

REPORT

One-day Webinar on

Glacial Lake Outburst Flood (GLOF): An Insight

The Centre of Excellence in Structural Engineering and Disaster Management (CESEDM) at Jaypee University of Information Technology, Wanknaghat organized a one-day Webinar on “Glacial Lake Outburst Floods (GLOF): An Insight” on Saturday, January 29, 2022. The event was inaugurated by Prof. Dr. Ashish Kumar, Head of Department, Civil Engineering and Coordinator of CESEDM, JUIT Wanknaghat. He welcomed all the participants and emphasized on the importance of such sessions which can familiarize the participants with the ongoing research in the field which is a huge part of Disaster Management in mountainous regions such as Uttarakhand and Himachal Pradesh. The participants of the Webinar included students, academicians, and practitioners from the field of Civil Engineering from all across the country. The presenter, Mr. Narendra Kumar Yadav, Chief Engineer (Retd.), Uttarakhand Irrigation Department, introduced the participants with the basics of Glacial Lake Outburst Floods and discussed the case studies and instances from his personal experience from Uttarakhand floods.

The event was coordinated by Dr. Sugandha Singh, Assistant Professor, Department of Civil Engineering, JUIT Wanknaghat. The webinar received an overwhelming response with more than 190 registrations for the event. Among the benefactors were academicians and students from Institutes like IIT Roorkee, IIT Mandi, IIT Hyderabad, IEST Shibpur, NIT Kurukshetra, NIT Calicut, NIT Karnataka, Anna University, G.B. Pant University of Agriculture & Technology; along with practicing Engineers from various Government and Private bodies like LEA Associates South Asia Pvt. Ltd., REC Power Development & Consultancy Ltd., AICA GC Mumbai Metro, Govt. of Andhra Pradesh, etc. All the attendees took active part in discussions and a range of practical problems were discussed with the presenter. The invited speaker expressed his interest in collaborating further with JUIT Wanknaghat. The webinar was concluded by a vote of thanks by the event coordinator. The content of the session was appreciated by the participants as highlighted by the positive feedback.

Event Photos:

REC N Narendra Kumar Yadav is presenting

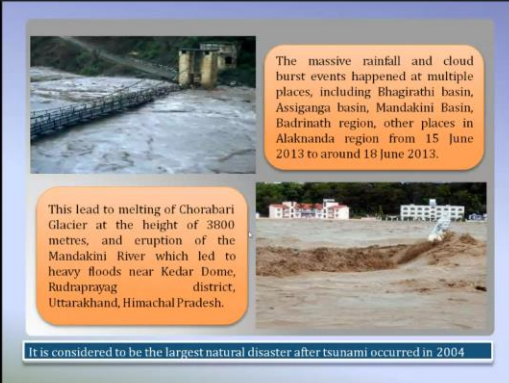
What exactly took place on the night of June 16 ?

- There was rainfall of 120 mm in 24 hours before the flash flood of June 16 at Kedarnath.
- The town and the glacier above are 3 km apart. As there is no automatic weather station there, the data has been collected from satellite.
- There is evidence that a small lake was formed during the rains above Kedarnath town.
- The lake must have lasted for a short duration. It was a 100 square hectare lake which contained 10 million litre of water.
- The water that collected in the lake came down along with the water from the glacier.
- The lake burst due to a breach in the blockade that formed its boundary. Coupled with heavy rain in the area, this caused flash floods.
- It is because of the lake that there was excessive stream run-off and a third channel was formed.

11:36 | Webinar on Glacial Lake Outburst Flood (...)

Participants: Narendra Kumar Y..., Sanjay Kushwaha, AMRIT RAJ, fayaz mir, kiran sobti, 73 others, Ashish Kumar, Mohan Raju, You

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The massive rainfall and cloud burst events happened at multiple places, including Bhagirathi basin, Assiganga basin, Mandakini Basin, Badrinath region, other places in Alaknanda region from 15 June 2013 to around 18 June 2013.

This led to melting of Chorabari Glacier at the height of 3800 metres, and eruption of the Mandakini River which led to heavy floods near Kedar Dome, Rudraprayag district, Uttarakhand, Himachal Pradesh.

It is considered to be the largest natural disaster after tsunami occurred in 2004

11:40 | Webinar on Glacial Lake Outburst Flood (...)

Participants: Narendra Kumar Y..., Sanjay Kushwaha, NISHI GUPTA, AMRIT RAJ, fayaz mir, 69 others, Ashish Kumar, Mohan Raju, You

REC N Narendra Kumar Yadav is presenting





Figure : Chorabari lake after disaster (Field photograph)

11:49 | Webinar on Glacial Lake Outburst Flood (...)

Participants: Narendra Kumar Y..., AMRIT RAJ, Ashish Kumar, Sanjay Kushwaha, 72 others, fayaz mir, mayank harda..., Mohan Raju, You

REC N Narendra Kumar Yadav is presenting

RAMBARA, AFTER DISASTER



11:50 | Webinar on Glacial Lake Outburst Flood (...)

Participants: Narendra Kumar Y..., Ashish Kumar, Sanjay Kushwaha, Mohan Raju, AMRIT RAJ, 72 others, You, mayank harda...

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GLOF PREVENTION METHODS

- Artificial deepening of the natural spillway.
- Blasting the moraine dam.
- Inclined drilling through the moraine dam.
- Driving a tunnel from an adjacent deeper lying valley (Norwegian Method).
- The hydraulic syphon technique (HST)

11:57 | Webinar on Glacial Lake Outburst Flood (G...)

Participants: Narendra Kumar Y..., Ashish Kumar, Sanjay Kushwaha, Mohan Raju, Manoranjon Paul, 73 others, You, mayank harda...

REC N Narendra Kumar Yadav is presenting

GLOF - MONITORING & EARLY WARNING SYSTEM

C-DAC's GLOF Early Warning System for Sikkim State

- Through extensive research, C-DAC has deployed India's first GLOF Early Warning System for Sikkim to predict GLOFs, which will help the Government authorities in case of an impending GLOF event. The GLOF Early Warning System has the following capabilities:
- Water Level Sensors developed indigenously by C-DAC, has been deployed at Shakho Chho Glacial Lake, North Sikkim.
- The near-real time sensors transmit data through INSAT satellite to control centre at Gangtok (SSCST).
- The flood simulation model runs the simulation for various GLOF scenarios. The model is capable of presenting Flood Simulation, Inundation information and Flood Arrival Time, in the event of a glacier lake outburst flood.

12:08 | Webinar on Glacial Lake Outburst Flood (...)

Participants: Narendra Kumar Y..., Ashish Kumar, Sanjay Kushwaha, Mohan Raju, Manoranjon Paul, NISHI GUPTA, 69 others, You, fayaz mir

Show desktop

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Narendra Kumar Yadav

70 others

You

In-call messages

Let everyone send messages

Messages can be seen only by people in the call and are deleted when the call ends.

Radhikesh Prasad Nanda 12:08
How tunnel ll work whn glacier is loaded with hevly rain..if it works, won't it be choked?

Ashish Kumar 12:09
in processing and compiling data of event, after that we will issue certificate

Send a message to everyone

12:11 | Webinar on Glacial Lake Outburst Flood (G... 