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Establishment and Operation of Small-Scale Forest-Based Enterprise in Nepal: A Critical Analysis of Issues and Challenges



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Our Cover Photo: District Forest Officer visited Chaubas Sawmill, Bhumlu Rural Municipality, Kavre

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**Ministry of Forests & Environment
Government of Nepal**

Establishment and operation of small-scale forest-based enterprise in Nepal: a critical analysis of issues and challenges

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Executive Summary

Several studies have highlighted the success of Nepal's community forest management in restoring degraded landscapes. Community forestry (CF) is now perceived to improve forests' biophysical conditions whereby supporting biodiversity and providing wide range of ecosystem services. Despite such successes, economic outcomes from CF are limited. There is also a growing realisation on the need to tap emerging market opportunities through management of community forests. In this context, small-scale forest-based enterprises are projected as one of the key strategies to addressing rural poverty and achieving prosperity in Nepal. This report highlights major issues and challenges in establishing and operating small-scale forest-based enterprises. The review is perceived to potentially trigger debate and bring a major breakthrough in reimagining policy provisions and effective institutional arrangement for the development and upscaling of forest-based enterprises in Nepal.

The study reveals that issues and challenges in the registration of forest-based enterprises and their smooth operation can be categorised into regulatory and non-regulatory (or managerial). There is a wide range of regulations that either constraint or discourage the registration of forest-based enterprises and their smooth operation. These issues and challenges include complex procedures and time-consuming environmental measures for the forest-based enterprise's registration, multiple provisions of taxation, royalties and subsidies, difficulties in transportation and export of forest products, lack of policy coherence concerning forest-based enterprises, poorly defined forest-based enterprises, least recognised private sector in forestry in comparison of other economic sectors, and unclear provisions over property rights. Further, a series of administrative/managerial hurdles have created hassles and are burdensome for the entrepreneurs. These mainly include lengthy bureaucratic procedures, lack of institutional cohesion for service delivery, unpredictable supply of raw materials, unfair competition in the timber business, lacking the economy of scale of enterprises, absence of entrepreneurial culture, underdeveloped private sector in forestry, lack of business services providers, lack of incentives for private forests, low capacity and skilled labour in timber processing, exclusion of value chain approach in the timber business, lack of access to finance and appropriate technology, and lack of market analysis and information.

Despite several challenges, there are opportunities to promote forest-based enterprises in Nepal. Timber supply from active and equitable forest management can replace timber import and contribute to the national economy. In addition to the increasing recognition of private sector in forestry, progressive policies and laws supporting forest enterprises are being formulated that would further support the registration and operation of forest-based enterprises in Nepal. However, forestry sector's policies and legislation needs to be reformed, and support should be laid to enhance private-sector involvement in the sector in addition to developing and improving finance and financial products. Service delivery to forest-based enterprises through the provision of business service providers is the precondition for capacity building for enterprise development.

Introduction

The emergence of community forestry in Nepal followed a series of catastrophic state-centric policy failures. The enactment of the Private Forests Nationalisation Act, 1957 sparked controversies and fear regarding the ownership of private forests and disrupted traditional forest management systems, resulting in uncontrolled felling of trees (Gautam et al., 2004). By the mid-1970s, vast areas of the mountain landscape appeared devoid of vegetation (Achet and Fleming, 2006). Deforestation and forest degradation resulted in an environmental crisis featuring raw material shortages, landslides, upland water scarcity and devastating downstream floods (Eckholm, 1975, 1976). In response, a participatory forest management campaign began in the late 1970s. A portion of degraded forest land was handed to the local communities for management and certain rights to utilise forest products as community forests. The result was the re-establishment of forest cover on large areas of eroded and degraded agricultural land, grasslands, forests and shrublands (Gautam et al., 2004).

A number of studies highlight the success of Nepal's community forest management in restoring degraded landscapes (Gautam et al., 2004; Niraula et al. 2013; Paudyal et al., 2017). Studies show that in most cases, forest productivity doubled, and the production of grass and fodder increased fivefold (Fleming and Fleming, 2009). Consequently, forest products and services have notably increased (Birch et al., 2014; Paudyal et al., 2015). Nepal's recent forest resource assessment reveals that the national forest area increased from 39.6 per cent in 1999 to 44.7 per cent in 2015, a substantial part of which is due to forest restoration in the mountainous regions (DFRS, 2015). These outcomes are clearly linked to the success of community forestry (Niraula et al., 2013, Paudyal et al., 2017) because most of the increased forest cover is in the middle hills, where community forestry (CF) has been successfully implemented (DFRS, 2015). CF is now perceived to improve the biophysical conditions of the forests whereby supporting biodiversity and providing many more life-sustaining services in comparison to the government-managed forests (Thoms, 2008). There is a feeling of dedication and ownership among local people and, therefore, rather stricter control of illegal activities exists, resulting in improved health of forests and consequently an increased provision of goods and services (Ojha et al., 2009).

Despite such successes, CF economic outcome is limited. There is also growing realisation that CF needs to be managed to tap into emerging market opportunities. In the context, small-scale forest-based enterprises in CF are projected as one of the important strategies for addressing rural poverty and achieving prosperity in Nepal (MFSC, 2016, 2015; MoFE, 2019; NPC, 2020). The increasing status of growing stock, including in CF implies that the resources should provide ample opportunities for establishing forest-based enterprises through the increase in harvesting of timber. There is also an opportunity to substitute timber imports to Nepal for the construction, furniture and furnishing products industries (Adhikary and Paudel, 2020).

Given the extent of natural capital and widespread institutional base, CF is well placed to move to the next stage of small-scale enterprise development. However, it is not realistic to achieve because the poor performance of existing community forestry enterprises (CFEs) and slow growth of the new ones have resulted in a huge gap between its potential and actual achievements. Alongside, a number of regulatory and non-regulatory barriers, confusion over effective institutional arrangements that garner investment, entrepreneurship and management efficiency are some of the major challenges facing these enterprises.

This report aims to highlight major issues and challenges in establishing and operating small-scaled forest-based enterprises that are equally important for the community forestry enterprises (CFEs) in Nepal. The critical review of issues and challenges could potentially trigger a bigger debate and bring a major breakthrough in reimagining policy provisions and effective institutional arrangement for the development and upscaling of forest-based enterprises in Nepal. Finally, this report provides some way forward for the development of forest-based enterprise in Nepal.

The study used both primary and secondary data sources. It draws upon the empirical findings using the individual consultations with CFUGs, forest entrepreneurs, forestry officials, and some focus group discussions as a primary source. As for secondary data, a meta-analysis of a wide range of policies, acts and regulations was conducted. Information for this study was collected through a systematic literature review, including policies and legal documents.

Major Issues and Challenges in the Establishment and Operation of Forest Enterprises

The complex regulatory structure is neither readily understood nor is easy to follow for enterprise registration and operation of a forest-based enterprise in Nepal (Adhikary and Paudel, 2020). Different pieces of legislation enacted and brought into force at different times allow the registration of forest-based enterprises in the forms of micro and small (or larger scale) enterprises, cottage industries, co-operatives, and private limited companies. However, the process required to register (and renew the registration on an annual basis) any forest-based enterprise is arduous in terms of time and cost. Additionally, forest-based enterprises also find themselves being constrained by their management practices or non-regulatory barriers. We also cover these issues in detail under this section.

Regulatory Issues and Challenges

There is a wide range of regulations that either constraint or discourage registration of forest-based enterprises and their smooth operation, even though studies show that the regulatory provisions governing forest-based enterprises in registration have relaxed over time (Sharma et al., 2017; Paudel et al., 2018; Adhikary et al., 2019). However, a series of administrative

hurdles have created hassles and are burdensome for the entrepreneurs. Moreover, policies are misconstrued and hence inappropriately implemented (Rai et al., 2016). This, together with the ongoing changes in the policy environment, as Nepal adopts federalism, inadvertently seem to pose a greater risk for existing enterprises (Adhikary and Paudel, 2020).

Complex process in the registration of forest-based enterprises

Several legal frameworks such as the Cooperatives Act, 1992; the Companies Act, 2006; the revised Industrial Enterprise Act, 2016; and Local Government Operation Act, 2017 have provided extended legal windows by offering opportunities to register CFEs of different institutional modalities: enterprises (micro, small, medium and large), cottage industries, co-operatives and private limited companies. This study reveals that the registration process for forest-based enterprises, irrespective of the institutional modality it will be registered, is arduous in terms of time, cost and knowledge required (Adhikary and Paudel, 2020). Moreover, the documentation requirements are huge and time-consuming. Another hurdle faced by small-scaled forest enterprises is the legal stipulation concerning the distance that is to be maintained between them and forested areas. Forest-based enterprises that use forest products ought to be located 0.25 to 1 kilometre (km) away from the forest (GoN, 2014). Moreover, no permanent structure can be set up for processing forest products within the forestlands (GoN, 2014), wherein it becomes very difficult to locate the site for establishing such enterprises.

Time-consuming environmental measures

Forest-based enterprises should comply with environmental measures during their registration and operation, including the raw material collected from the forests. Provisions of Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) were introduced in the forestry sector by the Environment Protection Act (EPA), 1997 and Environment Protection Rules (EPR), 1997. The new EPA (2019) and the EPR (2020) have added the concept of Brief Environmental Study (BES) to regulate the harvesting and collection of wood and Non-Timber Forestry Products (NTFPs) from various types of forests and to examine unintended environmental impacts. Depending on the type, volume and location of an enterprise, these options set out whether BES, IEE or EIA will need to be conducted (Table 1: BES/IEE/EIA requirement in Nepal's forestry sector). However, due to IEE/EIA requirements imposed on collecting even the smallest amounts of raw materials, forest-based enterprises face procedural complexities to finalise the approval processes related to environmental measures (Adhikary and Paudel, 2020). Therefore, forest-based entrepreneurs have been advocating to relax the provisions of Annexes 2 and 3 of the EPR 1997 and EPR 2020 because the thresholds are defined according to different government decisions made at different times. Further, it is claimed that IEE or EIA provisions have delayed the process of handing over forests to communities (Magrath et al., 2013) and establishing forest-based enterprises. However, the recent addition of BES may ease the process in some enterprise establishment if they do not cause much environmental impact.

Table 1: BES/IEE/EIA requirement in Nepal's forestry sector

BES requirements	IEE requirement(s)	EIA requirement(s)
<ul style="list-style-type: none"> • Monoculture plantation in one block: 10 – 50 ha • Plantation of exotic species that are proved appropriate for plantation in the country of origin: up to 10 ha • Handing over up to 20 ha of forest in Terai and up to 5 ha of forest in hills as commercial lease forest • Clear felling up to 15 ha of national forest area for research purpose by Nepal government • Construction of the botanical park, seed orchard and zoo within 20 ha area • Release of exotic animals to the forest • Daily collection up to 50 cubic meters of sand, stone, gravel and soil from each river/stream located in the 	<ul style="list-style-type: none"> • Monoculture plantation in one block: 50 – 500 ha in Terai and 50 – 250 ha in hills • Plantation of exotic species that are proved appropriate for plantation in the site of origin: 10 – 50 ha in Terai and 10 – 25 ha in hills • Handing over 20 - 100 ha of forest in Terai and 5 – 50 ha of forest in hills as commercial lease forest • Clear felling 15 – 30 ha of national forest area for research purpose by Nepal government • Construction of the botanical park, seed orchard and zoo in > 20 ha area • Daily collection of more than 50 cubic meters of sand, stone, gravel and soil from each river/stream located in the forest, buffer zone, conservation area • Use of 1 – 5 ha of forest area for other than forestry purpose • The annual collection of more than 5 tonnes resin per district • Construction of >10 km long fire line/road • Paper enterprises that produce 100 tonnes of paper per day (except cottage enterprises) • The annual collection up to 50 tonnes roots and tubers • The annual collection up to 150 tonnes bark • The annual collection up to 150 tonnes leaves or stems, except Sal seeds, Ritha (soap nuts), Amala (Indian gooseberry), Tendu (Asian ebony tree) leaves, Bhorlo (Indian borage) leaves and Tejpat (Indian Bay Leaf) • The annual collection up to 150 tonnes of flower and cotton types products • The annual collection up to 200 tonnes of fruits and seeds • The annual collection up to 150 tonnes seedlings 	<ul style="list-style-type: none"> • Monoculture plantation in one block: > 500 ha in Terai and > 250 ha in hills • Plantation of exotic species that are proved appropriate for plantation in the country of origin: >50 ha in Terai and >25 ha in hills • Handing over of forest >100 ha in Terai and >50 ha of forest in hills as commercial lease forest • Clear felling >30 ha of national forest area for research purpose by Nepal government • Use more than 5 ha of forest area for other than forestry purpose (except transmission line construction) • Establishment of resin, rubber, plywood, pulp and paper enterprise within 1 km distance from forest areas • The annual collection of > 50 tonnes of roots and tuber • The annual collection of >150 tonnes of bark • The annual collection of >150 tonnes leaves or stem except Sal seeds, Ritha, Amala, Tendu leaves, Bhorlo leaves and Tejpat • The annual collection of >150 tonnes flower and cotton types products

<p>forest, buffer zone, conservation area</p> <ul style="list-style-type: none"> • Use up to 1 ha of forest area for other than forestry purpose • The annual collection of less than 5 tonnes resin in a district • The annual collection up to 5 tonnes Chir pine's resin from one district • Construction of 5-10 km long fire line/road 	<ul style="list-style-type: none"> • The annual collection up to 200 tonnes gum, resin (except Chir Pine) from the forest • The annual collection up to 5 tonnes of resin from Chir pine in a district • The annual harvesting and collection of >200,000 cubic feet of timber • The annual collection of 20–100 tonnes forest products (per species, per district) concerning those species which have been allowed to export only after processing • Extraction of roots and stumps from >5 ha of forest area based on the approved forest operation plan • Establishment of commercial herbal and aromatic plants production/processing center in the public area 	<ul style="list-style-type: none"> • The annual collection of >200 tonnes of fruits and seeds • The annual collection of >150 tonnes seedlings • The annual collection of >200 tonnes gum, resin (except Chir pine) from a forest • The annual collection of >5 tonnes resin from Chir pine from a district • The annual collection of >100 tonnes forest products (per species per district) concerning those species which have been allowed to export only after processing
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Note: BES – Brief Environmental Study, IEE – Initial Environmental Examination, EIA – Environmental Impact Assessment. Source: (MoFE, 2020).

Multiple provisions of taxation, royalties, and subsidies

Nepal has formulated some legal framework with the provisions to exempt tax for the forest-based small enterprises and co-operatives, but forest entrepreneurs have not been able to enjoy this due to lack of awareness about such provisions (Adhikary et al., 2019). Because the government has not revised the royalty rates for timber in the past decade, current royalty rates do not reflect the true scarcity of products, nor do they correspond to current market prices. Royalties distinguish between logs classified as saw-logs and those classified as fuelwood, which, however, must be cut (bucked) to firewood length (less than 2 feet).

This serves to encourage misclassification, and the bucking of logs reduces their value for processing. Besides, there are some fiscal incentive provisions because NTFP enterprises are defined as a priority sector that can enjoy value-added tax exemption and a tax holiday for up to 10 years. However, local governments may impose the additional tax in some cases, according to the Local Self-Governance Act, 2017. The issue of multiple-taxation is particularly severe in the case of NTFP trade as different agencies tend to impose a tax on these products. Irrational system of fixing and collecting royalties, prices and taxes on forest products, especially charging royalties on NTFPs and Value Added Tax (VAT) on timber grown in private land (Magrath et al., 2013). Tariff and non-tariff barriers in trade, especially the hurdles in transportation hinder the forest-based enterprises.

Transportation and export of forest products

Obtaining transport and export permit poses a tedious burden on forest-based enterprises depending on the product type. The Forest Act (2019) and Forest Regulations (1995) and other directives set out various conditions for forest-based enterprises especially in terms of transportation of raw materials from specific forest types and products (Adhikary and Paudel, 2020). Ultimately, the Divisional Forest Officer (DFO) holds the authority, based on documents submitted, to provide a release order to transport timber from all types of forests, including community and private forests. Similarly, DFO also holds the authority to provide a release order to traders to transport herbs and NTFPs from one district to another to supply raw materials to forest-based enterprises. This process takes a long time contributing to a higher cost of production.

Lack of policy coherence concerning forest-based enterprises

Forest Acts and Forest Regulations (new or previous) are not consistent with the Policies and Strategies of the forestry sector. Implementing the policy, therefore poses a challenge in the absence of a timely amendment of these laws. The policies that govern the sector only touch on the role of the private sector and Public-Private Partnership (PPP) initiatives. The Master Plan for the Forestry Sector states the gradual privatisation of parastatals and the encouragement of private/public partnerships but does not spell out further details. Importantly, there is a lack of evidence of broad-based political commitment needed to implement privatisation (Paudel et al., 2018).

On the one hand, the protection-oriented forest management restricts the commercialisation forest resources. Live trees cannot be harvested in this kind of forest and only allow only dead, dying, and fallen trees (Sharma et al., 2020). It hinders the commercialisation of timber value chain. Activities related to production-oriented forest management are often considered as means of forest degradation (MSFP, 2016a). Problems in timber supply can be linked to the lack of sustainable forest management. Active harvesting and regeneration for timber supply has not been allowed in most of Nepal's forests, and have been practised only on a pilot scale (Baral et al., 2016).

Moreover, there is lacking supportive policy for forest-based enterprises. Hence, a suitable legal framework has to be emerged and flourished. So far, government initiatives have focused mainly on the promotion of community-based conservation and fulfilment of their subsistence needs, leaving aside attention to the development of such enterprises (MSFP, 2014). Furthermore, forest laws and regulations are open to multiple interpretations. Ad-hoc interpretation of the policy, legal and institutional framework has affected administrative procedures for timber/NTFP harvesting, processing, transport, and marketing, and constrains forest-based enterprise operation and management more generally (Subedi et al., 2014).

Poorly defined forest-based enterprises

Forest-based enterprise is poorly defined in Nepal and does not fully represent those which are informally practised in rural communities (Lamsal et al., 2017). Similarly, there are unclear and ambiguous roles of the private sector and CFUGs that have created confusion over who the private sector really is (NEC, 2010). The private sector is defined as a sector whose activities are outside the public sector's direct influence. However, in order to understand the 'private sector', it is important to understand the framework and basis of the definition. Ownership of forests in Nepal is divided between the government and the private sector (NEC, 2010). The community forests (belongs to the national forests) are handed over to the CFUGs by the government. In terms of roles, the formulation and implementation of laws and the delivery of service, these structures fall under the jurisdiction of the provincial government. Whereas the private sector, which is profit-making and outside the influence of the government, it can be argued that CFUGs can also fall under the private sector domain, which is ambiguous.

The private sector is least recognised in forestry

Nepal's forestry sector has not been able to contribute to the economic potential that can be achieved through private sector engagement (NEC, 2010). The private sector engagement is limited to timber harvesting and sawing, while with NTFPs, it is viewed as the initial phase of the semi-processing of goods. This is due to the large dominance of government and unwillingness to bring the private sector into forestry (NEC, 2010). In contrast, the Herbs and NTFP Development Policy, 2004 and the various renewable energy policies (including bioenergy) highlight the private sector's role (Subedi et al., 2014). It is clearly evident in the by-laws and five-year plans which stress on private sector participation in forestry and consider forestry as a priority sector of the Government (NPC, 2016).

In practice, the space for the private sector engagement has been limited due to the problems in the proper implementation of the existing policy and legislative provisions mainly arising from the contradictions, jurisdictional overlaps, inappropriate assignment of roles, weak coordination, and institutional inefficiencies (Subedi et al., 2014).

Unclear provisions over property rights

Confusion over property rights arises from contradictions and inconsistencies between forestry legislation and other laws, such as the Local Government Operation (LGO) Act, 2017. The Forest Act enshrines all use and management rights of the forest and other natural resources to the DFO, but the LGO Act usage rights to stone, sand, and driftwood/timber to local governments. In some situations, private companies or organisations are given exclusive collection rights for quarrying or mining in community forests. This creates confusion on use rights between the CFUG and the private licensee and results in an environment that is not conducive to improved production efficiency, conservation, and social equity.

Non-regulatory Issues and Challenges

In addition to the regulatory barriers discussed earlier, there are a number of non-regulatory barriers (mainly managerial and capacity related) that hinder forest-based enterprises in conducting their respective business. These have been elaborated below.

Lengthy bureaucratic procedures

Nepal's forest bureaucracy is highly inhibitive with respect to local resource utilisation and commercialisation. Cumbersome bureaucratic procedures exist for registration, collection and transport permits, and other necessary certifications (Nuberg et al., 2019). Also, impractical environmental standards, transportation hurdles and sudden harvest cessation create burdens for the forest-based enterprises (Schellhase, 2019). Further, complexity in the timber trade, especially for private tree owners and lengthy processes (Table 2) cause high transaction costs in harvesting and utilisation of forest products from private land and contradictory provisions that arise from multiple agencies and procedures (Paudel et al., 2018).

Table 2: Different steps of administrative procedures for timber harvesting, sawing and selling sawn timber to the market/consumer

Steps	Description	Government's rationale
Step 1: CFUG places a request to the forest office for "marking" of the trees to be felled	<ul style="list-style-type: none"> The CFUG, as per the clearly laid out provisions in its Operational Plan (OP) (which is approved by the District Forest Office), decides to harvest trees at a specified location (or block) within its community forest. However, this act of harvesting (even though it is mentioned in its OP) has to be informed to its CFUG members and approved by the General Assembly. If organising a General Assembly is not possible, a meeting of the Executive Committee members has to validate the decision. The CFUG then forwards a formal request to the Sub-Division Forest Office for "marking" of the trees to be harvested. Along with this formal request, the CFUG has to present the annual plan for the following year along with the proof (in writing) that 25 per cent of its previous year's revenue was spent on forest management and 35 per cent on activities aimed at the upliftment of the marginalised and disadvantaged poor households. 	<ul style="list-style-type: none"> To ensure that the decision was not made by a single individual but by the CFUG as a whole Proper auditing of CFUG's activities was carried out and that financial transparency is maintained 25 per cent and 35 per cent requirements are met (in case of CFUGs from the Terai, photos from such activities have to

	<ul style="list-style-type: none"> • The Sub-Division Forest Office forwards the request letter from the CFUG with a recommendation to the Division Forest Office¹. • The Division Forest Office approves of the request from the CFUG and issues a permit letter for "marking" of the trees 	be submitted as well)
Step 2: CFUG requests for felling of the "marked" trees	<ul style="list-style-type: none"> • The DFO issues a letter that asks of the CFUG to "mark" the trees to be harvested along with their individual valuations² as per their respective heights. • Valuation of the standing trees is calculated. • After the valuation of the tree(s) is estimated, the forest guard (or the forestry official) issues a recommendation letter which is then forwarded to the Division Forest Office. The CFUG again has to furnish another request letter to have the trees harvested (even though a similar letter was already submitted earlier). • This letter again has to go through the Sub-Division Forest Office - which again issues another recommendation letter - and sends it to the Division Forest Office. • Finally, the Division Forest Office releases the letter to the CFUG that permits it to "mark" and harvest the "marked" trees. 	<ul style="list-style-type: none"> • To ensure robust monitoring
Step 3: Harvesting of the trees	<ul style="list-style-type: none"> • The "marked" trees are fell down within the allotted harvesting window (harvesting is barred in the monsoon period which normally ranges from mid-July to mid-September). • Fell trees are to be piled one upon the other as per the "marks" (normally the "marks" are made in numbers)³. • These logs are kept in a depot (the costs for which will be the responsibility of the CFUG). 	<ul style="list-style-type: none"> •
Step 4: Loading of the timber	<ul style="list-style-type: none"> • The valuation of the felled trees (now timber logs) should not exceed by more than 10 per cent of its standing valuation. If the valuation of the timber logs exceeds the valuation of the 	<ul style="list-style-type: none"> • The 10 per cent valuation benchmark is

¹ The Sub-Division Forest Office mainly handles activities related to the consumption of forest products for CFUG's internal usage only. However, it is a legal requirement as per the 2014 Procedural Guidelines for the Collection, Sales and Distribution of Forest Products that this step be followed.

² Normally, a Ranger from the Forest Office is required to carry out this task but due to shortage of Rangers, this valuation is normally carried out by the Forest Guards. The Forest Guard measures the height and diameter breast height (DBH) of the trees being "marked" using a measuring tape.

³ Throughout this process of harvesting, at least one individual from the Forest Office has to be present. The costs associated with the individual's fooding and lodging is borne by the CFUG (although this is not a legal requirement and the rates are not standard, the CFUGs normally pay NRs. 1000/day (Forest Guard), NRs. 1200/day (Ranger), and NRs. 1600/day (Forest Officer). Even though these individuals from the Forest Offices are paid the aforesaid sum of money per day, they demand to be fed separately- a request that the CFUGs feel compelled to abide by since these officers are known to halt the process overall without much reason if their requests are not adhered to.

<p>logs to a vehicle</p>	<p>standing trees by more than 10 per cent, the CFUG is not allowed to load anything. Normally, these logs are left to rot.</p> <ul style="list-style-type: none"> • If everything is fine with the valuation, the timber logs are loaded to a truck or a vehicle. 	<p>there to ensure that the logs have not been exchanged. This is carried out by the forestry official(s)</p>
<p>Step 5: Bidding of the harvested timber logs⁴</p>	<ul style="list-style-type: none"> • The CFUG initiates a closed bidding process. However, before the bidding process can begin, the CFUG has to collect the details regarding the demand for timber logs from its members. Only after this is done, the CFUG can go to the forest office to acquire a 'Bidding Agreement'; • A notice for bidding has to be published in a National daily. A minimum of three bidders have to present by the end of the time of notice. If this requirement is not met, the bidding process (including the publication of the notice has to be repeated all over again). • The bidder with the highest bid will be required to deposit the sum of money into the CFUG's bank account within seven days. If this highest bidder does not comply within seven days, similar letters will be furnished by the CFUG to the second (and if not, third) highest bidder. • After the bidding process is completed, CFUG's engagement in this process concludes. 	<ul style="list-style-type: none"> • For fair and transparent bidding process
<p>Step 6: Getting the "Transport release order."</p>	<ul style="list-style-type: none"> • The costs incurred in Step 3 (iii) by the CFUG has to be paid by the highest bidder. • The Division Forest Office releases a "Transport Release Order Agreement" and also stipulates a date by which the depot has to be cleared off the logs. • All the loaded logs have marks of the forest office at one end and that of the CFUG at the other end. 	<ul style="list-style-type: none"> • To ensure that the logs are the same
<p>Step 7: Transporting the logs from the depot to a sawmill</p>	<ul style="list-style-type: none"> • The winner of the bidding process has to request for a letter from the forest offices (from two or more district forest offices if the logs are to be transported through multiple districts). In doing so, the winner of the bidding process has to clearly state which sawmill in which district s/he is taking the logs to. • Details of the vehicle and the driver are noted down by the forestry official. 	<ul style="list-style-type: none"> • To ensure that the logs are the same

⁴ The bidding process can take either 15 or 21 days depending on the cubic feet of timber logs available for sale (after deducting the demand from CFUG members).

	<ul style="list-style-type: none"> • The vehicle is sealed and therefore, not required to stop for checking during the transportation. It is only checked at the destination. • Upon offloading the logs, the forestry officials again take stock of the logs and ensure that the valuation is the same. • The sawmill buys the logs. 	
Step 8: Sawing of the timber logs	<ul style="list-style-type: none"> • Before sawing, the sawmill has to acquire a "sawing approval" from the District Forest Office. • After sawing, the sawmill has to submit a report to the District Forest Office outlining how much was sawed off (in order to ensure that it matches the initial valuations). • Upon approval from the forest office, the sawn logs are ready to be sold as they are or in the form of furniture. 	<ul style="list-style-type: none"> • To ensure that the logs are the same
Step 9: Buyers buys	<ul style="list-style-type: none"> • The consumer buys what s/he wants to. • Before transportation, the buyer has to acquire a "transport order" to bring the swan timber from sawmills to customers' location 	<ul style="list-style-type: none"> •

Source: adapted from Adhikary and Paudel, 2020

Lack of institutional cohesion for service delivery

The institutional arrangements regarding forest-based enterprises and their activities in Nepal varies. Three national government agencies with primary responsibility for the promotion and service delivery of forest-based enterprises, such as the Department of Cottage and Small Industries (DCSI), the Ministry of Forest and Environment (MoFE); and the Company Registrar. The Office of the Cottage and Small Industry; Divisional Office of the Cooperative; Divisional Forest Offices and local governments are responsible agencies that also have the authority to regulate forest-based enterprises as per the existing legal and regulatory frameworks at the district/local level. As regulatory agencies should be merged under each local government, the local governments' role in regulating and providing support to forest-based enterprises is significantly enlarged. It creates insufficient budgetary and technical capabilities that also causes delayed services.

Unpredictable supply of raw materials

Most forest-based enterprises have been facing an inconsistent supply of raw materials as one of the most pressing challenges that have limited them from operating their enterprises throughout the year. It has also hindered them from achieving economies of scale (Adhikary and Paudel, 2020). Further, the market and the timber value chains are squeezed by supply constraints because inconsistent policies lead to irregular supply of raw materials and market access (Paudel et al., 2018).

Most forest-based enterprises in rural areas are only involved in raw material collection and primary processing. They must depend on improper marketing channels such as a long chain of unreliable intermediaries due to inaccessible terrain (Lamsal et al., 2017). Besides, forest-based enterprises often encounter problems in purchasing raw materials and selling products, as they are geographically scattered and operating businesses at a tiny scale (Magrath et al., 2013; Subedi et al., 2014).

Unfair competition in the timber business

The state-owned Timber Corporation of Nepal (TCN), currently the Nepal Forest Corporation (NFC), can acquire timber from the government-managed forest in the minimum government royalty rate. Therefore, TCN has been selling timber at a lower cost than the current market rate. Although it has the mandate of harvesting, processing, and supplying timber to the market, it covers a tiny portion of the timber market. The earning has been used for unproductive staff's salary instead of providing timber efficiently at a lower price. In contrast, the private sector can get round log through auction at 30 per cent higher cost than the rate that TCN gets. The dual system (unfair pricing) has been discouraging private sector that causes a detrimental effect in developing the robust private sector in the forestry sector.

The economy of scale of enterprises

The case of CFEs, Individual enterprises are too small and struggle to gain economies of scale. Because of the scale of business and varied quality and type of products and services, joint collaborative efforts between value chain actors are required to understand unique strength of products and services that are lacking (MSFP, 2014). Also, CFUGs have structural inability to adjust to market demands (NEC, 2010).

Lack of entrepreneurial culture

In the context of the country where entrepreneurial culture is still a relatively novel idea, the government and donors have played a critical role in jumpstarting CFEs through idea development, start-up capital, provision of technology, training and capacity building, and creating partnerships and networks. While donor-based initiatives have played an important incubatory role through pilots, the support and incentives have also distorted market realities (Lamsal et al., 2017). This has prevented CFE management units from facing the questions of profitability and long-term viability until after donor support has ended. Most CFEs are run by communities or individuals with relatively inexperienced managerial and technical staff. As a result, they face significant problems from larger manufacturers in business negotiations, quality and pricing (Adhikary et al., 2019).

The underdeveloped private sector in forestry

The private forestry sector is not well established and takes time to establish itself as an economic contributor. Only a few of them have worked to produce final products through a

value chain approach. However, most of them have been engaged either in primary production or in transaction business (trade), particularly importing wood and wooden products to make money. Further, they are located in major cities and are unwilling to move to rural areas. Further, profit maximisation is the key objective of the private sector, but it hardly feels responsible for the sustainability of resources. Sometimes, few elites of the sector have a monopoly over the market that hinder the development of the genuine, competitive and responsible private sector (NEC, 2010).

Lack of business services providers

Enterprise development among poor, marginalised groups and CFUGs need a complete package including orientation, capacity building, entrepreneurship development, and skills-based training to marketing support. However, business development services focusing on forest-based enterprises are rarely organised by either the government or Non-Governmental Organisations (NGOs). Even basic knowledge on markets and marketing approach often fails in forest-based enterprises.

Lack of incentives for private forests

There are complex procedures and high transaction costs in harvesting and utilisation of forest products from private lands. There is also a lack of clarity on rights to harvest and process timber from private land and contradictory provisions that arise from multiple agencies and procedures. Even though the area of private forest is almost five times less than other forests in Nepal, the volume of timber sale from private forests is almost double that from community forests and government forests. Despite this, very little of the timber's final value to the sawmill goes to the landholder. The regulatory process for selling timber from private farms is so complicated and time-consuming that there is little incentive for farmers to participate (Nuberg et al., 2019). Middle-men or contractors play a vital role in procuring timber from private forests in Nepal. Generally, mill owners contact the local supply contractor. The contractor facilitates the process for landholders, who have no choice but to be price-takers rather than price-makers (Subedi et al., 2014). There is no clear basis for fixing and collecting royalties, prices and taxes on forest products, including charging royalties on NTFPs and VAT on timber grown in private land.

Lack of capacity and skilled Labour

There is a severe gap in skilled human resources and entrepreneurs in the sector at all levels (Schellhase, 2019). These gaps are listed below.

- *Government agencies* issuing applications for business creation suffer from inadequate staffing, especially skilled professionals;
- *Forest managers*, in general, either do not have a science-based forest management plan or are often unable to implement it if it exists;

- *Divisional Forest Offices* have limited human resources available to manage administrative processes;
- *Producers* have a low level of technical and managerial capacity, including the operating capacity for machinery and technology;
- *Banks* have very little knowledge and information about the sector and lack of appropriate loan products.

Largest employment category in the forestry sector is the elementary unskilled forest works (61.83 per cent) of total forest employment professional category accounts for only 2.54 per cent of the employment sector. Involvement of youth (less than 40 yrs) is lower than elders (40-59 years) – forest sector has not been able to attract enough younger people, which can have serious implications for forest sector development and management in the future (Subedi et al., 2014). Hence, the forest-based enterprise is run by individuals with limited managerial and technical skills. A large portion of current investment in skills training has been wasted due to high rural outmigration, mainly among the youths (MSFP, 2014). Lack of proper resource management and planning has prevented many forest-based enterprises from optimising production. Poor technical knowhow hinders the development of NTFP-based enterprises in Nepal, which directly affects cultivation, collection, harvesting, sustainable management and processing techniques and stocking (MSFP, 2016b).

Exclusion of a value chain approach

There are no value additions taking place in the timber industry. Like the plywood industry, there is scope and potential for the furniture industry to add value and cover-up for the high transport costs, but the lack of raw materials, product quality and design act as deterrents in enhancing the sector (NEC, 2010). Besides, there is a lack of a value-chain approach implemented in the NTFP sector as well.

Lack of quality certification

Quality certification of forest-based enterprise products is one of Nepal's major challenges (Lamsal et al., 2017). The lack of a certification system limits their value addition despite the huge potential of NTFP-based enterprises and high-quality local products. International competitiveness compels rural people to sell their goods in raw form in local markets at a low price (NEC, 2010).

Lack of access to finance

Forest-based enterprises requiring a big investment, lack access to finance. This creates obstacles to business development, especially as start-up capital and adequate capital to sustain the enterprise. For this, bank loans and other current funding sources are generally insufficient for growth because of the high demand for new corporate financing sources (Schellhase, 2019). Further, enterprises are exposed to interest rate fluctuations making it difficult for borrowers to make long-term projections or investments. Major factors leading to

slow advancement of forest-based enterprises for their access to finance from the bank and financial institutions (BFIs) are:

- *Informal and unorganised nature of forest-based enterprises:* Most of the forest-based enterprises are informal. A survey found that over 40 per cent of enterprises do business informally. By default, the informal nature of their business exclude them from the set of financeable organisations and have little access to finance (Subedi et al., 2014).
- *Financial illiteracy and difficulty in ensuring credit-worthiness:* Even the formally registered businesses lack financial literacy, and many of them suffer to prove their credit-worthiness. The lack of sound account keeping and inability to produce required documents often deprive these businesses of finance access (Lamsal et al., 2017).
- *Long moratorium period:* Some forest-based enterprises such as plantation need to wait for the sizeable number of years before production; this long moratorium period and other risk factors as disease and pest infestation make such businesses less attractive to BFIs (NEC, 2010).
- *Inability to produce enough collateral:* Forest-based enterprises in semi-urban or rural areas own low-value lands, which do not suffice for collateral. In addition, the banks also consider unavailability of readily saleable additional security as a negative score while they assess forest-based enterprises for credit disbursement.
- *Lack of appropriate insurance coverage:* Insurance market for FBEs is not developed in Nepal. The lack of insurance coverage is another factor that makes BFIs hesitant to disburse loans.
- *Information management system:* The availability of formal data and information on forest industries and forest-based enterprises in Nepal is minimal. Even the interested BFIs cannot triangulate the information produced by the borrower before lending the loan. Creation and maintenance of data on forest-based enterprises would positively enhance awareness for both the existing and potential investors to consider the investment/financing in the forest-based businesses.
- *The reputation of the forestry sector in general:* The lack of trust to the forestry sector business's negative reputation turns BFIs away from making investments.

In the case of CFUGs, the reach of financial institutions is very limited in the rural areas, and thus lack of access to finance to establish CFEs in the CFs is an issue. Financial institutions are not willing to provide collateral-free loans to CFUGs. Thus the CFUGs have to turn to local co-operatives and moneylenders for financial assistance who charge them with exorbitant rates varying from 2 – 4 per cent in a month (MSFP, 2016b). Up-scaling of technology is costly, and financial institutions are reluctant to lend to low-income entrepreneurs due to high risks of business failure, scattered and heterogeneous target beneficiaries and high loan administering cost (Lamsal et al., 2017)

Lack of appropriate technology

Forest-based enterprises are limited to collection and simple processing using locally available technologies. Their development is further hampered by the high purchase and maintenance costs and limited availability of machinery, as well as problems surrounding the adoption of advanced technologies (Paudel et al., 2018). Further, poor availability and adoption of technologies are a limitation for forest-based enterprises. The use of advanced technology can enhance economic returns yet most of Nepal's forest-based enterprises are limited to only collection and very simple processing from locally available technology, such as drying, grading, packing and distillation (Lamsal et al., 2017). In addition, the enterprises practice poor storage, lack of treatment for wood and there is the absence of grading for sawn timber which results in poor quality products that cannot compete with the quality, design and prices at which the imported goods sell in the market (NEC, 2010).

Lack of market analysis and information

Entrepreneurs engaged in forest-based enterprises have limited awareness of the market and the business scenarios that directly affect product demand. That means entrepreneurs often operate without adequate knowledge of market requirements (Paudel et al., 2018). There is no proper market analysis to set prices. Buyers usually determine the price of products, at times far below the cost of production. Smallholders also struggle to keep up with market trends and changing consumer preferences (MSFP, 2014). There is also a scarcity of market information, including price details, and the availability of product specifications and contacts and other qualitative information. In addition, there is no system for systematically tracking the income and employment generated from NTFP nationally. The limited access to information, technology, finance and market has created a dependency of producers on buyers even when the profit distribution is skewed, and trust among them is low (NEC, 2010).

Opportunities for the development of forest-based enterprises

The private engagement in the development of forest-based enterprises in the forestry sector poses challenges and problems and offers opportunities simultaneously. The national plans, policies and legislative instruments, for example, have recognised forestry as one of the important economic sectors and have highly emphasised the importance of private sector's involvement and development in the forest-based enterprise in Nepal. In this section, we briefly discuss how the sector offers opportunities:

Recent increasing recognition of the private sector in forestry

The Herbs and NTFP Development Policy, 2004 and the various renewable energy policies (including bioenergy) highlight the private sector's role. The institutional reform in the protected areas and buffer zone management also recognises their role, which can play an active role

for strengthening Payment for Environmental/Ecosystem Services (PES) system (Subedi et al., 2014). Nepal has ratified more than 25 Multilateral Environmental Agreements, and the private sector can benefit from it if the country takes steps to comply in practice fully. The Government of Nepal encourages private sectors' participation in forestry, which is evident in the by-laws and five-year plans. Forestry of Nepal falls under the priority sector of the government as per the industrial policy. These laws also favour local use of the forest for community income and employment.

Contribution to the national economy

Nepal's forestry sector can play an important role in enhancing livelihoods, well-being and social equity, while significantly reducing environmental risks and ecological scarcities, which directly contribute to the green economy (Baral et al., 2016). Small and medium forest-based enterprises could generate more than US\$8.7 billion and 1.38 million workdays through 400,000 sustainable full-time equivalent green jobs (Subedi et al., 2014). The sector offers informal workers the opportunity to enter formal employment, through enterprise-oriented forest management and other value chain functions. Potential areas for private-public sector partnerships in the sector include reforestation, carbon sequestration and trading, and eco-tourism (Baral et al., 2016).

Progressive policies and laws in support of forest enterprises

Government of Nepal promotes forest-based enterprises through the Department of Cottage and Small Industries (DCSI). The government has adopted an integrated enterprise approach, to create large numbers of micro and small entrepreneurs that can generate employment opportunities, especially for marginalised and disadvantaged communities (Nuberg et al., 2019). Nepal's Forest Policy, 2019 gives high priority to sustainable and productive forest resource use, promoting forest-based enterprises and creating green jobs through private sector involvement (Sharma et al., 2020). Further, the Forest Sector Strategy, 2015 provides for a strategic approach for private-sector forest management to promote and expand private involvement and investment in the production of forest products from public and private land. This will primarily be aimed to enhance sustainable supplies of forest products and services, to enhance rural incomes, create 'green' jobs and to contribute to national economic development and inclusive growth (Lamsal et al., 2017).

The Industrial Enterprises Act, 2017, Company Act, 2006 and some provisions in Nepal's fiscal laws have created ample opportunities to establish and operate forest-based enterprise at the local level (Baral et al., 2016). Property rights over forests transferred to CFUGs constituted the basic foundation for establishing community-forest enterprises. CFUGs provide the raw materials and make provisions for its sustainable supply, provide capital for initial establishment and operating expenditures, provide management support by themselves or by constituting a separate committee, and provide legally based on the operational plan approved by the DFO for the enterprises that are not formally registered (Baral et al., 2016; Adhikary et al., 2019)

The growing contribution of private forestry

In 2015, an amendment to the Forest Regulations 2051 (1994 AD) made the timber trade process more simple and private forest friendly. However, other restrictions intended to preserve natural forests' ecological integrity constrain the planting of high-value tree species on private land (Nuberg et al., 2019). The Forest Sector Strategy, 2015 provides for the strategic approach of forest management to promote and expand private involvement and investment in forest products production from public and private land. It also gives a clear direction to enhance the sustainable supply of forest products and services, enhance rural incomes, create 'green' jobs, and contribute to national economic development and inclusive growth (GoN, 2016).

In the context of the endorsed long term vision of forestry sector as "Forestry for Prosperity" and the policy to increase the forest cover area to 40 per cent by the Government of Nepal, the private forestry can play a major role in achieving this vision through the expansion of forestry outside the presently existing forest through the development of agroforestry and farm forestry with support from farmers, landowners and communities (Subedi et al., 2014).

Timber import in Nepal

Despite having huge growing stock, Nepal imports timber and timber products from several countries including India, Indonesia, China, Myanmar, Malaysia, Singapore, Germany, Ukraine, the United Arab Emirates and the United States of America every year. Customs data shows that Nepal has imported about four million cubic feet sawn timber in the last five-year period (Table 3). More than two million cubic feet (50 %) timber has been imported only from the Birgunj custom. However, the Federation of Forest-based Industry and Trade, Nepal (FeNFIT) claims that Nepal imports more than 2 million cubic feet of timber (in the form of logs and sawn timber) annually at the cost of NRs 4,500 million. In the fiscal year 2075-76 BS (2018-2019), Nepal spent NRs 6.61 billion against 5.56 billion in the previous year to import timber and timber products from several countries⁵. Many entrepreneurs and experts claim that tightened provisions and processes of timber collection and extraction in Nepal's regulations have been pushing timber import in the country.

The import data shows that the project should address issues of additional timber harvesting from community forests, collaborative forest and government-managed forests under sustainable forest management component that minimises the import as well as encourage local forest-based entrepreneurs to invest and expand their enterprise. This action will prevent to drain a huge sum of money and increase the significant number of green jobs in the country.

⁵<http://therisingnepal.org.np/news/33277>

Table 3: Table 3: Status of timber import from three entry point in last year (measured in cubic feet)

Fiscal year	Biratnagar	Birgunj	Bhairahawa	Total Import
2071-72	128,703	702,586	128,703	959,992
2072-73	65,443	284,216	65,443	415,102
2073-74	402,466	55,796	402,466	860,728
2074-75	514,865	473,300	48	988,213
2075-76	233,716	493,394	-	727,111
Total	1,345,194	2,009,292	596,660	3,951,146

Source: Records from Divisional Forest Office, Morang, Parsa and Rupandehi

Status of processed wood products import in Nepal

According to the Nepal Furniture and Furnishing Association, Nepal imports NRs 18 billion worth of furniture and furnishing products annually. The market for furniture and furnishing products in Nepal is worth around NRs 30 billion annually, and 60 per cent of the demand is fulfilled through imports⁶. Further, according to the association, there is a demand for NRs 18 billion worth of furniture and NRs 12 billion worth of furnishing products such as drapes and carpets in Nepal annually. These products are mainly imported from two neighbouring countries – China and India. However, some portion of furniture and furnishing products are imported from other countries such as Turkey, Italy and Jordan, among others.

According to Rajesh Agrawal of the Association, the main reasons for growing imports of furniture are inadequate production that does not meet the country's demand of furniture and furnishing products in Nepal and the unavailability of skilled workforce for timber processing in the country.

In addition, Nepal has been importing plastic furniture products with nominal wood attachment and wooden furnishing materials. Steel, Aluminium, Iron and PVC have significantly replaced wood in urban buildings. It is estimated that about 10 per cent doors and 50 per cent windows of the urban home are made of Steel, Aluminium, Iron and PVC. Even the new government buildings are seen without using wood.

Ways Forward for forest-based enterprise development

Despite the impediments indicated above, the government has committed to improving the forest-based enterprises and in order to make a strong private sector for forest-based economic growth and employment generation. The immediate interventions identified for the improvement is discussed in detail in this chapter.

⁶<https://kathmandupost.com/money/2016/05/26/demand-for-imported-furniture-on-the-rise>

Reform forestry sector's policies and legislations

As discussed earlier regarding the major policy gaps and hurdles for forest-based enterprise and private sector development, here are the suggested major interventions for policy changes:

- Despite being considerably rich in forest resources, Nepal currently imports a huge amount of finished forest products, particularly plywood, furniture, veneer, paper, wooden handicrafts, boards, and herbal products from several neighbouring countries. The Government of Nepal should devise strategies to engage the corporate and co-operative sectors to invest in forest-based industries to meet the needs of local and global markets. Laws, policies and support interventions should be designed to this end (Schellhase, 2019).
- It needs to develop an enabling policy, institutional and legislative environment to increase private sector involvement and investment in forestry businesses.
- Environmental standards should be integrated into local management planning, which should also consider sustainable harvesting (Baral et al., 2016).
- In order to encourage the establishment and operation of forest-based enterprise by user groups and individuals, reforms are required to allow CFUGs to exercise their resource assessment, planning and management rights; simplify compliance with environmental standards; increase transparency in the permit process for government forests; and grant autonomy to forest user groups to set product prices and deal with the market (Subedi et al., 2014).
- The straightforward and entrepreneur-friendly permits should be in place for harvesting, collection and transportation. Allowing forest products, especially NTFPs, to be sold as agriculture products would remove some of the producers' hurdles (NEC, 2010).

Support private forestry development

There is a vast scope to promote the plantation of species with the highest commercial value, such as fast-growing timber species in private lands, especially in Terai and mid-hills (Nuberg et al., 2019). For this, some of the activities described below are important to implement:

- Develop simple private tree registration guidelines;
- Formulate a simple royalty system for forest-based and farm-based products;
- Simplify en-route checking and limit product verification at the site of origin;
- Amend environmental regulations for private forestry products;
- Remove land taxes for private forestry;
- Revise the differentiation of trees, shrubs and herbs in forest regulations;
- Rationalise harvesting and transit policy for the forest products grown in private land, i.e. (i) timber species grow on private lands should be exempted from additional formalities in harvesting and trade; (ii) NTFPs should be considered as agricultural commodities; (iii) VAT on the harvest of privately grown timber should be removed (MSFP, 2014)

Capacity building for enterprise development

As mentioned above, there is a lack of capacity in the forestry sector, particularly in business planning, appropriate technology value chain, and marketing assistance. Hence, the following capacity building activities should be implemented for effective enterprise development:

- Need for well-designed capacity-building program
 - for existing entrepreneurs and personnel to improve skill sets to manage small-scale forest enterprises;
 - for service providers;
 - on legal provisions related to tax exemptions for forest-based enterprises;
 - on value chain development approach, good collection/harvesting practices, certification and enterprise development;
 - for forest managers, entrepreneurs and traders on certification.
- Establishing community-based enterprises and integrating them into responsible value chains can serve to achieve both economic and conservation goals.

Improvement of service delivery to forest-based enterprises

Some of the following actions are necessary for the improvement of business development services to forest-based enterprises:

- Required business development services to improve the investment climate include research and development, capacity building, the supply of quality inputs and technologies, business advice and counselling, market information and product promotions, and networking and brokering;
- Business development services aim at preparing business plans, facilitating tax payments, distributing information on marketing and value chain development and providing access to legal services are some of the areas that must be strengthened in the future;
- Establish a single-window system for service delivery to the forest-based enterprises;
- Business development services supporting forest-based enterprise for technology support and market support;
- Develop promotion and value-chain analysis for NTFP and timber products;
- Specific support in mapping and clustering for prioritised commercially important species and products would provide a clear scope for private sector involvement in this lucrative business creating more employment and revenue for the country;
- Strengthen access to inputs and technologies, including quality planting materials, fertilisers and pesticides, and tools and equipment;
- Infrastructure needs for attracting investments: transport, electricity, Information and Communication Technology, and other supportive facilities, such as collection centres, warehouses, market infrastructures (wholesale/ auction centres), and laboratory facilities.

Improve access to finance and financial products

The interventions indicated below are the key in order to improve forest-based enterprises through enhancing access to finance and other financial products:

- Provide access to finance for forest-based activities with the start-up outlay (capital) and capital to sustain their business.
- Develop a broader range of funding opportunities and financial tools;
- Stabilise interest rates for bank loans;
- Provide access to interest rate swaps and the ability to issue corporate debt securities, such as debentures and long-term bonds;
- Explore private equity or venture capital funding; invoicing factoring and the issuance of debt security;
- Collaborate with financial institutions so as to increase financial access to private tree producers;
- Develop risk mitigation measures in financing forest-based enterprises and helping bankers to understand opportunities in Nepal's forestry sector are needed. In this situation, bankers need support to develop financial products and a minimum assurance on the payback and incentives from the government for lending in this sector.
- Most of the BFIs have the provision and interest to extend their credit facilities to forest-based enterprises but do not have the knowledge and appropriate products that suit the enterprises. More specifically, it is suggested to provide the following supports:
 - *Support BFIs for developing forest-specific loan products:* Support in market research, and developing appropriate loan products to meet the requirement of forest-based enterprises at a various level including the terms and conditions addressing issues including long moratorium period for plantation and need of big amount for short-term for traders.
 - *Provide up-to-date knowledge, and financing opportunities for sustainable forestry:* Generation of information about forest-based industries, training and awareness-raising programs, and facilitation of interactions between BFIs and forest-based enterprises would be helpful.
 - *Minimise risks of banks and financial institutions (BFIs):* Investment in many forest-based enterprises is associated with risks from fire, pests, and mortality of saplings during transplantation. Without risk mitigation measures, it is difficult for BFIs to disburse the loan. Since this is a relatively new area for financing, most BFIs need a minimum assurance of payback of their investment, which would be helpful to develop their confidence. Silent guarantee for the brand-new products and insurance for others would boost the confidence of BFIs.
- Establish partnership of forest-based enterprises with banks and financial institutions and private investors for developing forest enterprise-based loan products and making equity investment;

- Mobilise service providers to support forest-based enterprises with accessing finance. The main areas on which forest-based enterprises need assistance to be eligible for financing are: (a) developing and executing business plans, (b) building managers' capacity, (c) linking with lenders and assistance in financial negotiations, and (d) books and accounts keeping.
- There is a need to develop a business service provider in the financial sector and link them with the entrepreneurs;
- establish a market information system with business development services;
- Provide information about the Nepal Rastra Bank (the Central Bank of Nepal) directives that favour the flow of finance in the forestry sector

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