



## Landslides in Jammu & Kashmir Union Territory: A Data Inventory from the Year 2018 To 2021

Naveen Kumar\* and Priyanka Tyagi\*\*

\*lecturer, Department of Geography, Bhaderwah Campus, University of Jammu

\*\*Guest Faculty, Department of Geography, Bhaderwah Campus, University of Jammu

### ABSTRACT

This article highlights the historical data of landslide hazard events that occurred in Jammu and Kashmir. This is a methodology that helps in understanding the nature of hazards, time & location of occurrences, its impact, and cost of the disaster in an area. This article documents landslide events from September 2018 to April 2021. The account of the frequency and impact of landslide hazards helps in finding out better mitigation measures and draws the attention of decision-makers to build resilience.

**KEYWORDS:** historical data, landslide, Jammu & Kashmir, Mitigation and resilience.

Received 09 May, 2021; Revised: 22 May, 2021; Accepted 24 May, 2021 © The author(s) 2021.

Published with open access at [www.questjournals.org](http://www.questjournals.org)

### I. INTRODUCTION

The Union territory of Jammu and Kashmir witnessed many natural and man-made disaster i.e. landslide, earthquake, floods, forest fire, droughts, and avalanches; since history due to its geological and physical settings causing loss of resources and human lives.

A landslide inventory is hardly created to be complete, despite the huge importance of data-keeping. Data of landslide disaster from 1st January 1982 to 20th August 2018 is given in detail in Multi-hazard Risk Assessment for the UT, Jammu and Kashmir: Data Inventory Report prepared and submitted by RMSI Private Limited, India. According to this report, there were 80 events of landslide in Jammu & Kashmir and proclaimed casualties of around 333 persons. This article presents the occurrence of landslide hazards after September 2018 in Jammu and Kashmir through secondary sources. The Landslide data inventory in this article contains spatial-temporal and its socio-economic impact in the UT.

**Table-1: Landslide Inventory in Jammu & Kashmir from September 2018 to April 2021.**

S. No.	Date of Occurrence	Place of Occurrence	Socio-Economic Impact	
			Causality	Injured
1	17 April 2021	Pathiyal cafeteria morh and Digdol (Ramban)		
2	26 March 2021	Samroli (Udhampur)	01	02
3	23 March 2021	ChanderkoleBanihal (Ramban)	-	-
4	03 March 2021	ShabanbasBanihal (Ramban)	-	-
5	27 February 2021	Ramsoo (Ramban)	-	-
6	09 February 2021	Marog (Ramban)	-	-
7	06 January 2021	Panthiyal, Ramsu, Nashri (Ramban-Udhampur)	-	-
8	19 December 2020	Bhoom, Chanderkot (Ramban)	-	-
9	12 December 2020	Gurmul (Doda)	-	-
10	23 November 2020	Qazikund (Ramban)	-	-
11	07 September 2020	Gand top Basamtgarh(Udhampur)	-	-
12	29 August 2020	DalwasNashriPeedha (Ramban)	-	-
13	25 August 2020	KhaurReasi	04	-
14	20 August 2020	TrishulMorh Battery Chashma (Ramban)	-	-
15	21 May 2020	Panthiyal (Ramban)	-	-

*Landslides In Jammu & Kashmir State: A Data Inventory From Year 2018 To 2021*

16	17 May 2020	Banihal (Ramban)	02	-
17	18 April 2020	Several Places BattoryChashma(Ramban)	-	-
18	05 April 2020	Marrog (Ramban)	-	-
19	27 March 2020	Dalwas Village (Ramban)	-	-
20	04 March 2020	Peera (Ramban)	-	-
21	22 January 2020	Chanderkote (Ramban)	-	-
22	16 January 2020	Digdol Monkey MorhMoumPassiPathjal (Ramban)	-	-
23	08 January 2020	Samroli Cafeteria morh(Udhampur )	-	-
24	25 December 2019	Digdol (Ramban)	-	-
25	15 December 2019	Digdol (Ramban) & Nashri (Udhampur)	02	-
26	15 November 2019	Digdol (Ramban)	-	-
27	09 November 2019	Mahar (Ramban)	-	-
28	11 October 2019	First Bridge (Ramban)	-	-
29	02 August 2019	Nashri (Udhampur)	-	-
30	31 July 2019	Loundna (Udhampur)	01	01
31	29 July 2019	Ramsu (Ramban)	-	-
32	25 May 2019	BattoryChashma (Ramban)	-	-
33	15 May 2019	Digdole (Ramban)	-	-
34	09 May 2019	Digdole (Ramban)	-	-
35	24 April 2019	DharabShalaThathri (Doda)	05	09
36	13 March 2019	BathriBhalleessa (Doda)	-	-
37	17 March 2019	Khari Mahoo (Ramban)	02	03
38	11 March 2019	Kharpura (Ramban)	-	-
39	02 March 2019	Thanpal (Reasi)	-	-
40	26 February 2019	Moum- Pass (Ramsu) Ramban	-	-
41	23 February 2019	PakalDul (Kishtwar)	02	-
42	12 February 2019	Maroog area (Ramban)	-	-
43	08 February 2019	Maroog area (Ramban)	02	-
44	30 January 2019	Anokhi fall (Ramban)	-	-
45	24 January 2021	Jawahar Tunnel area PanthaMagarkote KhoniNallah (Ramban)	-	-
46		Jammu-Srinagar Highway near Bhoom in Chanderkote	-	-
47	20 December 2018	Kharpur, Banihal	-	-
48	15 December 2018	Gangroo (Ramsu)	-	-
49	15 November 2018	Battery Chashma (Banihal- Ramban)	03	-
50	05 November 2018	Rajouri	03	-
51	30 October 2018	Jammu-Srinagar National Highway (Ramban)	01	-
52	20 October 2018	Banihal (Ramban)	-	-
53	09 October 2018	Jammu-Srinagar National Highway (Ramban)	-	-
54	25 September 2018	Gandoh (Doda) and Kathua	5 and 2 Respectively	-

Sources: Details are given in reference in form of links from new papers daily excelsior and times of India.

The District Witnessed around 54 landslide events and casualties of around 35 persons and around 15 people got injured. In total the State, the landslide has claimed almost 368 lives with 134 landslide events. Banihal, Ramban, Doda, Rajouri, Kishtwar, and Udhampur are the places of frequently affected areas due to landslide. This landslide inventory can be used to analyse the behaviour of landslides, factors triggering, and the mitigation processes.

The frequent occurrence of landslide on specific location i.e. Banihal, Ramban, Doda, Rajouri, Kishtwar, and Udhampur specifically along the national-highway; draws attention to continuous loss of financial resources (used for cleaning the road, solving traffic conjunction related issues), and inconvenience to the people. There is a great need for better mitigation practices that can link this reconstruction and rehabilitation with development.

There are Following Practices suggested by Parkash (2019), during the landslide event:

1. During a severe storm, stay alert and awake. Many deaths from landslides occur while people are sleeping.
2. Listen to local news stations on a battery-powered radio for warnings of heavy rainfall.
3. Listen for unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together.
4. Move away from the path of a landslide or debris flow as quickly as possible. The danger from a mudflow increases near stream channels and with prolonged heavy rains. Mudflows can move faster than you can walk or run. Look upstream before crossing a bridge and do not cross the bridge if a mudflow is approaching.
5. Avoid going near river valleys and low-lying areas during heavy rainfall and during high flow of water.
6. If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and notice whether the water changes from clear to muddy. Such changes may mean that there is debris flow activity upstream, so be prepared to move quickly.
7. If you are inside a building during a landslide, hide under a piece of sturdy furniture.
8. Curl into a tight ball and protect your head if escape is not possible.

Important practices should be used in landslide-affected areas which should be done specifically by decision-making authorities are before the construction of road geologists, civil engineers should be involved in detailed study and then construction should be done based on soil type, geological structure, etc. Most landslides occur at one place again and again because the geological structure of that specific location might be disturbed, so first there needs to fix the issues of geological disturbances then reconstruction should be done.

#### REFERENCES:

- [1]. Parkash, S.2019.*Landslide Preparedness Guidelines for Safety of Buildings on Slopes*. National Institute of Disaster Management, Ministry of home Affairs, Government of India.
- [2]. RMSI Private Limited. 2018 .*Multi-hazard Risk Assessment for the State Jammu and Kashmir: Data Inventory Report*. India.
- [3]. <https://thekashmirimages.com/2021/04/17/landslides-close-jammu-srinagar-highway/>
- [4]. <https://www.indiatoday.in/india/story/7-killed-due-to-floods-landslides-in-j-k-1348336-2018-09-25>
- [5]. [https://www.hindustantimes.com/india-news/landslides-on-jammu-srinagar-highway-after-heavy-rains-traffic-suspended/storySDRljZ8VDnTBmjcg8SJKzK.html?utm\\_source=whatsapp&utm\\_medium=social&utm\\_campaign=ht AMP](https://www.hindustantimes.com/india-news/landslides-on-jammu-srinagar-highway-after-heavy-rains-traffic-suspended/storySDRljZ8VDnTBmjcg8SJKzK.html?utm_source=whatsapp&utm_medium=social&utm_campaign=ht AMP)
- [6]. <https://timesofindia.indiatimes.com/india/massive-landslide-blocks-jammu-srinagar-highway/articleshow/66295431.cms>
- [7]. <https://www.newindianexpress.com/nation/2018/nov/05/massive-landslide-blocks-jammu-srinagar-highway-clearance-operation-underway-1894549.html>
- [8]. <https://www.indiatoday.in/india/story/jammu-and-kashmir-highway-closed-due-to-landslide-in-ramban-3000-vehicles-stranded-1619344-2019-11-15>
- [9]. <https://www.ndtv.com/india-news/landslide-hits-jammu-srinagar-highway-hundreds-of-vehicles-stranded-1963119>
- [10]. <https://www.ndtv.com/india-news/jammu-srinagar-highway-reopens-after-traffic-disruption-due-to-landslide-2341126>
- [11]. <https://www.indiatoday.in/india/story/j-k-one-dead-four-injured-landslide-ramban-1480074-2019-03-17>
- [12]. <https://www.indiatoday.in/india/story/landslide-hits-jammu-srinagar-highway-1442317-2019-01-30>
- [13]. <https://jkadworld.com/jammu-kashmir-news/jk-national-highway-traffic-updates-24-jan-2019/>
- [14]. <https://jkadworld.com/jammu-kashmir-news/jk-national-highway-traffic-updates-09-feb-2019/>
- [15]. <https://www.newindianexpress.com/nation/2019/feb/12/fresh-landslides-hit-jammu-srinagar-national-highway-1937784.html>
- [16]. <https://jkadworld.com/jammu-kashmir-news/jk-national-highway-traffic-movement-23-feb-2019/>
- [17]. <https://www.indiatoday.in/india/story/jammu-srinagar-highway-blocked-due-to-landslides-1465079-2019-02-26>
- [18]. <https://m.tribuneindia.com/news/archive/j-k/three-killed-one-injured-in-landslides-in-poonch-reasi-733100>
- [19]. <http://excelsiornews.com/reasi-heavy-landslides-at-thanpal-block-reasi-mahore-road/>
- [20]. <https://www.greaterkashmir.com/news/kashmir/landslide-blocks-jammu-srinagar-highway-as-snow-rains-lash-parts-of-jammu-and-kashmir/?amp>
- [21]. <https://www.indiatoday.in/india/story/landslide-buries-over-three-dozen-shops-in-j-k-doda-1476894-2019-03-13>
- [22]. <https://www.indiatoday.in/india/story/j-k-one-dead-four-injured-landslide-ramban-1480074-2019-03-17>
- [23]. <https://www.thequint.com/news/india/doda-landslide-jammu-and-kashmir-people-killed>
- [24]. <https://www.indiatoday.in/india/story/jammu-srinagar-national-highway-shut-after-landslide-hits-ramban-1520838-2019-05-09>
- [25]. <https://www.greaterkashmir.com/news/latest-news/srinagar-jammu-highway-to-remain-closed-tomorrow-due-to-landslides/?amp>
- [26]. <https://www.greaterkashmir.com/news/latest-news/driver-killed-two-injured-as-landslide-hits-vehicles-in-jks-udhampur/?amp>
- [27]. <https://www.newindianexpress.com/nation/2021/mar/23/snowfall-landslides-shut-j-k-highway-300-vehicles-stranded-2280361.html>