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## Climate change mitigation and adaptation roles of forests: A case from Charnawati watershed in Nepal

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Climate change poses challenges to human being. Forestry sectors of developing countries can play role in both mitigation of climate change and adaptation capacity of vulnerable communities. Now, both mitigation and adaptation roles of forests in addressing climate change have been taken into consideration in climate change related discussions and literatures. There are several forest management practices found in developing countries. Assessment of possible roles of forests in addressing climate change and possible issues to be considered while designing forests based climate change adaptation and mitigation projects is important. In this context, overarching goal of this paper is to evaluate carbon sequestration and climate change adaptation benefits of mountain forests located in Charnawati watershed in Nepal. This study analyse four years annual carbon stock data covering 58 community forests with diverse vegetation and people. Similarly socio-economic as well as environmental benefits, perceptions and use practices of communities are obtained from local communities and analysed. With possible climate change related projects, its positive and negative impacts on local socio-economic and environmental benefits are analysed. This study shows that community managed forests are contributing in sequestering additional atmospheric CO<sub>2</sub>, fulfilling forest products need of local people through sustainable management, supplying foods during scarcity time, supplying water for drinking and hydropower. However, people have strong interests to generate income from forests particularly from carbon benefits rather than others. Hence, there are possibilities to undermine other benefits which will have negative impact in long run. Government policies should facilitate to continue both benefits of forests and project developers should respect them.

### Biography

Shiva Shankar Pandey is a PhD Scholar in International Centre for Applied Climate Sciences, University of Southern Queensland, Australia. He has more than 15 years of experience in Community forestry, Ecosystem services, biodiversity, Forest based economic development projects in Nepal. He has contributed various publications including manuals, toolkits, and scientific peer-review articles in the related field.

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