Adaptation for Balancing Nourishment among Flood-Affected Children

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ABSTRACT

Purpose: *The variety of behaviours and solutions that people, families, communities, and organizations use to help kids who struggle with nutrition issues. The study's objective is to equip politicians, healthcare professionals, and educators with information they can use to create interventions that are more focused and long-lasting to find suitable practices of adaptation for overcoming nourishment among children during floods.*
Design/Methodology/Approach: *To develop a thorough understanding of adaption methods for child feeding, the study used both qualitative and quantitative approaches. Female community health volunteers (FCHVs), mothers, and caregivers participated in semi-structured interviews and focus groups where information was obtained. The study also included prior research to give background and a framework for analysis.*
The area was selected from a highly flood-affected area of Nepal. Data were collected through home visits and in-depth interviews taken with 3-5 years Childrens' households' mothers or caregivers. Children's weight height and Mid Upper Arms circumference (MUAC) were measured.
Findings/Result: *The results of the study reveal a field adaptive approach utilized to handle issues with infant nutrition. Dietary changes, nutrition education that was sensitive to cultural differences, community-based initiatives, legislative measures, and cutting-edge technological advances were all part of the discipline. The study identifies both successful and unsuccessful tactics.*
Originality/Value: *This is the empirical research to recommend a pragmatic solution for nourishment issues among flood-affected children of Nepal.*
Paper Type: *Research paper*
Keywords: Child, Flood, Nutrition, Policy, Water.

1. INTRODUCTION :

Risk, as defined by the Ministry of Home Affairs, is any natural occurrence, phenomenon, or action that has the potential to cause harm. Whatever their state—active or latent—they have the potential to endanger human life or property, disrupt social and economic stability, or impair the environment. Hazards can be single, consecutive, or compound in terms of their origin and effects. Location, frequency, and chance are the three characteristics that determine any risk. Natural hazards can take many different forms, including geophysical (such as earthquakes, volcanoes, tsunamis, and dryland slides), hydrological (such as floods, wet landslides, and wave), meteorological (such as storms, cyclones, typhoons, hurricanes, excessive rain), and climatological (such as extreme temperature, heat/cold wave, fire, drought), among others. Biological agents (such as an epidemic, an insect infestation, or an animal stampede) may also cause some (Ministry of Home Affairs, Nepal, 2019, p. 55) [1].

According to the Excellence Centre, floods are one of the most common and destructive natural disasters in Nepal during the rainy season. Nepal is home to more than 6,000 rivers and rivulets that run from north to south. The Koshi, Narayani, Karnali, and Mahakali are examples of perennial rivers that are snow-fed. They trek across the highlands before arriving in the Terai plains after leaving the Himalayas and other snow-capped mountains. The summer monsoon season (June to September) sees over 80% of the yearly precipitation. Heavy rain during the monsoon season quickly reduces the ability of the soil to absorb rainwater, which adds to water storage and subsequent flooding. Floods frequently cause significant property damage and a large number of fatalities in Nepal (Centre for Excellence, 2020, p. 21) [2].

ISET, ISET-N, Practical Action, and ZURICH summarised in the report, that the three days of heavy monsoon rain in Western Nepal caused severe Karnali floods. The floods severely affected 120,000 more people in addition to killing 222 people, destroying property and infrastructure, and forcing families to migrate. Floods and landslides rank among the most regular threats in Nepal, claiming a sizable number of people every year. Floods have the power to harm and destroy property. There is a threat to everything from roads to residences to hydropower plants to drinking water and irrigation systems to agricultural areas and ecosystems (ISET, ISET-N, Practical Action, and ZURICH, 2014, p. 4 & 10) [3].

Ghimire M. et al. noted that during the monsoon floods in Nepal, all family members were affected, but women, children, and the elderly were more vulnerable. Summer floods from June to July have a greater impact on children's nutrition in the Terai districts. It is necessary to conduct a research study in seven of Nepal's provinces. Children, mothers, and elderly flood victims receive special funding from the federal, provincial, and local governments (Ghimire & Mishara, 2018, p. 124) [4].

The floods, which had substantial humanitarian effects in terms of home damage, evictions, food security, sanitation, access to basic services, and losses in agricultural productivity, according to the WFP, were particularly bad in the southern Terai plains. WFP provided a 72-hour assessment of the flood based on satellite images, secondary data, and first-hand accounts in its report on the Terai flood. The results revealed that the districts most impacted by flooding were Saptari, Rautahat, Mahottari, Bardiya, and Banke (WFP, 2017, p. 2) [5].

Loss and damage aren't clearly specified in the Paris Agreement or the UNFCCC, according to Shing, P.M. et al. The definitions of loss and damage used by researchers and practitioners are different. The UNU Institute for Environment and Human Security defines loss and damage as "adverse effects of climatic stressors that occur despite mitigation and adaptation." Similar formulations are widely used to describe loss and damage as "residual impacts" caused by insufficient adaptation and mitigation efforts to entirely prevent all effects of climate change.

In a separate page on loss and damage, the Paris Agreement emphasizes the need to prevent, reduce, and deal with loss and damage via better understanding, action, and assistance. The areas for cooperation and facilitation in relation to loss and damage are listed as follows:

preparing for emergencies, early warning systems,

- Slow-onset situations;
- Situations that could result in permanent and irreparable loss and harm;
- Thorough risk analysis and management;
- Risk-insurance facilities, a pooling of climate-related risks, and other insurance options;
- Non-economic Losses
- The adaptability of ecosystems, livelihoods, and communities.

(Shing, P.M.; Shrestha J.K.; Acharya, S & Uprety M., 2021, p. 7 & 9) [6].

According to the District Disaster Management Committee (DDMC) in Bardiya, Molmes and associates, states that Gulariya Municipality is one of the regions that was severely impacted by floods in 2015 and 2017. The Bardiya district's 134,804 people were affected by the 2017 floods (Holmes, Samuels, Ghimire, & Twigg, 2019, p. 11) [7].

An emphasis on the Nepal Hazzard Risk Assessment was made by ADPC, NGI, and CECI. Both in the southeast and southwest monsoons, which account for 80% of the total amount of precipitation throughout the monsoon season and are distinguished by exceptionally heavy rainfall from June to September. During the monsoon season, rivers from the Mahabharat range like the Kankai, Kmala, Gangmate, West Rapti, and Babai cause considerable damage in the floodplain of the Terai region. Riverine floods from the principal perennial rivers frequently rise slowly in the southern Terai plains.

Overflowing river banks drown large areas, inflicting serious damage to people and property (ADPC, NGI & CECI, 2010, p. 5) [8].

According to UNSDR, 82.93% of average annual losses from floods in 2015 will occur in the future due to climate change's impact on Nepal's increasing precipitation. This would exacerbate the effects of water-related disasters. By the mid-century, monsoonal precipitation is expected to increase by 15-20% (adpc; Nepal government & UNDRR, 2019, p. 5) [9].

The local government of Bhakatpur placed particular emphasis on the serious risks to human life and property caused by earthquakes, fires, and floods in that order. Floods happen every year and threaten both people and property, including crops and agricultural land, every time. Monsoon floods often occur in Asar, Shrawan, and Bhadra in June, July, August, and September. Similar to this, the months of June, July, August, and September are high-risk for diseases and flooding in the Kathmandu Valley (Local government of Bhakatpur, Nepal, 2017, p. 15) [10].

Depending on the extent of the flood and its effects on the land, with the Terai being more damaged, Sharma, Jeevan, and friends had different priorities. There are three categories that it falls under Kataan, Pataan, and Duban. Land cutting is referred to as kataan, sand and stone sedimentation is known as pataan (unproductive materials are thrown on the ground), and submersion, also known as duban, destroys household items and crops if submerged for a number of days (Sharma, Marshar, Stites, & Dahal, 2013, p. 13) [11].

Thapa, P. claims that in the Morang district, more than 3,000 settlements are at risk of floods while about 24% of the population is at a higher risk. In areas where flooding is more likely, higher elevation is safer than lower elevation. This study's important findings suggest that more than half of the district regions were vulnerable to flooding. The local government, a non-profit organization, and international non-profit organizations should inform the public of this situation in order to grant equal acreage to other places that are safer from floods. It aided in the decision-maker, local government, and other stakeholders in designing residential zones in safer locations by aiding in risk perception, settlement areas, and land use planning (Thapa, 2021, p. 4) [12].

Bhandari et al. summarised that operationalized municipal governance includes the concentrated management of early warning systems, search and rescue operations, pre-stocking of relief supplies, coordination, and delivery of relief supplies. The Disaster Risk Reduction and Management Act mandates that while creating physical infrastructure, communities DRR implement applicable legislation and national building norms (Bhandari, Neupane, Hayes, Regmi, & Marker, 2020, p. 27) [13].

According to Tuladhar, G. L. et al., one of the main obstacles to DRR practice in rural regions, is the implementation strategy, particularly at the individual or household level. People can learn about the catastrophe reduction strategy and how to put it into practice, especially on an individual basis. The idea behind disaster education is to spread awareness and knowledge while encouraging DRR measures. Learning about catastrophe basics, preparedness strategies, awareness campaigns, adaption procedures, and risk assessment techniques at the local level. To increase public awareness of the risk of disaster, accurate and pertinent information should be provided to local community leaders. Initiatives and activities pertaining to disaster education may also provide the local populace with a setting for individual study. Children should be allowed to participate in community-based disaster preparedness exercises for raising awareness and modifying activities, and the community should be encouraged to get involved in school disaster education programs. These programs may increase local community's understanding of DRR and increase people's readiness for the disaster risk reduction process (Tuladhar, Dahal, Yatabe, & Bhandary, 2019, p.11) [14].

The government of Nepal focused on the risk of disaster rising in Nepal, national position statement, due to a variety of known and unknown hazards. Disasters' consequences on people, built environments, livelihoods, and physical buildings are getting worse. The unfortunate reality is that due to resource mismanagement, including deforestation, encroachment on flood plains, environmental degradation, haphazardly planned development projects, and a significant influx of people looking for work and a way of life in urban areas, human settlements are becoming more and more vulnerable to natural disasters.

The impoverished and vulnerable groups have not been able to appropriately mitigate, prepare for, respond to, or overcome the effects of several dangers in different regions of the country. Women, children, the elderly, and those from underprivileged backgrounds frequently find themselves unable to deal with disasters due to their lowered capacity and resilience. Therefore, strengthening the capacities

of the most vulnerable populations is essential to reducing the loss of life and material items during disasters (Ministry of Home Affairs, Nepal, 2018, p. 6) [1].

The National Adaptation Programme of Action (NAPA), according to the Ministry of Home and Affairs, demonstrates the country's admirable effort to assess and rank pressing priorities to address climate change concerns through a thorough consultative process. According to NAPA, some areas of Nepal are now experiencing increasingly irregular and intense rainfall as a result of climate change. The risk of landslides and flash floods is rising as a result of these climate changes in combination with Nepal's prone geography, deforestation, and eroding soils. Furthermore, it has been predicted that climate change will cause rainfall to become more intense in several parts of Nepal. In order to better adjust to climate challenges, vulnerable people will need to increase their ability to adapt. (Ministry of Home Affairs, Nepal, 2018, p. 15) [1].

According to Khanal, B. N. the geography of Nepal is the main contributor to floods. More flooding results from heavy precipitation, which can occur anywhere during the monsoon season aside from the high Himalayan region. Flooding along riverbanks and erosion of land along riverbanks cause loss by destroying irrigation and communication infrastructure as well as productive farms across or next to the riverbanks.

Flooding has hindered social and economic growth in several regions of the country. The floods on the Bagmati River in July and August 1993, the Koshi River in August 2008, Western Nepal in September 2008, and Nepal in 2017 were all catastrophic. In Nepal, monsoons and flash floods have both been experienced. The main reasons for the floods in Nepal include geography (steep Mountains and flat Tarai), deforestation, and rainfall variability (uneven rainfall across time and place) (Khanal, 2019, p. 11) [15].

Policy and Legal Framework: The federal, provincial, and municipal spheres of authority are described in detail in Nepal's 2015 Constitution. The National Policy for Disaster Risk Reduction 2018, which is supported by the National Strategic Action Plan for Disaster Risk Reduction, 2018–2030, has been put into place in accordance with the Sendai Framework for Disaster Risk Reduction (SFDRR). Governments at the provincial and local levels have developed vital institutional and legal structures for DRRM. The DRRM Act of 2017 and the Local Government Operationalization Act of 2017 have established institutional structures and given them the power to handle various levels of work in accordance with the spirit of the constitution. Organizations affiliated with the federal government, such as the receiving guidelines and sample policy documents, the Ministry of Federal Affairs and General Administration (MoFAGA) can enhance local DRRM. among other documents, check National Planning Commission guidelines for the local DRR Strategic Action Plan Guidelines 2021 and news announcement Guideline Plans and projects from local governments are listed there. To help local governments and stakeholders, a wealth of additional materials on disaster preparedness, response, recovery, and reconstruction is accessible. The Local Disaster and Climate Risk Plan (LDCRP), Local Emergency Operation Guideline, Local Disaster and Natural Resource Protection Act, and Local DRRM Strategic Plan are a few of them.

Institutional Structures: Nepal established the National Disaster Risk Reduction and Management Authority (NDRRMA) in 2019 to coordinate, facilitate, run, and manage the country's DRRM initiatives. The top disaster risk management authority, the DRRM National Council, is presided over by the Rt. Honourable Prime Minister. The council creates plans, authorizes disaster-related policies, and provides strategic guidance. The disaster body's Executive Committee (EC) is in charge of operational issues, including DRRM-related policies, programs, executive judgments, and deliveries. The EC is presided over by the Honourable Home Minister. The EC collaborates with line ministries to develop DRRM policies and initiatives. The NDRRMA serves as the secretariat for both the National Council and the EC. Governments at the local and provincial levels can oversee catastrophic risk reduction programs and carry out relevant disaster preparedness-related actions. The National Platform for DRR (NPDRR) was established with its guiding principles in place to enhance collaboration between all DRRM stakeholders. The NDRRMA chief executive is in charge of the National Platform. Nine thematic groups on the platform include a range of stakeholders, including governments, semi-governments, UN and bilateral partners, international, national, and local non-governmental organizations, the media, communities that have recently gone through a disaster, academics, and the private sector. To coordinate disaster planning and response activities, the Government of Nepal (GoN) and the relevant organizations have developed a network of Emergency Operation Centres (EOCs). Each of the 77 districts has its own district EOC, while the MoHA has a national EOC. Through their

provincial EOCs, province governments collaborate with the national and district EOCs. Several towns have also established EOCs. However, these EOCs must be equipped with the required personnel and equipment. The Ministry of Health (MoH) has also distributed Health EOCs (HEOCs) across the country (Ministry of Home Affairs, Nepal, 2022, p. 7 & 8) [1].

KEC Collage workshop presented, and focused came to the conclusion that Nepal has been experiencing various geohazards and instabilities as a result of its intricate structural deformation. In Terai regions, hazards including flooding and scouring are frequent, but rock falls and toppling happen in hilly locations. This review article can help to lessen the number of people who perish and the damage that water-related disasters do to socioeconomic structures in Nepal's many susceptible regions. In order to prioritize flood-prone districts for assistance the approval of a new multipurpose law in the nation, it may also be helpful. From the national to the local level, policies, programs, activities, and institutional arrangements have been developed and put into place to lessen the likelihood of disaster. Disaster management is practiced by regional organizations and activities taking place in the Terai district's flood-prone area. Early warning systems and community-based disaster management were successful in lowering flood risk. Nepal has been suffering numerous geohazards and instabilities as a result of its intricate structural deformation. Flooding and scouring are common hazards in Terai regions, but steep areas can experience rock fall and toppling. By reducing the number of fatalities and the harm that water-related disasters cause to socioeconomic structures in Nepal's numerous vulnerable regions, this review article can help. It might also be useful for the nation's ratification of a new multipurpose law and for prioritizing flood-prone communities for aid. Policies, programs, activities, and institutional structures have been created and implemented at all levels, from the national to the local (Gupta & S., 2019, p. 110) [16].

Food security exists when all individuals, consistently, have physical and financial admittance to adequate protected, and nutritious food that meets their dietary requirements and food inclinations for a functioning and solid life (FAO, 2008, p. 7) [17]. As per the Vital activity plan decreased unhealthiest reciprocal taking care of for babies and small kids advantageous taking care of in local area settings for advancing kid development, deworming to battle the well-being and nourishing effect of helminth diseases and surveying beneficial taking care of projects that support quick weight gain without direct development in babies and small kids (WHO, 2016, p. 30) [18].

Develop suitable financial channels to enable adequate frontline worker pay and sufficient numbers of frontline workers to deliver nutrition-specific interventions, according to the International Food Policy Institute's executive summary. (Institute for International Food Policy Research, 2017 p. 10) [19-20].

Due to enabling pro-poor economic growth, Bangladesh made improvements in lowering child stunting. The decreasing rates of child stunting were aided by increasing parental education, especially among women, and expanding access to healthcare (Nisbett, N. et al., 2017 p. 21) [21].

According to Nchang Mugyia, A. S. et al, basic understanding of proper nutrition during pregnancy, but there are large gaps and it is difficult to put knowledge into practice. It is challenging for mothers to follow the nutrition recommendations they are given because of the significant influence that hormonal changes during pregnancy, socioeconomic level, food taboos, and cultural beliefs have on their eating behaviours. As a crucial component of ANC, enough numerous dietary supplements must go together with nutritional guidance. In order to promote pregnant nutrition, health policies that address cultural taboos should be implemented (Nchang Mugyia, A. S. et al., 2016, p. 24) [22].

According to a summary by Sossi, Frieda, the main factors contributing to undernutrition are an insufficient variety in diet, which is associated with poverty, inadequate nutrition education, inadequate access to health care, social discrimination, and an unfavorable climate and topography for farming in Nepal (Sossi, Frieda, 2019 p. 184) [23].

The provision of nutrition-related therapies and counselling during antenatal care, according to Bryce, Emily et al., is essential for a healthy pregnancy for both the mother and the unborn child (Bryce, Emily, et al., 2022 p. 1) [24].

Namirembe et al.'s overall discovery of the research analysis revealed six domains: Collaboration; Financial Resources; Nutrition Leadership, Capacity, and Support; and Understanding Nutrition and Related Responsibilities. Comparatively to representatives from other government activity sectors, around half of the health sector representatives received high scores (>3 on a 5-point scale). Over a two-year follow-up period, the health sector's mean NGI score likewise exhibited the biggest improvement (Namirembe et al. 2020 p. 1) [25].

Quinn, T. et al. summarised the key health and well-being consequences of flood adaptations are related to a range of material, social, and environmental impacts. Disaggregating the health consequences in this manner both aligns with existing public health metrics and offers a way to think about well-being issues tied to specific adaptation processes, rather than simply aggregated and assumed outcomes (Quinn, T. et al. 2023 p. 959) [26]. Health and wellbeing implications of adaptation to flood risk. Flood seems significant so in our building code, we should introduce flood resistance features as we have provisions for fire safety, earthquake safety, materials standards, occupational safety, and many more [27-32]. This research is an opening for much upcoming research.

2. STATEMENT OF PROBLEMS :

According to Ghimire M., et al. the adverse impact of the flood on communities with widespread of the destruction of homes, infrastructure and livelihood. Among the most vulnerable group affected by floods are young children particularly those in early childhood development (ECD). ECD is a critical period for cognitive, physical and socio-economic development, and during this phase can have long-lasting consequences on a child's overall well-being and future potential. The problem is suffering from contaminated water resources, lack of proper sanitation facilities, and limited access to health care services which are factors that impact the health and well-being of ECD children in the affected area. Nutrition and food security: Flood loss crops, food security, and disrupted supply chains, resulting in malnutrition and inadequate diets for small children, its impacts show in children health. Access to education and early learning opportunities: Flood affected damages their schools, road and furniture's. Its effect on the children in their education and socio-emotional development (Ghimire M. M., 2023) [19]. Childhood nourishment remains a critical concern worldwide, with a substantial number of children experiencing inadequate nutrition that negatively impacts their growth, development, and overall health. Despite the many efforts and interventions, nutrition challenges persist, necessitating a deeper understanding of adaptive strategies that can effectively address the issues.

3. OBJECTIVES :

The research aims to find suitable practices of adaptation for overcoming nourishment among children during floods.

4. METHODOLOGY :

The study was conducted in Rajapur Municipality, Lumbini Province, Bardiya District, Nepal. It is a flash flood prone area as every year flood affected this area. Visited 3- 5 years old children houses and obtained consent from mothers of target people households. Collected information from focus group discussions of mothers or caretakers. In-depth interview was taken from children's mother or caretaker. Children weight, height and Mid Upper Arm of Circumference (MUAC) were measured. This research tries to provide preparedness among flood affected people. The total 210 children MUAC, height and weight were measured out of which 50% i.e., 105children belongs to flood affected using WHO2006 tool. This is ex-post facto research. It is cross-sectional study based on measures and interactions with mothers. Using structured questionnaire face to face interview was done to understand the situation. It was done with all flood affected 105 households. Using SPSS and WHO 2006 tool data were analysed and validated by comparing the previous research.

5. RESULT AND DISCUSSION :

5.1 Status of Nourishment Affecting Factors :

Results and discussion were related to nutrition and a flood of the western Terai area of Nepal. Bardiya district Karnali River monsoon floods victimized community conducted in result and discussion.

Table 1: Action after flood Crosstabulation

			What do you have done after floods		Total
			Stay in self-home	Before flood come go in safe location with cash, gold and important documents	
Flood affected home	Yes	Count	0	105	105
		%	0.0%	100.0%	100.0%
	No	Count	105	0	105
		%	100.0%	0.0%	100.0%

Total	Count	105	105	210
	%	50.0%	50.0%	100.0%

Table 1 shows that the total number of flood-affected and non-flood-affected households was 210, of which 105 were flood-affected. 105 (100%) households respond to the safe location with cash, gold, and important documents. Non-flood-affected households 105 (100%) are not affected because they remain at home. The disaster information committee made the Karnali River's water level dangerous (9–11 meters), and then all the people left their homes and went to a safe location. 9–10 meters of water level come into the Karnali River; this is preparation time for 2019, ready to leave home with cloth, cereals (rice and pulsed), gold or silver, and important documents. When the water level reaches 11 meters, all respondents leave their homes and go to a safe location. During preparation time, they shift their cereals, utensils, clothes, and important documents to a safe location (a flood refuse camp or a relative's home).

All the flood victims' households' citizens go to the community building, School building, and Godam building in a safe location. Some people go to relatives' homes too. Respondents replied that they stay with their family 1 - 4 weeks (7 days to 30 days) in the flood refuse camp annually.

Table 2: Action during flood Cross tabulation

			Action for saving in Priority			Total
			Not safe	Cereals	Cloths	
Flood affected home	Yes	Count	1	96	8	105
		%	1.0%	91.4%	7.6%	100.0%
	No	Count	105	0	0	105
		%	100.0%	0.0%	0.0%	100.0%
Total		Count	106	96	8	210
		%	50.5%	45.7%	3.8%	100.0%

Table 2 shows that the total number of flood-affected and non-flood-affected households was 210; among them, 105 were flood-affected. Flood-affected households' respondents saved 96 (91.4%) of their cereals, 4 (7.6%) of their clothes, and only one (1%) of all goods, cereals and cloths. Non-flood-affected 105 (100%) stay in their homes; they do not need to keep anything safe.

Table 3: Stay during the floods affect time Crosstabulation

			Where you stay during the floods affects time					Total
			No	Tent	High location in huts	Gov. or NGOs constructed community building	Relative home	
Flood affected home	Yes	Count	0	7	3	94	1	105
		%	0.0%	6.7%	2.9%	89.5%	1.0%	100.0%
	No	Count	105	0	0	0	0	105
		%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	105	7	3	94	1	210
				3.3%	1.4%	44.8%	0.5%	100.0%

Table 3 shows that the total number of flood-affected and non-flood-affected total households was 210; among them, 105 were flood-affected. Flood-affected respondents stay in 7 (6.7%) tents, 3 (2.9%) high-location huts, 94 (89.5%) NGOs-constructed community buildings, Godam buildings, and school buildings, and only 1 (1%) stay in relatives' homes. Non-flood-affected respondents (100%) stay in their homes. Karnali River floods affected the western Terai area from June to September. The floods lose structures, homes, toilets, and storage foods. The research area has the same result as the flooding area that affected June to September and damaged homes, toilets, and storage.

Table 4: Return in the home Cross tabulation

			After floods how long days you have return in your home				Total
			Safe HHs	After 7 days	After 15 days	After 30 days	
Flood affected home	Yes	Count	0	7	2	96	105
		%	0.0%	6.7%	1.9%	91.4%	100.0%
	No	Count	105	0	0	0	105
		%	100.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	105	7	2	96	210
		%	50.0%	3.3%	1.0%	45.7%	100.0%

Table 4 shows that the total number of flood-affected and non-flood-affected total households was 210; among them, 105 were flood-affected. The duration of flood-affected days of respondents after 7 days was 7 (6.7%), after 15 days was 2 (1.9%), and after 30 days was 96 (91.4%). Non-flood affected 105 (100%) stay in their homes safely in a safe location.

When precipitation rains in the Himalayan and hills areas, all rain converts into flood, flows in Rivers, and is seen in the Terai area. In *the research area, upstream floods come into the downstream area of the Karnali* River. It is the same problem as previous study results found in the research area.

Table 5: Maintenance home after floods Crosstabulation

			Have your maintenance your home after floods			Total
			Not flood affected	linter home Maintenance	Mud, thatch and wood home	
Flood affected home	Yes	Count	0	20	85	105
		%	0.0%	19.0%	81.0%	100.0%
	No	Count	105	0	0	105
		%	100.0%	0.0%	0.0%	100.0%
Total		Count	105	20	85	210
		%	50.0%	9.5%	40.5%	100.0%

Table 5 shows that the total number of flood-affected and non-flood-affected households was 210; among them, 105 were flood-affected; after flood maintenance, their homes were linter homes (20%), mud, thatch, and wood homes (85%). Non-flood-affected households: 105 (100%) did not need maintenance. Community-rich persons made a linter home with brick and cement. They throw water from the rooms and it became soon dry (within 4-5 days), then their home become their previous condition. But almost poorer Tharu people have traditional houses (made from mud, wood, and thatch). Such homes take maintenance time of 10–15 days (home wall and floor, toilet wall) then becomes previously conditional. Same condition was found in research area. Cost effective but concrete safe building need to build [30 & 31].

Table 6: Thought for the next flooding time Crosstabulation

			What you thought for the next flooding time		Total
			Non-flood affected HHs	before floods leave home with important documents, cash, gold	
Flood affected home	Yes	Count	0	105	105
		%	0.0%	100.0%	100.0%
	No	Count	105	0	105
		%	100.0%	0.0%	100.0%
Total		Count	105	105	210
		%	50.0%	50.0%	100.0%

Table 6 shows that the total number of flood-affected and non-flood-affected households was 210; among them, 105 were flood-affected. Next flooding: 105 (100%) respondents replied that after getting dangerous flood level information, they should go to a safe location with important documents, gold,

and cash. Non-flood-affected household' respondents, 105 (100%), stay at home; they have no such trouble in the summer.

In previous years, citizens were awarded by the District Disaster Committee and Red Cross ward and community level. When the Karnali River water level reached 9–10 meters District Disaster Committee and Red Cross informed to village level the water of Karnali River reached 11 meters, and they miking morning, daytime, and evening. After mixing all the people leave their homes and go to a safe location. The awareness and readiness followed by all households' people the same process in the research area during the flooding time.

Table 7: What to do is the best before flooding Crosstabulation

			What to do is best before flooding		Total
			Non flood affected HHs	Construct strong Dam	
Flood affected home	Yes	Count	0	105	105
		%	0.0%	100.0%	100.0%
	No	Count	105	0	105
		%	100.0%	0.0%	100.0%
Total		Count	105	105	210
		%	50.0%	50.0%	100.0%

Table 7 shows that the number of flood-affected and non-flood-affected households was 210, of which 105 were flood-affected households. Asked by food-affected people what to do before flooding, 100% of respondents replied to construct a strong dam in the Karnali River, make citizens aware of flooding times, and inform them as the Karnali River crosses a dangerous level. Non-flood-affected households in 105 (100%) households can safely stay at home. They have no problem. As part of the national disaster plan, Emergency Operations Centres (EOCs) were established at central, provincial and districts level. District-level disaster Centres ready preparedness during the monsoon floods. In the research area, the same process was conducted to inform district-level emergency centers information in the research area people at the Karnali River flooding time.

Table 8: What to do is best during the floods Crosstabulation

			What to do is best during the floods		Total
			Non flood affected HHs	foods, tent, cloths, water medicine, torch	
Flood affected home	Yes	Count	0	105	105
		%	0.0%	100.0%	100.0%
	No	Count	105	0	105
		%	100.0%	0.0%	100.0%
Total		Count	105	105	210
		%	50.0%	50.0%	100.0%

Table 8 shows that the total number of flood-affected and non-flood-affected households was 210; among them, 105 were flood-affected households. In the research area respondents or flood victims demanded food, clothes, drinking water, medicine, and a torch. Non-flood-affected households don't know about such conditions because they were safely staying in their homes. It was the same as other victims at the camp.

Table 9: Preparedness do for next floods Crosstabulation

			What preparedness will do for next floods				Total
			Non flood affected HHs	awareness and strong dam construct	Child, important document, Rupee with go in safe location	Flooding time stay big home construct	
Flood affected home	Yes	Count	0	1	103	1	105
		%	0.0%	1.0%	98.1%	1.0%	100.0 %

	No	Count	105	0	0	0	105
		%	100.0%	0.0%	0.0%	0.0%	100.0 %
Total		Count	105	1	103	1	210
		%	50.0%	0.5%	49.0%	0.5%	100.0 %

Table 9 shows that the total number of flood-affected and non-flood-affected households was 210; among them, 105 were flood-affected households. Preparedness for the next floods: 1 (1%) awareness and construction of a strong dam in the Karnali River; 103 (98.1%) go to a safe location went in time with their child, important documents, rupees, clothes, food, etc. Non-flood-affected 105 (100%) households don't know and do not experience flooding challenges. Different research recommended that during the disaster time of the flood, emergency operations centers (EOCs) are awarded to the flood-affected people. The Karnali River floods become dangerous level in 11 meters, all the people leave their homes with goods, important documents, cash, and ornamentals. The same condition and process follow-up were found in the research area also. Occupational safety care should be implemented for safety during floods [32].

Table 10: Have you any statement, if yes, please say Crosstabulation

			Have you any statement, if yes, please say		**Total**
			Non flood affected HHs	No	
Flood affected home	Yes	Count	0	105	105
		%	0.0%	100.0%	100.0%
	No	Count	105	0	105
		%	100.0%	0.0%	100.0%
Total		Count	105	105	210
		%	50.0%	50.0%	100.0%

Table 10 shows that the number of flood-affected and non-flood-affected households was 210, of which 105 were flood-affected households. Affected area people requested to prepare a master plan and work together in three tire levels Central, Province, and Local together. The state must think to enforce flood preparation guidelines through building codes [27, 28, & 29].

6. CONCLUSIONS AND SUGGESTION :

The Terai area is a flood-prone area of Nepal. During the monsoon duration (June–September), precipitation rain falls in the Himalayan and Hills areas. The rainfall water collected and converted into floods in the downstream area (Terai area) of Karnali River 1-3 times annually. The floods affected human life, property, crops, animals, and construction. During the flooding that occurred in the western Terai of the Karnali River-based in area. The floods damage residents, community infrastructures roads, bridges, schools, and Godam buildings, etc. During a disaster time of the flood, emergency operations centers (EOCs) are awarded to the flood-affected people. The Karnali River floods become dangerous level in 11 meters, all the people leave their homes with goods, important documents, cash, and ornamentals. The same condition and process follow-up were found in the research area also. When precipitation rains in the Himalayan and hills areas, all rain converts into flood, flows in Rivers, and is seen in the Terai area. In the research area, upstream floods come into the downstream area of the Karnali River. It is the same problem as previous study results found in the research area.

The best suggestion to the central, provincial, and Palika level (local governments) work together with long-term Karnali River flood control planning. Construct a strong dam in the Karnali River and a big building in every village for flooding time staying with humans and goods. Provide flood victims with food, torches, clothes, medicine, and drinking water. Support small amounts poorer people for home, toilet, and hand pump maintenance.

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