



Ministry of Forests and Soil Conservation
REDD-Forestry and Climate Change Cell, Nepal
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policy brief



Drivers of Deforestation and Degradation in the High Mountain Regions of Nepal

Nepal is a Forest Carbon Partnership Facility (FCPF) country; an initiative established by the World Bank to assist developing countries in their emissions from deforestation and forest degradation. Reducing Emissions from Deforestation and forest Degradation (REDD) has evolved as a means to reduce carbon emissions through appropriate forest management practices and enhanced forest governance both in forest sector and related sectors. Nepal has been involved in the Reducing Emissions from Deforestation and Degradation (REDD) process since March 2008. Nepal submitted the Readiness Plan Idea Note (R-PIN) in April 2008 and the revised Readiness Preparation Proposal (R-PP) in October 2010 to the World Bank

The REDD-Forestry and Climate Change Cell under the Ministry of Forests and Soil (MoFSC) Conservation is the lead institution for REDD readiness activities in Nepal.

Nepal's REDD strategy vision is that by 2013 and beyond, greenhouse gas emissions resulting from deforestation and forest degradation will be significantly reduced.

Key messages

- A *holistic approach* needs to be considered to address drivers of deforestation in the high mountain region of Nepal. It should comprise of four aspects; (i) Redefinition in attitude, mindset and ethics (ii) Knowledge and capacity development and management, (iii) Developing collective vision and common understanding, (iv) Policy and institutional arrangements.
- The development of "High Altitude Forest Policy" in Nepal should seek a holistic approach of integrating livelihoods, culture, ecological and social systems, and the hope and aspirations of the communities living in the entire area.
- Plans and programs of the major stakeholders will be integrated into region's resource management plans through better coordination and cooperation with concerned agencies considering population increase and the development in the area.

Towards the development of Nepal REDD strategy

The development and application of strategies and programs to address the drivers of deforestation and forest degradation is fundamental to REDD readiness phase. Towards this achievement, Nepal did an assessment of land use, forest policy and governance. A total of *nine (9) major drivers* of deforestation and forest degradation were identified in Nepal and documented in R-PP. However, the extent and speed of drivers are inevitably different from one physiographic region to another.

The analytical Study on “**Drivers of Deforestation and forest Degradation in High Mountain Regions of Nepal**” has provided a scientific foundation for the development of REDD strategy. It has endeavored to fill the gaps about the drivers of deforestation and forest degradation in the high mountain regions of Nepal.

The study identified three (3) *key causes* of

Box 1: Critical drivers of deforestation and forest degradation:

- Forest fire
- Illegal logging
- Free grazing

deforestation and forest degradation to focus efforts on while addressing the National REDD Strategy Implementation process.

The brief therefore communicates to key stakeholders these findings to give a clearer understanding on direct and underlying drivers of deforestation and degradation in the high mountains of Nepal. It further provides Nepal's roadmap for developing and implementing appropriate actions for better protection and management of the forests in the region.

High mountain regions of Nepal

High altitude (Himal and High Mountain) areas constitute 42% of total **landmass** of Nepal out of which 23% belong to the High Himal (MPFS (1988)). This high altitude area lies in *northernmost part of Nepal* on the border with Tibet and falls north of the Mid-Hills. 32% of country's forests lie in this region. *55 districts* of Nepal are located here with total area of 5,832,510 ha.

The **area** is characterized by large inaccessible forests, steep slopes, no settlements, poor infrastructure development, low population and adverse climatic condition (cold temperatures) It

is under GMF¹, CF², NPs³ and CAs⁴ management regimes

The total **population** is estimated at 4,211,900 is about 16% of Nepal's total population.

Major **human activity** is transhumance herding where livestock husbandry (yak, sheep and mountain goat) is practiced. A few people are engaged in dry land farming.

The area is of **Global significance**. It is a *biodiversity hotspot* area of high carbon density and conservation value. About two thirds of endemic plants of Nepal are in this region.

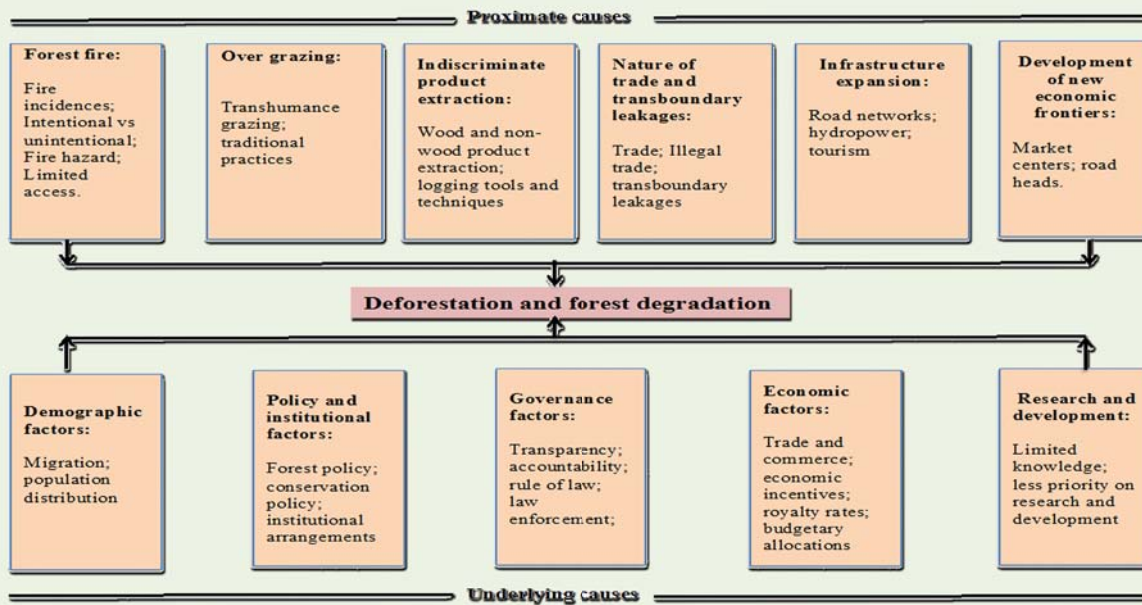
¹ Government Managed Forests, ² Community Forests, ³ National Parks, ⁴ Community Areas.

The Study on Drivers of Deforestation and Degradation of Forests in High Mountains Regions of Nepal was undertaken by Community Forestry Research and Training Centre (COMFORTC), Sankhamul, Kathmandu, NEPAL.

Drivers of deforestation and forest degradation in high mountains of Nepal

The classes of drivers of Deforestation and forest degradation in Nepal are two-fold; **proximate** and **underlying**. Proximate are the ones which are more immediate to human activity at local level and

underlying factors which are more fundamental in nature such as policy, institutional and social processes. These drivers are closely linked and interact in a complex way.



What challenges do the drivers of deforestation and forest degradation pose on the vision for Nepal's REDD strategy?

Out of 6 proximate causes of deforestation and forest degradation in the High mountain region, *forest fire*, *open grazing* and *indiscriminate product extraction* are perceived as the most critical factors.

High altitude forests are not fire resistant. The fires damage the regeneration of preferred species inviting non-preferred species to grow.

The extent of grazing is associated with the number and size of herders and the dynamics of transhumance grazing pattern. Two trends

(decrease and/or increase) show in livestock herding and varies across the region, districts and within the districts itself. The number of herders and livestock in the far eastern districts of Nepal has increased following the ban on free grazing in neighboring state of India. This implies more pressure on forests for firewood and construction of sheds and fences. There is also overgrazing, over lopping of fodder crops and clearing of forests for pasture which has reduced the reproductive capacity of the vegetation and accelerated soil erosion.

Wood products and timber harvesting has caused substantial damage to the forests. The preferred species for firewood are Oak, Rhododendron, Angeri, Cupressus, Juniperus. The broad leaved species such as Birch, Champ, Oak species other than Kharsu and Bangh, Aarupate and conifers such as Fir, Hemlock, Blue pine, Deodar, Spruce etc are harvested for timber. Juniperous and Cupressus wood are in demand in Kathmandu for religious and commercial purposes.

Other demands on forests include, Splitting of standing conifers for torches, Felling of trees for making roof shingles, Harvesting of flag poles, Timber for agricultural implements and home decoration, Timber for agricultural implements and home decoration, Debarking of Conifers for young calves beddings, Logging tools and techniques, MAP⁵s and NTFP⁶ harvesting

Impact of demand and supply of wood and non wood products on the REDD program

NFPS are mainly the major economic sources and means of livelihood of many people in the high mountain areas. Forest products are used largely for consumptive purposes except for MAPs, Lokta and Allo. A substantial quantity of wood and non-wood products is supplied from private forestry and community forestry in the region. The consumption pattern varies across the districts according to location, accessibility, remoteness and lifestyles. In the district where rural roads have improved the market access; the consumption of timber is high as compared to remote and poorly accessed districts.

For instance the annual consumption of firewood is higher in Mustang (9 ton/HH), Jumla (7.3 ton/HH), Myagdi (7.2/HH), Sankhuwasabha (5.47 ton/HH) and Sindhupalchowk (5.01 ton/HH) as compared to other districts.

The demand for forests products is on increase in the region. Lack of adequate institutional arrangement and open access nature of high mountain forests will make the degradation of timber and NTFPs to continue in the years to come particularly in remote area.

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⁵ Medicinal and Aromatic Plants, ⁶Non-Timber Forest Products