# Findings of the Khotang Household Survey:

A background paper for the Mid-term review of Swiss Country Strategy (2013-2017)

**August 2015**

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Cover photo: Boys ploughing
Credit: Ashish Shrestha

## Abbreviations and Glossary

| | |
|---|---|
| CFUGs | Community Forestry User Groups |
| DDC | District Development Committee |
| FCHVs | Female Community Health Volunteers |
| HG | Home Garden |
| LILI | Local Infrastructure and Livelihood Improvement |
| RCA | Reality Check Approach |
| NTFPs | Non-timber forest products |
| SSMP | Sustainable Soil Management Programme |
| SDC | Swiss Agency for Development and Cooperation |
| SCS | Swiss Country Strategy |
| TBA | Traditional Birth Attendants |
| TBSSP | Trail Bridge Sub-sector Programme |
| VDCs | Village Development Committees |
| WCF | Ward Citizen Forum |

## Acknowledgement

The study was commissioned by the Swiss Agency for Development Cooperation to provide insights to the mid-term review of the Swiss Country Strategy (2013-2017). The study was lead by Ansu Tumbahangfe, Results Monitoring and Reporting Manager at Trail Bridge Support Unit/HELVETAS Swiss Intercooperation with the support of Arun B Khanal, Statistics expert, and sixteen local enumerators from Khotang.

The study team would first of all like to thank Sushil Shreshta, SDC Liaison Officer for Khotang district, for his invaluable support during the whole study process.

But, most of all we are grateful to the respondent households for contributing their time and sharing their personal details.

We hope this report portrays the changes happening in Khotang and that it contributes towards improving the design and implementation of development programmes in the future.

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## Executive Summary

This report presents the findings of a household survey conducted in eight Village Development Committees (VDCs) in Khotang district that was commissioned by the Swiss Agency for Development and Cooperation's (SDC) as a part of the Mid-Term Review of the Swiss Country Strategy (SCS) 2013-2017.

The main objective of the self-conducted mid-term review was to enable SDC to reflect and systematically address the changing context within its core working districts.

The aim of the survey was to provide a robust analytical base to understand changes happening in the rural context, and thereby inform policy and practices for SDC vis-à-vis its SCS. It sought to analyze the changing context in rural areas and determine whether SDC project activities have led to the intended consequences, and are still relevant in the changing environment. The focus was on assessing livelihoods, living standards and access to public services; with special emphasis on the impact on disadvantaged groups.

Khotang district, which lies in the eastern development region, was chosen for the household survey, amongst the three core SDC districts (the others being Ramechhap and Okhaldhunga), due to the presence of a baseline dataset that was generated in 2010. The study employed a *Stratified Random Proportionate Sample* survey which was undertaken in March 2015. The sampling frame included the population of all the eight VDCs (6,565 households), amongst which 2,579 households (39%) were randomly sampled. This allowed for a confidence level of 95 % at 1.5 % margin of error.

The findings of the survey show that the number of households escaping 'extreme poverty' or 'ultra poverty' is growing; resulting in the rise of the 'poor' and 'middle' levels. However, these shifts are not always progressive and the findings show that households are vulnerable to slip back into poorer levels, if they suffer external and internal shocks (such as death of the main bread winner, decrease in remittances, drying up off savings, bad harvest, etc).

The specific key findings include:

### Poverty Levels

- Percentage of people living in 'extreme' or 'ultra poverty' has halved from 23 % to 11 %
- Dalit households show the highest percentage of improvement from ultra poor to poor and middle levels, primarily due to more families taking up migration as a livelihood option
- Average household incomes of the sampled household is NPR 197,000, with the per capita at NPR 41,000

### Farming

- Dalits, women headed households and disadvantaged groups have smaller landholdings than Brahmin/Chhetrys and Janajaties
- Majority of households reported that there had not been any significant changes in their cropping patterns and use of inputs
- 49.5% of the households have food sufficiency less than 6 months
- 2% of households are engaged in commercial vegetable production

### Migration and Remittances

- 41% of the sampled households have members who have migrated abroad for work, this represents an 11% increase from the Baseline of 37%
- Households receive remittances averaging NPR 146,600 per year

### Salaried Job and Wage Work

- Twice as more Brahmin/Chhetry households have salaried jobs compared to Janajati households, and five times more than Dalit households
- Dalit families were found to be more reliant on wage labour (agriculture and non-agriculture) compared to Bhramin/Chhetrys and Janajaties
- 40% of DAGs had been employed in public works

### Changes in Living Conditions

- Roads have reduced travel times to service centres
- Majority of the respondents travel on foot to service centres, except for going to district headquarters which is done mostly by using public transportation
- Twice as many Brahmin/Chhetry and Janajati households were had educational levels of secondary level or above in comparison to Dalits
- 94% of the households with children under 5 years had vaccinated their child
- 88% of pregnant women had gone for the 4 Ante Natal Checkups
- 84% of the sampled households have access to piped water (either directly to their homes or community taps), this represents an increase from the 62 % that was recorded in 2010
- 78% of the sampled households have toilets, which is also an increase from 43% that was noted in 2010

# 1. Introduction

## 1.1. Background

This report presents the findings of a household survey conducted in eight Village Development Committees (VDCs) in Khotang district that was commissioned by the Swiss Agency for Development and Cooperation's (SDC) as a part of the Mid-Term Review of the Swiss Country Strategy (SCS) 2013-2017.

The household survey was one method, amongst a mixed method approach, applied to undertake the MTR. The others included a Reality Check Approach[1] (RCA) and beneficiary assessments through photo journalists.

The survey was conducted by the Trail Bridge Support Unit/ HELVETAS Swiss Intercooperation, which was commissioned by SDC in early 2015. Actual data collection took place in March 2015 by sixteen trained enumerators, after a two-day rigorous training on the survey methodology and tools. The overall study was led by Ansu Tumbahangfe, Results Monitoring and Reporting Manager at TBSU/ HELVETAS Swiss Intercooperation, who was supported by Arun B. Khanal, consultant, for statistical analysis and Sushil Shrestha, SDC Khotang Liaison Officer, who was the contact person in the district.

## 1.2. Objectives

The main objective of the self-conducted mid-term review was to enable SDC to reflect and systematically address the changing context within its core working districts.

Specifically, it sought to:

1. Assess if the context has changed since the preparation of the SCS. If so, how has SDC adapted to the changing context and whether the context is changing due to their work.
2. Determine the status and trends in achieving the targets of SCS; particularly:
   (i) Assess whether project activities correspond with planned or foreseen activities by the SCS
   (ii) Determine if the SCS approaches are being applied and whether they are still relevant in the current environment in the country.
3. Identify areas of improvements in project monitoring (and management if needed); to identify areas of improvement/adaptations/adjustments in the current results framework.
4. Prepare for the decision for the Human Security Division for its future involvement in Nepal

The main aim of the survey was to provide a robust analytical base to understand changes happening in the rural context, and thereby inform policy and practices for SDC vis-à-vis its SCS. It sought to address the first two objectives of the MTR (i.e. analyze the changing context in rural areas and determine whether SDC project activities have led to the intended consequences, and are still relevant in the changing environment). The focus was on assessing livelihoods, living standards and access to public services; with special emphasis on the impact on disadvantaged groups[2] (DAGs).

Specifically, it focused on the following research questions:

1. How have household livelihood opportunities and incomes changed since the implementation of the SCS? What are the multiple contributing factors (both intended/unintended) that have influenced household well-being?

[1] Where relevant, the qualitative findings from the RCA have been used in this report to help explain the survey findings.
[2] Disadvantage groups refer to those who are economically poor (living on less than NRs 19,261 per person per year or having less than 6 months food security) and are socially discriminated based on gender, ethnicity, caste/religion and regional identity (SCS, 2012).

2. Who has benefited the most? Have disadvantaged groups benefited proportionately more from the newly created opportunities

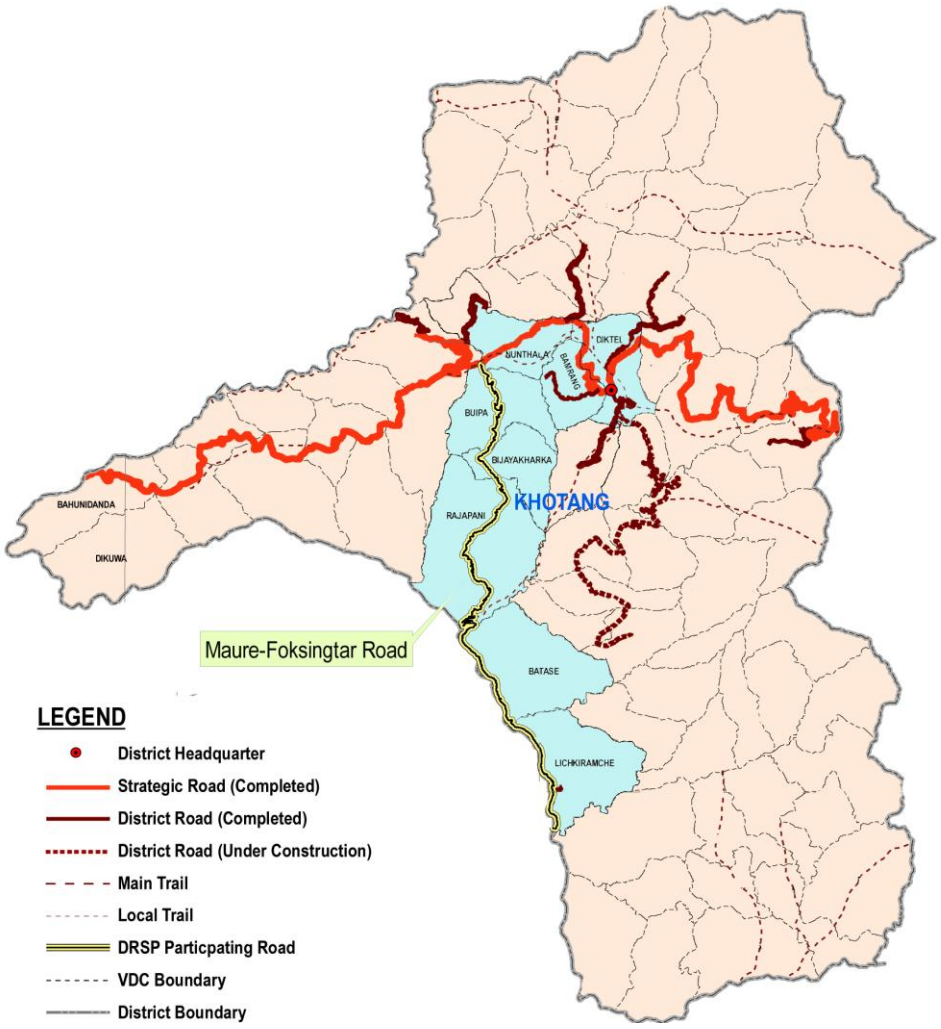
## 1.3. Study Sites

Khotang district, which lies in the eastern development region, was chosen for the household survey, amongst the three core SDC districts (the others being Ramechhap and Okhaldhunga), due to the presence of a baseline dataset that was generated through the Harmonized Social Mobilization (HSM) project in 2010.

The HSM had undertaken an 'Underlying Causes of Poverty Analysis' (UCPA) in 8 Village Development Committees (VDCs) – Bamrang, Batase, Bijayakharka, Buipa, Diktel, Lichkiramche, Nunthala and Rajapani lying along the Diktel-Maure-Phoksintar road corridor (Ref: Map 1).

This road corridor consists of two road segments. The section between Maure to Phoksintar (48 km) was constructed through the SDC supported District Road Support Programme (DRSP) from 2010 – 2013. While the 20 km section from Maure to Diktel was completed by the Upper Sagarmatha project in 2001. It is a part of the Mid Hill Highway, currently being developed by the Government of Nepal.

**Map 1: Maure-Phoksintar-Diktel Road Corridor with 8 selected VDCs in Khotang**




Note: The VDCs highlighted in blue signify the 8 VDCs along the Diktel-Maure-Phoksintar road corridor

The eight VDCs that lie along the road corridor have a total of 6,706 households and a population of 31,733 (15% of the district population)[3]. Diktel, the district headquarters, has the highest population (4,569), while Nunthala (1,596) has the lowest. Overall, women constitute 53 percent of the population. The Baseline (2010) shows that Janajaties (52%) make up the largest social group, amongst which Rai constitute 36%. They are followed by Brahmin/Chhetrys at 37 percent and Dalits at 11 percent.

Within these VDCs, 13 SDC supported programmes/projects, focusing on infrastructure, agriculture/forestry, vocational trainings, migration and governance, have been implemented based upon SDC's road corridor strategy of developing increased coordination and synergies among projects to foster multiple livelihood approaches. Amongst these five were phased out between 2014 and 2015, while the remaining 8 are still on-going (Ref: Table 1).

**Table 1: SDC Supported Projects Implemented in the 8 VDCs**

| Programmes/projects supported by SDC | | Village Development Committees | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Bamrang | Batase | Bijaykharka | Buipa | Diktel | Lichkiramche | Nunthala | Rajapani | |
| Infrastructure | District Road Support Programme | | √ | √ | √ | | √ | √ | √ | Phased out in 2014 |
| | Local Road Building Programme | | √ | | | | √ | | √ | On going |
| | Trail Bridge Sub-Sector Programme | √ | √ | √ | √ | √ | √ | √ | √ | On going |
| Agriculture/ Forestry | Hill Maize Research programme | √ | √ | √ | √ | √ | √ | √ | √ | Phased out in 2014 |
| | Home Garden | √ | √ | √ | √ | √ | √ | √ | √ | On going |
| | Local Infrastructure for Livelihoods Improvement | √ | √ | √ | √ | √ | √ | √ | √ | Phased out in 2015 |
| | Vegetable Seed Production | √ | √ | √ | √ | √ | √ | √ | √ | Phased out in 2014 |
| | Sustainable Soil Management Programme | √ | √ | √ | √ | √ | √ | √ | √ | Phased out in 2014 |
| | Multi Stakeholder Forestry | √ | √ | √ | √ | √ | √ | √ | √ | On going |
| Vocational Trainings | Employment Fund | √ | √ | √ | √ | √ | √ | √ | √ | On going |
| Migration | Safer Migration | √ | √ | √ | √ | √ | √ | √ | √ | On going |
| Governance | Harmonized Social Mobilization | √ | √ | √ | √ | √ | √ | √ | √ | Phased out in 2014 |
| | State Building at Local Levels | √ | √ | √ | √ | √ | √ | √ | √ | On going |

[3] Census 2010

## 1.4. Structure of the Report

The findings presented in this report are based on the rich dataset that was generated after the survey in Khotang. In addition, the report also includes analysis based on a Baseline that was conducted in 2010 by the Local Governance and Community Development Programme (LGCDP Phase-I) for its Underlining Causes of Poverty Analysis (UCPA) along with document reviews conducted by the study team.

An overview of SDC's Swiss Country Strategy (2013-2017) along with SDC supported development projects are presented in section 2. This is followed by a section that sets out the survey methodology, including the main challenges and limitations in section 3. The findings and conclusions are then presented in section 4 and 5 respectively.

# 2. Swiss Country Strategy (2013-2017)

## 2.1. An Overview of the Swiss Country Strategy (2013-2017)

As the main objective of the mid-term review is to take stock of the progress and determine whether project implementation has been in line with the Swiss Country Strategy 2013-2017, this section provides a brief narrative summary of the SCS.

The strategy comprises of two inter-related intervention domains presented below. The household survey and its analysis is primarily geared towards the latter domain, which seeks to bring about improvement in people's well-being and incomes, especially those of disadvantaged groups.

**Domain 1: Contribution to an inclusive Federal State, Human Security and the Rule of Law**

The intervention focus within this domain is on consolidating State building; supporting transition mechanisms, as Nepal is envisioned to move towards an inclusive democratic federal state; capacitating local institutions; and strengthening human rights mechanisms and practices at the national and local levels.

The three outcomes related to this domain include:

- ***Outcome 1.1. State building***: The elected representatives, civil servants and civil society ensure that the constitution drafting, the election and the State restructuring processes, as well as State structures at the local level, are inclusive and well managed.

- ***Outcome 1.2. Human security***: Stakeholders use non-violent means to deal with conflict, particularly related to resources, identity, gender and domestic issues.

- ***Outcome 1.3. Human rights***: Relevant national institutions effectively promote and protect Human Rights, specifically those related to impunity, to discrimination and to the situation of migrant workers and refugees.

**Domain 2: Contribution to improved livelihood and increased resilience of people especially the Disadvantaged Groups living in rural areas and small urban centres.**

The interventions within this domain are targeted towards improving livelihoods, incomes and opportunities of disadvantaged groups. A geographical concentration of Swiss programme/projects has been envisioned in two cluster areas in the central and mid-western hills of the country. Within these clusters, SDC's strategy is to implement a 'road corridor approach', whereby programmes and projects are implemented in Village Development Committees (VDCs) adjacent to the main roads to increase coordination and synergies amongst the various projects and generate multiple livelihood opportunities for the beneficiaries. As such, the majority of SDC supported programmes/projects are concentrated within these VDCs.

There are two outcomes related to this domain:

- Outcome 2.1. Inclusive socio-economic development: Disadvantaged groups improve their livelihoods and resilience.
- Outcome 2.2. Public service delivery: Local governments and line agencies in cluster areas effectively deliver basic services in response to needs and demands of women and men, especially disadvantaged groups.

## 2.2. Key Strategies

The key strategies being adopted for SDC supported projects include:

- ***Targeting:*** Programmes are to target women and disadvantaged groups. The process to identify beneficiaries involves identifying locations with a high concentration of disadvantaged groups, followed by identifying households and individuals with multiple disadvantages. Investment in the maintenance of infrastructure, such as bridges, rural roads and irrigation channels and provisions of skills training and support to entrepreneurship skills and market development.
- ***Road Corridor Approach:*** To focus on economic development in VDCs along the main roads. Contributing towards increased coordination and synergies among the projects in the areas to foster a multiple livelihood approach for the beneficiaries.
- ***Strengthening the capacities of public authorities:*** To design and implement local development strategies, applying participatory methodologies, to ensure transparent and accountable management of financial resources, and to provide accessible public services of good quality, corresponding to the demands and rights of people.
- ***Social mobilization***: To reach out to the poor and socially discriminated groups to enable them to organise themselves and influence purposes that benefit them.

# 3. Survey Design and Methodology

## 3.1. Household Survey Design

The household survey was designed to provide broad assessments of change in poverty and living standards in the VDCs that lie along the Diktel-Maure-Phoksintar road in Khotang. A number of elements were taken into consideration during the design of the study. Chiefly the need to measure changes in household poverty levels viz-à-viz the baseline dataset and the need to capture the key indicators of the Swiss Country Strategy (2013-2017).

- ***Poverty Levels: Comparisons between the Baseline and the Mid-term Review***

The Baseline, which was conducted in 2010, had collected household level information on 16 variables (Ref: Annex 1) ranging from demography, caste/ethnicity, economic activity, and living standards through Participatory Well-Being Rankings[4].

Households were ranked into four categories - Rich, Middle, Poor and Ultra Poor based on a 'poverty index' which looked at 9 variables - Food sufficiency, Remittances, Permanent employment, Business, Pension, Wage labour, Landholding size, Renting in land and Indebtedness (See Box 1). These variables were collected through Participatory Rural Appraisal (PRA) tools through public ranking processes, which made use of both quantitative and qualitative indicators. One advantage of the process was that data was obtained quickly and on indicators, which the intended beneficiaries themselves identified as being significant. On the other hand, the drawback was in the subjective and public nature of the exercise, which many have led to people (and their neighbours) either *under* or *over estimating* levels of wealth or poverty, due to the sensitivities surrounding sharing poverty levels[5].

**Box 1: Well-being Ranking Variables**

| | |
|---|---|
| Ultra Poor | • Food sufficiency less than 3 months<br>• Landless or having marginal landholdings<br>• Wage labour is main source of income<br>• High indebtedness |
| Poor | • Food sufficiency between 3- 6 months<br>• Renting in land<br>• Low earnings from migration<br>• High amount of loans used to invest in migration |
| Middle | • Food sufficiency between 6- 12 months<br>• Some earnings from migration<br>• Families invest 50% for migration from their own resources |
| Rich | • Food sufficiency more than 12 months<br>• Renting out of land<br>• Loan money<br>• Permanently employed household members<br>• Receive pensions<br>• Have business enterprises |

Source: JSSN (2011)

The mid-term review had the mandate to compare and analyse changes that had occurred since the Baseline in 2010. So, in order to maintain comparability with the baseline dataset, the household survey was designed to collect data that would allow for comparisons between the same variables[6], using a similar composite poverty index. The approach can also be described as a type of *Proxy-Means Test* which calculates household welfare by aggregating proxy indicators of household characteristics other than income or expenditures, which in rural areas can suffer from inaccuracies[7]. In addition, the mid-term review also collected additional variables (altogether 44), modelled on the Nepal Living Standard Surveys (NLSS-III), such as assets, health, education, access to public resources and living conditions (Ref: Annex 1).

The mid-term review's poverty composite index sought be more robust by hierarchically structuring and assigning scores (between 0–1) to the 9 selected variables based on the severity of poverty. The assigning of the weights was based on available literature as well as the findings from the qualitative RCA study to represent the general perception of poverty in the rural context in Nepal.

[4] Participatory well-being rankings were conducted for each ward in all the VDCs. This involved gathering household members in clusters and asking them to rank themselves according to various economic and social variables.
[5] The JSSN (2011) report mentions that during the public data collected process, there were interferences by political parties- which may have affected the accuracy of the data collected.
[6] One advantage of comparing the same variables is that local communities themselves have identified them as key characteristics o f poverty and wealth.
[7] Income and expenditure estimates and have been presented separately in the findings section.

Once weightages were assigned, weightage coefficients were computed for each of the variables, after which they were aggregated to form the 'poverty composite index' or the 'Poverty Vulnerability Index' (PVI). With the PVI providing the cumulative score of all 9 variables for each household. Once the PVI was calculated, each household was then classified into the four poverty categories (i.e. Rich, Middle, Poor and Ultra Poor) (Ref: Annex 3 for the detailed description of how the poverty levels were calculated).

- ***Swiss Country Strategy: Key Indicators***

The household survey questionnaires were designed with a view to capture a wide range of anticipated outcomes and impact indicators, including those noted in the Table 2 below, which were derived from the Swiss Country Strategy (2013-2017). The focus was specifically related to Domain 2 which seeks to '…(contribute towards) improved livelihoods and increased resilience of people especially the disadvantaged groups living in rural areas and small urban centres' (SCS 2012). Refer to Annex 1 for the full list of indicators which were collected by the household survey.

**Table 2: Anticipated Outcome Indicators of Swiss Country Strategy**

| | |
|---|---|
| Outcome 2.1: Disadvantaged groups improve their livelihood and resilience | • At least 60% of the beneficiaries disadvantaged groups benefit from Swiss development interventions<br>• At least 50% of the beneficiaries are women<br>• 25% increase in food security<br>• Increase in per capita income |
| Outcome 2.2: Local governments, and line agencies in cluster areas effectively deliver basic services in response to the needs and demands of women and men, especially of disadvantaged groups | • 60% of the service receivers are satisfied with the delivery of basic services<br>• Number of people receiving social welfare packages |
| Outcome 4.1: Disadvantaged groups have benefited from multiple livelihood options through coordinated Swiss Interventions | • At least 60% of disadvantaged groups living in the road corridor receive two or more livelihood options from Swiss funded projects |

## 3.2. Sampling

The study employed a *Stratified Random Proportionate Sample* survey which was undertaken in March 2015. The sampling frame included the population of all the eight VDCs (6,565 households), amongst which 2,579 households[8] (39%) were randomly sampled. This allowed for a confidence level of 95 % at 1.5 % margin of error.

Based on the list of households collected during the baseline, the entire population was first categorized into three stratums: Dalit [N= 728 (11%)], Janjati [N=3,392 (52%)] and Brahmin/Chhetry [N= 2,445 (37%)]. From each stratum, a proportionate number of households were then randomly selected through the use of Microsoft Excel to create sub-sample lists (Ref: Table 3).

These lists, along with substitution households, were then provided to the enumerators, who were trained for 2 days on how to administer the survey and use the sub-sample lists. The majority of the 16 enumerators, who administered the questionnaires, were local Social Mobilizers within the selected 8

[8] The sample size was originally planned or 2,626 households (40% of the total population). But, 47 questionnaires had to be discarded due to discrepancies and inaccuracies of the data collected.

VDCs. This was a big advantage as they were able to identify the selected households much quicker and also collect the required information.

**Table 3: Household Survey Sampling Frame**

| Caste/ Ethnicity | Bamrang | Batase | Bijaykharka | Buipa | Diktel | Lichkiramche | Nunthala[9] | Rajapani | Total |
|---|---|---|---|---|---|---|---|---|---|
| Dalit | 64 | 36 | 89 | 77 | 41 | 12 | 11 | 37 | 353 (14%) |
| Janajati | 179 | 197 | 122 | 319 | 298 | 11 | 142 | 82 | 1350 (53%) |
| Brahmin/ Chhetry | 104 | 65 | 18 | 63 | 342 | 55 | 0 | 215 | 876 (33%) |
| **Total** | **347** | **298** | **229** | **459** | **681** | **78** | **153** | **334** | **2579** |

## 3.3. Data Processing and Analysis

Data collected from the VDCs were edited before computer entry. This was done at three stages:

- The first editing was done in the field by the Field Supervisors to verify whether the questionnaires had been properly filled up by the enumerators and whether there were inconsistencies in the data collected, with corrections were made if any inconsistencies were noticed.
- The second stage of editing was done in Kathmandu by a Data Entry Assistants to check whether the required sample size was covered and whether any question was left unanswered. If there were any un-attempted/unanswered questions or answers that seemed implausible then where possible they were corrected.
- The third stage, consistencies of the responses were checked by the Statistician.

After data was computerized, the dataset was analyzed using SPSS computer package and Microsoft Excel. Both, *cross-sectional analysis* as well as a *panel-analysis* have been conducted and presented in the findings section. The panel-analysis was conducted to compare the changes in poverty levels between the two studies. To do this, the study team had to manually trace back[10] the households that had been sampled by the survey to the Baseline database. This was possible due to the identification of the households (which included Name of the household head, Name of wife or son, Name of the Tole along with the Ward no. of the VDC).

## 3.4. Limitations of the Study

- ***Inadequate presentation of the Baseline data has limited comparative analysis:*** The baseline database lists the poverty rankings (Rich, Middle, Poor and Ultra Poor) of all the households base on the composite poverty index. What it does not do is however present the variables of the 9 indicators (except migration) that were used to create the poverty index. This has limited comparative analysis of change, specifically related to livelihood sources.

- ***Sampling and non-sampling errors:*** The sampling frame of the survey was based on the Baseline database, which sought to collect information from all the households in the 8 VDCs. If there were any households that were missed or not included during the baseline, then these omissions, may have been incorporated into the sampling design. Non-sampling errors, that may occur due to the biasness of enumerators and the accuracy with which the questionnaires are filled in is also a possibility, though the survey sought to minimize this error by close supervision of the enumerators by Field Supervisors.

[9] The baseline only lists 2 Brahmin/Chhetry households in 2010.
[10] Out of 2579 households sampled the study was able to trace 1957 households to the Baseline.

# 4. Findings

This section presents the comparative analysis between the household survey and the baseline datasets, which have been structured around key dimensions of poverty in Khotang. Additional indicators, which were included in the survey, but not covered by the baseline, have also been presented where relevant. Each dimension has been analyzed in relation to caste/ethnicity, disadvantaged and non-disadvantaged groups, women headed households, as well as other factors depending upon the dimension. Where relevant, qualitative findings from the Reality Check Approach, which was conducted parallelly with the survey, have also been included to explain, substantiate or indicate outliers.

The section begins with the summary of the demography findings. Changing poverty levels are then presented, followed by analysis of how changing livelihoods, incomes, and support provided by development programmes (including SDC) have had an impact. Living standards are then discussed.

## 4.1. Demography

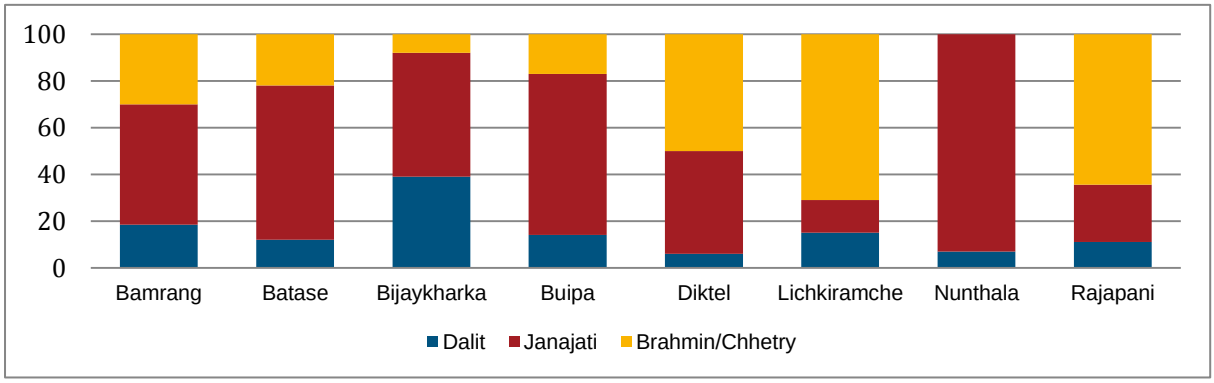
- Janajaties (52%) are the dominant caste/ethnic group within the 8 VDCs
- Disadvantaged groups account for 29% of the study population
- 9 % of the households are women headed households
- The average household size is 4.86
- Dalit households have higher number of dependents than other groups

### *a. Caste/Ethnic Composition and Disadvantaged Groups*

Janajaties constitute more than half of the total population (52%) within the 8 sampled VDCs. Followed by Brahmin/Chhetrys (34%) and Dalits (14%).

Dalit households were found in all the VDCs, with Bijayakharka having the highest number of households at 39% of the VDC population, while the lowest were in Diktel (6%). The largest populations of Janajaties (93%) are located in Nunthala, followed by Buipa and Batase with 69.5 percent and 66 percent respectively. Diktel, the district headquarters, also has a large Janajati population (44%) along with Brahmin/Chhetrys at 50 percent. Overall, Brahmin/Chhetry households were found in all the VDC except Nunthala[11].

**Chart 1: Caste/Ethnic Composition by VDCs**




Source: Household Survey 2015

Disadvantaged groups, which are both socially discriminated and economically poor[12], constitute 29 percent of the population. This is a decrease from the 32 percent that was recorded by the Baseline in 2010. One chief reason for the decline can be attributed towards a rise in household incomes rather than

[11] According to the Baseline, there were only 2 Brahmin/Chhetry households in 2010. During the household survey, we found out that they had migrated out of the village.

[12] Economic poverty is calculated as households earning less than NPR 19,621 (equivalent to USD 225) per capita.

increased agricultural production, which has shown less improvement (see section 4.3. a) for more details).

### *b. Household Head by Sex*

Overall, 9% of the households (N=242) are women headed households. This represents a significant rise, in absolute numbers and percentages, in comparison to the baseline, when only 92 households (1.5%) were headed by women. One of the most significant reasons for the rise in women headed households is due to rise migration of male members (an increase by 163 percentage since 2010), which leaves women becoming the de-facto head of their households. Fragmentation of families was also found to be increasing, with the younger generation separating from their parents (including widowed mothers) and moving to different locations, either in the same village or outside, due to tensions or in search of better facilities (education, water supply, etc).

The majority of women headed households are Janajties (64.5%), followed by Brahmin/Chhetrys (23%) and Dalits (12.5%).

**Table 4: Women Headed Households by Caste/Ethnicity**

| Caste/Ethnicity | Baseline 2010 | | Household Survey 2015 | |
|---|---|---|---|---|
| | N | % | N | % |
| Dalit | 10 | 11.0 | 30 | 12.5 |
| Janajati | 58 | 63.0 | 156 | 64.5 |
| Brahmin/Chhetry | 24 | 26.0 | 56 | 23.0 |
| Total | 92 | 100 | 242 | 100 |

Source: Baseline (2010) and Household Survey (2015)

### *c. Household Size and Dependency Ratio*

The average household size within the sample population is 4.86, which is less than the national average of 4.90 (CBS 2011). Amongst the different caste/ethnic groups, there were no significant differences; with Brahmin/Chhetrys having household sizes of 4.91, followed by Janajaties (4.84) and Dalits (4.82).

However the dependency ratios show that Dalit families have larger number of dependents (i.e. less economically active members[13]) at 0.70, compared to Janajati (0.56) and Brahmin/Chettry (0.54) households. The overall dependency ratio was less than 1 at 0.57, indicating that there are more economically active members (i.e. household members between 15-65 years) than non-economically active members within the 8 VDCs.

## 4.2. Poverty Levels

- There has been a bulge in the 'middle' and 'poor' household level categories over the past five years.
- Percentage of people living in 'extreme' or 'ultra poverty' has halved from 23 % to 11 %
- Dalit households show the highest percentage of improvement from ultra poor to poor and middle levels, primarily due to more families taking up migration as a livelihood option
- Richer households have also gotten poorer

Changes in poverty levels show that there has been a bulge in the 'middle' and 'poor' household level categories over the past five years. In 2010, poor and middle level households accounted for half of the

[13] Household members less than 15 years and above 65 years

households, while in 2015 it had increased to over two thirds (Chart 3). The chief reason for this has been due to the upward mobility of households from 'ultra poor' and also (to a smaller extent) the shift downwards of 'rich' households from to middle and poorer levels.

**Chart 3: Changes in Household Poverty Levels (in %)**

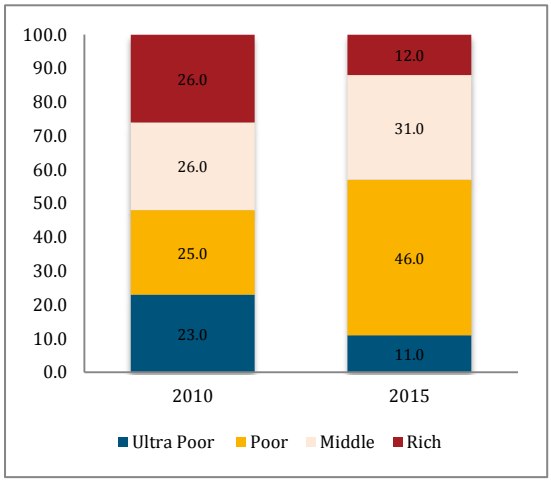
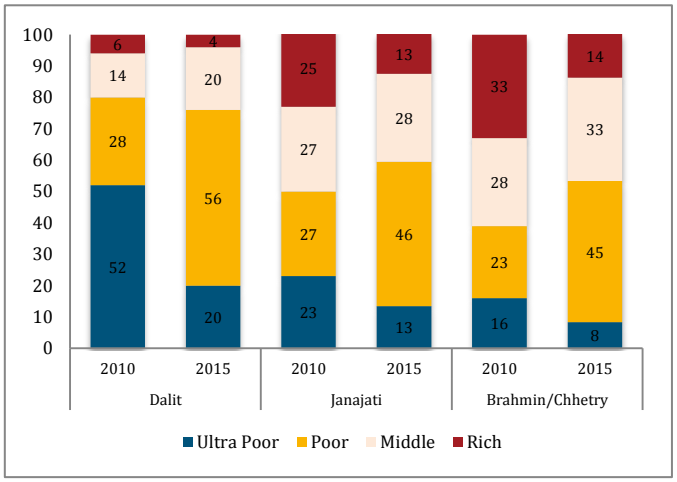



**Chart 4: Changes in Household Poverty Levels by Caste/Ethnicity (in %)**

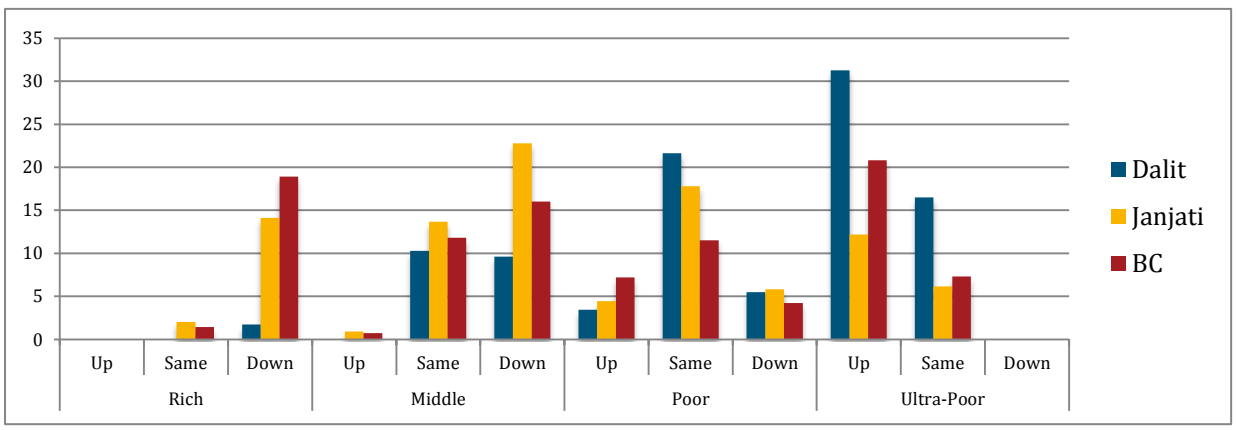



Source: Baseline (2010) and Household Survey (2015)

Overall, the percentage of people living in 'extreme' or 'ultra poverty' has halved from 23 per cent (in 2010) to 11 percent (in 2015). Dalit households show the highest percentage of improvement from ultra poor to poor compared to the other two social groups, which show similar percentage of rises. One significant reason for such a high number of upward mobile Dalit families has been the acceleration of migration as a livelihood option in the past five years (See section 4.3.a for more detailed analysis).

Furthermore, Chart 5 shows that while more Dalits are shifting upwards from the ultra poor levels; they are less likely to make the shift to the rich and middle levels. A significant reason for this is that besides migration, Dalit families have limited opportunities to be permanently employed and/or be engaged in businesses (See Table 5). Unlike Janajati and Brahmin/Chhetry households, which in addition to migration, were found to be permanently employed, receiving pensions and engaged in business activities. As such, more households from these two groups were found to have shifted from poor to higher levels.

**Chart 5: Mobility between the Poverty Levels by Caste/Ethnicity**



Source: Household Survey (2015)

There has also been a reduction in the proportion of 'rich' households to 'middle' and 'poor' levels; which has mostly occurred amongst Brahmin/Chhetrys and Janajati groups. The reasons for this downward shift are less clear from the findings of the survey. One main reason being that the Baseline did not record individual household information on salaried jobs, pensions and business enterprises, unlike migration. Nevertheless, analyzing the available information, one can infer that as households rent out less land (due to labour shortages) and decrease cultivation areas (resulting in the decline in food sufficiency for 12 months or more) along with losses of salaried jobs, and pensions due to deaths in families, then downward shifts can occur. Furthermore, these shifts reflect the dynamic nature of poverty or well-being; which does not always improve in a linear progression. Families can slip back into lower levels if there is a bad harvest, death of the main bread winner, decrease in remittances, drying up off savings, unfavorable climate for business, increased indebtedness, etc.

### 4.3. Livelihood Sources and Incomes

- Households rely on multiple and diverse livelihood sources
- More than half of the population continue to be engaged in agriculture, chiefly for household consumption rather than sales
- After farming, remittance contributions were found to be the most significant livelihood source across all caste/ethnic groups
- Very few households were cultivating commercial crops

Households were found to rely upon multiple livelihood sources (ranging from farming, remittances, wage labour, commercial agriculture production, business, permanent employment) than just rely solely on agriculture.

**Table 5: Main Sources of Livelihoods (in %)**

| Sources of livelihoods | Caste/Ethnicity | | | Total | Household Head | | Disadvantaged Groups | |
|---|---|---|---|---|---|---|---|---|
| | Dalit | Janajati | Brahmin / Chhetry | | Men | Women | DAG | N-DAG |
| Cereal Crops | 69 | 58 | 54 | **58** | 57 | 61 | 65 | 56 |
| Commercial Vegetables | 0 | 1 | 1 | **1** | 1 | 0 | 1 | 1 |
| Agri-Wage Labor | 4 | 1 | 1 | **2** | 1 | 1 | 4 | 1 |
| Non-Agri-Wage Labor | 7 | 5 | 1 | **4** | 5 | 1 | 11 | 3 |
| Commercial livestock sales | 1 | 3 | 4 | **3** | 3 | 3 | 4 | 3 |
| Permanent Jobs | 3 | 7 | 16 | **9** | 9 | 7 | 1 | 11 |
| Business | 3 | 8 | 5 | **6** | 6 | 7 | 4 | 7 |
| Pension | 1 | 5 | 6 | **4** | 4 | 7 | 4 | 4 |
| Migration/Remittance | 13 | 12 | 10 | **13** | 13 | 10 | 7 | 13 |
| Cottage & Small Industry | 0 | 0 | 1 | **0** | 1 | 0 | 0 | 1 |

Source: Household Survey 2015

However, a large proportion of the population (58%) continue to be engaged in farming as their main livelihood source; especially amongst Dalit, disadvantaged groups and women headed households (Table 5)[14]. After farming, remittance contributions were found to be the most significant livelihood source for households. There were no significant differences between the various caste/ethnic groups indicating that migration for work, as a livelihood option, is being taken up by all.

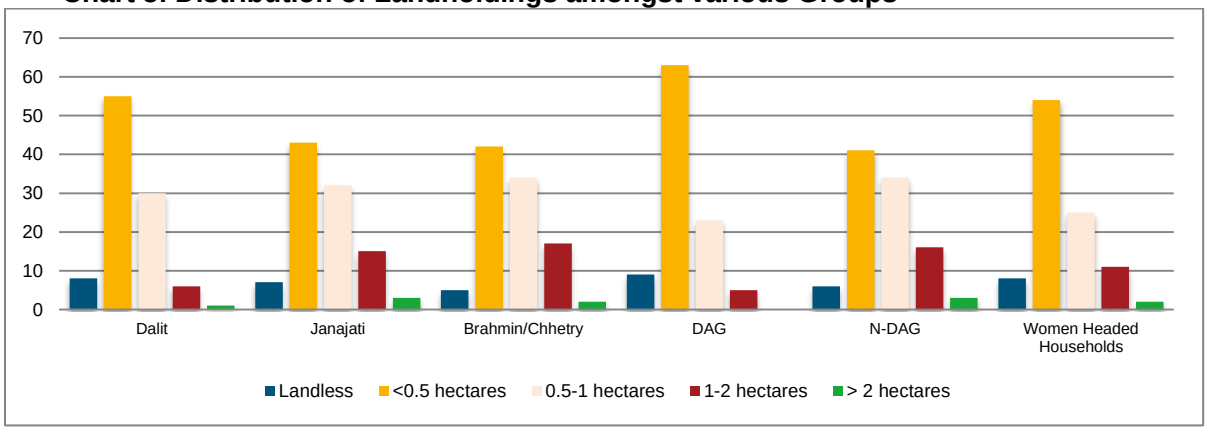
The following sections illustrate the main livelihood strategies in more detail.

## a. Farming

- 43% of households own less than 0.5 ha of land
- Dalits, women headed households and disadvantaged groups have smaller landholdings than Brahmin/Chhetrys and Janajaties
- Maize is the predominant crop cultivated in the study sites
- Majority of households reported that there had not been any significant changes in their cropping patterns and use of inputs
- 49.5% of the households have food sufficiency less than 6 months
- 2% of households are engaged in commercial vegetable production

Janajaties and Brahmin/Chhetry's were found to have similar average landholding sizes (0.59 ha and 0.61 ha, respectively) and patterns of distribution, with the majority 43% owning less than 0.5 ha of land. Dalits, women headed households and disadvantaged groups meanwhile had smaller plots with average landholdings of 0.43 ha, 0.41 ha and 0.35 ha respectively.

**Chart 5: Distribution of Landholdings amongst various Groups**




Source: Household Survey 2015

Maize is the predominant crop grown in the study sites, with 91% of households cultivating the cereal. This was followed by paddy (62%) and wheat (15%). Almost all of what is cultivated is consumed, with only a few households (les than 1%) selling their crops.

When we asked families about changes in cultivation patterns and techniques, 12 percent of respondents reported a decrease in cultivation area over the past five years. The main reason was cited to be the unavailability of labour (due to increased male out migration), which was also affecting agricultural wage rates, which were reported to have increased from between NPR 150 – 200 to NPR 250 - 400 (for digging, planting).

[14] The baseline database did not include the main sources of incomes for individual households and so it was not possible to calculate whether the share of people engaged in agriculture has changed or not.

Adoption of new crop varieties was also very low. Only 2.5 percent of households were found to use 'improved varieties' of maize and 6 percent for wheat. Uses of bio-pesticides were however reported to have increased. Five percent of the sampled households had received trainings on '*Gote Mal'* (organic fertilizers) and '*Mutra Sudhar'* (bio-pesticides), the majority (80%) of which had been provided by SSMP and VSP. Amongst which 69 percent reported that they had continued with the practice after the trainings.

Meanwhile, only 15 percent of the sampled households said that they had gone to/or received services (at least once) from government agriculture centres (in the last one year). The distribution of these households show that closer proximity to the main service centre[15] (in Diktel) leads to greater access/utilization, as the highest number of families receiving support were located in Diktel (57%) and its neighboring VDCs of Bamrang (26%) and Nunthala (11%). Meanwhile households located farther away, in Buipa (3%), Batase (1.5%), showed significantly less utilization of agricultural services[16], which also suggests that road access by itself does not necessarily translated into greater extension or service utilization.

Overall, respondents did not indicate any significant improvements in agricultural production; and half of the population reported to be producing only enough to feed their families for 6 months (Table 6). Dalit households, which have smaller landholdings, were found to be the most vulnerable with two thirds of the households having less than 6 months of sufficiency (Table 6). Nearly half of the Janajati and Brahmin/Chhetry households also were not producing food for more than 6 months. As a consequence, families were now reported to be more reliant on markets to access food, and therefore have greater need of cash incomes to feed their families.

Households were found to be spending on average NPR 34,800 yearly on buying food. Many were also taking out loans. Amongst the various groups, Dalit households were found to be taking out the most loans to buy food (14% of their total loans) followed by Janajaties (8%) and Brahmin/Chhetrys (6%).

**Table 6: Food Sufficiency from Own Production (in %)**

| | Food Sufficiency | | | | |
|---|---|---|---|---|---|
| Groups | < 3 months | 3-6 months | 6-9 months | 9-12 months | >12 months |
| Dalit | 26 | 48 | 15 | 7 | 4 |
| Janajati | 12 | 33 | 25 | 18 | 11 |
| Brahmin/Chhetry | 13 | 26 | 17 | 27 | 17 |
| DAG | 34 | 66 | 0 | 0 | 0 |
| N-DAG | 14 | 28 | 23 | 22 | 13 |
| Women Headed Households | 16 | 32 | 20 | 20 | 12 |

Source: Household Survey 2015

Qualitative findings further indicate that the construction of the road has played an important role in increasing the availability of food items (rice, noodles, snacks, energy drinks, etc) in local markets. According to the RCA study, before the construction of the road, families had been portering in sacks of rice (the preferred staple) from the Terai. This could take between 1- 4 days (depending upon the location). But now, most families were found to be buying food from the local markets, which people also noted had more choices on offer. The costs of food items were also found to have decreased, with the RCA report noting a 38 percent decrease in the price of rice at some sites.

[15] Within the study sites, there are three located in Diktel (main agricultural centre), Halesi and Simpani.
[16] Qualitative findings indicate that people prefer to go to the agricultural service centre in Diktel, not only because it is the main office with better facilities, but also because of the other activities (administrative work, buying/selling items) that they can undertake while in Diktel.

After the construction of the road, many development programmes (such as SSMP, VSP, LILI and CEPREAD) had supported vegetable and vegetable seed production through trainings and inputs (seeds, plastic tunnels, pipes, etc). But, the findings show that only 3 percent of the sampled households were found to be engaged in commercial production. Qualitative findings indicate that after the projects ended, many families did not continue because of the low prices that they were getting in the local hâat bazaars (which happen once a week). For most the low profit returns on what they regard as significant cash/time/energy investments were not attractive enough to make them change their livelihoods or compare favorably with the more lucrative migration work. However, the household figures show that amongst those that were cultivating vegetables for sale, the majority (48%) were located in Diktel. This suggests that while the general population do not regard commercial vegetable production as a viable livelihood option, in areas where there are large markets (in addition to the local hâat bazaars) with richer populations, then there can be a scope for commercialization.

Livestock meanwhile were found to be important for consumption (meat, milk, ghee) as well as a source of liquidity (to earn quick cash for buying food, medicines, paying school fees, etc). Households were found to have on average 2.8 large cattle, 4.4 goats, 4.6 chickens and 1.2 pigs. No notable differences were seen amongst the various groups, expect with respect to pigs, which were reared more by Janjaties.

Seventeen percent of the sampled households had received support from government livestock centres at least once (the average number of visits was 1.7). However, similar agricultural services, here to larger number of households who had gone to/received support on livestock issues were from Diktel (41.5%) and Buipa (25%), where the veterinary centre is located, compared to other VDCs such as Rajapani (1%) and Licjkiramche (1%), which were further away.

### b. Migration and Remittances

- 41% of the sampled households have members who have migrated abroad for work, this represents an 11% increase from the Baseline of 37%
- More Dalit households (49.5%) have migrants than Janajaties (41%) and Brahmin/Chhetrys (37%)
- Households receive remittances averaging NPR 146,600 per year

Half of the sampled households (51%) have family members who are migrants (working in Kathmandu or abroad). While, households with migrants who have gone abroad constitute 41% of the households, which represents an 11% increase from the 37% recorded in the Baseline in 2010. This suggests that migration continues to be significant, with more households looking towards migration as a way ‘out of poverty’.

Comparisons with the Baseline figures further show that though all caste/ethnic groups are migrating for work; Dalit and Janajati households are more likely to migrate, with the rate of migration for Dalits the highest compared to other groups (Table 7). This has had a direct impact on decreasing poverty, as migration is amongst the few livelihood options that are available to Dalits to gain large sums of money, in comparison to the other alternatives such as farming and wage labour (which have low returns) and salaried jobs (which are difficult to access).

Its impact on inequality is however not as straight forward. If we look at the average amount of remittances annually flowing back into the villages, then the findings show that Brahmin/Chhetrys[17] households are receiving more at averages of NPR 169,000 in comparisons to Dalits (NPR 97,900) and Janajaties (NPR 142,600). Past studies[18] indicate that the reasons for differences in remittances being sent back can be primarily attributed to the type of work, which in turn is associated with educational levels, skills and personal networks.

**Table 7: Migrant Households by Caste/Ethnicity (in %)**

| Caste/ Ethnicity | 2010 | 2015 | % change |
|---|---|---|---|
| Dalit | 40 | 49.5 | + 24.7 |
| Janajati | 39 | 41 | + 5.0 |
| Brahmin/ Chhetry | 34.5 | 37 | + 7.2 |

Source: Household Survey 2015

**Table 8: Sex of Migrants by Destination (in %)**

| | India | Gulf countries | South Asia |
|---|---|---|---|
| Women | 11 | 89 | 1 |
| Men | 5 | 94 | 1 |

Source: Household Survey 2015

Majority of migrants were men (82%); with the Gulf countries the preferred destinations for most (Table 8). The qualitative findings suggests men are more willing to go further to seek out employment opportunities, especially ones which they deem to be 'tried and tested' means of earning cash, which are more attractive than farming, compared to women who are wary of the risks and want to stay closer to their homes.

When we asked the respondents how they were financing migration to foreign countries most were found to be turning towards local moneylenders/merchants and their relatives/friends (Table 9). Very few people were taking bank loans. According to the RCA findings the need to provide collateral and do paperwork, which many find to be intimidating and a hassle, were the main reasons why they do not go to banks. On the other hand, local money lenders were found to be very willing to finance migration due to the high interest rates (up to 30%) that they can charge and the relatively good repayment rates by the migrants.

**Table 9: Loans taken by Households**

| | % of Households taking loans for investing in migration | Average loans taken (in NPR) | | |
|---|---|---|---|---|
| | | Local Money Lenders | Relatives/Friends | Banks |
| Dalit | 29 | 180000 | 128000 | 0 |
| Janajati | 19 | 177000 | 134000 | 98000* |
| Brahmin/Chhetry | 14 | 196000 | 138000 | 0 |
| DAG | 18 | 183000 | 97000 | 0 |
| N-DAG | 3 | 182000 | 145000 | 98000* |
| Women headed households | 22 | 156000 | 70000 | 0 |

Source: Household Survey 2015

Note: Percentages are greater than 100 as households have taken out loans for more than one activity

* Only three households had taken loans from banks

[17] One reason for the differences in earnings can be attributed towards the type of work that people perform.
[18] World Bank (2009).

The impact of remittances (averaging NPR 146,600 per year) on household incomes was found to lead to greater food security, improvements in living standards and rise in disposable incomes. The table below shows that households utilize remittances primarily to buy food and pay for educational purposes (such as fees, stationary, uniforms). Once these are fulfilled then, the payment of loans and investment in agricultural inputs was found to be the norm. Meanwhile, very few households had had enough to purchase land and gold. These trends were found to be similar across the different groups, expect for the repayment of loans for Brahmin/Chhetry households, who were found to be taking fewer loans (for migrating) and as Table 10 indicates were also paying less.

**Table 10: Usage of Remittances (in %)**

| | Food | Education | Agriculture | Loan payment | Land purchase | Gold purchase | House repairs |
|---|---|---|---|---|---|---|---|
| Dalit | 96 | 79 | 28 | 35 | 5 | 1 | 8.5 |
| Janjati | 95 | 95 | 30 | 30 | 3 | 1 | 5 |
| Brahmin/Chhetry | 95 | 90 | 38 | 19 | 5 | 2 | 13 |
| Women headed households | 94 | 91 | 20 | 44 | 4 | 1 | 5 |

Source: Household Survey 2015

Greater out flow of men has also resulted in labour shortages (within families and also those available for hire), especially during the peak agricultural seasons. Qualitative findings indicate that households are increasingly decreasing cultivated areas[19] of less arable land and that tenant-landlord relationships are being transformed, as landlords struggle to find labourers, and are instead having to make concessions (with regards to higher wages, provision of food and alcohol).

Women were also increasingly being left behind, as de-facto heads of households. As discussed earlier, there was significant rise in women headed households from 1.5 percent to 9 percent with the RCA study noting that there were mixed reactions to becoming the 'head of the household'. On one hand, wives were happy with the remittances being sent back, but, were also under pressure with all the extra burdens that they now had to deal with. With the men away, the study noted that mobile phones had become important and the survey findings show that 85 percent of households have atleast one mobile phone.

### c. Salaried Jobs and Wage Work

- 9% of the sampled households have at least one member with a salaried job
- Twice as more Brahmin/Chhetry households have salaried jobs compared to Janajati households, and five times more than Dalit households
- Dalit families were found to be more reliant on wage labour (agriculture and non-agriculture) compared to Bhramin/Chhetrys and Janajaties
- 17% of the sampled households had been employed (for short term work) for public works
- 40% of DAGs had been employed in public works

Salaried jobs, specifically government employment (such as Civil servants, teachers, police, army personnel) were found to be the main preferred livelihood choice by the majority of the households (Table

[19] It was not possible to compare the decrease in land area as it was not included in the Baseline.

10). Steady cash incomes and the possibility of pensions later on were reported to be the main reasons for the attraction.

**Table 10: Parents Aspirations for their Children (in %)**

| | Farming | Government Jobs | Jobs in the Non-Government/Private sector | Migration | Business |
|---|---|---|---|---|---|
| Son | 4 | 65 | 4 | 10 | 8 |
| Daughters | 5 | 71 | 8 | 1 | 8 |

Source: Household Survey 2015

However, the survey findings show that only 9 percent of the sampled households were found to have these jobs; with notable variations were seen amongst the various caste/ethnic groups. Twice as more Brahmin/Chhetry households have at least one member with a permanent salaried job compared to Janajati households and five times more than Dalit households (Table 5).

During the RCA, the majority of the villagers were found to be correlating better education with acquiring a salaried job, and this was one reason why people explained that they were sending their children (both girls and boys) to school. Findings however show that only 17 percent of Dalits have educational levels of Secondary (Class 9-10) or above, compared to 35 percent for both Brahmin/Chhetrys and Janajaties (see section 4.5.b. for further details on education). One can reasonably infer from these figures that for the majority of Dalit households salaried jobs still remain inaccessible due to their education qualifications. Qualitative findings also suggest that in addition, personal networks are also necessary to gain employment.

More Dalit (11%) families were found to be reliant on wage labour compared to Bhramin/Chhetrys (2%) and Janajaties (6%). Individuals were reported to be earning between NPR 250-500 per day for agricultural wage work (mostly during the planting and harvesting seasons) and between NPR 500 – 1,000 for non-agricultural work (such as masonry, carpentry).

### d. Involvement in Development Activities

- 40% of disadvantaged households had gained employment during public works
- On average a household had earned NPR 52,000
- 17% of women headed households were also involved in public works, earning NPR 38,000 on average
- 11% of the sampled households had received trainings, the majority were related to manure/bio-pesticides and vegetable production

Seventeen percent of households were also found to have earned cash as wage workers during public works construction (such as roads, schools, irrigation canals and ponds). The survey findings show that on average a household earned NPR 52,000. Amongst those who had worked on public works, 40 percent belonged to disadvantaged households, 49 percent were Janajaties, 33 percent were Brahmin/Chhetrys and 18 percent were Dalits.

Whilst amongst women headed households, 17 percent had gained employment through SDC supported programmes; with a household member (mostly the women) working on average of nearly 3 months (83 days) and earning incomes of NPR 38,000.

Similarly, the survey findings show that 11 percent of the sampled households had received various types of trainings; amongst which 36 percent had been provided by SDC[20] through programmes/projects such as SSMP, MSFP, LILI, VSP, HG, and DRSP. Table 11 shows that the majority of the trainings were related with 'Gotemal Sudar' or manure and bio-pesticides (65%) followed by vegetable production (21%).

**Table 11: Main Trainings[21] Provided to the Sample Households (in %)**

| Manure/Bio-pesticides | Forestry | Carpentry/ Masonry | Empowerment | Vegetable Production | Against women's violence | Tailoring |
|---|---|---|---|---|---|---|
| 65 | 5 | 5 | 20 | 21 | 4.5 | 4 |

Source: Household Survey 2015

In addition, many households were also part of various user groups (Table 12). The majority are members of community forestry user groups, followed by Mothers Groups and involvement in Cooperatives. Interestingly, women headed households were found to be less involved in these development groups, and one reason maybe because of the time pressures due to the lack of men to help out and as the RCA notes, sometimes, women are not interested in joining user groups if they do not see immediate direct benefits to themselves.

**Table 12: Household's Involvement in Development Activities (in %)**

| | Community Forestry | Leasehold Forestry | Ward Citizen Forum | Irrigation User Committees | Saving Groups | Cooperatives | Mothers Groups | Youth Groups |
|---|---|---|---|---|---|---|---|---|
| Dalit | 58 | 9 | 17 | 12 | 6 | 10 | 31 | 5 |
| Janajati | 64 | 6 | 13 | 23 | 9 | 22 | 27 | 4 |
| Brahmin/ Chhetry | 56 | 7 | 15 | 9 | 6 | 14 | 32 | 4 |
| Women Headed Households | 14 | 0.5 | 1 | 1 | 1 | 1 | 8 | 0 |

Source: Household Survey 2015

Amongst the various user groups/committees, women household members were found to be mostly members in Mothers groups (N=727), Community Forestry User Committees (N=319), Ward Forums (N=198) and Saving groups (N=141). The RCA findings indicate that most women are keen to become members when there is a direct link towards livelihood opportunities and/or if they have access to information.

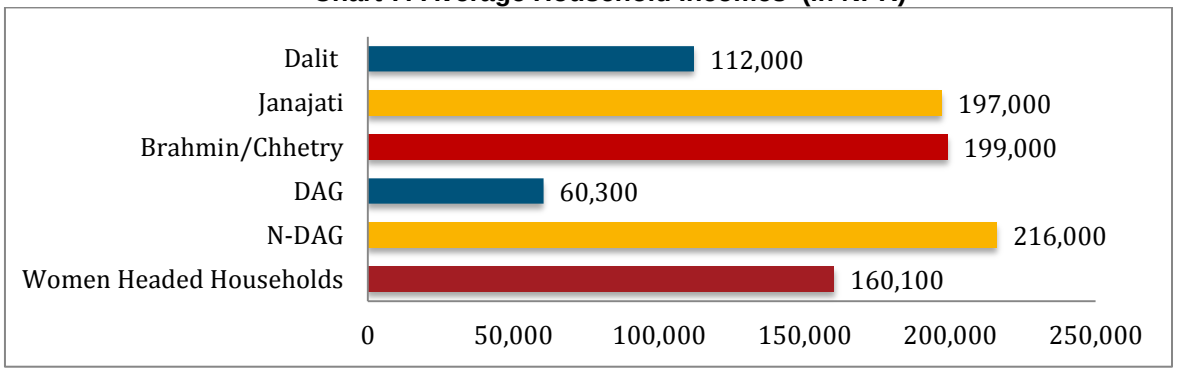
### 4.4. Household Incomes

- Average household incomes of the sampled household is NPR 197,000, with the per capita at NPR 41,000

[20] The RCA findings had indicated that many households do not always remember the name of the development programmes that provide support to them. Attribution is therefore quite challenging when there are many different project activities taking place, as is the case in Khotang, where in addition to SDC support, other donors (such as ADB) and organizations like PAF and CEPREAD are involved. The survey sought to minimize this difficulty by recruiting and training the already existing local Social Mobilizers as enumerators for the study as they would know which progammes had been implemented in their respective VDCs.
[21] Includes SDC supported as well as others

Overall, the average annual household income of the sample households is NPR 197,000[22]; with the per capita income at NPR 41,000. Amongst the different caste and ethnic groups, Brahmin/Chhetry households were found to have higher average annual incomes (NPR 199,000) than Janajati and Dalits (Table 7).

**Chart 7: Average Household Incomes (in NPR)**




Source: Household Survey 2015

When the income levels were disaggregated amongst households that were receiving remittances and those that do not then, the survey findings show that households with migrant workers have average annual incomes of NPR 235,000, while those that do not, have annual incomes of NPR 174,000. These figures clearly indicate the importance of remittances on household income and their impact on poverty and living standards.

The survey also asked women household members whether they had bank accounts and business/enterprises in their names. On these aspects, the figures show that only 8 percent of women have bank accounts and that the number for having businesses/enterprises is even lower at 2 percent.

### 4.5. Changes in Living Conditions

### a. Physical Access to Service Centres

- Roads have reduced travel times to service centres
- Majority of the respondents travel on foot to service centres, except for going to district headquarters which is done mostly by using public transportation
- Trail bridges are also important for providing safer access to service centres

Table 13 below lists the average time it requires for villagers to reach various service centres. It shows that primary schools are generally located within 35 minutes walk from households, while the district headquarter in Diktel is the farthest, and on average 3 hours away. Unfortunately, the Baseline study did not record the travel times before the construction of the Diktel – Maure- Phoksintar, so it was not possible to compare changes, but, one can reasonably infer that since then there will have been reductions in travel times. Especially, when one considers the RCA findings which noted that almost all the families considered the roads to be a 'significant sign of progress', due to the improved and faster access and inflow of cheaper goods into the villages.

[22] The Baseline did not record average annual household incomes and so any changes since then could not be calculated.

The qualitative findings also indicated that having a road does not necessarily mean that people start using motorized vehicles (generally public buses) to travel. Availability of vehicles, fares, condition of the roads, cramming of people along with distances to travel, all have an influence on whether a person uses public transportation or not. The table below shows that presently, most people prefer to walk to most service centres, except to the district headquarter.

**Table 13: Access to Service Centres**

| | | Nearest Road head | Primary School | High School | Health Post | Agri. and Vet Service centre | Local Market | District Hq |
|---|---|---|---|---|---|---|---|---|
| Average Travel time | | 42 mins | 35 mins | 49 mins | 52 mins | 1 hr 38 mins | 1 hr 21 mins | 2 hrs 51 mins |
| Mode of travel (in %) | Walking | 100 | 73 | 70 | 73 | 74 | 89 | 39 |
| | Motorized vehicle | | 25 | 26 | 26 | 20 | 2 | 58 |
| | Both | | 2 | 1 | 1 | 6 | 9 | 3 |

Source: Household Survey 2015

In addition, the qualitative findings also noted that after the construction of the road, new shops and businesses were emerging along the road network and this along with the improved access had led to decrease in cost of items (which previously had to be portered) and greater number of goods (food, construction materials, agricultural inputs, mobile phones and credit, etc).

**Table 14: Households that need to cross Trail Bridges (in %)**

| Nearest Road head | Primary School | High School | Health Post | Agri. and Vet Service centre | Local Market | District Hq |
|---|---|---|---|---|---|---|
| 3 | 2 | 3 | 2 | 10 | 11 | 46 |

Source: Household Survey 2015

The survey findings show that the majority (60%) of the shops are indeed located along the road corridors (less than 30 mins away) and that as one goes further in land the number decreases, with 34 percent of shops located between 30 minutes to 1 hour and 6 percent located more than 1 hour away.

Trail bridges were also found to be important for providing safer access to various service centres. Table 14 below indicates that the majority of people need bridges to access district headquarters (46%) and markets (11%).

## b. Education Levels

- Higher educational levels vary by caste/ethnicity and sex
- Twice as many Brahmin/Chhetry and Janajati households were had educational levels of secondary level or above in comparison to Dalits

The survey findings show that educational levels[23] vary by caste/ethnicity and sex, especially for higher levels of education. Table 15 shows that as while the distribution up to the lower secondary levels (Class 6-8) is similar, after that, there is a noticeable decline of Dalits with secondary or higher levels of

[23] The Baseline did not record educational levels.

education in comparison with Brahmin/Chhetrys and Janajaties. Between men and women there is also a difference, though, it is not as pronounced. One significant reason for this rise in parity[24] according to the qualitative findings is that families have aspirations for better employment opportunities (beyond farming) for their children, and they see education as a means to fulfill those ambitions.

**Table 15: Education Levels of the Sampled Household Members (in %)**

| | Illiterate | Can Read and Write | Primary Education (1-5) | Lower Secondary (6-8) | Secondary Education (9-10) | Intermediate or Above |
|---|---|---|---|---|---|---|
| Dalit | 19 | 19 | 22 | 22 | 14 | 3 |
| Janjati | 12 | 15 | 16 | 22 | 25 | 9 |
| Brahmin / Chhetri | 11 | 14 | 16 | 21 | 26 | 9 |
| Men | 6.5 | 9 | 20 | 25 | 29 | 10.5 |
| Women | 18 | 20 | 16 | 20 | 21 | 7 |

Source: Household Survey 2015

### c. Changes in Health

- 94% of the households with children under 5 years had vaccinated their child
- 88% of pregnant women had gone for the 4 Ante Natal Checkups
- 61% of women had given birth at home
- 3% of the households had women who were/had been suffering from uterine prolapse

Almost all families (94%) with children under the age of 5 years, were found to have vaccinated their children fully with Diphtheria-Tetanus-Pertussis (DPT), Polio, and Bacilus Calmette-Guerin (BCG). One significant reason for the high rates according to the RCA is due to the work of Female Community Health Volunteers (FCHVs) who are always reminding mothers to vaccinate their children.

Their work was also cited as catalyst for the higher number of women seeking Ante Natal Check (ANC) during pregnancies. With the survey findings showing that 88 percent of pregnant women had gone for the recommended 4 visits; with no differences seen between the various caste/ethnic groups.

Births at birthing centres were however found to be low. The survey findings show that the majority of women (61%) had given birth in their homes with the assistance of either their relatives or Traditional Birth Attendants (TBAs). Meanwhile 39 percent were found to have gone to formal Birthing Centres, with some variance seen amongst the different caste/ethnicity. Larger proportion of Brahmin/Chhetry women (48%) had given to birth at for health service centres compared to other groups (Table 16). The RCA findings note that in villages, many mothers still prefer to give birth at their homes because is it easier, comfortable and free while traveling to the birth centres may mean having to travel long distances which pregnant women do not necessarily want to take, unless there is a complication.

**Table 16: Birth of the Last Child (in %)**

[24] Other RCA studies conducted in the east of Nepal also indicate that educated bridges are considered more eligible and have more marriage proposals.

| | Home birth with relatives to help | Home birth with Traditional Birth Attendants (TBA) to help | Home birth with formal health service provider's help | Birth at a formal Birthing Centre |
|---|---|---|---|---|
| Dalit | 44 | 20 | 11 | 24 |
| Janajati | 43 | 13 | 8 | 36 |
| Brahmin/Chhetry | 31 | 13 | 7 | 48 |

Source: Household Survey 2015

Amongst the sampled population cases of uterine prolapse were also recorded during the survey. The highest number of percentage of women sufferers (8%) were from Brahmin/Chhetrys, followed by Dalits (4%) and Janajaties (2%). Surprisingly 30 percent of the women reported that they had had not sought any medical treatment, while 48 percent had gone to a hospital or private clinic for treatment and 2 percent had received help through health camps.

### d. Drinking Water and Sanitation

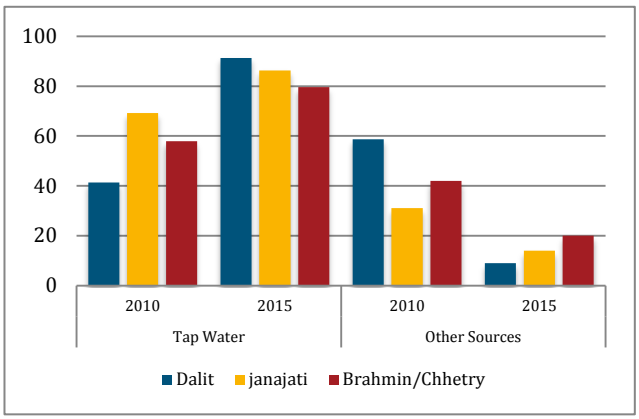
- 84% of the sampled households have access to piped water (either directly to their homes or community taps), this represents an increase from the 62 % that was recorded in 2010
- 78% of the sampled households have toilets, which is also an increase from 43% that was noted in 2010

The percentage of households with using tapped water (either private piped water brought to peoples' homes or community taps) has increased from 62 percent during the Baseline to 84 percent in 2015 (Chart 8). These figures are contradictory to the RCA findings in Khotang, which indicated that scarcity of water, both drinking and for farming purposes. The reason for the discrepancy is explained when one disaggregates the figures by VDCs, which shows that the VDC which was selected for the RCA has the lowest (38%) of households with piped water, with the majority relying on *Kuwa* (ground water).

With respect to toilets, there has been a 78 percentage rise in the number of families with toilets from 43 percent in 2010 to 76 percent in 2015. The RCA findings showed that many families have been supported by development projects for constructing toilets, either through the supply of materials and/or technical assistance, and people have also become more aware of hygiene and cleanliness which has lead to its rise. But, another significant reason can be attributed towards the 'Sanitation Card' system; whereby families are provided with cards[25] based on the type of toilets that they have. These cards need to be produced to the government officials if families require services from the VDC offices (eg. getting old age allowances, changing land ownership titles, etc), otherwise nothing is done. Many families have therefore been forced to build toilets, so as to not be excluded from services.

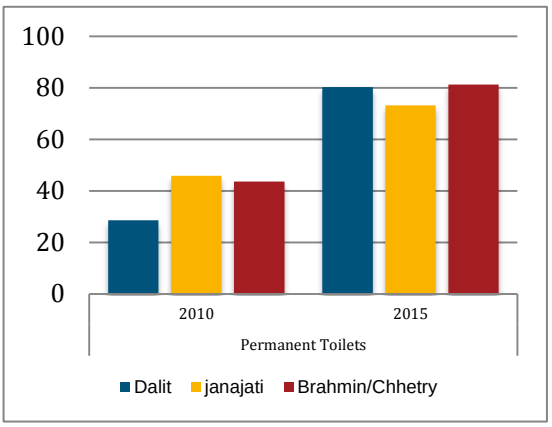
[25] There are three types of cards- White (if a household has a water sealed toilet), Yellow (if the toilet is not water sealed) and Red (if the household does not have a toilet).

**Chart 8: Household Drinking Water Sources (in %)**




Source: Baseline (2010) and Household Survey (2015)

**Chart 9: Households with Toilets (in %)**




Source: Baseline (2010) and Household Survey (2015)

## e. Access to Energy

- There has been no significant change in the number of households with electricity; with 75% of households having access compared to 73% in 2010
- Also, the majority of the households (86%) continue to rely on firewood for cooking

The survey findings show that there has been an only a small increase in the number of families who have access to electricity, from 73 percent in 2010 to 75 percent in 2015. Meanwhile over 86 percent of the households are relying on firewood for cooking. The RCA findings indicate that most households plant trees on their private lands for cooking, and that, they go to cut branches in the community forests once a year.

**Chart 10: Changes in Households with Electricity (in %)**

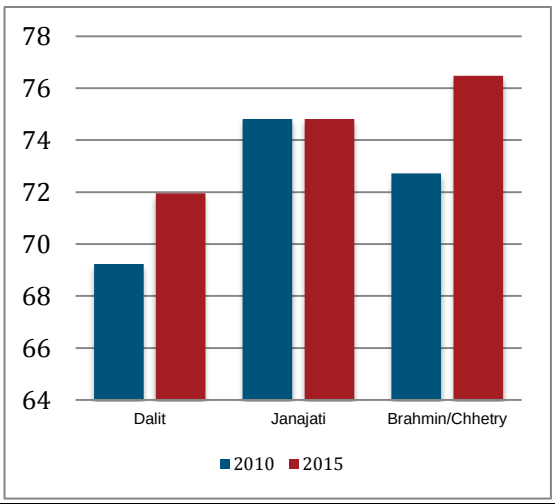
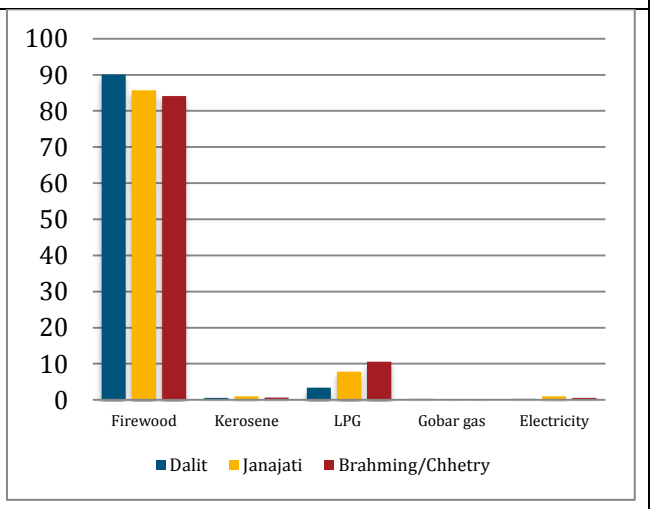



**Chart 11: Household's Source of Cooking Fuel (in %)**



## 5. Conclusions

The findings of the survey show that the number of households escaping 'extreme poverty' or 'ultra poverty' is growing; resulting in the rise of the 'poor' and 'middle' levels. However, these shifts are not always progressive and the findings show that households are vulnerable to slip back into poorer levels, if they suffer external and internal shocks (such as death of the main bread winner, decrease in remittances, drying up off savings, bad harvest, etc).

Foreign migration and remittances have become an integral source of livelihood in Khotang district, with the trend to likely increase in the upcoming years. Remittances have had a direct influence on poverty levels; especially for Dalit families who have limited opportunities for other alternative livelihood choices (such as farming, salaried employment, setting up of business) compared to the other groups. However, the impact on inequality is less noticeable, as findings show Dalit households receive less remittances and have more loans/interests to pay off.

Farming practices meanwhile were not found to have significantly changed within the last five years, except for the usage of manure/bio-pesticides which had been supported by SDC. More than half of the households have food sufficiency less than 6 months and were found to be increasingly more reliant on markets to access food (mostly rice).

Road access was found to have been important for increasing access to food items (and other commodities) and has also lead to decrease in prices. Travel times to various service centres have also decreased, though the majority of the population continue to travel by foot, due to the availability of public transportation, fares and condition of roads.

There are a number of user groups/committees which have been established by development programmes/projects. The findings indicate that more than half of the households are members of at least one. Women were found to be members of mostly Mothers groups and CFUGs.

Living standards were found to have improved since 2010. More households have access to piped water and toilets. Less changes were seen in number of households having electricity and the type of cooking fuel used. Mobile phones were however ubiquitous, with the majority of households having at least one.

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## Annex 1: List of Indicators

| Domain | Baseline 2010 | | Mid-term review 2015 | |
|---|---|---|---|---|
| | SN | Indicators | SN | Indicators |
| **Demography** | 1 | HH size | 1 | HH size |
| | 2 | HH Sex ratio | 2 | HH Sex ratio |
| | 3 | HH by Caste/Ethnicity | 3 | HH by Caste/Ethnicity |
| | 4 | Female headed HHs | 4 | Female headed HHs |
| | | | 5 | Dependency ratio |
| **Productive assets and debt** | 5 | HHs without land | 6 | HHs without land |
| | 6 | HHs with food sufficiency from own production | 7 | HHs with food sufficiency from own production |
| | 7 | HHs in debt | 8 | HHs in debt |
| | | | 9 | HHs landholding size |
| | | | 10 | HHs landholding type |
| | | | 11 | HHs using any improved crop varieties |
| | | | 12 | HHs livestock holdings |
| | | | 13 | HHs using forestry products |
| **Education** | | | 14 | HHs members by education levels |
| | | | 15 | HHs with enrolled of children |
| | | | 16 | HHs with drop outs |
| | | | 17 | HHs with members that participated in vocation trainings |
| **Livelihoods and Income sources** | | | 18 | HHs with main sources of income |
| | | | 19 | Annual HH income |
| | 8 | HHs that are dependent on daily wage labour | 20 | HHs that are dependent on daily wage labour |
| | 9 | HHs with members who are labour migrants | 21 | HHs with members who are labour migrants |
| | 10 | | 22 | Destination of migrants |
| | | | 23 | HH income from remittance |
| | 11 | HHs that are involved in trade | 24 | HHs that are involved in trade |
| | 12 | HHs that are highly in debt | 25 | HHs that are highly in debt |
| | | | 26 | HH income from SDC supported public works |
| | | | 27 | HH income from non-SDC supported public works |
| | | | 28 | HHs Involved in at least 2 SDC support projects |
| **Health** | | | 29 | HHs that used health workers during birth deliveries |
| **Living standards** | 13 | HHs with drinking water source | 30 | HHs with drinking water source |
| | 14 | HHs with electricity | 31 | HHs with electricity |
| | 15 | HHs with latrines | 32 | HHs with latrines |
| | | | 33 | HHs with different roofing materials |
| | | | 34 | HHs with mobiles |
| | | | 35 | HHs with radios |
| | | | 36 | HHs with TVs |
| | | | 37 | HHs with motor bikes |
| **Participation** | 16 | HHs with members involved community activities | 38 | Men and women's involvement in community groups |
| | | | 39 | HHs that are members of Community Forestry Groups |
| | | | 40 | Men and women's involvement in community processes (ward forums) |
| **Access** | | | 41 | Distance to nearest road head |
| | | | 42 | Distance to district headquarters |
| | | | 43 | Distance to educational institutes |
| | | | 44 | Distances to health services |

**Annex 2: Participatory Well-being Ranking used during the Baseline 2010**

| Well-being Raking Category | Indicators |
|---|---|
| **Ultra Poor (*Gha Category*)** | • HHs with food sufficiency for 3 months or less from own production<br>• HHs having no or marginal land holdings<br>• HHs dependent on wage labour as main source of livelihood<br>• HHs in debt<br>• HHs that took loans to become labour migrants, but have not managed to repay the loans<br>• HHs with elderly and physically disabled members |
| **Poor (*Ga Category*)** | • HHs with food sufficiency for 5-6months from own production<br>• HHs that rent in land<br>• HHs that took loans to become labour migrants, but have not managed to repay the loans<br>• HHs without or very less daily income sources |
| **Middle (*Ba Category*)** | • HHs with food sufficiency between 6-12 months from own production<br>• HHs with some earnings from labour migration<br>• HHs with permanent and/or temporary employment<br>• HHs which invested at least 50% of the costs for sending a member as a labour migrant |
| **Rich (*Ka Category*)** | • HHs with food sufficiency for more than 12 months from own production<br>• HHs which loan money<br>• HHs with houses and landholdings in market areas<br>• HHs with members earning high salaries<br>• HHs with members working for the government<br>• HHs with members having pension<br>• HHs with businesses<br>• HHs which rent out land |

Source: JSSN (2011)

## Annex 3: Measuring Poverty Levels

This section describes how households were categorized into different poverty levels based upon the calculation of a Poverty Vulnerability Indext (PVI).

### 1. Ranking and Weighing Indicators

The 9 indicators that were identified were first hierarchically structured and assigned a score between range (0, 1) based on the severity of poverty (or deprivation) of the household such that $0 \leq score_k \leq 1$; score 0 if there is 'no poverty' and 1 if there is 100 percent poverty indicating 'extremely poor' in that particular indictor. The hierarchical categories were assigned by simply proportioning the range with an expert judgment for the weightage of the category. For example, an indicator containing four categorical values (such as food sufficiency) were assigned a score of 0, 0.25, 0.5 and 1 depending on the significance of the category on the scale of 0 to 1. While other indicators with categorical values of 'yes/no' (such as households that rent in land) were scored as 0 or 1, representing non-poverty and poverty respectively.

Meanwhile, the ranking of the indicators was done based on available literature and the qualitative findings from the RCA to represent the general perception of poverty in the urban context of Nepal (see Table 1). The influence factor of each indicator is the weightage coefficient computed using the following function:

$$w_k = \frac{1 + n - r_k}{\sum_{k=1}^{n}(1 + n - r_k)}, \qquad For\ all\ \ 0 \leq w_k \leq 1, \qquad 1 \leq r_k \leq n, \qquad and\ \sum_{k=1}^{n} w_k = 1$$

Where, $w_k$ is weighted coefficient of indicator *k*, *n* (=9) is the number of indicators, *r* is the designated rank of the *k*th indicator.

This equation normalizes the weightage factor $w_k$ of *k*th indicator in the range (0, 1). Through this process, the highest ranked indicator receives the relative maximum value and the lowest ranked indicator receives the lowest value. In this method the computed weightage of indicator is the relative weightage among the set of indicators. The cumulative weightage of all the indicators is always 1 (see Table 1).

**Table 1: Ranking and Weighing of Indicators**

| Rank (r) | Indicators | 1+n-r | Weight (w) |
|---|---|---|---|
| 1 | 2 | (3) = 1+n-(1) | 4 = (3)/ Σ(1 + *n* – *r* ) |
| 1 | Households that receive remittances | 9 | 0.200000000 |
| 2 | Food sufficiency levels | 8 | 0.177777778 |
| 3 | Households that are in debt | 7 | 0.155555556 |
| 4 | Households that have members who are permanently | 6 | 0.133333333 |
| 5 | Households that are dependent on wage labour | 5 | 0.111111111 |
| 6 | Households that receive pensions | 4 | 0.088888889 |
| 7 | employed Households with business | 3 | 0.066666667 |
| 8 | Household landholding size | 2 | 0.044444444 |
| 9 | Households that rent in land | 1 | 0.022222222 |
| n = 9 | Total | Σ(1 + *n* -*r* ) = 45 | 1.000000000 |

**Table 2: Scoring of Variables**

| Rank | Key Information | Indicators | Variables | Score |
|---|---|---|---|---|
| 1 | Remittances | Households that are receiving remittances | Household is receiving remittances | 0 |
| | | | Household is not receiving remittances | 1 |
| 2 | Food sufficiency | No. of months of food sufficiency from own production | >12 months | 0 |
| | | | 0-12 months | 0.25 |
| | | | 7-9 months | 0.5 |
| | | | 3-6 months | 0.75 |
| | | | < 3months | 1 |
| 3 | Debt | Debt amount | Households that do not have any debt | 0 |
| | | | Debt amount is <10,000 | 0.25 |
| | | | Debt amount is 50,000- 10,000 | 0.5 |
| | | | Debt amount is > NRs 50,000 | 1 |
| | Permanent employment | No. of members that are permanently employed | Household had at least one member who is permanently employed | 0 |
| | | | Household does not have any members who are permanently employed | 1 |
| 4 | Wage labour | Households that are dependent on wage labour | Households which do not rely on wage labour | 0 |
| | | | Households whose main source of income is wage labour | 1 |
| 6 | Pension | Households that receive pension | Households receive pension | 0 |
| | | | Households do not receive pension | 1 |
| 7 | Business | Households that have businesses | Households that have business | 0 |
| | | | Households that do not have businesses | 1 |
| 8 | Landholdings | Landholding size | >1 ha | 0 |
| | | | 1-0.5 ha | 0.5 |
| | | | >0.5 ha | 1 |
| 9 | Households that rent in land | Households that rent in land | Households that do not rent in land | 0 |
| | | | Households that rent in land | 1 |

## 2. Deriving the Poverty Vulnerability Index of Households

The Poverty Vulnerability Index (PVI) is the composite index and an empirical aggregation of the 9 variables which have been synthesized into one given factor representing the cumulative influence of those variables. Household level PVI is derived by multiplying each indicator score with the associated weighted coefficient and aggregated to obtain the PVI of poverty of each individual household. Thus the PVI is a weighted arithmetic mean of the indicator score, where the sum of weight is always 1.

The PVI is computed using the following function:

$$PVI_h = \sum_{k=1}^{n} w_k \times score_k, \quad for\ all\ 0 \leq PVI_h \leq 1$$

Where, $PVI_h$ is the Poverty Vulnerability Index of household *h*, $W_k$ is the ranked weightage, $Score_k$ is the scaled score of indicator *k*, *n* (=19) is the number of indicators.

### 3. Classifying Households into Poverty Levels

The PVI was classified into four groups to categorize households into the four different levels of poverty/deprivations - Rich, Middle, Poor and Ultra poor. To make the household survey dataset comparable with the Baseline, the PVI ranges were derived by going back to the Baseline index, assigning weights to the variables and calculating the ranges.

**Table 3: PVI Categorical Range**

| PVI Range | Poverty Levels |
|---|---|
| 0 but less than 0.44 | Rich |
| 0.45 but less than 0.60 | Middle |
| 0.61 but less than 0.96 | Poor |
| 0.97 to 1.00 | Ultra poor |