

Rapid Assessment of Ecosystems and Their Services in Large Cardamom Growing Areas in Taplejung, Nepal



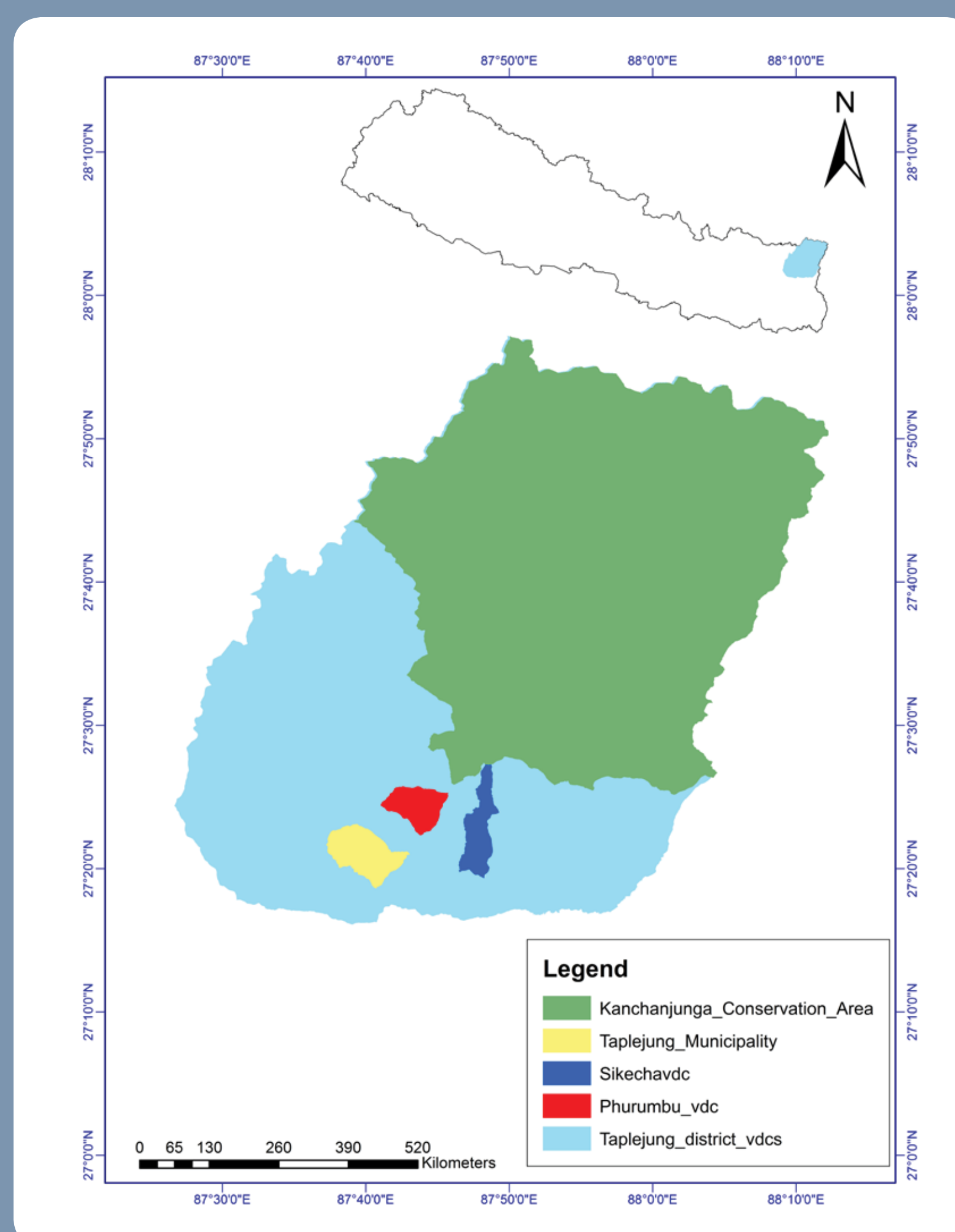
Introduction

Mountain ecosystems provide multidimensional (ecological, socio-cultural, and economic) benefits to human society. Yet their importance is not adequately recognized.

An assessment was undertaken to understand the state, dynamics, and value of major ecosystems and their linkages to human wellbeing. The results will contribute to the mainstreaming of knowledge into planning and development strategies.



Study sites, research framework, and methodology



Study Sites

The study was carried out in Taplejung Municipality, Phurumbu VDC, and Sikecha VDC of Taplejung District, eastern Nepal.

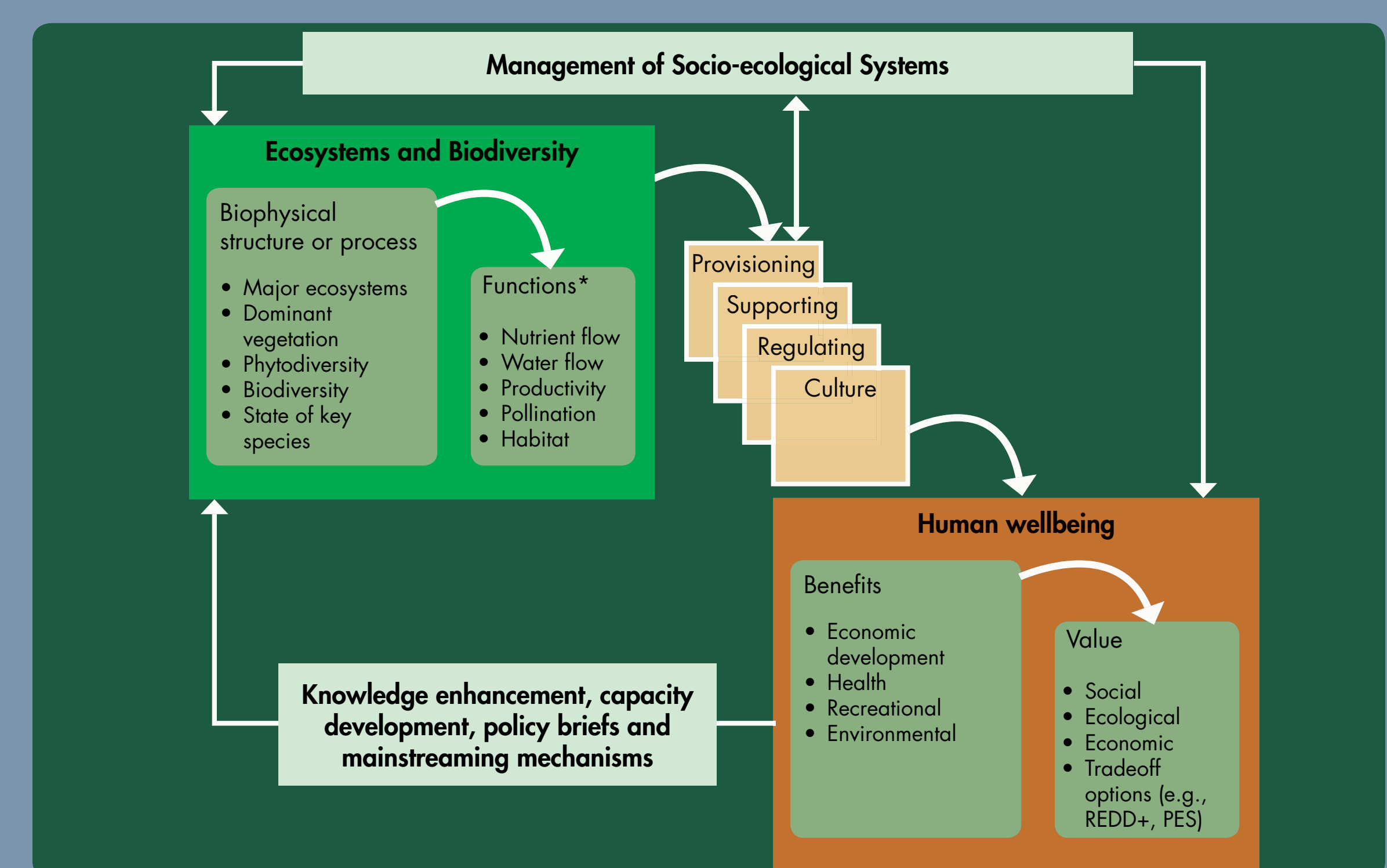
Research Framework

The Ecosystem Services Cascade Framework was adopted and modified for this study to rationalize the importance and significance of ecosystem services to human wellbeing. It allows the prioritizing and focusing of elements of each of the compartments: ecosystems and biodiversity, ecosystem services, and human wellbeing.

It considers elements from each of the compartments with logical linkages necessary for developing associations between ecosystem services and human wellbeing.

Methodology

A number of participatory tools like resource mapping, mobility mapping, seasonal calendar, focus group discussions, stakeholder analysis, institutional mapping, pair wise rankings, and historical time lines were used. A household survey was conducted along with land use and land cover change analysis using geographic information system (GIS) and remote sensing (RS) to understand the state and dynamics of ecosystems and their linkages to human wellbeing in the study sites.



Key findings and recommendations

- Among the three ecosystems identified, communities are highly dependent on agro-ecosystem, which provides the highest number of provisioning services, followed by forest and freshwater ecosystems. However, all three ecosystems are contributing to the livelihoods of the local people.
- A majority of farmers have shifted from traditional crop cultivation practices to more profitable cardamom based agro-forestry practices. Such practices are contributing to household level cash income generation. In the past 12 months, market fluctuations in the price of cardamom and poor production have been major issues. Farmers have taken loans and sold livestock in order to cope.
- Eighty six percent of households are willing to pay in cash or in kind for the proper management of their surrounding ecosystems and services, provided the funds are channeled through the local community.
- Both nature and religion based eco-tourism are significant due to the presence of the Pathivara Temple and the trekking route to Mount Kangchenjunga.

