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NATURAL DISASTER IN UDHAMPUR DISTRICT- A CASE STUDY OF FLASHFLOODS AND LANDSLIDES IN THE YEAR 2014.

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ABSTRACT

Natural hazards are extreme events and disasters are potential risks to these events. Man has been facing Natural hazards and Disasters since the dawn of civilization. With burgeoning population pressure, urban industrial growth, deforestation and cultivation of marginal lands the human –induced hazards have also increased. In recent years natural hazards have increased manifolds, lives have been lost and property destruction has taken place. Poverty, population growth and environmental degradation are the main causes of vulnerability in natural disaster. The driving forces for flashfloods and landslides are of natural, social, ecological origin which interact in complex ways.

***KEYWORDS*: Disaster, Flashflood, Landslides.**

INTRODUCTION

The flood situation in Jammu and Kashmir was declared a "National Level Disaster" by the Prime Minister Narendra Modi. Jammu and Kashmir has a long history of floods. From 1905 to 1959, the state was hit by flood 14 times. In 2010, the Jammu and Kashmir Flood Control Ministry had prepared a report and issued a warning that the state is likely to face a major Flood Catastrophe in the next five years and the government is ill equipped to save lives and property. Very fast rise and recession with characteristics of small volume flow and high discharge, which causes high damage, have been experienced in Udhampur District from 2 September 2014 onwards. For Jammu and Kashmir, this is their worst flood in 100 years, according to the former chief minister Omar Abdullah. The Tawi River and various major and minor streams in Udhampur District flow far above the danger mark, flooding houses along the embankments. This river flooded into the streets causing heavy causalities and loss of property. In rural

areas the flood is widely devasting. The floods have literally taken away everything- livelihood, homes and for some even their families. There is severe crisis of drinking water in the inundated areas. Private drinking water wells are unfit for use due to contamination with flood water. It will take a lot of time even after the flood water subsides to declare the flood affected areas safe.

Area Affected by the floods and landslides:

The entire District was affected by the Flash Floods and Landslides that comes in the month of September, 2014. The scale of destruction in Udhampur district was on the same lines as the Kashmir Valley but provision of relief and rescue measures in the former has been relatively much slower.

Area affected by Flash Floods:

The areas affected by Flash Floods in Udhampur District are mostly in Udhampur Tehsil, Chenani Tehsil, and Pancheri Tehsil. There are casualties and loss of property by the rise in the level of various rivers and streams. Some of the casualties happened in various Tehsil of Udhampur District. A young man was washed away by the rupturing of the bridge built on Devika River in Udhampur Tehsil. Also, a truck driver while loading his truck with sand near Birma in Udhampur Tehsil was washed away as the water level in the Birma stream was risen up. In Pancheri Tehsil a youth was washed away in a stream nullah and two others are injured in Flash Floods. In Pancheri Tehsil, a load carrier carrying two bovine animals and some passangers was on its way to Kainth Gali and the water level in the stream nullah near Kultiar has suddenly increased and there is one casualty and the others were injured which were sent to District Hospital Udhampur. In another incident, a villager was washed away in Tawi River at village kulakh in Chenani Tehsil of Udhampur District. In Pancheri, there is massive loss to approach road of Balley Bridge constructed by District Administration to facilitate people to cross Plusta river. Thus, in Udhampur District there was loss of Life and property by the devasting Flashfloods that comes on 6 September, 2014.

STREAM OVERFLOODED

There are only two main rivers in Udhampur District Tawi and Devika and there are various tributaries, distributaries, streams and khads in Udhampur District. The name of some streams

, tributaries, distributaries are Tawi, Nikki Tawi, Birma, Devika, Jajhar, Neele-Nala, Nullah, Duddar Nala, Bhiron, Plusta River, and various Khads. These streams were overflooded by the rain that comes during disaster and caused great havoc in the Udhampur District

LANDSLIDES

The occurrence of Landslides in Udhampur District is due to the combination of various Factors like Topography, geology, seismicity and climate in addition human activities have passed great challenges to its inhabitations in terms of implementing risks to life economy, environment, infrastructure and activity. The main reasons for absorbed increase in Landslide disaster are overexploitation of natural resources, deforestation and greater vulnerability of exposed population as a result of growing population and uncontrolled land use. The study area has sub-humid to humid type of climate on the basis of Thorn Wait criteria of moisture Index. The deforestation over

the Shiwaliks and lesser Himalayan slopes and the evaporation process have altered and caused uncertainity in normal rainfall and climate shifts in the area. The main anthropogenic activities like the construction of Jammu-Udhampur- Srinagar Road have increased the Landslides in Udhampur District. The landslides result in the complete destruction of Saddal village of Pancheri Tehsil and Panjar village of Moungri Tehsil.Thus, the landslides in Udhampur District results in heavy loss of life and property.

Area affected by landslides:

Unprecedented rainfall and the developmental activities generated a series of Landslides in Udhampur district as it lies in Hilly terrain but the landslides that comes in September by the continuous rainfall was the Vulnerable disaster that comes in the history of Udhampur District. Loss of damages is caused not only to physical landscapes but also to cultural landscapes. The Vulnerable identified areas in the Disaster are Udhampur tehsil, Pancheri tehsil, Moungri Tehsil, Latti. Landslides happen in almost every tehsil of Udhampur Tehsil. A number of hamlets in far off places in Udhampur districts, where hundreds of human lives got perished, thousands of livestock got killed besides scores of houses and road links got damaged due to landslides are yet to get a helping hand. The first Incident held in Rakh-Jaganoo area of Ramnagar Tehsil where 6 members killed in Udhampur District. The miseries in rough terrain of 12 panchayats of Block Pancheri and Moungri in District Udhampur, is unfolding horrifying tales of miseries and mass destruction with each passing day. Further details in terms of damage conditions are not available. Two more units of Army and NDRF had been airdropped to Pancheri in Udhampur where 30 people are missing after a landslide hit the area. Various villages of Udhampur Tehsil are also affected by the Disaster that comes in month of September. The most affected villages are Sui-Sambal, Rakh-Badali, A-T Gate, Malhar, Manthal, Kutliar, Jakheni, Kulakh etc.

STATEMENT OF THE PROBLEM

Natural Disaster is both sudden and powerful events which damage national economy and cause hardships to a large section of the society. The impact of Disaster is multidimensional, affecting it in all aspects- domestic, social, economic and environmental etc. Disaster never came with any warning, these are sudden events and cause great damage to the societies, cities and villages. As we know Udhampur District lies in the Shiwaliks Range and the area is vulnerable in varying degree to a large number of natural disasters. The whole district is prone to earthquakes of high to very high intensity. Also, rain in Udhampur district during September was a normal phenomenon but the intensity of rainfall in the year 2014 was very high. Such a huge rainfall was earlier recorded in 1903, 1908, 1926, 1942 and 1988. The people and the administration of J&K were not ready to face the problem of Flash Floods. The problem of flashfloods was new to them. The Panjar village of Moungri tehsil and Saddal village of Pancheri tehsil are the worst affected areas by the flashflood and landslides that came on 6 Sep 2014. Looking at the multiferous problem of Natural Disasters in the form of floods and landslides in recent past this topic has been chosen for in depth study.

OBJECTIVES

- To examine the history of hazard and disaster in J&K.
- To identify the worst affected areas in Udhampur district.

- To identify the impact of floods and landslides upon the inhabitants of Udhampur district.

REVIEW OF LITERATURE

Anbalagan R (1992) discussed about landslide hazard zonation (LHZ) maps which are of great help to planners and field engineers for selecting suitable locations to implement development schemes in mountainous terrain, as well as, for adopting appropriate mitigation measures in unstable hazard-prone areas. A new quantitative approach has been evolved, based on major causative factors of slope instability.

Evans SG (1993) described that fragmental rock fall is characterized by the independent movement of individual rock fragments after detachment from a rock face. The continued operation of the process leads to the accumulation of talus slopes. On talus slopes the rock fall shadow extends beyond the base of the talus and consists of scattered boulders that have run out beyond the base of the slope.

Kanungo DP (1995) describes the methods of landslide hazard zonation that were tested in the Srinagar-Rudraprayag area of the Garhwal Himalaya. He asserts that landslides occur frequently in areas prone to earthquakes and neotectonic activities. The identification and classification of hazard prone areas according to the degree of actual or potential danger is a necessary step in hazard assessment.

Cardinali M (1997) explain that in recent years, growing population and expansion of settlements and life-lines over hazardous areas have largely increased the impact of natural disasters both in industrialized and developing countries. Third world countries have difficulty meeting the high costs of controlling natural hazards through major engineering works and rational land-use planning. Industrialized societies are increasingly reluctant to invest money in structural measures that can reduce natural risks

DATABASE AND METHODOLOGY

The present study is based on both primary and secondary sources of data. For primary sources of data, questionnaires were prepared. The quantum of disaster in the affected area was analyzed by visiting the area personally. To understand the ground realities of the natural disaster, local inhabitants were consulted. The secondary data have been collected from following sources.

1.Deputy Commissioner Office, Udhampur.

2.Irrigation and Flood Control Department.

3.Revenue Department.

4.Newspaper

5.Internet. Etc.

The required data is then analyzed and tabulated with the help of statistical techniques such as Arithmetic Mean and Percentage Method. In order to select the area random sampling has been applied. Stratified Random sampling

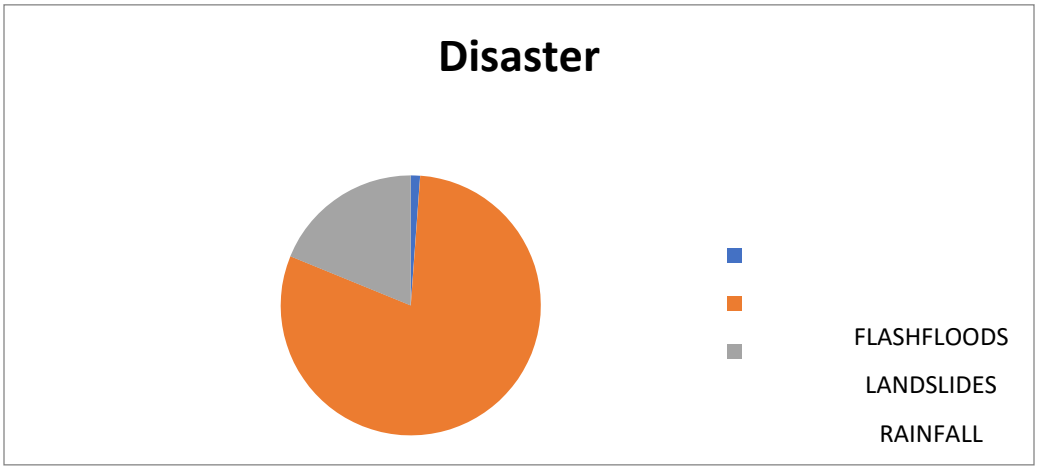
techniques is used to select the households of four most affected areas which are Ramnagar, Chennani, Udhampur, Majalta. The extent of affected area is analyzed with the help of Google Imageries Primary Data:

The primary data is collected by sampling of twenty houses in four tehsils of Udhampur District. Thus, about 85 houses are surveyed and primary data is collected by filling

Disaster	No. of houses	% age of houses
Flashfloods	1	1.17
Landslides	68	80
Rainfall	16	18.82

questionnaires.

Table 1: Disaster experienced in Udhampur District Source: Field Survey (2015)



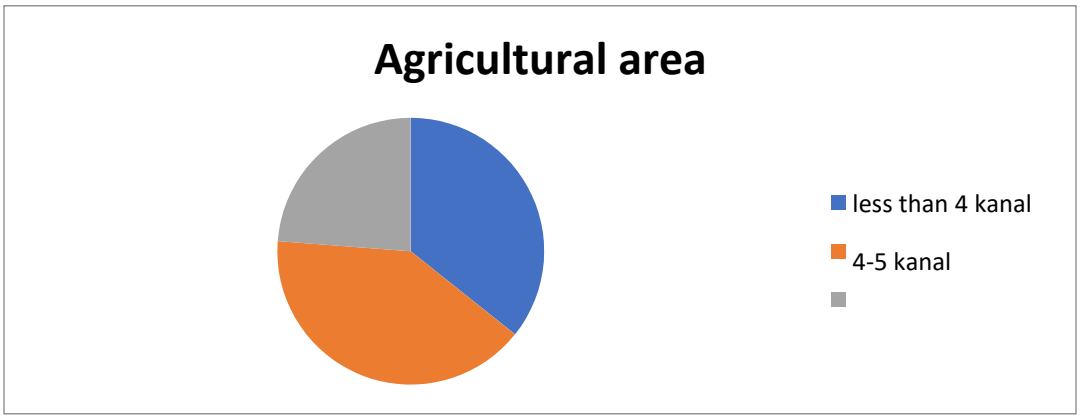
Interpretation:

The above table reveals that there are sixty-nine houses which experienced landslides in Udhampur district and sixteen houses which suffers from rainfall in Udhampur district out of eighty five houses.

Table2: Agricultural area destroyed or damaged in Udhampur District

Agricultural area	No. of Respondant	% age of respondant
Less than 4 canal	30	35.71
4 -5canal	34	40.47
More than 5 canal	20	23.80
Total	84	100

Source: Field Survey (2015)



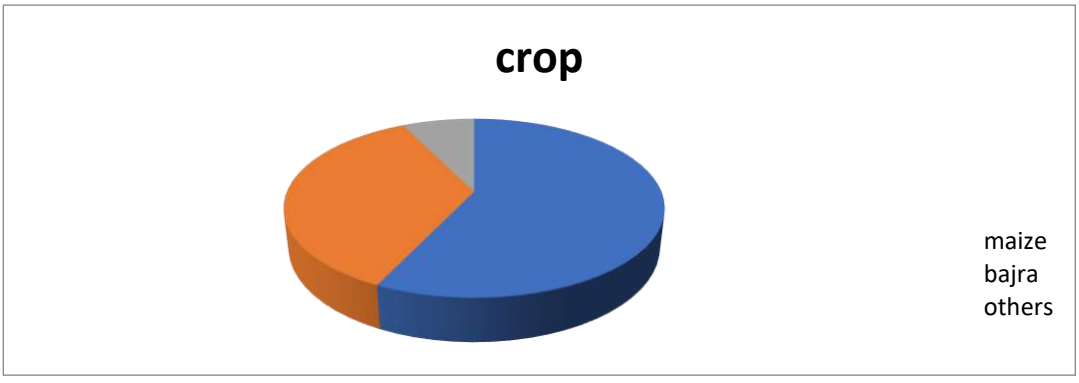
Interpretation:

The above table reveals that thirty-respondent said that they have less than 4 canal agricultural land which is destroyed or damaged in the disaster whereas there are thirty-four respondant who said that they have 4-5 canal agricultural land destroyed or damaged in the disaster. There are twenty respondant who have agricultural land above 5 canals destroyed or damaged in the disaster.

Table 3: Crop destroyed by the disaster in Udhampur District

Crop	No. of houses	% age of houses
Maize	54	56.84
Bajra	34	35.79
Others	7	7.37
Total	95	100

Source: Field Survey (2015)



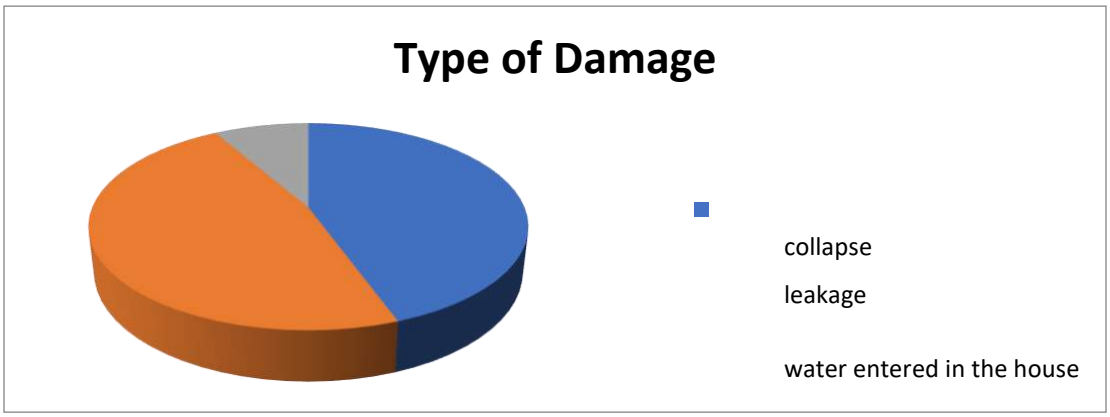
Interpretation:

The above table depicts that out of 85 houses there were 54 houses that faced loss in maize crop, 34 houses faced loss in Bajra and 7 houses faced loss in other crop.

Table 4: Damage caused to the house in Udhampur District.

Type of damage	House type			Total	% age of houses
	Pacca	Kaccha	Both		
Collapse	3	29		32	44.44
Leakage	2	30	2	34	47.22
Water entered in the house	1	4	1	6	8.34
Total	6	63	3	72	100

Source: Field Survey (2015)



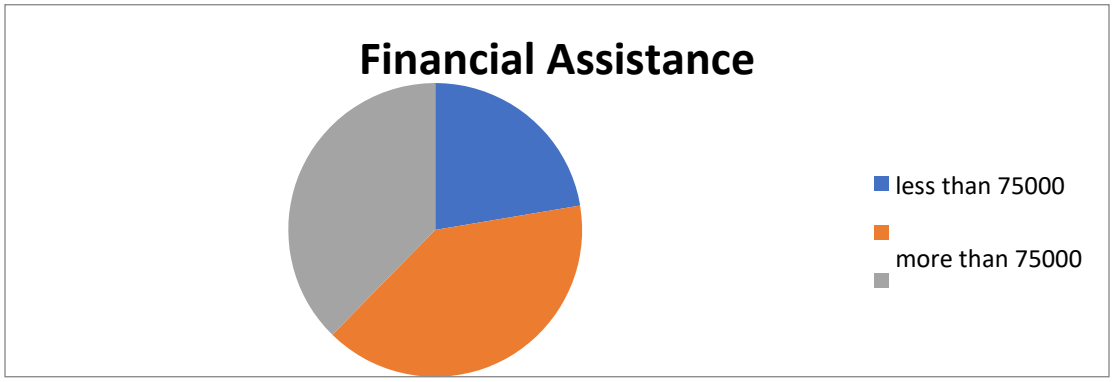
Interpretation:

The above table depicts that there are 32 houses which collapsed including both Kaccha as well as Pacca. There are about 30 kaccha houses which are affected by leakage and out of 85 houses water entered in 6 houses.

Table 5: Financial Assistance provided to the houses in Udhampur District.

Financial assistance	No. of respondent	%age of respondent
Less than Rs75,000	19	22.35
More than Rs 75,000	34	40
Not allowed	32	37.65
Total	85	100

Source: Field Survey (2015)



Interpretation:
The above table depicts that thirty-four respondents get financial assistance more than Rs 75,000 and nineteen respondents get financial assistance less than Rs 75,000. There are thirty-two respondents who not yet get the financial assistance.

SECONDARY DATA

Table 6: Damage caused to different type of houses in the Disaster.

Tehsil Name	Kaccha House			Pucca House		
	Fully	Severally	Partially	Fully	Severally	Partially
Basantgarh	41	33	134	0	0	2
Chenani	125	454	1178	2	9	25
Latti	31	48	39	0	0	0
Majalta	79	108	239	0	0	0
Moungri	185	268	252	0	0	1
Panchari	54	68	270	0	0	0
Ramnagar	197	374	569	1	0	2
Udhampur	276	450	1980	16	5	37
Total	988	1803	4661	19	14	67

Source: Revenue department, Udhampur (2014)

Interpretation:
The above table reveals that there are 988 Kaccha houses which are fully damaged, 1803 Kaccha houses which are severally damaged and 4661 Kaccha houses which are partially damaged. Also, there are 19 Pucca houses in the district Udhampur which are fully damaged, 14 houses which are severally damaged

and 67 houses which are partially damaged.

Table 7: Cattle wealth lost in Udhampur District.

Tehsil Name	Goat/ Sheep	Drought animal	Milch animal
Basantgarh	72	4	4
Chenani	2	1	1
Latti	0	0	0
Majalta	0	0	0
Moungri	34	6	15
Panchari	4	0	0
Ramnagar	4	1	4
Udhampur	8	1	4
Total	124	13	28

Source: Field Survey (2015)

Interpretation:

The above table depicts that there are 124 Goats and Sheep, 13 drought animal and 28 milch animal who lost their life in the disaster.

Table 8: Cattle shed lost in the Disaster in Udhampur District.

Tehsil Name	Cattle Shed
Basantgarh	0
Chenani	23
Latti	8
Majalta	16
Moungri	0
Panchari	17
Ramnagar	38
Udhampur	241
Total	343

Source: Field Survey (2015)

Interpretation:

The above table depicts that 241 cattle shed damaged in Udhampur tehsil, 38 cattle shed damaged in Ramnagar district, 23 in Chenani tehsil and 17 in Pancheri tehsil. There are 343 cattle shed damaged in the Udhampur district.

Table 9: Total relief amount sanctioned under head-2245.

Tehsil Name	Total Relief Amount Sanctioned Under Head-2245
Basantgarh	Rs 14,42,900
Chenani	Rs 79,07,000
Latti	Rs 8,95,300
Majalta	Rs 23,62,900
Moungri	Rs 55,40,400
Panchari	Rs 19,89,200
Ramnagar	Rs 67,71,650
Udhampur	Rs 1,33,90,300
Total	Rs 4,02,99,660

Source: Field Survey (2015)

Interpretation:

The above table depicts that the total relief amount sanctioned was Rs 4,02, 99,660 for Relief material. The maximum amount sanctioned in Udhampur tehsil which was Rs 1,33,90,300 for the Relief material and minimum amount sanctioned in Latti tehsil which was Rs 8,95,300. rescued persons were provided food, shelter, and medical assistance.

CONCLUSION

There was heavy floods experienced in the state of Jammu and Kashmir during the month September – October due to unseasonal raining in J&K. The heavy raining in Udhampur cause flash floods and landslides in many areas. The unseasonal rain cause large destruction in the Panjer and Saddal areas of Udhampur district. Due to this, large number of people lost their life in Pancheri and Moungri tehsil of Udhampur District and also some people lost their belongings. A particular study is carried out in the Udhampur district of Jammu province. There was continuous heavy rainfall which led to rise in the level of water in streams and of course landslides in most of the tehsil in Udhampur district. From the collected data it is observed that the area has 988 Kaccha houses which are fully damaged, 1803 Kaccha houses which are severally damaged and 4661 Kaccha houses which are partially damaged. Also, there are 100 Pucca houses in the district Udhampur which are damaged. About 124 Goats and Sheep, 13 drought animal and 28 milch animals lost their life in the disaster. There are 343 cattle shed damaged in the Udhampur district. Number of NGO work for providing relief and rehabitation services in Udhampur District Eg. Love Care Foundation (LCF) . The Indian Armed Force also helped through search, rescue, relief, relocation, humanitarian assistance and rehabilitation missions in Jammu and Kasmir that is named as operation Sahayata. The effect of flash floods and landslides was so powerful that one can observe its impact even today.

REFERENCES

[1]. Gulia Brig. K.S "Genesis of Disaster" (2004), Kalpaz Publication, New Delhi, India.
[2]. Ghosh G.K "Disaster Management" (2006), A.P.H Publishing Corporation, New Delhi, India.
[3]. Kumar Amit "Disaster Management" (2009), Sonali Publication. New Delhi, India.
[4]. Singh R.B "Disaster Management" (2000), Rawat Publication, New Delhi, India.
[5]. Singh R . B " Natural Hazards and Disaster Management" (2006), Rawat Publication, New Delhi, India.
[6]. State Action Plan on Climate Change-2013: J&K. LANDSAT data from http://earthexplorer.usgs.gov/
[7]. TRMM from: http://nascom.nasa.gov