Day 3 – Thursday, 21 November 2019

Time	Programme
08:00–17:00	Fieldwork
	Panauti Hydropower Station
	Rapid assessment: Upstream–downstream
	Biological and freshwater ecosystem assessment
	Water quality assessment
	Upstream–downstream linkages and interface

Day 4 – Friday, 22 November 2019

Time	Programme
09:00–09:30	Field observation – Recap and presentation
09:30–11:15	Case analysis and role play (Participants will be given 1–2 cases on hydropower and freshwater assessment.) **Moderator:** Laxmi Dutt Bhatta, ICIMOD
11:15–11:30	Tea break
11:30–13:00	Data analysis, formatting, and reporting (based on case study and field observation) **Moderator:** Laxmi Dutt Bhatta, ICIMOD
13:00–14:00	Lunch break
14:00–15:45	Interactive session: Approval process, assessment checklist, report quality assurance and synergy with other components **Moderator:** Salil Devkota , NESS
15:45–16:00	Tea break
16:00–16:30	Certificate distribution, closing, and feedback – Sunita Ranabhat, ICIMOD

Participants will depart from Dhulikhel on 23 November 2019.

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Assessing freshwater ecosystems for sustainable hydropower development in Nepal

19–22 November 2019
Dhulikhel, Nepal

Background

The Government of Nepal has recently endorsed a hydropower environmental impact assessment manual as a guiding document for environment impact assessment (EIA), in line with international good business practices in the hydropower sector. With the endorsement of the manual, an in-depth capacity assessment and gap analysis has been carried out in Nepal's hydropower sector, with particular focus on EIA.

To strengthen the capacity of stakeholders in hydropower EIA, the International Centre for Integrated Mountain Development (ICIMOD) is organizing a four-day training programme, including a field visit to the Panauti Hydropower Station. in collaboration with the Forest Research and Training Centre (FRTC) – Ministry of Forests and Environment (MoFE), the Norwegian Water Resources and Energy Directorate (NVE), the International Finance Corporation (IFC), and Kathmandu University (KU). The training will cover the assessment of freshwater ecosystems for sustainable hydropower development in Nepal. The participants will include EIA practitioners and approval authorities, hydropower consultants and investors, and representatives from relevant government offices.

Objectives

This training workshop will provide in-hand assessment tools and procedures on assessing freshwater ecosystems as part of EIA in the hydropower sector. The specific objectives include the following:

- Improve theoretical and practical understanding of integrated water resource management
- Equip participants with tools and procedures for collecting and analysing data on water quality and aquatic life
- Discuss upstream–downstream interlinkages and hydropower impact on downstream ecosystems

Programme agenda

Participants will travel by bus from the FRTC in Babarmahal to Dhulikhel at 15:00 on Monday, 18 November 2019.

Day 1 – Tuesday, 19 November 2019

Time	Programme
08:00–08:30	**Registration and networking**
08:30–09:00	**Opening remarks** • Megh Nath Kafle, Director General, FRTC, MoFE • Subodh Sharma, Registrar, KU • NVE representative • Eklabya Sharma, Deputy Director General, ICIMOD Introduction to and objectives of the technical training workshop – Laxmi Dutt Bhatta, ICIMOD
09:00–09:30	Group photo and tea break
09:30–10:45	Overview of the EIA process in Nepal: Policies, acts, and regulations – Jwala Shrestha, MoFE
10:45–12:15	Creating a sustainable hydropower sector in Nepal: Social and environmental safeguards (national and international requirements) – Salil Devkota, Nepal Environmental and Scientific Services (NESS)
12:15–13:30	Lunch break
13:30–14:45	Overview of the freshwater ecosystem approach in EIA for hydropower: Norwegian experiences – Ingrid Haug, NVE
14:45–15:00	Tea break
15:00–16:30	Environmental flows: Concepts, tools, and applications – Vishnu Prasad Pandey, International Water Management Institute (IWMI)

Day 2 – Wednesday, 20 November 2019

Time	Programme
09:00–10:15	Case studies on aquatic biodiversity assessment/freshwater ecosystem assessment • Upper Trishuli – Salil Devkota, NESS • Case from Norway – Ingrid Haug, NVE • Jhimruk Hydropower Project – Deep Narayan Shah, Tribhuvan University (TU)
10:15–11:15	Invertebrates: Assessment and protocol – Subodh Sharma, KU
11:15–11:30	Tea break
11:30–12:45	Standardized protocols for fish sampling and monitoring developed for the Trishuli basin: Survey for fish/fish ladder – Deep Narayan Shah, TU
12:45–13:45	Lunch break
13:45–15:00	The Paani Program's contribution to conservation of aquatic biodiversity: Lessons from three river basins of western Nepal – Deepak Rijal, USAID Paani Program
15:00–15:30	Tea break
15:30–17:00	Methods of assessing water quality and recommendations – Sunil Babu Khatri, NESS