





Baseline Survey of Floods and Landslides Recovery Operation

Final Report

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 International Federation
of Red Cross and Red Crescent Societies

 Nepal Red Cross Society

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List of abbreviations

| | | |
|-------|---|--|
| CADRE | - | Community Action for Disaster Response |
| CHF | - | Swiss Franc |
| DDRT | - | District Disaster Response Team |
| DREF | - | Disaster Relief Emergency Fund |
| DRR | - | Disaster Risk Reduction |
| EOC | - | Emergency Operation Centre |
| EPoA | - | Emergency Plan of Action |
| FGD | - | Focus Group Discussion |
| GBV | - | Gender-based Violence |
| GESI | - | Gender Equality and Social Inclusion |
| HH | - | Household |
| IFRC | - | International Federation of Red Cross and Red Crescent Societies |
| IRA | - | Initial Rapid Assessment |
| KII | - | Key Informant Interview |
| MoAD | - | Ministry of Agriculture Development |
| MoHA | - | Ministry of Home Affairs |
| NDRT | - | National Disaster Response Team |
| NGO | - | Non-Government Organization |
| NPC | - | National Planning Commission |
| NRCS | - | Nepal Red Cross Society |
| PFRNA | - | Post Floods Recovery Needs Assessment |
| PGI | - | Protection, Gender and Inclusion |
| RTEF | - | Ready to Eat Food |
| SPSS | - | Statistical Package for Social Science |
| ToR | - | Terms of Reference |
| USD | - | US Dollar |
| WASH | - | Water Sanitation and Hygiene |

Executive summary

Heavy rainfall since 10 August 2017 led to floods and landslides across 31 districts in Nepal that affected over 1.7 million people. After the rescue, relief and response phase, the International Federation of Red Cross and Red Crescent Societies (IFRC) and in country Partner National Societies (PNS) have started the early recovery activities. The purpose of this baseline study is to assess the existing situation of shelter; livelihood and basic needs; health; water, sanitation and hygiene (WASH); protection, gender and inclusion (PGI); and disaster risk reduction (DRR). The study provides baseline information on the outcome indicators of floods recovery operations of the Flood and Landslides Operation Project of the target municipal areas in 7 flood affected districts including Bardiya, Mahottari, Rautahat, Saptari, Siraha, Sunsari and Udayapur. The information will be used as benchmarks to measure the changes/progress of achievements on verifiable indicators presented in the recovery phase of IFRC Emergency Plan of Action (EPoA). The baseline values will be further utilized to compare with end-line values during the final evaluation of the project.

Study approach and methodology

The study employed mixed, participatory, indicator-based, gender equality and social inclusion, data triangulation, and capacity building approach. It is an analytical study primarily based on primary sources of information. However, the necessary and required data was also collected through secondary information by reviewing the published and unpublished reports. Primary data was gathered through household survey, key informants' interview (KIIs) and focus group discussions (FGDs).

The sample size for the household survey was 706 proportionately divided into districts, municipalities/rural municipalities, and wards. 10 FGDs comprising at least 1 in each project district were conducted with the beneficiaries. KIIs were carried out with 28 persons including district level government stakeholders, NRCS district and sub-chapters, elected representatives and officials of wards and municipalities, and health post in-charges. Checklists were used to conduct the FGDs and collect information from KIIs. Damaged houses, elevated water sources, toilets, hygiene status, living status and livelihood practices were observed during the field visit. Data was analysed by using SPSS and Excel.

Findings

Demographic and socio-economic characteristics

- Altogether 706 respondents were interviewed. Out of them, 59.8% were women and remaining 40.2% men.
- The mean age of the respondent was 43.6 year spread over 18 to 82 years. 86.7% respondents were married.
- 52.4% HHs had agriculture as a main occupation followed by labourer/wage earner 33.3%, household work 5.9%, and business 4%.
- 52.7% respondents were literate. Only, 0.6% of the respondents were found completed bachelor and above degree.
- The mean family size was 7.
- Terai Dalit was the largest ethnic group (32%) followed by Terai Janajati (28.5%), Terai and Hill Brahmin/Chhetri (11.5%), Muslim (10.5%).
- 20.7% households had one or more member(s) with disability/ies.
- 11% households in total had one or more member(s) with pregnant or lactating women.
- 32.4% households were women-headed.

Shelter

- 44.1% of the total respondents reported that their houses were washed away. 42.2% houses were partially damaged and 12.7% houses were submerged but not damaged. Only 0.3% of total houses in the study area were not affected at all by the floods.
- 85.6% of the respondents had knowledge about at least one of the seven factors to be considered while selecting the site for constructing safe house. 77.3% of the total houses were located in water logged area. 76.3% houses were situated at low land and 49.3% at river-bank. There was mismatch between knowledge and practice on the construction of safe houses largely due to unavailability of land in the settlement area for house construction. Particularly in Terai region, people do not prefer to live in scattered way.
- Only 1.4% of respondents were aware that there were government rules regulating the quality of construction of private houses.
- Only 3.5% of the total HHs received support and guidance for safe shelter construction during last one year preceding the survey.
- Only members of 0.3% HHs were participated directly in any safe shelter programme during last one year preceding the survey.

Livelihood and basic needs

- Only one person per HH was found contributing to their HH income in majority of the households (54%) ranging from 25% in Udayapur to 67.5% in Rautahat
- Only 55.1% of the HHs had access to agriculture land. On the other hand, 44.9% had no access on it.
- Total 32.6% of the HHs had relied on primary sources only and rest 67.4% had multiple sources of income. 49.5% of the HHs had agriculture as primary source of income.
- The average family and per capita income in the project area was NPR 130,586 and 18,586 respectively. The income distribution of the HHs was positively skewed.
- Only 3.7% of the HHs had food sufficiency and they saved their product and cash after 12 months consumption with their regular income except daily wage labour
- 5.4% of the HH members had received skill development training for livelihood improvement. Altogether only 3.7% HHs had received business start-up support from various organizations.
- Still 45.3% of HHs had money lenders as a source of loan where they have to pay high interest.
- 25.1% HHs had been working abroad and sending remittances. The percentage was the highest in Siraha 51.2% and the lowest in Rautahat 4.1%

Health

- 59.2% of the total respondents believed that they should first visit the government health institutions for treatment when they became sick.
- 58.5% of the HHs had their family member falling sick during the last one year preceding the survey and 60.1% among them treated at government health institutions.
- Altogether 59.8% of the respondents were aware about the at least one cause(s) of diarrhoea. A family member from 38% of the HH suffered from diarrheal case in recent past. Out of them, 57.1% were taken to the hospital for treatment and 54.1% treated with rehydration fluid (Jeevan Jal).
- 49.3% of the respondents were aware about at least one way to prevent the problem of diarrhoea. Altogether 36.8% respondents believed that the use of safe and drinkable drinking water was the best way to prevent diarrhoea followed by 35.8% washing hands with soap water and 29% use of latrines/toilets.
- 49.9% of the respondents had knowledge about the causes of malaria and dengue. 49.6% perceived that mosquitoes bite was the reason for malaria and dengue.
- 49.3% of the HHs were aware about at least one of the methods to prevent malaria and dengue. As 41.1% mentioned nets as a way of preventing malaria. On the other hand, 25.1% were actually using nets.
- 50.8% of the HHs were found to adopt at least one method for controlling vector borne diseases

- 3.1% of the interviewed HH said that at least one member(s) from the HHs had participated in any health-related programmes including training, orientation and awareness raising activities.

Water, sanitation and hygiene

- 91.9% HHs were using tube-wells or hand pipes as the main source of drinking water. 81.7% HH had their own private hand pipes and remaining 10.2% were using public hand pipes. But, no elevated tube-wells were found in the study areas.
- Total 63.9% of the HHs had their own sources and did not spend any time for fetching drinking water. Interestingly, 0.3% of the HHs still had to spend 10 to 20 minutes for fetching drinking water.
- 48.9% of the respondents reported that their sources of drinking water changed with seasons.
- 15% HHs said they drank treated drinking water all year around, 24.8% of the HHs treated water seasonally and 60.2% did not treat their water at all.
- 61.5% of the respondents reported that their water supply was not affected by floods.
- 67.3 of the respondents perceived that their water supply was sufficient for their needs.
- 82.3% of the HHs had a toilet. Many latrines were either washed out or damaged. 54.7% of the respondents had knowledge on health risk from lack of hand washing and personal hygiene
- 93.1% of the respondents reported that they washed hand before eating, followed by after toilet (83%), before food preparation (68.6%). 69.8% of the respondents reported that they used soap water for washing hand.
- 28.6% managed their waste in a dustbin, 20.3% in kitchen garden for composting.
- Only 3.4% in total had received orientation on hygiene practice

Access to information; protection, gender and inclusion (PGI)

- 78.6% respondents reported that they had used at least one of the six listed mass communication channels.
- The top most five effective ways of the sharing NRCS information in the project area were through local radio programme (57.9%), SMS text/telephone messages (41.9%), face to face conversation (36.4%), TV programme (33.6%) and through community leaders (27.2%).
- 8.6% of the respondents were found aware about registering the complaints or questions to the NRCS. Three top most common effective modes of registering complaints against NRCS in the project area as face to face (92.5%), telephone conversation (46.3%) and SMS (41.1%).
- 23.9% of the total respondents were aware about types of GBV.
- 20.8% of the total respondents said they were aware about physical violence, 14.9% on mental violence, 10.9% on other violence and 6.2% on sexual abuse.
- 1.4% of the respondents reported that their family members faced some form of GBV including physical, mental, sexual and others.

Disaster risk reduction

- During FGDs and KIIs, it was pointed out that there was no emergency safe shelter in entire project locations.
- Municipalities/rural municipalities, wards and communities had no task forces including search and rescue (SAR), First Aid, and response mechanism. The communities were lacking SAR materials.

Table 1: Outcome indicators with baseline value

| Sector | Indicators | Baseline value | Reference Box |
|-----------------------------|--|----------------|---------------|
| Shelter | 1.1 % of families living in shelters meeting agreed standards for emergency shelter for the specific operational context | 0% | Box 3.2 |
| | 1.2 % of target families who have increased knowledge about safe shelter construction | 1.4% | Box 3.1 |
| Livelihoods and basic needs | 1.1 % of those assisted for whom food consumption is equal or greater than the minimum food basket equivalent | 3.7% | Box 4.1 |
| | 1.2 % of targeted population whose livelihoods are (restored to/or improved from) pre-disaster level | 53.1% | Box 4.2 |
| Health | 1.1 % of targeted people with increased knowledge of and practiced preventive health behaviour | 41.2% | Box 5.2 |
| | 2.1 % of people in the operation catchment area who can access appropriate health services | 33.9% | Box 5.1 |
| WASH | 1.1 % of target population that has access to sufficient safe water | 30.3% | Box 6.1 |
| | 2.2 % of target population that is using adequate sanitation | 10.5% | Box 6.2 |
| | 1.2 % of target population that has increased knowledge of hygiene practices | 40.1% | Box 6.3 |
| DRR | 1.1 % of targeted communities with an active and well-equipped response team | 0% | Box 8.11 |

Chapter – I Introduction

Heavy rainfall was experienced in different parts of Nepal since 10 August 2017. This led to floods and landslides that affected over 1.7 million people across 31 districts. The number of people who were reported dead was 149, injured 134, and 27 missing. 352.7 thousand families along with 1.8 million people have been affected. Out of that, 92.2 thousand families having 461.1 thousand people are displaced. Some 65 thousand houses are completely destroyed and 145 thousand are partially damaged. Flood waters damaged 449 water supply schemes, 142 shallow tube wells, and 120 sanitation facilities. The agricultural losses are estimated at USD 69.5 million. Livestock and agriculture lands along with the crops that were ready to harvest were lost due to the floods. A total of 99 health facilities were damaged of which 5 were fully destroyed and 94 partially damaged. A total of 961 government managed irrigation schemes and river training infrastructures in Terai Region were affected to various degree by the floods¹.

The Government of Nepal took the lead in rescue, relief and response, and welcomed assistance from other countries' governments, organizations and interested individuals to support the response. On its part, Nepal Red Cross Society (NRCS) immediately activated its Emergency Operation Centre (EOC). NRCS responded to the situation by mobilizing trained volunteers and staff in the field to conduct rapid assessment, distributing relief items (ready to eat food, water, and emergency shelter material), rescue, evacuations, logistic management, and first aid services to the people affected by the disaster. The works were carried out in strong association with Nepal Police. A total of 1,289 volunteers and Junior/Youth Red Cross members and 21 National Disaster Response Team (NDRT) members along with District Disaster Response Teams (DDRT), Community Action for Disaster Response in Emergency (CADRE) and first aid teams were mobilized².

The International Federation of Red Cross and Red Crescent Societies (IFRC) allocated Disaster Relief Emergency Fund (DREF) of CHF 497,099 on 13 August to support NRCS in carrying out immediate relief activities. An Emergency Appeal of CHF 3.5 million was launched on 22 August to meet humanitarian needs of 16.2 thousand families, based on the Initial Rapid Assessment (IRA) preliminary findings. NRCS deployed, 1,289 Red Cross volunteers and Junior/Youth Red Cross members including District Disaster Response Team (DDRT) members, trained First Aid and National Disaster Response Team (NDRT) members along with volunteers on the ground for immediate response such as searching and rescuing people, providing first aid services to injured people and distributing Ready to Eat Food (RTEF) and managing temporary livings of evacuated people. Similarly, NRCS volunteers trained in Community Action for Disaster Response (CADRE) were involved in the search and rescue of the people in the affected areas.

Overall, more than 23 thousand families (115 thousand people) have been reached with relief items in 31 districts. The relief phase of the operation has come to an end. NRCS with support from IFRC and in country PNS have started to plan for early recovery activities in the targeted districts comprising Bardiya, Mahottari, Rautahat, Saptari, Sarlahi, Siraha, Sunsari and Udayapur.

1.1 Purpose

Purpose of this baseline study is to assess the existing situation and provide baseline information on shelter; livelihood and basic needs; health; water, sanitation and hygiene (WASH); protection, gender and inclusion (PGI); and disaster risk reduction (DRR) of target municipal areas in 7 flood-affected districts that are being supported by the IFRC Appeal. They include Bardiya, Mahottari, Rautahat, Saptari, Siraha, Sunsari and Udayapur. The information will be used as benchmark to measure the changes/progress of achievements using verifiable indicators presented in the recovery phase of IFRC Emergency Plan of Action (EPOA).

1 Emergency Plan of Action (EoPA), IFRC, 2018

2 Emergency Plan of Action (EPoA), IFRC, 2018

1.2 Objectives

The objective of this survey is to provide the baseline value on the outcome indicators of Flood and Landslides Operation. It covers the sectoral indicators of shelter, livelihood and basic needs, health, WASH, PGI, and DRR to measure the changes over the course of operation in the target areas.

1.3 Scope

The study mainly covers the outcome indicators of floods and landslides recovery operation. It initially adapted existing NRCS survey tools/questionnaires and further finalized in consultation with the project team. These include household survey questionnaire, and KII and FGD checklists. The study emphasises on generating base value of the outcome indicators (Annex 1) aligned with project objectives and results based on the IFRC detailed operational plan as well as the monitoring and evaluation plan. It will be further utilised as a benchmark to compare end-line values during final evaluation of the project. The scope of the study is included in the Terms of Reference (ToR) of the survey (Annex 2).

1.4 Survey strategy/approach

Mixed: The survey employed both qualitative and quantitative approach generated through primary and secondary sources.

Participatory: This approach was helpful to involve the diverse target groups (households and community); representatives, officials and volunteers of NRCS district and sub-chapters; and local and district level government stakeholders.

Indicator-based: The outcome indicators presented in the detailed operational plan as well as the monitoring and evaluation plan is the prime target of the survey.

Gender Equality and Social Inclusion (GESI): Inclusiveness of the marginalized groups was focused during the entire study period including data collection and analysis.

Data triangulation approach: The survey team gathered qualitative and quantitative information through various complementary sources and triangulated them.

Capacity building: The approach was to enhance the capacity of the NRCS representatives, staff and volunteers to make them well aware about the project objectives, components and implementation modalities. They were also utilized for supervision and data collection during the survey. It helped them to understand and internalize the project indicators, recognize stakeholders, and identify project and thematic areas that they will have to take consideration in implementation of the project.

1.5 Methodology

1.5.1 Study design

The study was an analytical approach primarily based on primary sources of information. However, the necessary and required data was also collected through secondary information by reviewing the published and unpublished reports. Primary data was gathered through household surveys, key informants' interview (KII) and focus group discussions (FGDs).

1.5.2 Review of secondary information

The documents collected and reviewed comprise (i) project documents and log frame; (ii) Government of Nepal policies and strategies related to DRR; (iii) IFRC emergency appeal and emergency plan of action (EPoA); (iv) IFRC operations updates; (v) NRCS situation update reports; (vi) ward/rural municipality/municipality/district profile periodic plan, annual plan and programme documents of the study areas; (vii) NRCS 7th development plan (2016-2020); (viii) disaster risk management plan of study districts; (ix) NRCS disaster response operational manual; (x) IFRC monitoring and evaluation plan (M&E Plan); (xi) Nepal Government's post flood recovery needs assessment; and (xii) NRCS post-distribution monitoring report.

1.5.3 Collection of primary information

I. Household survey: Face to face interview was conducted by using structured questionnaire (Annex 3). Data was collected by using smart phones through Kobo-toolbox online software.

Sample size: The sample size for selecting households was calculated based on simple random sampling with an adjustment by multiplying the usual formula by design effect. The sample size for the survey is 706 calculated by using formula (*) with 5% margin of error (d), 5% level of significance (α), estimated value of an indicators is ($p=q = \pm 0.5$), 1.75 design effect (Deft) and 1.05 response rate.

$$n = \left(\frac{z_{\alpha/2}}{d}\right)^2 pq * Deft * Response\ rate \dots\dots\dots(*)$$

Obtained sample size is proportionately divided into districts and municipalities/rural municipalities as presented in Table 1.1.

Table 1.1: Total and sample HHs by districts and municipalities (number)

| District | Municipality/Rural Municipality | Total HHs | Sample HHs |
|--------------|---|--------------|------------|
| Sunsari | Hari Nagara Rural Municipality, Ward # 7 | 780 | 62 |
| | Koshi Rural Municipality Ward # 3 | 200 | 16 |
| Saptari | Hanuman Nagar-Kankalini Municipality, Ward # 14 | 1,050 | 83 |
| Siraha | Siraha Municipality, Ward # 21 | 700 | 56 |
| | Kalyanpur Municipality, Ward # 4 | 300 | 24 |
| Udayapur | Belka Municipality, Ward # 1 | 450 | 36 |
| | Belka Municipality, Ward # 2 | 500 | 40 |
| | Triyuga Municipality, Ward # 2 | 250 | 20 |
| Mahottari | Loharpatti Municipality, Ward # 5 | 1,050 | 83 |
| Rautahat | Rajpur Municipality, Ward # 1 | 715 | 57 |
| | Yamuna Mai Rural Municipality, Ward # 4 | 836 | 66 |
| Bardiya | Gulariya Municipality, Ward # 2 | 872 | 69 |
| | Gulariya Municipality, Ward # 4 | 1,190 | 94 |
| Total | | 8,893 | 706 |

Sampling method: Steps and rationales followed during the sample HHs selection include (i) at first, flood affected communities in each ward were identified in collaboration with the project team at central as well as field level; (ii) the HHs were selected by adopting systematic random sampling method in all communities; (iii) the person who had clear and complete information about the HHs were selected for data collection; (iv) 18+ years men and women were interviewed alternatively in the HHs in order to maintain gender balance in the sample; and (v) prioritization was made to HHs having Dalit and Janajati, people with disability, senior citizen, pregnant and lactating women, women-headed respondent during data collection.

Orientation: Two days' orientation (Annex 4) was provided to NRCS volunteers and social mobilizers about the floods and landslides operation, data collection tools and techniques. They were further oriented on tablet/mobile-based data collection. Practice on the household questionnaire was made among the enumerators themselves during the orientation. Moreover, pre-testing of the questionnaire was carried out at Rajpur Municipality, Rautahat District. During pre-testing, question's sequence, duration of an interview, option provided in the questions, wordings of the questions and options, and

way of interview taking were minutely checked. The questionnaire was finalized based on the comments and feedback from the pre-testing.

Monitoring, supervision and evaluation: The data collection was done by the enumerators in close supervision of the consultants and IFRC/NRCS floods team members. The necessary suggestions and feedback were provided to the enumerators during the data collection process. The completed and submitted questionnaires were also checked by consultant to ensure proper information.

II. Focus group discussions (FGDs): 10 FGDs (Annex 5) comprising at least 1 in each project district were conducted with the beneficiaries including vulnerable people, women, men, Dalit, people with disabilities in the communities. The checklist was used to conduct the discussion and collect the information (Annex 6).

III. Key informants' interview: The KIIs were carried out with 28 persons (Annex 7) including (i) district level government stakeholders including District Administration Office and District Coordination Committee; (ii) NRCS district chapters and sub-chapters; (iii) the elected representatives and officials of wards and municipalities; and (iv) health post in-charge. Checklists were used to conduct KIIs (Annexe8).

IV. Observation: Damaged houses, water sources, toilets, hygiene status, living status and livelihood practices were observed during the field visit.

The consultants were involved in supervision, and information collection through FGDs and KIIs based on the agreed field movement plan (Annex 9) in close coordination with the floods operation team.

1.5.4 Data analysis

Survey data processing and analysis: After completion of the data collection, the data was cleaned by cross checking and field verification. It was analysed using SPSS and Excel. The descriptive statistics including frequency, percentage, ratio and mean analysis were carried out. Tables and graphs have been used for data presentation.

GESI analysis: Gender equality and social inclusion analysis was done in order to measure the participation of women, marginalized groups including Dalit, Janjati, people with disability and senior citizen in meetings, committee formations, and programme and activities of public affairs.

Livelihood analysis: This was done to know the present status of the livelihood options in agriculture and livestock, and non-agriculture focused on skill development and micro-enterprises.

1.5.5 Ethical consideration and informed consent

All the respondents involved in the study were fully informed about the nature of the study, research objectives and confidentiality of the collected information. The study team solicited each respondent a verbal consent prior to the enrolment in the study. Only those respondents who voluntarily agreed to participate were involved. All the study participants were informed of their right to refuse participation and to withdraw the interview at any time.

Chapter – II Demographic and socio-economic characteristics

This chapter presents the existing socio-economic and demographic characteristics of the respondents and the households in the project area. It includes age, sex, marital status, educational status and occupation of the respondents. It also includes the sex and age distribution of the population, and family size, ethnicity, vulnerable groups in the family; and sex of the household head.

2.1 Sex and age distribution of the respondent

Altogether 706 respondents were interviewed. Out of them, 59.8% were women and remaining 40.2% men (Figure 2.1).

Figure 2.1: Sex of the respondents by district (%)

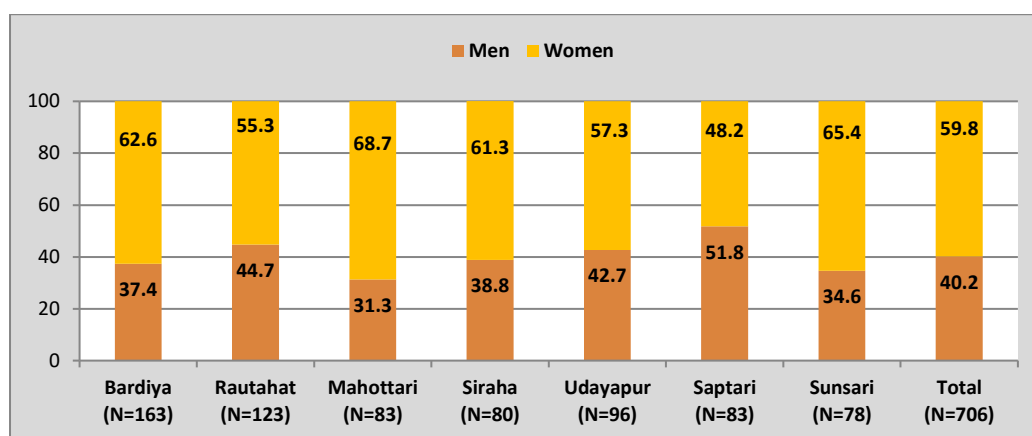


Table 2.1 reveals that the percentage of respondents between the age group 40 to 60 years was 43.5% followed by age group 18 to 40 years (39.5%) and senior citizen with 60+ years (16.9%). The mean age of the respondent was 43.6 year spread over 18 to 82 years.

Table 2.1: Age distribution of the respondents (%)

| Age group | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| 18-40 | 50.6 | 23.1 | 44.6 | 42.5 | 40.6 | 25.3 | 47.4 | 39.5 |
| 40-60 | 34.6 | 56.2 | 44.6 | 36.2 | 39.6 | 53.0 | 43.6 | 43.5 |
| 60 or more | 14.8 | 20.7 | 10.8 | 21.2 | 19.8 | 21.7 | 9.0 | 16.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.2 Marital status

Table 2.2 presents the marital status of the respondents. Total 86.7% respondents were married followed by 7.8% widowed. The marital status of the respondents seems consistent across the districts.

Table 2.2: Marital status of the respondents (%)

| Marital status | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Unmarried | 8.0 | 0.8 | 7.2 | 1.2 | 7.3 | 1.2 | 9.0 | 5.1 |
| Married | 88.3 | 90.2 | 79.5 | 87.5 | 84.4 | 91.6 | 82.1 | 86.7 |
| Widowed | 3.1 | 8.1 | 13.3 | 11.2 | 7.3 | 7.2 | 9.0 | 7.8 |
| Divorced/Separated | 0.6 | 0.8 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.3 Main occupation

Table 2.3 reveals that more than half of the respondents (**52.4%**) had **agriculture as a main occupation** followed by labourer/wage earner 33.3%, household work 5.9%, and business 4%. The percentage of respondents with agriculture as a main occupation was very low in Mahottari. This is mainly due to the respondents of Mahottari in the project area were landless and most of them depends upon wage labour.

Table 2.3: Main occupation of the respondents (%)

| Occupation | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|----------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Agriculture | 71.2 | 56.9 | 15.7 | 37.5 | 79.2 | 43.4 | 37.2 | 52.4 |
| Labourer/wage earner | 8.0 | 36.6 | 71.1 | 56.2 | 10.4 | 19.3 | 60.3 | 33.3 |
| Business | 3.1 | 4.1 | 9.6 | 0.0 | 5.2 | 6.0 | 0.0 | 4.0 |
| Job | 1.2 | 0.8 | 1.2 | 3.8 | 1.0 | 2.4 | 0.0 | 1.4 |
| Fully unemployment | 0.6 | 0.0 | 1.2 | 2.5 | 2.1 | 1.2 | 1.3 | 1.1 |
| household work | 11.7 | 0.8 | 0.0 | 0.0 | 1.0 | 25.3 | 0.0 | 5.9 |
| Student | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Skilled work | 1.8 | 0.0 | 1.2 | 0.0 | 0.0 | 2.4 | 1.3 | 1.0 |
| Local leader/Social worker | 0.6 | 0.8 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.4 Educational status

Out of 706 respondents, **52.7% were literate and 47.3% illiterate**. The percentage of illiteracy ranged from 27% in Bardiya to 82.1% in Rautahat. Only, 0.6% of the respondents were found completed bachelor and above degree. 10.2% of the total respondents were completed secondary education, i.e. from grade 9 to 12 (Table 2.4).

Table 2.4: Educational status of the respondents (%)

| Educational status | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|---------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Illiterate | 27.0 | 82.1 | 51.8 | 71.2 | 28.1 | 39.8 | 37.2 | 47.3 |
| Informal education | 24.5 | 4.9 | 27.7 | 1.2 | 25.0 | 22.9 | 32.1 | 19.5 |
| Basic education | 32.5 | 9.7 | 10.8 | 16.2 | 32.3 | 26.5 | 23.1 | 22.4 |
| Secondary education | 15.4 | 2.4 | 8.4 | 11.2 | 13.6 | 10.8 | 7.7 | 10.2 |
| Bachelor and above | 0.6 | 0.8 | 1.2 | 0.0 | 1.0 | 0.0 | 0.0 | 0.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.5 Age and sex distribution of the population

Table 2.5 reveals that out of the total population, 51.9% were men and remaining 48.1% women. According to the “Sex of the respondents by district”, 59.8% were women and remaining 40.2% men which differs with population structure. It is because, in Nepal women mostly stay in home and men go outside for work and therefore interviews were conducted more with women compared to men. Since, Moreover, 14.2% were children of age less than 5 years, 27.5% of age between 6 to 18 years, 50.6% of age between 19 to 59 years and only 7.7% were senior citizens with age 60+ years. The age distribution of the population was consistent across the districts.

Table 2.5: Age and sex distribution of the population (%)

| Sex | Bardiya (Pop= 936; HHs=163) | Rautahat (Pop= 990; HHs=123) | Mahottari (Pop= 602; HHs=83) | Siraha (Pop= 604; HHs=80) | Udayapur (Pop= 591; HHs=96) | Saptari (Pop= 597; HHs=83) | Sunsari (Pop= 631; HHs=78) | Total (Pop= 4951; HHs=706) |
|------------------|-----------------------------|------------------------------|------------------------------|---------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| Men | 49.0 | 52.0 | 53.5 | 53.6 | 53.0 | 53.1 | 50.9 | 51.9 |
| Women | 51.0 | 48.0 | 46.5 | 46.4 | 47.0 | 46.9 | 49.1 | 48.1 |
| Age group | | | | | | | | |
| ≤ 5 | 10.5 | 17.8 | 13.0 | 14.7 | 11.2 | 12.6 | 19.3 | 14.2 |
| 6-18 | 26.4 | 33.8 | 29.6 | 22.2 | 21.8 | 27.1 | 28.1 | 27.5 |
| 19-59 | 55.8 | 41.8 | 49.8 | 56.8 | 57.5 | 48.6 | 46.6 | 50.6 |
| 60+ | 7.4 | 6.6 | 7.6 | 6.3 | 9.5 | 11.7 | 6.0 | 7.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.6 Household size

The total population in the surveyed 706 HHs was 4,951 with mean family size 7. **The most common household size in the project area was 4 to 6 members.** Overall, 46.5% households had 4-6 members, 26.9% with 7-9 members and 18.4% with 10 plus members in the family. Very little variation was observed among districts as illustrated in Table 2.6.

Table 2.6: Family size by districts (%)

| Educational status | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| 1-3 | 12.3 | 5.7 | 3.6 | 7.5 | 12.5 | 8.4 | 3.8 | 8.2 |
| 4-6 | 60.1 | 37.4 | 49.4 | 40.0 | 50.0 | 47.0 | 30.8 | 46.5 |
| 7-9 | 20.2 | 27.6 | 28.9 | 32.5 | 24.0 | 22.9 | 39.7 | 26.9 |
| 10+ | 7.4 | 29.3 | 18.1 | 20.0 | 13.5 | 21.7 | 25.6 | 18.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.7 Ethnic composition

In aggregate, Terai Dalit was the largest ethnic group (32.0%) in the project area followed by Terai Janajati (28.5%), Terai and Hill Brahmin/Chhetri (11.5%), Muslim (10.5%). Similarly, the major ethnic group was Janajati in Bardiya and Siraha, Terai Dalit in Rautahat and Mahottari, Brahmin/Chhetri in Udayapur, other Madhesi caste including Teli, Sundi, Kalwar, Yadav, Kumhar, Hajam, Sonar etc. in Saptari, and Muslim in Sunsari (Table 2.7).

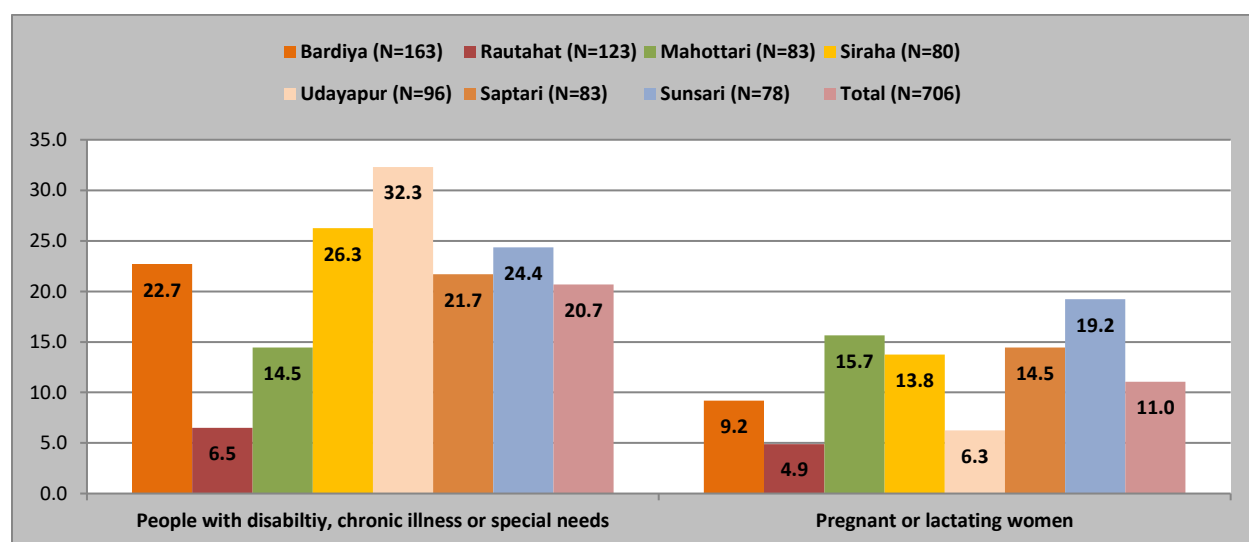
Table 2.7: Ethnicity by districts (%)

| Ethnicity | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (706) |
|---------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|--------------|
| Terai Dalit | 1.8 | 55.3 | 71.1 | 46.2 | 9.4 | 42.2 | 19.2 | 32.0 |
| Hill Dalit | 9.8 | 0.0 | 0.0 | 0.0 | 10.4 | 0.0 | 0.0 | 3.7 |
| Terai Janajati | 50.9 | 17.1 | 21.7 | 50.0 | 26.0 | 2.4 | 15.4 | 28.5 |
| Hill Janajati | 9.2 | 0.0 | 0.0 | 0.0 | 17.7 | 0.0 | 2.6 | 4.8 |
| Other Madhesi caste | 1.2 | 5.7 | 2.4 | 0.0 | 1.0 | 55.4 | 7.7 | 9.1 |
| Muslim | 0.6 | 21.1 | 3.6 | 1.2 | 0.0 | 0.0 | 55.1 | 10.5 |
| Brahmin/Chhetri | 26.4 | 0.8 | 1.2 | 2.5 | 35.4 | 0.0 | 0.0 | 11.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.8 Vulnerable group

Total 20.7% households had one or more member(s) with disability/ies ranging from 6.5% in Rautahat to 32.3% in Udayapur. Similarly, 11% households in total had one or more member(s) with pregnant or lactating women. The percentage of pregnant or lactating women was highest in Sunsari and lowest in Rautahat (Figure 2.2). The highest proportion of beneficiary in Sunsari was from Muslim community and therefore obvious that that there was high proportion of pregnant and lactating women there as the literature shows.

Figure 2.2: HHs with the vulnerable members (%)



2.9 Status of household head

Total 32.4% households were women-headed including single women-headed (7.6%) ranging from 16.9% in Saptari to 51.2% in Siraha. The percentage of elderly-headed was 16.6%, and people with disabilities 2% (Table 2.8). The single women include (i) deceased husband (ii) divorced (iii) separated, and (iv) unmarried.

Table 2.8: Vulnerability status of the household head (%)

| Items | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|------------------------|--------------------|---------------------|---------------------|------------------|--------------------|-------------------|-------------------|------------------|
| Women | 36.2 | 34.1 | 31.3 | 51.2 | 26.0 | 16.9 | 28.2 | 32.4 |
| Single women | 3.7 | 7.3 | 10.8 | 10.0 | 6.3 | 10.8 | 9.0 | 7.6 |
| Elderly | 14.1 | 12.2 | 26.5 | 22.5 | 14.6 | 18.1 | 12.8 | 16.6 |
| People with disability | 1.2 | 0.8 | 0.0 | 2.5 | 1.0 | 3.6 | 6.4 | 2.0 |

Chapter – III Shelter

The resilient houses play a crucial role for combating flood disaster and reduce risks for an individual. The household having concrete or brick houses and plinth raised above the normal flooding level is at lower risk. The HHs survey and FGDs/KIIs conducted during the field visits also support the evidence that most of the houses are made of bamboo and thatch and are located at water logged area. Hence, they are still at high risk.

3.1 Effects on personal houses by flood

Table 3.1 reflects that out of total 706 respondents, **44.1% reported that their houses were washed away** by the flood ranging from 14.1% in Sunsari to 76.4% in Rautahat. Similarly, 42.2% houses were partially damaged and 12.7% houses were submerged but not damaged. Only 0.3% of total houses in the study area were not affected at all by the floods. During the field visit, it was pointed out and observed that most of the houses were already reconstructed their house after damage with low cost model especially with mud, bamboo and straw after occurrence of the floods. These houses are temporary in nature and are not floods resilient. Around 20% damaged houses yet to be constructed. Houses belonging to the ultra-poor families including Terai Dalits like Mushhars, Dom, Chamar, Halkhor etc. were not constructed due to their weak economic condition.

Table 3.1: Effects on personal houses by flood 2017 (%)

| Effect | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|---------------------------|--------------------|---------------------|---------------------|------------------|--------------------|-------------------|-------------------|------------------|
| Washed away/fully damaged | 65.0 | 76.4 | 25.3 | 25.0 | 10.4 | 59.0 | 14.1 | 44.1 |
| Partially damaged | 33.7 | 23.6 | 63.9 | 48.8 | 60.4 | 37.3 | 42.3 | 42.2 |
| Submerged but not damaged | 1.2 | 0.0 | 10.8 | 21.2 | 28.1 | 3.6 | 41.0 | 12.7 |
| Others | 0.0 | 0.0 | 0.0 | 3.8 | 0.0 | 0.0 | 2.6 | 0.7 |
| Not affected | 0.0 | 0.0 | 0.0 | 1.2 | 1.0 | 0.0 | 0.0 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

3.2 Knowledge and practice towards safe house construction

Table 3.2 shows that 85.6% of the respondents were found having knowledge about at least one of the factors to be considered while selecting the site for constructing safe house. Only 14.4% of the respondents had no knowledge at all. 69.8% mentioned that one should not construct their house on a water-logged area followed by low land 68.1%, and river bank area 49.7%.

Table 3.2: Knowledge on site selection to construct safe house (%)

| Site | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|--------------------|---------------------|---------------------|------------------|--------------------|-------------------|-------------------|------------------|
| Aware about site selection | 97.5 | 34.1 | 100 | 82.5 | 97.9 | 98.8 | 100 | 85.6 |
| Water-logged area | 52.8 | 32.5 | 100.0 | 68.8 | 78.1 | 98.8 | 92.3 | 69.8 |
| Low land | 72.4 | 8.1 | 92.8 | 70.0 | 78.1 | 95.2 | 84.6 | 68.1 |
| River bank area | 77.3 | 12.2 | 18.1 | 26.2 | 80.2 | 94.0 | 24.4 | 49.7 |
| Any two out of above three options | 72.4 | 16.2 | 92.8 | 67.5 | 79.2 | 98.8 | 78.2 | 69.1 |
| Areas susceptible to landslide/sliding | 0.0 | 0.8 | 3.6 | 1.2 | 6.2 | 67.5 | 0.0 | 9.5 |

| | | | | | | | | |
|---|------------|-------------|------------|-------------|------------|------------|------------|-------------|
| Steep slope land | 0.6 | 0.0 | 1.2 | 0.0 | 3.1 | 54.2 | 1.3 | 7.2 |
| Geological fault or ruptured area | 0.0 | 0.0 | 1.2 | 1.2 | 0.0 | 37.3 | 1.3 | 4.8 |
| Filled up area | 0.0 | 0.0 | 7.2 | 0.0 | 0.0 | 25.3 | 0.0 | 3.8 |
| Others | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| Do not know about site selection | 2.5 | 65.9 | 0.0 | 17.5 | 2.1 | 1.2 | 0.0 | 14.4 |

Note: Percentage add up to more than 100 due to multiple responses

Table 3.3 demonstrates that 77.3% of the total houses were located in water-logged area ranging from 42.9% in Bardiya to 100% in Mahottari and Saptari. Similarly, 76.3% houses were situated at low land and 49.3% at river-bank. During FGDs and KIIs, it was pointed out that almost all houses in project areas were vulnerable to floods. The zones are still at high risk mainly due to the lack actions and activities taken on structural and non-structural mitigation. Therefore, such types of programmes need to be planned and implemented across all project locations.

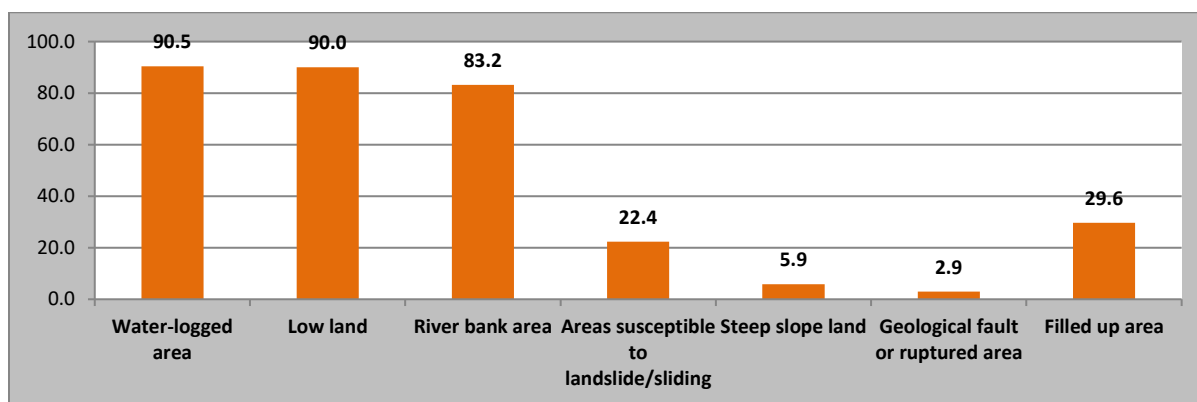
Table 3.3: Location of the houses (%)

| Site | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Water-logged area | 42.9 | 91.1 | 100.0 | 76.2 | 67.7 | 100.0 | 92.3 | 77.3 |
| Low land | 67.5 | 69.9 | 92.8 | 65.0 | 68.8 | 95.2 | 88.5 | 76.3 |
| River bank area | 75.5 | 40.7 | 20.5 | 7.5 | 66.7 | 89.2 | 17.9 | 49.3 |
| Areas susceptible to landslide/sliding | 0.0 | 4.9 | 3.6 | 0.0 | 1.0 | 15.7 | 0.0 | 3.3 |
| Steep slope land | 0.0 | 0.0 | 2.4 | 0.0 | 1.0 | 4.8 | 1.3 | 1.1 |
| Geological fault or ruptured area | 0.0 | 0.8 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| Filled up area | 0.0 | 0.8 | 6.0 | 2.5 | 3.1 | 4.8 | 0.0 | 2.1 |
| Others | 5.5 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 1.4 |

Note: Percentage add up to more than 100 due to multiple responses

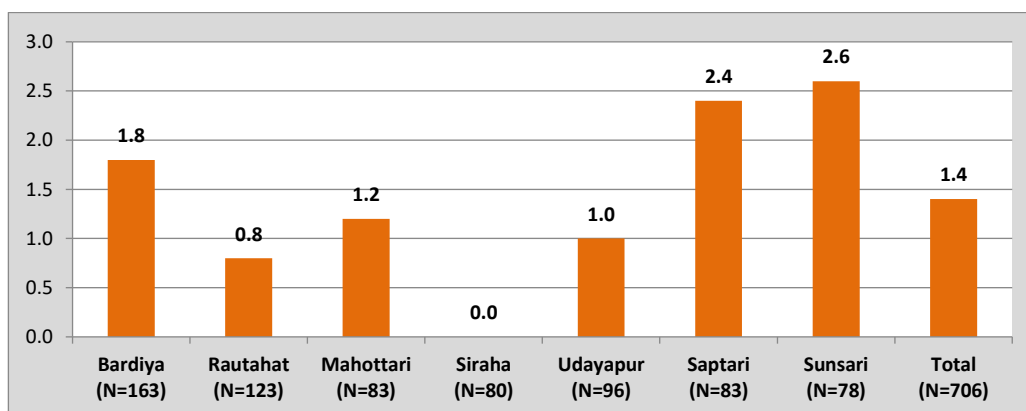
Figure 3.1 and Table 3.2 presents that out of **69.8% respondents those who had knowledge on not constructing their houses in water-logged area, 90.5% actually made their houses in such areas.** The scenario clearly shows that there has been wide mis-match between the knowledge and practice regarding constructing their houses in flood vulnerable areas. During FGDs and KIIs, it was pointed out that it was due to the unavailability of land with the individuals in the settlements for constructing houses and they also do not prefer to build their houses in scattered way because the settlements are mostly in clusters.

Figure 3.1: Practice of constructing houses against their knowledge (%)



The Nepal National Building Code (2008) stipulates the requirements for building construction in Nepal, including guidelines for remote rural areas. To assess the level of awareness of these regulations, respondents were asked ‘Do you know safe building techniques/building code?’ **Only 1.4% of respondents were aware that there were government rules regulating the quality of construction of private houses.** This awareness was highest in Sunsari (2.6%) and lowest in Siraha (0%), as Figure 3.2 illustrates. Interestingly, only 2 persons had followed the safe building techniques while constructing their houses. Most of the people did not follow the code mainly due to **lack of knowledge of Building code.**

Figure 3.2: Knowledge about building code (%)



Box 3.1: Base value of shelter sector outcome indicator

Outcome 1: Communities in disaster and crisis affected areas restore and strengthen their safety, well-being and longer-term recovery through shelter and settlement solutions.

Indicator 1b: % of target families who have increased knowledge about safe shelter construction

Baseline Value: 1.4%

Knowledge on site selection to construct safe house=69.1% (Table 3.2)

Knowledge about building code for constructing safe house=1.4% (Figure 3.2)

Knowledge about both (i) building code and (ii) site selection for safe house was 1.4%

Box 3.2: Base value of shelter sector outcome indicators

Indicator 1a: % of families living in shelters meeting agreed standards for the specific operational context

Baseline Value: 0

Numerator: # targeted families who have shelter that meets *specified* standards=0 (there was no emergency shelter in the project area) - *See DRR Section for detail*

Denominator: Total # of families reached with emergency shelter support=706

It is noted that only 3.5% of the total HHs received support and guidance for safe shelter construction during last one year preceding the survey. Among them, 0.6% HHs received technical support, 2.7% cash and 1.3% kind support. It is noted that 0.4% of the HHs received all three supports and 0.1% HH received both technical and cash supports.

Regarding the participation of any family members directly in any safe shelter programme during the same period, only members from 0.3% HHs comprising 0.15% in training and 0.15% in orientation programme was found. Similarly, altogether 0.7% HHs participated in such types of programme indirectly including 0.4% in training and 0.3% in orientation, seminar and awareness session. Directly involvement includes their active participation during the entire programme duration. Similarly, indirect participation includes participation in rally, campaign organized by any DRR related organizations. The trainings and orientations were conducted by municipalities and local NGOs.

Chapter – IV

Livelihoods and basic needs

4.1 Number of family members contributing to the household income

As part of the survey, respondents were asked, ‘how many of your family members contribute to the household income?’. Table 4.1 depicts that out of 706 respondents, only 683 replied on the question. **Only one person per HH was found contributing to their HH income in majority of the households (54%)** ranging from 25% in Udayapur to 67.5% in Rautahat. From FGDs it was found that mostly men were contributing to the household income and women were engaged in the household work.

Table 4.1: Number of family members contributing to HH income (%)

| Number of members | Bardiya (N=152) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=71) | Udayapur (N=96) | Saptari (N=82) | Sunsari (N=76) | Total (N=683) |
|-------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| 1 | 58.6 | 67.5 | 49.4 | 49.3 | 25.0 | 61.0 | 61.8 | 54.0 |
| 2 | 28.9 | 22.8 | 34.9 | 32.4 | 41.7 | 25.6 | 18.4 | 29.1 |
| 3 | 5.9 | 8.9 | 9.6 | 15.5 | 14.6 | 12.2 | 18.4 | 11.3 |
| ≥ 4 | 6.6 | 0.8 | 6.0 | 2.8 | 18.8 | 1.2 | 1.3 | 5.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

4.2 Agricultural land holding

Nepal is an agricultural country. Population engaged in agriculture profession is about two third. The agriculture sector occupies 28.9% of the Nepalese economy (Economic Survey, Ministry of Finance 2016/17). Table 4.2 clearly reveals that **only 55.1% of the HHs had access to agriculture land**. The percentage was the highest in Bardiya (88.3%) followed by Udayapur (70.8%), Saptari (67.5%), Sunsari (56.4%), Siraha (56.2%), Mahottari (33.7%) and Rautahat (3.3%). Altogether 37.1%, comprising 35.1% landowner without mortgage and 2.0% having mortgage land, were landowners and had a registration certificate with them. Mortgage land is used as collateral to take loan. Interestingly, 14.4% HHs in total were utilizing public land. The percentage was 35.6% in Bardiya and 34.4% in Udayapur. Total 3.4% of the HHs had taken land on lease for specified period of time with specified amount of money or agricultural product. The procedure of taking land on lease follows either the verbal or written contractual agreement between both parties. Similarly, 3.8% HHs had dual land ownership having registration certificate in the name of two or more persons jointly. Total, 1.2% HHs had duplicated landownership with public land. Similarly, 0.8% of the HHs had duplicated landownership with own land and mortgage, and land ownership and lease each.

Table 4.2: Access to agricultural land (%)

| Types of ownership | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Access to land | 88.3 | 3.3 | 33.7 | 56.2 | 70.8 | 67.5 | 56.4 | 55.1 |
| Landowner | 37.4 | 3.3 | 14.5 | 56.3 | 41.7 | 50.6 | 56.4 | 35.1 |
| Mortgage ³ | 0.6 | 0.0 | 2.4 | 6.3 | 0.0 | 6.0 | 1.3 | 2.0 |
| Lease | 3.7 | 0.0 | 4.8 | 1.3 | 0.0 | 13.3 | 2.6 | 3.4 |
| Land with dual ownership | 16.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 3.8 |
| Public (<i>Elani</i>) | 35.6 | 0.0 | 12.0 | 0.0 | 34.4 | 0.0 | 1.3 | 14.4 |
| No access to agriculture land | 11.7 | 96.7 | 66.3 | 43.8 | 29.2 | 32.5 | 43.6 | 44.9 |

Note: Percentage add up to more than 100 due to multiple responses

³ A mortgage means pledging real estate as a collateral security against a loan.

4.3 Sources of income

The most commonly reported main source of income was self-employed crop production. This was the main source of income for 40.2% of all households in the study areas. **Altogether 49.5% of the HHs had agriculture as main source of income** comprising 40.2% as self-employed and 9.3% involved in any type of employment including livestock and fishery. The second most commonly reported main source of income was daily labourer, i.e. approximately one third (31.6%) of the total HHs. They are taken as vulnerable group. This percentage was lowest in Udayapur 9.4% and highest in Mahottari 53%. Because agricultural land is the main source of income in Nepal and it is highly skewed in Terai (land is highly concentrated to few percentage of upper strata of HHs and on the other hand most of the lower strata of the HHs especially Dalits are landless) and compared to hill/inner Terai districts. Therefore, in Mahottari, the number of HHs dependent on daily labourers was very high compared to Udayapur. Interestingly, member(s) from 9.6% HHs had remittance from family member working abroad as their primary income source (Table 4.3).

Table 4.3: Primary sources of income (%)

| Source | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|---------------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Self-employed, agriculture sector | 64.4 | 40.7 | 9.6 | 45.0 | 38.5 | 32.5 | 26.9 | 40.2 |
| Self-employed, other sectors | 3.1 | 13.8 | 10.8 | 0.0 | 3.1 | 1.2 | 0.0 | 5.0 |
| Employment, agriculture sector | 0.6 | 13.0 | 0.0 | 1.2 | 41.7 | 8.4 | 1.3 | 9.3 |
| Employment, other | 1.2 | 3.3 | 1.2 | 0.0 | 4.2 | 1.2 | 3.8 | 2.1 |
| Government and non-government service | 2.5 | 0.0 | 0.0 | 1.2 | 1.0 | 3.6 | 0.0 | 1.3 |
| Working abroad | 11.0 | 2.4 | 22.9 | 1.2 | 2.1 | 12.0 | 19.2 | 9.6 |
| Daily labourer | 16.6 | 26.8 | 53.0 | 48.8 | 9.4 | 41.0 | 47.4 | 31.6 |
| Social security allowance | 0.6 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 1.3 | 0.6 |
| Others | 0.0 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 4.4 presents the secondary sources of incomes of the HHs. It is evident that **32.6% of the HHs had relied on primary sources only and rest 67.4% had multiple sources of income**. The major secondary sources of income of the HHs were daily labourer 23.1% followed by self-employed in agriculture sector (16.9%), working abroad (10.1%), and self-employed in livestock rearing (11.3%).

Table 4.4: Secondary sources of income (%)

| Source | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| A. Do people have secondary source of the income or not | | | | | | | | |
| No secondary sources | 8.6 | 46.3 | 50.6 | 53.8 | 18.8 | 22.9 | 47.4 | 32.6 |
| Have secondary sources | 91.4 | 53.7 | 49.4 | 46.2 | 81.2 | 77.1 | 52.6 | 67.4 |
| B. What is the secondary sources? | | | | | | | | |
| Self-employed, agricultural sector | 30.1 | 7.3 | 9.6 | 8.8 | 1 | 37.3 | 17.9 | 16.9 |

| | | | | | | | | |
|---------------------------------------|------|------|------|-----|------|------|------|------|
| Self-employed, fisheries sector | 0 | 0 | 3.6 | 1.2 | 0 | 1.2 | 0 | 0.7 |
| Self-employed, livestock | 23.9 | 0 | 13.3 | 0 | 19.8 | 4.8 | 9 | 11.3 |
| Self-employed, other sectors | 10.4 | 26.8 | 1.2 | 0 | 2.1 | 4.8 | 5.1 | 8.6 |
| Employment, agricultural sector | 0 | 12.2 | 8.4 | 8.8 | 8.3 | 1.2 | 3.8 | 5.8 |
| Employment, fishing sector | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| Employment, livestock | 0 | 0 | 2.4 | 0 | 37.5 | 10.8 | 6.4 | 7.4 |
| Employment, other private | 0.6 | 1.6 | 1.2 | 0 | 3.1 | 0 | 1.3 | 1.1 |
| Government and non-government service | 3.1 | 0 | 0 | 1.2 | 6.2 | 2.4 | 0 | 2 |
| Working abroad | 7.4 | 2.4 | 8.4 | 30 | 16.7 | 8.4 | 2.6 | 10.1 |
| Pension | 1.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 |
| Daily labourer | 40.5 | 15.4 | 15.7 | 15 | 12.5 | 32.5 | 17.9 | 23.1 |
| Social security allowance | 3.7 | 0 | 3.6 | 7.5 | 2.1 | 1.2 | 5.1 | 3.1 |

Note: Percentage add up to more than 100 due to multiple responses

4.4 Income distribution

Table 4.5 shows the income distribution per year of the HHs. **The income distribution of the HHs was positively skewed.** Percentage of HHs having less income is greater compared to the HHs having more income. **The average family and per capita income in the project area was NPR 130,586 and 18,586 respectively.** It is noted that 8.4% HHs are receiving remittance from abroad in Mahottari (Table 4.4). Therefore, there is highly skewed income level in this district.

Table 4.5: Income distribution per annum (%)

| Income in NPR ('000) | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=67) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=77) | Total (N=706) |
|------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| <25 | 3.7 | 30.1 | 9.6 | 14.9 | 4.2 | 28.9 | 26.0 | 15.8 |
| 25-50 | 2.5 | 43.9 | 22.9 | 32.8 | 10.4 | 28.9 | 10.4 | 20.4 |
| 50-75 | 23.3 | 23.6 | 10.8 | 19.4 | 19.8 | 33.7 | 24.7 | 22.4 |
| 75-100 | 2.5 | 0.0 | 4.8 | 0.0 | 4.2 | 0.0 | 9.1 | 2.7 |
| 100-150 | 19.0 | 0.8 | 8.4 | 7.5 | 31.2 | 7.2 | 3.9 | 12.0 |
| 150-200 | 12.9 | 0.8 | 3.6 | 3.0 | 15.6 | 0.0 | 0.0 | 6.1 |
| 200-300 | 19.6 | 0.0 | 14.5 | 10.4 | 11.5 | 0.0 | 10.4 | 10.1 |
| 300+ | 16.6 | 0.8 | 25.3 | 11.9 | 3.1 | 1.2 | 15.6 | 10.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Reference (Table 4.3) | | | | | | | | |
| Working abroad | 11.0 | 2.4 | 22.9 | 1.2 | 2.1 | 12.0 | 19.2 | 9.6 |

4.5 Food sufficiency

In total **only 3.7% of the HHs had food sufficiency and they saved their product and cash after 12 months consumption** with their regular income except daily wage labour. The percentage was the highest

in Saptari 13.3% and the lowest in Rautahat and Mahottari 0%. Remaining all the HHs had food deficiency and live in vulnerable condition (Table 4.6). Interestingly, 44.3% of the HHs ranging from 19.6% in Bardiya to 79.5% in Sunsari had less than 3 months food sufficiency. This was mainly due to their dependency on agricultural wage labour. It is noted that agricultural labourers are mostly seasonally employed with very low level of wage compared to other sectors.

Table 4.6 (a): Food sufficiency to the HHs (%)

| Food sufficiency | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|----------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Less than 3 months | 19.6 | 53.7 | 74.7 | 31.2 | 40.6 | 32.5 | 79.5 | 44.3 |
| 3-6 month | 27.0 | 35.0 | 12.0 | 27.5 | 20.8 | 21.7 | 6.4 | 22.9 |
| 6-9 month | 20.9 | 8.9 | 2.4 | 17.5 | 10.4 | 22.9 | 3.8 | 13.2 |
| 9-12 Month | 27.6 | 2.4 | 10.8 | 20 | 27.1 | 9.6 | 6.4 | 15.9 |
| Sold after 12 months consumption | 4.9 | 0.0 | 0.0 | 3.8 | 1.0 | 13.3 | 3.8 | 3.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 4.6 (b) show that the HHs having daily labourer as a primary source of income had very low food sufficiency. Similarly, the HHs whose members were working abroad or involved in government job had comparatively higher food security.

Table 4.6 (b): Food sufficiency with primary sources of income (%)

| Primary sources of Income | Less than 3 month | 3-6 month | 6-9 month | 9-12 Month | Sold after 12-month consumption | Total |
|------------------------------------|-------------------|-----------|-----------|------------|---------------------------------|-------|
| Self-employed, agricultural sector | 23.8 | 29.2 | 19.6 | 23.1 | 4.3 | 100.0 |
| Self-employed, livestock | 0 | 33.3 | 0 | 66.7 | 0 | 100.0 |
| Self-employed, other sectors | 42.9 | 14.3 | 20 | 22.9 | 0 | 100.0 |
| Employment, agricultural sector | 49.2 | 30.5 | 6.8 | 13.6 | 0 | 100.0 |
| Employment, livestock | 50 | 16.7 | 0 | 33.3 | 0 | 100.0 |
| Employment, other private | 60 | 13.3 | 6.7 | 20 | 0 | 100.0 |
| Government service | 22.2 | 0 | 22.2 | 33.3 | 22.2 | 100.0 |
| Working abroad | 39.7 | 16.2 | 13.2 | 19.1 | 11.8 | 100.0 |
| Daily labourer | 69.1 | 18.8 | 6.7 | 3.6 | 1.8 | 100.0 |

Box 4.1: Base value of livelihood sector outcome indicators

Outcome 1: Communities, especially in disaster and crisis affected areas, restore and strengthen their livelihoods

Indicator 1a: % of those assisted for whom food consumption is equal or greater than the minimum food basket equivalent

Baseline Value: 3.7% (Table 4.6 (a))

Numerator: # of respondents that report an increase in food security in their family=26

Denominator: Total # of respondents =706

Only 5.9% of the respondents reported that their HH income had increased after flood 2017. The percentage was highest in Rautahat 20.3%. On the other hand, 46.9% reported that their income was deteriorated and 47.2% unchanged (Table 4.7).

Table 4.7: Change in HH income after flood 2017 (%)

| Income | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Improved | 1.2 | 20.3 | 7.2 | 1.2 | 0.0 | 0.0 | 10.3 | 5.9 |
| Deteriorated | 86.5 | 0.0 | 1.2 | 68.8 | 41.7 | 98.8 | 15.4 | 46.9 |
| Not changed | 12.3 | 79.7 | 91.6 | 30.0 | 58.3 | 1.2 | 74.4 | 47.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Box 4.2: Base value of livelihood sector outcome indicators

Indicator 1b: % of targeted population whose livelihoods are restored to/or improved from pre-disaster level

Baseline Value: 53.1%

Households whose income were restored/unchanged=47.2% (Table 4.7)

Households whose income were improved=5.9% (Table 4.7)

Targeted population whose livelihoods are restored to/or improved = (47.2%+5.9%)=53.1%

Out of 706 HHs, only 5.4% of the HHs had received skill development training for livelihood improvement. Most of the women were trained on vegetable farming and sewing. On the other hand, men received training on vegetable farming like mushroom, driving, *Mudha* (chair made up with bamboo) making, mason, carpentering, electrician, motorcycle repairing and bread making. Most of the trained men are involved in their respective sectors of training received. However, the scenario was opposite in the case of women. More than 50% of the trained women are idle and remained housewife. Remaining women are involved in sewing and vegetable farming.

Altogether only 3.7% HHs had received business start-up support from various organizations. Out of them, 1.3% HHs had received in-kind support and remaining 2.4% HHs cash support. This reveals that very few people have got in-kind and cash support for micro entrepreneurship in the study area. Therefore, start-up support should have given focus under the programme.

The question was asked to the respondents "Imagine you needed a loan in order to maintain or expand your income-generating activities (IGA), which of the following would be most likely to give you the loan, considering your current household situation?" Table 4.8 reveals that still 45.3% of HHs had money lenders as a source of loan where they have to pay high interest. The figure was the highest in Saptari 91.6% and the lowest in Bardiya 8%. It is because in Saptari people are not aware about formal sector loan financing. Moreover, they have less accessibility and collateral means.

Table 4.8: HHs possible sources of loan for starting/promoting IGA (%)

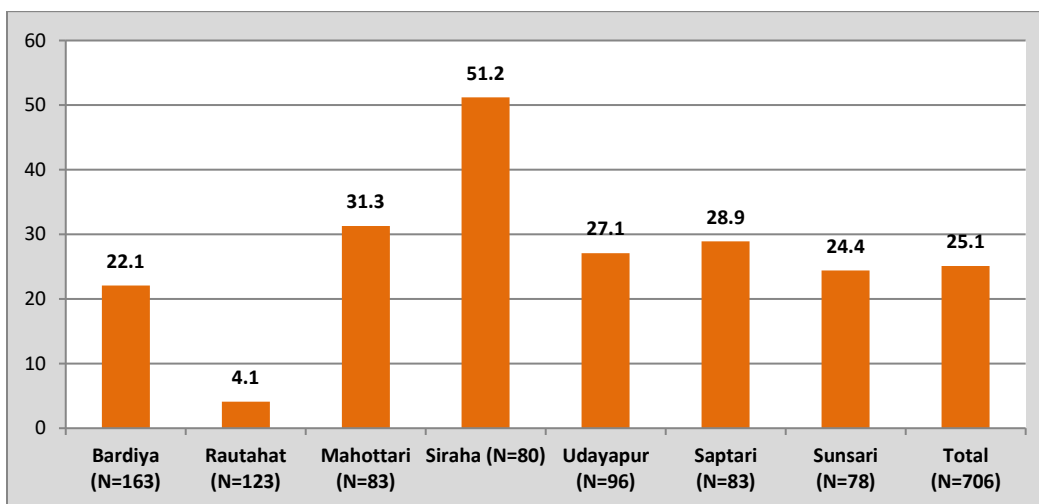
| Source | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|---|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Friends/neighbours | 40.5 | 4.1 | 6.0 | 2.5 | 66.7 | 73.5 | 28.2 | 31.9 |
| Relatives | 8.6 | 2.4 | 7.2 | 2.5 | 21.9 | 81.9 | 33.3 | 19.8 |
| Money lenders | 8.0 | 27.6 | 79.5 | 76.2 | 28.1 | 91.6 | 55.1 | 45.3 |
| Bank | 4.9 | 0.0 | 19.3 | 3.8 | 13.5 | 54.2 | 30.8 | 15.4 |
| A community fund to which our household makes contributions | 4.9 | 0.0 | 0.0 | 0.0 | 1.0 | 9.6 | 1.3 | 2.5 |

| | | | | | | | | |
|--|------|------|-----|------|------|-----|------|------|
| A saving group that household belongs to | 71.2 | 0.0 | 2.4 | 0.0 | 44.8 | 6.0 | 48.7 | 28.9 |
| None of the above | 5.5 | 69.1 | 8.4 | 20.0 | 2.1 | 4.8 | 1.3 | 17.6 |

Note: Percentage add up to more than 100 due to multiple responses

Out of 706 HHs, **family members from 25.1% HHs had been working abroad and sending remittances.** The percentage was the highest in Siraha 51.2% and the lowest in Rautahat 4.1% (Figure 4.1).

Figure 4.1: Household with any members working abroad and sending remittance back (%)



Chapter – V Health

5.1 Access to treatment

Table 5.1 depicts that **59.2% of the total respondents believed that they should first visit the government health institutions** comprising 29.7% health posts and 29.5% hospitals for treatment when they became sick. Altogether 13.3% respondents mentioned that they would visit private clinics first for treatment of their health problems followed by 12.2% respondents who mentioned medicine shops and pharmacies. Interestingly, 65% respondents in Siraha district mentioned that they would visit local health practitioners, 87.2% respondents in Sunsari for health posts, and 39.6% respondents in Udayapur for medicine shops and pharmacies. Because the GoN has established health posts in each ward.

Table 5.1: Perception on the person/place of calling/visiting first for treatment (%)

| Person/place | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Indigenous treatment in house | 0.6 | 0.0 | 0.0 | 3.8 | 0.0 | 1.2 | 1.3 | 0.8 |
| Local health practitioner | 0.0 | 10.6 | 1.2 | 65.0 | 0.0 | 1.2 | 0.0 | 9.5 |
| Medicine shop/pharmacy | 20.2 | 0.8 | 4.8 | 8.8 | 39.6 | 1.2 | 2.6 | 12.2 |
| Traditional healer | 1.2 | 0.0 | 9.6 | 0.0 | 19.8 | 0.0 | 7.7 | 5.0 |
| Health post | 23.3 | 36.6 | 47.0 | 3.8 | 12.5 | 6.0 | 87.2 | 29.7 |
| Hospital | 27.0 | 52.0 | 16.9 | 13.8 | 5.2 | 84.3 | 0.0 | 29.5 |
| Private clinic | 27.6 | 0.0 | 20.5 | 5.0 | 22.9 | 6.0 | 1.3 | 13.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 5.2 portrays that **altogether 58.5% of the HHs said that their family member fell sick during the last one year preceding the survey** and rest 41.5% did not have a family member falling sick. Out of 58.5% HHs, 40.4% HHs received treatment from health posts and 62.2% from hospitals. Only 29.8% got treated in private clinics, 22% went to medicine shops and pharmacies, and 7.5% visited traditional healers. This scenario reveals the fact that the government health facilities are the common treatment centres for the people in the study areas.

Table 5.2: Practice on person/place of treatment (%)

| Person/Place | Bardiya (N=121) | Rautahat (N=22) | Mahottari (N=46) | Siraha (N=74) | Udayapur (N=68) | Saptari (N=39) | Sunsari (N=43) | Total (N=413) |
|---|-----------------|-----------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| A. Did your family member get sick for the past one year | | | | | | | | |
| No | 25.8 | 82.1 | 44.6 | 7.5 | 29.2 | 53.0 | 44.9 | 41.5 |
| Yes | 74.2 | 17.9 | 55.4 | 92.5 | 70.8 | 47.0 | 55.1 | 58.5 |
| B. Where did sick family visit first for the treatment? | | | | | | | | |
| Indigenous treatment in house | 0.0 | 0.0 | 6.5 | 9.5 | 2.9 | 10.3 | 2.3 | 4.1 |
| Local health practitioner | 0.0 | 9.1 | 2.2 | 75.7 | 0.0 | 0.0 | 4.7 | 14.8 |
| Medicine shop/pharmacy | 29.8 | 0.0 | 17.4 | 4.1 | 42.6 | 12.8 | 23.3 | 22.0 |
| Traditional healer | 9.1 | 0.0 | 10.9 | 1.4 | 13.2 | 2.6 | 9.3 | 7.5 |

| | | | | | | | | |
|--|------|------|------|------|------|------|------|------|
| Health post | 33.1 | 63.6 | 41.3 | 47.3 | 22.1 | 25.6 | 79.1 | 40.4 |
| Hospital | 72.7 | 45.5 | 69.6 | 58.1 | 44.1 | 89.7 | 44.2 | 62.2 |
| Private clinic | 46.3 | 0.0 | 21.7 | 13.5 | 48.5 | 17.9 | 16.3 | 29.8 |
| Either health post or hospital or private clinic | 95.9 | 90.9 | 93.5 | 71.6 | 88.2 | 94.9 | 95.3 | 89.6 |

Note: Percentage add up to more than 100 due to multiple responses

During FGDs and KIIs, it was pointed out that even though the government health facilities are accessible to the people, the availability of basic health services including laboratory tests, diagnostic tools like X-ray and medicines were lacking for about 90% of the cases. For even most of the diagnosed cases, they will have to buy medicine from private pharmacies. Therefore, the appropriateness and quality of health services was weak.

Box 5.1: Base value of health sector outcome indicators

Outcome1: The immediate and mid-term risks to the health of affected populations are reduced
Indicator 1.2: % of people in the operation catchment area who can access appropriate health services

Baseline Value: 33.9% calculated through composite index by taking 70% weight to quality services and 30% weight to accessibility of health services (70% * 10+30% * 89.6)

Access to health services= 89.6% (Table 5.2)
 Appropriateness and quality of health service=10% (During FGDs and KIIs, it was pointed that 90% of the HHs did not received quality health services)

5.2 Causes and treatment of diarrhoeal disease

Figure 5.1 describes that **at least one family member from 38% of the HH suffered from diarrheal case in recent past** in the study area and 62% HHs did not suffer.

Figure 5.1: HHs suffered from diarrhoea in recent past (%)

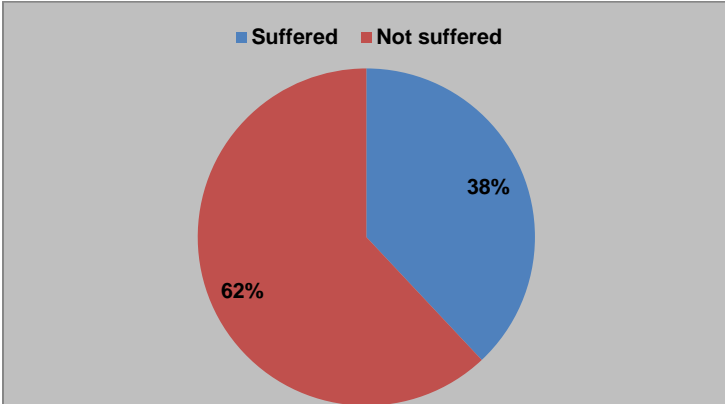


Table 5.3 represents that altogether **59.8% of the respondents were aware about at least one of the causes of diarrhoea** and 40.2% of the respondents did not have idea on the subject. Out of total respondents, 47.6% perceived that drinking dirty and contaminated water was the cause of diarrhoea followed by 41.1% who said eating dirty and rotten food, 25.5% no hand washing with soap and water after touching dirty objects and so on.

Table 5.3: Perception of respondents about the causes of diarrhoea (%)

| Causes of diarrhoea | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Drinking dirty water/contaminated water | 39.9 | 22.8 | 45.8 | 28.8 | 78.1 | 65.1 | 67.9 | 47.6 |
| No hand washing with soap and water after touching dirty objects | 11.7 | 3.3 | 15.7 | 13.8 | 41.7 | 60.2 | 55.1 | 25.5 |
| Eating dirty and rotten food | 57.1 | 8.9 | 30.1 | 16.2 | 74.0 | 57.8 | 37.2 | 41.1 |
| Not washing hands with soap and water after defecation | 17.8 | 3.3 | 16.9 | 7.5 | 17.7 | 55.4 | 15.4 | 18.1 |
| Flies | 17.8 | 4.1 | 42.2 | 7.5 | 49.0 | 54.2 | 10.3 | 24.8 |
| Open defecation | 6.1 | 1.6 | 6.0 | 6.2 | 21.9 | 30.1 | 3.8 | 10.1 |
| Others | 5.5 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 1.3 |
| Any one causes | 71.8 | 30.1 | 53.0 | 40.0 | 84.6 | 67.5 | 70.5 | 59.8 |
| Any two causes | 56.5 | 8.9 | 49.4 | 27.4 | 80.3 | 67.4 | 66.7 | 49.8 |
| Any three causes | 21.5 | 2.4 | 32.5 | 11.2 | 67.8 | 60.2 | 35.9 | 30.8 |
| Do not know | 28.2 | 69.9 | 47.0 | 60.0 | 15.6 | 32.5 | 29.5 | 40.2 |

Note: Percentage add up to more than 100 due to multiple responses

Table 5.4 shows that out of 38% HHs, patients from **57.1% HHs said they were taken to the hospital for treatment. Patients from 54.1% HH's were treated with rehydration fluid (Jeevan Jal)**, 37.3% with traditional medicines and methods, 14.9% with purified water and so on. It is very clear that taking to hospital and treating at home with Jeevan Jal is very eminent way of treating diarrhoea in the study area. The culture of taking hospital for diarrhoeal patients is prevalent in Bardiya. It is pointed out that 88.8% of the HHs were either treated with Jeevan Jal or taken to hospital or both. In Rautahat, treating with Jeevan Jal is most prominent and the method is empowered by the health institutions in Nepal as a primary treatment of diarrhoea.

Table 5.4: Types of treatment used for family members in diarrhoea (%)

| Types of treatment | Bardiya (N=119) | Rautahat (N=8) | Mahottari (N=11) | Siraha (N=42) | Udayapur (N=35) | Saptari (N=20) | Sunsari (N=33) | Total (N=268) |
|---|-----------------|----------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Traditional medicines and methods | 32.8 | 12.5 | 18.2 | 64.3 | 34.3 | 35.0 | 36.4 | 37.3 |
| Purified water | 7.6 | 0.0 | 9.1 | 21.4 | 20.0 | 60.0 | 6.1 | 14.9 |
| Jeevan jal | 31.1 | 75.0 | 45.5 | 73.8 | 51.4 | 100.0 | 84.8 | 54.1 |
| Taken to hospital | 72.3 | 12.5 | 45.5 | 23.8 | 60.0 | 65.0 | 51.5 | 57.1 |
| Either Jeevan Jal or taken to hospital | 90.8 | 87.5 | 63.6 | 81.0 | 85.7 | 100.0 | 97.0 | 88.8 |
| Others | 7.6 | 0.0 | 27.3 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 |

Note: Percentage add up to more than 100 due to multiple responses

Table 5.5 describes that in total **49.3% of the respondents were aware about at least one way to prevent the problem of diarrhoea** and 50.7% were not aware on the matter. Altogether 36.3% respondents believed that the use of safe and drinkable drinking water was the best way to prevent diarrhoea followed by 35.8% washing hands with soap water and 29% use of latrines/toilets. The idea is diverse among the study districts.

Table 5.5: Perception of the respondents about the best way to prevent diarrhoea (%)

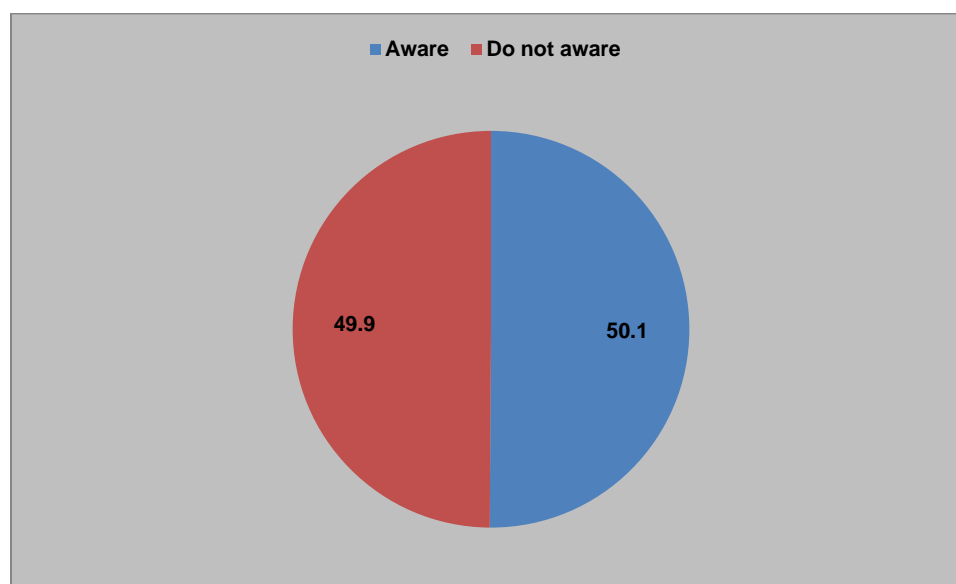
| Way to prevent diarrhoea | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Washing hands with soap water | 19.6 | 25.2 | 37.3 | 12.5 | 58.3 | 69.9 | 44.9 | 35.8 |
| Use of latrines/toilets | 13.5 | 8.1 | 28.9 | 13.8 | 62.5 | 55.4 | 41.0 | 29.0 |
| Use of safe and drinkable drinking water | 33.7 | 5.7 | 30.1 | 23.8 | 70.8 | 67.5 | 33.3 | 36.3 |
| Other | 12.9 | 0.0 | 0.0 | 6.2 | 0.0 | 0.0 | 1.3 | 3.8 |
| Any 1 of above options | 40.5 | 26.8 | 48.2 | 36.2 | 76 | 69.9 | 62.8 | 49.3 |
| Any 2 of above options | 21.5 | 10.5 | 35 | 15 | 74 | 69.9 | 43.6 | 35.7 |
| I do not know | 59.5 | 73.2 | 51.8 | 63.8 | 24.0 | 30.1 | 37.2 | 50.7 |

Note: Percentage add up to more than 100 due to multiple responses

5.3 Causes and treatment of vector borne disease

Figure 5.2 Illustrates that **49.9% of the respondents had idea(s) about the causes of malaria and dengue** and 50.1% of the respondents were not aware about the subject.

Figure 5.2: Awareness about the causes of malaria and dengue (%)



Out of the total respondents, **49.6% perceived that mosquitos bite was the reason for malaria and dengue**. The knowledge on the subject was the highest in Bardiya and lowest in Rautahat.

Table 5.6: Knowledge about causes of malaria/dengue (%)

| Causes of malaria/dengue | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Mosquitoes | 71.8 | 29.3 | 55.4 | 46.2 | 58.3 | 39.8 | 32.1 | 49.6 |
| Germs | 1.2 | 0.0 | 14.5 | 1.2 | 1.0 | 8.4 | 7.7 | 4.1 |
| Do not know | 28.2 | 70.7 | 44.6 | 52.5 | 41.7 | 60.2 | 66.7 | 50.1 |

Note: Percentage add up to more than 100 due to multiple responses

Table 5.7 shows **49.3% of the HHs were aware about at least one of the methods to prevent malaria and dengue** and 50.7% HHs did not aware any method. In total, 41.1% of the HHs aware about mosquito nets as prevention of malaria. Other known methods for malaria and dengue prevention in the study areas were spray of mosquito prevention medicines (20.7%), clearing grass/scrub (19.1%) and so on.

Table 5.7: Knowledge on the methods to prevent malaria/dengue (%)

| Measures | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-------------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Cover up body | 13.5 | 0.0 | 22.9 | 0.0 | 11.5 | 20.5 | 17.9 | 11.8 |
| Spraying | 9.8 | 21.1 | 7.2 | 31.2 | 37.5 | 31.3 | 14.1 | 20.7 |
| Destroying mosquito breeding places | 6.1 | 0.0 | 13.3 | 0.0 | 29.2 | 27.7 | 9.0 | 11.2 |
| Clearing grass/scrub | 23.9 | 0.8 | 21.7 | 13.8 | 30.2 | 26.5 | 19.2 | 19.1 |
| Clearing stagnant water | 15.3 | 0.0 | 19.3 | 2.5 | 29.2 | 20.5 | 12.8 | 13.9 |
| Use mosquito repellent | 1.8 | 0.0 | 2.4 | 0.0 | 16.7 | 21.7 | 3.8 | 5.9 |
| Use mosquito coil | 20.2 | 0.0 | 16.9 | 13.8 | 24.0 | 26.5 | 9.0 | 15.6 |
| Mosquito nets | 77.3 | 2.4 | 44.6 | 38.8 | 58.3 | 30.1 | 15.4 | 41.1 |
| Others | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Knowledge on at least 1 options | 77.9 | 23.6 | 49.3 | 46.3 | 58.3 | 40.8 | 30.7 | 49.3 |
| Knowledge on at least 2 options | 55.2 | 0.8 | 45.7 | 41.3 | 56.2 | 39.6 | 24.3 | 38.0 |
| Knowledge on at least 3 options | 25.8 | 0.0 | 36.1 | 12.5 | 46.8 | 36.0 | 20.5 | 24.5 |
| At least above 4 options | 8.6 | 0.0 | 10.8 | 0.0 | 34.3 | 28.8 | 11.5 | 12.6 |
| Do not know | 22.1 | 76.4 | 50.6 | 53.8 | 41.7 | 59.0 | 69.2 | 50.7 |

Note: Percentage add up to more than 100 due to multiple responses

Figure 5.3 depicts that **altogether 25.1% of the HHs had insecticide treated mosquito nets** in the study area. It was the highest in Rautahat (60.2%) and the lowest in Siraha.

Figure 5.3: HHs using insecticide treated mosquito nets (%)

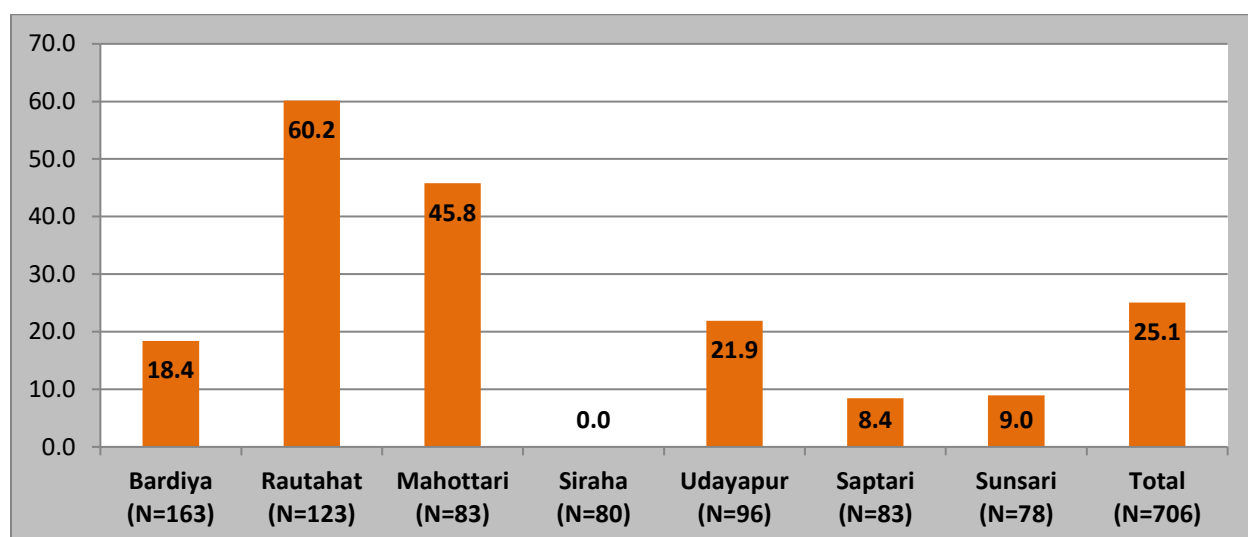


Table 5.8 describes in total 50.8% of the HHs were found to adopt at least one method for controlling vector borne diseases and 49.2% did not adopt any method. Out of total, 38.8% of the HHs practiced on getting rid of stagnant water/clean water reservoir around their houses followed by cutting the lawn/trim the vegetation (30.3%), larvicide-use of products to kill larva in water (22.7%).

Table 5.8: Methods adopted by the HHs for vector control (%)

| Methods | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Get rid of stagnant water/clean water reservoir | 35.0 | 10.6 | 45.8 | 23.8 | 77.1 | 44.6 | 46.2 | 38.8 |
| Remove mosquito breeding grounds | 16.6 | 2.4 | 13.3 | 3.8 | 41.7 | 36.1 | 20.5 | 18.4 |
| Cut the lawn/trim the vegetation | 32.5 | 0.8 | 34.9 | 23.8 | 62.5 | 41.0 | 23.1 | 30.3 |
| Indoor residual spraying | 10.4 | 2.4 | 6.0 | 16.2 | 28.1 | 34.9 | 5.1 | 13.9 |
| Larvicide (use of products to kill larva in water) | 22.1 | 8.9 | 15.7 | 36.2 | 36.5 | 33.7 | 10.3 | 22.7 |
| Others | 4.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 1.3 |
| At least 1 of above options | 57.6 | 22.0 | 51.8 | 48.7 | 82.4 | 49.4 | 46.1 | 50.8 |
| At least 2 of above options | 42.3 | 3.3 | 39.8 | 37.5 | 69.9 | 48.2 | 37.1 | 38.5 |
| At least 3 of above options | 17.1 | 0.0 | 18.1 | 17.5 | 45.9 | 44.6 | 17.9 | 21.5 |
| I do not know | 42.3 | 78 | 48.2 | 51.2 | 17.7 | 50.6 | 53.8 | 49.2 |

Box 5.2: Base Value of Health Sector Outcome Indicators

Indicator 1.1: % of targeted people with increased knowledge of and practiced preventive health behaviour

Baseline Value: 41.2% calculated through composite index by taking 30% weight to knowledge and 70% weight to practice as $(30\% * 32.2\% * 45.1)$

Knowledge

Knowledge on any three causes of diarrhoea:30.8% (Table 5.3)

Knowledge on prevention of diarrhoea: 35.7% (Table 5.5)

Knowledge on causes of malaria/dengue (mosquito bite): 49.6% (Table 5.6)

Knowledge on the methods to prevent malaria/dengue:12.6% (Table 5.7)

Average of above 4 = $(30.8\%+35.7\%+49.6\%+12.6\%)/4=32.2\%$

Practice

Practice on diarrhoeal treatment: 88.8% (Table 5.4)

HHs using insecticide treated mosquito nets: 25.1% (Figure 5.3)

Methods adopted by the HHs for vector control: 21.5% (Table 5.8)

Average of above 3 = $(88.8\%+25.1\%+21.5\%)/3=45.1\%$

Table 5.9 represents that any member from **only 3.1% of total HHs had participated in any health-related programmes** including training, orientation and awareness raising activities. The scenario was more or less similar across all districts of the study area.

Table 5.9: Participation in health-related programmes (%)

| Programmes | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Participated in any one | 2.5 | 2.4 | 7.2 | 2.5 | 1 | 4.8 | 2.6 | 3.1 |
| Training | 0.0 | 2.4 | 6.0 | 1.2 | 1.0 | 4.8 | 1.3 | 2.1 |
| Orientation | 2.5 | 0.0 | 0.0 | 1.2 | 0.0 | 3.6 | 1.3 | 1.3 |
| Awareness raising | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 1.2 | 0.0 | 0.3 |
| Health camp | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.2 | 0.0 | 0.3 |
| Not participated | 97.5 | 97.6 | 92.8 | 97.5 | 99.0 | 95.2 | 97.4 | 96.9 |

Chapter – VI Water, sanitation and hygiene

6.1 Drinking water

The survey found that altogether **91.9% HHs were using tube-wells or hand pipes as the main source of drinking water** in the project areas. 81.7% HH used their own private hand pipes. In most of the cases, these hand pipes are used by the family members only. However, in some cases, the community people also share the private hand pipes. 10.2% were using public hand pipes. Only 5.7% HHs were using public tap and 2.2% neighbour's tap. The percentage of HHs using public tap was higher in Mahottari (39.8%). Because during field visit, it was observed only two taps in Mushahari tole of Loharpatti Municipality among the settlements of 162 HHs (Table 6.1).

Published literatures are not available about the deepness of hand pipes for safe water. The GoN has no such type of policy and guideline provisions. However, During FGDs and KIs, it was pointed out that around 90% of the hand pipes in the project area were shallow tube-well which was regarded as the unsafe source of drinking water. Therefore, it is recommended that all the hand pipes to be supported by the project should be deep tube-well having more than 200 feet depth which can be either penetrated manually or by machine.

Table 6.1: Main sources of drinking water (%)

| Sources of water | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-----------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Private tube-well/hand-pipe | 91.4 | 87.0 | 32.5 | 82.5 | 88.5 | 91.6 | 85.9 | 81.7 |
| Public tube-well/hand-pipe | 4.9 | 13.0 | 22.9 | 6.2 | 9.4 | 6.0 | 12.8 | 10.2 |
| Public tap | 0.0 | 0.0 | 39.8 | 7.5 | 0.0 | 0.0 | 1.3 | 5.7 |
| Others | 3.6 | 0.0 | 4.8 | 3.8 | 2.1 | 2.4 | 0.0 | 2.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Total 95% of the respondents reported that water obtained from the main source was used for bathing the whole family members. Similarly, 95.8% used for washing clothes, 42.6% for watering garden, 59.9% for washing nappies, 65.3% for feeding livestock, and 31.9% for irrigation (Table 6.2).

Table 6.2: Use of water besides drinking (%)

| Use of water | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|----------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Washing body/bathing | 93.3 | 99.2 | 95.2 | 76.2 | 100.0 | 100.0 | 100.0 | 95.0 |
| Washing clothes | 98.2 | 98.4 | 95.2 | 80.0 | 97.9 | 96.4 | 100.0 | 95.8 |
| Watering garden | 59.5 | 42.3 | 51.8 | 10.0 | 13.5 | 72.3 | 35.9 | 42.6 |
| Washing nappies | 74.2 | 19.5 | 84.3 | 38.8 | 51.0 | 72.3 | 87.2 | 59.9 |
| Feeding to livestock | 82.8 | 8.1 | 53.0 | 61.3 | 90.6 | 92.8 | 75.6 | 65.3 |
| Irrigation | 42.9 | 9.8 | 16.9 | 7.5 | 46.9 | 67.5 | 28.2 | 31.9 |
| Other | 0.6 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 1.3 | 0.4 |
| None | 0.6 | 0.8 | 2.4 | 18.8 | 0.0 | 0.0 | 0.0 | 2.7 |

Note: Percentage add up to more than 100 due to multiple responses

Total 63.9% of the HHs had their own sources and did not spend any time for fetching drinking water. Similarly, 27.1% had spent less than 5 minutes and 8.8% spent 5 to 10 minutes. Interestingly, 0.3% of the HHs still had to spend 10 to 20 minutes for fetching drinking water (Table 6.3). The scenario of Mahottari was totally different because in Mushahari tole of Loharpatti Municipality 162 families relies on only two public taps for fetching drinking water.

Table 6.3: Walking distance to get drinking water in minute (%)

| Walking distance | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-----------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Zero Minute (In home) | 68.1 | 61.8 | 28.9 | 76.2 | 67.7 | 63.9 | 78.2 | 63.9 |
| < 5 Minutes | 30.7 | 35.8 | 21.7 | 22.5 | 28.1 | 27.7 | 14.1 | 27.1 |
| 5 -10 Minutes | 1.2 | 2.4 | 48.2 | 1.2 | 4.2 | 7.2 | 7.7 | 8.8 |
| 10-20 Minutes | 0 | 0 | 1.2 | 0 | 0 | 1.2 | 0 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Figure 6.1 depicts that **48.9% of the respondents reported that their sources of drinking water change with seasons**. The percentage was the lowest (2.4%) in Rautahat and the highest (87.7%) in Bardiya. During FGDs and KIs in Bardiya, it was pointed out that during rainy season the sources used to submerge and dry season it becomes dried.

Figure 6.1: Sources of drinking water changed with seasons (%)

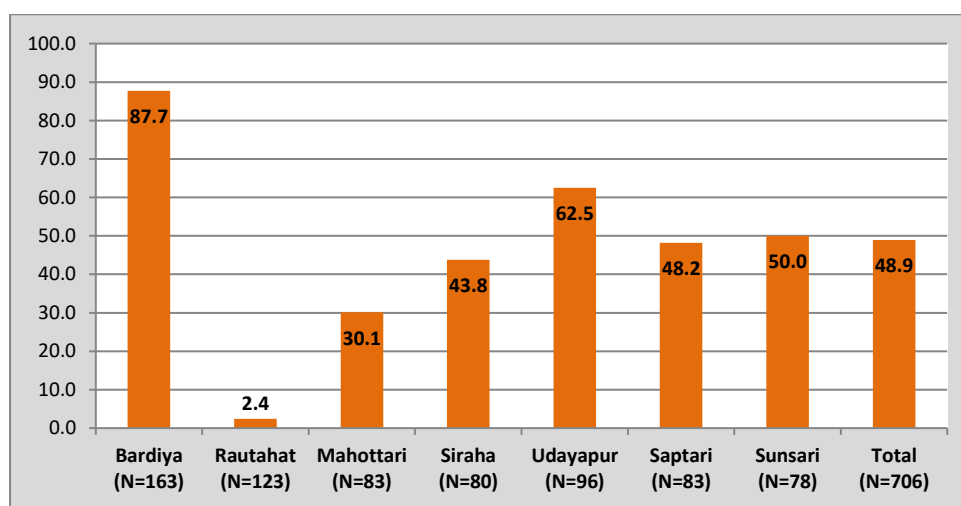


Figure 6.2 presents the practice of treating water before drinking. **Only the members of the 15% HHs had drunk treated drinking water all year around** and one fourth of the HHs treated water seasonally. Large mass of people i.e. the members of the 60% HHs had drunk water without treating/purification even in rainy seasons. **The percentage of practicing always purification of drinking water was 35.4% in Udayapur, 31.9% in Bardiya, 11.5% in Sunsari, 6.0% in Mahottari, 3.6% in Saptari, and 2.4% in Rautahat.**

Figure 6.2: Practice of purification of drinking water (%)

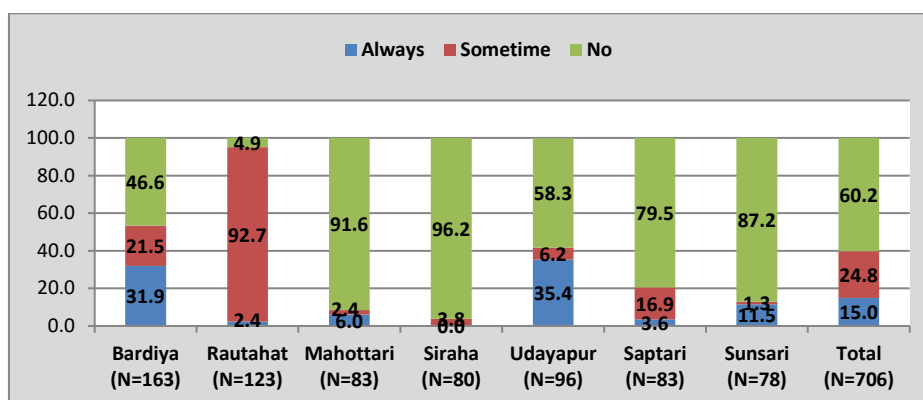


Table 6.4 reflects that 39.8% respondents used any purification process for drinking water and 60.2% did not use any process. The percentage of practicing any purification method was the highest in Rautahat and the lowest in Siraha. **The most common method of purification was boiling (20.7%) followed by filtering (16.7%).**

Table 6.4: HHs practicing the purification methods of drinking water (%)

| Purification method | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|---------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Treating water | 53.4 | 95.1 | 8.4 | 3.8 | 41.7 | 20.5 | 12.8 | 39.8 |
| Boil water | 8.0 | 93.5 | 1.2 | 3.8 | 4.2 | 10.8 | 1.3 | 20.7 |
| Filter water | 33.1 | 1.6 | 7.2 | 0.0 | 36.5 | 9.6 | 11.5 | 16.1 |
| Add chlorine | 6.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 |
| Other | 5.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.4 |
| Did not treat water | 46.6 | 4.9 | 91.6 | 96.2 | 58.3 | 79.5 | 87.2 | 60.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 6.5 reveals that out of 60.2% respondents who did not treat water at all, 43.3% respondents reported that they did not purify water mainly due to their drinking water was of good quality. Similarly, 48.2% of the respondents did not purify because of they did not know the benefit of purification of water. Further, 24.9% respondents replied that it was unnecessary, 22.4% told that purification was expensive and 16.7% did not do due to lack of means. Interestingly, 1.9% of the respondents reported that they did not purify because it was not safe for health and 3.5% believed that it changed the taste of water.

Table 6.5: Reasons for not practicing the purification methods for drinking water (%)

| Reasons | Bardiya (N=76) | Rautahat (N=6) | Mahottari (N=76) | Siraha (N=77) | Udayapur (N=56) | Saptari (N=66) | Sunsari (N=68) | Total (N=425) |
|-------------------------------------|----------------|----------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Water is of good quality | 11.8 | 83.3 | 90.8 | 22.1 | 64.3 | 48.5 | 23.5 | 43.3 |
| I don't know why to treat water | 23.7 | 0.0 | 48.7 | 75.3 | 16.1 | 71.2 | 52.9 | 48.2 |
| it's not necessary | 6.6 | 16.7 | 42.1 | 2.6 | 30.4 | 16.7 | 55.9 | 24.9 |
| Lack of means | 21.1 | 0.0 | 0.0 | 1.3 | 55.4 | 33.3 | 1.5 | 16.7 |
| Purification is expensive | 50.0 | 0.0 | 11.8 | 0.0 | 8.9 | 27.3 | 36.8 | 22.4 |
| Purification is not safe for health | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.1 | 0.0 | 1.9 |
| Changes the taste of water | 1.3 | 0.0 | 5.3 | 3.9 | 0.0 | 0.0 | 10.3 | 3.5 |
| Other | 1.3 | 0.0 | 0.0 | 1.3 | 0.0 | 10.6 | 0.0 | 2.1 |

Note: Percentage add up to more than 100 due to multiple responses

Table 6.6 illustrates that majority (61.5%) of the respondents reported that their water supply was not affected by floods. On the other hand, the water supply was affected in 38.5% HHs. Moreover, total 22.1% respondents reported that flood damaged their sources of water, 17% replied that it became dirty and unhealthy, and smelled bad taste.

Table 6.6: Problem found in water supply after floods (%)

| Problems with water supply | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| A. Was water supply affected by floods? | | | | | | | | |
| No | 22.7 | 82.1 | 60.2 | 68.8 | 72.9 | 75.9 | 74.4 | 61.5 |
| Yes | 77.3 | 17.9 | 39.8 | 31.2 | 27.1 | 24.1 | 25.6 | 38.5 |
| B. How was water supply affected by floods? | | | | | | | | |
| Flood damaged the source | 36.8 | 17.1 | 13.3 | 15.0 | 15.6 | 24.1 | 21.8 | 22.1 |
| Source dried post floods | 4.3 | 0.0 | 0.0 | 6.3 | 11.5 | 15.7 | 7.7 | 5.9 |
| It is dirty/unhealthy ⁴ | 39.9 | 0.8 | 0.0 | 21.3 | 16.7 | 18.1 | 7.7 | 17.0 |
| It is irregular | 16.6 | 0.0 | 1.2 | 1.3 | 1.0 | 10.8 | 10.3 | 6.7 |
| It is a long way | 6.1 | 0.0 | 19.3 | 6.3 | 4.2 | 2.4 | 6.4 | 5.9 |
| Periods when it dries up | 0.0 | 0.0 | 2.4 | 1.3 | 0.0 | 2.4 | 1.3 | 0.8 |
| Management issues | 0.6 | 0.0 | 14.5 | 1.3 | 0.0 | 3.6 | 1.3 | 2.5 |
| No caretaker | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 3.6 | 0.0 | 0.6 |
| Turbid looks ⁵ | 57.1 | 0.0 | 8.4 | 3.8 | 17.7 | 9.6 | 17.9 | 20.1 |
| Tastes bad | 55.2 | 0.0 | 0.0 | 8.8 | 16.7 | 4.8 | 3.8 | 17.0 |
| Breakdown of hand pump | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 0.8 |
| Others | 0.6 | 0.0 | 10.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 |

Note: Percentage add up to more than 100 due to multiple responses

Around two third (67.3%) of the respondents perceived that their water supply was sufficient for their needs. Rest one third reported that they had scarcity of water and they managed by using less water in urgency.

Table 6.7: Management of water during scarcity (%)

| Management of water | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--------------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Less use of water as per the urgency | 39.3 | 79.7 | 9.6 | 7.5 | 9.4 | 22.9 | 2.6 | 29.2 |
| Use of other sources | 0.6 | 0.0 | 20.5 | 8.8 | 0.0 | 1.2 | 1.3 | 3.8 |
| HH with adequate water | 60.1 | 20.3 | 69.9 | 83.8 | 90.6 | 77.1 | 97.4 | 67.3 |

Note: Percentage add up to more than 100 due to multiple responses

⁴ Dirty water means contaminated or chemically polluted water

⁵ turbid water means the water appears cloudy or muddy with suspended solids in it

Box 6.1: Base value of WASH sector outcome indicators

Outcome 2: Sustainable reduction in risk of waterborne and water related diseases in targeted communities in the recovery phase

Outcome Indicator 2a: % of target population that has access to sufficient safe water

Base value: = **30.3% calculated through composite index by taking 30% of (a) and 70% of (b)**

a) Access to sufficient water = 71.9% calculated through composite index by taking 40% of (i), 30% of (ii) and 30% of (iii)

(i) % of HHs reached to drinking water source in less than 5 minutes=91% (Table 6.3)

(ii) % of HH with fixed sources of drinking water i.e. the sources have not been changed= (100-48.9)%=51.1% (Figure 6.1)

(iii) HHs with adequate/sufficient water =67.3% (Table 6.7)

b) Safe water = 12.5% calculated through composite index by taking 50% of (iv) and 50% of (v)

iv) % of deep tube-well in the community=10% (during FGDs and KIs, it was pointed out that 90% were shallow tube-well in the project area)

v) % of HHs who used to drink treated drinking water all year around=15% (Figure 6.2)

Total members of 47.6% of the HHs used ash and water to clean the pot of drinking water followed by soap and water 40.9%, water alone 6.7%.

Table 6.8: Things used to clean the pot of drinking water (%)

| Things | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|----------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Water alone | 1.2 | 13.0 | 1.2 | 13.8 | 4.2 | 2.4 | 14.1 | 6.7 |
| Soap and water | 42.3 | 12.2 | 54.2 | 23.8 | 68.8 | 28.9 | 65.4 | 40.9 |
| Ash and water | 54.0 | 69.9 | 32.5 | 60.0 | 25.0 | 56.6 | 20.5 | 47.6 |
| Sand and water | 1.8 | 2.4 | 12.0 | 1.2 | 2.1 | 8.4 | 0.0 | 3.7 |
| Others | 0.6 | 2.4 | 0.0 | 1.2 | 0.0 | 3.6 | 0.0 | 1.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

6.2 Sanitation

In total 80.2% of the HHs had a toilet and remaining 19.8% had no toilet and had gone for open defecation before flood. Total 38.5% HHs had private pit latrine, 30.5% had private offset pit latrine, 4.8% had private flush toilet and 5.2% had private offset flush toilet (Table 6.9).

Table 6.9: HHs used toilet before flood (%)

| Types of toilets | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-----------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Private pit latrine | 65.0 | 75.6 | 2.4 | 22.5 | 17.7 | 15.7 | 29.5 | 38.5 |
| Private offset pit latrine | 31.3 | 1.6 | 24.1 | 43.8 | 56.2 | 28.9 | 37.2 | 30.5 |
| Private flush toilet | 0.6 | 1.6 | 15.7 | 8.8 | 0.0 | 9.6 | 3.8 | 4.8 |
| Private offset flush toilet | 0.6 | 0.0 | 1.2 | 15.0 | 16.7 | 4.8 | 3.8 | 5.2 |
| Open defecation | 1.2 | 21.1 | 56.6 | 10.0 | 7.3 | 41.0 | 20.5 | 19.8 |
| Others | 1.2 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 5.2 | 1.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 6.10 reveals the members of the percentage of HHs currently using the toilet. Table 6.10 reveals that 37.0% HHs had private pit latrine, 33.1% had private offset pit latrine, 5.5% had private flush toilet and 5.0% had private offset flush toilet. It is pointed out that the percentage of HHs using toilet in Saptari was increased and open defecation was decreased. Hence this also decreased the percentage of HH members going to open defecation in total as well.

Table 6.10: HHs currently using toilet (%)

| Type | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-----------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Private pit latrine | 55.2 | 74.0 | 2.4 | 22.5 | 13.5 | 33.7 | 24.4 | 37.0 |
| Private offset pit latrine | 40.5 | 2.4 | 21.7 | 43.8 | 56.2 | 36.1 | 35.9 | 33.1 |
| Private flush toilet | 1.2 | 1.6 | 14.5 | 8.8 | 0.0 | 16.9 | 2.6 | 5.5 |
| Private offset flush toilet | 0.6 | 0.0 | 1.2 | 15.0 | 13.5 | 6.0 | 3.8 | 5.0 |
| Open defecation | 1.8 | 22.0 | 60.2 | 10.0 | 9.4 | 7.2 | 28.2 | 17.7 |
| Others | 0.6 | 0.0 | 0.0 | 0.0 | 7.2 | 0.0 | 5.2 | 1.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Box 6.2: Base value of WASH sector outcome indicators

Outcome Indicator 2b: % of target population that is using adequate sanitation

Base value: 5.5+5.0=10.5%

Percentage of HHs having private flush toilet =5.5% (Table 6.10)

Percentage of HHs having private offset flush toilet =5.0% (Table 6.10)

Table 6.11 presents the knowledge of the respondents on health risk from lack of hand washing and personal hygiene. **Total 54.7% of the respondents had knowledge on health risk from lack of hand washing and personal hygiene** and remaining 45.3% did not have any knowledge on it. Total 45.0% of the respondents reported that diarrhoea can occur followed by fever 13.5%, vomiting 12.6% and loosing appetite 10.6%.

Table 6.11: knowledge on health risk from lack of hand washing and personal hygiene (%)

| Health risk | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|---|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| A. Knowledge of health risk from lack of hand washing and personal hygiene | | | | | | | | |
| I do not know | 11.0 | 79.7 | 61.4 | 28.8 | 27.1 | 68.7 | 60.3 | 45.3 |
| Aware on health risk | 89.0 | 20.3 | 38.6 | 71.2 | 72.9 | 31.3 | 39.7 | 54.7 |
| B. What are the health risks? | | | | | | | | |
| Vomiting | 0.6 | 4.9 | 19.3 | 3.8 | 35.4 | 24.1 | 11.5 | 12.6 |
| Diarrhoea | 65.6 | 15.4 | 34.9 | 52.5 | 71.9 | 30.1 | 34.6 | 45.0 |
| Fever | 2.5 | 0.0 | 21.7 | 20.0 | 28.1 | 25.3 | 11.5 | 13.5 |
| Loosing of Appetite | 1.2 | 0.0 | 10.8 | 40.0 | 14.6 | 15.7 | 6.4 | 10.6 |
| Any two out of 4 options | 3.7 | 0.0 | 26.5 | 33.8 | 41.7 | 31.3 | 20.5 | 19.4 |
| Other | 30.7 | 0.0 | 1.2 | 1.3 | 1.0 | 0.0 | 1.3 | 7.6 |

Note: Percentage add up to more than 100 due to multiple responses

Respondents were asked about their knowledge on the various components of personal hygiene maintenance without mentioning the answer options. Majority of the respondents (88.8%) told that hand should be washed before eating after using toilet followed by after using toilet (82.9%), before food preparation (73.5%), after urinating (48.4%) and after handling animals. People having knowledge of washing hand at critical time is higher in all districts (Table 6.12).

Table 6.12: Knowledge on critical time for hand washing (%)

| Critical time | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Before food preparation | 58.3 | 79.7 | 96.4 | 32.5 | 74.0 | 88.0 | 97.4 | 73.5 |
| Before eating | 95.7 | 65.0 | 94.0 | 92.5 | 97.9 | 95.2 | 84.6 | 88.8 |
| Before feeding infants | 11.7 | 3.3 | 54.2 | 5.0 | 18.8 | 55.4 | 57.7 | 25.6 |
| After urinating | 49.1 | 3.3 | 54.2 | 27.5 | 68.8 | 77.1 | 78.2 | 48.4 |
| After defecating | 95.7 | 27.6 | 97.6 | 77.5 | 100.0 | 98.8 | 94.9 | 82.9 |
| After caring for a sick person | 17.8 | 2.4 | 21.7 | 2.5 | 20.8 | 54.2 | 38.5 | 20.8 |
| After cleaning a baby/changing diapers | 14.7 | 0.0 | 3.6 | 2.5 | 15.6 | 28.9 | 14.1 | 11.2 |
| After handling animals | 54.0 | 4.1 | 37.3 | 38.8 | 86.5 | 50.6 | 61.5 | 46.5 |
| Other | 4.9 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 1.4 |
| Any 2 out of above options | 99.4 | 45.5 | 100.0 | 78.8 | 100.0 | 100.2 | 100.0 | 88.0 |
| Any 3 out of above options | 82.8 | 28.4 | 98.8 | 57.6 | 100.0 | 99.0 | 97.4 | 78.2 |
| Any 4 out of above options | 56.4 | 8.1 | 81.9 | 33.8 | 85.4 | 85.7 | 93.6 | 59.9 |

Note: Percentage add up to more than 100 due to multiple responses

Box 6.3: Base value of WASH sector outcome indicators

Outcome1: Immediate reduction in risk of waterborne and water related diseases in targeted communities

Indicator 1b: % of target population that has increased knowledge of hygiene practices

Base value: 40.1%

Knowledge on critical time for hand washing=59.9% (Table 6.12)

Knowledge on health risk from lack of hand washing and personal hygiene=19.4% (Table 6.11)

Average of above two= (59.9%+19.4%)/2=40.1%

Table 6.13 presents the respondents' critical time for washing hand. Total 93.1% of the respondents reported that they washed hand before eating, followed by after toilet (83%), before food preparation (68.6%). The practice of hand washing after defecation was very poor in Rautahat (35.8%) and Siraha (75%).

Table 6.13: Practice of critical time for hand washing (%)

| Critical time | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Before food preparation | 59.5 | 61.8 | 97.6 | 30.0 | 71.9 | 71.1 | 100.0 | 68.6 |
| Before eating | 95.7 | 87.0 | 95.2 | 88.8 | 96.9 | 95.2 | 92.3 | 93.1 |
| Before feeding infants | 12.9 | 8.1 | 66.3 | 5.0 | 17.7 | 32.5 | 61.5 | 25.8 |
| After urinating | 49.7 | 10.6 | 54.2 | 23.8 | 66.7 | 62.7 | 80.8 | 47.7 |
| After defecating | 94.5 | 35.8 | 100.0 | 75.0 | 99.0 | 92.8 | 93.6 | 83.0 |
| After caring for a sick person | 27.0 | 4.9 | 28.9 | 6.2 | 16.7 | 30.1 | 42.3 | 21.7 |
| After cleaning a baby/changing diapers | 17.2 | 0.0 | 7.2 | 2.5 | 12.5 | 9.6 | 17.9 | 9.9 |
| After handling animals | 56.4 | 4.1 | 38.6 | 28.8 | 85.4 | 59.0 | 67.9 | 47.6 |
| Other | 3.7 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 1.0 |

Note: Percentage add up to more than 100 due to multiple responses

In total 69.8% of the respondents reported that they used soap water for washing hand. Similarly, 17.6% of the total respondents reported water only and 10.2% reported ash and water (Table 6.14).

Table 6.14: Use of materials in washing hand (%)

| Materials | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|----------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Soap and water | 92.0 | 78.0 | 54.2 | 20.0 | 92.7 | 41.0 | 80.8 | 69.8 |
| Only water | 0.6 | 8.1 | 26.5 | 72.5 | 2.1 | 24.1 | 14.1 | 17.6 |
| Ash and water | 6.1 | 10.6 | 13.3 | 5.0 | 4.2 | 31.3 | 5.1 | 10.2 |
| Other | 1.2 | 3.3 | 6.0 | 2.5 | 1.0 | 3.6 | 0.0 | 2.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

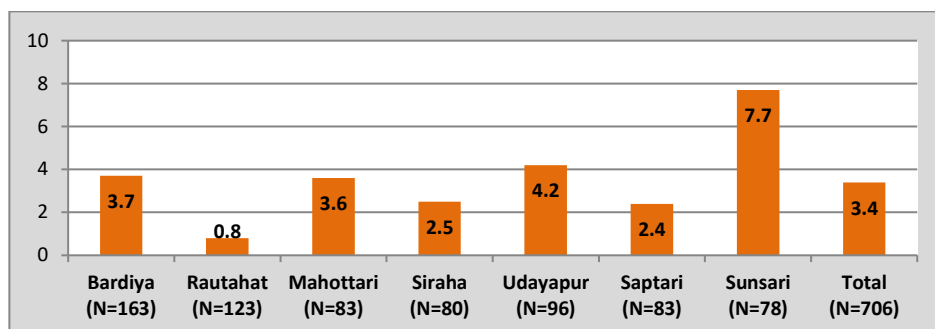
Table 6.15 shows the waste disposal practices in the HHs. Out of 706 HHs, **28.6% managed their waste in a dustbin**, 20.3% in kitchen garden for composting. Interestingly, 27.9% were throw their waste anywhere and did not follow the proper disposal system. The percentage of throwing the waste anywhere was highest in Siraha (58.8%) and lowest in Bardiya (4.9%)

Table 6.15: Waste disposal practices in the HHs (%)

| | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| In a dustbin | 23.9 | 22.8 | 36.1 | 17.5 | 26.0 | 42.2 | 39.7 | 28.6 |
| Public place Burn | 22.7 | 4.1 | 10.8 | 5.0 | 3.1 | 6.0 | 5.1 | 9.5 |
| Anywhere | 4.9 | 56.1 | 6.0 | 58.8 | 11.5 | 45.8 | 24.4 | 27.9 |
| Kitchen garden/filed Compost | 31.3 | 4.1 | 15.7 | 17.5 | 37.5 | 6.0 | 24.4 | 20.3 |
| Burning | 16.6 | 13.0 | 19.3 | 1.2 | 21.9 | 0.0 | 6.4 | 12.2 |
| Other | 0.6 | 0.0 | 12.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Only 3.4% in total had received orientation on hygiene good practice ranging from 0.8% in Rautahat to 7.7% in Sunsari.

Figure 6.3: Received orientation on hygiene good practices (%)



Chapter – VII

Access to information; protection, gender and inclusion and disaster risk reduction

7.1 Access to information

Table 7.1 shows that altogether **78.6% respondents reported that they had used at least one of the listed mass communication channels** and 21.4% had not used any. Altogether 55.8% of the respondents used telephone and mobiles ranging from 23.3% in Bardiya to 86.7% in Mahottari. Similarly, 35.7% respondent listened radio/FM and 24.1% watched TV. Only 1.3% of the respondents have access to newspaper and internet each. Among the project districts, the access to TV was the highest in Udayapur, radio/FM in Bardiya and telephone and mobile in Mahottari.

Table 7.1: Use of communication channel (%)

| Communication channel | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-----------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| I use any | 90.8 | 74.0 | 86.7 | 71.3 | 84.4 | 51.8 | 80.8 | 78.6 |
| TV | 13.5 | 3.3 | 36.1 | 32.5 | 56.2 | 22.9 | 19.2 | 24.1 |
| Radio / FM | 68.7 | 16.3 | 9.6 | 20.0 | 46.9 | 48.2 | 14.1 | 35.7 |
| Telephone/Mobile | 23.3 | 61.8 | 86.7 | 62.5 | 81.2 | 24.1 | 76.9 | 55.8 |
| Internet | 1.2 | 0.0 | 1.2 | 1.2 | 3.1 | 2.4 | 0.0 | 1.3 |
| Newspaper articles | 0.0 | 0.8 | 0.0 | 2.5 | 0.0 | 7.2 | 0.0 | 1.3 |
| Others (Specify) | 11.7 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.8 |
| I did not use | 9.2 | 26.0 | 13.3 | 28.7 | 15.6 | 48.2 | 19.2 | 21.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

The question was asked to the respondents that “Which do you think would be the most effective ways of the Red Cross sharing information with people in your community?”. As per the respondents’ response, the top most five effective ways of the sharing NRCS information in the project area were through local radio programme (57.9%), SMS text/telephone messages (41.9%), face to face conversation (36.4%), TV programme (33.6%) and through community leaders (27.2%).

Table 7.2: Most effective mode of sharing NRCS information in the community (%)

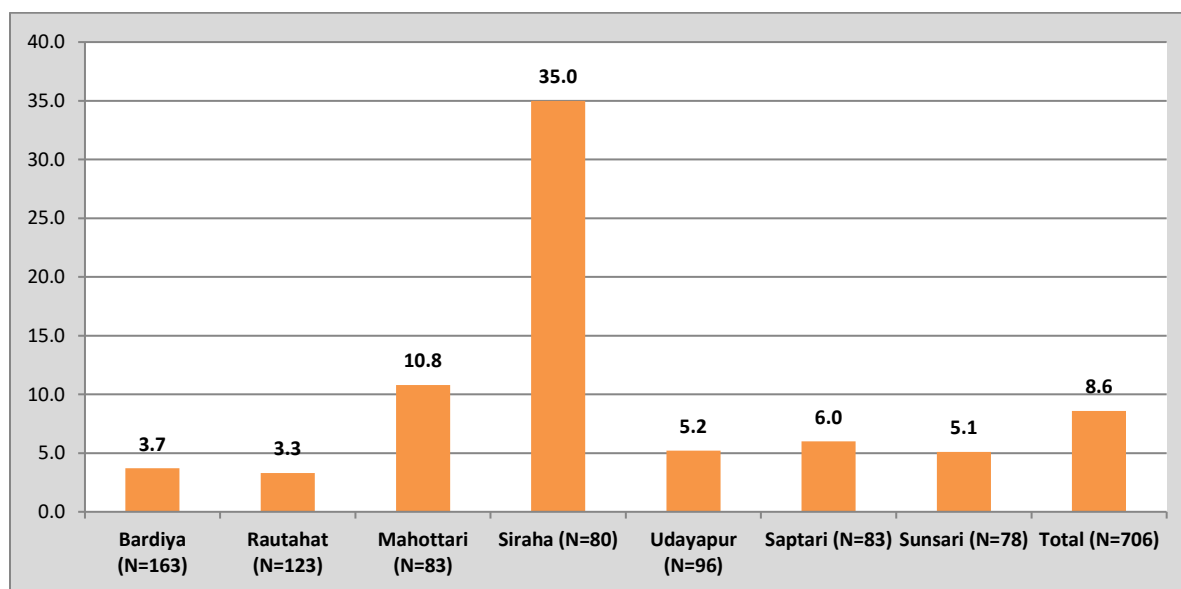
| Mode | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|----------------------------------|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| TV programme or adverts | 4.3 | 59.3 | 25.3 | 66.2 | 52.1 | 18.1 | 23.1 | 33.6 |
| Local Radio Programme or adverts | 75.5 | 83.7 | 9.6 | 56.2 | 65.6 | 59.0 | 23.1 | 57.9 |
| Community entertainment | 3.1 | 58.5 | 31.3 | 26.2 | 3.1 | 50.6 | 5.1 | 24.5 |
| Newspaper articles | 0.6 | 30.9 | 0.0 | 1.2 | 9.4 | 12.0 | 0.0 | 8.4 |
| SMS text/Telephone Messages | 64.4 | 3.3 | 48.2 | 52.5 | 66.7 | 12.0 | 39.7 | 41.9 |
| Facebook messages | 1.8 | 0.8 | 2.4 | 0.0 | 6.2 | 0.0 | 0.0 | 1.7 |
| E-mail | 1.2 | 0.0 | 1.2 | 0.0 | 1.0 | 1.2 | 0.0 | 0.7 |
| face to face | 33.7 | 8.9 | 74.7 | 35.0 | 17.7 | 39.8 | 65.4 | 36.4 |

| | | | | | | | | |
|--|------|-----|------|------|------|------|------|------|
| Through local committees and organizations | 0.0 | 0.0 | 1.2 | 36.2 | 4.2 | 26.5 | 0.0 | 7.9 |
| Through religious leaders | 1.2 | 0.0 | 12.0 | 0.0 | 1.0 | 1.2 | 5.1 | 2.5 |
| Through Community Leaders | 31.3 | 0.8 | 61.4 | 0.0 | 25.0 | 28.9 | 52.6 | 27.2 |
| Through schools | 0.0 | 0.8 | 2.4 | 0.0 | 17.7 | 1.2 | 3.8 | 3.4 |
| IEC materials | 0.6 | 0.0 | 0.0 | 0.0 | 4.2 | 2.4 | 9.0 | 2.0 |
| Hoarding board advertising | 0.0 | 0.0 | 3.6 | 0.0 | 12.5 | 1.2 | 7.7 | 3.1 |
| Loudspeakers in the community | 18.4 | 0.8 | 0.0 | 0.0 | 18.8 | 36.1 | 10.3 | 12.3 |
| Others | 3.7 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 1.0 |

Note: Percentage add up to more than 100 due to multiple responses

Figure 7.1 depicts that 8.6% of the respondents were found aware about registering the complaints or questions to the NRCS. The percentage was the highest in Siraha (35%) and the lowest in Rautahat (3.3%).

Figure 7.1: Knowledge about registering the complaints or questions for the Red Cross (%)



The question was asked to the respondents that “If you have a question or complaint for the Red Cross how you would most like to register it?”. The respondents replied three top most common effective modes of registering complaints against NRCS in the project area as face to face (92.5%), telephone conversation (46.3%) and SMS (41.1%).

Table 7.3: NRCS complaints registration mode (%)

| Communication medium | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|--|-----------------|------------------|------------------|---------------|-----------------|----------------|----------------|---------------|
| Face-to-Face | 77.3 | 99.2 | 97.6 | 95.0 | 97.9 | 98.8 | 92.3 | 92.5 |
| Putting a written note into a suggestion box | 23.9 | 2.4 | 22.9 | 22.5 | 53.1 | 42.2 | 21.8 | 25.8 |
| Telephone | 15.3 | 42.3 | 27.7 | 70.0 | 75.0 | 75.9 | 46.2 | 46.3 |

| | | | | | | | | |
|---------------------|------|------|------|------|------|------|------|------|
| SMS | 25.2 | 28.5 | 37.3 | 63.7 | 68.8 | 42.2 | 39.7 | 41.1 |
| Email | 0.6 | 1.6 | 2.4 | 0.0 | 1.0 | 1.2 | 0.0 | 1.0 |
| Facebook | 0.0 | 1.6 | 6.0 | 0.0 | 4.2 | 0.0 | 0.0 | 1.6 |
| NRCS website | 3.1 | 0.0 | 1.2 | 0.0 | 0.0 | 2.4 | 1.3 | 1.3 |
| Others | 24.5 | 0.0 | 2.4 | 2.5 | 0.0 | 1.2 | 1.3 | 6.5 |

7.2 Protection, gender and inclusion

The project basically focuses on 4 major types of gender-based violence (GBV) comprising physical, mental, sexual and others. The physical violence includes beating, over work load, shouting etc. Mental violence comprises disrespect and threat. Sexual violence incorporates rape, marital rape, teasing etc. Similarly, other violence includes child marriage, polygamy, untouchability, women claiming as ghost, treating daughters as liability, trafficking, dowry, disrespect to widow.

Altogether 76.1% of the total respondents were not aware about any types of GBV and 23.9% were aware about some of the types. Total 20.8% respondents were mentioned physical violence, 14.9% mental violence, 10.9% other violence and 6.2% mentioned sexual abuse. The knowledge on GBV was the highest in Udayapur (49.0%) and the lowest in Rautahat (7.3%) (Table 7.4).

Table 7.4: Knowledge on gender-based violence (%)

| Violence | Bardiya (N=163) | Rautahat (N=123) | Mahottari (N=83) | Siraha (N=80) | Udayapur (N=96) | Saptari (N=83) | Sunsari (N=78) | Total (N=706) |
|-----------------------|------------------------|-------------------------|-------------------------|----------------------|------------------------|-----------------------|-----------------------|----------------------|
| Aware on GBV | 22.7 | 7.3 | 43.4 | 11.2 | 49.0 | 8.4 | 30.8 | 23.9 |
| Physical | 22.1 | 7.3 | 37.3 | 5 | 41.7 | 7.2 | 26.9 | 20.8 |
| Mental | 9.8 | 0 | 36.1 | 7.5 | 35.4 | 4.8 | 19.2 | 14.9 |
| Sexual abuse | 2.5 | 0 | 19.3 | 1.2 | 21.9 | 2.4 | 0 | 6.2 |
| Others | 5.5 | 0 | 28.9 | 6.2 | 35.4 | 0.0 | 6.4 | 10.9 |
| I did not know | 77.3 | 92.7 | 56.6 | 88.8 | 51.0 | 91.6 | 69.2 | 76.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Figure 7.2 illustrates the fact that **1.4% of the respondents reported that their family members faced any of 4 major types of GBV. Out of 706 respondents, 76.1% were not aware about GBV and hence they just undermine the matter.** In this connection, the proportion become low because the knowledge on GBV is low in the community and they might be unaware that they are victimized. **Additionally, GBV survivors do not like to expose themselves as GBV survivors due to social prestige.** Sometimes the criminal activities like rape are not exposed and solved through community mediation.

Figure 7.2 (a): GBV faced by the family members in last 1 year by districts (in %)

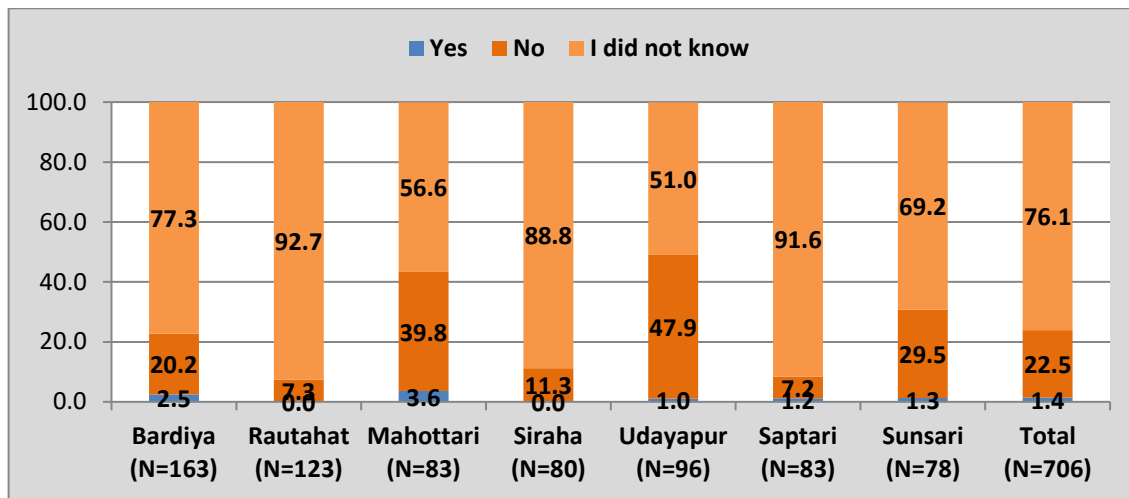
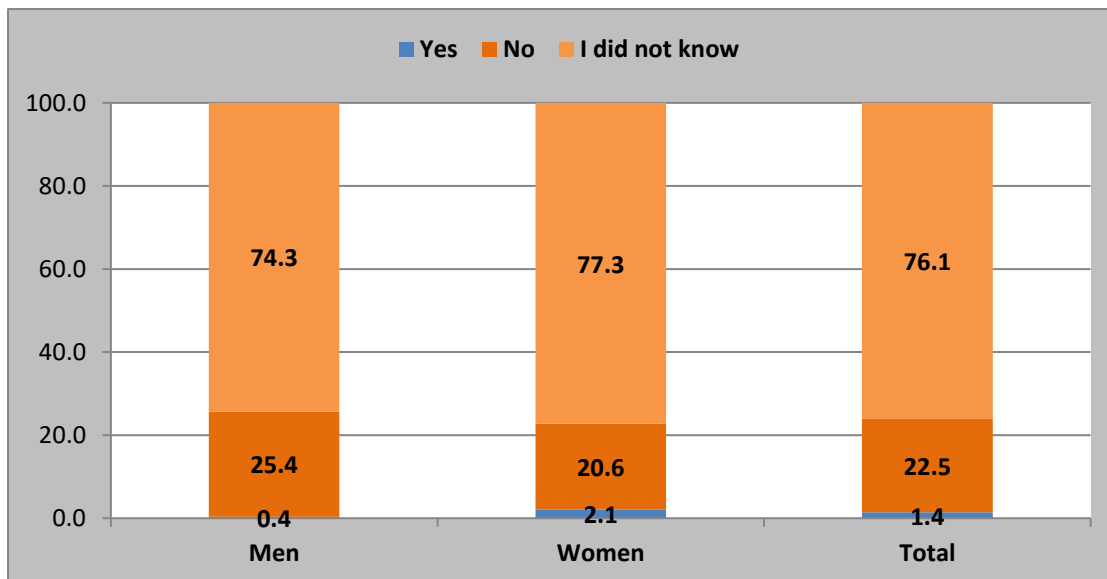


Figure 7.2 (b) reveals that **women respondents reported five times more than men regarding the GBV faced by family members in last 1 year.**

Figure 7.2 (b): GBV faced by the family members in last 1 year by districts (%)



During the FGDs and KIIs with different stakeholders in the field, it was pointed out that people did not openly talk on the matter on GBV. They wanted to hide the real situation and cases of GBV. It was found that the awareness level on exposing the cases of GBV in the project area was still low. **Therefore, the real cases of GBV is much higher than the baseline figure.** It was noted that the number of cases could increase if awareness campaigns are made. In-depth study on the issue is needed in order to explore the real situation of GBV in the project area. It was also pointed out that the cases of GBV have slightly increased in recent years. During FGDs with beneficiaries, it was found that the nature of child marriage has changed nowadays. Earlier parent used to force for child marriage. Now, the trend has changed and the parent do not force.

Box 7.1: Case Study- Liquor induces GBV in Dalit and Tharu community

Shree Bati Sada, 35 years old women from Mushahari Tole, Kalyanpur Municipality Ward Number 4, told that 100% men of the community used to drink locally produced liquor. 50% of the women also used to drink liquor. After drinking liquor, most of the men used to disrespect mentally, threat and beat to his wife. However, she pointed out that there was no option to just leave their husband because they completely depend on her husband for livelihood and other supports.

Similarly, Bhawani Chaudhary, 38 years old women Triyuga Municipality Ward Number 2, Naya Basati told that her husband named Raja Ram Chaudhary used to beat her regularly after drinking liquor.

Chapter – VIII

Findings of focus group discussions and key informants' interview

8.1 Shelter

The poorest of the poor people were mostly victimized by the floods. They comprise Terai Dalits like Mushhars, Chamars, Dom etc. and Muslims. They have thatched houses made with bamboo, straw and mud. During every medium and high level of floods, their houses are washed out. During FGDs and KIIs, it was pointed out that construction of low cost housing could be one of the sustainable and permanent solutions for saving their lives and properties from floods. Therefore, low-cost housing could be constructed for those families. This effort could be made jointly and in collaboration with various national and international organizations including bi-lateral, regional, and multi-lateral working for disaster management in Nepal.

8.2 Livelihood and basic needs

Most of the people in the study areas are dependent on agriculture, animal husbandry, daily wage, and micro-entrepreneurship. The agricultural landless and daily wage labourers are the poorest of the poor group. They have limited livelihood options and are highly affected by floods. During FGDs and KIIs, it was pointed out that indigenous skill development training for modernized and commercial entrepreneurship could increase their income level. For example, laundry for Washer-men, shoe making for Chamar community, bangle and Lahathi making for Muslim community, Dhakiya and Chhitani making for Tharu community in Bardiya etc. Potential areas of income generating activities and livelihood enhancement for them include:

First priority should be given for livestock rearing particularly goat, pig, cow and buffalo. Because it was pointed out that this could be the best way in increasing the income level of the poorest of the poor in the community. This sector also requires less investment. Secondly, vegetable farming like potato, cauliflower, beans, tomato, onion etc. need to be focused. This can be one of the best means of income generating for poor people. Because vegetable farming can be done with a small plot of land. Those who do not have land can also take on lease for certain period of time. Thirdly, indigenous skill development training for modernized and commercial entrepreneurship, along with other skill development training like bicycle fitting, motorbike maintenance, mobile repairing, plumber, electrician, mason, carpentry, veterinary with equipment, and small shops need to be provided. They should also be supported with seed money facility and possible opportunity of job placement.

The livelihood options of the people in the study area are affected by floods as well as droughts. Awareness programmes are required on the use of flooding as well as dry-sensitive varieties of paddy. As the government of Nepal is subsidizing 75 percent of total premium for livestock and agriculture insurance, massive awareness on that is required.

8.3 Health

Water and vector borne, and skin diseases are the major health problems in the study areas. Water and vector borne diseases comprise diarrhoea, dysentery, common cold, typhoid etc. Similarly, scabies is very common. Therefore, health related awareness activities and health camps are necessary.

It was pointed out in all communities that the prevalence of mosquitos is widespread in the study areas. Therefore, mosquito prevention spray along with distribution of mosquito net is necessary.

8.4 Water, sanitation and hygiene

Overwhelming majority of the people in the study area are using hand pipe for drinking water. But, no elevated water hand pipes were in the community. The available shallow tube wells in the community used

to submerged during the floods. People are bound to drink unsafe water during floods period and suffer from water-borne diseases.

No literature is available about the deepness of hand pipes for safe water and the GoN has also no such type of policy and guideline provisions. However, it was pointed out that safe water in the study area is available only after deep pipe penetration with about 200 feet. However, most of the hand pipes are penetrated up to 30 to 40 feet in the community. Water is not safe and contains arsenic. The water becomes undrinkable during floods. Therefore, it is necessary to penetrate the pipes around 200 feet and make it elevated which would be provided by NRCS.

Almost all communities of the study areas are declared Open Defecation Free (ODF) zone. However, it was pointed out that many toilets in the community were either washed out or damaged by 2017 floods. Some marginalized and poor families like Mushhars and Doms are still practicing open field defecation. Therefore, awareness raising, and construction and renovation of latrines are needed.

8.5 Disaster risk reduction

During FGDs and KIs with stakeholders and community people, it was pointed out that **there was no emergency safe shelter also called evacuation centres in entire project locations** including municipalities/rural municipalities, wards and communities. They used to stay in unorganized way in different nearest places like road, embankment, schools, railway track etc. after occurrences of various types of disasters. However, these places are not officially designated by the concerned authorities as emergency safe shelter. Therefore, demand was raised from all places, and concerned people and stakeholders to construct emergency safe shelter in support of the project.

During the FGDs and KIs, it was pointed out that had no emergency evacuation centre. It was also pointed out that there were no task forces including search and rescue (SAR), First Aid, and response mechanism. The communities were lacking SAR materials like life jacket, helmet, stretcher, gum boot, head light, primary treatment kit box, hand mike, whistle, carpet, radio, *belcha*, *fauro*, tent, rope etc. The newly elected peoples' representatives at local level along with the official working at municipalities, rural municipalities and wards were not oriented and trained on the policies, programmes, and even basic components of Disaster Risk Management.

Box 8.11: Base value of DRR sector outcome indicators

Outcome1: Communities in high risk areas are prepared for and able to respond to disaster
Indicator 1b: % of targeted communities with an active and well-equipped response team for
Base value: 0% (No task forces are formed and communities are not equipped with SAR materials)

8.6 Protection, gender and inclusion

Children, women, people with disability, senior citizen, and marginalized groups are vulnerable and are at high risk during floods. Meaningful participation of those people in awareness raising and capacity building activities is necessary. The cases of GBV are highly prevalent in Dalit and Tharu community particularly after liquor drinking but it is rarely exposed.

8.7 Sustainability plan of NRCS

The atmosphere of creating regular income through the establishment of permanent structures could be the major technique of making District Chapters sustainable. For example, Krishna Prasad Gautam, Chairperson, Bardiya District Chapter demanded the construction support of operation theatre and ward for indoor patients to eye hospital, which has already been established, in order to make the NRCS District Chapter Bardiya sustainable. The only one hospital established by NRCS is providing eye and ear care for 5 to 6 thousand out door patients and 700 to 800 patients for cataract operation. According to him, the well-functioning of hospital would generate regular income for NRCS. The building could also be used for District Chapter Office because current building is partially damaged by the earthquake. However, further assessment studies are required for the well sustainability plan of the District Chapters

Chapter – IX

Conclusion and Recommendation

9.1 Conclusions

The purpose of this baseline study is to provide baseline information on the outcome indicators of the Flood and Landslides Operation particularly recovery phase. The study was based on primary as well as secondary sources of information. Primary data was gathered through household survey, key informants' interview and focus group discussions. The sample size for the household survey was 706 proportionately divided into districts, municipalities/rural municipalities, and wards.

The findings of this study show most of the houses of the study areas were washed away by 2017 floods. After the successful rescue, relief and response phase, people are in the need of recovery. Dalits, daily wage earners and landless are most vulnerable in most of the cases. During FGDs and KIIs, it was observed and pointed out that their health conditions were also weak due to poor water, sanitation and hygiene facilities. Although the accessibility of health facilities is better in the community as government health institutions are established in each ward, quality of service delivery is poor due to the lack of laboratory, medicine and equipment facilities. There is the moderate level of knowledge on health and hygiene which needs to be increased. Municipalities/rural municipalities, wards and communities had no task forces including search and rescue (SAR), First Aid, and response mechanism. The communities are lacking SAR materials.

9.2 Recommendations

The Project activities included in the IFRC detailed Revised Operational Plan of Action (EPoA) are in line with field realities. However, following are the main activities demanded during the field visit that are not included in the logical framework:

1. Altogether 25.1% of the HHs had insecticide treated mosquito nets in the study area. During FGDs and KIIs, it was pointed out that the prevalence of mosquitos was widespread in all communities. Therefore, **mosquito prevention spray along with distribution of mosquito net is recommended.**
2. During the FGDs and KIIs with stakeholders and community people, it was pointed out that municipalities/rural municipalities, wards and communities had no emergency evacuation/safe centres. Therefore, construction of Emergency Evacuation/Safe Shelter was **demanded from every place.**
3. The houses of poorest of the poor people comprising Terai Dalits like Mushhars, Chamars, Dom etc. and Muslims are washed out during every medium and high level of floods. They have thatched houses made with bamboo, straw and mud. Therefore, it is **recommended to support in constructing low cost housing for them which could be the sustainable and permanent solution under future projects.** This effort can be initiated jointly with other government and non-government agencies working in this sector in phase wise way.
4. During FGDs and KIIs, it was pointed out that the newly elected peoples' representatives at local level along with the official working at municipalities, rural municipalities and wards were not oriented and trained on the policies, programmes, and even basic components of Disaster Risk Management (DRM). Therefore, **it is recommended to orient newly elected local bodies and deputed staffs immediately on community-based DRM.** NRCS can communicate with them and explain the programme.
5. Terai Dalits along with the Muslims and Tharus are the poorest of the poor in the study area. Therefore, it is recommended to **focus on livelihood support** for them.
 - Indigenous skill development training for modernized and commercial entrepreneurship with seed money support like laundry for Washer-men, shoe making for Chamar community, bangle and *Lahathi* making for Muslim community, *Dhakiya* and *Chhitani* making for Tharu community in Bardiya etc.
 - Potential areas for Mushar and Dom community are goat rearing, small shops, and tailoring.

- For other beneficiaries fishing, vegetable farming, buffalo and cow rearing, and shops are the potential areas.

Moreover, the following specific sectoral programmes are also recommended that are the part of broad activities included in Revised Operational Plan of Action (EPoA).

- Although published literatures as well as GoN policies and guidelines regarding the deepness of hand pipes for safe drinking water are not available, during FGDs and KIIs it was pointed out that around 90% of the hand pipes in the project areas were shallow tube-well which was regarded as the unsafe source of drinking water. Therefore, it is **recommended that all the hand pipes to be supported by the project should be deep tube-well having more than 200 feet depth** which can be either penetrated manually or by machine.
- **Support skill development training** like bicycle fitting, motorbike maintenance, mobile repairing, plumber, electrician, veterinary with equipment, seed money facility and possible opportunity of job placement.

Sustainability plan of NRCS: The atmosphere of creating regular income through the establishment of permanent structures could be the major technique of making District Chapters sustainable. However, further assessment studies are required for the well sustainability plan of the District Chapters.

Annex 1: Baseline value with indicators

| Sector | Outcome | Indicators | Base value | Reference Box |
|-----------------------------|---|--|------------|---------------|
| Shelter | Outcome1: Communities in disaster and crisis affected areas restore and strengthen their safety, well-being and longer-term recovery through shelter and settlement solutions | 1.1 % of families living in shelters meeting agreed standards for emergency shelter for the specific operational context | 0% | Box 3.2 |
| | | 1.2 % of target families who have increased knowledge about safe shelter construction | 1.4% | Box 3.1 |
| Livelihoods and basic needs | Outcome1: Communities, especially in disaster and crisis affected areas, restore and strengthen their livelihoods | 1.1 % of those assisted for whom food consumption is equal or greater than the minimum food basket equivalent | 3.7% | Box 4.1 |
| | | 1.2 % of targeted population whose livelihoods are (restored to/or improved from) pre-disaster level | 53.1% | Box 4.2 |
| Health | Outcome1: The immediate and mid-term risks to the health of affected populations are reduced | 1.1 % of targeted people with increased knowledge of and practiced preventive health behavior | 41.2% | Box 5.2 |
| | Outcome 2: The medium-term risks to the health of affected | 2.1 % of people in the operation catchment area who can access appropriate health services | 33.9% | Box 5.1 |
| WASH | Outcome1: Immediate reduction in risk of waterborne and water related diseases in targeted communities Outcome 2: Sustainable reduction in risk of waterborne and water related diseases in targeted communities in the recovery phase | 1.1 % of target population that has access to sufficient safe water | 30.3% | Box 6.1 |
| | | 2.2 % of target population that is using adequate sanitation | 10.5% | Box 6.2 |
| | | 1.2 % of target population that has increased knowledge of hygiene practices | 40.1% | Box 6.3 |
| DRR | Outcome1: Communities in high risk areas are prepared for and able to respond to disaster | % of targeted communities with an active and well-equipped response team for | 0% | Box 8.1 |

Annex 2: Terms of reference for baseline survey

Floods and Landslides Recovery Operation Baseline survey

Terms of Reference (ToR)

Introduction

Heavy rainfall was experienced in different parts of Nepal since 10 August 2017. This led to floods and landslides that affected over 1.7 million people across 31 districts¹. In addition, 149 people lost their lives, 134 were injured and 27 were reported missing. At least 92,216 families (approximately 461,080 people) have been displaced due to damage of their houses, some 64,997 houses are fully damaged and 144,973 partially damaged². According to the Ministry of Livestock Development, a total of 181,000 livestock (cows, buffalos, pigs, poultry etc.) have been killed by floods. According to the Ministry of Agricultural Development (MoAD), this monsoon has had a major impact on the agriculture sector, destroying planted crops and fish worth NPR 8.1 billion. However, the amount could change as MoAD is yet to prepare the final post-disaster needs assessment (PDNA) report of the recent floods and landslides on the agriculture industry of the country³.

The Government of Nepal took the lead in rescue, relief and response, and welcomed assistance from other countries' governments, organizations and interested individuals to support the response. On its part, Nepal Red Cross Society (NRCS) immediately activated its Emergency Operation Center (EOC) and responded to the situation by mobilizing trained volunteers and staff in the field to conduct assessment as well as distributing relief items (ready to eat food, water, emergency shelter material) and first aid services to the people affected by the disaster.

The International Federation of Red Cross and Red Crescent Societies (IFRC), allocated Disaster Relief Emergency Fund (DREF) of CHF 497,099 on 13 August to support NRCS in carrying out immediate relief activities. An Emergency Appeal of CHF 3.5 million was launched on 22 August to meet humanitarian needs of 16,200 families, based on the initial rapid assessment (IRA) preliminary findings.

NRCS deployed, 1,289 Red Cross volunteers and Junior/Youth Red Cross members including District Disaster Response Team (DDRT) members, trained First Aid and National Disaster Response Team (NDRT) members along with volunteers on the ground for immediate response such as searching and rescuing people, providing first aid services to injured people and distributing ready to eat food (RTEF) and managing temporary livings of evacuated people. Similarly, NRCS volunteers trained in Community Action for Disaster Response (CADRE) were involved in the search and rescue of the people in the affected areas.

Overall, more than 50,000 people have been reached with relief items in 31 districts. The relief phase of the operation has come to an end and NRCS, with support from IFRC and in-country Movement partners, have started to plan for early recovery and recovery activities in the targeted districts: Bardiya, Mahottari, Rautahat, Saptari, Sarlahi, Siraha, Sunsari and Udayapur.

Purpose

Purpose of this baseline study is to assess existing situation of shelter, livelihood, health, water, sanitation and hygiene (WASH), of target municipal areas in 7 flood affected districts (Bardiya, Mahottari, Rautahat, Saptari, Siraha, Sunsari and Udayapur).

The baseline study will provide reliable baseline information of target municipal areas and districts that will be used as benchmarks against which changes/ progress of achievements can be measured and evaluated, using verifiable indicators presented in the IFRC Emergency Plan of Action (recovery phase).

Objectives

Provide baseline data on key floods recovery indicators of shelter, livelihood, WASH and health to enable changes in people to be measured over the course of operation in the target areas;

Scope

This baseline study will mainly cover the key floods recovery indicators at outcome level. Adapt existing NRCS survey tools/questionnaires, finalize with the project team and field testing. These include household survey questionnaire, KII and FGD questionnaire.

Preparation of the inception report that includes study methodologies, detailed work plan and final version of the tools Field work including interviews and discussion with community members ensuring appropriate representation of vulnerable groups, women, people with disability as well as household survey based on the methodologies as mentioned in the inception report (agreed with IFRC) Tabulation, analysis and presentation of the data in agreed template of the study report Presentation of the findings to IFRC and NRCS, seek feedback and make necessary adjustment in the report. Preparation and submit final report to IFRC

Methodology

Household survey

Capture information related to outcome indicators of the project (baseline data)
Random sampling of households to be interviewed.
Explain sampling methodology in inception report

Desk review of existing documents

IFRC Emergency Appeal and Emergency Plan of Action
IFRC Operations Updates
NRCS situation reports

Interviews and focused group discussion with key informants including but not limited to:

Targeted population (Children, women, men, minorities, people living with disability)
Community groups/ organizations
Local authorities (ward secretary, labour officer, health officer, WASH officer, agriculture officer, livestock officer)

Deliverables

Inception report and detailed work plan and data collection plan and tools for the study
Draft report to be submitted one week after the completion of the field work
Presentation of findings of the study to IFRC and NRCS.
Final evaluation report of no more than 30 pages (excluding annexes) –
Photos and presentations from the field

Proposed Baseline schedule

| Activity | Location | No. of Days | Date | Deliverables |
|---|------------------------|-------------|------|---|
| Desk review | Home | 3 | | |
| Preparation of data collection tools/survey questionnaire, field testing and inception report | Home | 4 | | |
| Submission of inception report, tools and methodologies and a detailed work plan | NRCS Office, Kathmandu | 1 | | Inception report, survey tools, work plan |
| Discussion with IFRC and NRCS and field preparation | NRCS, Kathmandu | 1 | | |
| Travel to districts (project communities and district headquarters) | 7 districts | 14 | | |
| Data analysis, report writing and submission of preliminary draft, presentation of findings to IFRC/NRCS (IFRC/NRCS requires 10 days for coordinated feedback to the draft report by IFRC/NRCS) | Office, Kathmandu | 10 | | Draft report, and survey tools used during the assignment |
| Prepare and submit final report | Home | 2 | | Final report |
| Total consultancy working days | | 35 | | |

Qualification of consultant

The consultant should have the following expertise and experiences:

Master's Degree in Disaster Management or relevant field with prior experience of similar work
 Prior experience of baseline /end-line study of recovery operations
 Language proficiency in both English and Nepali languages

Application procedures

Interested candidates/teams should submit their expression of interest to abhinav.sharma@ifrc.org by 1 February 2018 not later than 5 PM.

The application should include:

Cover letter clearly summarizing experiences as it pertains to this assignment, and contact details for three professional referees.

Curriculum Vitae

Applicants will be required to provide samples of two previous written work like that described in this TOR, (previous baseline, end-line/evaluations and reviews completed).

Budget for the completion of the work

Application materials are non-returnable and we thank you in advance for understanding that only short-listed candidates will be contacted.

Annex 3: Questionnaire for household survey

**नेपाल रेडक्रस सोसाइटी (Nepal Red Cross Society)/International Federation of Red Cross and Red Crescent Societies आधारभूत सर्वेक्षण (Baseline Survey)
Floods and Landslides Recovery Operation
घरधुरी प्रश्नावली (Household Questionnaire)**

Introduction and consent (परिचय र सहमति)

मेरो नाम हो र हामी नेपाल रेडक्रस सोसाइटीद्वारा यस जिल्लामा संचालित बाढी र पहिरो पुनर्लाभ कार्यक्रमको लागि आधारभूत सर्वेक्षण गर्न आएका छौं । घरधुरीहरूको विपद् व्यवस्थापन, आवास, जिविकोपार्जन, स्वास्थ्य र खानेपानी तथा सरसफाई सम्बन्धि वर्तमान ज्ञान, दृष्टिकोण तथा अभ्यासबारे जानकारी लिनु यस सर्वेक्षणको प्रमुख उद्देश्य हो । तपाईंसंगको अन्तर्वाता समाप्त हुन करीव..... मिनेट लाग्नेछ । यो अन्तर्वाता तपाईंको इच्छा अनुसार हुनेछ र तपाईंलाई इच्छा नभएको खण्डमा प्रश्नहरूको उत्तर दिन जरुरी छैन । यस प्रक्रियाबाट प्राप्त सम्पूर्ण जानकारी गोप्य हुनेछ र तपाईंको नाम कतै पनि उल्लेख हुने छैन । सर्वेक्षण बारे तपाईंका केहि प्रश्नहरू छन् ?

यस प्रक्रियामा तपाईंको सहभागिताको हामी कदर गर्नेछौं । के तपाईं यस सर्वेक्षणमा सहभागी हुन इच्छुक हुनुहुन्छ ?

My name is, and I have come here at your place to collect the household data for Baseline Survey of Flood and Landslide Recovery Programme implemented by the Nepal Red Cross Society in this districts. The purpose of this survey is to explore and analyze the current knowledge, attitude and practice of people/HHs in DRR, Shelter, Livelihood, Health and WASH. The survey takes around minutes to complete. Participation in this survey is voluntary, and you can choose not to answer any question. All information is anonymous. We will not include your name with the information we collect.

At this time, do you have any questions about the survey? We would very much appreciate your participation in this survey. Are you willing to participate?

नोट (Note) : घरहरूमा अन्तर्वाता लिदा १८ वर्ष भन्दा बढी उमेर भएको र परिवारको सम्पूर्ण विवरणहरूको स्पष्ट जानकारी भएको उत्तरदातासंग लिनुपर्छ । यस सर्वेक्षणमा महिला र पुरुष उत्तरदाताहरूको संख्या सकेसम्म बराबर हुनुपर्ने भएको हुँदा एउटा घरमा महिला र अर्को घरमा पुरुष उत्तरदातासंग विवरणहरू संकलन गर्नु पर्छ । अन्तर्वाता लिदा दलित र आदिवासी जनजाति, अपाङ्गता भएको व्यक्ति, जेष्ठ नागरिक, गर्भवती तथा सुत्केरी महिला, महिला घरमूली भएको घर-परिवारलाई प्राथमिकता दिनु पर्छ । (Interview men and women alternatively in the HHs. The age of the respondent should be 18+ years. The respondent should have clear and complete information about the HH. Prioritize HHs having Dalit and Janajati, people with disability, senior citizen, pregnant and lactating women, women-headed respondent)

अन्तर्वाता लिनेको नाम (Interviewer's Name) :
मोबाइल नम्बर (Mobile Number) :
अन्तर्वाता शुरु गरेको समय (Starting time of interview):.....
अन्तर्वाता सकिएको समय (Ending time of interview):.....
मिति (Date):.....
कृपया जि.पि.यस. प्वाइन्ट (Please record GPS point):

समूह १ (Section 1) : उत्तरदाताको सामान्य जानकारी (General information of the respondent)

| क्र.सं. (S.N.) | प्रश्नहरू (Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् । (Circle in or write appropriate answer) | जानुहोस् (go to) |
|-------------------|---|--|---------------------|
| 1.1 | आवश्यकता अनुसार चिन्ह लगाउनुहोस् । Circle in appropriate answer. | पुरुष(Men) महिला(Women) तेश्रो लिङ्ग(Third Gender) | |
| 1.2 | तपाईंको उमेर कति हो ? What is your Age? | | |
| 1.3 | तपाईंको घर कुन जिल्लामा पर्छ ? In which district your house is located? | रौतहट Rautahat महोत्तरी Mahottari सिरहा Sirha सप्तरी Saptari उदयपुर Udayapur सुनसरी Sunsari बर्दिया Bardiya | |
| 1.4 | तपाईंको घर कुन नगरपालिका/गाउँपालिकामा पर्दछ ? In which municipality/rural municipality your house is located? | | |
| 1.5 | तपाईंको घर कुन वडामा पर्दछ ? In which ward your house is located? | | |
| 1.6 | तपाईंको घर कुन टोलमा पर्दछ ? In which tole your house is located? | | |
| 1.7 | तपाईं कुन जाति/जनजाति समुहमा पर्नु हुन्छ ? From which ethnicity do you belong to? | तराई दलित Terai dalit पहाडे दलित.. Hill dalit तराई जनजाति Terai Janajati पहाडे जनजाति Hill Janajati अन्य पिछडिएका जातजाति Other backward caste मुसलमान Muslim बाहुन/क्षेत्रि Brahmin/Chhetri | |
| 1.8 | तपाईंको वैवाहिक स्थिति के हो ? What is your marital status? | अविवाहित Unmarried विवाहित Married एकल (श्रीमान/श्रीमती वितेको) Single (Husband/Wife has dead) सम्बन्ध विच्छेद भएको /छुट्टै बसेको Divorce/Separated | |
| 1.9 | तपाईं कति पढनु भएको छ ? What is your education level? | प्राथमिक (१ देखि ५) Primary (1-5) निम्न माध्यमिक (६ देखि ८) Lower secondary (6-8) माध्यमिक (९ देखि १०) Secondary (9-10) उच्च माध्यमिक (११ देखि १२) Higher secondary (11-12) स्नातक र सो भन्दा माथि Bachelor and above निरक्षर Illiterate अनौपचारिक शिक्षा Non-formal education | |

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| 1.10 | तपाईंको मुख्य पेशा के हो वा तपाईंको संलग्नता ?What is your main occupation? | कृषि Agriculture श्रम/ज्यालादारीLabourer/wage earner व्यापार Business नोकरी Job पूर्ण बरोजगार Fully unemployed गृहणी Housewife विद्यार्थी Student सिपमुलक पेशा Skilled work स्थानीय नेता/समाजसेवी/नागरिक समाज Local leader Social/worker/Civil society member | |
| 1.11 | घरमूली महिला वा पुरुष के हुनुहुन्छ ?What is the sex of the HH head? | महिला(Women) पुरुष (Men) | |
| 1.12 | तपाईंको परिवारको मूली यी मध्ये कुनै समुहमा पर्नुहुन्छ ?Is the household headed lie in following groups? (Related to livelihood vulnerability) | एकलमहिला Single women वृद्ध (६० वर्ष माथिका) Elderly (above 60 years) बालबालिका (१८ वर्ष मुनिका)Children (below 18) अपाङ्गता भएको व्यक्ति People with disability यी मध्ये कुनै समुहमा पर्दैनDo not lie in above group | |
| 1.13 | तपाईंको परिवारमा ५ वर्ष भन्दा मूनि कतिजना बालकहरु छन् ?How many boys having age5 year or less live in this household? (A family means people who live and sleep under one roof, eat from the same kitchen) | | |
| 1.14 | तपाईंको परिवारमा ६ देखि १८ वर्षका कतिजना पुरुषहरु हुनुहुन्छ ?How many male family members having age in between 6 year to 18 year live in this household? | | |
| 1.15 | तपाईंको परिवारमा १९ देखि ५९ वर्षका कतिजना पुरुषहरु हुनुहुन्छ ?How many male family members having age in between 19 year to 59 year live in this household? | | |
| 1.16 | तपाईंको परिवारमा ६० वर्ष भन्दा माथि उमेरका कतिजना पुरुषहरु हुनुहुन्छ ?How many male family members having age 60 year or above live in this household? | | |
| 1.17 | तपाईंको परिवारमा जम्मा कतिजना पुरुषहरु हुनुहुन्छ ?How many male family members live in this household? | | |
| 1.18 | तपाईंको परिवारमा ५ वर्ष भन्दा मुनि कतिजना बालिकाहरु छन् ?How many girls having age 5 year or less live in this HH? | | |
| 1.19 | तपाईंको परिवारमा ६ देखि १८ वर्षको विचमा कतिजना महिलाहरु हुनुहुन्छ ?How many female family members having age in between 6 year to 18 year live in this household? | | |

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| 1.20 | तपाईंको परिवारमा १९ देखि ५९ वर्षको बिचमा कतिजना महिलाहरु हुनुहुन्छ ?How many female family members having age in between 19 year to 59 year live in this household? | | |
| 1.21 | तपाईंको परिवारमा ६० वर्ष भन्दा माथी कतिजना महिलाहरु हुनुहुन्छ ?How many female family members having age 60 year or above live in this household? | | |
| 1.22 | तपाईंको परिवारमा जम्मा कतिजना महिलाहरु हुनुहुन्छ ?How many female family members live in this household? | | |
| 1.23 | तपाईंको परिवारमा जम्मा कतिजना हुनुहुन्छ ?How many family members live in this household? | | |
| 1.24 | तपाईंको परिवारका सदस्यहरुमा कोहि शारीरिक अशक्तता, दीर्घरोग वा विशेष आवश्यकता (शारीरिक, मानसिक, फरक सोच, फरक व्यवहार जस्ता) भएका व्यक्तिहरु हुनुहुन्छ ?Are there household member(s) who have a disability, chronic illness or special needs (physical, mental, sensory, behavioural,) | छः(yes) छैनः(no) | |
| 1.25 | If yes, specify number? छन भने, कति जना छन ? | | |
| 1.26 | तपाईंको परिवारका सदस्यहरुमा कोहि गर्भवति वा सुत्केरी भएका महिलाहरुहरु हुनुहुन्छ ? Are there pregnant or lactating women in the household? | छः(yes) छैनः(no) | |
| 1.27 | छन भने, कति जना छन ? If yes, specify number | | |

खण्ड २ (Section 2): स्वास्थ्य सम्बन्धी जानकारी Health Related Information

| क्र.सं. (S.N.) | प्रश्नहरु (Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् । (Circle in or write appropriate answer) | जानुहोस् (go to) |
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| 2.1 | Who is the first person/ place that you think of calling/visiting when someone in the family is sick? तपाइको परिवारमा कोही विरामी पर्दा सहयोग लिनका लागि बोलाउन वा सम्पर्क गर्ने व्यक्ति वा स्थान कुन हो ? | घरमै उपचारIndigenous treatment in house स्थानीय स्वास्थ्य अभ्यासकर्ता Local health practitioner औषधी पसल Medicine shop/pharmacy धामी भाँकीTraditional healer स्वास्थ्य चौकीHealth post अस्पतालHospital निजी क्लिनिक Private clinic | |

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| 2.2 | विगत १ वर्ष भित्रमा तपाईं वा तपाईंको परिवारका कुनै सदस्यहरु विरामी हुनु भएको छ/थियो ?Have you or any of your family member been sick during the last 1 year? | छ Yes छैन No | |
| 2.3 | यदि विरामी हुनु भएको छ/थियो भने कहाँ उपचार गराउनु भयो ?If yes, where did you treat? (Health Outcome Indicator 2.1) (Multiple Response) | घरमै उपचार गरे Indigenous treatment in house स्थानीय स्वास्थ्य अभ्यासकर्ता Local health practitioner औषधि पसल Medicine shop/pharmacy धामी भाँकी Traditional healer स्वास्थ्य चौकी Health post अस्पताल Hospital निजी क्लिनिक Private clinic स्वास्थ्य शिविर Health camp | |
| 2.4 | तपाईंलाई भ्रडा पखाला लाग्ने कारण के हो जस्तो लाग्छ ?In your view, what are the causes of diarrhea? (Health Outcome Indicator 1.1) (Multiple Response) | फोहर तथा प्रदुषित पानी पिउनाले Drinking dirty water/contaminated water फोहर पदार्थ चलाएपछि साबुनपानीले हात नधुनाले No hand washing with soap and water after touching dirty objects फोहर तथा बासी/विग्रीएको खाना खाएमा Eating dirty and rotten food दिसा धोइसकेपछि साबुनपानीले हात नधुनाले Not washing hands with soap and water after defecation भिँगाको कारणले Flies खुल्ला स्थानमा दिसापिसाव गर्नाले Open defecation अन्य (खुलाउनुहोस) Others (Specify) मलाई थाहा छैन Don't know | |
| 2.5 | विगतमा तपाइको परिवारका कसैलाई भ्रडापखाला लागेर विरामी पर्नुभएको छ ?Did any member of your family get diarrhoea? | छ Yes छैन No | |
| 2.6 | पर्नुभयो भने, रोकथाम गर्न के गर्नुभयो ?Which kind of treatment are you using for diarrhea? (Multiple Response) (Health Outcome Indicator 1.2) | परम्परागत औषधि तथा विधिहरु Traditional medicines and methods सफा पानी Purified water जीवनजल Jeevan jal अस्पताल लगेको Taken to hospital अन्य (खुलाउनुहोस) Others (Specify) | |
| 2.7 | तपाइको विचारमा भ्रडापखालाको रोकथाम गर्ने उत्तम उपाय के होलान ?What is the best way to prevent diarrhea? Multiple response (Health Outcome Indicator 1.1) | साबुनपानीले हात धुने गरेमा Washing hands with soap water चर्पीमा मात्र दिसापिसाव गर्ने गरेमा Use of latrines/toilets सफा र स्वच्छ खानेपानी पिउने गरेमा Use of safe and drinkable drinking water अन्य (खुलाउनुहोस) Others (Specify) मलाई थाहा छैन Don't know | |

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| 2.8 | तपाईंको विचारमा कालाज्वर र डेंगु लाग्ने प्रमुख कारणहरु के होलान ?What causes malaria/dengue? (Health Outcome Indicator 1.1) | लामखुट्टे Mosquitos जीवाणु Germs अन्य (खुलाउनुहोस)Others (Specify) मलाई थाहा छैन Don't know | |
| 2.9 | कालाज्वर र डेंगुको रोकथामका लागि तपाइले के गर्न सक्नुहुन्छ ?What can you do to prevent malaria/dengue? (Health Outcome Indicator 1.1) Multiple Response | शरीरलाई ढाकेर राख्ने Cover up body कीटनाशक औषधी घर वरीपरी छर्कने Spraying लामखुट्टे वृद्धि हुने स्थानहरु नष्ट गर्ने Destroying mosquito breeding places (tires, recipients, vases) घाँसपात तथा भाडीहरुको सरसफाइ गर्ने Clearing grass/scrub जमेका पानीहरुको निकास बनाउने Clearing stagnant water लामखुट्टेबाट बच्ने मलम लगाउने Use mosquito repellent लामखुट्टेको धूप प्रयोग गर्ने Use mosquito coil लामखुट्टेको लागि भुल प्रयोग गर्ने Mosquito nets अन्य (खुलाउनुहोस)Others (Specify) मलाई थाहा छैन Don't know | |
| 2.10 | तपाइको घरमा औषधीयुक्त लामखुट्टेको भुल छ ?Do you have insecticide treated mosquito nets (eg. Supanet) in your household? (Health Outcome Indicator 1.1) | छ Yes छैन No आवश्यक छैन Not applicable (no malaria/dengue prevalence) | |
| 2.11 | औषधीयुक्त लामखुट्टेको भुलभित्र परिवारका सदस्यमध्ये को को सुत्छन ?Who sleeps under a treated mosquito nets? (Health Outcome Indicator 1.1) | बाल बालिका मात्र A child/children only गर्भवती महिला मात्र Pregnant mother only घरका अन्य महिला Other women तपाइ आफैँ Yourself श्रीमान श्रीमती Husband/partner घरका सबै सदस्य All family members कोही पनि सुत्दैनन् None | |
| 2.12 | छरछिमेकमा लामखुट्टे नियन्त्रणका लागि तपाइ के गर्नुहुन्छ ?What do you do for vector (mosquito) control in your neighbourhood? Multiple response (Health Outcome Indicator 1.1) | जमेको/जम्मा गरेर राखेको पानीलाई सफा गर्ने Get rid of stagnant water/clean water reservoir Remove mosquito breeding grounds लामखुट्टेहरुको वृद्धिहुने संभावित आधारहरुको रोकथाम गर्ने Cut the lawn/trim the vegetation बढेको बनस्पति/घाँस काटने Indoor residual spraying घरभित्र थन्काइएका मालसमानहरु भएको ठाउँमा औषधी छर्कने Larviciding (use of products to kill larva in water) घाँस पानी जमेको र संभावित किटाणु उत्पन्न हुन सक्ने ठाउँमा औषधी छर्कने अन्य (खुलाउनुहोस)Others (Specify) मलाई थाहा छैन Don't know | |

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| 2.13 | तपाईं वा तपाईंको परिवारको कुनै सदस्यले विगत १ वर्षमा स्वस्थ सम्बन्धि कुनै कार्यक्रममा भाग लिनु भएको थियो ? Have you or your family members participated in any health related programme in last 1 year ? (Health Outcome Indicator 1.1) (Multiple Response) | तालिम Training अभिमुखिकरण Orientation सचेतना अभिवृद्धि Awareness raising स्वास्थ्य शिविर Health camp अन्य (खुलाउनुहोस्) Others (Specify) छैन No | |
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खण्ड ३(Section 3):खानेपानी तथा सरसफाई सम्बन्धी जानकारी WASH

| क्र.सं. (S.N.) | प्रश्नहरू (Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् । (Circle in or write appropriate answer) | जानुहोस् (go to) |
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| 3.1 | तपाईंको परिवारको पिउने पानीको मुख्य स्रोत के हो?What is the main source of drinking water of your family ? (WASH Outcome Indicator 1.1) | व्यक्तिगत ट्युववेल/चापाकल Private tube-well/hand-pipe सार्वजनिक ट्युववेल/चापाकल Public tube-well/hand-pipe व्यक्तिगत धारा Private tap सार्वजनिक धारा Public tap व्यक्तिगत पाईप, अस्थायी रूपमा सार्वजनिक धारामा जोडिएको Private pipe, temporary connected to public tap सुरक्षित झरना Protected spring पोखरी Pond असुरक्षित झरना Non-protected spring वर्षाबाट जम्मा गरिएको पानी ट्याकी Rain water tank/rain water harvesting system व्यक्तिगत इनार Private shallow well सार्वजनिक इनार public shallow well व्यक्तिगत गहिरो इनार Private deepwell सार्वजनिक गहिरो इनार Public deepwell नदी, सिंचाई पाईप River/irrigation channel अग्लो पारी बनाइएको ट्युववेल Elevated Tube well खोला Stream अन्य (खुलाउने) Others (Specify) | |
| 3.2 | What else do you use water from this source for? पिउन बाहेक अन्य के मा यो स्रोतको पानी प्रयोग गर्नुहुन्छ ? (Multi response) (WASH Outcome Indicator 1.1) | नुहाउन (Washing body/bathing) लुगा धुन (Washing clothes) बगैँचामा पानी हाल्न (Watering garden) वच्चाको कपडा धुन (Washing nappies) जनावरलाई खुवाउन (Feeding to livestock) सिंचाई गर्न (Irrigation) अन्य (खुलाउने) Other (Specify) केही गर्दैन (None) | |
| 3.3 | तपाईंलाई खानेपानी लिनको लागि स्रोतसम्म पुग्न कति समय लाग्छ ?How long does it take you to get from your house to the drinking water source? (WASH Outcome Indicator 1.1) | ० मिनेट (घरमै) 0 min (In home) ५ मिनेट भन्दा कम less than 5 minute ५ देखि १० मिनेट सम्म 5-10 minute १० देखि २० मिनेट सम्म 10-20 minute २० मिनेटभन्दा बढि more than 20 minutes | |

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| 3.4 | तपाईंको खानेपानीको श्रोत मौसम अनुसार बदलिन्छ ?Does your source of drinking water change according to seasons? (WASH Outcome Indicator 1.1) | बदलिन्छ Yes बदलिदैन No | |
| 3.5 | तपाईं खानेपानीलाई शुद्धीकरण गर्नुहुन्छ ?Do you treat your drinking water? (WASH Outcome Indicator 1.1) | सधैं गर्छु Yes always कहिलेकाहिँ गर्छु, Sometimes गर्दिन No | 3.7 |
| 3.6 | यदि गर्नुहुन्छ भने, प्रायजसो कस्तो शुद्धीकरण विधि प्रयोग गर्नुहुन्छ?If yes always to the previous question, what water treatment method do you usually use? (WASH Outcome Indicator 1.1) | पानी उमाल्ने Boil water पानी छान्ने Filter water क्लोरीन हालेर Add chlorine सोडिस विधि Solar disinfection अन्य (खुलाउने) Others (Specify) | |
| 3.7 | यदि गर्नुहुन्न भने, शुद्धीकरण विधि किन प्रयोग गर्नुहुन्न ?If no or sometimes to the previous question, why don't you treat drinking water? | पानी सफा भएकोले Water is of good quality पनि सुद्धीकरण किन गर्नुपर्छ थाहा नभएकोले । don't know why to treat water आवश्यक नभएकोले it's not necessary शुद्धीकरण साधनको अभाव (दाउरा, क्लोरिन आदि) lack of means (to buy heating wood, chlorine,...) शुद्धीकरण महँगो भएकोले Purification is expensive शुद्धीकरण स्वास्थ्यको लागि सुरक्षित नभएकोले Purification is not safe for health पानीको स्वाद परिवर्तन हुने भएकोले Changes the taste of water अन्य (खुलाउने)Other (Specify) | |
| 3.8 | वाढी भन्दा पछि पानिको आपूर्तिमा केही समस्या छ ?Are there any problems with your water supply after floods? | छ Yes छैन No | |
| 3.9 | यदि छ भने के के हुन ?If yes, what are they? | वाढीले पानिको श्रोतमा क्षति पुर्याएको Flood damaged the source वाढी पछि पानीको मुहान सुकेको Source dried post floods पानी फोहोर र असुरक्षित भएको It is dirty/unhealthy पानी अनियमित भएको It is irregular पानीको श्रोत टाढा भएको It is a long way महँगो भएको It is expensive हिउदमा पानी सुक्ने गरेको Periods when it dries up व्यवस्थापनमा समस्या Management issues हेरचाह गर्ने मानिस नभएको No caretaker पानी फोहोर देखिने Turbid looks पानीको स्वाद खराब भएको Tastes bad हातेपम्प भाँचिएको Breakdown of hand pump अन्य (खुलाउने) Others (specify) | |
| 3.10 | तपाईंको विचारमा पानीको आपूर्ति तपाईंको आवश्यकता अनुसार पर्याप्त छ?Do you consider | छ Yes छैन No | 3.12 |

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| | your water supply is sufficient for your needs? (WASH Outcome Indicator 1.1) | | |
| 3.11 | यदि छैन भने तपाईंले कसरी व्यवस्थापन गर्नुभएको छ ? If no, then how do you manage it? | अवस्था हेरी कम पानीको प्रयोग गरेर (Less use of water as per the urgency) जारको पानी पिएर (Drinking Jar water) अन्य (खुलाउने) Others (Specify) | |
| 3.12 | What do you use to clean your drinking water's container with? तपाईं खानेपानीको भाँडो सफा गर्न के प्रयोग गर्नुहुन्छ? | पानी मात्र Water alone साबुन र पानी Soap and water खरानी र पानी Ash and water बालुवा र पानी Sand and water सफा गर्दैन Don't clean थाहा छैन Don't know अन्य (खुलाउने) Others (Specify) | |
| Sanitation सरसफाई | | | |
| 3.13 | वाढी पूर्व तपाईं कस्तो प्रकारको शौचालय प्रयोग गर्नुहुन्थ्यो ? What kind of toilet facility did you use before the floods? | व्यक्तिगत खाल्टे चर्पी Private pit latrine सुधारिएको व्यक्तिगत खाल्टे चर्पी Private offset pit latrine व्यक्तिगत फ्लस चर्पी Private flush toilet व्यक्तिगत सुधारिएको फ्लस चर्पी Private offset flush toilet सावर्जनिक चर्पी Public toilet खुला दिशा Open defecation अन्य (खुलाउने) Other (Specify) | |
| 3.14 | हाल प्रयोग गरिरहनु भएको शौचालयको अवस्था कस्तो छ ? What kind of toilet facility do you use now? (WASH Outcome Indicator 2.2) | व्यक्तिगत खाल्टे चर्पी Private pit latrine सुधारिएको व्यक्तिगत खाल्टे चर्पी private offset pit latrine व्यक्तिगत फ्लस चर्पी Private flush toilet व्यक्तिगत सुधारिएको फ्लस चर्पी Private offset flush toilet सावर्जनिक चर्पी Public toilet खुला दिशा Open defecation अन्य (खुलाउने) Other (Specify) | |
| Hygieneस्वच्छता | | Answers | |
| 3.15 | तपाईंलाई हात नधुनु र व्यक्तिगत सरसफाईको कमीको जोखिम बारे जानकारी छ ? Do you know the risks from lack of hand washing and personal hygiene? | छ Yes छैन No | 8.3 |
| 3.16 | यदि छ भने, के हुन सक्छ ? If yes, what can happen? (WASH Outcome Indicator 1.2) | उल्टी/वान्ता Vomiting भाडा(पखाला) (Diarrhoea) ज्वरो (Fever) खान मन नलाग्नु Loosing of Appetite अन्य (खुलाउने) Other(specify) | |
| 3.17 | तपाईंको विचारमा हात धुने आवश्यक अवस्थाहरु कुन कुन हुन ? When do you think is/are necessary times to wash your hands? Multiple Response | खाना बनाउनु अघि Before food preparation खानु अघि Before eating बालबालिकाहरुलाई खुवाउनु अघि Before feeding infants पिसाव गरिसकेपछि After urinating | |

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| | (WASH Outcome Indicator 1.2) | दिशा गरिसकेपछि After defecating विरामीको स्याहार सुसार पछि After caring for a sick person बच्चाको नेपकिन फेरेपछि After cleaning a baby/changing diapers गाईबस्तुको स्याहार पछि After handling animals अन्य (खुलाउने) Other, specify | |
| 3.18 | तपाईं प्रायः कहिले र कुन अवस्थामा हात धुनुहुन्छ ? When do you usually wash your hands? Multiple Response (WASH Outcome Indicator 1.2) | खानु अघि Before eating) बालबालिकाहरुलाई खुवाउनु अघि Before feeding infants पिसाब गरिसकेपछि After urinating दिशा गरिसकेपछि After defecating विरामीको स्याहार सुसार पछि After caring for a sick person बच्चाको नेपकिन फेरेपछि After cleaning a baby/changing diapers गाईबस्तुको स्याहार पछि After handling animals अन्य (खुलाउने) (Other) Specify | |
| 3.19 | तपाईं प्रायः के ले हात धुनु हुन्छ ? What do you normally wash your hands with? (WASH Outcome Indicator 1.2) | साबुन र पानी Soap and water पानी मात्रै Only water खरानी र पानी Ash and water बालुवा र पानी Sand and water अन्य (खुलाउने) Other (Specify) | |
| 3.20 | तपाईं वा तपाईंको परिवारको सदस्यले घरबाट निस्केको फोहर कहाँ व्यवस्थापन गर्नुहुन्छ ? Where do you or your family member dispose rubbish generated from your house? (Multiple Response) (WASH Outcome Indicator 1.2) | फोहर फाल्ने खाल्टो In a dust सार्वजनिक स्थान Public place जताततै Anywhere करेसावारी अथवा मल खाडल Kitchen garden/filed जलाउने Burning अन्य (खुलाउने) Other (Specify) | |
| 3.21 | तपाइले स्वच्छता सम्बन्धि केही जानकारी र अभिमुखीकरण पाउनु भएको छ ? Have you received any orientation related to hygiene good practices? | छ Yes छैन No | |

खण्ड चार (Section 4): जिविकोपार्जन सम्बन्धी जानकारी (Livelihood Related Information)

| क्र.सं. (S.N.) | प्रश्नहरु (Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् । (Circle in or write appropriate answer) | जानुहोस् (go to) |
|----------------|--|--|------------------|
| 4.1 | तपाइको परिवारका कतिजना सदस्यहरुले परिवारका लागि कमाइ गर्नुहुन्छ ? How many of your family members contribute to the household income? | संख्या(number) : | |
| 4.2 | तपाईं वा तपाईंको परिवारको आफ्नै खेती योग्य जमिन छ ? Do you or your family have your own cultivated land? | छ Yes छैन No | |

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| 4.3 | तपाइको हालको जग्गाको स्वामित्व कसको हो ? What is the land holding status? (Multiple Response) | मेरो आफ्नै Own धितोमा रहेको Mortgage बहालमा लिएको Lease सामूहिक स्वामित्वमा Land with dual ownership एलानी Public | |
| 4.4 | तपाइको परिवारको प्रारम्भिक आयश्रोत के हो ? कुनै एउटा छनौट गर्नुहोस । What is the primary source of household income? Choose one | स्वरोजगार, कृषि Self employed, agricultural sector स्वरोजगार, माछापालन Self-employed, fishing sector स्वरोजगार, पशुपक्षीपालन Self-employed, livestock स्वरोजगार, अन्य Self-employed, other sectors रोजगारी, कृषि Employment, agricultural sector रोजगारी, माछापालन Employment, fishing sector रोजगारी, पशुपक्षीपालन Employment, livestock रोजगारी, अन्य Employment, other private sectors सरकारी/गैरसरकारी सेवा Government service वैदेशिक रोजगार Working abroad निवृत्तिभरण Pensions Rental income घर तथा सम्पत्ति बहाल Daily labourer दैनिक मजदुरी समाजिक सुरक्षा भत्ता Social security allowance अन्य (खुलाउने) Other (Specify) | |
| 4.5 | तपाइको परिवारको सहायक आयश्रोत के हो ? कुनै एउटा छनौट गर्नुहोस What is the secondary sources of household income? (Multiple Response) | स्वरोजगार, कृषि Self employed, agricultural sector स्वरोजगार, माछापालन Self-employed, fishing sector स्वरोजगार, पशुपक्षीपालन Self-employed, livestock स्वरोजगार, अन्य Self-employed, other sectors रोजगारी, कृषि Employment, agricultural sector रोजगारी, माछापालन Employment, fishing sector रोजगारी, पशुपक्षीपालन Employment, livestock रोजगारी, अन्य Employment, other private sectors सरकारी/गैरसरकारी सेवा Government service वैदेशिक रोजगार Working abroad निवृत्तिभरण Pensions Rental income घर तथा सम्पत्ति बहाल Daily labourer दैनिक मजदुरी समाजिक सुरक्षा भत्ता Social security allowance अन्य (खुलाउने) Other (Specify) | |
| 4.6 | तपाइको परिवारको अनुमानित वार्षिक खुदआय कति हो ? On average what is your annual net household income? Note: include income from all sources | रु NPR | |
| 4.7 | तपाईंको आफ्नो नियमित आम्दानीबाट (दैनिक ज्यालादारी बाहेक) परिवारलाई कति महिनासम्म खान पुग्छ ? How many months in a year does your family has food sufficiency with your family's regular income except daily wage labour? (Livelihood and Basic Needs Outcome Indicator 1.1) | ३ महिना भन्दा कम Less than 3 months ३ देखि ६ महिना सम्म 3 to 6 months ६ देखि ९ महिना सम्म 6 to 9 months ९ देखि १२ महिना सम्म 9 to 12 months १२ महिना खाएर बेच्ने गरेको Sold after 12 month consumption | |

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| 4.8 | जिविकोपार्जनका लागि तपाईं अथवा तपाईंको परिवारको कुनै सदस्यले सिपमूलक तालिम लिनु भएको छ ? Have you or your family members received any vocational training for livelihood improvement? (Livelihood and Basic Needs Outcome Indicator 1.2) | छ Yes छैन No | |
| 4.9 | तालिम कसले लिनु भएको छ ? Who have got the training? (Multiple Response) | महिला Women पुरुष Men | |
| 4.9.1.1 | What type of training did women get? महिलाले कस्तो प्रकारको तालिम लिनु भएको छ ? | तरकारी खेती Vegetable farming पशुपालन व्यवस्थापन Livestock management अन्य (खुलाउने) Other (Specify) | |
| 4.9.1.2 | Duration of training received by women (in days) | | |
| 4.9.1.3 | सिपमूलक तालिमपछि महिलाले के गर्दै हुनुहुन्छ ? What are women doing after the training? | | |
| 4.9.2.1 | What type of training did men get? महिलाले कस्तो प्रकारको तालिम लिनु भएको छ ? | तरकारी खेती Vegetable farming पशुपालन व्यवस्थापन Livestock management अन्य (खुलाउने) Other (Specify) | |
| 4.9.2.2 | Duration of training received by men (in days) | | |
| 4.9.2.3 | सिपमूलक तालिमपछि महिलाले के गर्दै हुनुहुन्छ ? What are men doing after the training? | | |
| 4.12 | व्यवसाय शुरु गर्नको लागि कुनै संघ संस्थाबाट सहयोग पाउनु भएको छ ? Have you got the start up support from any organization? | छ Yes छैन No | |
| 4.13 | यदि छ भने, के सहयोग पाउनु भएको छ? If yes, type of support ? (Multiple Response) | नगद Cash सामाग्री Kind नगद तथा सामाग्री दुबै Cash and kind both | |
| 4.14 | विगतको बाढी पश्चात तपाईंको जीवन स्तरमा परिवर्तन भएको छ ? Have your livelihood changed after the floods? (Livelihood and Basic Needs Outcome Indicator 1.2) | सुधार भएको Yes, it has improved खस्केको Yes, it has deteriorated No, it hasn't changed | |
| 4.15 | आय आर्जनको गतिविधिलाई धान्न वा बढाउनका लागि तपाईंलाई ऋण चाहिएको खण्डमा अहिलेको पारिवारिक | साथीभाई, छरछिमेकी Friends/neighbours आफन्त वा नातागोता Relatives साहुमहाजन Money lenders | |

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| | परिस्थितिमा तपाईंलाई तलका मध्ये कसले ऋण दिन्छ होला? Imagine you needed a loan in order to maintain or expand your income-generating activities, which of the following would be most likely to give you the loan, considering your current household situation? (Multiple Response) | बैंक तथा वित्तीय संस्था A bank तपाईंले नै योगदान गरिरहेको सामुदायिक कोष A community fund to which our household makes contributions तपाईं सदस्यरहेको बचत समूह A saving group that our household belongs to माथिका कसैले पनि दिदैन None of the above | |
| 4.16 | तपाईंको परिवारका सदस्यहरूमध्ये कोहि देश बाहिर काम गरी परिवारको लागि कमाइ गर्दै हुनुहुन्छ? Is your any family members working abroad and sending remittances back home? | छः(yes) छैनः(no) | |
| 4.17 | छन भने, कति जना छन? If yes, specify number | | |

खण्ड ५ (Section 5): सुरक्षित आवास सम्बन्धी जानकारी Safe Shelter Related Information

| क्र.सं. (S.N.) | प्रश्नहरू (Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् । (Circle in or write appropriate answer) | जानुहोस् (go to) |
|-------------------|--|--|------------------|
| 5.1 | २०७४ सालको बाढीबाट तपाईंको घर कसरी प्रभावित भएको थियो । How was your house affected by recent flood of 2017? | घरहरूलाई पुरै क्षति बनाएको My house was washed away/fully damaged घरहरूलाई केहि मात्रामा क्षति पुऱ्याएको My house was partially damaged घरहरूमा पानी मात्र छिरेको तर क्षति नगरेको My house was submerged but not damaged by flood Others (specify) अन्य (खुलाउनुहोस) प्रभावित भएन Not affected | |
| 5.2 | तपाईंको विचारमा कस्तो ठाउँमा घर बनाउनु हुदैन? In which place we should not construct our houses? (Shelter Outcome Indicator 1.2) (Multiple Response) | डुबान क्षेत्रका जग्गाहरू Water-logged area गहिरो जग्गाहरूमा Low land नदी किनारको जग्गाहरू River Bank area पहिरो जान सक्ने क्षेत्रहरू Areas susceptible to landslide धेरै भिरालो जग्गाहरू Steep slope land चिरा परेका/फाटेको/फुटेको जग्गाहरूमा Geological fault or ruptured area पुरिएको जग्गाहरू Filled up area अन्य (खुलाउनुहोस्) Others (Specify) थाहा छैन I do not know | |
| 5.3 | तपाईंको घर कस्तो क्षेत्रमा पर्छ? In which site do your house lie? (Shelter Outcome Indicator 1.2) (Multiple Response) | डुबान क्षेत्रका जग्गाहरू Water-logged area गहिरो जग्गाहरूमा नदी किनारको जग्गाहरू River Bank area पहिरो जान सक्ने क्षेत्रहरू Areas susceptible to landslide धेरै भिरालो जग्गाहरू Steep slope land चिरा परेका/फाटेको/फुटेको जग्गाहरूमा Geological fault or ruptured area | |

| | | पुरिएको जग्गाहरू Filled up area अन्य (खुलाउनुहोस्) Others (Specify) | |
|------|--|---|--|
| 5.4 | तपाईं भवन निर्माण संहिताको बारेमा थाहा छ ? Do you know safe building techniques/building code ? भवन निर्माण संहिताको बारेमा थाहा भएको नभएको ठम्याई चिन्ह लगाउनुहोस । (Shelter Outcome Indicator 1.2) | थाहा छ Yes थाहा छैन No | |
| 5.5 | तपाईं घर बनाउँदा भवन निर्माण संहिता पालना गर्ने गर्नुभएको छ ? Do you follow safe building techniques while constructing house? भवन निर्माण संहिताको पालना गरी घर बनाएको नबनाएको ठम्याई चिन्ह लगाउनुहोस । (Shelter Outcome Indicator 1.2) | छ Yes छैन No घर बनाएको छैन Have not constructed house | |
| 5.6 | यदी छैन भने किन If no, why? | | |
| 5.7 | के यो गाउँमा प्राकृतिक विपद्को समयमा भेला हुने आपतकालिन सुरक्षित आश्रय स्थल छ ? Is there a safe emergency shelter in your village to which villagers can retreat during the onset of a natural disaster? (Shelter Outcome Indicator 1.1) | छ Yes छैन No मलाई थाहा भएन I don't know | |
| 5.8 | के त्यो सुरक्षित स्थलमा पुग्नको लागि विपद्को समयमा प्रयोग गर्ने सुरक्षित बाटो तपाईंलाई थाहा छ ? Do you know safe routes to this location that you can take in case of an in coming disaster? | छ Yes छैन No | |
| 5.9 | के बिगत २ वर्षमा त्यो बाटो तपाईंले विपद्मा वा कृत्रिम अभ्यासका क्रममा प्रयोग गर्नुभएको छ? Over the past two years, have you ever used this location, either through a simulation or in a disaster case? | छ Yes छैन No | |
| 5.10 | विपद्का बेलामा आश्रय लिनका लागि के त्यहाँका सुविधाहरू पर्याप्त छन् ? To what extent are the facilities at this location adequate to stay during a disaster? | पूरे पर्याप्त छन् Very adequate ठीकै छन् Adequate अपर्याप्त छन् Inadequate पूरे अपर्याप्त छन् Very inadequate | |
| 5.11 | बिगत १ वर्षमा तपाईंले घर बनाउन कुनै किसिमको सहयोग तथा परामर्श सेवा पाउनु भएको छ ? Have you received any support and guidance for safe shelter construction in last 1 year? (Multiple Response) | प्राविधिक सहयोग Technical support नगद सहयोग Cash support सामग्रीको सहयोग Kind Support/Essential Household Items पाएको छैन Not received | |
| 5.12 | तपाईं वा तपाईंको परिवारको कुनै सदस्यले बिगत १ वर्षमा सुरक्षित घर निर्माण सम्बन्धी कुनै कार्यक्रममा प्रत्यक्ष रूपमा भाग लिनु भएको थियो ? Have you or your family members participated in any safe shelter programme directly in last 1 year ? (Shelter Outcome Indicator 1.2) (Multiple Response) | तालिम Training अभिमुखिकरण Orientation गोष्ठी Seminar सचेतना अभिवृद्धि Awareness session अन्य (खुलाउनुहोस्) Others (Specify) छैन No | |

| | | | |
|------|--|---|--|
| 5.13 | तपाईं वा तपाईंको परिवारको कुनै सदस्यले विगत १ वर्षमा सुरक्षित घर निर्माण सम्बन्धी कुनै कार्यक्रममा अप्रत्यक्ष रूपमा भाग लिनु भएको थियो ? Have you or your family members participated in any safe shelter programme indirectly in last 1 year ? (Shelter Outcome Indicator 1.2) (Multiple Response) | तालिम Training अभिमुखिकरण Orientation गोष्ठी Seminar सचेतना अभिवृद्धि Awareness session अन्य (खुलाउनुहोस्) Others (Specify) छैन No | |
| 5.14 | छ भने, कहाँबाट पाउनु भएको छ ? If yes, where did you get? (Multiple Response) | रेडक्रस सोसाईटी Red cross society नगरपालिका / गाँउपालिका Municipality/Rural municipality सरकारी निकाय Government body गैर सरकारी संस्था I/NGO निजी क्षेत्र Private sector अन्य Others | |

समूह ७ (Section 7) : सूचनामा पहुँच (Access to Information)

| क्र.सं. (S.N.) | प्रश्नहरू(Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् (Circle in or write appropriate answer) | जानुहोस् (go to) |
|-------------------|---|--|------------------|
| 7.1 | तपाईंले कुन कुन आमसञ्चारका साधन दैनिक रूपमा प्रयोग गर्नुहुन्छ ? Which mass communication channels do you regularly use? | टि.भी TV रेडियो / एफ.एम Radio / FM टेलिफोन / मोबाइल Telephone/Mobile इन्टरनेट Internet पत्रपत्रिका Newspaper articles अन्य खुलाउनुहोस् Others (Specify) I do not use any communication channels | |
| 7.2 | तपाईंको समुदायमा रेडक्रसद्वारा सूचनाहरू प्रचार प्रसार गर्नका लागि कुन सञ्चारको माध्यम बढी प्रभावकारी हुन्छ ? Which do you think would be the most effective ways of the Red Cross sharing information with people in your community? Select top three, ranked if possible | टि. भि TV programme or adverts रेडियो Local Radio Programme or adverts समुदायस्तरीय मनोरञ्जनात्मक कृयाकलाप (सडक नाटक, सडक सिनेमा, चित्रकला, गित संगित Community entertainment events – street drama, street cinema, art + music events पत्रपत्रिका Newspaper articles मोबाइल तथा मोबाइल मेसेज SMS text Telephone Messages फेसबुक Facebook messages इमेल e-mail प्रत्यक्ष भेटघाट face to face स्थानीय समुदाय तथा संस्थाहरूको माध्यम Through local committees and organizations धार्मिक नेता Through religious leaders सामुदायिक नेता Through Community Leaders विद्यालय मार्फत Through schools प्रचार प्रसार सामग्री प्रकाशन तथा वितरण IEC materials (poster, Pamplates, hoarding board, public notice board) | |

| | | | |
|-----|--|---|-----------|
| | | सूचना बोर्ड Hoarding board advertising समुदायमा माइकिङ गरेर Loudspeakers in the community (miking) अन्य खुलाउनुहोस् Others (Specify) | |
| 7.3 | यदी तपाईंलाई रेडक्रसप्रति गुनासो भएमा त्यसलाई कसरी पेश वा दर्ता गर्ने थाहा छ ?If you had a question or complaint for the Red Cross do you know how you would register that? | छ छैन Don't Know | Yes No |
| 7.4 | यदी तपाईंसँग रेडक्रसप्रति कुनै पश्न वा गुनासो पेश गर्नुपरेमा कस्तो माध्यम प्रयोग गर्न मन पराउनुहुन्छ ?If you have a question or complaint for the Red Cross how would you most like to register it? Select top three, ranked if possible | प्रत्यक्ष भेटघाट Face-to-Face सुभाब पेटीकामा लिखित पत्र राखेर By putting a written note into a suggestion box टेलिफोनबाट By Telephone मोबाइल मेसेजबाट By SMS इमेलबाट By Email फेसबुक मार्फत On Facebook नेपाल रेडक्रसको वेबसाइटबाट Through the NRCS website अन्य Other | |

खण्ड आठ (Section 8): सुरक्षा, लैङ्गिक समानता र समावेशीकरण / Protection, Gender and Inclusion

| क्र.सँ. (S. N.) | प्रश्नहरू (Questions) | गोलो घेरा लगाउनुहोस् वा आवश्यकता अनुसार लेख्नुहोस् । (Circle in or write appropriate answer) | जानुहोस् (go to) |
|--------------------|--|---|---------------------|
| 8.1 | लैंगिक हिंसा भन्नाले के बुझ्नुहुन्छ ?What do you understand by gender-based violence? | शारीरिक हिंसा जस्तै कुटपिट, महिलालाई कामको बोझथोपारेर दुखदिनु Physical like beating, over work load, shouting मानसिक हिंसा जस्तै अपशब्दको प्रयोग, दुर्व्यवहार, धम्की, होच्याउने Mental like disrespect, threat यौनीक हिंसाजस्तै जबरजस्ती, यौन दुर्व्यवहार Sexual abuse like rape, teasing अन्य हिंसा जस्तैबालविवाह, बहुविवाह, बोक्सीको आरोप, दाईजो, छुवाछुत, विधवा प्रति दुर्व्यवहार, छोरीलाई बोझ सम्भन्ने मानव बेचबिखन Others like child marriage, polygamy, untouchability, women claiming as ghost, treating daughters as liability, trafficking, dowry, disrespect to widow थाहा छैन Do not know | |

| | | | |
|------|--|-----------------|--|
| 8.3 | तपाईं वा तपाईंको परिवारका कुनै सदस्यले विगत १ वर्षमा माथिका कुनै लैंगिक हिंसा भोग्नु परेको छ ?Have you or your family member suffered from above mentioned any type of gender-based violence during last one year? (Multiple Response) | छ Yes छैन No | |
| 8.12 | यदि छ भने त्यो के हो ?If yes, what is this? | | |

Annex 4: Schedule for interviewers' orientation

**NRCS/IFRC
Baseline Survey of Floods and Landslides Recovery Operation**

**Programme for Interviewers' Orientation
(23 and 24 February 2018, Friday and Saturday)**

| Time | Particular | Responsible person |
|---|--|--|
| <i>First day (23 February 2018, Friday)</i> | | |
| 10:00 - 10:10 | Introduction of the participants | |
| 10:10 -10:20 | Welcome | Representatives, NRCS Rautahat |
| 10:20 -11:20 | Logical framework indicators, stakeholders, thematic areas, and implementation modality of the project | Representatives from IFRC/NRCS Rose Wairimu Munene, Prajwal Acharya, Binita Dhungel |
| 11:20 -11:40 | Objectives and importance of the baseline | Dr. Uma Shankar Prasad/Santosh Kumar Sah Consultants Representatives from IFRC/NRCS |
| 11:40 -12:10 | Baseline Methodology | Dr. Uma Shankar Prasad/Santosh Kumar Sah Consultants |
| 12:10 -1:00 | Discussion on the questionnaire | Dr. Uma Shankar Prasad/Santosh Kumar Sah Representatives from IFRC/NRCS All interviewers |
| 1:00-1:50 | Refreshment | |
| 1:50 - 5:00 | Discussion on the questionnaire | Dr. Uma Shankar Prasad/Santosh Kumar Sah Representatives from IFRC/NRCS All interviewers |
| <i>Second day (24 February 2018, Saturday)</i> | | |
| 10:00 - 11:00 | Practice on the questionnaire | Dr. Uma Shankar Prasad/Santosh Kumar Sah Representatives from IFRC/NRCS All interviewers |
| 11:00 - 1:00 | Pre-test in the local area households | Dr. Uma Shankar Prasad/Santosh Kumar Sah Representatives from IFRC/NRCS All interviewers |
| 1:00-1:50 | Refreshment | |
| 1:50 - 3:00 | Feedback gathering from pre-test | Dr. Uma Shankar Prasad/Santosh Kumar Sah Representatives from IFRC/NRCS All interviewers |
| 3:00 - 5:00 | Preparation for the field <ul style="list-style-type: none"> • Discussion about modality • How it is planned? • Monitoring of data collection | Dr. Uma Shankar Prasad/Santosh Kumar Sah Representatives from IFRC/NRCS All interviewers |

Venue: Nepal Red Cross Society, Rautahat

Annex 5: Details of Focus Group Discussions (FGDs) conducted

| S. N. | Districts | Community/Municipality/Ward |
|--------------|------------------|--|
| 1. | Rautahat | Rajpur Municipality Ward Number 1 |
| 2. | Rautahat | Yamunamai Rural Municipality Ward Number 4 |
| 3. | Mahottari | Loharpatti Municipality Ward Number 5 |
| 4. | Siraha | Kalyapur Municipality Ward Number 4 |
| 5. | Siraha | Sirha Municipality Ward Number 21 |
| 6. | Saptari | Ward Office, Hanuman Nagar Kankalini Ward Number 14 |
| 7. | Saptari | Rampura, Hanuman Nagar Kankalini Ward Number 14 |
| 8. | Udayapur | Naya basti, Khaijanpur, Triyuga Municipality Ward Number 2 |
| 9. | Sunsari | Ghusaki, Hari Nagara Ward Number 7 |
| 10. | Bardiya | Turantpur, Hariyali Tole, Gulariya Ward Number 4 |

Annex 6: Checklist for FGD

Health

- What is the current status of access to health facility and quality of service in your community?
- What are the common health problems faced by your families in the past 1 years? Where do you generally do when you get sick? Where do you generally go to get health service?
- What do you use for vector control in your community? State about prevention and control mechanism for water borne disease in community.
- What are the activities conducted in your communities for prevention and control of health problems like celebration of toilet day, hand washing day, tuberculosis day, , awareness raising programme including campaign, radio programme etc

WASH

- What are the most significant water and sanitation problems that have been faced by by male and female because of the floods in your community? What do you think the main reasons are for them?
- Do you think the families in this Ward have a sufficient amount of clean water available for all their family members' needs? How far you have to travel to get the water and who brings water in your home every day?
- Have you received any orientation related to good hygiene practices? If yes than what type of orientation, Please specify

Shelter

- Do you have safe emergency shelter in your community?
- What types of houses are in your community? Are house affected by flood in last 2 years? If yes, how? Have you constructed your house? If not why?
- Do you know about the building codes of GoN? Have you received any training/orientation about safe shelter? Do you follow safe building code techniques while constructing house?

Livelihood

- Who has more access to source of income for their family in your community?
- Has the income source been affected by flood? If yes than how?
- What is the livestock status? (cows, buffalo, pig, chicken, hen, ducks)
- Have you received any training or support for livelihood improvement? If yes, are you using the training or grant? Is your income increased since last two years?
- What does current diet include? What is the status of eating fruits, legumes, vegetable and green vegetables, egg, meat, milk etc.

Disaster

- Preparedness at HH level and community level
- Task forces: search and rescue group, first aid
- Open spaces
- Evacuation routes

Feedback mechanism

- Best way the Red Cross can communicate with them?
- How would you like to address your issues/complaints?

Annex 7: Details of Key Informants' Interview (KII) conducted

| S. N. | Name | District | Institution | Position |
|-------|-----------------------|-----------|--|------------------------------|
| 1. | Sanjeeb Kumar Mallik | Rauthat | NRCS District Chapter | Chairperson |
| 2. | Mohammad Sakil Akhtar | Rauthat | Rajpur Municipality | Mayor |
| 3. | Shekh Amirullaha | Rauthat | Rajpur Municipality Ward # 1 | Chairperson |
| 4. | Shree Prasad Mukhiya | Rauthat | Yamunamai Rural Municipality | Chairperson |
| 5. | Aashwini Roy | Rauthat | Yamunamai Rural Municipality Ward # 4 | Ward Chairperson |
| 6. | Ishwor Nath Mishra | Rauthat | District Coordination Committee | Programme Officer |
| 7. | Uddhav Br. Thapa | Rauthat | District Administration Officer | Chief District Officer |
| 8. | Sailendra Kr. Yadav | Mahottari | Loharpatti Municipality | Mayor |
| 9. | Nishrudin Sekh | Mahottari | Loharpatti Municipality Ward # 5 | Chairperson |
| 10. | Ram Binaya Pande | Mahottari | Loharpatti Municipality | Chief Administrative Officer |
| 11. | Dipak Mishra | Mahottari | NRCS District Chapter | Chairperson |
| 12. | Shree Dev Yadav | Siraha | NRCS District Chapter | Senior Office Assistant |
| 13. | Surendra Mandal | Siraha | Siraha Municipality Ward # 21 | Chairperson |
| 14. | Madhav Neupane | Siraha | Health Post Siraha Ward # 21 | AHW |
| 15. | Sailesh Kumar Shah | Saptari | Hanuman Nagar Kankalini Municipality | Mayor |
| 16. | Surendra Pd. Yadav | Saptari | Hanuman Nagar Kankalini Municipality | Chief District Officer |
| 17. | Satya Narayan Yadav | Saptari | Hanuman Nagar Kankalini Municipality Ward # 14 | Chairperson |
| 18. | Jogendra Bhagat | Saptari | NRCS District Chapter | Chairperson |
| 19. | Dhaman Singh Khatri | Sunsari | Triyuga Municipality Ward # 2 | Chairperson |
| 20. | Bimod Kumar Basnet | Udayapur | NRCS District Chapter | Chairperson |
| 21. | Nasir Khan | Sunsari | Hari Nagar Rural Municipality Ward # 7 | Chairperson |
| 22. | Samim Ansari | Sunsari | Hari Nagar Rural Municipality Ward # 7 | Ward Secretary |
| 23. | Suleman Mansuri | Sunsari | Koshi Rural Municipality Ward # 3 | Chairperson |
| 24. | Krishana Pd. Gautam | Bardiya | NRCS District Chapter | Chairperson |
| 25. | Hari KC | Bardiya | NRCS District Chapter | Section Officer |
| 26. | Ram Bdr. Rawal | Bardiya | Gulariya Municipality Ward # 4 | Chairperson |
| 27. | Tank Pd. Adhikari | Bardiya | Gulariya Municipality Ward # 2 | Chairperson |
| 28. | Shankar Pd. Thapa | Bardiya | District Coordination Committee | Chairperson |

Annex 8: Checklist for KII

Nepal Red Cross Society)/ International Federation of Red Cross and Red Crescent Societies
Baseline Survey of Floods and Landslides Recovery Operation

KII Checklist

District:

Date:

Rural Municipality/Municipality:

Ward:

Name of Respondent:

Designation:

Do you have the following plan, system and group at your place/organization?

| S. No. | Question | Response Yes /No | If yes, describe the situation or collect the document and explore it |
|--------|--|---------------------|---|
| 1. | Search and Rescue Group (Outcome 5) | | |
| 2. | First Aid Group and Equipment (Outcome 5) | | |
| 3. | Structural Mitigation Activities (check dam, embankment etc) | | |
| 4. | Safe Emergency Shelter (Outcome 4) | | |
| 5. | Elevated Water Pipe (Output 1.2) | | |
| 6. | Wash Awareness campaign | | |
| 7. | Health Awareness activities | | |
| 8. | Proportion of flood affected household (shelter, Livestock, agriculture) | | |
| 9. | Level of Preparedness at HH level (outcome 5) | | |
| 10. | Potential areas of entrepreneurship opportunity for livelihood improvement? | | |
| 11. | People reached by health activities, programme and services | | |
| 12. | Status of drinking water | | |
| 13. | Status of toilet | | |
| 14. | Status of hygiene | | |
| 15. | existing formal and informal organizations | | |
| 16. | Existing GO | | |
| 17. | Existing NGOs | | |
| 18. | Existing CBOs | | |
| 19. | Frontline workers assisting the project in the project area | | |
| 20. | Possible collaboration for the Municipality, Wards, NRCS district chapters at district and community level | | |

Health

- Common health problems in your catchment area
- Prevention and control mechanism for water and vector borne diseases
- Is your health institution equipped with medical and non medical supplies? If No, what is the lacking?
- Which group has lack of access in health facilities and why?
- Your recommendation and suggestion

WASH

- Water quantity/accessibility/duration/continuity
- Water quality
- Sanitation situation
- Waste water and drainage situation
- Water management and involvement of marginalized groups
- Hygiene practice

Livelihood

What are the barriers/challenges preventing households to recover their livelihoods?

Which sources of income are affected by the floods?

Physical-floods damage infrastructures that supports in livelihoods

- Market, shelters, animal sheds, land, water, irrigation facilities, energy sources, storage places, farm tools, livestock, community facilities school, medical and transport.

Which infrastructures are affected due to floods that hinder the livelihood recovery

- Landslide affecting the cropping land
- Loss of livestock for agriculture, loss of animal sheds, lack of irrigation water channel, lack of farm tools, lack of electricity facility for farm activity, lack of road from farm to marke, lack of transport, ack of storage, lack of market

Natural- agro-ecological zones, forest, water sources, land.

Which of the following natural resources affected by the floods hinders the livelihoods? Water channel, agriculture land and any other

Challenges

- Food at the household level, income, market, access to financial services, policies, institutions, any other

How the food security situation of the vulnerable household will improveFood voucher to single families, chronically ill, solo mothers and beggars

- Community food for work projects
- Advocacy for social safety net for
- Education on nutrition and balanced diet
- Any other

How the food availability can be increased in the targeted communities?

- Cash for seeds and tools to farmers
- Cash for livestock raising at HHs level
- Training to farmers on crop cultivation

- Livestock training at community level
- Training on enterprise development
- Start-up cost for enterprise opening
- Advocate for more food stock in the market
- Advocate for subsidized food counters
- Support for target household kitchen enterprise
- Increase community awareness on Govt funded food and income development programmes
- Any other

How the income of vulnerable HHs can be increased to meet household's needs?

- Labour intensive community projects
- Enterprise skill development at HH level
- More than one form livelihood practiced at HHs
- Skills development based on market demand
- Increased awareness on mainstream
- Any other

What infrastructures are essential for livelihood recovery?

- Grants for livestock
- Grants for animal shed construction
- Improve irrigation channel
- Provide farm tools
- Repair and construct road from farm to market
- Provide local transport
- Construct community storage facility
- Any other

How to improve access to financial services?

Feedback mechanism

- Best way the Red Cross can communicate with them?
- How would you like to address your issues/complaints?

Response capacity of NRCS

- Existing capacity
- Problems and suggestions

Disaster

- Preparedness at HH level and community level
- Task forces: search and rescue group, first aid
- Open spaces
- Evacuation routes

Annex 9: Field Movement Plan

| Date (day) | Place | |
|--|--|--|
| | Uma Shankar Prasad | Santosh Kumar Shah |
| 23-24 February (Fri-Sat) | Enumerators' orientation | Enumerators' orientation |
| 25 February (Sunday) | <p>Travel from Mahottari to Rautahat</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Rautahat</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Rautahat</p> | <p>Travel from Mahottari to Rautahat</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Rautahat</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Rautahat</p> |
| 26 February (Monday) | <p>FGD/KII in community in Rautahat</p> <p>Travel from Rautahat to Mahottari</p> | <p>FGD/KII in community in Rautahat</p> <p>Travel from Rautahat to Mahottari</p> |
| 27 February (Tuesday) | <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Mahottari</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Mahottari</p> | <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Mahottari</p> <p>FGD/KII in community in Mahottari</p> |
| 28 February (Wednesday) | <p>Travel from Mahottari to Sirha</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Sirha</p> <p>FGD/KII in community in Sirha</p> | <p>Travel from Mahottari to Sirha</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Sirha</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Sirha</p> |
| 1 March (Thursday - Holi in hilly region) | <p>Travel from Sirha to Saptari</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Saptari</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Saptari</p> | <p>Travel from Sirha to Saptari</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Saptari</p> <p>FGD/KII in community in Saptari</p> |

| | | |
|---|---|--|
| 2 March(Friday-Holi in Terai region) | <p>Travel from Saptari to Udayapur</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Udayapur</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Udayapur</p> | <p>Travel from Saptari to Udayapur</p> <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Udayapur</p> <p>FGD/KII in community in Udayapur</p> |
| 3 March (Saturday) | <p>Travel from Udayapur to Sunsari</p> <p>FGD/KII in community in Sunsari</p> | <p>Travel from Udayapur to Sunsari</p> <p>FGD/KII in community in Sunsari</p> |
| 4 March (Sunday) | <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Sunsari</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Sunsari</p> <p>Travel from Sunsari to Bratnagar to Kathmandu</p> | <p>Meeting with NRCS District Chapter/ District concerned stakeholders in Sunsari</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Sunsari</p> <p>Travel from Sunsari to Bratnagar to Kathmandu</p> |
| 5 March (Monday) | <p>Travel from Kathmandu to Nepalganj to Bardia</p> <p>Meeting with NRCS District Chapter</p> | |
| 6 March (Monday) | <p>Meeting with District concerned stakeholders in Bardia</p> <p>Consultation meeting with municipalities and rural municipalities and NRCS Sub-Chapters in Bardia</p> <p>FGD/KII in community in Sunsari</p> <p>Travel from Bardia to Nepalganj to Kathmandu</p> | |