Agenda

Day 1

Time (PKT)	Programme
09:00–09:30	Registration
09:30–10:00	**Inaugural session** Tilawat (Recitation) of Quran Majeed Welcome remarks – **Ghulam Muhammad Ali**, Chairman, PARC Opening remarks –**Liaqat Al**, Director, NCEG Overview of ICIMOD's cryosphere capacity building program in Pakistan – **Sher Muhammad**, Remote Sensing Specialist, ICIMOD
10:00–10:30	Group photo and Tea/Coffee break
10:30–11:00	Introduction to Cryosphere, past, present, and future changes – **Sher Muhammad,** ICIMOD
11:00–11:30	Status of Cryosphere Research in Pakistan –**Arshad Ashraf**, Principal Scientist, PARC
11:30–12:00	Cryosphere, Climate change impacts, and policy implications –**Shaukat Ali,** Senior Scientific Officer**,** GCISC
12:00–12:30	Present status of permafrost research in the HKH region – **Prashant Baral**, Cryosphere Analyst, ICIMOD
12:30–13:30	Lunch break
13:30–14:15	Introduction to glacier mass balance methods – **Sharad Joshi,** Cryosphere Analyst, ICIMOD
14:15–15:00	Parameters and sensors for permafrost monitoring (examples from Nepal Himalayas) - **Prashant Baral,** ICIMOD
15:00–15:30	Tea/Coffee break
15:30–16:00	Introduction and Basics of GPS– **Sher Muhammad,** ICIMOD
16:00–17:00	Hands-on Exercise on GPS/differential GPS – **Sher Muhammad,** ICIMOD

Day 2

Time	Programme
09:00–09:30	Installation of GIS/R tools – **Sher Muhammad,** ICIMOD Data analysis
09:30–10:00	Cryosphere hazards and related early warning system in UIB – **Adnan Shafiq Rana**, Meteorologist, PMD & **Muhammad Atif Wazir**, Deputy Director, PMD
10:00–11:00	Mapping glaciers using Remote sensing techniques– **Sher Muhammad,** ICIMOD Hands-on Exercise
11:00–11:15	Tea/Coffee break
11:15–12:00	Permafrost: Key Concepts and Modelling Tools –**Prashant Baral,** ICIMOD

12:00–12:30	Hands-on exercise on permafrost probability distribution modelling in Google Colab – **Prashant Baral,** ICIMOD
12:30–13:30	Lunch break
13:30–14:30	Continue Hands-on exercise on Permafrost probability distribution modelling in Google Colab –**Prashant Baral,** ICIMOD
14:30–15:00	Glaciers monitoring in Afghanistan, Bhutan, and Nepal – **Sharad Joshi,** ICIMOD
15:00–15:30	Tea/Coffee break
15:30–17:00	Practical session on field data processing and analysis – **Sharad Joshi,** ICIMOD Hands on Practice

Day 3

09:00–09:30	Snow monitoring in UIB – **Hammad Ali**, Glaciologist, WAPDA
09:30–10:30	Remote sensing snow datasets and its applications– **Sher Muhammad,** ICIMOD
10:30–11:00	Tea/Coffee break
11:00–12:30	Installation of R, RStudio, Snow data downloading, processing, and analysis – **Sher Muhammad,** ICIMOD; **Prashant Baral,** ICIMOD Hands-on Exercise
12:30–13:30	Lunch Break
13:30–15:30	Group work (Snow, Glaciers, Permafrost) – **Sharad Joshi,** ICIMOD; **Sher Muhammad,** ICIMOD; **Prashant Baral,** ICIMOD Group presentations
15:30–15:45	Tea/Coffee Break
15:45-16:00	Post-training survey form
16:00–17:00	Participants' reflections on the training, closing remarks, and certificate distribution
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