

## Press Release

## IIT Bhubaneswar among the winners of National Grand Challenge for Glacial Lake Outburst Flood (GLOF) Mitigation

**Bhubaneswar, 3<sup>rd</sup> March 2025:** In a significant achievement, Indian Institute of Technology (IIT) Bhubaneswar has secured Second Runners-Up Position in the recently concluded HIMASHIELD 2024 Grand Challenge, organized by C-DAC (Centre for Development of Advanced Computing), Thiruvananthapuram, under Ministry of Electronics and Information Technology research initiatives. The competition aimed to develop innovative and sustainable indigenous solutions for Glacial Lake Outburst Flood (GLOF) mitigation.

The CryoSense Team consisting of Dr. Ashim Sattar, Dr. Sudipta Saha, Dr. Debajyoti Biswas, Abhinav A, Kattamuri Mohan Krishna, Kartick Cherukuri of IIT Bhubaneswar received a Trophy and cash prize of Rs 2 lakh on the occasion of National Science Day. The award ceremony was presided over by Ms. Sunita Verma, Scientist G & Group Coordinator, R&D, MeitY. Dr. Kalai Selvan A, Director, C-DAC, Thiruvananthapuram, Shri. Arvind Kumar, CCA, MeitY were present on this occasion.

The IIT Bhubaneswar team (Cryosense) presented their groundbreaking solution, "GLOF EWS: Deployment and Integration of LoRa IoT Devices at Glacial Lakes and Dissemination of GLOF Warning through an Android App." The project offers a pioneering approach to early warning systems (EWS) for GLOF events, leveraging cutting-edge technology to safeguard communities vulnerable to such disasters.

The team was led by Dr. Ashim Sattar, Assistant Professor at IIT Bhubaneswar, who is one of the leading experts in GLOF both in India and internationally. Commenting on the significance of the project, Dr. Sattar said, "It is high time to work towards GLOF mitigation and integrate the latest technology in building resilience of the GLOF-exposed communities and infrastructure." Dr. Sattar is heading the "Cryosense Lab" at IIT Bhubaneswar dedicated to working towards glacier hazards and risk reduction.

The project focuses on utilizing LoRa IoT devices for monitoring glacial lakes and providing real-time data on potential flood risks. This data is transmitted and processed via a mobile Android application, which alerts relevant stakeholders about the possible occurrence of a GLOF event. By leveraging the Internet of Things (IoT), the system ensures timely dissemination of alerts to mitigate disaster risks.

This achievement reflects IIT Bhubaneswar's commitment to applying technology towards solving real-world problems. The institute's focus on innovation, sustainability, and resilience has once again been proven through this high-impact project, which has the potential to transform GLOF mitigation efforts worldwide.