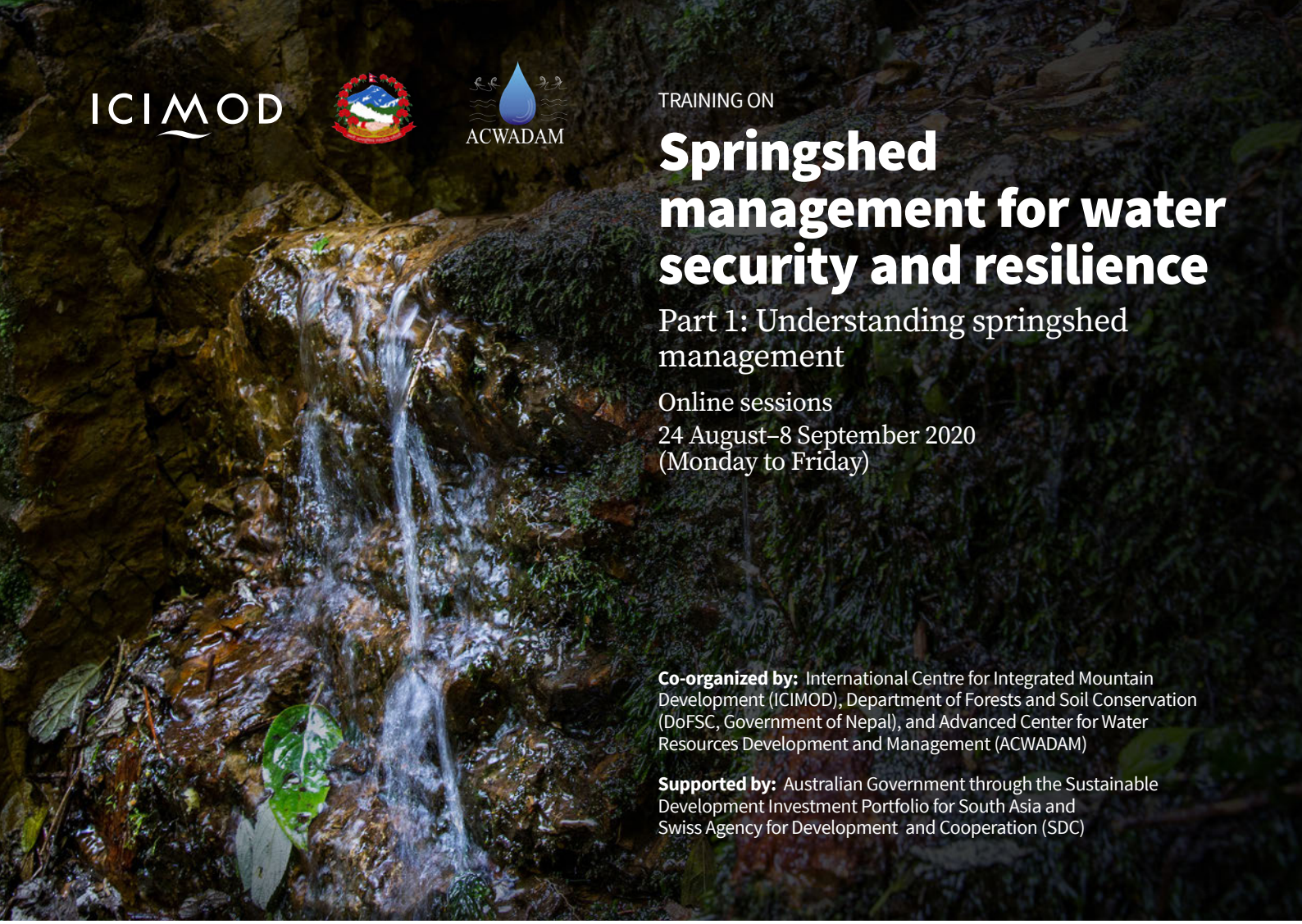


TRAINING ON

Springshed management for water security and resilience

Part 1: Understanding springshed management

Online sessions
24 August–8 September 2020
(Monday to Friday)

Co-organized by: International Centre for Integrated Mountain Development (ICIMOD), Department of Forests and Soil Conservation (DoFSC, Government of Nepal), and Advanced Center for Water Resources Development and Management (ACWADAM)

Supported by: Australian Government through the Sustainable Development Investment Portfolio for South Asia and Swiss Agency for Development and Cooperation (SDC)

Background

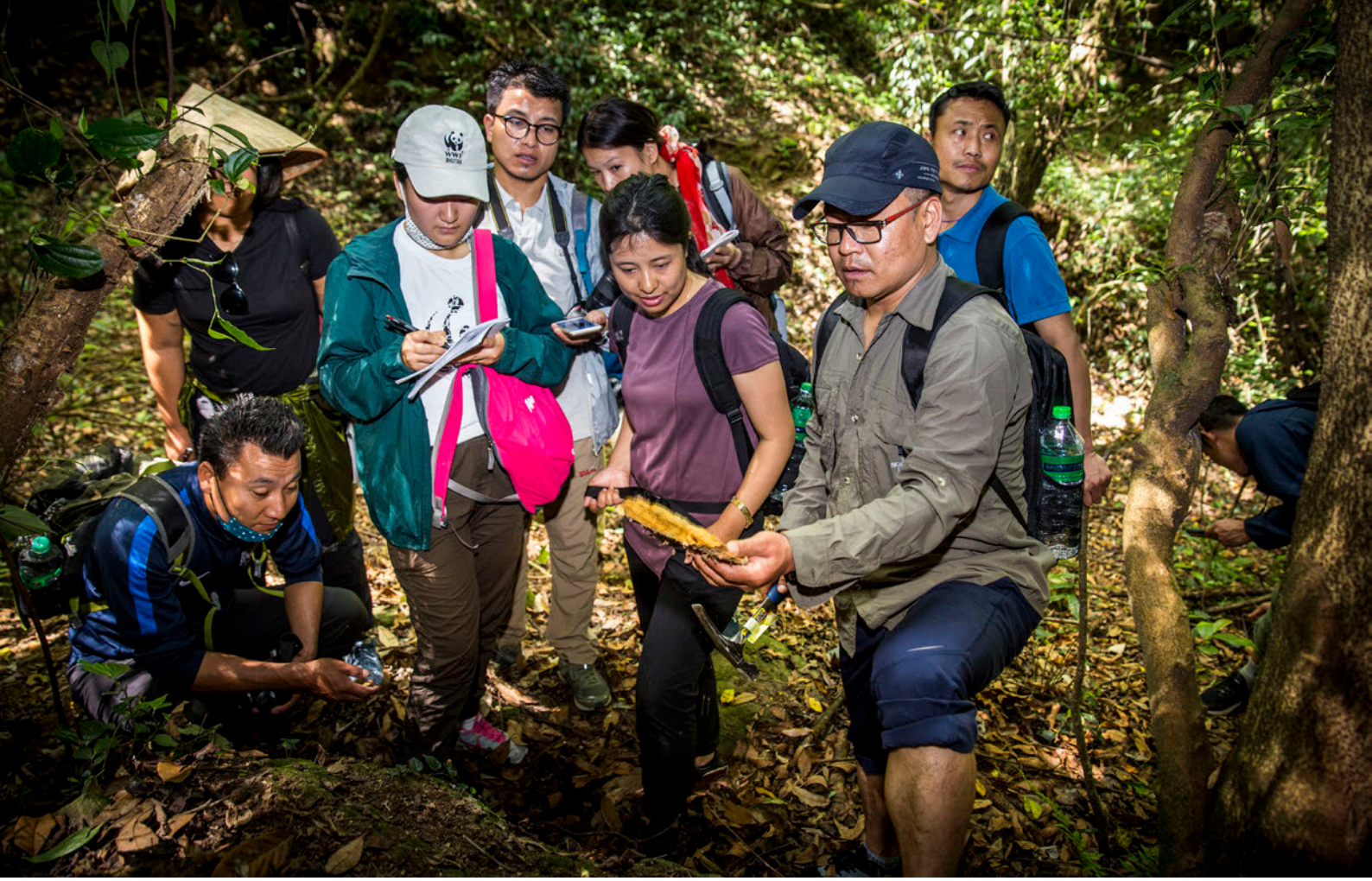
As a part of the ongoing collaboration between the DoFSC and ICIMOD on strengthening integrated river basin management, improving access to water through land resource management has been identified as an area of focus. As institutional capacity building on springshed management has been prioritized under this focus area, a training programme on the subject – to be conducted in two parts – is being jointly organized.

Efficient river basin management is vital for sustainable development in Nepal. The sectoral approach to the management of land and water ecosystems has led to the achievement of only narrow objectives of individual projects, at times with unintended consequences that have widened gender and social inequalities. Addressing environmental issues requires the inclusion of women and men and the marginalized, partnerships among different stakeholders, coordination between horizontal and vertical layers of government, public awareness, and enhanced institutional capacity.

The Integrated River Basin Management (IRBM) approach incorporates these wide-ranging requirements and improves coordination of stakeholders at different scales and from different sectors – leveraging Nepal's federal structure – so that water resources can be managed efficiently. To advance the IRBM approach, the government has already established river basin management offices for all the major river basins of the country. These new institutional structures aim to bring coordination among relevant stakeholders and institutions for a collective and integrated approach to managing resources.

The mainstreaming of the IRBM approach and its integration into government structures and planning is encouraging for spring revival and springshed management initiatives, since springs directly influence streams, rivers, lakes, and other surface water bodies into which they discharge. Any change in spring hydrology has ramifications on river hydrology.

The majority of households in the hills and mountains of Nepal are dependent on springs, which are part of groundwater systems, for their drinking, domestic use, religious rituals, and cultural and agricultural needs. Many water supply schemes in towns and cities are also connected to springs. Like in other countries of the Hindu Kush Himalayan region, there is increasing evidence of reducing discharge or drying of springs in



Nepal. This can be attributed to natural and anthropogenic factors such as variability of rainfall, earthquakes, landslides, infrastructure development, degradation and loss of traditional ponds and wetlands, deforestation and other land use/land cover changes, and lack of spring management systems.

Deterioration of spring water quality is also a growing concern in many places. Depletion of these resources has led to acute water stress among mountain communities, bringing new challenges and hardships especially for women and children, who bear the primary responsibility of fetching water in these areas. Spring revival and springshed management is therefore vital to ensure present and future water security in these regions.

Watershed management programmes in Nepal support spring development activities, mostly through the watershed "ridge-to-valley" approach. Most water conservation programmes in Nepal and elsewhere have been built around the watershed concept, but it does not account for groundwater, which travels from one watershed to another through rock beds that dip towards an adjoining watershed.

The "valley-ridge-valley" approach is an innovative springshed management approach being practised in the Himalayan region for reviving springs. Its design is centred on the concept of a springshed – the unit of land where rain falls (recharge area), accumulates and moves inside the surface (aquifer), and then emerges at discharge points (the spring). This approach identifies spring recharge areas with the help of hydrogeological analyses and social and governance assessments. It also includes women and marginalized groups in participatory roles and decision making, along with multistakeholder and intersectoral collaboration. The approach focuses on enhancing institutional, individual, and community capacity.

The following are the outcomes envisioned for institutional capacity building on gender-responsive springshed management:

Short term (until mid-2021)

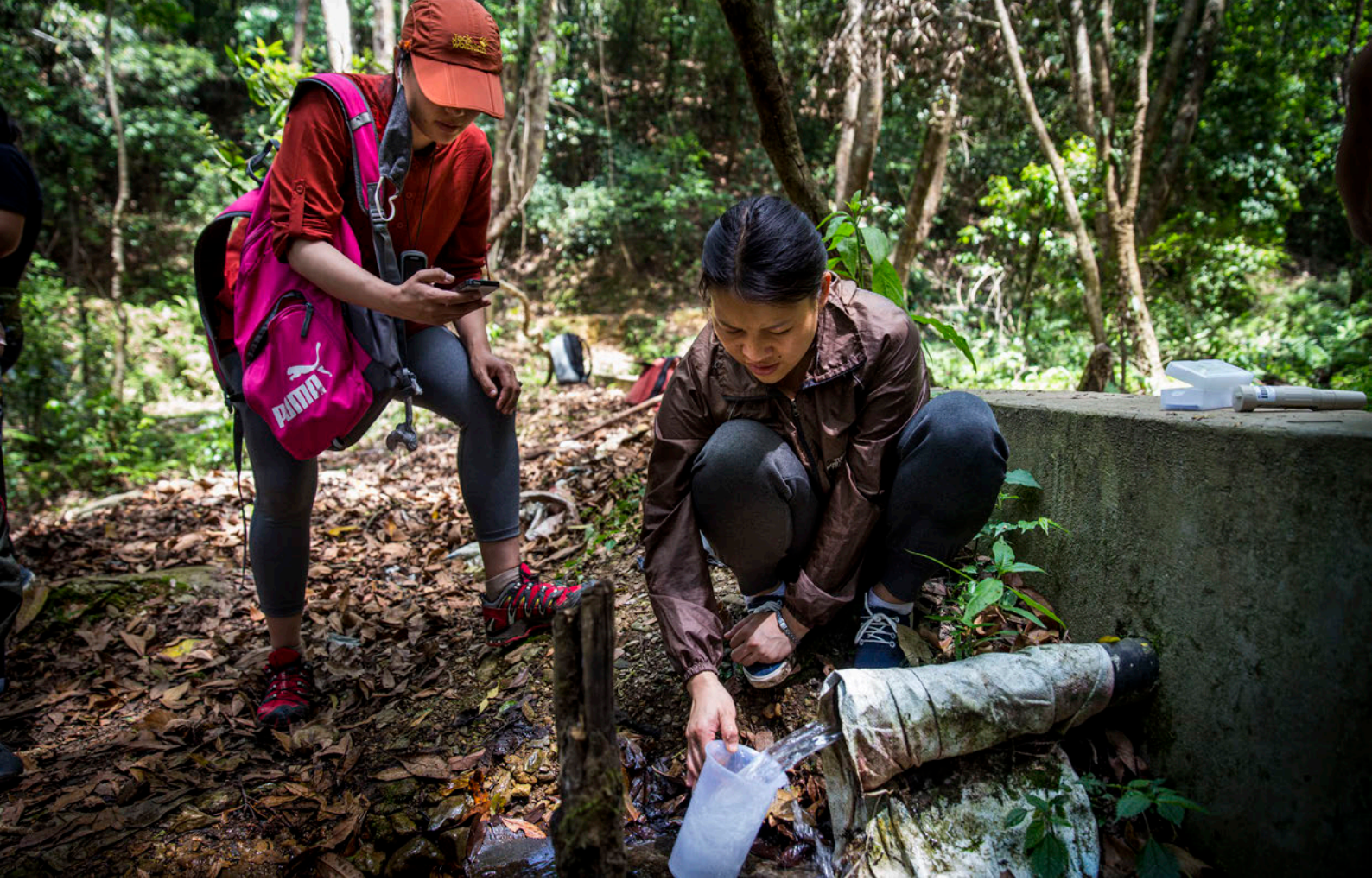
Strengthened capacity for gender-responsive and inclusive springshed management of government and non-government partners

Medium term

Gender-responsive and inclusive springshed management activities initiated by government partners and closely monitored and evaluated by decision makers and community members or end-users

Long term

Institutionalization of springshed management into plans and practice



Part 1: Understanding springshed management

With the outbreak of the global COVID-19 pandemic, this interactive training on institutional capacity building on springshed management will be adapted and organized accordingly. Part 1 will consist of entirely online sessions focusing on expanding understanding on common concepts and computer-based tools. Part 2 will focus on the application of these concepts and tools through in-person field practice, which is expected to help participants pilot springshed management in their own working area.

Target participants

Around 15 participants are being targeted for the training. Participants will include staff who will be identifying recharge areas and recharge measures for springs for a range of government bodies: DoFSC, Basin Management Center, Provincial Government and Soil Conservation and Watershed Management Office, Forest Research and Training Center, Watershed Resource Management Center, and selected municipalities. All efforts will be made to ensure at least 35% women's participation in the training.

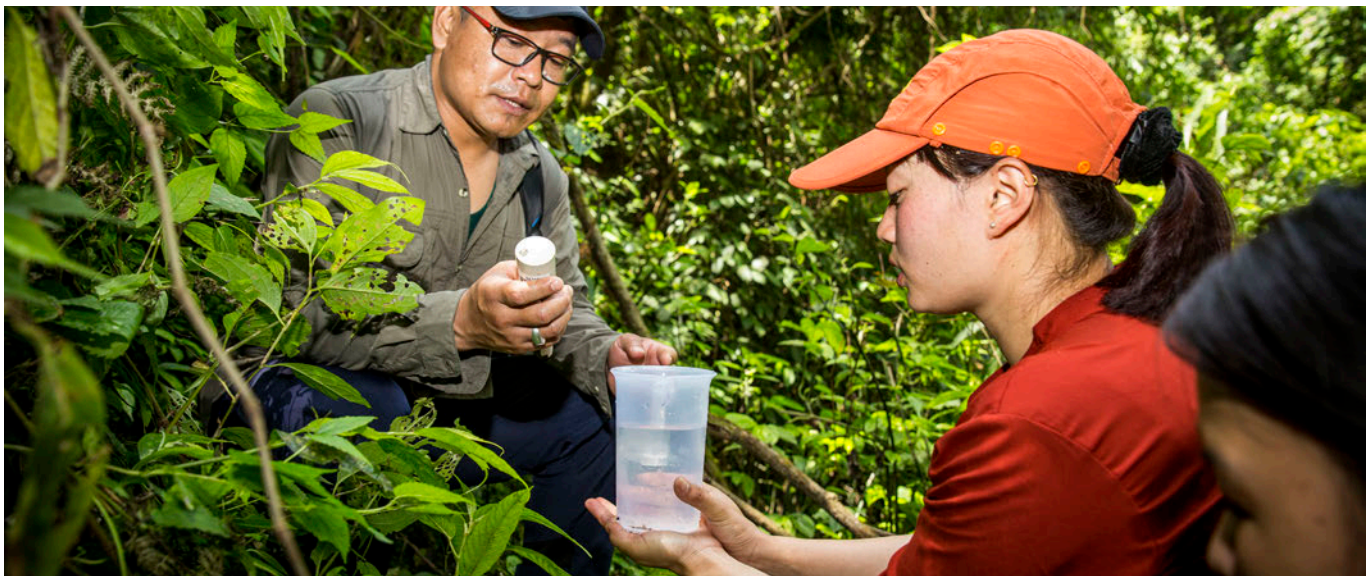
Participants are expected to have a basic understanding of hydrogeological processes, recharge areas and discharge points, and potential measures to augment spring discharge and springshed management, taking into account gender, social, and governance aspects. The training will provide comprehensive knowledge on all relevant aspects of springshed management, especially in the context of the mid-hills of Nepal.

Target groups

Participants with different expertise will be targeted to promote peer learning. For instance, participants could be specialists in hydrology, hydrogeology, GIS, gender equality and social inclusion, forestry, soil conservation, or watershed management.

Training approach

The training is based on an interactive training approach combining lectures, group works, illustrations and demonstrations, and active participation. This allows enhanced understanding of springshed management through listening, seeing, experience sharing, and trying. Participants will be encouraged to use their experience and background expertise to contribute to the training programme.



Training outcomes

At the end of the training, the participants will:

- Understand the six-step springshed management process
- Have a basic understanding of hydrology, hydrogeology, social and governance aspects of springshed management; be able to identify recharge areas based on hydrogeological conceptual layout; be able to discuss potential technical and institutional measures for reviving springs
- Understand the importance gender equality and social inclusion in springshed management
- Recognize the role and relevance of springs in ecosystem management and sustainability
- Be able to begin piloting springshed management activities in their own area or become future resource persons

Online training modality

The training will be conducted through 12 sessions of 2 hours each from 10:00 to 12:00 and five sessions of 1 hour each from 16:00 to 17:00 on consecutive days (Monday–Friday) through an online platform. This will include the following:

- Pre-training orientation on the online platform, software installation, and pre-training assessment
- Presentations, discussions, and demonstrations on springshed management
- Next steps, closing, certificates, and post-training assessment
- Three to five sessions of one hour or less in the afternoon where participants share their experience/ presentations, group work presentation, etc.
- Self-reading or very short tasks or quizzes following the morning session
- Following the online training, a two-day in-person field practice session (Part 2 of the training programme) has been tentatively planned towards the latter half of the year
- Language of instruction:
  - Speaking: primarily Nepali
  - Written (such as presentation slides, handouts, assignment instructions): English
  - Group work assignments can be in Nepali

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