

Final Draft

Participatory Vulnerability Analysis (PVA)

Process Outputs

**Disaster Risk Reduction through Schools
in Nepal**



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ACKNOWLEDGMENTS

ACRONYMS

AAN	Actionaid Nepal
ASC	Agriculture Service Centre
BBUPS	Buddhajyoti Bal Udhan Primary School
BEE	Bheri Environmental Excellence
BKSS	Bal Kumari Secondary School
BS	Bikram Sambat
CBDP	Community Based Disaster Preparedness
CBO	Community Based Organization
CFUG	Community Forest User Group
CSP	Community Support Program
CPREeC	Centre for Policy Research and Consultancy
DADO	District Agriculture Development Office
DAO	District Administrative Office
DDC	District Development Committee
DEO	District Education Office
DMC	Disaster Management Committee
DFID	Department for International Development
DFO	District Forest Office
DIO	District Irrigation Office
DLSO	District Livestock Support Office
DR	Disaster Risk
DRR	Disaster Risks Reduction
DRRS	Disaster Risk Reduction through School
DSCO	District Soil Conservation Office
EDM	Emergency and Disaster Management
FGD	Focus group discussion
GO	Government Organization
GoN	Government of Nepal
HFA	Hyogo Framework for Action
HO/HP	Health Office/Health Post
ICS	Improved Cooking Stove
IEC	Information Education and Communication
JT	Junior Technician
JTA	Junior Technician Assistant
JKSS	Janakalyan Secondary School
KMC	Kathmandu Metropolitan City
KII	Key Informant Interview
LDO	Local Development Officer
MSS	Mahendra Secondary School
MCHW	Mother and Child Health Workers
NGO	Non-government Organization
NRCS	Nepal Red Cross Society
NSET	National Society for Earthquake Technologies
PTA	Parent Teachers Association
PVA	Participatory Vulnerability Analysis
PLWHA	People Living with HIV/AIDS
RRN	Rural reconstruction Nepal
SC	Save the Children
SMC	School Management Committee
TIC	Tole Improvement Committee
VDC	Village Development Committee

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Chapter 1

Introduction

'The effective strategy on natural disaster prevention not only saves billion worth of wealth but also saves the lives of thousand people from being devastated. If the money invested in the relief and reconstruction be invested judiciously on sustainable development activities then it will reduce the risk of war and natural disaster. It is not easy to implement natural disaster prevention activity and culture. The investment invested in the prevention of natural disaster can only be seen in future'

-Kofi Anan (1999), Ex-General

Secretary, UN

1.1 The Context of DRRSP

Actionaid Nepal (AAN) has been implementing the disaster risk reduction through school (DRRS) Project since April 2006 for a core implementation period of three years under the support from Department for International Development (DFID).

The goal of the project is to reduce peoples' vulnerability to natural disaster by contributing to the implementation of the Hyogo Framework for Action (HFA). The HFA (2005-2015) seeks to ensure that disaster risks reduction is a national and local priority through using both national platforms and community participation. The framework is explicit about using 'knowledge, innovation and education to build a culture of safety and resilience at all levels. 'It specifically refers to the inclusion of disaster risk reduction in education, but there are few examples for translating in effectively in to practice. DRRS project has plan to involve education coalitions to link work on disaster risk reduction in schools to national processes for implementation of the HFA.

The main purpose of the project is to make schools in high disaster risks areas safer, to enable them to act as a locus for disaster risk reduction, and to engage the education sector in the HFA. In order to achieve goal, purpose and results, relevant activities are designed at community, district and national level.

The project is being implemented in Kathmandu/Lalitpur and Banke district in 2006 and will cover Rasuwa and Makwanpur from 2007. The number of beneficiary will be 8 schools, 4500 children, 200 teachers, 100 parents and 200 community members of four districts where the indirect beneficiary will be some 25000 people including national level civil society groups, policy makers and campaigners.

1.2 PVA in DRRS Project

The participatory vulnerability analysis (PVA) added one-step in the development methodologies to identify the root causes of different types of vulnerabilities and action to reduce those vulnerabilities. Thus, the main purpose

of PVA documentation is to understand time line, time trend and mobility pattern; assess how seasonality affects the vulnerability; identify the correlation between vulnerability and existing Institutional set-up, and document the types of risks, hazards and vulnerabilities and identify how these vulnerabilities affects the people's life and livelihoods.

PVA is different from the previous participatory methodologies. Because it not only collect the data but also mobilise the people to assess the root causes of their vulnerabilities, their effects at individual, family and society and followed by appropriate action plan. The main motto of this process is that communities know their own situations best and so any analysis should be built on their knowledge of local conditions. It also aims to motivate communities to enable them to find opportunities to enhance their resilience by seeking to change limiting ideas and circumstances, thereby seeking to reduce their vulnerability. Therefore, it mobilises resources and enact appropriate policies, laws, and strategies to reduce their vulnerability to disasters.

1.3 Scopes

The PVA was conducted in 4 schools of the DRRS project. These schools are located in Kathmandu/Lalitpur and Banke district. The name and address of the schools is as follows:

Table 1.1: Name and address of the schools selected for PVA

Name of the school	Address
Janakalyan Secondary School	Bageshwori-9, Badripur, G Gaon, Banke
Mahendra Secondary School	Matehiya, Banke
Balkumari Secondary School	Sunakothi VDC-6, Lalitpur
Buddha Jyoti Bal Uddhan Primary School	Kathmandu Metropolitan City-16, Buddha Jyoti Marg, Balaju, Kathmandu

1.4 Basis for School Selection

The schools were selected based on following process and procedures:

- Consultation meeting with relevant stakeholders like District Education Office (DEO), VDC, local government offices and NGOs working within the district about the extent of vulnerability of the schools within Banke and Kathmandu/Lalitpur.
- Information collection from different sources for the most potential schools in terms of vulnerability to disasters and prepared the list of preliminary selected schools.
- Made physical observation of the preliminary selected schools.
- Consultation meeting with schools, SMC, and community about their interest and commitment about the disaster risks reduction through schools.
- Selection of schools based on physical vulnerabilities and commitment of the community, schools and SMC to work on DRR.

Chapter 2

Processes and Methodologies

The PVA in four selected schools and school's neighbourhood communities was carried out considering the following steps.

2.1 Review of Relevant Information

To broaden the ideas and concept about the study, relevant reports and documents were reviewed. In addition to these, study reports, reports of other organisations related to disaster risks reduction, and existing policy and strategy related to disaster risks reduction were also reviewed to understand the issues and concerns of risks and vulnerabilities.

2.2 Impart PVA Training

The participants for the PVA training were identified with the consultation with various district level stakeholders and relevant schoolteachers. Based on individual commitment to work in DRR and skills of facilitation, the participants were selected. The participants were mostly students, teachers, government officials, NGO and social workers. They were provided practical training especially focus on the vulnerabilities and risks.

PVA trainings were held in Kathmandu and Banke for local community volunteers, teachers, CBOs members, and line agencies people to build their clear understanding on vulnerabilities. The team also conducted variety of exercises in the field to get hands-on experience and information.

2.3 Action Plan for PVA Team Mobilisation

Before leaving for PVA exercise, one day orientation meeting was organised for PVA team to sharpen their knowledge, skills and understanding on vulnerabilities. The team also prepared detail plan of action for PVA exercise. The plan then shared with the communities and schools about the date, time and venue. The logistics arrangements were also made in advance so that PVA exercise could be made smoothly.

2.4 Building Rapport with the Schools

Before entering in to the communities and schools for PVA exercise, several round discussions and meetings were made with SMC, teachers, students and communities about the rationale of PVA process and its linkage with DRRSP. It was also shared the objectives of DRRSP and its roles for schools and communities.

The observation of selected schools was made to collect general information and its neighbourhood communities. The basic information obtained through observation were: type of school buildings, features of school buildings from a

disaster perspective, classroom characteristics and other facilities within the school which are critical to overcome disasters or to reduce the impacts once any disasters come into play, etc.

2.5 Design Instruments, Checklist and Guide Questions

Based on agreed framework some checklists were prepared so that those can be used through FGDs, time line, time trend, Venn relationship, mobility mapping, seasonal calendar and problem tree etc. These tools were used with community people and school students/teachers. Considering the DRR perspective in central focus, appropriate guide questions were developed to collect basic information about different types of vulnerabilities.

2.6 Meetings with the Communities

Meetings were organized in each community to collect information on the community structures, the availability of social services and the vulnerability of the community towards disasters. The action plan of PVA process was also shared with school and communities and agreed.

2.7 PVA at Community Level

The PVA team stayed with the community for 5-6 days and conducted various exercises to establish what people were vulnerable to and what they could do to overcome their vulnerabilities. For this, following tools and techniques were used to explore vulnerabilities to disasters.

2.7.1 Vulnerability Mapping

Vulnerability mappings exercise was found very useful to know the context of people's vulnerabilities and their coping strategies. In the beginning of the exercise, people were requested to show the social infrastructures along with major vulnerabilities to disasters by sketching the village map in the ground. Before that, role was divided among the PVA team to act as a facilitator, a recorder and an observer. The symbols were made on the basis of agreed consensus of the people. Once the mapping was prepared on the ground, it was copied in the large sheet of paper. The map again presented in the large group later and necessary corrections were made.

Vulnerability mapping has also been an important tool during the field level exercise. It is a process where community members draw their area, identifying households and families, pointed out the most vulnerable to hazards and identify the direction of hazards including who are most vulnerable from what in last couple of years. People also reflected the available local resources such as agriculture land, grazing fields, community ponds, forest, water resources etc in the map. The maps are detailed and show assets at both community and individual level.

2.7.2 Timeline and Trend Analysis

Communities in each of the school location were asked about the major phenomenon including history of area in terms of the disasters occurrence. The purpose was to see and explain the occurrence of disasters. People shared the

dates and the type of disasters that were observed and their effects. Elderly people contributed the information from decades back. The following process was used to explore the timeline and time trends.

- Shared the purpose of the exercise. Once the people knew about the purpose of information collection, they selected the elderly and knowledgeable people both men and women to list out the major events, their effects and trends.
- In case of confusion of years, agreed communities benchmarks were established that were later verified from other knowledgeable people.
- The role played by the communities during each disaster events was also recorded. Their increasing and decreasing trends were also discussed.
- At the end of the exercise, the lead person shared the timeline and trends to the community in large group for the purpose of verification.

While the major disaster events were located with the time line of the disasters and some informal meetings and interviews, a trend analysis of these disasters was also made. It means the rate of increase or decrease in the intensity and the community shared magnitude of disasters. This information provided an opportunity to make further analysis and recommend the measures at the end.

2.7.3 Venn Relationship

Venn diagrams were prepared sitting with the community members based on different information on the existing support of various institutions. The following process was used to assess the Venn relationships:

- The participants listed down the major organisations working in the area with their detail information.
- Discussion was made on how the absence of effective organisation/institution further promoting people's vulnerability at the time of need.
- The participants were requested to identify the most important, least important, the more accessible and least accessible institutions at the time of people's need.
- Then they were asked to place institutions based on their interrelationship (one way and two-way relationship, near and far, more access and less access etc) etc.
- The institutional mapping (Venn diagram) then later presented in the large group for its verification.

2.7.4 Seasonal Calendar

Seasons are an integral part of people's lives and exert an important impact upon the livelihood of the local people. The calendar reflects the perceptions of the local people regarding seasonal variations in the various aspects. It helps to identify heavy workload periods, periods of relative ease, credit, diseases, food security, wage availability and possibility of occurrence of some disaster like fire, thunderstorm, flood, landslides etc. It also establishes the pattern of crop cultivation and vulnerability, crop diversification and changes in climate. It has helped the community who is the most vulnerable according to seasonality. For this, the following process was adopted.

- People were asked to list down the major events of the year then fit it in to calendar.
- It was discussed that how seasonality propagate vulnerabilities and how people cope with such vulnerabilities.
- At the end of the discussion, the calendar was shared in the large group for the purpose of triangulation.
- Separate seasonal calendars were prepared for schools and community.

2.7.5 Problem Tree for Casual Analysis

Casual analysis is very important to know the types of problems and their underlying causes and effects. The participants were mobilised to identify major problems and their cause and effects. For this, pair wise ranking was made to identify the most crucial problems. For clarity, the facilitators draw the sketch of tree by showing its three parts: the root, stem and branches. The stem was symbolised as problem, roots as causes and branches as effects.

This exercise was able to analyse the level of awareness of the people at one hand and to identify the areas for interventions for the community efforts to ensure that proper DRR framework exists to save the children of the schools in their communities and other community members.

2.7.6 FGDs with Students, Teachers and Community People

The FGDs were held to find out the potential areas where the schools and communities need to focus in the coming days for DRR. The objective of this exercise was to find out the current practices and plans of making schools and communities safer from disaster perspective.

2.7.7. Consultation with Children Out of Schools

Due to poverty and poor livelihood, many children are either not enrolled in the school or compelled to leave schools before graduation. In order to record the views and opinions of these children about the disaster risks and its impacts, discussions were made with them separately. It has helped to know their knowledge and understandings about the disaster risk and the suitable strategies to reduce the risks.

2.7.8 Meeting with Government Stakeholders

The perspective of different stakeholders on disaster risk reduction is important to know. Therefore, meetings were organized with district level stakeholders such as District Forest Office (DFO), Nepal Red Cross Society (NRCS), District Development Committee (DDC), District Public Health Office (DPHO), District Livestock Support Office (DSLO), District Agriculture Development Office (DADO), District Irrigation Office (DIO), etc and some non-government organisations (NGOs)/Community Based Organisation (CBOs) and ex-Village Development Committee (VDC). The main purpose of these meetings was to record the perception and views on status of disaster risks within the schools and communities and their coping strategies to reduce the risks.

2.8 Reporting back to the Communities and Schools in Large Group

Once the information and data were collected through varieties of tools and techniques in the presence of small groups as well as at the individual interview, large group meeting was organized at the end of PVA exercise to present all the PVA findings. The purpose of this exercise was to share main findings about vulnerabilities and risks and to triangulate the information collected from various sources. It has ensured greater reliability and validity of information.

2.9 Analysis the Vulnerabilities

All issues explored from PVA process was categorized in to various forms of vulnerabilities. It has helped to identify the correlation between poverty and vulnerability and so forth. During this step, situation analysis of vulnerability, analyzing the causes of vulnerability, analysis of community action and drawing action from analysis were made.

Chapter 3

Social Setting of Study Area

3.1 Social Overview

The social overview of the study area covers social information of study VDCs and the schools under DRRSP.

3.1.1 Matehiya VDC

Matehiya VDC is 21 Km far from the Nepalgunj and considered as one of the most remote VDCs of the district. It lies beyond the Rapti area. Its total area is 3945ha in which 725 ha is *khet* land, 169 *bari* and remaining forest land. Nainapur, Gangapur, Baijapur and Phattepur VDCs are in east, west, north and south respectively.

The total number of HHs is 1182 and average HHs size is 5.47. The total population of Dalit is 674, 86 Janjati, 2318 Muslim, 553 Bhamin/Chhetri and 2333 others. Within the VDC, the ward 1-3 is most vulnerable in term of disaster. The statistics of VDC office showed that in 250 HHs, 1978 people are victimized from flood, 582 from fire, 10 from ARI, 122 from pneumonia, 1 from malaria, and 9 from dysentery. The people living in the *khal* (low land) are mostly affected from flood. People leaving nearby torrent, *khal*, road edge, dense populated areas, nearby community forest area and school area are more vulnerable areas.

Box 1: Salient Features of Matehiya

- Total area: 3945 ha
- Total HHs: 1182
- Average family size: 5.47
- Literacy: Male-30.75, female-11.65
- Major castes: Muslim, Bhamin/Chhetri, Yadav, Chamars, Murau, Tharu, Dhobi, Godia, Gurungs, Magars

3.1.2 Mahendra Secondary School (MSS), Matehiya, Banke

MSS was established as a primary school in 2016 BS while in 2041 BS, it was promoted to lower secondary school. However, before that in 2040 BS, the school had obtained permission to become a secondary school. The school building was a small hut in the beginning. A local landowner Mr. Ram Chandra Maurya supported in constructing the school building with CGI sheets as roofing materials. Later Dfid contributed in constructing the building.

This school provides education to the students of other 7 VDCs like Laxmanpur, Gangapur, Phattepur, Kalaphanta, Narainpur, Kathkaiya, and Holiya meaning that there are no other secondary schools around or at least very near to this school. An observation quickly could be that more is the coverage of the school, more is the time required for the students of this school to come to study here. It also means that when it is the rainy season, the students who have to walk long to come to the school could potentially encounter disasters that may lead them to injuries. For instance, and as identified through the general observation and informal meetings, many students come to school at dirty clothes because of falling due to slippery road to school.

3.1.3 Bageshwori VDC

It is 12 Km far from the Nepalgunj. The total area is 2210 ha in which 1215 ha is *khet* (paddy field) land, 281 *bari* (up land) and remaining is degraded land. Murgiya torrent in the east, Kiran torrent in west and south, and Samshergunj VDC in the north of Bageshwori VDC. People's mobility is completely reduced during monsoon when the flood level is high in these torrents.

Box 2: Salient Features of Bageshwori

- Total area: 2210 ha
- Total HHs: 2382
- Average family size: 5.21
- Literacy: Male-78.55, female-60.75
- Major castes: Bhamin/Chhetri Yadav, Gurungs, Magars, Sunar, darji, Thakuri

The total number of HHs is 2382 and average family size is 5.21. The total population of Dalit is 2389, 3306 Janjati, 274 Muslim, 5314 Bhamin/Chhetri and 1130 are others. The literacy percentage of male and female is 78.55 and 60.75 respectively.

The ward 8-9 is most vulnerable in term of disaster. There is no evacuation centre for the displaced people during the flooding.

3.1.4 Jana Kalyan Secondary School (JKSS), Bageshwori, Banke

This school was established in 2028 BS as a primary school, which became lower secondary school in 2037 BS and secondary school in 2041 BS. A huge labour mobilization was made while constructing the school building and Mr Devnath Yogi, Mr Jaya Bahadur Karki, Mr Par Bahadur Pun, Mr Dwarika Singh Thakuri, etc. made a substantial contribution in this aspect.

The distance from school to major road network is 5-8 km. It also provides an opportunity for students of 5 VDCs namely: Bageshwori, Ganapur, Bankatuwa, Belhari, and Shamshegunj.

3.1.5 KMC-ward no 16

The Balaju community is located at ward number 16 of Kathmandu Metropolitan City (KMC). It is 10 minutes walk north from Balaju New Bus Terminal. Students are mostly come from 2 VDCs (Gangabu and Manamaiju) and 2 wards (16 and 29) from KMC. The community around is at the interface of modern urban to urbanizing centres where migration is very common from outside the place.

This indicates that in migration to this place is very high. The major groups of people living in this place include Tamang, Magars, Gurungs, Brahmins, Chhetris, Rai, etc. In case of religion, people are found to observe Hinduism and Buddhism but because the composition is dominated by the hill migrants, those who believe in Lord Buddha.

Box 3: Salient Features of Balaju

- Total HHs: 77
- Average family size: 6.71
- Major castes: Tamang, Magars, Gurungs, Brahmins, Chhetris, Rai

3.1.6 Buddhajyoti Bal Uddhan Primary School (BBUPS), Kathmandu

This school was established in 2053 BS under the community initiation. The community people including teachers contributed cash, kind and labour in establishing this school. Teachers also contributed their voluntary labour. In 2054 BS, there was only one teacher provided from the government side. By 2058 BS, school was run obtaining three permanent posts of teachers.

3.1.7 Sunakothi VDC

This VDC lies in the southern part of the Patan city. The total number of HHs within the VDC is 1149 and the total population is 6199. The male and female population of the VDC is 3035 and 3164 respectively. The average family size is 5.4.

3.1.8 Bal Kumari Secondary School (BKSS)

This school is located in Sunakothi VDC ward no 6 of Lalitpur. It was established as primary school in 2007 BS, which in 2026 became lower secondary school and it was promoted to secondary level in 2038 BS. Ms Rita Rana, Mr Janak Kumar Basnet and Mr Man Bir Singh Panthi supported in constructing school building. It is a governmental school. The interesting feature of the school is that there are students only from the Sunakothi VDC. There are no children who come here from other VDCs or part of municipality. However, the students in the school comprise from different ethnic groups as people from different part of the country are residing in the VDC.

Box 4: Salient features of Sunakothi

- Total HHs: 1149
- Total population: 6199
- Average family size: 5.4
- Major castes: Newar (Maharjan), Chhetri, Magar, Rai, Limbu, Tamang

3.2 Number of Students and Teachers

Number of students in a school and the teachers available for them play a crucial point role in giving a close monitoring and observation of the students. It is generally accepted that less the student teachers ratio, more is the time available for teachers to listen to students concerns. From the careful analysis, we would also make note of appropriate counselling to the students available especially after the disasters.

From the available information, two schools are found to have an optimistic student teachers ratio. These schools are Balkumari Secondary School in Lalitpur and BBUPS in Kathmandu. However, the student-teachers ratios in the remaining two schools were found very high. While the national target for student teacher's ratio is 38, the same is 50.4 and 58.8 in JSS and MSS, which are outside Kathmandu Valley. This also provides a general impression that though there are sufficient teachers in the capital valley, as we go out to the rural parts of the country, this goes on decreasing. Therefore, during disasters or during the post disasters situation, counselling from teachers may be jeopardized.

The total number of students and teachers is given for different school in the following table 1:

Table 1: Number of Students, Teachers and student teachers ratio

S. N	Name of the school	Number of boys	Number of girls	No of students	No of teachers	Student-teacher ratio
1	Balkumari Secondary School	251	331	582	20	29.1
2	Janakalyan Secondary School	325	330	655	13	50.4
3	Mahendra Secondary School	525	240	765	13	58.8
4	Buddha Jyoti Bal Uddhan Primary school	131	133	264	8	33

While analyzing the student-teacher ratio, Balkumari Secondary School was found to be in better position. Here, the ratio was 29.1. This was followed by Buddha Jyoti Bal Uddhan Primary School, Janakalyan Secondary School and Mahendra Secondary School. In Mahendra Secondary School, the ratio was 58.8.

Chapter 4

Vulnerabilities and their Causes

4.1 Vulnerability

Vulnerability is a term used to describe exposure to hazards and shocks. People are more vulnerable if they are badly affected by events outside their control. It describes a person or group and their situation that influences their capacity to anticipate, cope with, resist and recover from the impact of a hazard. People are threatened by hazards because of their social, economic and environmental vulnerabilities. The underlying causes of disaster vulnerability lie in inequality, discrimination and exploitation etc.

Therefore, vulnerability is not the same as poverty, marginalization, or other conceptualisations that identify sections of the population who are deemed to be disadvantaged, at risk, or in other ways in need. In order to understand how people are affected by disasters, it is clearly not enough to understand only the hazards themselves. Disasters happen when a natural phenomenon affects a population that is inadequately prepared and unable to recover without external assistance. But the hazard must impact on groups of people that are at different levels of preparedness, resilience, and with varying capacities for recovery. Hence proper analysis of vulnerabilities is needed as it describes the condition of people who are at risks. It involves much more than the likelihood of their being injured or killed by a particular hazard, and includes the type of livelihoods people engage in, and the impact of different hazards on them.

Generally it was observed that people who have a high degree of vulnerability are low in capacity. A capacity might include institutional membership, group cohesion, or literacy. In simple means, vulnerability is a result of poverty, house quality, or even illiteracy. One of the reasons that capacities seem to be often separated from vulnerability is that capacities are regarded as dependent on groups or some form of social organisation, while vulnerabilities are socially determined but the characteristic of individuals or households.

The communities defined their vulnerability based on their own understanding and experiences. It is often site specific. Therefore, nature causes and effects of vulnerabilities are different from one place to another.

4.2 Identification of Vulnerabilities

The following methods and procedures were adopted in order to identify the people's vulnerabilities and their underlying issues.

4.2.1 Vulnerability Mappings

In order to identify the most vulnerable people on the basis of people's own understandings in a participatory way, Vulnerability mappings were prepared both at communities and schools. During this exercise, the following things were explored:

- Social infrastructure available
- Natural resources like river, torrent, land, forest, canals etc
- Fire, flood and landslide prone area
- River training and embankment

Therefore, it is clearly seen that vulnerability depends upon level of poverty, health condition, level of malnutrition, female-headed households, level of illiteracy and living conditions etc. The Vulnerability mappings of schools and communities are given in annex 1.

4.2.2 Timeline and Time Trend Analysis

During the discussion, the community members shared different hazards that have occurred over the past few decades in each of the communities where the sampled schools are located. The information was also crosschecked with the elderly people in the village through informal interviews and during informal meetings.

In Sunakothe, landslide, earthquake, diarrhoea, windstorms, and thunderstorm have been the recorded as hazards in the community. There is no problem of fire so far. The timeline and time trend of Sunakothe VDC is given in table 2. In Balaju, since the school is located by the side of the Bishnumati River, the regular floods during the monsoon season poses threat to the school, the community around and influences the teaching and learning environment.

In Bageshwori, Banke many incidents of disasters have been recorded. People have recorded history of death of the local people to loss of assets including agricultural production. Timeline of Bageshwori VDC shows that

- Drought, fire, flood, snakebite are frequently happened
- Snakebite, theft, mosquito bite, flood, drought, windstorm, and conflicts are in increasing order
- Similarly, health hazard, starvation, deforestation and fire are in decreasing order.

Table 2: Timeline and Trends of Sunakothe VDC			
Date (BS)	Major Phenomenon	Effects	Trends
2007	Destruction of temple	No human lost but the Bhirgarekh and Ganesh temples were seriously damaged	D
2007	School	Establishment of school	-
2034	Building support	Lion's Club supported for the construction of building	
2038	Landslide	Culturally important pond was washed away	I
2040	Landslide	2 people were died by landslide and fallen down of trees	D
2045	Earthquake	Crack of several houses (about 30%)	-
2045	Electric sot	1 person was died by electric current	I
046-048	Conflicts	People were seriously injured due to conflict between two Newar groups about bi vs. small guthi	D
050-051	Heavy rain	3 people were died due to sudden fallen of house wall	D
2051	Building support	DEO supported for the construction of building	
2052/53	Windstorm	Roof of school buildings were blown away.	I
2053	Thunder storm	Electric shut of several houses	D
2058	Accident	Due to overturn of tempoo, 3 children were died	I
2060	Eye diseases	Several people were affected by epidemic of eye diseases	I
2060/61	Computer support	Rotary club supported computer to school students	
2061	Road	Construction of village road	-
2060/61	Building upgrading	DDC Lalitpur supported for upgrading of school buildings	
2063	Library	Establishment of Sunakothe Library and operation of literacy classes	-
2063	Dacoit	2 dacoit were died in the encounter with local people	D
2061	Library support	Room to Read has supported school to establish library	
2063	Drinking water	Volunteer service Nepal has supported for drinking water	
Every	Diarrhoea	Locals had to invest for medicines. So they had	I

Similar disasters are also affecting the communities in Metehiya, Banke. The prevailing disasters in the communities where the schools are located are either increasing or decreasing in intensity and magnitude. The timeline and trend of Matehiya VDC reflects

that:

- There is no problem of landslides.
- Mainly diarrhoea is happened every year.
- The problems of cold wave and threats of wild animals are in increasing order.
- Since 2048, there is no problem of dacoit means there is social unity and harmony among the various caste people.
- Flood, drought and windstorm are in increasing trends whereas fire and epidemics are in the decreasing order.

The information on the time line of the disasters and the trends of the disasters together with the effects of particular disasters and causes of the trends are presented in the table which is given in annex 2.

4.2.3 Seasonal Calendar

The seasonality also increases the people's vulnerability. The seasonal calendar exercise was carried out to know the occurrence of flood, wind storm, fire, starvation, diseases, thunderbolt, cold wave, theft, and river cutting etc, the pattern of crop cultivation, trend of crop diversification and change of climatic conditions and its effects.

Table 3: Seasonal Calendar of Balaju													
SN	Major Incident	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Flood												
2	River Cutting												
3	Fire												
4	Starvation												
5	Loan												
6	Diseases												
7	Busiest time												
8	Thunderbolt												
9	Cold wave												
10	Community Sanitation												
11	Theft												
12	Wind storm												

1=Baisakh, 12=Chaitra

During the PVA exercise, the people of Balaju prepared their seasonal calendar which is given in table 3. Credit is an essential means for poor households to overcome seasonal crisis and to meet immediate food needs. There are some financial institutions that have been

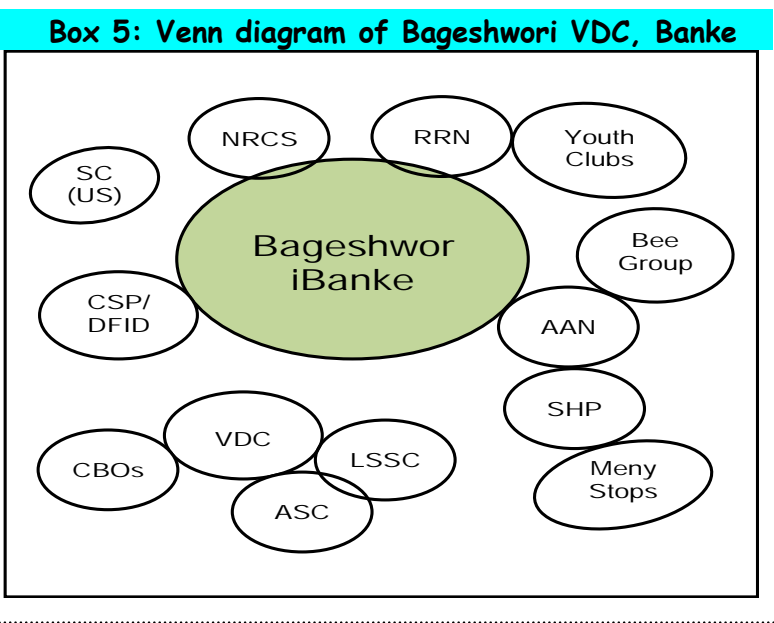
providing loan to people at individual and group approach.

Due to climate change, people now experienced the unusual weather and climatic condition. From cold wave and excess hot is in increasing order in the recent years. People have to experience of flood even in slack monsoon season. The excess rain, partial and no rain (drought) are observed frequently. Mostly children and elderly people are vulnerable from both cold and hot wave. The seasonal calendars of other communities are given in annex-3.

4.2.4 Venn relationship

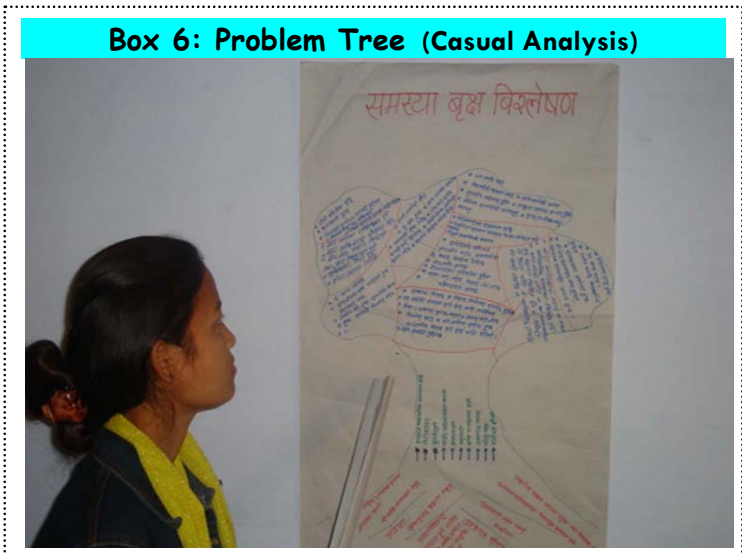
Venn diagrams were prepared sitting with the community members based on which different information on the existing support of various institutions. People said that the absence of institutions and institutions both creates the institutional vulnerabilities to the people. Before preparing the Venn relationship, the participants were asked to list down the major organisations working in the area with their types of service delivery. On the basis of most important, least important, the more accessible and least accessible institutions at the time of people's need, one way and two way relationship, near and far, more access and less access etc) etc, Venn diagrams were prepared and presented.

The box 5 shows the Venn diagram of the Bageshwori, Banke. The types of institutions working within the VDC are: NRCS, VDC office, HP, Schools, SMC, AAN, SC (US), CSP/DFID, UNDP, Bee group, Merry Stops, RRN, LSSC, ASC, Youths Clubs and CBOs. Though there are many institutions but people said that they are not able to get immediate supports from these institutions in the time of need. There is an information gaps between the community people and the services delivered from these institutions, their basis and so forth. Neither people consult these institutions nor did these institutions share the information about their services and ways of securing the services. The Venn diagram of other area is given in annex-4.



4.2.5 Problem Tree

Casual analysis is very important to know the types of problems and their underlying causes and effects. This exercise was carried out towards the end of the PVA process once all tools and techniques were used including FGDs and KIs. The participants were encouraged to identify major problems and their cause and effects. For this, pair wise ranking was made to identify the most crucial problems. It was symbolised branches as problem, roots as causes and branches as effects.



4.3 Different types of Vulnerabilities

People shared the different types of vulnerabilities during the PVA process. These vulnerabilities were social, political, environmental, health, natural, physical, economic, educational, agricultural, and institutional etc. The nature, magnitude and extent of these types of vulnerabilities are different from one place to another. The following paragraphs briefly highlights the types of vulnerabilities and their underlying causes, as well as possible options for reducing those vulnerabilities.

4.3.1 Social Vulnerabilities

Weak family structures, poor leadership qualities, ignorance of decision-making process (who is left out and who is in), neglect the participation of all well-being groups, injustice, and inequality are identified as the main causes of social vulnerabilities. Likewise

disability, child labour, dowry, alcoholism and gambling, domestic violence, conflicts and disputes, believe in witches, discrimination irrespective to caste, class, gender etc are other causes of social vulnerabilities.

Disability: There are various kinds of human disabilities prevailed in the study VDCs. They are blindness, dumbness, mutes, lunacy, and paralysis etc. People have inadequate knowledge about the institutions that are working for the welfare and development of disable people. Due to disability, their mobility and exposure to outside the village is very limited. Unfortunately, it was found that the tendency of people towards disability is always negative as they assumed that it is the consequence of *pap of purbjanna*. Therefore they are isolated from the communal activities so mostly vulnerable.

Child labour: In Banke, there is a practice of child labour. Many of the child labourers are orphans. Some guardians send their children for labour work because of poverty, difficult to earning livelihood of family members and to pay back the loans. Usually, children from dalit communities and Muslim caste are found working as child labour, mostly domestic helper. In few cases, child labours are schooled but at the same time they have been brutally treated at schools and the houses by employers, as they get no time for study. Some of the major consequences of child labour as identified during the PVA were no education, heavy workload, degrading human dignity and more chances of attraction towards socially unaccepted behaviours (trafficking and alcoholism). The problem of child labour is also severe in Balaju and Sunakothi. In Sunakothi, children are mostly working in the carpet industries. These labours are more vulnerable from basic health and educational facilities.

Trafficking: People have found low awareness to combat the child abuse, violence and trafficking. Polygamy is also in practice. In Banke, it was found that about 15% teraian

Box 7: Causes of Social Vulnerabilities

- Disability
- Child labour
- Trafficking
- Dowry
- Alcoholism and Gambling
- Touchability
- Inter caste marriage
- Domestic violence
- Conflicts and disputes
- Witches
- Discrimination irrespective to caste, class, gender etc
- Poor social unity

people get second marriage seeking son and disliking the first wife. Both male and female who practices polygamy are more vulnerable from society and within kinship. Most of them are also suffered from economic problems.

Dowry: This system is deeply rooted in the Terai society. Since it is a way to earn prestige, this practice has also palpated other ethnic groups too. The practices of getting late marriage of boys are to get education to the possible extent with the hope that they would be eligible to get attractive dowry from the bride's family. It was found that it is further advantage

for the boys if they are employed in any enterprises or associated with the public service or even government services. The communities have experienced that the system of dowry has created disputes between both the sides resulting divorce, domestic violence and sometimes murder. It has further caused unhealthy practices like taking loan in high interest rate by keeping land as deposit. Its implications are immense in debt/loan, increasing poverty, hypertension and social disorders. Some women are still in favour of the dowry system as they perceived that the system protects property right of women in indirect way. As a part of dowry, there is an increasing tendency to give land to the daughter. It

is believed that those who receive plot of land get love and prosperities in the new house. Apparently, wives often dominate husbands and disputes among the brothers have been created particularly about the unequal distribution of the resources. Those, who unable to give fewer dowries, in terms of materials and land are more vulnerable within the house and society,

Alcoholism and gambling: Traditional thinking, unemployment and ignorance of people about future are the major causes behind social evils like alcoholism and gambling. As a consequence, public places have been turned as a venue for conflicts, physical fights and unnecessary debates. Often the men, who earn more than the women, spend their income on alcohol or gambling. This leaves the women, who earn less, to shoulder the financial responsibilities of the household with less resource. Women during the FGDs stressed that this situation invites the family disputes and women are again victimized. Mostly during the festival time such as Dashain and Dipawali, the cases of domestic violence are more. It was shared that male members mostly take alcohol from local vendor shop. The problem of alcoholism and gambling is severe in teraian communities. In Bageshwori, it was shared that there is a problem of domestic violence in at least 10 % HHs due to alcoholism.

Touchability: There are plenty of evidences that clearly show the disparities and discrimination between dalits and non dalits. Dalits are often humiliated by non dalits. Dalits have poor access in entering and worshipping in the temple, fetching water, and enjoying in the natural resources. In Matehiya, dalit students argued that they were discouraged from worshipping goddess during Saraswoti puja. Guardians are the main obstacles to reduce all forms of discrimination. Fortunately, in the meeting, there is no issue of touchability, all shared the water from the same pot but they are reluctant to enter the dalit within house. In Bageshwori, there is still discrimination between dalits and non-dalits in terms of religion. The people from Chamar, Kori, Dhobi and Bhangi caste groups are not allowed to enter in the temples. But student of JKSS shared that there is no discrimination in terms of caste, religion, well-being, political and social among the students. Non dalits students charged that there is inferiority complex within the dalit students.

Inter Caste Marriage: Despite of the protest of elderly people against inter-caste marriage, there are some cases of such marriage within the village. If non dalit weds dalit, the society pressurize non dalit to back their decision and organise next marriage

Box 8: Vicious Circle of Vulnerabilities

In Matehiya, Banke, once father asked his daughter to carry local liquor from vendor shop, she fetch water from tube well and give her father. Once father tasted liquor, he was angry and try to beat daughter mentioning that it is a great insult. Due to fear, daughter ran way from the home and back once the night is maturated. She could not understand the lesson due to psychological fear and slept early. Due to that, she could not complete her home work and penalised from teacher at school in the following day.

immediately but if dalit weds non dalit then society pressurize them for divorce. In such aspects, dalit people are victimized and the society is not in the favour of dalits. Within the dalit communities, there is also a disparity between upper and lower caste, hence so called dalits are again vulnerable.

Domestic violence: In the communities of Banke and even in Sunakothe of Lalitpur, for many women was the first time they talked about their experiences of

domestic violence and many raised the issue of the need for psychosocial support for them. Students also raised the issues of bad impact of domestic violence in their study. In

Bageshwori, Banke, they expressed that it is hard to arrange the light (lamp) for study once there is a disputes between guardians within the houses.

Mostly male members drink alcohol outside the home that created domestic violence. Students expressed that they are witnessed as their mothers are normally beaten by fathers. Due to this, their workload is increased as mothers are not in the situation to do hard work for several days. It also created unfavourable situation within the house. As a result, they could not read and write at school and at home.

There is poor social unity among the people. But fortunately, In case of any disaster, community people have a tendency to work collectively and with the sole motive of support. It was found in all locations.

During the PVA exercise, the following are the some of the initiatives that they agreed to carry out to reduce the social vulnerabilities:

- Conduct orientation on the implications of alcoholism at individual, household and community level. Run campaign for 'alcohol free area'. Prepare agreed rules and regulation and strictly enforced those rules to reduce these bad habits. In Matehiya, people agreed to penalise Rs 100-500 to vender shop owner who sale local liquor to people. Organise and strengthen women group to motivate the male counterparts against alcoholism and gambling.
- Run campaigns against child labour, dowry, trafficking, touchability, and all forms of social discriminations. Form especial task force to control domestic violence during main festivals.
- Organise orientation programs at school to eliminate all forms of social discrimination, social ills and misbehaviours in the presence of SMC, PTA and youths.
- Organise interaction meeting among various caste people and organize common feast program.
- Organise the capacity building activities for teachers and students to reduce the social vulnerabilities both at schools and communities.
- There is a need of advocacy and awareness program through wall magazine, street drama, installation of hording boards, poster and pamphlets, FM radio program, child rallies etc.

4.3.2 Cultural Vulnerabilities

Religious, cultural and traditional values and practices drive the societies that adorn the life style of a particular social group. Threat to cultural identity of certain social or ethnic groups is an emerging issue. The indigenous practices of various caste groups are now reported to be disappeared as a result of acculturation and modernization process. People faced difficulties in preserving their traditional norms, values and practices. They opined that these factors are leading the cultural vulnerabilities.

Box 9: Causes of Cultural Vulnerabilities

- Negative attitude towards change
- Believe in faith, determination, religious beliefs and ideology
- Hopelessness and discouragement from cultural practices
- Poor solidarity and neighbourhood
- Passivity, fatalism, lack of initiative to do any work

In teraian culture, there is practices of child marriage/early marriage as they assumed that it is difficult to marriage it in the late age. The practices of early marriage also hampered the education of children. Getting education especially teraian communities means to easily get citizenship certificate, comfortable to daughter's marriage or getting more dowry, and finally to get a good job. This perception has been appeared from cultural background of the local communities. About 98% girls reported to be left school after marriage. Most of the young boys after marriage left for India for labour work. It was also shared that when girls heard about their marriage without their consent, they mostly ran away from house and stayed with their kin far from village even for 1-2 months. This hampered their regular education and suffered from physiological fear and trauma. The problem of child marriage is not practiced in Balaju and Sunakothi.

People are compelled to live in the same place even though there is increasing risks by flood and other disaster. It was due to cultural believes in terms of *Kul devata* (family god) and *Bhumi devata* (land god). Those who believe in faith are more vulnerability.

Students also expressed that cultural taboos also hampered their formal education system. For example, in Muslim society of Matehiya of Banke, children are given especial education about *Kuran* (the holy book) in *Motherasa*, that also hampered their formal schooling system. The guardians give more attention for *Kuran* than formal education.

In Sunakothi of Lalitpur, there is a practice of burning dead bodies near the school compound. Despite of several efforts and protest of students, this practice can not be stopped. There is also belief that the tall trees near the Bal Kumari Secondary School compound should not be trimmed. Culturally on one is allowed to cult trees in the school vicinity. Due to this, students and teachers have always feared during the wind storm. These are the reasons that people are mostly vulnerable due to cultural practices and taboos. Similarly, in Sunakothi, there are several small ponds within the villages but those ponds are very dirt that are causing outburst of many communicable diseases. People are reluctant to clean those ponds as they are in fear of water god (*Nag raja*).

In Chidimar communities of Banke, guardians are often reluctant to send their children in the schools. Due to their cultural practices, they willing to continue their traditional occupation as tending pigs, kill birds for feeding etc. They assumed that the continuation of the cultural practices is more important than having formal education. This example clearly shows that cultural practices are also barriers for formal education and they are vulnerable for having good education that is their basic rights.

People during the PVA expressed that good practice of knowledge management helps reduce the risk of disasters by increasing the level to which people are informed and motivated to participate in a culture of disaster prevention, mitigation and recovery. The following activities are committed to carry out by communities and schools to reduce the cultural vulnerabilities.

- Orientation on the role and importance of religious harmony among the different caste people and zero tolerance
- Aware people through rally, street drama, poster pamphlets and initiation of wall magazine against the cultural taboos (fatalism and luck) and promote cultural harmony.
- Organise interaction programs both at schools and communities about the negative implications of cultural taboos.

4.3.3 Gendered Vulnerabilities

Women have very less opportunity for exposure and privilege of working outside the village is always threatened. Even female are barrier to expose active women and are sometimes the medium to discourage ladies seeking development opportunities. Women's contribution in socio-economic activities is not valued.

Men are mostly involved in production, reproduction and social activities but women are engaged in reproductive and to some extent in community works. Very few women have been involved in productive sector such as working as schoolteacher and maternal and child worker. The communities of all study VDCs are male dominated. Even in the families of widow or abandoned, the junior male member becomes the in-charge of the family. Women are restricted to ascertain their individual personality that is strongly backed by so-called social norms and values.

Women head the family if senior male members go outside the village/country for work or her husband is expired. Some women headed HHs have been emerged due to once her husband bring the second wife. This is particularly seen in teraian communities. They are forced to live separately because the harmony in the family is threatened.

Women and girls are marginalized in terms of decision making both inside and outside the house. The society does not pay due respect to the dignity of girls resulting in less mobility. They are confined to play traditional roles like household chores, taking care of children and farming. They cannot often enjoy entertainment and recreational activities. The so-called social customs like early marriage and unequal marriage are other barriers for their overall development. Women are oppressed, their voices are not heard and their roles are not valued and recognized. They cannot argue or discuss with their superiors even in determining their future.

Box 10: Causes of Gender Vulnerabilities
<ul style="list-style-type: none">• Less mobility and exposure• Traditional thinking of valued son than daughter• Less involvement in families decision making process• Early and unequal marriage• Unequal wages even in the same nature of work• Heavy work load at home

The socio-cultural norms make women hesitant to speak with superiors and strangers. Their position is mainly attributed to their lack of access to educational opportunities and awareness. In fact, women's interests, concerns, and needs are seldom taken into account. The unmarried ladies in their late teens face tough questions regarding their character and behaviour if their mobility is high.

During the discussion with people of Matehiya, it was observed that men and women of poorer classes mostly work as wage labour. There is also a disparity in wage. The wage rate varies according to sex, crops and season. It was found that generally men are given a higher wage rate than women even for the same nature of work and the rate increases during monsoon. Communities determine the rate of wage on the basis of demands of labour. The differences of rates for men and women are determined on the basis of nature of work. It is said that men generally do '*hard physical work*' such as ploughing, carrying seedlings for transplanted, manure transportation, threshing whereas women do '*light work*' like uprooting the seedlings, paddy transplanted, weeding, crop cutting and carrying.

There are plenty of evidences of gender disparities in all activities. Gender disparities are from the generation. People generally send daughter to government schools while sons have been admitted in boarding schools. This was particularly seen in Balaju and Sunakothi VDC. The society gives more respect the role of son than daughter. Son is considered '*the stick of elderly age*'.

In Matehiya, it was found that only 30 % women are being involved in family decision making. Women have no authority to expense in medicine, and selling and buying the land. The role and importance of women in the society is basically determined by the social norms and values, cultural practices and behaviours. Women are found always back in terms of reading and writing, resting and getting outsiders information etc. As a result, they are marginalized in education, health, safety and security, and different livelihood activities. In Bageshwori, only 20% women have citizenship certificate.

During the discussion with girls, they opined that they are victimised in home and school. In school, as majority of the teachers are male, so girls are reluctant to express their feeling and emotions with male teachers. School administration is always favouring of boys for sports events. Neither school procured girls related sports materials nor encouraged them to participate in extra curricular activities. Still there is thinking that as girls are physically weak, they can not demonstrate the good results in sports.

In home also, the roles of girls are never valued. They are only free to read once all family members take food. Their mobility within the village is also limited. Guardian asked many questions once they are late. They are also victimized by the young boys. They often faced the vulgar words of boys and harassed sexually. They mostly vulnerable around the narrow road, near the bushy land, forest and agriculture field. As they have to involve in many household activities, they are irregular in school in several instances. During crop plantation and harvesting time, they are asked to stay at home for several days. If there is important work to be carried out within house, daughters are asked to leave school to contribute household work. This leads the missing of several lessons in the school resulting poor academic performance.

In the communities of Banke, girls shared that they have much work load than boys. They generally wake up at 5 am, then clean the cowshed, utensils and prepare meal for family. Fetching water, collecting grass and fodder are the regular work. After finishing these activities, they go for school. The same work has to be repeated when they back from school. In Saturday and other holidays, they have to go far from house to fetch firewood. Girls expressed that there is a fear of dacoit and *chaukidar* of community forestry user group (CFUG) who often grasped *namlo* and *doko* and punished up to Rs 100. Sons are never pressurising to fetch firewood. Due to ignorance, parents have no idea what much load is tolerable for their children especially daughters. They are unaware about the difficulties of their children and its implication in their formal education. In Matehiya, about 25% children are not going to schools. It is mostly seen within Muslim communities. There is proverb that '*investment for son is profit but an investment in daughter is always in loss*'.

There are several causes were identified during the PVA for the gendered vulnerabilities. Some, among others, are less mobility and exposure, traditional thinking of valued son than daughter, less involvement in families decision making process, early and unequal marriage, and heavy work load at home. On the basis of discussion, the people and students agreed to run the following activities to reduce the gender disparities.

- Organise rallies and campaigns against gender discrimination.
- Encourage male counterparts to reduce the workload of girls and women.
- Organise gender and development training for all.
- Involve the women in the family and community's decision making process.
- Campaign against early and unequal marriage.
- Rallies for equal wages, treatments and behaviours between men and women.

4.3.4 Political Vulnerabilities

The political awareness is determined by level of education and people's exposure. The elected village representatives are not clear on their role and responsibilities. The same person is elected even though submitted their candidature from different political parties. It shows the low political awareness of people.

People blamed that they are not getting fair justice in different cases. The most reported cases reported in the VDC are beaten case between husband and wife, transaction of

Box 11: Causes of Political Vulnerabilities

- No social justice in time
- Unequal distribution of the resources
- Unfair decision making mostly politically influenced
- Unable to generate external resources
- Improper mobilisation and management of internal resources

cash and kind, separation of assets, disputes between *Mohi* and *Sadhiyar* etc. Traditional leaders, political party and community leaders are the primary agents to resolve conflicts at the local level. These leaders have settles many cases. But people opined that the majority of the decisions are influenced by party politics hence generally not fair.

The major causes of the political vulnerabilities as expressed by the people are no social justice in time, unequal distribution of the resources, unfair decision making mostly politically influenced, unable to generate external resources and improper mobilisation and management of internal resources. People who have poor political networks and have no power to influence others are politically vulnerable.

People opined that there is need of immediate attention of following activities in order to reduce the political vulnerabilities:

- Conduct orientation program on the roles and responsibilities of elected people to provide services to their voters
- Organise interaction program to identify the political resources available within the VDC and ways to secure those resources
- Promote the CBOs, mothers groups and natural resources management groups by allocating some resources from VDC fund

Box 12: Causes of Physical Vulnerabilities

- Standing trees next to houses and schools
- Wooden electric poles
- Torrents
- Congested settlements
- Poor road networks
- No bridges in the torrents
- Depletion of forest resources
- Insecure and risky sources of livelihood

4.3.5 Physical Vulnerabilities

In order to identify the physical vulnerabilities at communities and schools, separate discussions were made. The intensive exercise yielded good results to identify existing and potential local hazards such as – standing trees next to houses and schools; wooden electric poles; drains;

narrow bridge; congested houses, etc. During PVA in Sunakothi, the community highlighted the fact that the amount of drinking water provided by the government was inadequate and wooden electric poles was identified that created physical vulnerabilities.

People living in the area prone to landslides, floods, fire and epidemics are suffered from physical vulnerabilities. Access rain and drought also propagated physical vulnerabilities. Fast growing population causes pressure on natural resources. The poor access to and control over land, water, and other means of production, infrastructure and services: roads, health facilities, schools, electricity, communications, housing, poor means of livelihood, productive and other skills also causes physical vulnerabilities. Population, mortality, diseases, nutritional status, literacy, poverty levels, types of forest cover, soil quality, extent of erosion also promote the physical vulnerabilities.

Road is an important infrastructure for economic activities and mobility. Most of the interior roads of Matehiya and Bageshwori VDCs are workable only in winter season. Travelling in all the wards of these VDCs in rainy season is very difficult. The condition of road is poor because of the encroachment of road and practices of keeping livestock at the roadsides. The conditions of roads are further worsened by installation of hume-pipe. It has blocked drainage resulting inundation. There is no people's contribution in earthwork (*khaldo ma mato purne*) to label the road. Riding bicycles and driving vehicles in the village has been very difficult especially in monsoon. The houses constructed at the roadsides have been contributing to worsening the condition of roads. All these forms of hardship also cause the physical vulnerabilities.

In addition to these, the following are the major causes of physical vulnerabilities.

Communities of Banke

- The torrent in the monsoon causes the physical vulnerabilities. It is difficult to cross these torrents in monsoon. As a result, people compel to use long route for travelling.
- In Matehiya, mostly Newaji gaon, Bhagwanpur, Motipur are most vulnerable in terms of flood. In Bageshwori, Budhapur, Bhandariya, F goun, Prempur, Kapasi and Dithapur are more vulnerable from flood. During the monsoon, the water from the northern highway passes from Kiran torrent so it always created problems. It also damages newly planted paddy. Sometimes, the flood also damages the crops that are ready for harvesting. It also erodes both the bank of valuable agriculture land and created many families became landless. There is no bridge and no headwork for irrigation in these torrents. Hence, flood is the most common problem, which has taken lives and destroyed the land and buildings.
- Kapasi Murgiya torrent passes from Ganapur-5. This torrent has to cross by the students of 2 VDCs during monsoon. No bridge is in this torrent.
- During this years' flood, the whole village was waterlogged. Many hand pumps were under the water. Those hand pumps that were installed at an elevated part were only useful to fetch water for drinking purposes.
- There is no fire brigade facility. Because of no communication facility, it is even difficult to inform of the disasters if something really big happens.
- In Bageshwori, communities are affected from different disasters such as windstorms, floods, fire, draught, snakebites, mosquito bites and theft. There are some initiatives to control disasters in the communities such as making roofs tightly stitched as well as encouraging people to practice safer sanitation. The previous

disasters have affected the free movement of the people as floods take away the bridges along the rivers in the village. It is difficult to access hospitals during the floods.

- In 5th Bhadra 2063, one youth of Nawaji village was died from flood.

Balaju

- There have been no other physical disasters other than flooding. Because of flood, school had to be closed in 2055 for few days. During flood, water supply is polluted and people use filtered or boiled water.
- After flood, communities collectively work to reduce the impacts. They establish coordination with the local institutions but the coordination is not strong.
- In the community most people have back door to reduce the impacts or to escape during larger floods.
- MCDS has raised wall for 300m length in the river. All are equally benefited through this wall. It has helped to control the flood.
- Police is 1 km away and fire brigade is 5-6 km away from the community.

Sunakothi

- The community settlement of Sunakothi has provided the major disasters problems in the area. It is revealed that in the past, windstorms, landslides and diarrhoea have affected school and the community.
- District soil conservation office (DSCO) is now working to control landslide, the efforts of which are inadequate and ineffective.
- There is a fire brigade 7 km away and police post is 4 km away but service is not effective.

School disasters are also triggered by the presence or the absence of certain structures or facilities in and around the school premises. Very often, it is heard that the school buildings are cracks as a result of tap root system of the trees around the school. The deep roots travel to the foundation of the school and as a result of this, different cracks are formed. Accidentally, the buildings might collapse and the teachers and the students may be at risk of the disaster. Moreover, presence of trees especially the long-standing trees may invite the shocks of thunderbolts pulled by their earthling characteristic. In addition, old, decayed trees may at any time collapse and the students in the class or those playing in the playground may eventually hurt. Play ground features, drainages and other similar structures may invite similar problems. The physical facilities are poor due to inadequate school building, educational materials, furniture and well-trained teachers. Besides some exceptional cases, physical facilities are also very poor even lower than satisfactory level. Most of the school buildings are weak with CGI sheeted roofs and with no sufficient classrooms. The specific types of physical vulnerabilities by school are given below:

MSS, Banke

- In MSS, two buildings are CGI sheet roofed made up of bricks, wall is not plastered, the wall of resource centre building is not plastered, the another building is without roof as the CGI sheets have been blown away by wind last year.
- Hand pump is installed inside the building. There is a chance for students to meet accidents because of support pillars that might drop anytime from the roof.
- In 2063 Bhadra, massive flooding occurred in the area as a result of which the school had to be completely closed for 2 days. The after effect further made

students to be absent for a number of days.

- There is a tall tree within the school compound. Though the branches of the tree are trimmed regularly but the risks are always there.
- Because the school has no compounding wall, small children meet minor accidents every year.
- By the side of the school, there is a busy road. Cycle, motorcycle, tractor, etc. are driven and the animals also use the road. Therefore, if the students from lower classes are not cautioned, frequent accidents are possible.

JKSS, Banke

- Out of six buildings of JKSS, 2 buildings are lintered and 4 are with CGI sheets. Due to this, it was created problems during rainy seasons and winter season.
- There is a single room for both for headmaster and other teachers.
- The surface level of playing ground is gig gag and the wire fencing created wound. There is a fear of poisonous snakes as there are plenty of trench within the school ground.
- There is inadequate drinking water system for the students.
- There is no bridge in the torrent. As students not able to cross the torrent during high flood, they compel to back home, some use long route and others cross the torrent with risks. Hence they missed the most of the periods. During the crossing of torrents, clothes and book are also wet. As they have to sit with wet clothes in the classrooms, their concentration towards studying is very minimal and they also suffered from common cold and fever.
- School was closed for a day in 2062 BS because of windstorm. Similar was the case by floods where 3 days were declared holiday in 2063.
- There is no school compound separated with walls. So animals come and encounter with children in several instances.
- There is a small tree for shade and the same tree may be a risk for the students as students climb up and down the trees.

BBUPS, Kathmandu

- There is one school building made up of bricks in walls but without pillars and beams. So, larger earthquakes may collapse the building. Suitable strengthening mechanisms are essential. The building is of 1 story but irons sheets are used as roofs in the raised walls to produce additional 2 rooms.
- The concrete stairs do not have railings, posing threats to the students. There are a total of 8 rooms in the building.
- Few rooms do not have windows and as a result, the light in the room is also insufficient.
- Each class has door but window has no grill. So, students have to either completely close the window or open it. As a result, during the winter, there may be oxygen deficiency in the class if all the windows are closed, as it is very cold.
- Head teacher and other teachers shared same room so mostly congested.
- There is insufficient furniture for teachers and students. The furniture (desk/benches) is inadequate as it could be seen that the bench for 3 accommodating 6 students.
- No security railing in the school and no plying ground.
- In 2055 BS, because the flood entered into the school building, the school declared holiday. School and river are very near and as school has no compound, it is likely that student meet accidents.

- There is a public road in front of school where taxis and motorcycles are driven and people use the road frequently. Leaving the children alone therefore might cause some risks from these vehicles.
- No wall in the bridge in the Bishnumati River, so risky for the young kids.
- Black boards are not properly maintained, often reflected and difficult to see.

BKSS, Lalitpur

- There are 2 concrete buildings with CGI sheets that cause an inherent risk of encountering a disaster when the speedy winds are blown. In 2053 BS, school was closed for 15 days because wind flew away with roofs made up of CGI sheets.
- There is no safety nails to tighten in the roofs.
- There is no safety railing along the stairs. Any minor obstacle or the slippery material over the stairs is likely to result students to fall down. It is identified a necessity that security railing are in place.
- The single room used by 23 staffs make it congested, thus making distress among the teachers as they stay in the room during their off-periods.
- There is a small drain at a distance of 100 m from the school compound. It should be kept in mind to aware and inform the children of this fact.
- There is no compounding wall. It means more risks to young kids as they leave from the school to the home.
- There are tall trees posing threat for thunderbolts.
- The problems of slippery during monsoon as the school ground are muddy.
- As rooms are congested and crowded, teachers have to cry in loud voice hence often suffered from headache.
- As the majority of the buildings were constructed from individual support, school is unable to pressurise individual donors for its own requirement.

On the basis of discussion at community and school, there is a need of following activities to reduce the physical vulnerabilities.

At schools

- Need compound wall with safety gate. Closes gates other than main gate.
- Building with CGI sheets have been blown away by wind. Again there are similar chances. So bolting tightly with the nails is necessary.
- Manage toilet and drinking water facilities for the students.
- Prepare security railings in the stairs and level the school playground should be maintained.
- Trimming trees that are near the school premises.
- Teachers are involved in teaching the students and delivering the messages such as not to go to river during flood side, not to get out of the school during likely disasters outside, etc. Students are also taught not to get out during windstorm from the class.
- There is a busy local road by the side of the school. Therefore, absence of caution may lead to the occurrence of disasters. Students need to be informed of the traffic rules.
- Ensure that the building is not weak by maintaining it.
- School buildings are not earthquake prone. So pillars need to be made.
- There is inadequate furniture. So furniture should be availed in sufficient quantity to create a learning environment.

At communities

- Community does not have organized DRR system in place but there is a practice of keeping matches in the safe places so that fire could be avoided by its misuse from the children. Community members also have the practice of awareness generation among the locals for the safe use of water. Hence, small orientation should be made to aware adult and children.
- Construct bridge/culvert in torrent for Banke communities. Train the torrent and control the flood from entering in to the agricultural land. River training work from the initiatives of stakeholder consultation and community contribution should be made. There is need of one culvert in Buddhapur to provide the facilities of students to go school. There is a need of weir with on and off facilities at least 2-3 different location to control the flood.
- Free grazing practices also created the problems during the school time. It breaks the concentration of the students. Though there is a provision of kanji house but it is not properly functioning.
- In Murgiya torrent, there is a need of box culvert and the community is ready to contribute both cash and kind for the construction of it. The improvement in road of Khajura to Hawaldarpur is important to sale agriculture commodities in the local market.
- The formation of Disaster Management Committee (DMC) and creation of relief fund at local level to fight against the disaster on time.
- There are some holes in the Matehiya roads. Those holes are filled with water during monsoon hence difficult to walk. As a result, children compel to walk from paddy field. Landowners are not in the favour of changing their routes. Sometimes students have to listen bad and vulgar words of landowner. They also faced the risks of pines. There is need of filling those holes by soil.
- In Bageshwori, there is need of culvert/bridges in Bhagwanpur, Dondra, Motipur, Lalpur and Mahadevnager torrents. The bridge towards the western part of the school is tends to broken, it has to be renovated.
- Physical improvements are needed through river training, community plantation, pond maintenance and improvements, canal maintenance, road maintenance, and drainage improvements.

4.3.6 Natural Vulnerabilities

Vulnerability analysis begins with the crucial acceptance that vulnerability is often part of the normal, becoming apparent and obvious to some only with the impact of a hazard. Therefore, vulnerability should be treated as a condition of people that derives from their political-economic position. The assumption that 'natural' disasters are inherently and predominantly natural phenomena has tended to exclude the social values from consideration in much of the spending that is done in disaster preparedness.

Box 13: Causes of Natural Vulnerabilities

- Flooding, Inundation
- Thunderstorm
- Cold wave, Fire
- Earthquake, Drought
- Windstorm, Hailstone
- River erosion
- Epidemic
- Access rain and partial rain

Flooding, inundation, thunderstorm, cold wave and fire are the main reasons for natural vulnerabilities. Apart from these, earthquake, drought, windstorm, hailstone, river erosion, epidemic, access rain and partial rain are identified as the main

causes of the natural vulnerabilities. The depletion of forest resources, haphazard use of agriculture land, the *khoriya* cultivation practices at the upper catchments are responsible for climate change that created frequent problem of flood, drought, cold wave, raising in temperature, outburst of epidemic etc.

In Banke, factors for natural vulnerabilities as identified during the PVA were fire, flooding, inundation, thunderstorm, cold wave, drought, windstorm, and hailstone, and river erosion, epidemic. Among the different causes, fire is most crucial factor due to negligence, dense clusters, thatched roofs and low level of awareness. The problem of fire is mostly seen in the months of Chaitra to Jestha. In 2061 BS, 97 houses in Nawaji village were destroyed by fire. Similarly in Kathmandu/Lalitpur, thunderstorm, drought, windstorm, hailstone and epidemic are the main causes of natural vulnerabilities.

People experienced that due to climate change, they are facing unpredictable drought. As there are no facilities of irrigation, people have to wait rain for cultivation. The long drought also hampered the total production of crops. People shared that once the production is low; they became vulnerable from other factors geometrically.

In Banke, flood and erosion along river bank are most devastating phenomenon. In monsoon, the majority of the area submerges by flood resulting the crop damages, displaced the lives and livestock and people living with fear and trauma. As agriculture is the main livelihood option, the frequent flood during monsoon caused people's vulnerability further.

During the discussion, both community people and students opined that these hazards can not be eliminated but reduce the effects of these vulnerabilities. The following initiatives are instrumental in reducing the effects of natural vulnerabilities.

- The existing perceptions and feelings towards the causes of natural vulnerabilities should be changed through continuous awareness campaign programs.
- Disaster preparedness activities should be in place to minimise the effects of natural phenomenon.
- Conduct the social campaigns to change the perceptions towards 'natural vulnerabilities are not the consequences of god's will'.
- Coordinate NGOs and GOs for the small scale infrastructure support to minimise the risks.
- There is need of management of relief materials before disaster, establishment of early warning system and disaster preparedness training in advance.

4.3.7 Economic Vulnerabilities

Agriculture and livestock are the major occupations of the communities except the Balaju. In Banke, some people earned their livelihood working in factory, pulling rickshaw, carpentry, masonry, farm labour etc. These days, employment in foreign countries like Malaysia, Qatar, Dubai, and India is also one of the important means for livelihood. Poor and landless families mostly depend upon both on-farm and off-farm activities. Besides agriculture, some families are engaged in trade. But a large portion of the labour force is still engaged in agriculture. There are very limited scopes of off-farm activities within the village. Some people are employed in government and non-government organisations whereas others run small cottage industries like saw mill, flour mill etc. In Matehiya, people are working as daily wage labour, sharecropping others land, and run mobile shop. Only 4% people in Matehiya and 8% in Bageshwori worked in government and NGO sector.

The percentage of people working as factory and carpentry, mason is only 0.3 and 0.2 in Matehiya and Bageshwori VDC respectively. In Matehiya, the alternative means of livelihoods are: forest resources, extraction of stone from mines, goat rising, poultry, buffalo farming, sale of daily commodities, and cultivation of both seasonal and off-

Box 14: Causes of Economic Vulnerabilities

- Lack of skills and knowledge
- Poor opportunities of off-farm activities within the village
- Still depend upon subsistence agriculture
- Poor sources of income generating activities
- Unequal distribution of land
- Poor entrepreneurship skills
- Poor market facilities
- depend upon the money lenders in high interest rate

seasonal vegetables farming. In Begeshwori VDC, mostly people are engaged in fishery and rickshaw, driving, work in brick factory, and pulling apart from agriculture. Both the schools of Banke are not resourceful to invest for the improvement of physical infrastructures.

The agriculture is the prime occupation of the community of Sunakothi. The BKSS is constructed in the public land though it has 10 ropani of land. But school is

unable to utilise the land properly. As the land around the school is managed by Guthi, school is unable to mobilise it for income generation (cultivation, hire etc). In fact, the school is not benefited from Guthi. JKSS has 5 *bigha* of land with opportunity for school to construct a better building. BKSS has 5 *ropanis* of land and process of land registration is ongoing. BBUPS has 8 *ana* of land which is the *ailani* (not registered with government) land.

Few people are engaged in trade. In Balaju, people are engaged in off-farm activities as there is no scope of agriculture related activities. But most of the people are unemployed, 50% work as labour, only 20% run small business here. The BBUPS is worst in terms of economically resourceful.

Land is also an important resource for livelihood. Access to and control over land is the determinant factor for improving socio-economic condition of rural poor. The inequitable distribution of land is a major factor that caused food deficiency at the household level.

Women are mostly engaged within the household activities so have little entrepreneurship skills. The hindrances for women entrepreneurship development are inadequate skill, illiteracy, poverty, engagement in domestic works, patriarchal social system and lack of awareness. Poor access and control over natural resources and depend on local money-lenders for loan are some of the causes of economic vulnerabilities.

It was shared that there is good correlation between people's well-being and livelihood. To identify the vulnerability due to poor livelihood, the types of threats were identified. There are some constraints towards promoting livelihood such as: inadequate capital, remoteness, poor transportation system, and poor awareness about market, low price of agricultural products and inadequate skill and knowledge of people. Unemployment of youths is another problem. Hence, this information provides poor economic set up in absence of adequate resource generating activities in the community. As a result, the investment of the community in school education can be expected less and above that disaster risks would not remain the top priority.

In order to reduce the economic vulnerabilities, the following activities could be effective, that were explored during the PVA exercise:

- Run collective grain storage program for the emergency period.
- Adopt modern agriculture practices and mobilise alternative income generation activities to reduce acute or chronic food shortage.
- Increase people's skills and knowledge through various capacity building measures.
- Increase the entrepreneurship skills of the people through demonstration and investment of small amount for catchy business.
- Promote reliable market facilities to ensure the people's agriculture product.
- Link farmers groups with cooperative to provide agriculture inputs including loan in cheaper interest rate.
- Encourage the guardians to contribute in the improvement of educational performance of the school.

4.3.8 Environmental Vulnerabilities

In Banke, most of the settlements are found densely populated. As a result, these houses are lacking basic facilities like drinking water and toilets. People mostly drink well water. The indoor as well as outdoor sanitation is extremely poor. There are several improper and unhygienic practices regarding use of drinking water. Usually, people drink water of tube-well using *lota* (a pot made of aluminium). The collected water is used only for cooking meal. Water is generally stored in bucket or *ghada* (vessel made of clay) that is covered with plate. Jug is used to pouring water from *ghada*. There is improper practice of hand washing after toilet and soap is rarely used.

Kharani (the dust of firewood) and soil is sometimes used for hand washing. Few people practice hand washing, bathing, brushing and nail cutting especially among adults and children. These

poor practices invites outburst of communicable diseases. The same situation is also observed in Sunakothi, Lalitpur village.

Box 15: Causes of Environmental Vulnerabilities

- Inadequate family and school toilets
- Practice of open defecation
- Congested housing patterns
- Depletion of forest resources
- Use of dirty water
- Haphazard use of agriculture land
- No proper place to dump dead animals

Keeping livestock such as pig, cow, and buffaloes at the road and storage of cow dung on the road is common in Banke. Wastewater management is also poor in these communities including Sunakothi. Water disposal practice is harmful to the family and community health. It was observed that the households keep the wastewater open and very close to their doorsteps, which prepares breeding ground for mosquito. Very few people dump kitchen wastage in the farmland. Likewise, wastewater from kitchen is rarely used in kitchen garden.

Due to absence of family toilets, open defecation is a major problem. It was reported that large family size, lack of materials for toilet construction, and no understanding about the importance of toilet are the main reasons behind lacking family toilets. The situation is more severe in teraian community of Banke. Due to open defecation, as reported by the respondents, are heavily contaminated sources of water and dirty canals, farmlands, bamboo gardens, and roadsides. It is very difficult to walk through and it is, on the other hand, risk of snakebites for those who go far away for defecation. Walking outside at night is dangerous particularly in conflict situations. It is also not practical especially to sick, children and elderly people. The people also realized that their prestige is often

threatened when guests are at their homes. It is rather very difficult for female members to go for defecation during daytime due to no toilets. The adverse effect of open defecation is certainly poor domestic and community environment that causes spreading communicable diseases in the communities.

In Matehiya, Plan Nepal helped for the construction of toilets through the ring support. Later, those rings were mostly used to keep paddy seed. Due to cultural taboos and practices, mostly teraian people are reluctant to use the same place for defecation several times.

It was shared that the spread of communicable diseases and water borne disease during the monsoon also threatened the environment. In Bageshwori, the exposure of Malaria disease which was assumed to be eradicated from teari is now seen due to poor sanitation. Typhoid, cholera, dysentery, *kala Jor*, encephalitis etc are also the problem during monsoon. There is fear of poisonous snakes in every year. People said that due to poor access of timber, they unable to make *palang* (wooden bench used for sleeping) and compel to sleep in the ground and mostly victimize by poisonous snakes. In the other hand, the floods take dead bodies of livestock and leave at the bank of torrents that also created environmental pollution. There is no common and agreed place to dump the dead bodies of livestock. Hence, people living near the torrents are mostly vulnerable.

The students opined that the poor facilities of toilets in the schools are the main reasons for environmental vulnerabilities. In MSS, there is only one toilet so students compel to go open defecation in the nearby cultivated land. The land owner use vulgar word and often beat the students. The local people also came around the school for open defecation. It caused the horrible situation around the school. In Bageshwori, it was shared that sometimes teachers are being threatened by local people once teachers advised not to dirt around the school. As the open defecation is everywhere, students often took stool in their sandal and go inside the classroom that also created unfavourable situation. In Matehiya, teachers are also go for open defecation that also caused students in more problems. Students have to go far from school for open defecation and missed their classes several times.

The depletion of forest resources are other reasons for environmental vulnerabilities. Mostly people use traditional stove in Banke. It has created smoky within the house hence children unable to read and write so they sleep early. In Bageswori, as there is no forest nearby, people compel to use the stem of maize, wheat straw and others as firewood. Majority of the population depends on cow dung for firewood. This has resulted the environmental vulnerabilities in the communities. Three years back, in Matehiya, Plan Nepal supported the community for Improved Cooking Stove (ICS) but people were not happy with the ICS. They said that ICS consumed more time for cooking that they have always time constraints. It was reported that there are some TB patients mostly children of 1.5 years age and elderly mothers who cook the food using cow dung. Student during the discussion opined that if there is ICS instead of traditional stove, their clothes, books, and copies would not be dirt and black. It will also easy for read and write and there will be no fear of fire also.

In Balaju, there is a Bishnumati river by the side of the school. It is literally no river as the percentage of water in the river in most seasons is less than 20 percent. The remaining is the urban and semi-urban sewerage. It means the river is polluted with the sewerage being mixed in the river.

In Sunakothi, flood has affected water sources during monsoon. As a result, many children are suffering from water borne diseases. Though community has sufficient drinking water sources, 50% of community member do not have toilet facilities. Open defecation is also practiced here.

In Bageshwori, Banke, there are no sufficient drinking water facilities on the community. Open defecation has remained a threat for breaking epidemics. While the drinking water facilities are inadequate, only less than 2 percent of the people have toilet facilities at their homes.

On the basis of community people and students, there is a need of following activities to reduce the effects of environmental vulnerabilities.

- Training for ICS. There is a need of ICS demonstration program to convince the illiterate women about its benefits.
- Training on private forest management and community plantations are equally important. If so, it will reduce the workload of children who mostly spent their time for fetching firewood in off school days.
- Conduct awareness program to reduce the practices of keeping livestock, poultry, and ducklings at the edge of public road.
- Control open defecation practices and encouraged the people for the construction of family toilets.
- Need plantation work for safety and greenery around the school.
- Clean the water sources in a fixed interval of time.
- Encourage to install bio gas plants to replace cow dung as firewood.

4.3.9 Health Vulnerabilities

During the PVA exercise, the health facilities of the study communities and the schools found poor and inadequate. The Sub Health Post (SHP) are supposed to provide basic curative health services through health assistants and auxiliary health workers and nurses, and provide preventive services to the people mainly on communicable diseases through health education.

Box 16: Causes of Health Vulnerabilities

- Inadequate essential drugs in SHP
- Lack of equipped HPs
- Poor health education
- Not dedicated and unskilled health staff
- Faith in traditional healings and witch
- Outburst of communicable diseases due to poor sanitation
- Arsenic contained drinking water
- Lack of female health workers in the HPs
- Malnutrition and occurrence of diseases

According to people, inadequate essential drugs in the health post as per the basic demand of the community, less committed health personnel, lack of well-equipped

health posts, inadequate health education among the people and passive and poor health management committee are the main reasons for poor health services. This situation mainly affects the poorest and marginalized groups of people who cannot afford the expensive private health facilities.

The male health personnel except Mother and Child Health Workers (MCHW) handle all the cases reported in the health posts. The roles of MCHW, as shared by the people distribute contraceptives, feed polio drops and other vaccines to newly born child. In Banke, majorities of women suffer from anaemia as a result of inadequate nutritional

food. Due to the inadequate number of female health personnel in the health post, women are unable to get quick and proper health services. Poor people cannot afford the expenses for medicines and therefore compelled to consult traditional healers. Poor sanitation and personal hygiene, poor economic condition, and faith in traditional healers are other reasons for poor health condition of local people.

Fever, dysentery, acute respiratory infection, worms, anaemia, diarrhoea are major diseases in Kathmandu and Lalitpur. Measles, cholera, cold, pneumonia, elephantiasis and meningitis cases were found more in Banke. The skin diseases are mostly due to eating fish of contaminated water and swimming in torrents. Diarrhoea is the main disease and its reasons were unsafe drinking water often arsenic contained, and poor sanitation. The main causes for frequent illness of children, as reported, were due to climatic changes and open defecation. The drinking water available at present in the communities of Banke is not safe. Apart from these, ponds, river and irrigation canal water are also used for washing clothes and animals feeding. It was observed that there is a need for maintenance of tube-wells and wells because of poor condition and high population pressure. People are compelled to use low quality water from the open wells, which often caused epidemic of water born disease. The tubes well are not bore in greater depth (need to bore even 100 feet depth). Ratio of iron is maximum compare to standard level of iron in drinkable water. Poor drinking often invites water born diseases like diarrhoea, dysentery, typhoid and jaundice.

Students during the discussion expressed that inadequate health education has caused poor sanitation. This is primarily caused by absence of first aid services, irrational use of liquor, poverty, ignorance and no access to clean water, insufficient foodstuffs and negligence in personal hygiene. Its implications, as identified, are people unable to getting treatment on time, suffering from many diseases, and premature or early death. As discussed in Matehiya, Banke, women health condition is very vulnerable. They are mostly suffering from diseases like: over bleeding, lower stomach pain, *patheghar khase* (prolepses), miss carries, and their interrelated physical and psychological problems. As there is no female health practitioners in the SHP, women are reluctant to express their health problem and its implications are further terrible. Girls also opined that during the menstruation period, they are suffering from lower stomach pain but they can not express their problems as there is no ladies a teacher in senior classes. There are no primary health care facilities available in the schools. Due to that, they compel to leave class showing family urgency, hence missed lessons and failed in the exam.

In Begeshwori of Banke, there are 20 PLWHA in ward 8 only. Two patients were already died. In Bhagawanpur of Matehiya, it was reported that one person is suffered from HIV/AIDS. It was found that due to socio-cultural conditions like prestige in the society, many people just hide the diseases. Due to poor economy and livelihood pattern, youths are unable to use the skills they acquired from formal education in to practice as no opportunities at local level. Hence most of youths, willing to go India for labour work and back home along with HIV/AIDS.

In BBUPS, there is a first aid box with few medicines. Lumanti is supporting it. All students have access to these facilities. In the community, common cold, diarrhoea and fever are common health problems. But because of medical facilities around, problems are soon addressed. People still practice traditional healing system in some cases.

In MSS, there are no health care facilities in the school. Basic first aid box is required for treating injuries from minor disaster. In Matehiya, during the monsoon, the community suffers from different diseases. These diseases include water borne diseases and Maleriya. Rather than particular ethnic groups, it is the group of the children who suffer most from these diseases. There are also no health posts and people express that it is at the hand of god to decide their living. Some people visit traditional healers such as dhamis/jhankris. There are no primary health care facilities in the school.

In Sunakothi, the problem is partly increased, as community doesn't have necessary facilities. Further, during epidemics or health problems during the disasters, people go to dhamis/jhankris and this has caused problem in health service promotion. Small injuries can be treated in health post but no facilities of hospital for bigger health problems. In BKSS, there are facilities of primary health care. But as the science lab, account section and teachers canteen is in the same room, it created serious health hazards.

The nutrition and health status of people in everyday life (or before the impact of a hazard) is always important. People have poor capacity to cope with illness and some types of injury resulting from a hazard, and capacity for self-reliance. Poverty and ignorance are the major factors for poor health.

People expressed that in order to reduce the vulnerabilities from poor health situation, the following initiatives are important. Some the initiatives, among others, are as follows:

- Conduct orientation on HIV/AIDS for school students. Prepare local volunteers to disseminate the positive message for HIV/AIDS. It is equally important to blood check up who back from India.
- Organize rallies and campaigns against the open defecation.
- Manage female teachers at secondary level for counselling of girls on sexual health.
- Run cleaning well program at community level in Banke.
- Provide the facilities of free health check-up at the schools.
- Increase awareness to mothers about girls sexual health, reduce the heavy work load of girls, provisions of female doctors in the SHP, and strengthen health post management committee.
- Training on first aid and search and rescue.

4.3.10 Educational Vulnerabilities

Education is one of the most important social indicators that show the level of awareness of a particular society. The level of prosperity of the community is determined by the quality of education provided by educational institutions.

The quality of education depends upon the sufficiency and qualified teachers, cooperative SMC and PTA, and availability of educational materials in the schools. In MSS, Banke, the available number of teachers is inadequate to the number of classes and students especially for primary and lower secondary schools. In BBUPS, the resources available are little and often villagers have to raise fund for resource generation to pay the teachers.

On the other hand, irregular attendance of the teachers, passive school management committee (SMC), vested party interests in teachers' recruitment process, frequent transfer of teachers and no supervision done by DEO are perceived as the major reasons behind poor formal education. Even high school like MSS and JKSS have no reading centres and

libraries for students. Child friendly environment in the schools is out of imagination. The major constraints in upgrading educational level as expressed by the people are poverty, less attention paid by guardians and inappropriate educational system. There are few toilets and educational materials. Financial position of the schools is almost ruined.

The teachers clearly expressed the quality of education of the schools does not meet minimum standard. Its main reasons are low output at each subject level, maximum burden of number of classes on a single teacher, decreasing in percentage of successful students, high drop out ratio of students and inadequate resources to ensure quality education.

Box 17: Causes of Educational Vulnerability

- Unavailability of educational and extra curricular activities
- Poor internal resources
- Guardians are reluctant to contribute for quality of education
- Not good relation among SMC, teachers and guardians
- No correlation between number of teachers and infrastructures available

Extra curricular activities are the foundations for intellectual capacity of the students. Teachers say that they need additional budget for extra curricular activities. Very few common sports are purchased by the schools due to resource constraints. Since there are no separate sports teachers, these materials are not properly used.

School enrolment of boys is found higher. Low enrolment of girl children is caused by inherent social stigma. Due to the increased level of awareness among people, enrolment ratio of girls is also encouraging. To achieve the goal of "Education for All (EFA)" of GoN, the number of students in these schools has been increasing but at the same time, there are new challenges for managing basic facilities like rooms, furniture for new comers.

In Banke, it was said by teachers that it is difficult to retain the boys in the school as they are mostly engaged in factories, ploughing work and *jani-bani*. The students expressed that there is no single activity supporting for early childhood development. Those who were not able to enrol in the formal education are participated in child classes. There are no activities supportive to creating child friendly environment. However, teachers are found fully aware on the importance of this for overall development of children. None of the school under DRRSP has facilities of ladder, fencing and railing and other materials for recreational activities. In Banke, students from dalit communities shared that they mostly dominated from teachers and school administration because their dress are dirt and they can not paid fee on time.

The main problems observed during the PVA are small room compared to number of students, inadequate extracurricular materials, dirt classrooms due to no plaster, inadequate furniture and so on. During the discussion, the students of MSS raised the following issues that are responsible for the educational vulnerabilities.

- Math/science teachers came from Nepalgunj so mostly irregular
- Teachers not willing to take class even presence in the school
- Teachers always discouraged those students whose educational performance is low
- Teachers reluctant to use educational materials even available in the school
- There is a poor coordination between SMC, teachers and guardians
- Congested room, more students, less furniture and poor blackboards hence students are discouraged to read and write.

It was found that in class 1, because of increasing number of students, the room seems congested and there is no sufficient furniture too. Volleyball, Kabaddi, Lundo, Carom boards are major sport facilities available in the school. The condition of sport materials is at the worst. There is open space outside the school but not properly managed.

JKSS

Similarly, the students of JKSS raised the following educational issues:

- Teachers are not sufficient compare to number of students and classes.
- Students are reluctant to go schools due to miss-behaviours of teachers.
- Weak administration of school, no provision of award and penalty.
- Inadequate furniture.
- Football, Volleyball, Cricket, Kabaddi, Carom, etc. are major games played by the students. There is play ground but needs levelling. There is no electricity facility.
- Good library, books are available from BEE Group and Nepal Red Cross Society (NRCS).
- School management can raise nominal money from all the students to contribute to the DRR at school. Teachers can start dialogues with the parents in this aspect. Students think that school curricula are inadequate to aware them in disaster risk reduction. School has no further plan of any action for DRR. So students demand some awareness activities and training programs in DRR.

BBUPS

- In BBUPS, the furniture (desk/benches) is inadequate as it could be seen that the bench for 3 accommodating 6 students. Black board is in poor and old condition. There is one *madal* (musical drum) in school for entertainment purpose. School has electricity facility but no library, play ground and compound in the school premises.
- Student and teachers have responsibility to be saved and to save others from disasters. Teachers need to control students to more out during floods. All have to generate awareness in using toilets. Students can aware community for better sanitation. Until now, school has no further plan of disaster mitigation.
- Students are happy with the behaviours of teachers, the quality of education is also good as they can read extra book of boarding school.
- There is a disparity in salary between permanent and temporary teachers.
- Improper management inside the room.
- Inadequate educational materials for teaching.

BKSS

- Inadequate furniture but writing board is cemented.
- There is good library. There is no compounding wall.
- Students and teachers demand books on disaster preparedness
- School has no any immediate plan for DRR. Students are little aware on DRR. It is found that school resources are insufficient to initiate such initiatives.
- School is unable to enrol more students due to poor infrastructures available.
- The members of SMC are engaged in their own business so reluctant to manage time for school. There is poor coordination among school, SMC, and guardians.
- There is scarcity of subject wise teachers.
- No use of computers even though Rotary Club provided computer for the students.

- No provision for compulsory dress hence poor in personal health and hygiene. No strict rules and regulations and no provision of rewards and penalty system.
- There is no operational calendar of school.
- There is no financial transparency and financial audits.
- Students are mostly irregular due to many cultural practices within the villages (feast and festivals within Newar culture)
- No sports teacher in the school.
- There is no practice of monitoring of the teaching.

Schools have no any mechanism to save life and property in case of disaster. Students agree that curricula need to provide more information on DRR. It is identified that a period could be taken on DRR once a week to aware the students. More awareness development activities are found to be required for both the students and teachers in DRR to reduce the overall impact of the disasters.

In order to reduce the vulnerabilities due to poor educational infrastructures, both local people and students suggested the following activities:

- Organize series wise meetings and interaction meeting among SMC, PTA and other relevant stakeholders to improve the quality of education.
- Improve in examination structures and provide the additional educational support to weak student through coaching class in cheaper rate.
- Organize extra curricular activities to build the intellectual capacity of the students. The playing and educational materials should be used strictly.
- Organise door to door campaigns and orientations to increase the girl's enrolment in the school.
- Provide training to teachers in recent teaching practices and methodologies.
- School curricula should include matters related to DRR, community based disaster preparedness initiatives, role of teachers, community and schools in DRR.
- Promote trainings to community members (parents and guardian), teachers and students on DRR.
- Promote and dissemination of IEC materials on DRR.
- Organize campaigns and educational fairs to familiarize DRR.
- Organize street drama, folk song competitions, etc. to raise awareness on DRR.
- Organize exposure tours where community or schools have good practice on DRR.

4.3.11 Agricultural Vulnerabilities

As majority of the people are depended on agriculture, the practices are often subsistence level. Cereal is the main crop, except the Balaju communities. Rice, wheat, maize, and millet; leguminous grains such as soybean, black gram, red lentil (musuri), red gram, cow pea, horse gram, and tuber are produced. In Banke, bulb crops such as: potato and colocasia are

Box 18: Causes of Agricultural Vulnerabilities

- Poor knowledge of the people and inadequate market facilities
- Inadequate services from ASCs (inputs, loan and advices)
- Increase of insecticides and diseases
- Non irrigated land and improper land use
- Crop failure due to unpredictable climatic changes
- Irrational use of chemical pesticides and fertilizer
- Improper cropping intensity

being cultivated. Apart from these, farmers grow oil seeds such as mustard, groundnut, linseed, sesame and spices such as chilli, onion, ginger, garlic, turmeric and coriander. Very few farmers grow brinjal, cauliflower, radish, carrot and tomatoes because of no irrigation facilities. People use improved seed varieties for cereal crops and chemical fertilizers and pesticides despite of limited knowledge. Use of compost manure in Bageshwori Banke is found very less because of the cow-dung traditionally used for cooking meals.

People shared during the discussion that the production of pulses and fruits is decreasing. Unpredictable climatic changes, irrational use of chemical pesticides and fertilizer, and improper cropping intensity has caused agricultural vulnerabilities.

It was found that people have low exposure and ideas in approaching Agriculture Sub-centre (ASC), use of inputs and improved techniques as well as diagnosing disease for right treatment. People are not satisfied with the services provided by JT/JTA. People are deprived from easy loan for improved farming system. As the cost of agriculture inputs is very high, poor farmers are always deprived from these facilities. Poor technical know-how in using medicines, no practice of mono crop, poor irrigation and use of excesses fertiliser to get more yields are other reasons for low production. Its impacts are reduction in yields, improper use of land, and increase seasonal migration.

Dip boring could be the effective means for irrigation for off seasonal vegetable farming. If there are irrigation facilities, the production would be increased by 60%. There is a need of especial trainings and orientation for increasing crop intensification and diversification, promotion of HVC, and aware on the types of diseases and their treatments.

On the basis of discussion with people, the following initiatives should be undertaken to reduce the agricultural vulnerabilities.

- Organise training to people on modern agriculture practices
- Initiate HYV and HVC in the coordination with ASCs
- Link the farmers group with cooperative for market ensure
- Aware people against the improper use of pesticides, insecticides and chemical fertiliser

Box 19: Causes of Institutional Vulnerabilities

- Poor and conflicting leadership
- Unpractical decision-making process
- Weak CBOs
- Inadequate resources
- Poor governance
- Political disturbances
- Conflicts and injustices in terms of resources sharing
- Poor networking and coordination among the institutions
- Design and implement the activities without the concerns of local people
- Poor service delivery (education, health, safe drinking water, shelter, sanitation, roads, electricity, communication etc)

- Increase the use of ICS and biogas to reduce the burning of cow dung
- Mobilise the ASC technicians in the favour of people
- Adopt the crops that are feasible even less irrigation and survive during the longer drought.
- Install treadle pump and dip boring for alternative irrigation facilities

4.3.12 Institutional Vulnerabilities

The presence of institutions is supposed to be an indicator of social awareness. Study area is poor in terms of number of institutions providing the basic services to local people and schools. In addition to the government institutions, there are other organizations like INGOs, NGOs, Cooperative societies, CBOs and informal groups. The relationship among the institutions looks yet to develop that will promote collaboration and resource sharing practice. Hence, more consideration and efforts are needed to make functional networking and effective linkage among the local and supportive organizations. The social mobilization part is the most important in this regard.

During the PVA process, poor and conflicting leadership, unpractical decision-making process, weak CBOs, inadequate resources, poor governance, political disturbances, conflicts, and injustices in terms of resources sharing are the main causes of institutional vulnerabilities.

No proper guidance from teachers, guardians and seniors and inadequate awareness are some of the causes that have created problems in formation of child clubs. Some other causes for not forming child clubs are absence of institutions working for it, no information and no supportive environment in the schools. It was expressed that direct consequences of absence of these clubs are lacking proper venue for implementation of innovative ideas, deteriorating creativity in children, less interaction and discussion among children, losing adaptability, children's increased attraction towards wrong behaviours and anti-social habits. Other consequences as opined are: children unaware about health and sanitation, weak in extra curricular activities and unable to initiate mental and intellectual development activities.

There are some adolescents and youth clubs but they are poorly functioning. Poor leadership and having no idea about the process of formation and resource mobilization are the major reasons identified during the PVA. As a result, youths are found no commitment to design their individual and common future. They are not united and are suffered of socially unaccepted behaviours. People expressed that vulnerability to natural disasters is also the result of weak institutions, with little enforcement power, and making poor development policy decisions.

During the Venn exercise, people listed down the institutions working in the community and assessed the services delivering by these institutions. During this exercise people explained their logic against responsive and irresponsive institutions, one way and two way relationships were identified. People said that good and pro people institutions could play an important role in the local community.

There are many institutions working in Bageshwori, Banke, like NRCS, VDC office, SHP, AAN, SC (US), CSP/DFID, UNDP, Bee group, Merry Stops, RRN, LSSC, ASC and Youths clubs and CBOs. Similarly, Institutions like NRCS, VDC office, SHP, AAN, SC (US), CSP/DFID, UNDP, Bee group, RRN, LSSC, ASC, and Youths clubs and CBOs are working in Matehiya Banke. Likewise, in Sunakothi there are Rotary club, Lumanti, VDC, Room to Read, Volunteer Society of Nepal etc. In Balaju the institutions like CWIN, EDEN, MCDS, SAKTI/OXFAM, adolescence group, Buddhajyoti Youth Club, TIC, and SCDS are working to provide the services to the local people.

There are different institutions supporting each of the school in various aspects. These

supports vary from building construction to scholarships and teachers support. The organizations supporting the school are presented through the Venn diagrams in this section.

MSS, Banke

MSS is supported by eight institutions. DDC and VDC are supporting with the building construction and drinking water facilities such as hand pumps. IDS is supporting with the solid waste management equipments. DEO is with its usual support: scholarship and teachers. BEE Group is taking students to excursions and providing the school with the sport materials. Human right organization is providing the books on human right issues. Plan Nepal's support is in scholarship and stationery. DFID is contributing to building construction as well as toilet and furniture facilities.

IDS support seems to avoid some epidemics in the school from the haphazardly thrown solid waste. District Development Committee (DDC), VDC and DFID's support in drinking water can contribute to DRR actions in the school.

BBUPS, Kathmandu

There are key 6 institutions supporting this school for various purposes. HIPLA is supporting for building construction, MCDS for building and toilet construction, Lumanti for building construction and teachers support. Likewise, DEO is supporting with teachers, construction of building, scholarships, stationery and other educational materials including the training. ADUCT is supporting with the health related awareness and materials. CEPReC is supporting with the educational materials.

While analyzing the support from different institutions, it is observed that there has been some support that is crucial for DRR at the school levels. ADUCT's support on health, MCDS's support in toilet construction is particularly important supports from the disaster perspective.

BKSS, Lalitpur

Lions Club has supported the school in construction of the building. Primary and Secondary Education Projects of Government of Nepal (GoN) have supported building construction and establishment of a science laboratory. Patan Rotary Club has provided scholarship to the students of the school. Sunakothi VDC has contributed salary of the teacher kept in the private source. DDC has supported in construction and maintenance of the building and the classrooms. Volunteer society, Lions Club, Primary and Secondary Education Projects, DDC, DEO, VDC and Patan Rotary Club also supported the BKSS. From the information obtained, there has not been precise support for the environmental management and hazard reduction initiatives. However, support to drinking water facilities is a positive aspect of the institutional support.

JKSS, Banke

This The school is supported by BEE Group with furniture, RRN is contributing to the school through support in construction of school building, installation of drinking water facilities, and furniture. Japan International Cooperation Agency (JICA), Primary Education Project, DDC and VDC are contributing in the construction of the buildings. SEF is conducting health classes and educational material support to the Internally Displaced Peoples (IDPs). DEO's support is regular-teachers and educational materials. Nepal Red Cross has provided the school with the library books. Support by RRN and SEF are essential for DRR at the school levels.

On the basis of discussion at school and community, the following activities could be the initiatives in the beginning to reduce the institutional vulnerabilities.

- Build the capacity of the institutions and promote networking and coordination with local level institutions.
- Organise periodic interaction meetings in the presence of community people to share their plan, programs and ways to secure their services.
- Formation and strengthening of DMC.
- Involve the people irrespective of caste, class and gender in all types of decision-making process.
- Train CBOs for the local resource mobilisation and management.
- Improve the governance of the institutions working at local level.
- Involve the local level stakeholders during design and implement the activities.

4.4 Understanding about Risks, Hazards and Vulnerabilities and their Consequences

During PVA, it was found that people have limited knowledge about the disasters, risks and vulnerabilities. Some respondents were found totally ignorant about the knowledge

Box 20: Risks can be reduced

We don't have much knowledge about risks. Risk means the problem caused by the disaster that is possibly happen. We can not control the disaster, but we can reduce its effects. Therefore risks can be reduced through the efforts of mankind.

-Mr Ramananda Tiwari, Teacher, MSS, Banke

of disaster and their consequences while others had no clear ideas how to deal with the disaster. Knowledge and practices are important to deal with the disaster and emergency at local level. Knowledge can be derived from both experiences (i.e. indigenous knowledge) and trainings and exposures. But the practices can be done through demonstration.

Those who have received trainings and orientations, have better knowledge about the consequences of disaster. They opined that after disaster, people loose income as they are unable to go for daily wages, the roads are blocked and they are unable to access health care facility in time, students become unable to attend schools, and markets become unable to operate properly. It was also shared that after the disaster like landslide and floods, drinking water became contaminated and as a result, there is spread of communicable diseases. The flood damaged stored food grains. Hence, they argued that before the preparation of activities for preparedness, it is better to analyse vulnerability situation, to provide advance notice about disaster and to educate people through training and exposure. It was found that disadvantaged, minority caste groups, poor families are affected from disaster as they usually live in the disaster prone areas like at the river banks and flood prone areas. Women are

Box 21: No Idea about the Causes of Hazards

Earthquake, fire, thunderbolt, windstorm, flood etc created problem to us. We heard that these are the examples of hazards. But we are ignorant that the causes of these hazards (?) as we are ignorant. If we can able to get training and exposure, we also know how to reduce the problem of these hazards. To know the causes, in my opinion, is most important. If we diagnose the disease, we can treat it.

-Mr Budhiman Tamang, Balaju

more affected because they have to go for collecting firewood, fodder and grass from forest. For that they have to cross the torrents several times. Similarly, children also suffer

from inadequate housing; improve care, mal-nutrition and abuse of rights to education if the family is suffered from disaster. Pregnant women, disable people, elderly people are more vulnerable during disaster.

It was found that those people who are unable to manage disaster destruction right after the disaster by their own resources are vulnerable. It was found that the agencies working in disaster sector have inadequate technical knowledge on mitigation, early warning system, emergency rescue and relief operation, rehabilitation and recovery plans. These knowledge and skills can be strengthened through training and exposure. During the discussion, the activities that fall under the category of risk reduction are identified as: planning pre-disaster with immediate post disaster response, identifying hazard prone areas, establishing early warning system, raising the level of awareness.

The community's expectations in reducing vulnerability are: improving the basic infrastructures that are responsible to cause the risks, training and exposure to enhance the knowledge and skills, improving early warning system, mobilizing volunteers and youths, and developing organizations and networks of disaster victims at local level.

People have poor measure of the capacity of an individual and/or their household to

Box 22: Vulnerability has many facets

From the generations, we are facing several problems. That's why we became poor every year. When we tried to solve one problem then many other problems standing in front of us. When crop failures, there is food shortage. If food shortage, male counterparts have to go for seasonal migration, then we became overburdened from inside and outside activities. We have to managed house with minimal expenses. You can not imagine our psychological fear and problem during those days. One problem has several linkages.

-Sunita Sunar, Badripur, Banke

cope with the aftermath of a given hazard impact, and to reinstate their earning or livelihood pattern. This might include their likely continued employment, level of savings, loss of welfare benefits, loss or injury of supportive family members, hazard damage to their normal livelihood activity like income opportunities, qualifications/skills.

It was found that the ability or willingness of an individual and/or household (with a given level of knowledge of apparent risks) to provide themselves with adequate protection, or

to be able to avoid living in hazardous places. It will be influenced by the level of knowledge of physical measures, and the capacity of people to implement them.

4.5 Action Plan

The learning, challenges, and output of the PVA have been documented systematically so that all the issues and concerns of the communities and the schools are truly covered. Based on this, action plans were prepared in the close coordination and consultation with CBOs, NGOs/INGOs, government authorities at local, district and national level (see annex-5). The analysis itself has no value unless it is followed by action. The evolved plan clearly distinguished between the role of the government and that of the community to reduce the risks and vulnerabilities vis-à-vis hazards and also identified ways to address the rehabilitation related issues. Therefore, it will help to draw the attention of relevant duty bearers to implement activities and programs in reducing disaster risks through continuous advocacy and lobbying. The community and school will play a role as informants and analysts by breaking down vulnerability to a point where they can begin to take action to reduce their own vulnerability.

4.6 Output of PVA Process

It was realised that PVA process helped to empower the communities in initiating the community level activities from their own efforts. They are convinced that the organisation will help if there is some efforts and initiation from local people. Below are the different cases that clearly demonstrate that PVA has successful to change the perception and beliefs of the people.

Now Our Voices are heard

Bageshwori VDC is one of the remote Village Development Committees (VDCs) of Banke and it is 17 km far from Nepalgunj. The basic livelihood of people mostly depends upon agriculture and daily wage labour. Due to poverty, less exposure and traditional beliefs, women are always back so they are marginalised. Their workload is becoming high as a result of seasonal migration of male counterpart and present conflicts.

Women involvement in community's decision making process is almost zero. They are always bounded in household activities. Their representation in the community level institutions is also minimal. For instance, in 9-membered School Management Committee (SMC) of Jana Kalyan Secondary School (JKSS), there is only one woman. Women shared that male decides and signature in major decisions on behalf of women.

Hence, women and girls are marginalized in terms of decision making both inside and outside the house. The society does not pay due respect to the dignity of women and girls resulting in less mobility. They are confined to play traditional roles like household chores, taking care of children and farming. They cannot often enjoy entertainment and recreational activities. The socio-cultural norms make them hesitant to speak with superiors and strangers. Their position is mainly attributed to their lack of access to educational opportunities and awareness. In fact, their interests, concerns, and needs are seldom taken into account. The unmarried ladies in their late teens face tough questions regarding their character and behaviour if their mobility is high.

But PVA process opened the eyes of both men and women and changed their perspectives once women explored their issues why they are vulnerable. They also provided best possible options to reduce the different types of vulnerabilities. Once women realised why they are always backed, they started to decide in the favour of awareness and software activities. The meeting is organised to carry out immediate action for the improvement of infrastructures. In the meeting, men stressed for levelling the school ground while women emphasised for the construction of toilet for girls along with awareness activities against open defecation. Once women also put

Box 23: I am now recognized in Committee

Until January 07, I never contacted for the SMC meeting and I have also no idea about my roles. I was so-called member of SMC. But after the PVA, I knew my roles and influence in the decisions in reducing the vulnerability to disaster and risks. Now, I am respected in the SMC. Other male in SMC also recognised my concerns before the final decisions.

-Women member of SMC, JKSS, Banke

their logic why toilets and awareness against open defecation practices are necessary, men are convinced. Hence decisions were in the favour of women. Now women are happy that for the first time their voices are heard. They are now encouraged to raise their collective voice and action for their fundamental rights. All these changes, according to them, are from the PVA process.

PVA is Instrumental to mobilise the External Resources

JKSS was established in 2028 BS for providing an opportunity for students of 5 VDCs namely:

Box 24: We are Encouraged to mobilise Resources

The PVA process helped us to formulate detail plan of action for the overall improvement of the school. As we have plan, we are able to correspond various organisations along with our plan. It has created positive result. That's why we able to get large amount from Plan Nepal.

-Headmaster, JKSS, Banke

Bageshori, Ganapur, Bankatuwa, Belhari, and Shamshergunj. The basic infrastructures (school building, furniture, toilets, drinking water etc) are inadequate

for 687 students. Low output at each subject level, maximum burden of number of classes on a single teacher, decreasing in percentage of successful students, high drop out ratio of students and inadequate infrastructures to ensure quality education are the main reasons for the poor performance. The top most problem of the school is inadequate rooms for the students.

Fortunately, school is selected for DRRSP School on the basis of its vulnerability to disasters and risks. PVA was carried out in school and its neighbourhood communities and came up with concrete plan of action. It has encouraged SMC, teachers, students and guardians to seek the support from relevant institutions both at local level and district level. In the past, neither school has concrete plan of action or any ideas to generate resources from outside. The PVA process also linked the school and SMC to other relevant institutions. Once they have plan of action in black and white form, they were inspired and a basis for request to others. Eventually, SMC, teachers, students and guardians were started to consult relevant institutions for the mobilisation of external resources. As a result, SMC has able to secure 140000 from Plan Nepal Banke Program. Now that resources are being used in the construction of school building that have four rooms. The amount (Rs 26250) allocated from DRRSP is also used for the improvement of infrastructures to enhance the education performance of the student.

Now We have no Risks from Cattle and Outer Disturbance

Matehiya VDC is 21 Km far from the Nepalgunj and considered as one of the most remote VDCs of the district. The people living in the *khal* (low land) are

Box 25: Support is on the basis of Evidence

It is difficult to support the school on the basis of one letter without any concrete action plan. We also justified the use of resources to government and we can not make any support to school without concrete plan. In the involvement of PVA process, we also realised that there is a need of even small support from VDC. The plan has eased use to extends our hands.

-VDC Secretary, Matehiya VDC, Banke

mostly affected from flood. People leaving nearby torrent, *khal*, road edge, dense populated areas, nearby community forest and school are

more vulnerable. The Mahendra Secondary School (MSS) provides education to the students of Matehiya along with other 7 VDCs like Laxmanpur, Gangapur, Phattepur, Kalaphanta, Narainpur, Kathkaiya, and Holiya.

Free grazing practices created the problems during the school time. It breaks the concentration of the students. Though there is a provision of *kanji* house but it is not properly functioning. The lack of proper compound around the school created school ground for open defecation of villagers which also created environmental pollution.

Due to absence of family toilets, open defecation is a major problem. Large family size, no habits of using toilet in the same place several times and no understandings about the importance of toilet are the main reasons behind lacking family toilets. Due to open defecation, sources of water, canals, farmlands, bamboo gardens, and roadsides are dirt. It is very difficult to walk through and it is, on the other hand, risk of snakebites for those who go far away for defecation. The community people also realize that their prestige is often threatened when guests are at their homes. The adverse effect of open defecation is poor domestic and community environment that causes spreading communicable diseases in the communities. Due to cultural taboos and practices, mostly teraian people are reluctant to use the same place for defecation several times.

PVA process breaks the ice about the traditional thinking about the use of toilets. The process encouraged SMC, students, teachers and guardians to initiate for student friendly environment by making compound wall to control the practices of open defecation and free grazing. The traditional thinking about the dependency on district education office is also reduced once the stakeholders realised the importance of their own initiatives from local level. They are now believed in 'small is beautiful'. As a result, they are encouraged to generate both internal and external resources for the purpose of making compound wall. One of the inspiring efforts for the first time was Matehiya VDC supported with Rs. 15000 and Rs 10000 was managed from School's internal fund. These types of support were in the first time in the history of the school. The Rs. 26250 allocated from DRRSP is also being used for the purpose of compound wall construction.

Chapter 5

Conclusion, Lesson learnt, Challenges, Recommendations

5.1 Conclusion

Both the community people and school realized that the findings obtained from PVA process would be helpful to design of the programme aimed to reduce risks and vulnerabilities. The PVA helped the community to better understand their vulnerability and also make concrete plans for overcoming their vulnerability. The PVA exercise also opened the ways to form networks at local and district levels that serve as a platform for capacity building, training, experience sharing, advocacy and resource mobilisation to assist communities in the implementation of community action plans. The network is also engaging in advocacy and campaigns based on issues identified from the community exercise. The PVA also support to enhance community resilience, strengthening community coping and mitigation capacities, building a capacity to reduce the probable risks.

In order to explore the issues of women's rights and increase their ability to cope socially and economically through fundamental rights, PVA exercise helped a lot. Women came together in a forum to come up with strategies to raise awareness and help negotiate an equal share in the communities' resources as men.

The PVA approach reinforces the notion of participation, that the vulnerable people themselves should be involved in analyzing vulnerability and designing actions and strategies to reduce their vulnerability because they are more knowledgeable about their own vulnerabilities and appropriate solution to reduce the vulnerabilities.

People expressed their hidden issues related to vicious circles of vulnerabilities because the process honours the various approaches like 'listening to people', 'hearing people's voices', 'listen to and learn from vulnerable people'. It also involves a predictive judgment of what might happen to people as individuals or communities by reviewing the time line and trends of different phenomenon.

It seeks ways to protect and enhance people's livelihoods and rights through influencing policy. It supports institutions in their own role of disaster prevention and preparedness. PVA process also found that the communities have local capacities to respond to their vulnerability like strong social unity, functional CBOs, communal relations, community work and the ability of communities to speak with one voice about their vulnerabilities.

The partner NGOs acts as a facilitator to take the issues forward, which are an output of PVA process. On the basis of these issues along with community and

school action plan, it will be easier to design and develop appropriate program and activities at local level.

The process also made a significant impact on people's perceptions of disasters, vulnerabilities and capacities. People attitude and behaviours have started to changed positively to perceive and deal with disaster, risks, hazards and vulnerabilities. It was realised in the first time that they have a significant capacity to prepare and respond to disasters immediately.

It was found that all the communities have little knowledge on disaster preparedness. There has been no effective programme or mechanism to address the disasters in the communities. The services and facilities in communities where the schools under study are located are inadequate. As a result, disaster response and rehabilitation activities are not likely to happen in case of disaster from the community itself. The curricula in the schools have not been inclusive of disaster management.

5.2 Lessons Learnt

- Community know their own risks/vulnerability and the emerging challenges more than the outsiders, so they should keep in the front while analysing the vulnerabilities. They know the risks they live with, and their coping strategies. There is nothing complicated about vulnerabilities that communities cannot understand. They know their situation best; have practical suggestions on how they can reduce it. A simple but systematic facilitation is needed to systematise people's knowledge for action plan preparation.
- To understand the people's vulnerabilities and how they cope with those vulnerabilities, the school is effective through the mobilisation of students and teachers. It is because the local teachers are considered the key informant to know the situation of disaster and risks better. They can analyse on the basis of their experiences to know the types of vulnerabilities, their effects at individual, family and society as a whole.
- The involvement of district level stakeholders in the PVA training and process added the encouragement for the local people in the analysis of vulnerabilities.
- As PVA process took longer period to analyse the different types of vulnerabilities, it is better to build the rapport with community. PVA process would be initiated after the acceptance of people about the process.
- Some group of people were reluctant to participate in the PVA process with fear and trauma. For instances, in Banke, the PLWHA were not participated during the PVA process due existing cultural constraints. They were in fear of expose their vulnerability in the large group publicly. Separate meetings were organised to listen their voices and feelings.
- The local facilitators for the PVA process are more effective than the outsiders. They knows the community more better as they grown up with same culture and tradition of the community, knows inherent and inner

reasons for the people's vulnerabilities that often not exposed with simple efforts.

- The separate group discussions are effective to explore critical issues of vulnerabilities and their underlying causes on the nature of disaster and risks as well as the types of people's vulnerabilities.
- Before the PVA, clear communication and transparency with stakeholders about the process, objective and output of the initiative is key to build trust, accountability and create an environment that is conducive to the PVA process.
- Situation analysis is important because it helps to understand the context of social, economic, political and cultural vulnerabilities.
- The PVA team members need thorough knowledge on local area, the culture, tradition, and language, the well-being status of the people, the causes of vulnerabilities and their coping strategies.
- For the effective participation, all voices need to be heard, taking into account the inclusion of vulnerable and excluded communities and individuals at all levels keeping power balance in mind.
- For more participation of local people, it was learnt that the venue, and time should be flexible as per the wish of majority of the people.
- It is strictly linked the findings of the PVA with action plan otherwise people lose their confidence and trust and unwilling to participate in the process.
- At the community level exercise, school students, teachers, SMC, guardians and people living in and around the school area are more effective. It is because they know the context of vulnerabilities better.
- The success of the PVA process depends on facilitation skills. More skilful facilitators mean more explore of the issues and their analysis too. Good facilitation and analytical skills, and knowledge of rights based approaches and social change are added advantage for the PVA process.
- It was learnt that to ensure the participation of district and local level stakeholders from early stage, inform relevant stakeholders in advance.
- Proper logistic arrangements along with suitable timing (date, venue and time). It is important to consider school calendar as well as seasonal calendar before setting date and time.
- In the communities' perception, the duty bearers should bear the responsibilities to manage the effect of disaster as proper disaster preparedness in advance saved the life and livestock. People are now convinced that human created disaster are more vulnerable than natural disaster. It was realised by the vulnerable people that once the disaster happened, they are the people who should initiate the activities to reduce the risks of disaster.
- In the stakeholders opinion the PVA of the community is itself preparing the preparedness plan for disaster. PVA is the best tool to empower the vulnerable people to claim their rights.

5.3 Challenges

The following challenges were encountered during the PVA process.

- It was very difficult in the beginning to convince the people about the disaster risks and people's vulnerabilities. It was primarily because of lack of a culture for disaster preparedness.
- As the community faced other different participatory methodologies in the past working with different NGOs, they lost their tolerance power about the participatory exercises. In the beginning, it was difficult to motivate people that PVA is somehow different from other participatory techniques.
- The local language also the challenge for PVA team. Those facilitators who do not understand local language were idle during the group discussion.
- As most of the people are wage labour, it was difficult to mobilise them during the PVA process. So we were more flexible in the PVA timing even early morning and late afternoon.
- As most of the people are uneducated and illiterate, it was difficult to mobilise people in the group discussion. People speak less because of societal norms and values. There is a general practice that once most influential people of the society speak; other should listen but not argument. It was therefore people reluctant to express their inner feeling and perceptions in the group.
- As the PVA process was much detail and analytical, it sometimes created expectation of the community from the NGO

5.4 Recommendations

On the basis of PVA, the following are the general recommendations for reducing the different types of vulnerabilities. The people's opinion in reducing the different types of vulnerabilities is given in chapter four.

- It was realised that as the disasters like flood and river erosion influence the pattern of the livelihood of people, all activities and program should be developed considering the issues of natural calamities and types of disaster at local level.
- The choice of crop should be made compatible with the seasonality especially for the area where the people suffered from inundation. The people should aware the role of technician of agriculture service centre for the adoption of high value crops that yield more income to people.
- People argued that different and subsidized policy should be provisioned to the people who often suffer from natural disaster.
- Build the capacity of local level committees such as DMC, SMC, and others CBOs for disaster preparedness, program implementation strategy and advocacy and lobbying.
- Assess the local level risks and take appropriate measures to reduce the risks
- Build the strong coordination and networking among the institutions working at local level
- Mitigation strategies and measures are needed in order to avert danger and vulnerability from risks. The CBOs can not fight against the risks unless their capacity is enhanced.

- Frequent meetings and interactions among the stakeholders are essential to share the skills, knowledge and experiences in mitigating the risks because the risk mitigation measures and strategies have to be tangible with the availability of resources, capacity, nature of risks and the risks affected area.
- Health education and awareness rising are beneficial to decrease communicable diseases such as flu, diarrhoea, dysentery etc.
- Maintain existing relationship with the support organizations showing transparency of the supported cause. Organize network meetings, map stakeholders working in DRR at schools. Functional coordination among the various stakeholders is fruitful to implement the disaster mitigation measures at local level. Effective coordination is possible if their roles and responsibilities are defined and analysed properly. Local government can formulate necessary policies and regulations, help in the implementation of disaster mitigation activities partnering with CBOs and NGOs at local level, preparing guidelines and allocate resources, and mobilising state machinery to all phases of disaster. Similarly, NGOs/CBOs need to advocate policy and regulations while constructing physical infrastructures and their rights to secure the external resources. Likewise, community people need to provide reliable information about the risk and vulnerability of disaster and get involved actively in enforcing mitigation measures at the local level.
- Indigenous knowledge, skills and experience of the local people in disaster risk reduction are very much instrumental to reduce the traditional thinking that disaster is understood as a science of geo-physical and engineering knowledge.
- Disaster preparedness activities should be carefully designed and implemented as it minimizes the loss of lives and property, prepares safe place, protect lives and wealth to decrease in the injured cases of injuries during disaster and helps saving the infrastructures from destruction and develops capacity of the community to combat disaster.
- The capacity should be built of local volunteers for proper education through the Disaster Management Committee (DMC). Due to inadequate education and exposure, the perception of some people is that natural disasters are the acts of god and consequence of fate.
- In order to make the people aware about the emergency and disaster, mass education is required. The community awareness and education campaign should be planned and prepared incorporating all the social and technical issues on mind.
- Establish the link with new support organizations in DRR, health and watsan issues.
- Advocacy at district level with the relevant stakeholders like health, education, drinking water offices, etc. Generate funds from District Administrative Office (DAO), government relief funds for early warning.

Annexes

Annex-1: Vulnerabilities Mappings



Vulnerability Mapping of Bageshwari, Banke

Annex-2: Time line and Time Trend Balaju, Kathmandu

Date (BS)	Major Phenomenon	Effects	Trends
2051	Starts of settlements	40 families were started to settle by demarking the public land, formation of tole improvement committee	-
2052	Construction of Pati/sattle	Students were able to read and write	-
2052	Construction of well by Lumanti	Community people able to fetch drink water	-
2053	Expansion of settlement	More families were added, loss of social harmony among the families	-
2053	School establishment	Community initiated for the operation of school even small resources	-
2053	Formation of Pragati Women saving group	Increase the saving practices among the women	-
2053	Lumanti	Organised awareness program for health, sanitation, saving and credit, child clubs	-
2054	Approval for class 1	DEO agreed to operate the school up to class 1	-
2055, 2056	Flood	The houses at the river banks were destroyed by flood	l
2055	Improvement of school building	Lumanti supported for the additional 3 rooms, formation of SMC	l
2056	River training	MCDS supported for the river training and the houses were more secured, also supported the toilets for school, got approval to run class 2 and 3	-
2057	Approval for class 4-5	DEO provided approval to run class up to 5	-
2057	Buddhajyoti Youth Club	Youths were united to build the intellectual capacity of the youths	-
2057	ADUCT	Disseminate the health related message and awareness programs	-
2058	Formation of Shaktisali Adolescence group	Adolescence were united to deal with the problems related to them	
2058	HIPLO	Conducted literacy programs	-
2059	Reform SMC	As the previous SMC was defunct	-
2061	Construction of Buddhist Stupa	Able to pray and worship the Buddha by Buddhist followers	-
2062	Installation of drinking water tap	Able to fetch clean water	-
2062	Formation of PTA	Increase the educational environment in the school	-
2062	EDEN	Management of garbage	-
2063	Construction of Shiva temple	Hindu follower started to worship god Shiva	-
2063	Construct 3 rooms	3 rooms were constructed in the upstairs	-

Matehiya VDC, Banke

Date (BS)	Disaster	Effects	Trends
2038	Landslide	Culturally important pond was washed away	l
2039/ 2063	Flood	Land erosion, destroyed the crops completely/one people was died, destruction of crops of 109 HHs	l
2042	Drought	Outburst of epidemic, production reduced by 70%	l

2044/ 52/53	Windstorm	Roof of school buildings were blown away.	I
2048	Dacoit	people were protested with the group of dacoit, youth were mobilised for security at night	
2050, 2061	Fire	20 houses were destroyed completely/80 houses were brunt and people were displaced	D
2058	Cold wave	2 children were died, elderly people were in difficult situation	I
2062	Problem of wild animal	2 people were seriously injured, destruction of crops	I
2063	Epidemic	5 people were died by encephalitis, about 200 people were admitted in the hospital	D
Every year	Diarrhoea	Locals had to invest for medicines. So they had economic burdens.	I

Bageshwori VDC, Banke

Date (BS)	Disaster	Effects	Trends
2028	Health hazard	Death of both baby and pregnant woman	D
2042	Windstorm	The CGI sheet of school were flown by the air	D
2031	Starvation	As there was no production, there was starvation and people compel to leave for India for wage labour	D
2034	Deforestation	Forest resources were depleted completely	D
2034, 042, 044, 052, 062, 063	Snakebite	There were 4 deaths while many were injured.	I
2035	Cholera	10 people were died	
2040	Theft	1 death, 3 infused, Rs 60000 stolen	I
2044	Mosquito bite	1 local died, and there were other many that were diseased.	I
2032, 38, 56, 62, 63	Flood	Loss of crops and less of 4 houses in 2038 BS was resulted. the fish of 6 ponds were also damaged by flood	I
2047, 061, 062	Fire	There was a loss of property equivalent to Rs. 1.5 lakhs in 2047 BS.	D
2032, 048, 052, 062	Drought	Economic burden to buy food made poor people to migrate out for work, 50 children were suffered from malnutrition	I
2052-53	Windstorm	Roof of 25 houses in community were blown away. Loo was also experienced.	I
2061	Conflicts	7 youths were beaten by Maiost and there was a tense situation	

Annex-3: Seasonal Calendar

Matehiya, Banke

SN	Major Incident	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Flood												
2	River Cutting												
3	Fire												
4	Starvation												
5	Loan												
6	Diseases												
7	Busiest time												
8	Fetching firewood												
9	Thunderbolt												
10	Inundation												
11	Freed animal												
12	Snake bite												
13	Cold wave												
14	Dacoit												
15	Encephalitis, Malaria												
16	Eye disease, cholera, dysentery												
17	Pneumonia												
18	Scabies												
19	Epidemic												
20	Typhoid, fever												

1=Baisakh, 12=Chaitra

Badripur, Banke

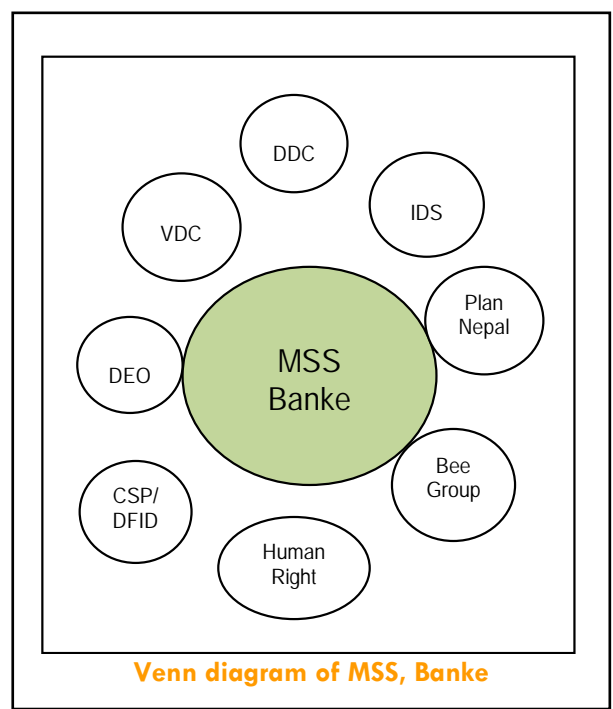
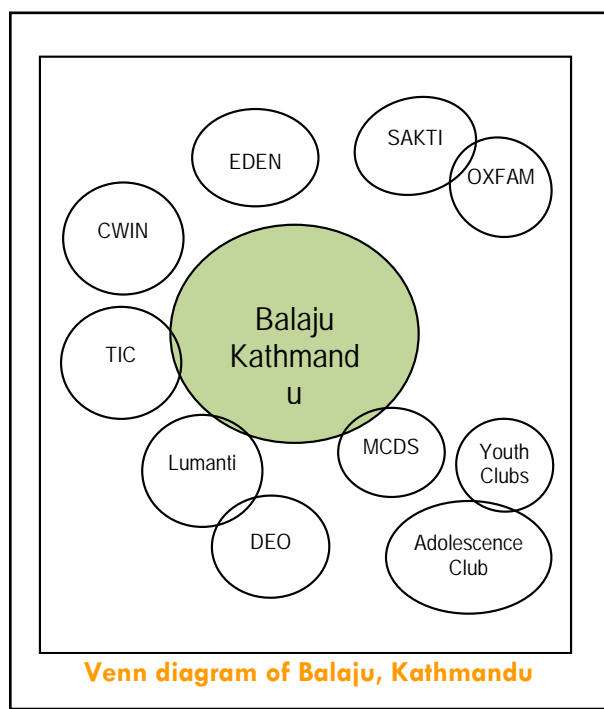
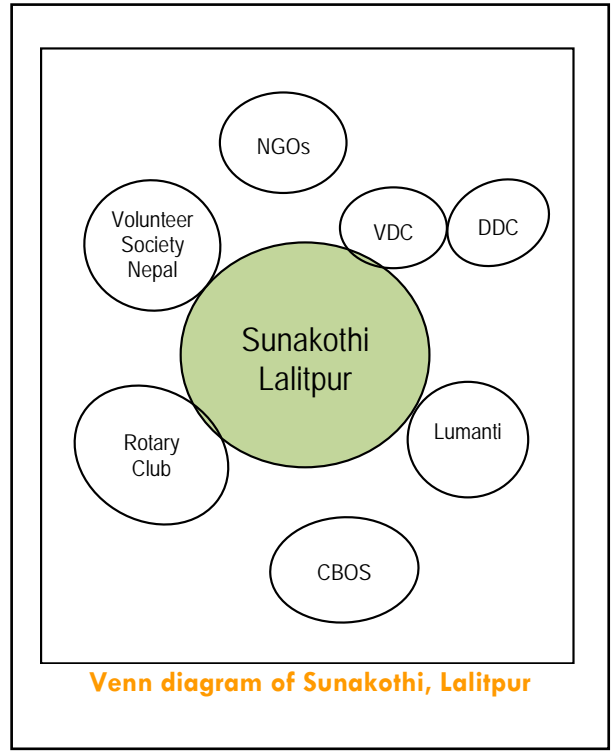
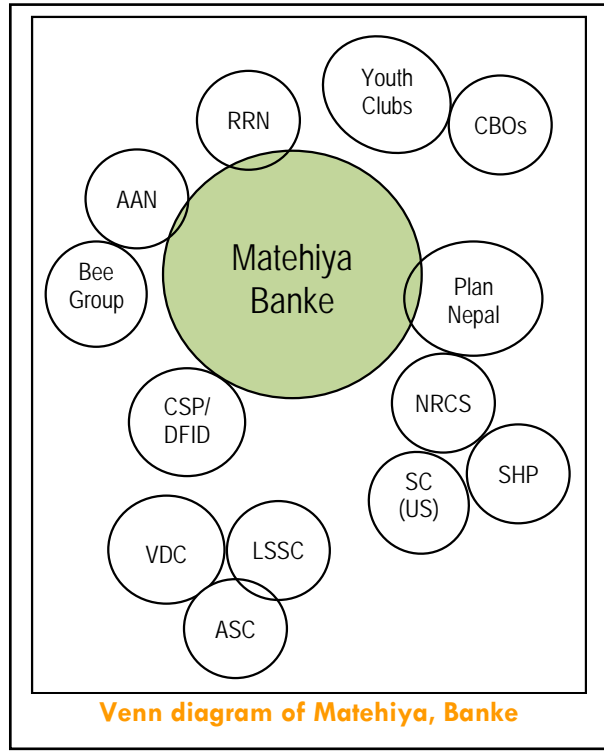
Description	Months												
	1	2	3	4	5	6	7	8	9	10	11	12	
Flood, river cutting													
Fire													
Starvation													
Loan													
Outburst of dysentery, cholera,													
Busiest time													
Dogs bite													
Pneumonia and disease and poultry, <i>tusaro</i> , cold wave,													
Fetching firewood													
Thunderbolt													
Freed animal													
Snake bite													
Dacoit													
Back home from India													

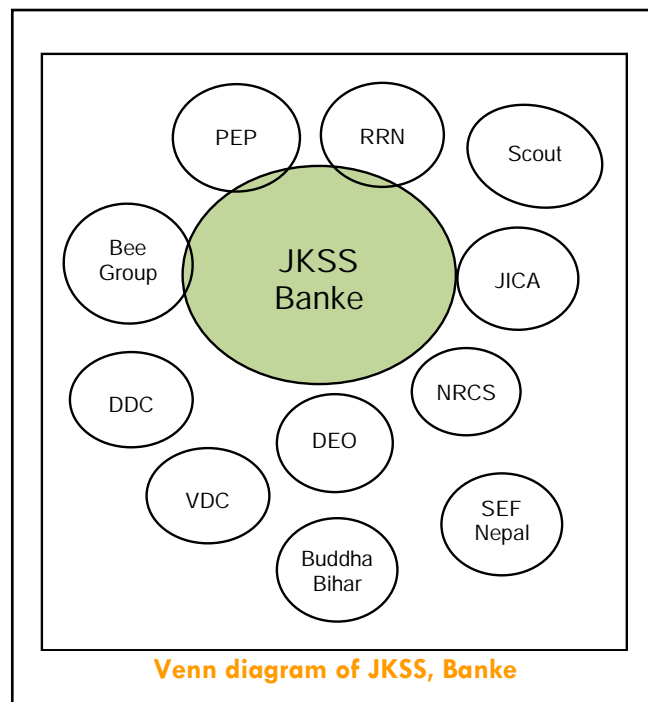
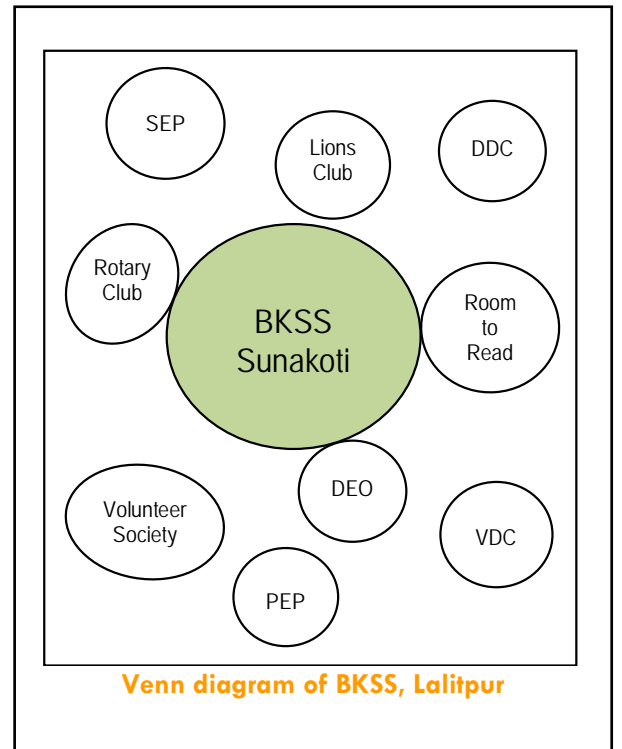
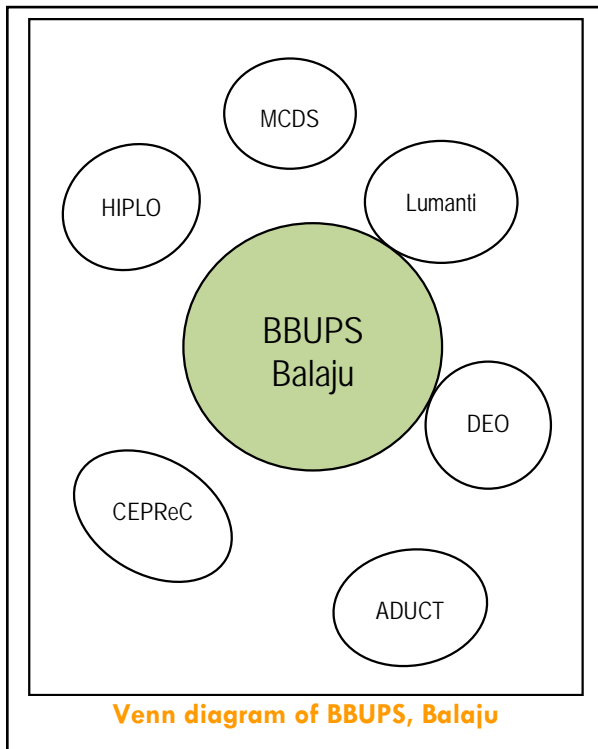
1=Baisakh, 12=Chaitra

Sunakothi, Lalitpur

SN	Major Incident	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Fire												
2	Starvation												
3	Loan												
4	Diseases												
5	Busiest time												
6	Thunderbolt												
7	Landslide												
8	Cold wave												

Annex-4: Venn diagram





Annex-5: Action plan

Action Plan (Balaju, Kathmandu)

SN	Activities	Why	How	Where	When	Responsibilities	Coordination
1	Manage drinking water	Reduce the chronic problem of drinking water	Extension of pipeline	In community	Chaitra	Tole improvement Committee	Lumanti, Melamchi drinking water project, community and Mansingh (Individual donor)
2	Improve sewerage system	Management of garbage and improve sanitation	Coordinate with ward officials	In community	From Baisakh	Tole improvement Committee	EDEN and community
3	Construction of protection wall	Increase safety and security	Mobilise internal and external resources	Along the bank of river	From Baisakh	Tole improvement Committee	MCDS, Lumanti and community
4	Skill development training	Increase self-employment scheme	Impart relevant training and exposures	In community	From Baisakh	Community, local institutions, ward	EDEN, CePREC, Lumanti
5	Formation of DMC	Conduct awareness program about disaster	Aware the roles and responsibilities of DMC	In community	From Baisakh	Community	Lumanti/AAN
6	Mobilisation of local Institutions	Generate resources for community development	Through interaction program	In community	Immediately	DMC	TIC, Lumanti, EDEN
7	Increase social harmony among the people	Implement the programs in an effective manner	Mobilisation of all people youths, adolescence and elderly people	In community	Immediately	Youths	TIC, Lumanti, Adolescence groups

Action plan (BBUPS School)

SN	Activities	Why	How	Where	When	Responsibilities	Coordination
1	Physical improvements	For safety and security	Through the decision of SMC	In school	From Chaitra	SMC, community, TIC	Lumanti, AAN, DEO, Ward, EDEN
2	Community based school management	Increase the responsibility of the community	Consent of relevant stakeholders	in school	within Chaitra	School, SMC	Lumanti, CePREC, DEO, TIC
3	Training and other facilities for teachers	Increase the educational performance	Through the meeting of SMNC and teachers	in school	in a regular manner	School, SMC and community	Lumanti, CePREC, DEO, TIC

4	Improve communication	Build collaboration, and cooperation	Regular meetings	Community	in a regular manner	Teachers, SMC, TIC	Lumanti, DEO, SMC, TIC
5	Increase the teachers quota	Increase the education performance	decision of SMC	in school	immediately	SMC	Lumanti, DEO, SMC, TIC
6	Organise extra curricular activities	Promote the physical and intellectual capacity of the students	School, SMC and students	in school	immediately	teachers	DEO, SMC, TIC
7	Training on disaster management	Prepare community against disaster	Training and exposure	in school	immediately	Lumanti/AAN	Lumanti, DEO, TIC, SMC, Lumanti
8	Upgrading up lower secondary	Run up to class eight	PTA, SMC and teachers	in school	immediately	School	Lumanti, DEO, TIC, SMC

Action plan (Bageshwori, Banke)

SN	Activities	Where	When	Who is responsible	How	Why
1	Formation of DMC	In school	25 Magh 063	SMC, DMC	Participation of women, dalit, teachers, guardians, SMC	Disaster mitigation and management
2	Awareness program on disaster management	School and community	3-5 phalgun 063	DMC	Mobilisation of students and youths in each tole	increase awareness about disaster and risks
3	Organise sanitation campaigns	Community	2 Chaitra 063	DMC	Participation of the people of committee and community	importance of sanitation to control the epidemic
4	Collect information for toilet users	Community	22 Chaitra 063	DMC	Door to door campaigns	Improve the family and community sanitation
5	Organise street drama (fore and wind storm)	Community	28 Chaitra 063	DMC	Organise cultural program	Increase the awareness level of people
6	Construction of slab culvert	Kiran Nala and Murgiya Nala	Within 064	DMC	Coordination with various organisations	Improve the accessibility of the people
7	Improve drinking water system	Ward 8 and 9	Jestha 064	DMC	Coordination with various organisations	provide clean drinking water
8	DMC sub committee formation	different toles	25 Chaitra 063	DMC	Mobilisation of the people from different toles	Aware the people of each tole about the disaster preparedness
9	Skill development training	Unemployed youths	Within 064	Bee group	Collection of information about unemployed youths	general self-employment at local level

10	Management of artesian boring	Ward 8 and 9	Within 064	AAN	Mobilisation of external resources	Increase the efficiency of irrigation
11	Orientation of HIV/AIDS	School	Jestha 064	DMC	Mobilisation of DMC	Increase awareness about the HIV/AIDS
12	Training on women rights	Bageshwori	Within 064	Bee group	Mobilisation of women from Bageshwori village	Aware the women about their basic rights
13	Organise health campaign in monthly basis	School	from Baisakh 064	DMC	Seeking support from health post and Merry Stops	To know the status of people's health
14	Establish emergency fund for disaster management	Community	Asadh 064	DMC	Mobilisation of internal and external resources	Collection of monthly savings
15	Community plantation	Toles	Jestha 064	DMC	Mobilisation of internal and external resources	Control the soil erosion and promote greenery
16	Arsenic test	Toles		DMC	Coordination with relevant institutions	Mitigate the effects of the arsenic

Action plan (JKSS, Banke)

SN	Activities	Where	When	Who is responsible	How	Why
1	Toilet construction	School	Chaitra 063	SMC	Mobilisation of SMC and PTA	Control the communicable diseases and improve the community sanitation
2	Procurement of educational materials	School	Baisakh/Jestha 064	SMC	Mobilisation of external resources	Improve the educational performance of the students
3	Student enrol campaign	School	22 Baisakh 064	SMC	Mobilisation of SMC, PTA and students	Increase the students in the schools
4	Management of PHC	School	Jestha 064	SMC	Mobilisation of external resources	Quick treatment in need
5	Management of clean drinking water	School	Baisakh 064	SMC	Request for AAN	Provide clean drinking water
6	Furniture support	School	Within 064	SMC	Coordination with relevant stakeholders	Improve the indoor environment
7	Fund establishment for disaster management	School	Baisakh 064	SMC	Child club, teachers, SMC	Provide support in need
8	Construction of play	School	Mangsir 064	SMC	Mobilisation of external	Improve the physical and

	ground				resources	intellectual capacity of the students
9	Sanitation improvements the school vicinity	School	two times a month	Child clubs	Mobilisation of school students	Control the communicable diseases
10	Co-feast program	School	14 Sharwan 064	SMC	Participation of all caste and ethnicity people	Increase the social harmony
11	Orientation on gender and development	School	7 Ashadh 064	SMC	Participation of SMC, teachers and students	Increase the same level of understandings about gender
12	Training on child rights	School	26 Jestha 064	Bee group	Participation of both teachers and students	Secure the basic rights of children
13	Street drama against HIV/AIDS	School vicinity	8 Kartik 064	child club	Mobilisation of people	Increase awareness level of students
14	Plantation	School	18 Ashadh 064	child club	Raise Rs 1 from each students and Rs 5 from teachers	Promote greenery around the school

Action plan (Matehiya, Banke)

SN	Activities	Where	When	Who is responsible	How	Why
1	Orientation on disaster related issues	School	15 Phalgun 063	Community volunteers	Mobilisation of 10 people from each ward	Increase the awareness of community people
2	Prepare detail action plan	MSS	11 Phalgun 063	Sohan Lal and Sabitri Bohara	Interaction and discussion	Prepare detail programme
3	Rally for sanitation	VDC	20 Chaitra 063	Community	Through rally	Increase awareness
4	Construction of slab culvert	Dandra Nala	Within 064	DMC	Coordination with relevant stakeholders	Regular mobility of people
5	Formation of DMC sub committee	Toles	25 Chaitra 063	DMC and school	Participation of community people	For disaster preparedness
6	Skill development training	Community	Within 064	DMC	Information collection of unemployed youths	Generate self-employment at local level
7	Installation of artesian	Ward 3-6	Within 064	AAN	Mobilisation of external resources	Increase the crop production
8	Training on women rights	Bagesjwori VDC	Within 064	Bee group	Participation of women	Increase the awareness level of women about their basic rights

9	Free check up campaign	School	Baisakh 064	DMC	Seek support from health post and Merry stops	Reduce the health hazards of the women and children
10	Create emergency fund	Community	Baisakh 064	DMC	Mobilisation of internal and external resources	Cope with effects of disaster during disaster
11	Plantation	Toles	Baisakh 064	DMC	Seek support from outsider organisation	Reclaim the agriculture land
12	Co-feast program among dalits and non dalits	VDC	25 Bhadra 064	DMC	Participation of dalits and non dalits	Increase the social harmony and cooperation

Action plan (MSS, Banke)

SN	Activities	Where	When	Who is responsible	How	Why
1	Toilet construction	School	Chaitra 063	SMC	Mobilisation of external resources	Improve the sanitation around the school, reduce the practice of open defecation
2	Educational materials procurement	School	Baisakh/Jestha 064	SMC	Coordination with relevant stakeholders	Improve the educational performance of students
3	Student enrol campaigns	Community	20 Baisakh 064	SMC	Coordination with PTA and students	Increase the school enrolment
4	Management of PHC	School	Jesth 064	SMC	Mobilisation of external resources	Timely treatment in case of emergency
5	Plantation	School	18 Asadh 064	child club	Raise Rs 1 from each student and Rs 5 from each teacher	promote greenery around the school
6	Management of clean drinking water	School	Baisakh 064	SMC	Request to AAN	Provide clean drinking water
7	Furniture management	School	Within 064	SMC	Mobilisation of relevant stakeholders	Improve the indoor environment
8	Establish the fund for disaster management	School	Baisakh 064	SMC	Mobilisation of child clubs, teachers, SMC	For the management during emergency
9	Improvements of playing ground	School	Within 064	SMC	Contribution of guardians and students	Improve the physical and intellectual capacity of the students

10	Sanitation around the school	School	2 time in each month	Child clubs	Participation of all teachers and students	Improve the sanitation and make school free from communicable diseases
11	Reduce the social discrimination	School	12 Sharwan 064	SMC	Participation of both dalits and non dalits	Improve the social harmony and discrimination irrespective of caste, class and gender
12	Orientation on gender and development	School	Jesth 064	SMC	Participation of students, teachers and guardians	Create common understanding among the people
13	Training on child rights	School	27 Jestha 064	Bee group	Mobilisation of the members of child clubs and other children	Aware the children about their fundamental rights
14	Organise folk song and street drama against diarrhoea	Community	10 Mangsir 064	Child clubs and teachers	Participation of community people and students	Eliminate the cultural taboos and practice about diarrhoea
15	Street drama against fire	Community	5 Mangsir 064	Child club and teachers	Participation of guardians	Aware the people about dos and don'ts in summer

Action plan (Sunakothi, Lalitpur)

SN	Activities	Why	Who	Where	When	Coordinate with
1	Maintenance of club building	Systematise the library	DMC and library management committee	community	Baisakh 064	Lumanti, Samaj Kalyan Parisad, community
2	Construction of community and family toilets	Reduce open defecation	DMC, community, HP	community	Baisakh 064	Lumanti, community
3	Improve the electric lines	Systematise the electric lines	DMC, community	community	Baisakh 064	Lumanti, community, VDC
4	Organise sanitation campaigns	Improve community sanitation	DMC, community, club, library and school	community	Chaitra 16 063	DMC

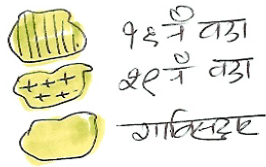
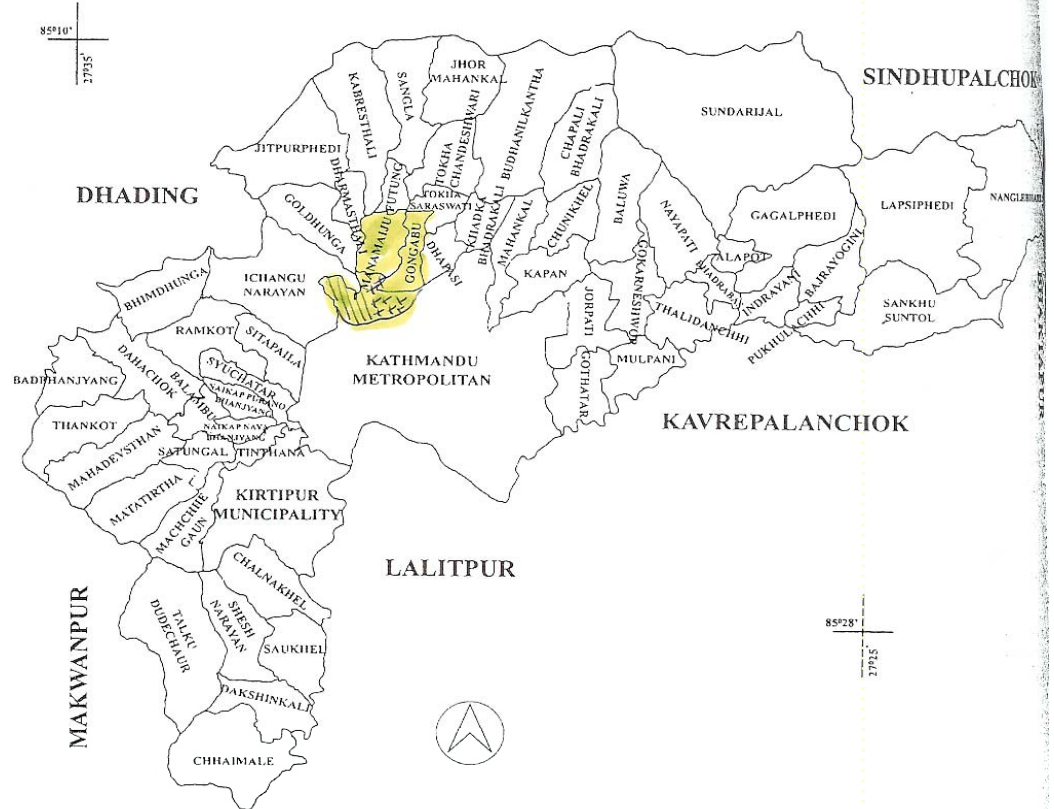
Action plan (BKSS, Lalitpur)

SN	Activities	Why	Who	Where	When	Coordinate with
Social						
1	Form PTA	Promote good relationship with community	SMC and Head Master	School	Baisakh 064	Teachers and students
2	Celebrate Guardian Day	Present the progress of school to the guardians	SMC and Head Master	School	Phalgun 1	Teachers and students, guardians, VDC, SMC
3	Run interaction program	Discuss on the emerging issues and concerns	SMC and Head Master	School	Baisakh 064	Teachers and students, guardians, VDC, SMC
4	Organise social audit	Maintain transparency	SMC and PTA	School	Jestha of each year	Teachers and students, guardians, VDC, SMC, relevant organisations
Physical						
1	Manage Railing	Improve the safety and security	SMC and school	School	Jestha 064	Lumanti, VDC, DDC
2	Manage necessary furniture	Ease the sitting arrangement	SMC and school	School	Chaitra 15 063	Lumanti, DEO
3	Construct compound wall	Improve the safety and security	SMC and school	School	Baisakh 064	Lumanti
4	Furniture support for teachers	Keep the documents safely	SMC and school	School	Baisakh 064	Lumanti
5	Add class rooms	Reduce the pressure in the class	SMC and school	School	Baisakh 064	Lumanti
6	Trim the tall tree near the school compound	Reduce the accident during wind storm	SMC and school	School	Immediately	Guthi, Balkumari Conservation Committee
7	Maintain the roofs of school building	Control the water during raining	SMC and school	School	Immediately	Local CBOs, DEO
8	Manage the Masan ghat (criminated place)	Reduce the negative psychology of the students	SMC and school	School	Immediately	Local CBOs
9	Organise awareness program for earthquake, fire, sanitation etc	Reduce the risks and vulnerabilities	SMC and school	School	In a regular manner	Lumanti, NRCS, SHP, Women group, VDC
10	Carry out preliminary initiative for earthquake free condition	Reduce the man made and natural losses	SMC and school	School	Baisakh 064	NSET, relevant GOs

Educational							
1	Manage educational materials	Improve the quality of education	SMC and school	School	As per the need	School, CePREC	DEO,
2	Prepare school improvement plan	Develop the school as per plan	SMC and school	School	Baisakh 064	School, CePREC	DEO,
3	Manage subject wise teacher	Improve the educational performance	SMC and school	School	Baisakh 064	DEO	
4	Manage computer training to students	Provide computer knowledge and skills	SMC and school	School	064	School, SMC, PTA	
5	Manage sport materials and improve the facilities of PHC	Improve the intellectual capacity of the students	SMC and school	School	064	School, SMC, PTA	
6	Publish bulletin for creating awareness about disaster related issues	Aware students and teachers about disaster related issues	SMC and school	School	In a regular manner		

Annex-6: Map of the DRRSP District and Study Area

KATHMANDU



Area: 395 Sq. Kms.

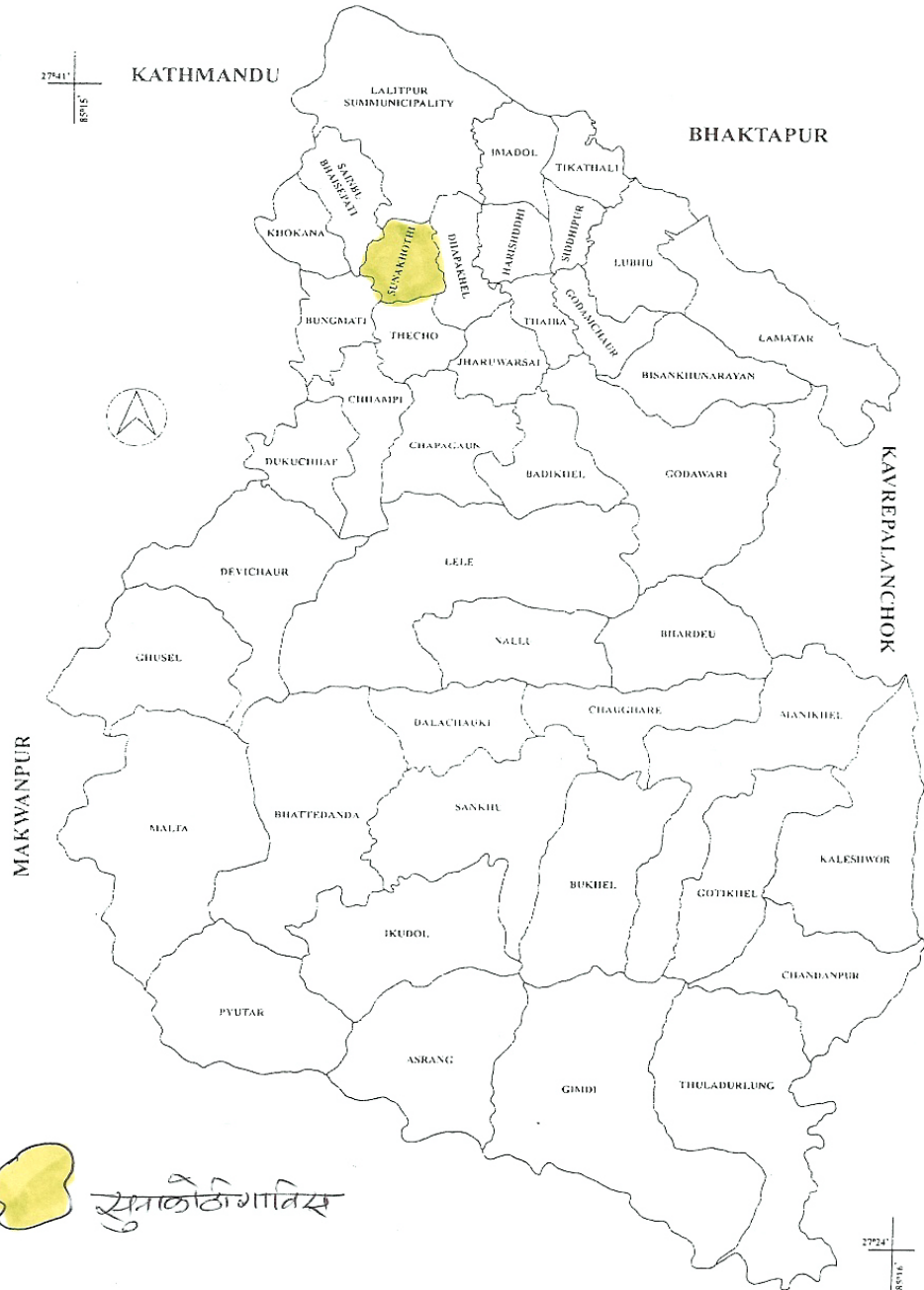
Elevation: 1372 m. - 2,732 m

LALITPUR



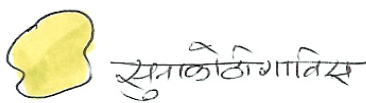
KATHMANDU

BHAKTAPUR



KABEPAANCHOK

MAKWANPUR

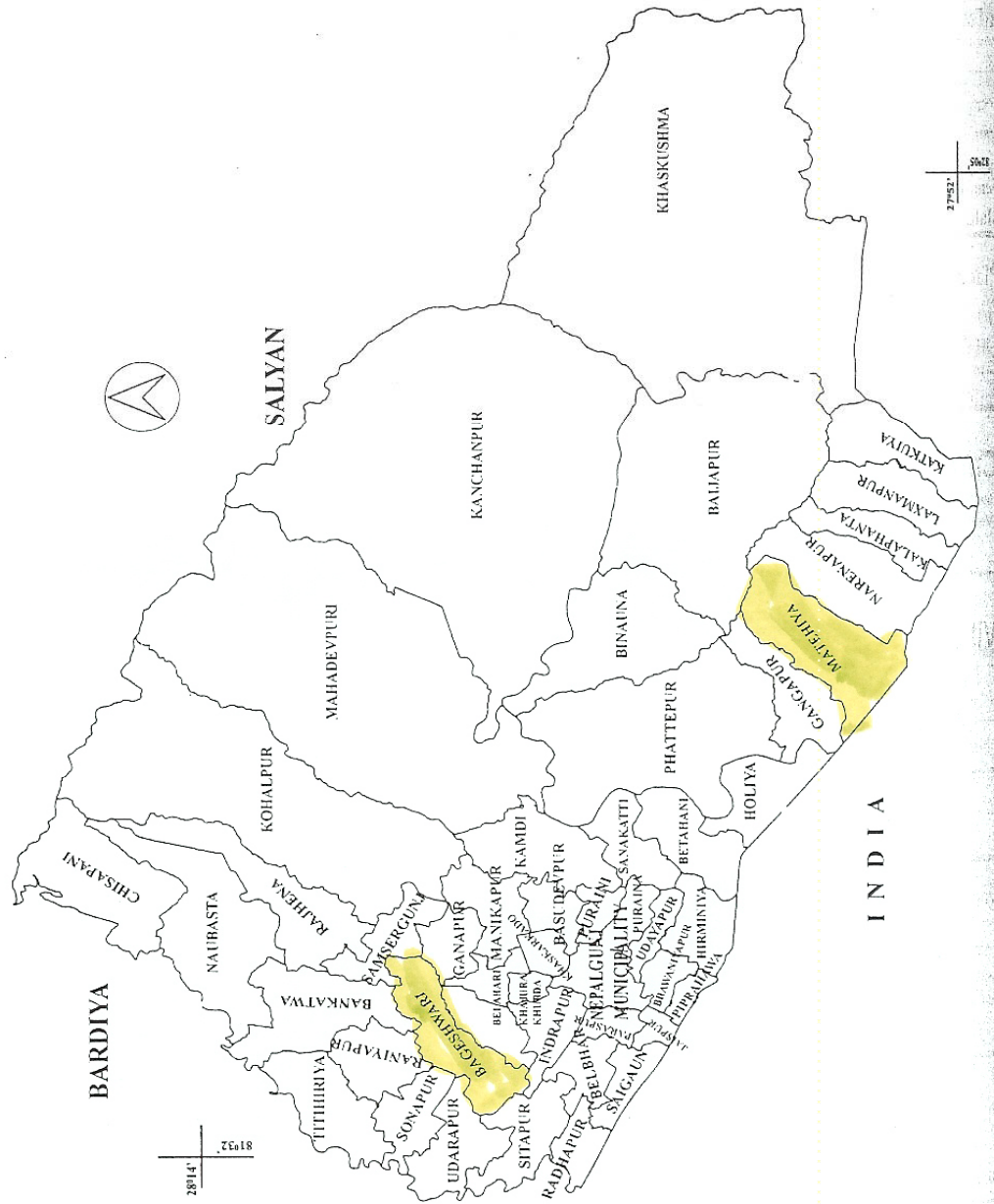


Area: 385 Sq. Kms.

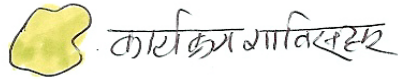
Elevation: 457 m. - 2, 831 m

BANKE

DANG



Area: 2,337 Sq. Kms.



Elevation: 129 m. - 1,290 m.

Established in 1972, ActionAid is one of the UK's

largest development charities. It works with over six million people in the developing world, helping them to achieve lasting improvements in the quality of their lives.

ActionAid is secular and non-political. It works with the poorest people, regardless of religion, race or political persuasion.

ActionAid works with poor communities in more than 40 countries across Asia, Africa and Latin America and the Caribbean. Through long-term development projects set up in close consultation with local people, it aims to eradicate poverty and bring about lasting changes in people's lives.

ActionAid has been working in Nepal since 1982. The mission of ActionAid Nepal is to eradicate poverty by facilitating the process of empowerment of the poorest and most marginalised women, men, girls and boys. It aims to achieve this by creating, sharing and providing opportunities for greater awareness, skills and resources to the poorest and disadvantaged.

At present ACTIONAID Nepal is involved in designing, implementing (directly and in partnership with NGOs), facilitating and funding anti-poverty field and advocacy programmes mainly in Sindhupalchowk, Nawalparasi, Sindhuli, Kanchanpur, Jajarkot, Kailali, Bajhang, Kathmandu and Lalitpur, Saptari, Khotang, Sarlahi, Parbat and Baglung, Baitadi, Banke, Siraha, Rasuwa, Kapilwastu, Dang, Parsa, Dolakha, Dhanusha, and some urban centers of Municipalities in Sunsari, Morang and Jhapa Districts.

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