Research needs for Nepal's Midhills spring management

Issues	Research needs
Lack of representative rainfall data	• Assess regional scale rainfall trends in Nepal's Midhills. • Locate appropriate global remote sensing rainfall dataset and assess its suitability for different regions within the Midhills. • Evaluate the effectiveness of a low-cost open-source sensor network. • Collate and disseminate site specific rainfall data from different developmental projects. • Assess dominant controls on local rainfall patterns. • Use citizen science approaches for localized rainfall data collection.
Hydrogeology	• Assess dominant recharge mechanisms in different geological stratum across the Midhills. • Study pre and post-monsoon stream-aquifer interactions. • Integrate stream-aquifer modelling to assess ongoing and long-term repercussions of climate change. • Evaluate how nature-based approaches/community reforestation can revitalize spring flows.
Socio-economic considerations	• Provide fair and equitable access for women and other vulnerable groups. • Assess power dynamics within the communities for accessing spring sources in times of water scarcity and abundance. • Assess upstream-downstream water use patterns and their effects on spring flow. • Study spring (clean water SDG 6) and other SDG interactions in the Midhills area. • Estimate the societal and environmental costs and benefits of sustaining springs in the near and long term. • Document and compile good practices.