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Cross-Sectoral Forestry and Food Security Policy Analysis

Country Profile Report
Forestry Sector
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Acronyms

ADS	Agriculture Development Strategy
AIDS	acquired immune deficiency syndrome
CBFM	community-based forest management
CBS	Central Bureau of Statistics
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CF	Community Forest
CFUG	Community Forest User Group
CNI	Confederation of Nepalese Industries
DFCC	District Forest Coordination Committee
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forestry
DSCWM	Department of Soil Conservation and Watershed Management
FAO	Food and Agriculture Organization of the United Nations
FECOFUN	Federation of Community Forest User Groups Nepal
FSN	food security and nutrition
FSS	Forest Sector Strategy
GDP	gross domestic product
GESI	gender equality and social inclusion
HDR	Human Development Report
LDO	Local Development Officer
LPG	liquefied petroleum gas
MAP	medicinal and aromatic plant
MFSC	Ministry of Forest and Social Conservation
MoAD	Ministry of Agricultural Development
MPFS	Master Plan for the Forestry Sector
MSFP	Multi Stakeholder Forestry Programme
NBCC	National Biodiversity Coordination Committee
NGO	non-governmental organization
NHRC	Nepal Health Research Council
NIDS	Nepal Institute of Development Studies
NPC	National Planning Commission
NWFP	non-wood forest product
REDD+	reducing emissions from deforestation and forest degradation, including sustainable forest management and conservation and enhancement of carbon stocks
WFP	World Food Programme
WHO	World Health Organization
ZHCNAP	Zero Hunger Challenge National Action Plan

A. Introduction

Globally, an estimated 795 million people suffer from chronic hunger, food insecurity and malnutrition. The forest sector has a vital role in food security and nutrition (FSN), but this has gone largely unrecognized and is dismally reflected in national and international development and food security policies, programmes and legal frameworks. As a result, opportunities to enhance FSN in the forestry sector at policy level still remain limited. For better understanding and recognition of forests' contribution to food security and nutrition, FAO held the International Conference on Forest for Food Security and Nutrition in Rome in May 2013. The main outcome of the 22nd session of the FAO Committee on Forestry (COFO) reiterated the importance of developing capacity and mainstreaming cross-sectoral forestry and food security policies and programmes in order to strengthen the role of forests for food security. In addition, the High Level Panel of Experts (HLPE) of the Committee on World Food Security is preparing a report on sustainable forestry for food security and nutrition.

In view of the above limitations and some landmark background work at the international level, efforts are required:

- to enable better appreciation and understanding of the various important roles of forests in food security and nutrition;
- to raise overall awareness among policy actors to recognize the need to maintain healthy forests for food security and nutrition;
- to ensure that FSN objectives are well integrated in national forestry policies and that forestry is integrated in national FSN policies.

In this context, the proposed policy analysis framework (field-testing version) serves as a guiding tool to support informed policy dialogue and evidence-based decision-making processes. The framework comprises five dimensions covering national forestry policies, programmes and legal frameworks; human and financial resources; cross-sectoral forestry and FSN governance; evidence-based decision-making; and FSN policies, programmes and legal frameworks addressing forestry. FAO plans to test this framework in seven countries, including two in Asia – Nepal and Myanmar. This report is structured according to a framework provided by FAO (see details in Annex 1). The analysis is based primarily on a review of the existing national forestry and agricultural policies, programmes, strategies and legal frameworks, interviews with experts and a national-level validation workshop with key actors across both the forestry and the food security policy sectors. This report outlines the key outcomes of the review using the framework, with a view to support Nepal in assessing the relevance of its forestry policies to FSN and in evaluating areas for improvement to enhance their contribution to FSN. Further, the information captured during the first round of the assessment will provide baseline data at the national level for future policy work.

The report is structured as follows. This introduction provides an overview of national policies, programmes and legal frameworks in forestry and food security. Section B presents

the situation of the national forestry sector, poverty, hunger and inequality, which is then summarized in Section C. Section D provides an analysis of the five criteria, and these results are summarized in Section E as country scorecard results. The last section offers conclusions and recommendations based on the analysis in the previous sections.

National forestry policies, programmes and legal framework addressing FSN

In Nepal, the current national forestry policy and strategy recognize, at least in the newly formulated Forest Policy and Forest Sector Strategy documents, the need to consider food security and, less explicitly, nutrition. However, the degree of recognition varies across various regimes of forest governance. Forest sector policies regulate at least four major governance regimes: government-managed forests, community-managed forests, protected areas and private forests. There are two parent categories of legal ownership: private and government managed (with all community and government-managed forest and protected areas owned by the government). Legal frameworks and operational guidelines, especially for community-based forest management, also identify food insecurity and nutrition as an important aspect to be considered in the management of forest. However, as over 60 percent of the forest area is under government management, forests are not generally accessible to communities, nor are they managed with food security considerations. More specifically, an explicit aim of the Forest Policy (MFSC, 2015a) and the Forest Sector Strategy (MFSC, 2016) is to increase agricultural productivity and food security through the farm-forest interface, creating employment opportunities (green sector employment) and increasing income from the management of forests. The recently formulated (though in draft form) strategy for reducing emissions from deforestation and forest degradation, including sustainable forest management and conservation and enhancement of carbon stocks (REDD+) also mentions food security in one of its objectives (MFSC, 2015d).

Despite the above provisions, implementation and procedural guidelines are yet to be developed to create a conducive environment and translate these policy visions into practice, owing to a continued focus on conventional strategies of forest conservation and subsistence-based production systems. More importantly, persistent regulatory hurdles and poorly designed operational procedures hardly encourage sustainable management of forest or market-oriented use of forest resources by private and community groups, despite a huge potential of forests to address food security concerns through income generation, employment creation and provision of forest products, especially timber (Adhikari *et al.*, 2016).

Human and financial resources

The existing human and financial resources and expertise of the Ministry of Forest and Soil Conservation (MFSC) and the Department of Forestry (DoF) in general are not adequate for addressing food security and nutrition issues. Human resource investments do not specifically reflect food security related aspects. The technical capacity of the staff mainly reflects strengths in forest administration and management, and opportunities for capacity

development have remained limited, especially in relation to food security.¹ Notwithstanding the recent policy recognition of the need to incorporate food security and livelihoods needs in forest governance (MFSC, 2015a; MSFP, 2016), the capacity of the forestry institutions emphasizes natural and plantation forest management and largely focuses on timber production. Despite a certain level of appreciation, the actual capacity for managing forests for multiple use and supporting the food security and livelihood needs of the local communities remain limited. In addition, the lack of cultural and especially gender diversity in human resources is another limiting factor for addressing food security needs through the forest sector. Apart from the Department of Soil Conservation and Watershed Management (DSCWM), whose staff has expertise in forestry, agriculture and engineering, all the other departments under MFSC lack cross-sectoral and interdisciplinary expertise in areas such as agriculture, agroforestry, landscape management and hydrology.² In addition, forestry officials are required to perform other administrative work, such as administrative management and semi-judicial and even policing roles, thus leaving little time to consider or act on the potential of forests for food security.

The existing training curricula for DoF staff include some elements related to food security (although not explicitly), especially in relation to community-based forest management systems. Because of the limited connection between training and actual workplace practices, such training has largely been ineffective in boosting staff motivation in general and in work related to food security in particular. The training centre often has difficulty getting an adequate number of trainees to take part in the regular training sessions.³ Also, as (Gronow and Shrestha, 1990) highlight, reorienting forestry staff has been a time consuming and very challenging process in Nepal, and staff tends to maintain the status quo rather than proactively take a new role (Kanel and Acharya, 2008). Even in forest management, limited investment is made in human resources development to tackle new challenges such as those related to climate change (an illustration being the growing incidence of forest fire).

Budget allocation is partly related to how forest management is articulated as an agenda of national priority. Currently, the contribution of the forest sector is not well reflected in gross domestic product (GDP) calculations. A GDP study is under way and may generate some figures highlighting the role of forestry in overall development.⁴ The forest sector has an opportunity to demonstrate its contribution to food security and other sectors such as ecotourism, and to justify allocation of a greater proportion of the budget.

Forest sector policies include some recognition that non-governmental service providers are important partners in development and forest management (e.g. NGO guidelines of MFSC and Community Forestry Guidelines 2009). Increasing numbers and types of non-governmental organizations (NGOs) are involved in delivering services related to forest management. However, their work is also guided by sectoral policy frameworks, indicating the need to reorient even the NGO sector in forestry so that it can champion the forest-food interface in practice.

¹ Source: analysis of expert consultation meeting and review of the content of the existing training materials.

² Sample review of the terms of reference of MFSC staff.

³ As expressed by a government official during expert interview.

⁴ The study is being conducted by the Department of Forest Resources and Survey in collaboration with the Central Bureau of Statistics.

Cross-sectoral forestry and FSN governance, coordination mechanisms and partnerships

There is a lack of a national-level institutional mechanism to create synergy between the forest and agricultural sectors in such a way as to enhance FSN governance. However, some initiatives have recently started aiming to enhance cross-sectoral governance, in both the forestry and agricultural sectors, by establishing coordination and partnership mechanisms within the government ministries and between the government ministries and NGOs and the private sector. For instance, an apex body of the National Biodiversity Coordination Committee (NBCC), chaired by the Minister for Forestry and consisting of 27 members, including eight from sectoral ministries and other relevant stakeholders, coordinates implementation of the National Biodiversity Strategy and Action Plan (MFSC, 2014). Another national apex body on REDD+ is a national-level multi-stakeholder forum chaired by the Secretary of MFSC (MFSC, 2015d).

Agroforestry policy is prepared in close collaboration with the Ministry of Agricultural Development (MoAD) and MFSC. Likewise, forestry is considered by the high-level Agriculture Development Strategy (ADS) implementation body (MoAD, 2015).

Coordination and partnerships with NGOs and the private sector are increasingly institutionalized in the forest sector. The Multi Stakeholder Forestry Programme (MSFP) which ran for the past four years included NGOs and civil society organizations in its national-level steering committee as well as in its field-level implementation. Similar arrangements are found in other national projects as well, although with inadequate inclusion of varied stakeholders. Despite progress in some specific projects and sectors, there is limited coordination among various policy formulation and implementation arms (e.g. parliamentary committees, the environmental council, planning bodies such as the National Planning Commission). At the district level, District Forest Coordination Committees (DFCCs) have a mandate to bring various stakeholders together to discuss plans and budget (MFSC, 2011). Because of the lack of elected district government, this arrangement has not been as effective as envisaged in the DFCC regulations (*ibid*).

The Forest Policy also identifies the private sector as relevant and important, particularly for enhancing income and employment opportunities from the forest sector. However, in practice, the private sector continues to experience procedural hurdles and regulatory bottlenecks in running forest-based enterprises and businesses (Pandit *et al.*, 2015).

Evidence-based decision-making

In general, the science-policy interface is weak, and most policies are formulated and revised based on the personal knowledge of the individuals involved in policymaking rather than on the institutional memory of the whole forest sector (Ojha *et al.*, 2016). Sometimes, media reports have also influenced parliamentary debates on legislation (such as those related to the Forest Act 1993 amendment and banning green tree felling). Also, the term “food security and nutrition” is a recent insertion in the Forest Policy and Forest Sector Strategy; it is yet to

be integrated into the programme output monitoring and operational procedures of MFSC and its line departments down to the district and community levels. Currently, different departments under MFSC collect data differently, and no system has been developed to streamline data management, for example to collate and analyse data across the departments using common and specific indicators of food security and to use the resultant data in decision-making.

FSN policies, programmes and legal frameworks addressing forestry

Nepal's food security policy is under preparation, under the lead of MoAD. As noted above, recently formulated agricultural policies have started to recognize the important role of forest in achieving food security and nutritional goals. Notably, the Agriculture Development Strategy (ADS) (MoAD, 2015), the National Action Plan on Zero Hunger Challenge (MoAD, 2016b) and the Food and Nutrition Security Plan of Action (MoAD, 2016a) have included sustainable management of forest for wood and non-wood products as one of the important contributing factors for enhancing food availability, access and utilization. In a more concrete sense, ADS has proposed an allocation of 8 percent of its total budget for the forestry sector (MoAD, 2015).

B. National forestry sector, poverty, hunger and inequality situation

Indicators of the national forestry sector, poverty, hunger and inequality situation are provided in Table 2, which follows this section.

National forestry sector

Nepal is the world's 93rd largest country with an area of 147 181 km². It has three main ecological regions: high mountains, middle hills and Terai. The high mountains and middle hills make up about 83 percent of the area, and the Terai 17 percent. Much of the hill and mountain areas are fragile and vulnerable to landslides and mass wasting. Terai lands are regularly exposed to flooding and sedimentation. Further to these challenges, Nepal is among the world's least developed countries, with per capita GDP of US\$644 and Human Development Index of 0.463 (157th among 187 countries).

Forest occupies 5.96 million hectares (40.36 percent) and other wooded land covers 0.65 million hectares (4.38 percent). Forest and other wooded land together represent 44.74 percent of the total area of the country (MFSC, 2015b). Of the total forest area of Nepal, 37.80 percent lies in the middle hills region, 32.25 percent in the high mountains, 23.04 percent in the Churia foothills and 6.9 percent in the Terai. A high proportion of the country's area (22.5 percent) is in the protected area management system. Nepal is rich in biodiversity as it falls in the transition zone between the eastern and western Himalayas (Bhujju *et al.*, 2007). Nepal occupies about 0.1 percent of the global area but harbours over 3 percent of the world's known biodiversity.

As per FAO estimates, the forestry sector contributed 3.5 percent of Nepal's GDP in 2000 and 4.4 percent of GDP in the period 1990–2000, but less conservative estimates suggest the sector's GDP contribution could be as high as 15 percent (MFSC and FAO, 2009).

Nepal lost 0.57 million hectares of forest between 1964 and 1991. The recent national Forest Resources Assessment report shows a net increase in forest cover across the nation (DFRS, 2015), but deforestation continues in the Terai, with an annual rate of approximately 0.44 percent (Kanel and Dahal, 2008; MFSC, 2016). Four major drivers of deforestation noted in the DFRS report include: illegal logging, overharvesting of fuelwood for consumption, forest encroachment and road construction. However, in the hills improved forest cover is widely reported because of the expansion of community-based forest management. The Forest Sector Strategy (MFSC, 2016) aims to achieve 50 percent forest cover by 2025.

In Nepal, people's dependence on forest is very high. On average, about two-thirds (64 percent) of the total households (FAO, 2014) use fuelwood as their usual source of fuel for cooking food and sterilizing drinking water. However, there is an increased trend of using liquefied petroleum gas (LPG) as a main source of cooking energy. The proportion of fuelwood as a source of household energy has been decreasing in recent years, especially in urban areas. By 2011, the proportion of the population using LPG as a primary source of cooking energy was slightly more than 21 percent countrywide but 68 percent in urban areas (CBS, 2011b). In addition, the forest sector has an important role in providing irrigation to agriculture. For instance, more than 70 percent of the irrigation in Nepal comes from watersheds (in the form of surface irrigation), and the agriculture sector alone has a target to increase this figure to 77 percent by 2025 (MoAD, 2014).⁵ Hence, better conservation and management of watersheds is crucial for the sustainable supply of water for irrigation. About 40 percent of livestock fodder comes from forest. In 2014, the forest sector accounted for 200 000 jobs, thus employing 1.4 percent of the active population.

The Government of Nepal issued a new Forest Policy in 2015 following the expiry of the Master Plan for the Forestry Sector (MFSC, 1989). The policy includes a goal to contribute to national prosperity through sustainable management of forest and watershed areas (MFSC, 2015a). It emphasizes creating employment opportunities, livelihood improvement for local communities and maintaining ecosystem services through the protection, management and use of forest plants, wildlife, watersheds, protected areas and biodiversity. The Forest Sector Strategy (2016) further advances these goals by projecting targets for conservation and development outcomes in the forest sector. It particularly recognizes some key trends in the forest sector over the past two decades: an increase in protected area, an increased share (reaching 8 percent) of medicinal and aromatic plants in the overall export value, adaptation and mitigation of climate change impacts, reform of the forest governance and tenure system, and expansion of plywood factories in the country (MFSC, 2016).

⁵ In the same period, MoAD aims to increase groundwater irrigation by 16 percent and non-conventional irrigation by 7 percent.

Poverty

Poverty is the most important determinant of food insecurity and poor nutrition. In Nepal, less than a quarter of the land is suitable for agriculture. Nepal is ranked 195th of 210 countries (World Bank, 2010) in terms of gross national income per capita. The proportion of the population living below the US\$1.25 per person per day threshold is 67.97 percent. Over the past decades, Nepal has made significant progress in poverty reduction, from a rate of 40 percent in 1995/96 to 25 percent in 2010/11. However, this figure is differentiated by a rural–urban divide (15 percent in urban areas and 27 percent in rural areas) (CBS, 2011b). Reduced poverty levels are related to increased remittances, which account for between one fourth and one-third of Nepal’s GDP (CBS, 2011b); this ratio of remittances to GDP is one of the highest in the world. Nearly 44 percent of households have at least one member working away for income (ibid). Given the increased scale of men’s and youth’s outmigration, remittances have become important for both household and national economy. In 2014/15, Nepal received over US\$5.0 billion as formal remittances (MoLE, 2016). Migration takes place for various reasons, but food insecurity has been one of the main causes of migration undertaken by poor, lower-middle-class and middle-class households (Pain *et al.*, 2014). This is particularly true for people from the mid-western and far-western hills and mountains going to India (Adhikari, 2008)

Furthermore, Nepal is experiencing rising levels of economic inequality. Table 1 depicts the average household income, per capita income and the income shared by the poorest 20 percent and the richest 20 percent of the population. Some 41 percent of the total income is shared the by highest 20 percent of the population.

In Nepal, feminization of agriculture is occurring at an unprecedented rate. The Agricultural Census Survey reports that between 2001 and 2011 the proportion of women as lead farmers grew from 10 to 19 percent (CBS, 2011a). In 2010/11 as many as 1.92 million Nepalese were working in foreign countries for more than six months (ibid). Of these, 87 percent were male and 13 percent female, clearly demonstrating the gender imbalance in migration and explaining the feminization of agricultural tasks. Labour migration has become a key strategy at the household level to ensure food security. However, increased out-migration has negative impacts on agricultural production (MoAD, 2014). A recent review by the Asian Development Bank shows that outmigration has led to reduction in agricultural production and that remittance money is not necessarily used to improve agricultural production (Tuladhar *et al.*, 2014). Increased income from remittances, along with growing urbanization, has led to households switching from fuelwood to cleaner energy sources such as LPG. Outmigration is thus leading to profound changes in the forest–agriculture–livelihood nexus, with important implications for food security.

Table 1. Average per capita income of households (Nepalese rupees [NPR])⁶

Year	Nominal average household income	Nominal average per capita income		
		All Nepal	Poorest 20% of population	Richest 20% of population
1995/96	43 732	7 690	2 020	19 325
2003/04	80 111	15 162	4 003	40 486
2010/11	202 374	41 659	15 888	94 149

Sources: CBS, 1996; CBS, 2004; CBS, 2011b

Food security and nutrition

Until 1987 Nepal was a net exporter of rice despite a deficit in some regions, mainly in the western hills (Adhikari, 2008). Between 1974 and 1992, however, there was a swift decline in food production, and Nepal has almost consistently been a net importer of food, in surplus only between 2000 and 2004/05 (Agriculture Project Service Center & John Mellor Associates, 1995, cited in Pain *et al.*, 2014). From the national food production point of view, Nepal has become increasingly food insecure over the decades. Hobbs (2009) reports that Nepal has experienced "a sharp and sustained decline in food security" (Hobbs, 2009:2) which has led to Asia's worst levels of food insecurity and nutritional deprivation, comparable to those in certain sub-Saharan countries. A food availability crisis in 1971/72 led to the establishment of the National Food Corporation (NFC), which took a major responsibility for distributing subsidized food to remote food-deficit areas, including the western and far-western development regions of the country.

WFP (2009) estimated that 3.4 million people were highly to severely food insecure during the period 2007–2009. As of August 2011, the population suffering from acute food insecurity was, at 3.48 million, largely unchanged (Pain *et al.*, 2014). While these statistics represent the national level, Nepal has a number of disadvantaged groups suffering from specific forms of food insecurity. Such disadvantaged groups include *dalit*⁷ community groups who hardly own any land on their own and rely on the support of the government and local communities (Pain *et al.*, 2014)

The number of undernourished people is 2.2 million, representing a decline of 65.6 percent between 1990–1992 and 2010–2012 (FAO, 2015). An estimated 1.6 million children under five years of age (of an estimated total population of 3.5 million) suffer from chronic undernutrition and its long-term consequences, while over 500 000 children suffer from acute undernutrition, or wasting. Undernourishment rates of 42 percent nationally and as high as 50 percent in the hills and mountain areas indicate an exceptional situation of malnutrition and food insecurity (CBS, 2011c). In 2011, 42 percent children were stunted, 31 percent were underweight and 14 percent were wasting (CBS, 2011c). A study conducted in 2009 revealed

⁶US\$1 = NPR107.

⁷The so-called "untouchable" group of people based on traditional caste hierarchies in Nepal.

that 3.4 million people had become highly to severely food insecure as a result of a 2007/08 price rise and a 2008 winter drought (Hobbs, 2009).

Nepal is a land-scarce country in terms of the availability of cultivable land. Despite the dependence of a large majority (74 percent) of households on agriculture, about 60 percent of farm households cannot produce food sufficient for more than six months in a year (CBS, 2006) because of low productivity and small landholdings (CBS, 2011c). Average household farm size is 0.7 ha, of which about half is upland dryland, a part of which consists of uncultivated land such as terrace bunds, uncultivated spaces, terraces, wooded lands and grasslands. Land distribution has been skewed, but only 0.8 percent of farms hold 5 or larger than 5 ha; they make up 7.3 percent of the total land area (MoAD, 2015). About 47 percent of farm households hold less than 0.5 ha of the land, which is equivalent to 14.7 percent of the total land holding. Likewise, the landholding size of 24.5 percent of farm households is in between 1 ha and under 5 ha, making 53.8 percent of the total landholdings. The remaining 27.4 percent of the farm households own between 0.5 ha and under 1 ha, comprising of 24.2 percent of the total landholdings (MoAD, 2015).

Health and HIV/AIDS

Health care services in Nepal are provided by both the public and private sectors. They are of a poor standard and are still beyond the reach of most Nepalese. The poor and marginalized people and women have limited access to basic health care because of its high costs and low availability. The demand for health services is further lowered by the lack of health education. Reproductive health care is neglected, which puts women at a disadvantage. Traditional belief systems also play a significant role in the spread of disease in Nepal. Provision of health care services is constrained by inadequate government funding. As reported by WHO, total expenditure on health was less than 6 percent of GDP in 2014.⁸ Approximately 70 percent of health expenditures came from out-of-pocket contributions.

Disease prevalence is higher in Nepal than in other South Asian countries, especially in rural areas (GoN and NHRC, 2010). Some improvements in health care have been made, most notably significant progress in maternal-child health. The maternal mortality rate for Nepal in 2010 was 380 per 100 000 births, as compared with 240.2 in 2008 and 471.3 in 1990. Nepal has made tremendous progress in enhancing under-five and infant mortality rate. According to WHO, neonatal mortality has been stagnant at 33 per 1000 live births since 2006, contributing to 54 percent of under-five mortality (WHO, 2013). Likewise, Nepal reduced its maternal mortality ratio by 71% (from 901 deaths per 100 000 live birth) to 258 in the period between 1990 and 2015 (WHO, 2016). Life expectancy at birth is 69.6 years.⁹

Rural health facilities often lack adequate funding. Much of rural Nepal is hilly or mountainous. The rugged terrain and the lack of proper infrastructure make rural areas highly inaccessible, limiting the availability of basic health care facilities. In many villages, the only mode of transportation is by foot, which results in a delay of treatment that can be

⁸ www.who.int/countries/npl

⁹ http://databank.worldbank.org/data/reports.aspx?Code=SP.DYN.LE00.IN&id=af3ce82b&report_name=Popular_indicators&populartype=series&ispopular=y#

detrimental to patients in need of immediate medical attention. Most of Nepal's health care facilities are concentrated in urban areas.

HIV prevalence among the population aged 15 to 49 is 0.2 percent (World Bank, 2014). As of 2007, HIV prevalence among female sex workers and their clients was less than 2 percent and 1 percent, respectively, and that among urban-based men who have sex with men (MSM) was 3.3 percent.¹⁰ HIV infections are more common among men than women, as well as in urban areas and the far western region of Nepal, where migrant workers are commonly affected by HIV. Labour migrants account for 41 percent of the total known HIV infections in Nepal, followed by clients of sex workers (15.5 percent) and drug users (10.2 percent).

Gender

Gender is an important axis of social differentiation and deprivation in Nepal (DFID and World Bank, 2006). In 1982, the Women Services Coordination Committee and National Social Services Coordination Council were set up for preparation of the Plan of Action for Women in Development. After 1990, with political changes in the country, the gender justice movement has taken great strides, affecting national policies. The Government of Nepal established the National Women Commission in 2002. Nepal also ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1991. More importantly, Nepal established the Ministry of Women, Children and Social Welfare in 1995.

The Sixth Five Year Plan (1980–1985) was the first national development plan that recognized the role of women in development.¹¹ From the Ninth Five Year Plan (1997–2002), Nepal started to adopt the policy of gender mainstreaming, reducing gender inequality. The Tenth Plan (2003–2008), in addition, recognized gender equality as a key indicator of poverty analysis.

The Civil Service Act and its regulations (1991) provide 45 percent reservation for marginalized groups, including women. The government introduced a gender-responsive budget from the fiscal year 2007/08. Nepal's Constitution has a provision for 33 percent women in the national parliament, which has to be reflected in decision-making bodies at all levels including community organizations. As an important achievement, in 2008 the Constitutional Assembly had 33 percent women elected, and this trend continued in the second constitutional assembly in 2013 (Secretariat of Parliament, 2013).

The current Constitution (GoN, 2015) provides equal rights of daughters and sons to ancestral property and ensures women's right to reproduction and reproductive health. Furthermore, women occupy three of the five apex-level positions of the State: President, Speaker of Parliament and Chief Justice of the Supreme Court of Nepal.

Despite such important progress, gender inequality and imbalance are perpetuated in every sphere of the society, and the forestry sector is not an exception. Forestry science, institutions, management, practices and decision-making culture are all biased against

¹⁰ https://en.wikipedia.org/wiki/HIV/AIDS_in_Nepal

¹¹ In addition to sector-specific plans, Nepal has followed periodic national development plans since 1957. These were five-year plans until the current plan, the 14th, which has a duration of seven years.

women. Despite the promulgation of a forest sector gender equality and social inclusion strategy, there is little progress on the ground. Research shows that current gender mainstreaming work is reproducing inequality in more subtle ways (Bhattarai *et al.*, 2015). Forest sector human resources have a high gender imbalance (Gurung, 2002; Christie and Giri, 2011), and this could have a bearing on the formulation of gender friendly forest management policies and equitable livelihoods including food security.

The recent census report (CBS, 2011b) shows that the average literacy rate of the Nepali population aged five years and above is 65.9 percent, which is 11.8 percent more than the average literacy rate reported in the previous census (CBS, 2001). However, it varies by gender. The male literacy rate is 75.1 percent and the female literacy rate is only 57.4 percent (CBS, 2011b). Educational disparity is further reinforced by the rural–urban divide. For instance, the overall literacy rate is highest in the capital city of Kathmandu (86.3 percent), which is not surprising given the long history of centralized government in Nepal.

Table 2: National forestry sector, poverty, hunger and inequality situation

Indicator	Value	Source	Year
FORESTRY SECTOR			
Geographic extension of forests in km ² (% of total country)	59 600 (44.74%)	Government	2015 (DFRS)
Number of employees in Forestry Sector (% of active population)	200 000 (1.4%)	Government	2016 (FSS)
Contribution of forests to national GDP (% of total)	10%	Government Approach paper to 3-year interim plan	2011-2013
POVERTY			
Poverty headcount ratio living below \$1.25 a day (PPP) (% of population)	67.97%	World Bank	2015
Poverty headcount ratio at rural poverty line (% of population)	25.2%	World Bank	2015
Income share held by highest 20%	41.4%	World Bank	2010
FOOD AND NUTRITION SECURITY			
Stunting prevalence (children under 5, moderate and severe)	41%	Government (NDHS)	2011
Wasting prevalence (children under 5, moderate and severe)	11.20%	World Bank	2011
Undernourishment prevalence (% of population)	42%	Government	CBS, 2011c

Change in undernourishment prevalence, 1990–1992 to 2010–2012	–47.3%	FAO	2015
Number of people undernourished (millions)	2.2	FAO	2015
Change in number of people undernourished, 1990–92 to 2010–2012	–65.6%	FAO	2015
Prevalence of overweight (children under 5)	1.5%	World Bank	2011
HEALTH and HIV/AIDS			
Under-five mortality rate (per 1 000 live births)	33	WHO	2013
Life expectancy at birth (years)	69.6	World Bank	2014
HIV prevalence rate (population ages 15–49)	0.2%	World Bank	2014
GENDER			
Employees, agriculture, female (% of female employment)	77%	NASS	2010
Women's access to agricultural land**	10.8%	ActionAid	2010
Ratio of girls to boys in primary and secondary education***	1.07	World Bank	2014

Estimated proportion of the population with Hb<110 g/L

** 0 = Women have equal legal rights with men to own and access land; 0.5 = Women have same legal rights to own and access land, but in practice are restricted due to discriminatory practices; 1 = Women have no/few legal rights to access or own land or access is severely restricted by discriminatory practices

*** Ratio of female gross enrolment ratio for primary and secondary to male gross enrolment ratio for primary and secondary. A GPI equal to 1 indicates parity between females and males. In general, a value less than 1 indicates disparity in favor of males and a value greater than 1 indicates disparity in favor of females.

C. Summary of the national forestry sector, poverty, hunger and inequality situation

In Nepal forest and other wooded land occupies 6.61 million hectares representing 44.74 percent of the total area of the country (MFSC, 2015b). Nepal harbours three percent of the global floral biodiversity. Despite good representation of forest under the protected area system, some endangered species are not yet under adequate protection (Shrestha *et al.*, 2010). A net increase in forest cover across the nation has been reported in recent years, although deforestation continues in the Terai region at a rate of 0.44 percent per year. Almost two-thirds of all households of Nepal depend on fuelwood as a primary energy source for cooking and sterilization of drinking water, and 40 percent of the livestock fodder comes from forest. Some 200 000 jobs in the forest sector provide work for 1.4 percent of the active population.

The forest sector's contribution to GDP is 4.4 percent. In relation to gross national income per capita, Nepal is ranked 195th out of 210 countries. The incidence of poverty is high among the rural population. Almost 68 percent of the population lives below the US\$1.25 per person per day threshold. More than 40 percent of the total income is shared by highest 20 percent of the population.

Nepal has made significant gains in poverty reduction, from a rate of 40 percent in 1995/96 to 25 percent in 2010/11. Poverty has been reduced through increased remittances, which account for nearly one-third of Nepal's GDP. Labour migration has also become a key strategy to ensure food security. Feminization of agricultural tasks is occurring at an unprecedented rate and has negative impacts on agricultural production.

Nepal is a low-income food-deficit country. An estimated 3.4 million people were highly to severely food insecure during the period 2007–2009 according to WFP in 2009. As of August 2011, the population suffering from acute food insecurity was 3.48 million.

The under-five mortality rate per 1 000 live births is 36 and life expectancy at birth is 70 years. HIV prevalence rate (population aged 15 to 49) is 0.2 percent. The number of people undernourished (2.2 million) declined by 65.6 percent between 1990–1992 and 2010–2012.

An estimated 1.6 million children under five years of age (of an estimated total population of 3.5 million) suffer from chronic undernutrition and its long-term consequences. The national undernourishment rate is 42 percent (CBS, 2011c). By 2011, 42 percent children were stunted, 31 percent were under weight and 14 percent were wasting (CBS, 2011c).

In 2011, the average literacy rate of the Nepali population aged five years and above was 65.9 percent (CBS, 2011), which is 11.8 percent more than the average literacy rate reported in the previous census (CBS, 2001).

Nepal has made tremendous progress in addressing gender equality through its Constitution and sectoral government policies. At present, women occupy three of the five main State-level positions. Nepal's Constitution has a provision for 33 percent women in its national parliament, which has to be reflected in decision-making bodies at all levels, including community organizations.

D. Overview of the five criteria/ country scorecard results

Dimension 1: National forestry policies, programmes and legal frameworks addressing FSN

1.1 Existence of national forestry policies, strategies, programmes or legal frameworks with explicit FSN objectives

The current national forestry policy and strategy explicitly mention the term food security. More specifically, the Forest Policy (MFSC, 2015a) and Forest Sector Strategy (MFSC, 2016) explicitly stipulate a strategy to increase agricultural productivity and food security through the farm–forest interface, creating employment opportunities (green sector employment) and increasing income from the management of forests. The recently formulated (draft) REDD+ strategy also mentions food security in one of its objectives (MFSC, 2015d). However, implementation/procedural guidelines are yet to be developed to create a conducive environment for translating these policy provisions into actual practice.

1.2 Comprehensiveness of national forestry policies, programmes and strategies in terms of addressing the four dimensions of FSN

The Master Plan for the Forestry Sector (1989–2011) was the first document that explicitly mentioned the role of forest in contributing to food production: An effective interaction between forestry and farming practices is one of the long-term objectives of the plan. The plan has created space for addressing all four dimensions of FSN, although not in an explicit way. Similarly, the current Forest Policy (MFSC, 2015a) and Forest Sector Strategy (MFSC, 2016) explicitly mention FSN as one of the outcomes to be achieved from forestry sector development. More specifically, the Forest Policy envisions forest sector contributions to enhanced food production and food security through enhancement of effective linkages between forest and farming practices. The Forest Sector Strategy (MFSC, 2016) aims to address food security concerns through biodiversity conservation, soil and water conservation, integrated watershed management and improvement of ecosystem services at the landscape level. Employment generation is a focus of all the above-mentioned policies, strategies and guidelines. The Forest Sector Strategy includes a target of creating 1.2 million full-time jobs in the forest sector by 2025. One of the policy sub points of the Forest Policy (MFSC, 2015a) is to create “green sector employment opportunities” by inviting private-sector investment in the promotion, diversification, value addition and marketing of forest products. The recently formulated (draft) REDD+ strategy also mentions food security in one of its objectives. The third of its five objectives is “to increase livelihood assets, food security and diversify employment opportunities of forest dependent people particularly of poor and marginalized” (MFSC, 2015d:29).

The translation of the above policy provisions into actual practice is yet to be put in place, however. Existing implementation procedures poorly reflect FSN concerns, and there is a need to develop operational procedures that better reflect food security concerns as per the spirit of the forest policy and strategy. The persistence of regulatory hurdles in operationalizing policy provisions is the major bottleneck in the forest sector.¹² The sector has huge potential for addressing food security concerns through income generation, creation of employment opportunities and provision of forest products, especially timber (Adhikari *et al.*, 2016).

One commonly observed issue is that all of the above-mentioned policy documents seek to address food security concerns through enhancement of agricultural production systems. These policies hardly recognize the contribution of forest through other pathways such as direct provision of food for consumption (including edible fruits, bamboo shoots, spices, vegetables, tubers, fibre, medicinal herbs), forest-based income and employment generation. Forests are also a safety net for the poor and people living in remote areas in times of natural and human-induced crisis. The collection and direct use of food items from forests is an age-old and regularly performed practice among the rural population of Nepal.

¹² As remarked by a senior government official during expert interview.

1.3 If there is no explicit FSN objective in the policy, what are the existing elements contributing to FSN implicitly?

Community-managed forests make up a large proportion of accessible forest in Nepal. CBFM covers 40 percent of the total forest area and includes four management regimes – community forestry, pro-poor leasehold forestry, collaborative forest management and buffer zone committees (with community forestry alone occupying 33 percent of the area). The remaining 60 percent of the forest is under State management and is normally inaccessible to the public.

Community-based forest management (CBFM) guidelines (DoF, 2009) and the working strategy (Version 3) of the Department of Soil Conservation and Watershed Management (DSCWM, 2015) provide some space for strengthening food security practices and innovations. The operational strategies of DSCWM (DSCWM, 2015) include several provisions that support food production and food security of the communities through soil and water conservation, terrace improvement, on-farm conservation, degraded land rehabilitation, fodder and fruit-tree plantation, income generation and livelihood improvement, agroforestry development and small-scale enterprise development. Despite such good practices, the work of DSCWM is yet to be mainstreamed in the forest sector¹³.

All of the existing community-based forest management regimes allow communities to collect fuelwood, fodder, leaf litter, edible fruits and vegetables, medicinal herbs and timber for subsistence uses. More specifically, nearly two-thirds of the 14 provisions in the Community Forestry Guideline (DoF, 2009) are related to food security and nutrition issues of the poor, *dalit*, indigenous and ethnic groups and women. The specific provisions made in the Community Forestry Guideline include: allocate 35 percent of community forestry income to the above group; allocate some part of community forestry land to poor households to plant crops and generate income; provide training and create self-employment generation skills; develop forest-based pro-poor enterprises; distribute forest products on an equitable basis and subsidize the cost of forest products for the poor and marginalized;¹⁴ prioritize the poor and marginalized in regard to the employment opportunities created within community forestry; allocate some funds for the education of children of the poor families. As result of pro-poor enterprise development, about 8 000 small-scale forest-based enterprises are running in 25 districts as per a recent survey conducted by the Federation of Community Forest User Groups Nepal (FECOFUN).¹⁵ This number excludes the enterprises run by the private sector based on the raw materials supplied from the forests, such as privately run sawmills.

Under the poor-focused leasehold forestry programme, poor households are given degraded forest to plant fodder trees for feeding their livestock. Under this arrangement, each household is entitled to get at least 1 ha of forest land for 40 years. Studies have revealed that leasehold forestry has helped in improving livestock production for both meat and milk, and has generated income.

¹³ As stated by a senior government official during expert consultation.

¹⁴ However, Dhakal and Masuda (2009) show that the low price for high-value forest products, particularly timber, is counterproductive for equitable benefit sharing among the user households in areas of heterogeneous socioeconomic conditions.

¹⁵ As remarked by a non-government official during expert consultation.

In Nepal, there is a strong legal framework for community control of tree and forest resources, but enterprise-oriented use of forest faces various constraints. The national legal framework on forest and tree tenure is changing over time with the changes in forest management modalities. In this line, the Forest Act 1993, Forest Regulation 1995 and Forest Policy 2015 provide a strong legal basis for statutory forest tenure. Table 3 depicts forest tenure regimes in different forest management modalities in Nepal.

Table 3. Forest tenure regimes in Nepal

Forest management modality	Tax	Charge	Income sharing	Forest management
Private management				
Private Forest	VAT is applicable on private forest products			
State Managed Forest				
Government-managed forest	VAT applicable to national treasury		<ul style="list-style-type: none"> • Equal distribution of the income from stray timber between local government and central government • 10% revenue to the local government from the total income of forest 	All costs to be allocated by national treasury
National Parks and Wildlife Reserves			30-50% benefits to Buffer Zone management	
Collective management				
Community forest	VAT collection in commercial transactions	15% charge on commercial transactions of <i>Acacia catechu</i> and <i>shorea robusta</i> in Terai	100% benefits to local community	25% of the total income of CF to be spent on forest development activities
Leasehold forest	-	No lease fee is charged to poor people	100% benefits to local community	-
Buffer Zone CF	Sale of timber to outsider restricted	-	Collection of revenue from sale of stray timber	-
Collaborative forest	Application of VAT on auctions	-	75% for national revenue and 25% for local government or community	Not fixed

Source: Acharya *et al.* 2008

Community forestry has a strong legal framework for forest and tree tenure as compared to other three CBFM regimes. Article 25 of the Forest Act 1993 clearly mentions that community forests are “entitled to develop, conserve, use and manage the Forest and sell and distribute the Forest Products independently by fixing their prices according to Work Plan”(MFSC, 1995). Moreover, this act empowers communities to claim rights to forest as per their willingness, capacity and customs; to access up to 100 percent of forest products from an autonomous organization; to punish members who break rules; and to amend or revise forest management rules. Community forest management plans need to be renewed within five years. Despite these provisions, the District Forest Officer has the right to take back community forest at any time if he/she is not happy with the conduct of a particular

forest user group. However, the authority has to give back the forest after completing the (re) handover process to the same community in the form of community forest.

In pro-poor leasehold forestry regimes, communities are not entitled to use all tree-based products, in particular where communities are not entitled to use and manage trees already grown (before the start of pro-poor leasehold arrangements).

1.4 Use and mainstreaming of traditional and local food systems and use of NWFPs

Non-wood forest product (NWFP) policy has recognized sustainable management and promotion of NWFPs for livelihoods and incomes, but various regulatory hurdles impede innovation in practice. As per experts' estimates, more than 700 species of medicinal and aromatic plants (MAPs) occur in Nepal (Subedi, 1998), and of the total, more than 100 types of NWFPs and MAPs are already in trade (Edwards, 1996). Besides trade, a large number of these species are already used by rural communities for subsistence purposes. Rural communities consider forest as a safety net in times of food crisis associated with natural or human-induced disasters. Poor people have depended on forest and other common land for food and nutrition in Nepal through the ages. However, forest foods are considered and confined in the informal domain and are yet to be mainstreamed into local food systems.

There is a lack of consistent research data on the actual contribution of forests to food security. One study found that people in rural villages in Nepal were using 62 types of uncultivated or wild food plants (Shrestha and Dhillion, 2006). Of these, 46 percent were consumed as fruits and 37 percent as green leafy vegetables. Some of these species were also good for nutrition and taste. Likewise, locally available medicinal herbs are used as crucial resources for curing several health issues in rural communities, where a vast majority of the population still lacks access to modern medical facilities. The percentage of women who use these medicinal herbs for their everyday health issues is higher than that of men.¹⁶ Use of medicinal herbs for curing gynaecological and menstrual disorders is very common in rural communities.

The income and employment generated from the sale of forest products by individuals, communities or the private sector is not taken into account. For 50 households surveyed in one middle hills district, forest products derived from community forestry alone accounted for 20 to 25 percent of mean household income, regardless of wealth class (KC, 2004). Another recent study found that forest income contributed 5.8 percent to total household income, ranging from 3.8 percent in the top income quartile to 17.4 percent in the lowest income quartile (Oli *et al.*, 2016).

1.5 Mainstreaming of gender issues in national forestry policies, programmes and strategies

The Master Plan for the Forestry Sector (MFSC, 1989) (the first document to guide the forest sector, designed for 20 years and expired in 2011), the Forest Act 1993 (MFSC, 1995) and the Forest Regulation 1995 were the foundational policy documents to institutionalize gender

¹⁶ As observed by a senior government and a non-government official.

mainstreaming through women's increased participation in the forestry sector, mainly through CBFM programmes. The subsequent Community Forestry Guideline has a provision for at least 33 percent reservation for women in the decision-making bodies of the community forestry groups. However, as mentioned above, CBFM programmes cover only around 40 percent of the forest area while 60 percent of the forest area is under State management. Realizing the importance of gender and social inclusion in Nepal's whole forest sector, MFSC formulated a forest sector Gender Equality and Social Inclusion (GESI) Strategy in 2008. The strategy is a comprehensive document that guides the whole forestry sector in gender mainstreaming. It envisions four change areas:

- formulate/amend and implement all forest sector policy/master plans/acts/bylaws/directives/guidelines to be more inclusive for the benefit of poor, women and excluded groups,
- prepare gender and socially responsive institutional development for forestry sector,
- institutionalize gender and social inclusion sensitive budget, programmes and monitoring,
- provision equitable access to resources, decisions and benefits.

In line with the strategy, the Community Forestry Guideline (DoF, 2009) made three key provisions: women must occupy 50 percent of memberships in the executive committee of the Community Forest User Group (CFUG), women must hold at least one leadership position (either secretary or chairperson), and a woman's name must be listed in the CFUG constitution as a member of the CFUG along with her male counterpart. As a result of the strategy and the Community Forestry Guideline, women occupy nearly one-third of the memberships in the decision-making bodies of more than 18 000 CFUGs in Nepal. Of the total CFUGs, slightly more than 1 000 are women-only managed CFUGs where women occupy all the decision-making positions.

Despite some progress achieved in CBFM regimes, gender mainstreaming in the institutional structure of MFSC is far from adequate. In general, the forestry profession is dominated by masculine ideology and the entry of women in the profession has only been possible for the past three decades as a result of the direct interference of the former Queen in allowing female students to enter forestry schools. With the aim of addressing the acute gender imbalance, the 2007 amendment of the Civil Service Act reserves 45 percent seats (vacant posts) in civil service for women and marginalized groups; 33 percent of these seats are specifically reserved for women (GoN, 2007). There is thus an increased trend among women foresters to join the government forest service as civil servants. However, women make up only 3.33 percent of forest sector civil servants, and there is a real dearth of women officers at the senior level. MFSC has one female joint secretary (first-class officer the in government hierarchy), only since 2015. MFSC has made a provision for a gender focal point under the Planning Division, and the head of the division takes charge of this responsibility.

The irony here is that despite the increased number of women in the decision-making bodies of the CFUGs, women's voice and influence are yet to be effectively reflected in the management of their respective community-managed forests. As a result, women from poor households are facing a shortage of forest products for their subsistence use (including fruits,

vegetables, fibre, fuelwood, fodder and medicinal herbs for health purposes), which are directly linked to the food security needs of the households. The majority of the poor rural households in Nepal rely on forests for fuelwood for cooking, fodder for livestock and as a source of income, food for the family diet and manure to fertilize cropland. Nepali women are primarily responsible for the management of all forest products required for subsistence use.

Despite the continued focus of the forest policies, GESI strategy and related community forestry guidelines to address gender issues, these have been less effective in addressing the gender gap in a practical sense. The poor conceptualization of gender equity is partly responsible for gender policies not being effective in practice. Gender equity outcomes are limited by the number of women physically present or enlisted in the decision-making body of the community groups, the amount of training provided to community groups and the government staff. At the community level, there is a lack of gender-disaggregated data, which limits the scope of effective monitoring. To sum up, despite the provisions made to incorporate the idea of gender-based inclusion in forest sector policies and programmes, in practice change is too slow, and there are not enough regulatory and procedural mechanisms to enforce change.

1.6 Recognition of the rights of indigenous people and other local communities in the use and management of forests and trees outside forests

Community-managed forests are the forests most accessible to local communities. Community forestry, pro-poor leasehold forestry and collaborative forest management are common types of CBFM. Among these, community forestry has stronger legal provisions for recognizing the rights of indigenous peoples and other local communities in the use and management of forests than the other types. Article 25 of the Forest Act 1993 clearly mentions that community forests are “entitled to develop, conserve, use and manage the Forest and sell and distribute the Forest Products independently by fixing their prices according to Operational Plan”(MFSC, 1995). Moreover, this act empowers local communities to: claim rights to forest as per their willingness, capacity and customs; access up to 100 percent of forest products from an autonomous organization; punish members who break rules; and amend or revise forest management rules. In addition, local communities are entitled to have some access to some forest products from conservation areas, buffer zones, public land management, protected forests and urban forests. However, the amount of forest products to be harvested or collected is subject to the jurisdiction of the respective authorities.

In recognition of the rights of indigenous people and other local communities in the use and management of forests, MFSC formulated the forest sector Gender Equality and Social Inclusion (GESI) Strategy in 2007 (MFSC, 2007). Its four change areas are described above under Dimension 1.5 (mainstreaming gender issues).

Despite the existence of these policy provisions to ensure community rights, in practice a number of regulatory hurdles hinder the process of using and managing forests for the benefit of forest-dependent poor communities, including indigenous communities. Local

communities, including indigenous communities, persistently face difficulties in using and managing forests and trees outside forests.¹⁷

Dimension 2: Human and financial resources

2.1: Adequacy of forestry sector budget allocation to address relevant FSN issues and/or implement activities related to improve FSN (both implicit and explicit)

Despite the existence of policy provisions to address food security by enhancing productivity of agricultural land, the national forest sector budget poorly reflects any budget headings for addressing FSN issues. Overall, forest sector human and financial resources are oriented towards forest conservation.¹⁸ However, within the forest sector, CBFM regimes have already recognized the role of forestry in poverty reduction and income and employment creation from the management of forests. The Community Forestry Guideline (DoF, 2009) requires that 35 percent of the total budget of a CFUG be allocated for the benefit of the poor, *dalits*, indigenous minorities and women. The guideline has listed 14 areas relevant to this allocation, including income generation and enterprise development, poverty reduction, skill development and training, women's empowerment and employment opportunities for the poor, women and the marginalized.

Likewise, there is a policy provision for disbursing 30 to 50 percent of the revenue from national parks for the benefit of local people living in the immediate periphery of a national park. There is a wide difference in the needs of different stakeholders within the command zone of the national parks, and generally there is a tendency to spend money in activities that are not directly related to food security, such as roads, community halls, training and the like. According to a report of the Department of National Parks and Wildlife Conservation (DSCWM, 2015), of the total revenue disbursed from Chitwan National Park, 20 percent was allocated for income generation. Other expenditure headings include conservation (30 percent), community development (30 percent), conservation education (10 percent) and administration (10 percent).

Despite the good policy provisions made, these policies are less effective than expected because of the weak monitoring mechanisms and poorly designed implementation guidelines and support mechanisms. This shows that good policies alone are not enough for addressing food security concerns if effective implementation mechanisms and accountability structures are not in place. The Monitoring and Evaluation Division is poorly equipped and receives little attention relative to other divisions within MFSC.¹⁹

As per the review of Magrath *et al.*, 2013, the annual budget for the forestry sector for the fiscal year 2010/11 was NPR4.47 billion (US\$63 million), which is 1.3 percent of the total budget. About 63 percent of the budget for the forestry sector was spent on salaries and allowances to support about 10 000 staff, including about 700 army personnel deployed to protect the national parks. Typically, according to this study, about 90 percent of the forestry

¹⁷ As expressed by all government and non-government officials during expert interview meeting.

¹⁸ Expressed by a senior government official during expert interview.

¹⁹ As remarked by a government official during expert interview.

sector budget goes to administrative expenditure, whereas only 10 percent goes to capital expenditure.

The number of forestry sector programmes and the annual investment level have both declined with the closure of the Multi Stakeholder Forestry Programme. In addition, stringent financial regulations result in the government agencies being unable to spend the allocated budgets.

2.2 Adequacy of financing of forestry programmes and projects with specific FSN objectives

As most forest policies and programmes do not explicitly mention FSN as an outcome of the government programmes, budget allocation for FSN cannot be expected. However, several projects and programmes running under MFSC (as listed in Annex 3) contribute to FSN issues directly or indirectly in a variety of ways (MFSC, 2015c). As of 1 July 2015, of the total 23 programmes and projects running under MFSC, a single project includes food security through forestry in its title and objectives: “Enhancing Livelihoods and Food Security from Agroforestry and Community Forestry in Nepal (EnLiFT) (2013–2018).²⁰

In addition to forest sector projects and programmes, as part of cross-sectoral collaboration the Agriculture Development Strategy (MoAD, 2014) has allocated 8 percent of its total budget to be spent in forestry activities that address FSN issues.

2.3 Adequacy of forestry sector human resources technical capacities to address FSN issues

The existing human and financial resources of MFSC and DoF are in general not adequate to address food security and nutrition issues, and at best, do not specifically reflect food security related investment. The technical capacity of the staff reflects strengths in forest administration and management. Opportunities for capacity development have remained limited, especially on aspects related to food security through forestry.²¹ Despite recent policy recognition on incorporating food security and livelihood needs, the capacity of the forestry institution is strongly based on natural and plantation forest management that largely focuses on timber production. Despite a certain level of appreciation, the actual capacity for multiple-product forest management that supports food security and the livelihood needs of the local communities remains limited. The lack of diversity in the human resources structure is another limiting factor for addressing food security needs in the forest sector, as DoF staff expertise does not include cross-sectoral and interdisciplinary areas such as agriculture, agroforestry, landscape management and hydrology.²² Further, forestry officials are under pressure to discharge diverse roles which are often related to multiple specialty areas such as technical forestry, administrative management, semi-judicial and even policing roles²³. Amid

²⁰ EnLiFT is an action research project funded by the Australian Centre for International Agricultural Research (ACIAR). The project runs in four middle hill districts with the total budget of AUD2.5 million.

²¹ With the start of CBFM regimes, the forest sector offered workshops, seminars and study tours to forestry staff, which have significantly contributed to changing the role of forestry staff from “policing” to “facilitating”.

²² Expressed by a government official and two of the non-government officials during expert consultation.

²³ As expressed by one of the government officers, in some districts, the District Forest Officer has to spend almost 70 percent of his or her time for semi-judicial and policing tasks.

such complex responsibilities, staff of the MFSC have hardly any space to think about an additional role in targeting food security.

The existing training curricula for DoF staff include some elements related to food security, especially in relation to community-based forest management systems. Owing to the limited synergies between training and actual workplace practices, such training has largely been ineffective in boosting staff's motivation in general and in relation to food security concerns in particular. Limited resources are allocated for pursuing sustainable management of forest resources such as the management of fire, which is an increasing challenge in the face of climate change.

2.4 Adequacy of forestry sector efforts to enhance technical and operational capacities to address FSN

Forest sector resource allocation is partly related to strategic planning and articulation of forest management as an agenda of national priority. The forest sector has an opportunity to demonstrate its contribution to food security and other sectors such as ecotourism and to justify a greater proportion of budget allocations. However, at present, forest sector efforts to enhance technical and operational capacities are far from adequate to address FSN. A GDP study is under way, and this may generate some figures for better recognition of the role of forestry in overall development.²⁴

It is recognized that non-governmental service providers are important partners in development and forest management (e.g. NGO guideline of MFSC and Community Forestry Guideline 2009). An increasing number and diversity of NGOs are also involved in delivering services related to forest management, yet their work is also guided by sectoral policy frameworks, which indicates the need to reorient even the NGO sector in forestry so that NGOs can champion food security friendly forest management policies and practices.

Dimension 3: Cross-sectoral forestry and FSN relevant governance, coordination mechanisms and partnerships

3.1 Degree of coordination with FSN relevant government sectors in developing national forestry policies, programmes and strategies

In general, the coordination between MFSC and its line departments and community groups seems good in the process of formulating forest sector policies, strategies and programmes. At the time of the current Forest Sector Strategy development, the strategy development team consulted the staff of MFSC and its departments at all levels including community groups through forest user group federations, namely FECOFUN, ACOFUN and NEFUG²⁵

²⁴ The study is being conducted by the Department of Forest Resources and Survey in collaboration with the Central Bureau of Statistics.

²⁵ FECOFUN, ACOFUN and NEFUG stand for Federation of Forest User Groups Nepal, Association of Collaborative Forest Users of Nepal and Nepalese Federation of Forest Resource User Groups, respectively. FECOFUN is the largest federation of community forest user groups in Nepal.

(MFSC, 2016). Despite the good practices followed during Forest Sector Strategy formulation, there was limited consultation during preparation of the Forest Policy.

There is an increasing trend of coordinating with other government ministries in formulating forest sector policies. For instance, the Forest Sector Strategy preparation team consulted with policy/decision-making officials of several other ministries including the Ministry of Finance, the Ministry of Education, the Ministry of Land Reform, the Ministry of Federal Affairs and Local Development and the Ministry of Agriculture and Development – the focal ministry for food security and nutrition. However, in most cases, the level of consultation was limited to the policy formulation stage.

Likewise, there is increased recognition of intergovernmental organizations (IGOs), NGOs, the private sector and markets during forest policy and strategy formulation. For instance, the Forest Sector Strategy formulation team consulted IGOs, NGOs, community-based organizations, universities, the private sector, bankers, traders, the Federation of Nepalese Chambers of Commerce and Industries (FNCCI) and forestry professionals' organizations. Although not all of the organizations consulted mention food security and nutrition explicitly in their organizational goals and objectives, their actions are linked to food security and nutrition in many ways.

3.2 Degree of partnerships with non-governmental (international and national) agencies and institutions

There is a lack of national-level institutional mechanisms to create synergy between the forest and agricultural sectors that could enhance FSN governance. However, some initiatives have recently started aiming to enhance cross-sectoral governance in both sectors by establishing coordination and partnerships within the government ministries and between the government ministries and NGOs and the private sector. For instance, there is an apex body on the National Biodiversity Coordination Committee (NBCC), chaired by the Forest Minister and consisting of 27 members including eight sectoral ministries,²⁶ whose role is to implement the National Biodiversity Strategy and Action Plan (MFSC, 2014). Under REDD+ there are three national level forums (the Apex Body, REDD Working Group and multi-stakeholder forum) representing various government ministries, NGOs, the private sector and community groups (MFSC, 2015d)

The role of forestry in addressing food security issues is duly recognized and well reflected in the agriculture sector as well. For example, MoAD has included MFSC as one of the members of the national-level Agriculture Development Strategy (ADS) implementation body, with 8 percent budget allocation to forest sector development (MoAD, 2014). In addition, the Zero Hunger Challenge National Action Plan (ZHCNAP)²⁷ emphasizes the forest sector's

²⁶ The MFSC secretary serves as member secretary of the NBCC. Other members include the MoAD, the National Planning Commission (NPC), universities, FNCCI, independent experts and representatives of NGOs and community federations from different sectors.

²⁷ A Zero Hunger Challenge (ZHC) Secretariat has been established at MoAD under the supervision of the High Level Committee (HLC). The Secretariat will be responsible for ensuring implementation of cross-sectoral tasks as planned under the National Action Plan (NAP). The Secretariat will work in close collaboration with the HLC on Food Security and Nutrition established at the National Planning Commission. The Secretariat will also maintain a database and submit periodic progress reports to the HLC indicating changes in hunger and nutrition

contribution to enhancing agricultural productivity through “shift of subsistence production based forestry to competitive, agriculture friendly and inclusive forest management practices, with a holistic and community based landscape approach to natural resource management and livelihoods improvement” (MoAD, 2014:10).

Coordination and partnerships with NGOs and the private sector are increasingly institutionalized in the forest sector. The recent Multi Stakeholder Forestry Programme included NGOs and civil society organizations in its national-level steering committee as well as its field-level implementation. MFSC has started to use private banks to finance businesses to be run by CFUGs.²⁸

The role of the private sector is also identified as relevant and important in the Forest Policy, particularly for increasing income and employment opportunities from the forest sector without compromising conservation goals. However, in practice, the private sector continues to experience procedural hurdles and regulatory bottlenecks in running forestry enterprises and businesses.

At the district level, District Forest Coordination Committee (DFCC) has a mandate to bring various stakeholders together in the district to discuss plans and budget. Owing to the lack of elected district government, this arrangement has not been as effective as envisaged in the DFCC regulations (MFSC, 2011).

At the project/programme level, there are 23 projects/programmes funded by international development organizations under MFSC and its line departments. Almost half are linked to food insecurity issues, although indirectly (MFSC, 2015c). Only one project aims to address food security explicitly in its title: “Enhancing Livelihoods and Food Security from Agroforestry and Community Forestry in Nepal (EnLiFT) (2013–2018) (see Dimension 2.2).

3.3 Existence of multi-sectoral planning processes and policy dialogues

Food security and nutritional outcomes are linked to multiple sectors of environmental governance – forestry, agriculture, livestock, water, energy, mining and health. While the National Planning Commission (NPC) uses an overarching and integrative planning approach, much of the planning work is sector specific. Despite some attempts to foster dialogue across sectors, food security-oriented cross-sectoral coordination remains limited.

Dimension 4: Evidence-based decision-making capacity

4.1 Use of evidence in developing national forestry policies, programmes and strategies

Key public policy decisions about forestry are made at multiple levels of governance: The Council of Ministers (or the cabinet), Ministry (Minister and Secretary levels) and the

status. At the district level, the Agriculture Coordination Committee within the District Development Committee (DDC) will implement district-level activities. At the Village Development Committee (VDC) level, a Citizen’s Forum will also be mobilized.

²⁸ Business proposal presented by a banker in an MSFP seminar, 16 June 2016, Kathmandu.

Department (Director General level). The National Planning Commission guides decisions of the cabinet through periodic planning, and the Minister brings specific proposals – such as the Forest Policy draft – into the cabinet meeting. Decisions of the Minister, Secretary and Director General are primarily based on evidence and interpretation gathered by the staff of MFSC. The collection and analysis of data to determine the contribution of forestry to food security and nutrition are far from adequate for a number of reasons. The Monitoring and Evaluation Division of MFSC is weak in terms of resources and staffing. Forest resources assessment data have been generated recently and provide useful evidence. Over the past few years, new initiatives have emerged around sustainable forest management, with a strong component of forest inventory and assessment, especially for timber products. Forestry-related research by independent researchers is mounting in Nepal, and systematic review of such research can also generate useful evidence for decision-making.

In general, the science–policy interface is weak, and most policies are formulated and revised based on the individual knowledge of the individuals involved in policymaking rather than on the institutional memory of the whole forest sector (Ojha *et al.*, 2016). Sometimes, media reports have also influenced parliamentary debates on legislation (e.g. the Forest Act 1993 amendment, banning green tree felling). The term “food security and nutrition” is a recent insertion in the current Forest Policy and Forest Sector Strategy and is yet to be integrated into the programme output monitoring and operational procedures of MFSC and its line departments down to the district and community levels. Currently, different forestry departments collect data differently, and no system has been developed to streamline data management, for example by collating and analysing data across the departments using common as well as specific indicators of food security for use in decision-making.

4.2 Existence of mechanisms for data collection, analysis and reporting on the contribution of forests to FSN

The collection and analysis of data to determine the contribution of forestry to food security and nutrition is far inadequate as the monitoring and evaluation section is weak in terms of resources and capacity of its human resource. Also, the term ‘food security and nutrition’ is a new aspect in current Forest Policy (MSFP, 2015) and Forest Sector Strategy (MSFP, 2016), it is yet to be included in the existing data collection, analysis and reporting. Currently, different forestry departments collect data differently and no tradition of collating them and analysing them together and feed the result in the decision-making processes.

4.3 Incorporation of evidence in forestry policy development and programming

Largely, the forestry policymaking process is based on the cumulative experience of the government officials or consultants rather than incorporating publicly scrutinized evidence/knowledge²⁹. In many instances, such cumulative experience is guided by forest conservation principles rather than supporting communities to enhance their livelihoods and food security.

²⁹ As expressed by an NGO official.

Dimension 5: FSN policies, programmes and legal frameworks addressing forestry

5.1 Adequacy of FSN policies, programmes and legal frameworks to address forestry

In Nepal, national food security policy is under preparation. However, Nepal has already prepared the Multi-sector Nutrition Plan (GoN/NPC, 2012), the Zero Hunger Challenge National Action Plan (ZHCNAP) (MoAD, 2016a) and the Agriculture Development Strategy (ADS) (MoAD, 2014) to address FSN concerns. The last two explicitly mention the role of the forest sector's contribution in food security and nutrition. ADS, under Outcome 2, states that an increased level of agricultural productivity is achieved through "shift of subsistence production based forestry to competitive, agriculture friendly and inclusive forest management practice, with a holistic and community based landscape approach to natural resource management and livelihoods improvement" (MoAD, 2014:10). Of the total flagship programme budget (37 percent of the total programme cost) of ADS, 8 percent is allocated for forestry development. ADS also plans to establish a national multi-sectoral ADS implementation committee in which MFSC is enlisted as a member.³⁰

Likewise, ZHCNAP has recognized the importance of the forest sector in achieving its stipulated goals. Forestry development is explicitly mentioned under two of the five pillars in the ZHCNAP document: Pillars 3 and 4. The mentioned activities aim to address FSN by engaging smallholder farmers in leasing forest land, producing MAPs and NWFPs in leased and community forests and increasing community participation in conserving degraded forest and farmland.

In the case of the Multi-sector Nutrition Plan (GoN/NPC, 2012), Output 6 mentions "environment" as a whole together with the agricultural and local development sectors, but the role of forestry is not directly taken into account. This shows a limited recognition of the role of MFSC and its departments and district and community groups. This plan was jointly developed with the Ministry of Agricultural Development, Ministry of Education, Ministry of Federal Affairs and Local Development, Ministry of Health and Population and Ministry of Urban Development. A series of consultative meetings were conducted involving the National Nutrition and Food Security Steering Committee and Coordination Committee members, government line agencies, technical working groups, sector reference groups, experts and consultants, and representatives from various development partners including donors and civil society organizations. This plan is implemented by the sectoral ministries identified above at the national level and is coordinated by NPC. Output 1 of this plan says:

"Policies and plans updated/reviewed, and the incorporation of a core set of nutrition specific and sensitive indicators at national and sub-national levels. NPC and sector

³⁰ This committee will be chaired by Hon. Minister for Agricultural Development, with Hon. VC of NPC as co-chair, Hon. member of NPC (Agriculture Sector), VC University of Agriculture and Forestry, Secretaries from the Ministries of Finance, Irrigation, Forestry, Federal Affairs and Local Development, Cooperatives and Poverty Alleviation, Land Reform and Management, and Education, Presidents of FNCCI and CNI, and representative of National Peasant's Coalition as members, and MoAD Secretary as Member Secretary. Observer status will be made available to independent professionals, development partner representatives, NGOs and academia.

ministries (local development, health, education, agriculture, physical planning and works) will be responsible for achieving this result” (GoN/NPC, 2012: 10)

This plan excludes the role of MFSC in nutritional security. At the district level, Nutrition and Food Security Steering Committees have been formed under the Local Development Officer (LDO). No specific responsibility has been given to forestry offices in these committees.

E. Summary highlights of the country scorecard results

Dimension 1: National forestry policies, programmes and legal frameworks addressing FSN

Classification: Medium low (average score 1.58)

The current national forest policy and strategy incorporates food security as one of the sub-outcomes to be achieved in the forest sector. Enhanced agricultural productivity through soil and water conservation, creating employment opportunities and generating income from forest-based wood and non-wood products are the key areas that the current forest policy and strategy focus on in relation to food security and nutrition. However, these are yet to be incorporated in actual programmes and legal frameworks. In the case of community forestry, forest sector legal frameworks and the Community Forestry Guideline (DoF, 2009) provide tree and forest tenure security to local communities, but several procedural and regulatory hurdles are faced in materializing these provisions in actual practice. Since the formulation of the Gender Equality and Social Inclusion Strategy and the Community Forestry Guideline (with community forests focus), forest sector policy has taken a progressive approach in mainstreaming gender, but the effectiveness of gender mainstreaming has been an issue in the forest sector.

Dimension 2: Human and financial resources

Classification: Low (average score 1.4)

Human and financial resources in the forest sector are far from adequate to address food security and nutrition concerns. This inadequacy is observed in relation to the capacity and number of technical staff and poorly established data collection and data management systems for feeding future planning and policy formulation processes. Collection, analysis and posting of data related to FSN, the forest sector and other important contributions of the forest sector such as ecosystem services are poorly organized.

Dimension 3: Cross-sectoral forestry and FSN governance, coordination mechanisms and partnerships

Classification: Low (average score 1.4)

Cross-sectoral forestry and FSN governance, coordination and partnership mechanisms are slowly arising in the forest sector. The Forest Sector Strategy formulation process is an example of such a cross-sectoral mechanism; it involved consultation of several other government ministries beyond forestry, as well as private-sector entities and other organizations. However, inclusion of other sectors has been limited to one-time consultation rather than continuing through regular coordination and the establishment of a functional partnership mechanism for achieving FSN objectives.

Dimension 4: Evidence-based decision-making capacity

Classification: Low (average score 1.2)

Nepal's forest policymaking process is weak in terms of linking science and policy. Despite a prolific amount of independent research, mainly related to community based forest management, very few studies are taken into consideration in the formulation of policies and strategies. In most cases, these policies and strategies are formulated based on the cumulative experience of the policymakers, consultants contracted for the purpose and the MFSC staff in different departments and district offices.

Dimension 5: FSN policies, programmes and legal frameworks addressing forestry

Classification: Medium low (average score 2.0)

Nepal's food security policy is under preparation. The recently formulated Agriculture Development Strategy (ADS) and Zero Hunger Challenge National Action Plan (ZHCNAP) are the two important documents that specifically mention forestry as important component of agriculture sector policies. More specifically, 8 percent of the total budget required for the implementation of ADS is allocated for forestry, and MFSC is included as a member of the ADS high-level implementation committee.

F. Conclusion and recommendations

Conclusions

Nepal's forest policy and strategy explicitly mention increasing agricultural productivity and ensuring food security through the forest sector. This is particularly important and relevant to the country context of Nepal, where agriculture, forestry and livestock are closely linked. For instance, integrated farming systems are common in the middle hills region of the country. However, these explicit provisions are yet to be well reflected in regulatory

frameworks and operational guidelines to enhance implementation. A review of the current regulatory framework and interviews with experts related to forestry reveal that there are a number of procedural hurdles to food security across production, trade and use.

The analysis shows that few of the recent policy frameworks related to forest and agriculture development have prioritized the need to integrate agriculture and forestry processes. There is no institutional arrangement for linking forest and agriculture. For example, there is no unit within the forest and agriculture ministries to look after forest and food security linkages. In some cases, researchers even comment that the Forest Policy has contributed to pulling apart the livestock–forest link, an integral part of local livelihood systems (Dhakal *et al.*, 2011). Likewise, agricultural policies that aim to intensify farming through commercialization miss the opportunity to make farming resilient (for biodiversity, organic matter and risk management) by better integration with forests. This oversight has limited efforts to harness the full potential of forests for FSN objectives, which could bring millions of people out of the food insecurity trap.

Despite the huge contribution of forest to food security, its overall contribution is not adequately accounted for or well documented. Despite the promotion of a participatory forest management agenda, the eco-centric conservation orientation and the continuation of various forms of centralized control over forests are not greatly conducive to food security oriented innovations in forest governance. Both in government- and community-managed forests, the emphasis is still on conservation of the forest ecosystem, often leading to either “passive management” or timber-focused “scientific forest management” of forests.

In addition, human resources in the forest sector are oriented towards forest conservation and management, and lack the expertise needed to address food security and livelihood-related concerns through management of forest. Additional issues include lack of cross-sectoral and cross-scale institutional support mechanisms and joint planning and service provisioning mechanisms.

There is some recognition that non-governmental service providers are important partners in development and forest management (e.g. NGO Guideline of MFSC and Community Forestry Guideline 2009). An increasing number of NGOs are involved in delivering services related to forest management, yet their work is guided by sectoral policy frameworks.

Gender equity is among the criteria used in the formation of forest management committees at village level. There are, however, issues of effective gender-based inclusion, which is a key to food security oriented management of forest at the local level. Rapid feminization of agricultural tasks due to massive male outmigration has been an emerging challenge related not only to gender but also to overall food security.

This analysis suggests that Nepal’s forest sector has a huge potential to contribute to food security. However, this possibility has not been fully realized, as the forest sector is still oriented towards a narrow view of conservation which separates food security and livelihoods from forest management. Forests as communal resources have the potential to enhance equitable access and the empowerment of food-insecure groups and poor communities through collective action and local institutional development. As forests usually provide diverse and often nutritionally valuable foods, the utilization aspect of food security will also be strengthened if forests are managed for food security outcomes.

Recommendations

Based on the analysis carried out in the previous sections, the following recommendations are made to address the gaps in the forest sector's contribution to food security and nutrition.

1. To ensure sound implementation of cross-sectoral forest and food security policy and relevant strategies and programmes, and for improved alignment and coordination between policies and practices on the ground, operational guidelines and procedures should be developed, taking into consideration the existing challenges and possible solutions in practical terms.
2. Legislative frameworks (Forest Act 1993 and Rules 1995) should be amended to incorporate food security and nutrition issues and to guide all forest sector departments to address these issues.
3. Nepal's periodic development plans should also explicitly guide sectoral policies and programmes to incorporate food security and nutrition issues and facilitate effective synergy among them.
4. National food security policy (being developed) should incorporate the vital contribution of the forest sector and should explicitly recognize the need to ensure an effective link between forest and food security.
5. The forest sector should allocate adequate budget for training and capacity development of the staff, covering food security and nutrition issues in the training curricula designed for staff as well as outreach for community members.
6. Establishing a foresters' council could help in addressing some of the gaps seen in service provisioning and the inadequacy of human resources by outsourcing forest sector services to registered professionals. Unlike professionals in other sectors such as engineering, foresters are not currently allowed to offer their technical services independently as registered professionals.
7. Given the important role of non-governmental organizations and private-sector groups in forest development, there is a need to reorient and instruct these actors so that they can champion the forest–food security interface in their projects, programmes and practices.
8. Agroforestry policy (being formulated) should help address the gaps currently seen between the work of MFSC and MoAD in relation to agroforestry, the forest–agriculture interface and food security. In developing strong cross-ministry collaboration and coordination mechanisms, technical matters of agroforestry including field implementation arrangements should be handled by MoAD and relevant legal matters by MFSC.

9. An integrated database and knowledge repository on forest, agriculture, land use and food security should be developed, and platforms and facilities created for analysis to inform food insecurity and nutrition policy and planning.
10. Forestry- and agroforestry-based enterprise development should be promoted and supported through effective involvement of the private sector, including financial institutions such as banks, to facilitate access to capital and high quality entrepreneurship skills and, more importantly, to address the persistent regulatory hurdles in the forest sector.
11. An overall forest wealth accounting survey should be conducted to estimate the total wealth (all resources and services) available in the forests (including regular updates on forest's contributions to GDP) and its actual contribution to food security and nutrition (covering subsistence use of direct food products, income, employment and increased agricultural productivity through enhanced farm–forest linkages).
12. The capacities of local communities involved in community-based forest management should be continuously strengthened to ensure effective management of forest resources to address food security and nutrition needs without compromising forest conservation goals.
13. A poverty focus should be maintained in forest sector services delivery, emphasizing food security and nutrition benefits from forest management.
14. More effective interventions should be designed for tackling persistent gender gaps in the forestry sector, from MFSC and department levels down to community groups. Work with women's groups should build women's capacity to voice their concerns effectively at all levels of decision-making and planning.
15. Given the widespread effect of the feminization of tasks related to food security from forestry and agricultural development, there is a need to promote and upscale technologies that require minimal labour inputs but promote high income potential from enterprises in forestry, agroforestry, agriculture and landscape management.
16. Monitoring and evaluation systems should be strengthened at the central level and also potentially at the provincial level (well linked to the central system) with the active involvement of government, NGOs and private-sector groups that are contributing, or have the potential to contribute, to FSN directly or indirectly.
17. Promoting payments for environmental services (PES) and developing mechanisms and facilitating dialogue to connect upstream and downstream communities can contribute to effective soil and water conservation in watersheds. In this regard it is crucial to consider the potential impact of changing climate on the hydrological cycle and water supply system of a watershed.

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Annexes

Annex 1: Forestry and Food Security Analysis Framework

Table 2: Cross-sectoral Forestry and Food Security Policy Analysis Framework (Proposed Assessment Criteria, Indicators and Key Assessment Questions)			
Assessment dimensions	Indicators	Key Assessment Guiding Questions	Information Sources
1) National Forestry policies, programmes and legal frameworks addressing FSN	1.1 Existence of national forestry policies, strategies, programmes or legal frameworks with explicit FSN objectives	<p>-Does the country have national forest policies and strategies with explicit FSN objectives?</p> <p>-If yes, are the FSN objectives set by national forest policies?</p> <p>-If yes, are they strategies specific, measurable, achievable, relevant and time-bound?</p>	Secondary information (National forestry policies, strategies and other relevant documents)
		<p>-Is there any forestry programmes with explicit FSN objectives at national level?</p> <p>-If yes, are the FSN objectives set by national forestry programmes?</p> <p>-If yes, are they specific, measurable, achievable, relevant and time-bound?</p>	
		<p>-Is there any forestry legal framework with explicit FSN objectives at national level?</p> <p>-If yes, are the FSN objectives set by national forestry programmes?</p> <p>-If yes, are they specific, measurable, achievable, relevant and time-bound?</p>	
	1.2 Comprehensiveness of national forestry policies, strategies, programmes and legal frameworks in terms of addressing the 4 dimensions of FSN	<p>Are the existing sustainable forest management policies, strategies, programmes and legal frameworks at national level addressing:</p> <p>-Food availability (<i>e.g. improved agricultural productivity; utilization of edible NWFPs for food intake or medicinal use</i>)</p> <p>-Food access (<i>e.g. income, e.g. salaries, profit, etc., generated from the forestry sector</i>)</p> <p>-Food utilization (<i>e.g. safe and sustainable use of fuelwood and charcoal for cooking and water sterilization; use of local NWFPs for health and nutrition; medicinal use of NWFPs</i>)</p> <p>-Food stability (<i>e.g. biodiversity conservation, soil fertility, water regulation, ensuring sustainable agricultural and fisheries production</i>)</p>	
	1.3 If there is no explicit FSN objective in the policies, strategies, programmes or legal frameworks are there any existing elements that are contributing to FSN implicitly	<p>-Is there any evidence of the existing forest policies, strategies, programmes or legal frameworks providing specific options for strengthening key drivers of forestry's contribution to FSN with a focus, among others, on the following:</p> <ul style="list-style-type: none"> • Access to forest and tree resources for own consumption of edible NWFPs 	

		<ul style="list-style-type: none"> • Access to forest and tree resources for commercialization of any forest goods and services • Access of forest-dwellers to forestry/FSN extension services • Access of forest-dwellers to technology and credit • Access of forest-dwellers to markets and market information • Sustainable production and consumption of fuelwood and charcoal • Promotion of forestry sector employment • Promotion of income generation activities of forest dependent communities <p><u>*For legal frameworks, in particular, additional aspects can be assessed in a complementary way by looking at the existing tenure system:</u></p> <p><i>National legal framework on forest and tree tenure & Enabling level of the existing national forest and land tenure legislation</i></p> <ul style="list-style-type: none"> • At which level is forest and tree tenure regulated? (e.g. Constitution, land, agriculture, forest acts, etc.) • Does the legal framework on forest and tree tenure provide clarity on rights and obligations to ensure an equitable access to forest, trees and land resources? • Does the legal framework provide long-term rights to forest and tree resources? • What are the levels of obligations/requirements (management plans, authorizations, taxes, etc.) to access forest and tree resources? • Does the legal framework on forest and tree tenure include mechanisms for the protection against violations of the rights to forest and land tenure? 	
	1.4 Use and mainstreaming of traditional and local food systems, and NWFPs	-Are there any forest policies, strategies, programmes or legal frameworks recognizing the important value of, and promoting traditional/local indigenous food systems (e.g. NWFPs) for improved nutrition & health?	
	1.5 Mainstreaming of gender issues in national forestry policies, strategies, programmes and legal frameworks	<p>-Are the national forestry policies, strategies, programmes and legal frameworks recognizing the key role of women, in general?</p> <p>-Are the national forestry policies, strategies, programmes and legal frameworks recognizing the key role of women to achieve FSN?</p> <p>-Does the national forestry policies, strategies, programmes and legal frameworks include provisions for ensuring gender equity in accessing forests and tree resources?</p>	

	1.6 Recognition of the rights of indigenous people and other local communities in the use and management of forests and trees outside forests	-Does national legal frameworks on forest and tree tenure (and national forestry policies, strategies and programmes in general, if applicable) recognize the rights of indigenous people and other local communities?	
2) Human and financial resources	2.1 Adequacy of forestry sector budget allocation to address relevant FSN issues and/ or implement activities (e.g. communication, capacity building, awareness-raising) related to improved FSN (both implicit and explicit).	-Is the national budget allocated to the forestry sector adequate in general? -Is the national budget allocated to the forestry sector adequate for addressing relevant FSN issues and/ or implement activities (e.g. communication, capacity building, awareness-raising) related to improved FSN (can either be implicit and explicit)? -Are there any areas that are not adequately financed where budget allocation can be improved?	Secondary information (National forestry policies, strategies and other relevant documents) & Primary information
	2.2 Adequacy of financing of, and investment in forestry programmes and projects with specific FSN objectives	-Is there adequate amount of investment in the forestry sector in general (e.g. national forestry programmes and projects)? -Are the national forestry programmes and projects addressing FSN issues? -If yes, is the financing of forestry programmes and projects addressing FSN issues adequate? -Which programmes and projects should increase their budget for enhancing their effectiveness?	(Expert opinion surveys at national level)
	2.3 Adequacy of forestry sector human resources technical capacities to address FSN issues	-Are the existing technical capacities of forestry sector staff at national level adequate in general? -Are the existing technical capacities of forestry sector staff at national level adequate for addressing effectively FSN issues? (e.g. Do they have an adequate level of understanding on the contribution of forests for FSN?) -Are the existing technical capacities of forestry sector staff at sub-national level adequate for effectively addressing FSN issues? -Is there a gender-balance in the human resources allocated by forestry sector to address FSN?	
	2.4 Adequacy of forestry sector efforts to enhance the technical and operational capacities to address FSN	-Is the government committed to enhance the technical and operational capacities of the forestry sector in general? -Is the government committed to enhance the technical and operational capacities of the forestry sector to effectively address FSN issues? -Are there any capacity development opportunities that exist for the forestry sector staff at national level (if so, what are the focus of the main topics)? -Are the government efforts to remove capacity gaps adequate?	
3) Cross-sectoral forestry and FSN governance, coordination mechanisms and partnerships	3.1 Degree of coordination with FSN relevant government sectors in developing national forestry policies, strategies,	-Are the existing national forestry policies, strategies, programmes and legal frameworks resulting from consultation and coordination processes with other sectors and actors, in general?	Secondary information (National policies,

	programmes and legal frameworks	<p>-Are the existing national forestry policies, strategies, programmes and legal frameworks resulting from consultation and coordination processes with other sectors and actors that are relevant for achieving FSN?</p> <p>- If yes, which government sectors relevant to FSN have been consulted in developing the national forestry policies, strategies, programmes and legal frameworks?</p> <p>-Are there any regular inter-sectoral meetings organised and held among different ministries? (e.g. agriculture, forestry, fisheries, finance, health etc.)</p>	<p>programmes and legislation on FSN)</p> <p>&</p> <p>Primary information</p> <p>(Expert opinion surveys at national level)</p>
	3.2 Degree of partnerships with non-governmental (international and national) agencies and institutions	<p>-Have the existing national forestry policies, strategies, programmes and legal frameworks been supported by any non-governmental partners in general?</p> <p>-Have the existing national forestry policies, strategies, programmes and legal frameworks been supported by any non-governmental partners to enhance their contribution to FSN?</p>	
	3.3 Existence of multi-sectoral planning processes and policy dialogues	<p>-Are there any governmental national-level multi-stakeholder platforms in general (including the participation of non-government entities, if applicable in your country-context)?</p> <p>-Are there any national-level multi-stakeholder platforms to address forestry and FSN issues?</p> <p>-Is any of governmental stakeholders involved in multi-stakeholder processes at global level? (e.g. Committee on Forestry, Committee on Agriculture, Committee on Fisheries, Committee on World Food Security, Conference of the Parties of UNFCCC, UNCCD and CBD etc.)?</p> <p>-Is any of non-governmental stakeholders involved in multi-stakeholder processes at global level (e.g. Committee on World Food Security, Conference of the Parties of UNFCCC, UNCCD and CBD, etc.)?</p>	
4) Evidence-based decision-making capacity	4.1 Use of evidence ³¹ in developing national forestry policies, strategies, programmes and legal frameworks	<p>-Are the existing national forestry policies, strategies, programmes and legal frameworks based on evidence (<i>e.g. reference to certain cases, examples, data, impact studies etc.</i>)?</p> <p>-If yes, are the root causes of food insecurity and malnutrition identified and addressed by the existing national forestry policies, strategies, programmes and legal frameworks?</p>	<p>Secondary information</p> <p>(National policies, programmes and legislation on FSN)</p> <p>&</p> <p>Primary information</p> <p>(Expert opinion surveys at national level)</p>
	4.2 Existence of mechanisms for data collection, analysis and reporting on the contribution of forests to FSN	<p>-Has the government established any mechanisms for data collection, analysis and reporting in the forestry sector in general?</p> <p>-Has the government established any mechanisms for data collection, analysis and reporting on the contribution of forests to FSN?</p> <p>-Are the gender aspects adequately captured by the existing mechanisms for data collection, analysis and reporting in the forestry sector in general?</p> <p>-Are the gender aspects adequately captured by the existing mechanisms for data collection,</p>	

³¹ In this context, “evidence” should be intended as comprehensive situational analysis by credible sources that provide a detailed description of FSN dimensions, underlying causes of food insecurity and vulnerable populations.

		analysis and reporting on the contribution of forests to FSN?	
	4.3 Adequacy of forestry sector efforts for the collection of data, analysis and reporting on the contribution of forests to FSN	-Are the resources (human and financial) allocated for the collection of data, analysis and reporting in the forestry sector in general? -Are the resources (human and financial) allocated for the collection of data, analysis and reporting on the contribution of forests to FSN adequate?	
	4.4 Existence of well-functioning mechanisms for regular M&E of national forestry policies, strategies, programmes and legal frameworks addressing FSN	-Is the government performing M&E activities for assessing the outcome of implementation of national forestry policies, strategies, programmes and legal frameworks in general? -If so, do they provide a systematic approach and are they carried out on a regular basis? -Is the government performing M&E activities for assessing the contribution of forestry programmes and projects to FSN? -If so, do they provide a systematic approach and are they carried out on a regular basis? -If the government is not performing M&E activities to assess the contribution to FSN, can existing M&E systems be easily adapted to include the FSN dimension? -Do the existing M&E mechanisms provide gender disaggregated data?	
	4.5 Incorporation of evidence in forestry policy, strategy, programme and legal framework development and programming	-To which extent is the evidence related to the contribution of forests to FSN incorporated in forestry policy dialogues and decision-making processes? - If not explicit, to which extent is the evidence related to the contribution of forest to FSN incorporated in forestry policy dialogue and development in an implicit manner? (e.g. mention of NWFPs, woodfuel, forestry income etc. without a link made to FSN) -To which extent is the evidence on the contribution of forest to FSN from M&E actions supporting the review the existing, and the development of the new national forestry policies, strategies, programmes (and projects) and legal frameworks addressing FSN?	
5) FSN policies, programmes, strategies and legal frameworks addressing Forestry	5.1 Adequacy of FSN policies, programmes, strategies and legal frameworks to address Forestry	- Are there any FSN policies, programmes, strategies and legal frameworks at national level? - If yes, are there any FSN policies, programmes, strategies and legal frameworks at national level addressing the important role of forests to FSN?	Secondary information (National policies, programmes and legislation on FSN)

Annex 2. Country scorecard

Indicators					Scores (4= high; 0= low)	Total Score (average)	Classification
Dimension 1: National forestry policies, programmes and legal frameworks addressing FSN							
	Policies & Strategies	Programmes	Legal Frameworks	average			
1. Existence of national forestry policies, strategies, programmes or legal frameworks with explicit FSN objectives	3.5	1.5	1.5	2.1	1.58		<i>High = 4 (3.5 - 4.0);</i>
2. Comprehensiveness of national forestry policies, strategies, programmes and legal frameworks in terms of addressing the 4 dimensions of FSN	2.0	1.5	1.5	1.6			<i>Medium-High = 3 (2.5 - 3.4);</i>
3. If there is no explicit FSN objective in the policies, strategies, programmes or legal frameworks are there any existing elements that are contributing to FSN implicitly	2.0	1.5	1.5	1.6			<i>Medium-Low = 2 (1.5 - 2.4);</i>
4. Use and mainstreaming of traditional and local food systems and use NWFPs	1.5	1.0	1.0	1.1			<i>Low = 1 (0.5 - 1.4)</i>
5. Mainstreaming of gender issues in national forestry policies, strategies, programmes and legal framework	3.0	1.5	1.5	2.0			<i>No/Negligible = 0 (0 - 0.4)</i>
6. Recognition of the rights of indigenous people and other local communities in the use and management of forests and trees outside forests	1.5	1.0	1.0	1.1			

Dimension 2: Human and financial resources			
7. Adequacy of forestry sector budget allocation to address relevant FSN issues and/ or implement activities (e.g. communication, capacity building, awareness-raising) related to improved FSN (both implicit and explicit).	0.4	1.4	
8. Adequacy of financing of forestry programmes and projects with specific FSN objectives	0.4		
9. Adequacy of forestry sector human resources technical capacities to address FSN issues	0.3		
10. Adequacy of forestry sector efforts to enhance the technical and operational capacities to address FSN	0.3		
Dimension 3: Cross-sectoral forestry and FSN governance, coordination mechanisms and partnerships			
11. Degree of coordination with FSN relevant government sectors in developing national forestry policies, strategies, programmes and legal frameworks	1.5	1.4	
12. Degree of partnerships with non-governmental (international and national) agencies and institutions	1.5		
13. Existence of multi-sectoral planning processes and policy dialogues	1.3		
Dimension 4: Evidence-based decision-making capacity			
14. Use of evidence in developing national forestry policies, strategies, programmes and legal frameworks	1.3	1.2	
15. Existence of mechanisms for data collection, analysis and reporting on the contribution of forests to FSN	1.3		
16. Adequacy of forestry sector efforts for the collection of data, analysis and reporting on the contribution of forests to FSN	1.2		
17. Existence of well-functioning mechanisms for regular M&E of forestry policies, strategies and programmes addressing FSN	1.1		
18. Incorporation of evidence in forestry policy, strategy, programme and legal framework development and programming	1.2		
Dimension 5: FSN Policies, Programmes, Strategies and Legal Frameworks Addressing Forestry			
19. Adequacy of FSN policies, programmes, strategies and legal frameworks to address Forestry	2.0	2.0	
Notes:			

All indicators are scored on a 0 to 4 scale, with 4 representing high levels of commitment and capacity, and 0 no/negligible. Scoring is done through primary and secondary data. Primary data is collected through an expert opinion survey. The respondents include a selected number of experts working on forestry, agriculture, and food security and nutrition in a particular country and represent government, United Nations organizations, international donors/financial Institutions, research institutions/academia, civil society and private sector. Selection is done through the FAO Representation office, with the aim to get an equal number of respondents from the different groups.

*Several broad categories of levels of commitment and capacity are assigned to each dimension on the basis of the total scores of their respective indicators: high, moderate-high, moderate-low, low and no/negligible. The total maximum points for each dimension is 4. Classification of the criteria into broad categories of levels of commitment and capacity is done as follows: **High = 4 (3.5 - 4.0); Medium-High = 3 (2.5 - 3.4); Medium-Low = 2 (1.5 - 2.4); Low = 1 (0.5 - 1.4); No/Negligible = 0 (0 - 0.4)***

Annex 3. Ongoing projects/programmes under MFSC (as of 1 July 2015)

S. N.	Name of project/ programme	Objectives	Donor agency	Total budget	Duration	Coverage	Contact	Steering committee
1.	Multi Stakeholder Forestry Programme	To maximize the contribution of Nepal's forestry sector to inclusive economic growth, poverty reduction and tackling of climate change	DFID, SDC and Government of Finland	USD 62 million (Grant) USD 88 million (Grant)	2012-July 2016-1st Phase 2016 - 2025-2nd Phase	Total 61 districts (23+38)	MSFP/PCO/ MFSC	PSC- led by the Secretary
2.	REDD Implementation Programme	To prepare the country for REDD readiness and prepare National REDD strategy	World Bank, FCPF	USD 3.4 Million	July 2010- June 2015		RIC	REDD working group- led by Secretary
3.	Terai Arc Landscape Programme	To restore and protect forests in the identified critical areas, reduce threats to species, ecosystems and biodiversity against climate change and bring livelihood benefits in communities in Critical areas in TAL	WWF	USD 8,150,308 (TA)	2011 July- June 2015	TAL area (Rautahat- Kanchanpur)	DG, DNPWC / DoF	PSC- led by the Secretary
4.	Sacred Himalaya Landscape Programme	To restore and protect forests in the identified critical areas, reduce threats to species, ecosystems and biodiversity against climate change and bring livelihood benefits in communities in critical areas in SHL	WWF	USD 1,831,530 (TA)	2011 July- June 2015	SHL area (KCA, LNP, Koshi river basin, Indrawati sub-basin)	DG, DNPWC / DoF	PSC- led by the Secretary
5.	Kanchanjanga Landscape Conservation and Development Initiative (KLCDI) (Feasibility study phase)	To contribute to the sustainable development of KL by applying transboundary ecosystem approaches while considering both the risks and opportunities of climate change	ICIMOD			(KL) Jhapa, Illam, Panchthar, Taplejung	Planning Division , MFSC	NSC- led by the Secretary
6.	National Priority Area (NPA)	Similar objectives with TAL and SHL except the program area which includes areas other than covered by TAL and SHL.	WWF	USD 1,950,000	2011 July- June 2016			PSC- led by the Secretary
7.	Ecosystem Based Adaptation in Mountain Ecosystem in Nepal	To strengthen national capacities to implement Ecosystem-based Adaptation (EbA) options and to reduce the vulnerability of communities, with particular emphasis on mountain ecosystems.	UNDP, IUCN, UNEP	USD 3,372,637 (TA)	August 2012 – December 2014 (extended to Dec. 2015)	Shivapuri NP, Illam, Rasuwa (Langtang), Kaski, Parbat, Syangja (Panchase)	DoF/ Planning & Monitoring Division	PEB (NPD, DDG, DoF)
8.	Kailash Sacred Landscape Conservation Initiative Implementation Plan-Nepal	To enhance regional cooperation between China, India and Nepal to ensure the long-term sustainable development and conservation of the important landscape and its communities.	GIZ, DFID, ICIMOD	USD 10 million (TA)	2013-2017	Humla, Darchula, Baitadi, Bajhang	FACD, MFSC/ RECAST	NCC led by the Secretary

S. N.	Name of project/ programme	Objectives	Donor agency	Total budget	Duration	Coverage	Contact	Steering Committee
9.	Strengthening Regional Cooperation for Wildlife Conservation Project (IDA)	To assist participating governments to enhance capacity, institutions, knowledge, and provide incentives to jointly tackle illegal wildlife trade and other selected regional conservation threats to habitats in cross border areas.	The World Bank	USD 3 million (TA)	July 16, 2011 to July 15, 2016	Tiger bearing PAs and National Forests	NTNC/ DNPWC/ DoF	NPSC-led by the Secretary
10.	Strengthening the Capacity of DNPWC for the Effective Management of Mountain PAs (IDF)	To strengthen the capacity of the Department of National Parks and Wildlife Conservation for managing protected area effectively with a specific focus on the mountain regions.	The World Bank	USD 0.5 million (Grant)	July 16, 2011 to May, 2016	Mountain PAs	DG,DNPWC	
11.	Forest Preservation Program Nepal	To procure equipment and services necessary for the implementation of Forest Preservation Programme that directly support in effective implementation of Reduced Emission through Deforestation and Forest Degradation at national level.	Japan-Grant (under implementation)	Japanese Yen 600 million	March 2010- March 2012 (not completed yet)	Central level	FACD, MFSC	
12.	Building Climate Resilience of Watershed in Mountain Eco Region (Full-fledged programme)	To build climate change resilience of mountain communities of Nepal.	Climate Investment Fund and ADB	ADB-USD 23.54 million NDF-USD 4.63 million GoN—1.94 million Total: 31.11 million	Jan 2014- Jan 2020	Achham, Baitadi, Bajhang, Bajura, Dadeldhura, Doti	Dr. Jaganath Joshi	PSC led by the Secretary
13.	Implementing the NTIS in the Sector of Medicinal and Aromatic Plants (MAPs) project	To strengthen the capacities of MAPs actors for coordinating and implementing the National Trade Integration Strategy for an increased export of MAPs	Enhanced Integrated Framework (EIF), GIZ	3.3 million Euro (TA)	June 2014- 31 December 2015	Pyuthan, Dang, Surkhet, Banke, Kailali and Kanchanpur	FACD, MFSC	PSC led by the Secretary
14.	Adaptation for Smallholders in Hilly Areas (ASHA)	To reduce the vulnerability of target communities to climate- related risks and strengthen the enabling institutional environment	IFAD	USD 25 million	2015-2020	Jajarkot, Kalikot, Dailekh, Salyan, Rolpa, Rukum	MFSC	PSC led by the Secretary
15.	Strengthening the Institutional Capacity of SAWEN to Combat Wildlife Crime in South Asia	To strengthen the institutional capacity of the SAWEN, through its secretariat and its focal points in Member countries	IDF grant	USD 0.4 million	2014- 2017	Regional Level	DNPWC/ NTNC	PCC led by Chief, FACD
16.	Enhancing Livelihoods and Food Security from Agroforestry and Community Forestry in Nepal (EnLiFT)	To enhance livelihoods and food security from improved implementation of agroforestry and community forestry systems in the middle hills of Nepal	Australian government	AUD 2.5 million	2013-2018	Kavre, Lamjung, Sindhupalchok, Kaski	CFD/DoF	NCC led by DG, DoF

S. N.	Name of project/ programme	Objectives	Donor agency	Total budget	Duration	Coverage	Contact	Steering Committee
17.	Forest Farm Facility-Pilot Programme in Nepal (FFF-PPN)	To increase household income of the smallholder, women, community and indigenous peoples groups by sustainable management of forest and farm resources	FAO	USD 500,000	2014-2016	Nawalparasi, Kavre	IUCN	PSC led by the Secretary
18.	Sustainable Land Management in Churia Region, Nepal	To arrest land degradation from Human activities in the Churia Range and to reduce vulnerability to climate change through improved sustainable land and forest management	GEF	USD 5,398,864.00	2014-2016	Bara, Parsa, Rautahat, Makwanpur	WWF	PSC led by the Secretary, MoLRM
19	Barcode Wildlife Project	To demonstrate use of DNA barcode evidence in investigations, prosecutions and convictions	CBOL	USD 500,000	2014-Dec 2016	Central	NTNC	NCC led by Chief, FACD
20	REDD+ Himalayas: Developing and Using Experience in Implementing REDD in the Himalayas	To strengthen the capacity of REDD Implementation Centre to prepare itself for implementation of REDD+ activities at subnational level	BMUB (GIZ), Germany/ ICIMOD	USD 382,500	May 2015- Dec 2018	Dolakha, Gorkha, Chitwan	RIC	NCC led by Chief, FACD
21.	Improved Governance for Effective Timber Monitoring and Traceability of Shorea robusta in Nepal	To promote good governance and increase transparency of production and trade of Shorea robusta by developing a control system covering timber supply, CoC and independent monitoring and building necessary capacities of different stakeholders	EUFLEGT Programme	USD 108,219	2014-2015	-	DoF	PAC led by DG, DoF
22.	Strengthening Forest Tenure for Sustaining Livelihoods and Generating Income	To strengthen regulatory frameworks and institutional capacity of pilot countries	FAO	USD 375,000	Oct 2014- Sept 2016	Regional	DoF	NCC led by DG, DoF
23.	Supporting Community Based Sustainable Forest Management and Economic Empowerment of Women in Central Region of Nepal	To assist on sustainable forest management and improve the forest condition through the mobilization of forest dependent community and to generate the opportunity for the livelihood enhancement through the women-led enterprises development	APFNet	USD 530,568	April 2014-April 2017	Kathmandu, Makwanpur, Sarlahi	HIMAWANTI/ DoF	PSC led by DG, DoF

Source: MFSC 2015b:99–101

Annex 4: Distribution of land by farm size and households

Farm size (ha)	% of farm households	Cumulative % of households	% of farm area	Cumulative % of farm area
<0.1	9.1	9.1	0.6	0.6
0.1–0.2	12.1	21.2	2.5	3.1
0.2–0.5	31.5	52.7	15.4	18.5
0.5–1	27.4	80.1	28.3	46.8
1–2	15.5	95.6	31.1	77.9
2–3	2.8	98.4	9.9	87.8
3–4	0.7	99.1	3.7	91.5
4–5	0.5	99.6	3.4	94.9
5–10	0.3	99.9	3.3	98.2
≥10	0.1	100	1.9	100

Source: Pain *et al.* 2014, CBS 2011, GoN/NPC [2012](#)

Annex 5: List of experts consulted

SN	Name	Sector (government or non-government)
1	Dr Janannah Adhikari	Non-government
2	Ms Radha Wagle	Government
3	Dr Hemant R Ojha	Non-government
4	Mr Resham B Dangi	Government
5	Dr Naya S Paudel	Non-government
6	Mr Sagar Rimal	Government
7	Dr Purushottam Mudbhary	Non-government
8	Ms Judy Oglethorpe	Non-government
9	Ms Bharati Pathak	Non-government
10	Dr Prahlad Thapa	Non-government
11	Dr Gehendra Keshari Upadhyaya	Government
12	Dr Jagannath Joshi	Government
13	Dr Binod Prasad Devkota	Government
14	Mr Meghnath Kafle	Government
15	Dr Indra Prasad Sapkota	Government
16	Mr Jagadish Chandra Kuinkel	Non-government

Annex 6: Land use change over time (years) area (ha)

Land use type	1991/92				2001/02			
	Himal	Hills	Terai	Total	Himal	Hills	Terai	Total
Cultivated land (total)	207 761	1 721 450	1 038 806	2 968 017	210 635	1 798 158	1 081 987	3 090 780
Non-cultivated land	494 998	436 300	55 600	986 898	517 309	448 491	64 590	1 030 390
Forest (total)	233 346	4 435 809	1 158 845	5 828 000	228 100	2 890 606	1 149 494	4 268 200
Shrub	137 800	511 608	39 000	688 408	167 800	1 254 178	138 132	1 560 110
Grassland	132 644	1 589 278	35 423	1 757 345	137 644	1 592 093	36 423	1 766 160
Other	796 618	1 667 919	24 894	2489432	946212	2024775	31 474	3 002 460
Grand total	2 003 168	10 362 364	2 352 568	14 718 100	2 207 700	10 008 300	2 502 100	14 718 100

Source: Kanel *et al.* [2009](#)

Annex 7: Overlapping rights regarding forest and forest products

Forest Products	Forest Act 1993	Local Self Governance Act (1999)	Mines and Minerals Act (1996)	Water Resources Act (1992)
Fuelwood, dry timber, twigs, branches and bushes	Users groups or managers	Village Development Committees (VDCs)	---	
Mines (stones, sand, soil)	User groups and government	District Development Committees (DDCs)	Central Government	
Medicinal plants, herbs and other NWFPs	User groups and government	VDCs and DDCs		
Resin	CFUG and Gov	DDC		
Stray timbers	CFUG and Gov	DDC		
Straw, grass	CFUG	VDC		
Water resources, wetland	CFUG	VDC/DDC	Government	State
Natural heritage	CFUG	VDC/DDC		
Forest land	CFUG, Gov mega projects and individual	VDC/DDC	Government	State

Source: Paudel *et al.* [2011:19](#)

Annex 8: Forest sector assistance from other donors (million US\$)

donor	2002	2003	2004	2005	2006	2007	2008	2009
Australia		---	---	---	-1.5145	-0.0861	---	0.0651
Austria	---	---	---	---	---	0.0168	---	---
Canada	---	0.0643	0.1486	---	0.1252	-0.0019	---	0.0262
Denmark	---	0.0245	0.2009	0.5664	0.1528	0.4601	0.5022	0.5319
Germany	---	0.9894	1.1351	1.2711	0.2246	---	---	---
Netherlands	0.8944	0.7183	2.7443	---	---	---	---	---
Norway	---	0.1058	0.0613	0.099	---	---	---	0.6371
Switzerland	0.6423	1.3896	0.7242	1.1277	0.8634	0.961	1.4864	1.4799
United Kingdom	1.889	2.3155	3.0144	2.256	4.1842	3.7008	3.8075	6.5474

Source: Magrath *et al.* [2013:50](#)

