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Ecosystem based adaptation planning in Nepal's mountain ecosystem

Abstract:

Nepal has many unique and rich ecosystems. The Panchase Mountain Ecosystem (PME) located in Western Nepal is an enchanting landscape that offer spectacular views of some of the highest Himalayan peaks including Annapurna, Dhaulagiri and Nilgiri besides being rich in socio-cultural practices and indigenous local knowledge. The PME was selected as one of the three global sites for piloting mountain Ecosystem-based Adaptation (EbA) with an aim of strengthening ecosystem resilience by reducing the vulnerability of communities and building local institutional capacities. This paper describes how vulnerability and impacts assessment (VIA) was used of assess the impact of both climatic and nonclimatic changes on ecosystem services and local livelihoods. The focus was to plan human-centric adaptation strategies and action plans in order to develop a sustainable ecosystem management. The approach defined 32 socio-economic, ecological, biophysical and institutional indicators to assess vulnerability of the PMES. Finally through participatory visioning and shared learning dialogue, a number of EbA options were identified that included the following components: (i) mainstreaming climate resilience in eco-tourism; (ii) integrated management of ecosystem services, especially water, forest and non-timber forest products; (iii) enhancing livelihood opportunities; (iv) promoting conservation agriculture; (v) wildlife management through habitat protection and improvement of habitats; and (vi) building local human resource capacities and skills. These options aim to support local communities to increase the resilience of their personal, community and public assets and also provide benefits to downstream urban communities in terms of clean water, food, energy and human security.