

# “Challenges and Impact of Disaster on Vulnerable Families in Rapti Sonari Municipality, Banke District”

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## Abstract

Nepal is exposed to multiple recurrent hazards. The country falls in the top 20<sup>th</sup> list of the most multi-hazard prone countries in the world. The country is ranked 4<sup>th</sup>, 11<sup>th</sup> and 30<sup>th</sup> in term of climate change, earthquake and flood risk respectively. The Rapti Sonari Rural Municipality of Banke district is traversed by the west Rapti river from in between. Communities living near the river coastal areas of the municipality are affected by floods every year. In addition to flooding their crops, the water seeps into their houses and damages their stored food and other materials. According to the district disaster preparedness and response plan (DPRP), communities living in the coastal areas of the river of formerly Fatehpur VDC and present Rapti Sonari Rural Municipality wards no. 6 and 7 have been mapped as being at high risk of flooding. Due to the fact that floods during the monsoon damage the paddy fields, the farmers who are vulnerable to the floods are not able to get agricultural production expected hence they are starting to promote winter and spring farming. Such phenomenon's have caused loss of lives and property in different areas of Nepal and have posed severe hazards to physical infrastructure likes roads and bridges. The floods of August 2008 in Koshi river, Sept. 2008 in Western Nepal and July and August 1993 in the Bagmati and other rivers were the most devastating floods in Nepal. The primary data collection was accomplished himself by the researcher during March 2023. The exploration of gap between policy and practice is the main area of research. What are the best practices, skills and how they (Governmental and non-governmental organizations) are using this knowledge solving the major problems of poor and vulnerable community is also the issue of research. This study will be helpful for policy makers, stakeholders, province and local government and other researcher to study the well-being and resilience among vulnerable families in targeted area.

**Key words:** *livelihood, floods, resilience, response, vulnerable*

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## Introduction

In many regions of the world, flooding is a frequent widespread, severe, and increasing natural hazard. Mainly the flood “disaster risk index” of the United Nations Development Program (2004, UNDP) identifies 147 nations with populations exposed to flood hazards with the largest exposed populations (as a proportion of national populations and the absolute number of people affected) located in populous Asian countries (such as India, Pakistan, China and Bangladesh) and less populous states (Bhutan, Ecuador and Nepal.)

In Nepal with due causes of socio-economic status from poor families and marginalized groups and communities face multi-dimensional problems triggering further various consequences in absence of capacity and income opportunities in society, they have very limited options for health, education, livelihood and social protection situation. Therefore, it has become urgent to initiate transforming the environment for such socio-economically vulnerable people so that they can strengthened with various life skills and opportunities to get capable to tackle their problems in the society. There are numbers visible and invisible factors associated with the isolation and backwardness, they even cannot identify and grab the opportunities in their surroundings due to structural constraints.

Nepal is prone to various types of disasters. Geographical conditions, illiteracy and poverty have made Nepal actually vulnerable to different natural disasters include landslides, floods, drought heavy rainfall, hailstones earthquake etc. Nepal is ranked 4<sup>th</sup>, 11<sup>th</sup> and 30<sup>th</sup> in terms of vulnerability to respectively floods and earthquakes in the world (UNDP, 2004). Specially, Nepal is one of the worst flood affected countries in the world. Floods are the recurrent phenomena of Nepal. Nepal losses more than 300 lives every year due to water induced disaster. More than 50,000 people have been reported injured, about 27000 deaths were recorded, which reveals a persistent threat to huge loss of human lives due to natural disasters. This accounts for an average death of more than two people every day (Marasini, 2008).

Rapti is one of the major rivers in Nepal that cause massive damage every year by flood. According to Nepal Republic Media (Oct. 11, 2022) more than 8000 households have been affected by mountain caused by floods triggered by incessant rainfall in Banke district. 8703 households in eight local bodies in the district have been directly affected by flood. Highest number of affected households is in Rapti Sonari Rural Municipality. As many as 3500 families are affected in Rapti Sonari, 2696 families in Narayanipur, 249 households in Khajura, 1950 families in Duduwa Rural Municipality, 220 families in Nepalgunj, sub-metropolitan city, 20 in Janaki Rural Municipality and 18 families in Kohalpur Municipality.

Between 1970 and 2013, nearly 4000 floods were reported in Nepal. Similarly, in Banke households have suffered complete damage with 598 households have partial Destroyed due to flood and inundation. As many as 1,143 people have been displaced in the eight local bodies of Banke district. 2,131 flood affected people have been rescued from 37 wards of the eight local bodies. People living in Rapti Sonari, Narayanipur and Duduwa rural municipalities, the settlements in the downstream of the Rapti river, have been affected the most due to the flooding and inundation. Despite the number of policies and guidelines that have been prepared for disaster risk reduction and management (DRM) act 2017, local government, grassroots community people and civil society organizations have limited awareness, skills and knowledge on mainstreaming DRM in to the local development planning process (Budhathoki et al., 2020).

In the history of flood events in Nepal, 2008 Koshi flood was remarkable. The Koshi flood occurred after embankment breach on 18<sup>th</sup> August 2008 at Kushaha about 12.6 km. upstream from Koshi barrage has experienced extensive loss of life and property in Sunsri district of Nepal and north Bihar (Hooning, 2011). Flood damages are also rising because of urban development in head waters (Which alters natural hydrologic balances) and the increasingly dense concentration of people and critical infrastructure in floodplains (Hall et al., 2003).

## **Methodology**

Primary and secondary data were taken for the present research. Primary data was collected from household survey, Focus Group Discussion (FGD), KII (Interviews with key informants), Questionnaire, observation tools and techniques were used to capture the quantitative and qualitative information from the respondents, during March 2023, 24 sample respondents were selected for primary data collection, whereas secondary data were collected from different published, unpublished literatures and government, non-government line agencies. The sampling method used to select the study site was purely purposive.

Rapti Sonari municipality of Banke distinct was selected for the present research study. Mainly two wards 6 and 7 of Rapti Sonari Municipality were purposively selected as a sample. The rational for selecting was this rural municipality of Banke district is traversed by the west Rapti river from in between communities living near the river coastal areas of the municipality are affected by floods every year. According to the district Disaster Preparedness and Response Plan (DPRP), communities living in the coastal areas of the river of formerly Fatehpur VDC and

present Rapti Sonari Rural Municipality Ward No. 6 and 7 have been mapped as being at high risk of flooding.

### Results and Discussion

Rapti Sonari Municipality location was selected considering the high disaster vulnerability area. According to the past disaster incidences and DPRP (Disaster Preparedness, and response plan) Rapti Sonari RM is highly vulnerable to multiple hazards such as earthquakes, floods, fire etc. Hence, over 4000 houses had been inundated by the flooded Rapti river in Banke, leaving hundreds of houses damaged and over a hundred cattle dead in 2014.

The study revealed that the study area is natural disaster-Prone area. The natural disasters include landslides, floods, drought, heavy rainfall, hailstones, earthquake etc. There has been loss of lives and livelihood of the people due to natural disasters specially floods in the study areas that also contributed to push the vicious circle of poverty. The time line of natural disaster of Banke district has been presented below.

**Table 1: The Line of Natural Disaster in Banke District**

Date	Events	Impact of livelihoods
1933 AD	Earthquake	Damaged houses, landslide, damaged of life and missing of water source
1971 AD	Draught and flood	Starvation, landslide, houses damaged death of many people due to epidemic
1998 AD	Flood	Many people killed and lost of thousand cattle in flood. Damaged of 30 to 40 houses. Very low production of grain due to disaster. Displaced a total of 25 Tharu families
2015 AD	Huge rainfall (Jesth to Asar)	Damaged community building including people residential houses.

Source: Focus Group Discussion, 2023.

In present there has been contribution of government and non-government sector on changing internal policies, practices and ideas on disaster risk reduction. Series of awareness raising initiatives has been instrumental for changing believe of local people that disaster can be reduced. Significantly due to increased awareness. The efforts taken by some program term in linking the beneficiaries with local

government and other relevant stakeholders were found to be somewhat effective and promising more needs to be done in the future. Program initiated awareness on importance of resilience and Disaster Risk Reduction (DRR), which has been instrumental to motivate them on construction of the flood resilient construction and cognizance to the importance of vulnerability reduction initiatives. However, during the recovery and rehabilitation phase, the people of targeted areas not even strengthened their resilience to emergencies through government support, civil society and duty bearers to minimize impact of disaster while fulfilling an individual's right to survival, protection, participation gaps and challenges.

During the period of research the researcher found few gaps and challenges implemented program by government and non-government sectors in the study area which are presented below:

**Table No. 2: Gaps and Challenges by Sectors as March 2023**

S.N.	Sectors	Gaps and challenges
1	Shelter	<ul style="list-style-type: none"> <li>• Despite of several efforts from government and non-government agencies flood disaster affected communities lack adequate technical awareness, knowledge and skills to incorporate disaster resistant features in reconstruction their houses and formal processes and mechanisms to access government support.</li> <li>• Local government carrying out technical assistance are largely inadequate to meet the reconstruction needs of the communities.</li> <li>• New local level structure poses new challenges for ongoing houses rebuilding in Nepal.</li> <li>• The role and responsibility of the newly established local authorities in the ongoing housing reconstruction process is also unclear.</li> <li>• Local elected bodies lack logistic and human resource capacities regarding to this issue.</li> </ul>

2	Education	<ul style="list-style-type: none"> <li>• Insufficient awareness raising in education</li> <li>• Many children are still taking classes in cracked schools and need to retrofit but it's not happening due to lack of resources.</li> <li>• More difficult to children to reach school especially in monsoon season.</li> </ul>
3	WASH (Water, Sanitation and Hygiene)	<ul style="list-style-type: none"> <li>• There is need of capacity development of health workers to regularize the hygiene sessions.</li> <li>• Lack of collaboration with WASH sector project at district and provincial level, so that other stakeholders can also be benefitted from water Aid Nepal's hygiene interventions.</li> <li>• Difficulty in transportation due to remoteness of the sites of water supply schemes.</li> <li>• From the government side there is lack of quality monitoring officer in flood disaster areas.</li> <li>• Due to flood it is challenge to promote sanitation, therefore chances of illness or the spread of diseases.</li> </ul>
4	Livelihoods	<ul style="list-style-type: none"> <li>• It's urgent to maintain access to essential food security to vulnerable flood affected households.</li> <li>• Need to restore their livelihoods and rebuild their resilience through capacity building, awareness and advocacy.</li> <li>• The researcher found that only limited capacity to address livelihood need of the people.</li> <li>• Similarly, inadequate systematic support packages for livelihood improvement.</li> </ul>
5	Resilience and DRR (Disaster Risk Reduction)	<ul style="list-style-type: none"> <li>• Huge gap of skillful and capable groups, committees and institutions to reduce risks, mitigate and prevent flood affected families from exposure to future hazards.</li> <li>• Further, students have to train on school based DRR and need to support DRR materials to roll out school safety plan.</li> <li>• With the restructuring of government, all local bodies require LDCRC (Local Disaster and Climate Resilience Committee) to be formed.</li> </ul>

Source: Field Work, 2023.

## Conclusion

Objectives of this study is gaps, challenges, impact of flood disaster in Rapti Sonari Rural Municipality, Banke district, ward no. 6 and 7 in close coordination with government of Nepal/Ministry of Home Affairs, local government of targeted area. Mostly this research concentrated or focused on the project implementation and effectiveness of project to the beneficiaries (especially flood affected vulnerable families).

Study carried out with different approaches: FGD, observation and government and non-government progress reports regarding to this issue. During planning and implementation of the program were not found quite relevant, effective, efficient and have not make impact on food, shelter, education, income and nutrition security. However, some what the level of awareness was found increased in their thinking and decision making capacity. Hence, this type of program is good to continue to restore the livelihood of the people's education, shelter and WASH etc.

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