SAARC Disaster Management Centre (IU)

NEWS LETTER

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Content

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Director's Message

Dear Readers,

I am delighted to share with you the latest updates from SDMC (IU) as we continue our unwavering commitment to fostering a culture of disaster resilience in our region.

In recent months, we have been dedicated to organizing impactful virtual workshops aimed at addressing pressing challenges faced by our communities. Our recent Virtual Workshop on "Integrated Flood Risk Management" provided a comprehensive framework for flood risk mitigation strategies, laying the groundwork for more resilient communities in the face of flooding events.

With the encouragement and feedback from all stakeholders, we have meticulously planned several upcoming workshops that emphasise the importance of adopting a comprehensive and inclusive approach to address disaster risks.

In the latest edition of our newsletter, we delve into updates regarding various significant events and developments. Specifically, we cover the recent workshop on Integrated Flood Risk Management, the celebration of the 39th SAARC Charter Day, insights from the G20 Disaster Risk Reduction Working Group (G20DRRWG), recent seismic activities in Afghanistan, and the occurrences of GLOF events in India. Let's explore each of these topics to gain a comprehensive understanding.

We invite you to explore the content of our newsletter and hope that you find it insightful and informative. Your support and engagement are crucial as we strive to create a safer and more resilient future for all.

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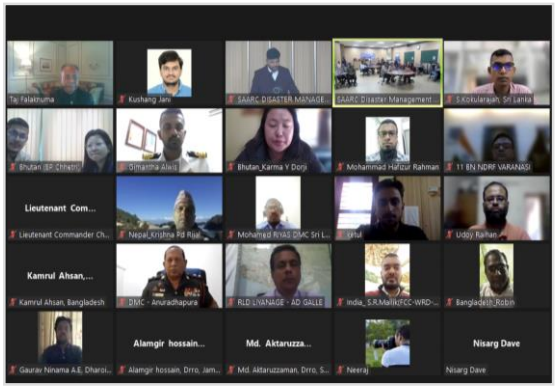
Virtual Workshop on Integrated Flood Risk Management



The SAARC region is facing multiple compounding and cascading crises simultaneously. The ongoing presence of climate change is fundamentally altering the landscape of disaster risks. With the latest climate projections from the 6th IPCC Assessment Report, even the slight variance between 1.5 and 2 degrees Celsius holds significant consequences. Each fractional increase correlates with amplifies and unequal effects, particularly evident in heightened heavy rainfall and flooding across the SAARC region. Acknowledging the imperative for joint action to curb flood risks and strengthen disaster preparedness, the virtual Workshop on 'Integrated Flood Risk Management', was organised from 08-11 December, 2023. Throughout the workshop, discussions centred on climate-induced flood-risks, drawing from Nepal's firsthand encounter with GLOF events. Participants explored integrated flood risk management, discussing its various components and evaluation methods. Insights were gleaned from experiences such as the Kedarnath floods (2013), Kerala Floods (2013) of the same year, fostering a platform for sharing good practices and lessons learned.

Celebration of 39th SAARC Charter Day

The 39th SAARC Charter Day was observed on the 8th of December 2024, during the virtual workshop on Integrated Flood Risk Management, to commemorate the signing of the Charter one the 8th of December in 1985 by the leaders of the Seven South Asian Countries - Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. SAARC was joined by the Afghanistan as a Member in the month of April, 2007. Director (SDMC) extended his warmest wishes and appealed the Member States and their people to reaffirm their commitment to make SAARC more Disaster Resilient.

G20 Disaster Risk Reduction Working Group (DRRWG): Outcome document and potential opportunities

Curtain Raiser Event held at Gujarat Institute of Disaster Management (GIDM), Gandhinagar

Under India's presidency, first time G20 Disaster Risk Reduction (DRR) Working Group (DRRWG) was institutionalised as noted by UNGA res. 77/289 which prioritised five action areas and prepared a road map for 2023 to 2025. They are as follows:

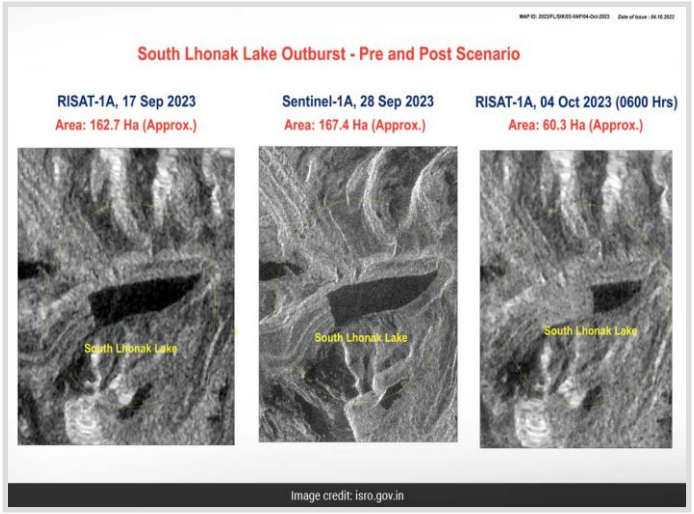
- Global Coverage for Early Warning System
- Disaster and Climate Resilient Infrastructure
- Financing Frameworks for Disaster Risk Reduction
- Disaster Recovery, Rehabilitation and Reconstruction
- Nature based Solutions and Ecosystem based Approach for Disaster Risk Reduction

The action areas poised to facilitate anticipatory actions from government and private entities, ensuring swift assistance to vulnerable communities during disasters, even in hard-to-reach areas. Investments in critical infrastructure and disaster risk finance are crucial tools for governments in addressing emerging macroeconomic problem and economic instability. The imperative of "Build Back Better" resonates strongly as a means to enhance the resilience and livelihoods of disaster affected countries like Afghanistan and Turkey, drawing valuable lessons from past calamities. With the upcoming presidencies of Brazil (2024) and South Africa (2025), it is anticipated that a comprehensive roadmap will be developed and implemented to address these pressing issues.

G20 Disaster Risk Reduction Working Group (DRRWG) has received invaluable support from esteemed knowledge partners including the United Nations for Disaster Risk Reduction (UNDRR), the Risk-Informed Early Actions Partnership, Coalition for Disaster Resilient Infrastructure, Asian Development Bank, International Recovery Platform (IRP), National Disaster Management Authority (NDMA) of India, among others. This collaborative effort underscores the importance of collective action and knowledge sharing in building resilience and mitigating disaster risks globally.

Devastating Impact: Glacial Lake Outburst Flood (GLOF) in Sikkim

On 4th October, 2023 Glacial Lake Outbursts Flood (GLOF) took place in North Sikkim's South Lhonak lake. GLOF resulted in deaths of almost 100 people and several went missing including Indian Army personnel. Apart from human loss, it destroyed the Chungthang dam on River Teesta. Almost 105ha was drained out. The temporal satellite images (before and after) captured by RISAT 1 satellite gives an idea of the pre and post scenario.

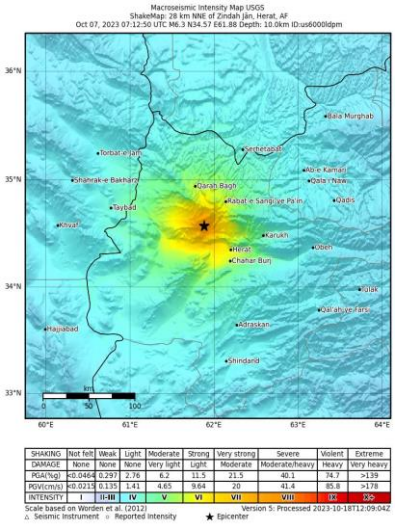


By definition, a GLOF is created when water dammed by a glacier or a moraine is released suddenly. Some of the glacial lakes are unstable and particularly moraine dammed lakes are potentially susceptible to sudden discharge of large volumes of water and debris which causes floods downstream i.e. GLOF. Several agents like buildup water pressure, earthquake, avalanche of rocks, heavy rainfall, melting of snow, collapse of an adjacent glacial lake. It led to travelling of highly mixtures of water and sediment posing high risk to people's life and infrastructure. It is a matter of concern that climate change and associated increased instability of high mountain slopes may have exacerbated such processes and associated extreme flows.

Studies refer to more than 9,575 glaciers in Indian Himalayan Region ranging from Union Territory of Jammu-Kashmir, Union Territory of Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh. The state of Sikkim in India hosts 10% of glacial lakes and has more than 25 high risk lakes present in districts of Mangan, Gangtok, Pakyong and Namchi. The greatest threat of GLOF is to hydel project causing damage to critical infrastructure.

National Disaster Management Authority (NDMA), India has launched Glacial Lake Outburst Flood (GLOF) Risk Mitigation Program. Under this, NDMA installed two solar powered twin camera, Automated Weather Station (AWS) at two high risk glacial lakes, South Lhonak and Shak Cho in Sikkim and later it will be extended to all high risk glacial lakes. The stakeholders involved are NDMA, Government of Sikkim, Indian Army, Indo - Tibetan Police Force (ITBP), Swiss Agency for Development & Co-operation.

Unveiling Afghanistan's Earthquake Nightmare: Reflections on Three Deadly Quakes



Source: Earthquake Hazards Program, USGS

In October, 2023 Afghanistan witnessed 3 earthquakes killed atleast 2000 people and injured more than 1000 people in Western Afghanistan i.e. Zendeh Zeh, Herat, Badghis & Farah Province, etc. The three earthquakes occurred at October 7 (6.3 magnitude), October 11 (6.3 magnitude) and October 15 (6.4

magnitude) respectively. As per OCHA, 43,395 people (7,165 families) are affected in areas like Injil, Kushk, Zindajan, Gulran, Herat and Koshan. UN bodies and humanitarian agencies are providing required assistance, food supply, shelter, etc.

In this issue, let's delve into the basics of earthquake and why Afghanistan had been repeatedly struck by devastating seismic events in 1998, 2002, 2015, 2002 and most recently in 2023. Simply put, an earthquake occurs when there is a sudden slip on a fault. Foreshocks are the smaller slips preceding the main earthquake. It then continues to adjust with small slips called aftershock after the event. Afghanistan's geographical location places it on multiple fault lines of Eurasian plate, Arabian plate and Indian plate.

In the western part of the country, Arabian plate subducts under the Eurasian plate, while in the south, the Arabian and Indian plate converges and subducts northwards under the Eurasian plate. Active fault systems like Chaman fault and Main Pamir faults contributes to numerous aftershocks. All the recent earthquakes in Afghanistan have been characterised by reverse faults, leading to the collapse of various villages. The impact of these seismic events extends beyond Afghanistan's borders, with tremors felt across northern India. Given the fragile ecosystem of Hindu-Kush, it is crucial to establish early warning system. Such a system would benefit not only Afghanistan but also its neighbouring countries like Afghanistan, Pakistan, India, Nepal, Bhutan, Myanmar and China, helping mitigate the potential impact of future earthquakes.

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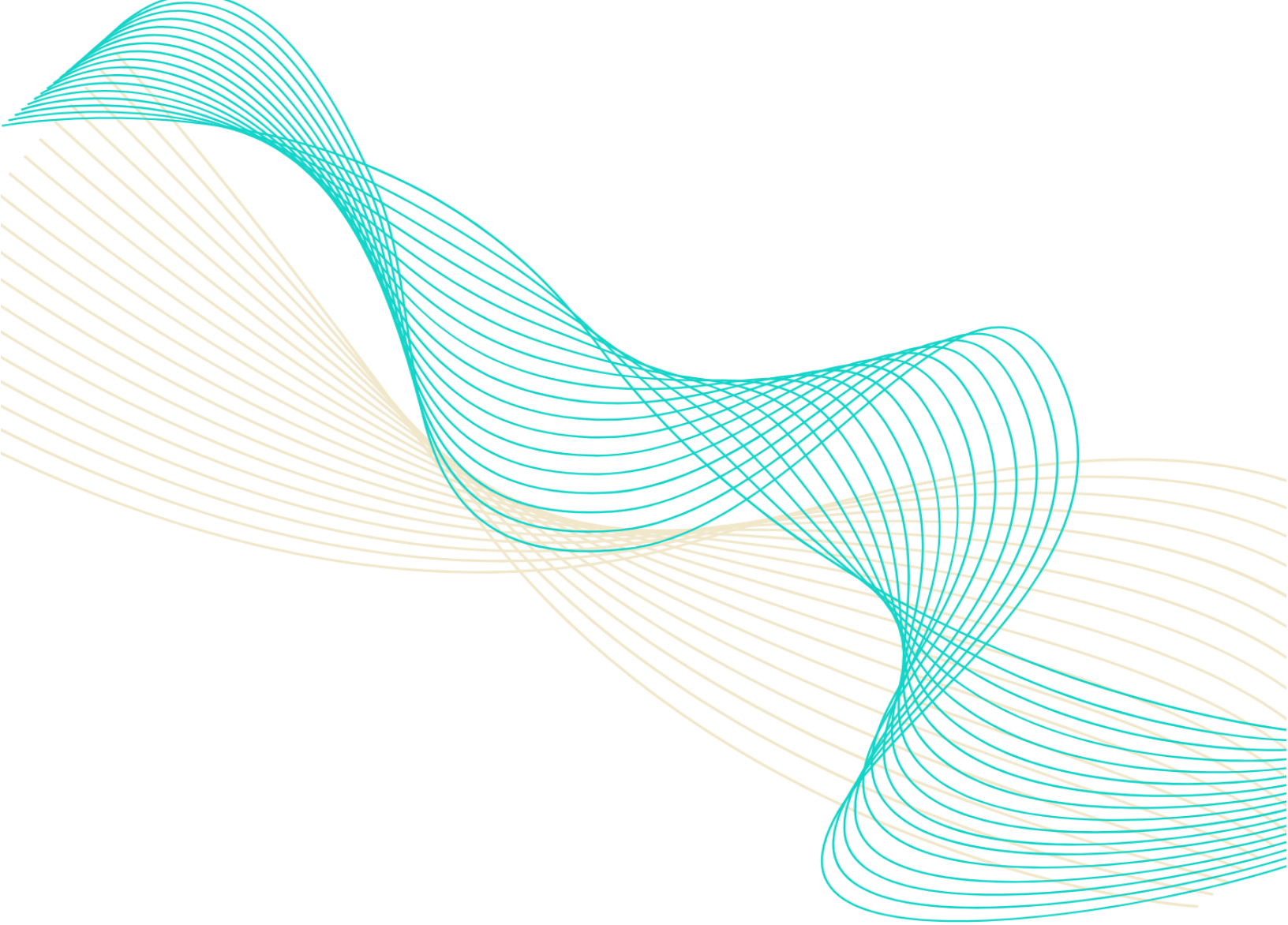

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