# Springshed management for water security and resilience

Part I: Understanding springshed management

# Agenda

Time	Session		Trainer	Moderator	Facilitator/ Coordinator		
DAY 0 – 24 August							
10:00-10:15	Opening remarks (overview of the programme, collaborative rules, parking lot)		Kanchan Shrestha	Sanjeev Bhuchar	Govinda Shrestha		
10:15-10:45	Getting to know each other		Prakash Thapa	Kanchan Shrestha			
10:45-12:00	Introduction to online training guideline (technology, process; software) Q/A		Rajesh Bahadur Thapa/ Gunanidhi	Sanjeev Bhuchar			
DAY 1 - 25 Aug	gust						
10:00-10:10	Session 1A: Opening	Welcome remarks	David Molden DG, ICIMOD	Sanjeev Bhuchar	Kanchan Shrestha		
10:10-10:20		Opening remarks	Badri Dhungana, DDG, DoFSC				
10:20-10:40	Session 1B: Setting the context	Springshed management in the context of IRBM and watershed management	DoFSC: TBC	Arun Shrestha			
10:40-11:15	Session 1C: Objectives of the course and expectations	Objectives of the course	Karishma Khadka	Rajesh Bahadur Thapa	Jayesh Desai		
11:15:12:00		Expectations of participants & sharing Pre-assessment results	Rajesh Bahadur Thapa	Karishma Khadka			
DAY 2 – 26 August							
10:00-10:45 Session 2A: Concepts of spring and springshed management	<b>Concepts of springs</b>	Introduction to springs: Rational and relevance in the context of Himalayas	Himanshu Kulkarni	Madhav Dhakal	Jayesh Desai/ Kanchan Shrestha		
	management	Understanding springshed management and how it is different from watershed management					
10:45-11:15	Session 2B: Introduction to Governance and Gender	Basic concepts of gender in the context of springshed management	Aditya Bastola	a Suman Bisht			
11:15-11:45		Importance of governance and gender issues in management of freshwater resources					
11:45-12:00	Recap of Day-2		Sanjeev Bhuchar	Suman Bisht			

## DAY 3 - August 27

10:00-10:45	Session 3A: Six-step protocol for spring revival	Introduction to six-step protocol for spring revival in the Hindu Kush Himalaya	Karishma Khadka	Jayesh Desai	Sanjeev/ Kanchan	
10:45-11:15	Session 3B Case studies	Case study on implementation of six-step protocol	Madhav Dhakal			
11:15-12:00	Session 3C: Basics of geology	Basic concepts on Geology	Gunanidhi Pokhrel			
Afternoon sess	on					
16:00-17:00	Session 3D: Basics of geology and hydrogeology	Groundwater resources of Nepal	Surendra R. Shrestha	Gunanidhi Pokhrel	Jayesh Desai	
DAY 4 - 28 Aug	ust					
10:00-10:15	Recap of Day-3		Participants	Madhav Dhakal	Gunanidhi Pokhrel	
10:15-11:00	Session 4A: Basics of geology and hydrogeology	Basic concepts of hydrogeology for springshed management	Jayesh Desai	lmran Siddique		
11:00-12:00	Session 4B: Water quality aspects	Assessing and interpreting spring water quality	Karishma Khadka			
Afternoon sess	on					
16:00-17:00	Session 4C: Discussion	Recap by Jayesh - 15 min Q and A; 30 min Recap by Mentimeter - 10 Assignment - 10 min	Rajesh Thapa		Jayesh Desai/Imran Siddique	
DAY 5 – 31 August						
	Recap		Participants (recap and select			
10:00-11:00	Session 5A: Step 1 of Springshed protocol	Comprehensive mapping of springs and springsheds	Jayesh Desai	Gunanidhi Pokhrel	Imran Siddique	
11:00-12:00	Session 5B: Step 2 of Springshed protocol	Setting up a data monitoring system	Madhav Dhakal	lmran Siddique	Jayesh Desai	
Afternoon session						
16:00-17:00	Session 5C: Experience sharing by participants	Presentations on their work (linking with springshed steps)	Milan Bhattarai and Gangaram Sah	Uddhaw Ghimire	Madhav Dhakal	
DAY 6 – 1 September						
	Recap					
10:00-11:00	Session 6A: Step 3 of Spring revival protocol	Gender and social inclusion with focus on gender analysis	Suman Bisht	Aditya Bastola	Sanjeev Bhuchar/ Kanchan	
11:00-12:00	Session 6B: Step 3 of Spring revival protocol	Exercise on gender analysis	Indira Mulepati	Suman Bisht	Shrestha	

### DAY 7 – 2 September

10:00-10:15	Recap of Day-4,5 and 6		Participants	Aditya Bastola	Imran	
10:15-11:15	Session 7A: Step 4 of Spring revival protocol	Hydrogeological mapping process	Jayesh Desai	Karishma Khadka	Siddique	
11:15-12:00	Session 7B: Step 4 of Spring revival protocol	Development of conceptual layout and identification of recharge area	Imran Siddique	Gunanidhi Pokhrel	Jayesh Desai	
Afternoon sess	ion					
16:00-17:00	Session 7C: Experience sharing by participants	Presentations on their work (linking with springshed steps)	Prabhat Pal and Uddhaw Ghimire	Madhav Dhakal	lmran Siddique/ Jayesh Desai	
DAY 8 – 3 Septe	ember					
10:00-10:45	Session 8A: Step 4: Spring revival protocol- Hands on exercise	Demonstration on plotting field data and identification of recharge area based on conceptual layouts	Jayesh Desai	lmran Siddique	Gunanidhi Pokhrel	
10:45-12:00	Session 8B: Spring revival protocol- Hands on exercise	Participants to enter field data, prepare geological map and draw hydrogeological layouts for recharge area delineation	Jayesh Desai Karishma Khadka	Madhav Dhakal/ Kanchan		
		area delineation	Gunanidhi Pokhrel	Rajesh Thapa/ Sanjeev/ Ram Singh Thapa		
			Imran Siddique	Singh mapa		
Afternoon sess	ion					
16:00-17:00	Session 8C: Hands-on exercise	Participants to discuss any difficulty in plotting and analysing the data	ICIMOD and ACWADAM	Rajesh Thapa	Madhav Dhakal	
DAY 9 – 4 September						
10:00-11:15	Session 9A: Step 4: Identifying recharge areas	Demonstration on plotting field data and identification of recharge area based on conceptual layouts (take-home assignment given)	Jayesh Desai and Gunanidhi Pokhrel	Sanjeev Bhuchar		
11:15-12:00	Session 9B: Step 4: New methods for identifying recharge areas	Recharge area identification with isotopic analysis	Ram Singh Thapa	Jayesh Desai		
Afternoon session						
16:00-17:00	Session 9C: Step 6 of spring revival protocol	Measuring impacts of spring revival activities - Technical impacts and Social impacts	Dr. Himanshu Kulkarni	Madhav Dhakal	lmran Siddique	

### DAY 10 – 7 September

10:00-12:00	Session 10A: Step 4: identifying recharge areas	Discussion on the assignment - Analysis - 3 participants - 30 min - troubleshoot on the hands-on exercise: 3 participants - 1.5 hours	Jayesh Desai and Gunanidhi	lmran Siddique		
Afternoon Sess	sion					
16:00-16:30	Session 10B: Step 5 of Spring revival protocol	Identifying potential measures for recharge and springshed management (technical and social)	Madhav Dhakal	Sanjeev Bhuchar		
16:30-17:30		World Overview of Conservation Approaches and Technologies (WOCAT) – linking to springshed management	Madhav Dhakal	Sanjeev Bhuchar		
DAY 11 – 8 Sep	otember					
10:00 - 10:15	Recap	Pasang Tamang and Prales Basnet and Sushma Giri		Sanjeev Bhuchar		
10:15 - 11:00	Session 11 A:	From GESI perspective - Moving beyond bio-physical to understand the measures that are socially inclusive-easy to learn and replicate such as issues of cost-effectiveness, sustainability	Sanjeev Bhuchar	Suman Bisht		
		5 min break				
11:00-11:30	Session 11 B: Communicating springshed management with communities	Gender friendly communication	Debabrat Shukla / Suman Bisht		Rajesh Thapa	
11:30-12:00		Community manual for springshed management/3D model	Madhav Dhakal/ Sanjeev Bhuchar		Rajesh Thapa	
Afternoon session						
16:00-16:30	Session 11C: Case studies and Training assessment	Case study from India	Jayesh Desai	lmran Siddique	Gunanidhi Pokhrel	
16:30-17:00		Assessment of the training by participants	Rajesh Bahadur Thapa	Karishma Khadka		
DAY 12 – 9 September						
10:00-11:00	Session 11A: Putting learning into practice	Participants prepare action plans (concrete, link to in-person training)	Prakash Thapa	Sanjeev Bhuchar	Jayesh Desai/Imran	
11:00-12:00		Participants share plans in plenary	Prakash Thapa + DOFSC	Suman Bisht	Siddique	

Afternoon session

15:30-16:00	Session 11B: Evaluation and Closing session	Feedback on capacity self- assessment by the participants (participants sharing the experience) Post-training questionnaire	Rajesh Bahadur Thapa/ Sanjeev/ Jes	Madhav Dhakal	Karishma Khadka/ Gunanidhi Pokhrel
16:00		Recap of training	Debabrat Shukla	Sanjeev Bhuchar	
16:15-17:00		E-certificate Remarks by participants Remarks by Himanshu Kulkarni, ACWADAM Remarks by Eklabya Sharma, Deputy Director General, ICIMOD Vote of thanks - Kanchan Shrestha, ICIMOD, and Prakash Thapa, DoFSC Closing remarks by Badri Dhungana DDG, DOFSC	DoFSC, ICIMOD and	d ACWADAM	