



RESEARCH ARTICLE

FLASH FLOODS IN JAMMU AND KASHMIR: AN OVERVIEW

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ABSTRACT

A Flash flood is rapid flooding of geomorphic low lying areas, washes rivers, dry lakes and basins flash floods occur due to slow moving thunderstorms, heavy rains, glacial lake, out bursts or due to failure of artificial dams. Flash floods occur in fury and leads to destruction of life and property at a very considerable rate. The loss of precious lives carried off by the floods is a big score with rising number day by day. Markets offices, hospitals, educational institutions, roads etc are sounding feeling of fear, mental uneasiness grief, discomfort and anxiety are so deep rooted caused by disasterous flash floods. Flash floods can impact hundreds of kilometers. These floods mostly occur in steep sloppy valleys in hilly and mountains areas, but can also occur in small waterways in urban environments.

INTRODUCTION

Flash floods, short lived extreme events, which usually occur under slowly moving or stationary thunderstorms, lasting less than 24 hours are a common disaster in the state. As a result of the velocity of the current which can wash away all obstacles in its way, this phenomenon has resulted in enormous loss of life and property in various parts of the region. Kashmir valley flash floods are recurrent problems occurring due to overflowing of embankments and breaching of river channels, horizontal erosion of river basin of Jehlum and flash floods in its tributaries of Doodh Ganga, Romushi, Rambiar, Lliddar, Mudhumati, Pohru and Sukhnag etc. the hazards vulnerability from Anantnag to Srinagar city is due to insufficient carrying capacity of river vis-à-vis very high discharge during floods.

Cause of flash floods in Jammu and Kashmir

The main causes of flash floods in Jammu and Kashmir are briefly described as follows:

Glacial melting:

Glacial melting due to global warming is the main cause of flash floods. The major glaciers in the high mountains are receding at an alarming rate. Glacier in Jammu and Kashmir is receding at a faster rate compared to other glacial regions in the world.

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In Kolhai Glacier of Kashmir situated at Pahalgam is the main source of drinking water and irrigation in valley, during the same period this glacier has receded to about 18% in last 40 years. Climate change is likely to effect a number of sectors, particularly agriculture horticulture and hydro power capacity. Recently, Kashmir valley has witnessed drastic decrease in the snowfall. The reduction of snowfall together with fast receding Glacier has resulted in water scarcity for irrigation and hydropower generation in the last few decades.

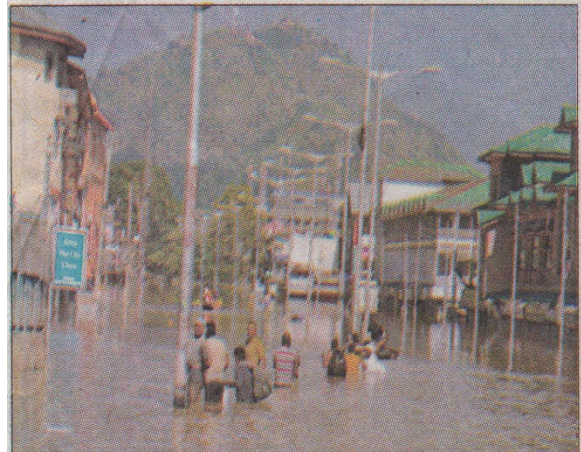
Heavy Rainfall

- The heavy rainfall has caused flash flooding with localized damage across Jammu and Kashmir. This has mainly cause the excessive snow melt in the upper regions of the valley. The average annual rainfall is around 1,000 mm but some areas are excepted to receive more than 2350 mm rain in just four days.
- Normally September is not a rainy season in Kashmir. But during year 2014 heavy rains were received because of interaction between the western disturbances and monsoon currents and its effects seen in all three regions of Kashmir. The weather in Kashmir valley is mainly influenced by the western disturbances originated from the Caspian sea.

Shrinkage of wet lands: The flood vulnerability scenario in the Jehlum basin has worsened during the last few decades as most of the wetland that used to act as sponge during flooding have been urbanized and converted into concrete landscape in the entire Kashmir valley.



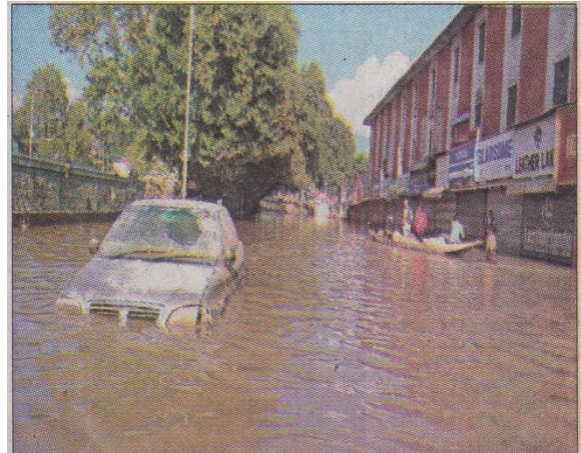
Abiguzar bund stands cracked.



People walk through flood waters near Budshah Chowk in city centre.



A view of a collapsed shed in Chatabal area of the old city.



Submerged car on the once fashionable Residency Road outside Press Enclave.



Devastation in Lambert Lane near the city centre.



A view of Abiguzar bund in Srinagar.

Most of the wetlands and water bodies are fighting a losing battle for their survival. The functionality of wetlands has strong linkage with the hydrological cycle and has got adversely affected due to their encroachments and seasonal changes in the precipitation and run off attributed to the climate change. In and around Srinagar only 20 wetlands have been lost due to urban colonies during the last few decades, particularly in the south of the Srinagar city. Shrinkage of wetlands in Kashmir valley due to urbanization on flood plains and siltation of water courses has degraded the ability of our environment to absorb excessive rain water and this increased the vulnerability of the river Jehlum basin to flooding which is manifested in the frequent flash floods and water logging observed in the flood plains of the Jehlum.

Landslides

The Himalayas are well known for the occurrence of snow avalanches particularly in the western Himalayas i. e: the snowy regions of Jammu And Kashmir, Himachal Pradesh and western U.P. In Jammu and Kashmir high reaches of Gurez valley, Kargil and Ladakh and some of the major roads are highly vulnerable to the landslides.

Impact of flash floods

The impact caused by the recent floods in the valley of Kashmir are varied. Some of the destruction caused is immediately apparent while some subtly threaten existing

structures and the true damage is not seen until some latter time. The large scale impact was found on the agriculture sector in which varied types of crops suffered and got damaged fully. The manufacturing sector as well as the tertiary sector like trade, transportation, communication and services have been adversely affected.

Overview of flash floods

The 2014 Kashmir floods fulfill every criterion for being categorized as the extreme of the extreme floods. The Jhelum water that used to be the provider of life suddenly became a monstrously destructive force against the human life and the infrastructure that cohabit its backyards since millennia. From historical knowledge, this event was unique relative to earlier recorded floods on the Jhelum with almost 1,00,000 cusecs of water gushing down in the Jhelum at Sangam compared to about 80,000 cusecs recorded during the 1928 floods. In the midnight the August 6, 2010 Leh in Ladakh region of J&K received heavy downpour followed by sudden burst, within a span of about two hours, it recorded a rainfall of 14 inches. As many as 234 people were killed and 800 were injured and many went missing. The recent floods have claimed the death of about more than 500 people and rendered thousands of people homeless. The recent floods damaged most of public and private sector in infrastructure including hospitals and schools, thousands of small business establishments that were built over generation have gone. The floods in the valley have also damaged about 272 bridges, 306 foot bridges and 242 approaches to bridges and road infrastructure. The 300 Km long Jammu and Kashmir national Highway was closed for traffic.

Conclusion

After a thorough study it is concluded that the hilly areas like J&K the main cause of floods are melting of glaciers, shrinkage of water bodies, heavy rainfall and large scale landslides.

Flood devastations has lead to eruption of various problems and hindrances which people will have to meet too in any how and governing bodies must have to swiftly and energetically to take care and think for the rehabilitation and reconstruction, welfare, improvement of the affected areas. Only with the help of co-operation provided by the people, "Govt." and "NGO's" and other agencies can secure the adequate use of prevention and mitigation strategies.

REFERENCES

- Dar, G. M Disaster Management – present status and future strategies with special references to J&K Indus instt. Of Management public Administration and Rural development J&K 2008.
- Disaster relief Memorandum for central Assistance 2012. Department of Disaster Management, Government of Utrakhand.
- Draft J&K Disaster Management Policy Published by "Govt. of Jammu and Kashmir 2013".
- Goswami, B.N.V., Venigopal, D., Sengupta, M.S Madhusoodanan and P.K Xavier 2006.
- Greater Kashmir Sept. 22, 2014 Monday. "the 2014 Kashmir Floods" by Shakeelahmad Ramshoo.
- Jammu and Kashmir Economics survey 2013-2014.
- Ruheela Hassan, 2014. disasters in Kashmir. Impact and Response IOSR, *Journal of Humities and Social Science*, Vol. 19, issue 7 (July 2014) PP32
- The Daily Greater Kashmir November 11, 2014.
- Vandana, K. M. and Sri Ram, 2014. flash floods in Jammu and Kashmir *ISJRO-International Journal of Scientific Research and Development*, Vol. 2 PP146-148.
