

Agenda

Date: 23 - 26 September 2024

Venue: ICIMOD, Kathmandu, Nepal

Day 1: Foundations and Current Research Open to all at ICIMOD 23 September 2024		
Time	Agenda	Remarks
09:00 AM – 09:20 AM	Registration	
09:20 AM – 09:30 AM	Plenary: Welcome remarks	Arun Bhakta Shrestha , Strategic Group Lead, SG-1: Reducing Climate and Environmental Risks, ICIMOD / Neera Shrestha Pradhan , Action Area Coordinator, AA-A : Managing cryosphere and water risks
09:30 AM – 10:10 AM	Inventorying Rock Glaciers: Insights from the IPA Action Group	Shelley MacDonnell & Benjamin Robson
09:10 AM – 10:50 AM	Automating Rock Glacier Inventories with Machine Learning	Daniel Thomas
10:50 AM – 11:10 AM	Tea/Coffee Break	
11:10 AM – 11:50 AM	Evaluating the Reliability of Landform Mapping via Machine Learning	Sunil Tamang
11:50 AM – 12:30 PM	Monitoring Permafrost in the Ladakh Himalaya	A.P. Dimri
12:30 PM – 01:30 PM	Lunch Break	
01:30 PM – 02:10 PM	Using Satellite and UAV Data for Glaciers and Rock Glacier Characterisation	Benjam Robson (Ben)
02:10 PM – 02:50 PM	Role of GMRC-WAPDA in Monitoring Glaciers in Karakoram Region Pakistan	Hammad
02:50 PM – 03:10 PM	Tea/Coffee Break	
03:10 PM – 03:50 PM	Permafrost Research Activities at ICIMOD	Prashant
03:50 PM – 04:30 PM	GLOF and Permafrost Association	Sonam Rinzin
04:30 PM – 05:00 PM	Overall discussion	All
Day 2: Collaborative Opportunities and Field Insights 24 September 2024		

9:00 AM – 10:00 AM	Discussion topic How can we better link remote sensing observations of permafrost landforms to understand permafrost processes and permafrost degradation?	All
10:00 AM – 11:00 AM	Discussion topic What level of accuracy or precision is necessary for the machine learning based inventories of permafrost landforms such as rock glaciers for understanding the state of permafrost? How do issues of AI trustworthiness and reliability impact a wider understanding of the state of permafrost?	All
11:00 AM – 11:20 AM	Coffee/Tea Break	
11:20 AM – 12:30 PM	Discussion topic How can the field and remote sensing-based observations on permafrost used to understanding the changing risk of geohazards related to permafrost degradation?	All
12:30 PM – 01:30 PM	Lunch Break	
01:30 PM – 02:30 PM	Discussion topic Extending the scope of machine learning studies	All
02:30 PM – 03:30 PM	Discussion topic How applicable are the RGIK guidelines and methods for High Mountain Asia?	All
03:30 PM – 03:50 PM	Tea/Coffee Break	
03:50 PM – 04:30 PM	Discussion topic What are the needs of permafrost/rock glacier inventories in High Mountain Asia compared to other world regions? What possibilities are there for future funding for collaborative projects?	All
04:30 PM – 05:00 PM	Discussion topic Possibility of joint field visits or exchanges of students?	All

Day 3: SAR and InSAR Applications - Part 1 Open to all at ICIMOD 25 September 2024		
09:00 AM – 10:00 AM	Principles of radar imaging	Ben & Sonam W
10:00 AM – 11:00 AM	Introduction to SAR and InSAR techniques	Ben & Sonam W
11:00 AM – 11:20 AM	Tea/Coffee Break	
11:20 AM – 12:30 PM	Applications of SAR/InSAR in observing permafrost dynamics	Ben & Sonam W
12:30 PM – 01:30 PM	Lunch Break	
01:30 PM – 02:30 PM	Hands-on exercises to manipulate SAR data	Ben & Sonam W
02:30 PM – 03:30 PM	Techniques to assess terrain effects on radar signals	Ben & Sonam W
03:30 PM – 03:50 PM	Tea/Coffee Break	
03:50 PM – 05:00 PM	Strategies for automating data processing workflows within SNAP	Ben & Sonam W
Day 4: SAR and InSAR Applications - Part 2 Open to all at ICIMOD 26 September 2024		
09:00 AM – 10:00 AM	Step-by-step guidance on interferogram creation	Ben & Sonam W
10:00 AM – 11:00 AM	Techniques for topographic phase removal	Ben & Sonam W
11:00 AM – 11:20 AM	Tea/Coffee Break	
11:20 AM – 12:30 PM	Integration of SAR data with geographic visualization tools	Ben & Sonam W
12:30 AM – 01:30 PM	Luch Break	
01:30 PM – 02:30 PM	Introduction to time-series analysis in permafrost research	Ben & Sonam W
02:30 PM – 03:30 PM	Practical exercises on velocity mapping	Ben & Sonam W
03:30 PM – 03:50 PM	Tea/Coffee Break	
03:50 PM – 05:00 PM	Discussions on interpreting and applying the results to permafrost monitoring	Ben & Sonam W