

Summary
Of
An Assessment of Nepal's Forestry Sector's Contribution to
Sustainable Development Goals (SDGs)



Forest Research and Training Centre

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About the Report

This report has been produced with a realization that forests and their sustainable management can contribute to the achieving the several goals of 2030 Agenda for Sustainable Development adopted by Head of State and Government of United Nations in September 2015. This report is the outcome of a mixed-method approach including desk-based review, experts' and field stakeholders' consultation, and participatory observation where incredible and empirical evidences related to Nepal's forestry sector that contributes to achieving the 2030 agenda for Sustainable Development Goals were collected, consolidated, and verified.

The analysis of this study considers forestry sector as defined by the Lebedys (2004), which includes all the economic activities that are dependent on the production of goods and services from the forests. This further embraces the forest-related programs and plans and enabling policy and legislative environments, and existing institutional instruments for their implementation (NPC, 2015a). Hence, the forestry sector's contribution for this study report includes all kinds of benefits to national development process derived from the forest-related activities, policy process beyond the direct benefits from goods and services derived from the forests.

An Overview of Sustainable Development Goals

The agenda for Sustainable Development is a global commitment includes a coherent set of 17 integrated objectives for sustainable development (Sustainable Development Goals- SDGs), which comprise 169 concrete targets and 230 indicators. The SDGs build upon the Millennium Development Goals (MDGs) with a broader dimension of urbanizations, resilience, inequality, and governance. SDGs conceive to give further impetus to global efforts of development focusing on each country irrespective of economic status.

SDGs provide the global framework for shared actions "for people, planet, and prosperity". SDGs and targets are global in nature and universally applicable, which cover the three traditional dimensions of sustainable development – social inclusion, economic growth, and environment sustainability– with a strong focus on quality of life, justice, and equality, as well as the sustainable consumption, production, and use of natural resources. The goals and targets are

integrated, interlinked, and indivisible in nature considering different national realities, capacities, and level of development and respecting national policies and priorities. SDGs embody five underlying principles namely; universality, leaving-no-one-behind, interconnectedness and indivisibility, inclusiveness and multi-stakeholder partnership, which are underpinned by 5 critical aspirations (5Ps) namely; People, Prosperity, Peace, Planet, and Partnership as indicated in Table1.

Table 1: General Features of SDGs

Sustainable Development Goals (SDGs)	Priority Area	Description
SDG 1- End poverty in all its forms everywhere	People	End poverty, fight inequality, ensure healthy lives, knowledge and the inclusion of women and children
SDG 2- End hunger, achieve food security and improved nutrition and promote sustainable agriculture		
SDG 3- Ensure healthy lives and promote well-being for all at all ages		
SDG 4- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		
SDG 5- Achieve gender equality and empower all women and girls		
SDG 6- Ensure vulnerability and sustainable of water and sanitation for all	Planet	Protect our ecosystems for all societies and our children
SDG 12- Ensure sustainable consumption and production patterns		
SDG 13- Take urgent action to combat climate change and its impacts		
SDG 14- Conserve and sustainably use the oceans, seas and marine resources for sustainable development		
SDG 15- Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss		
SDG 7- Ensure access to affordable, reliable, sustainable and modern energy for all	Prosperity	Grow a strong inclusive and transformative economy
SDG 8- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		
SDG 9- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation		
SDG 10- Reduce inequality within and among countries		
SDG 11- Make cities and human settlements inclusive, safe, resilient and sustainable		
SDG 16- Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive	Peace	Promote safe and peaceful societies and strong institutions

SDG 17- Strengthen the means of implementation and revitalize the global partnership for sustainable development	Participation	Catalyze global solidarity for sustainable development
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Source: Preamble to the 2030 Agenda: UN. 2015. Transforming our world: The 2030 Agenda for Sustainable Development.

SDGs and their targets may have several interactions and relationships each other. These relationships can be indivisible, reinforcing, enabling, consistent, constraining, counteracting, and cancelling (Nilsson et al., 2016). First three interactions (i.e. indivisible, reinforcing, and enabling) may create co-benefit relationships among targets and SDGs; while last three (i.e. constraining, counteracting, and concealing) generate trade-offs. Consistent i.e. no effect among targets is the neutral type of relationships. Trade-offs among some SDGs and targets are unavoidable (Singh et al., 2018, Fader et al., 2018), which arise due to the difference in goal achievement pathways. For example, SDGs 2, 6, 7 and 9 relate to increase wellbeing per unit of resource use through some essential development needs and provisioning systems. On the other hand, SDGs 13, 14, 15, and 17 (natural and social capital) seek to decrease environmental pressure per unit resource use, which require sustainable extraction, use, and restriction.

Categorization of the SDGs and Targets

SDGs and targets are clustered considering the nature and functions of goals and targets. Nepal has broadly grouped the SDGs into five clusters. Basic mark of civilization is the first category that includes SDGs 1, 2, 6 and 7 and deals with ending of poverty and hunger, and providing basic water, sanitation and modern energy for all citizens (NPC, 2017b). SDGs 3 and 4 fall under the second category that is to exercise of human capabilities and agency. These SDGs are about the healthy lives, quality education, and lifelong learning. Third group of SDGs include 5, 10 and 16 under the higher human aspiration, which aim to achieving gender equality, reducing inequality, and securing peace, access to justice, inclusive institutions. SDGs 8, 9, 11, and 12 are fourth category, which are means for sustained progress that relate to economic growth, jobs, resilient infrastructure, industrialization, cities and settlement, and sustainable consumption and production pattern. Last or fifth group of SDGs are recognized threats to future prosperity that include 13, 14 and 15. This group of SDGs deals with the protection of the global commons such as life below water, climate change and life on land. Nepal perceives the first three sets of goals

are mostly national in scope, while the latter two have regional and global dimensions. SDG 17 calls for strengthening the means of implementation and revitalizing global partnerships.

Based on the functions and the complex relationships among them, Elder et al. (2017) have broadly grouped 17 SDGs into two categories; outcome-types (1,3, 5, and 10) and means-types (2, 6,7, 8, 9,11, 12, 13,14, 15, 16, and 17). At the target level, considering the contribution to the real changes in people's lives and other benefits (OECD, 2016; Bartram et al., 2018) have identified nearly half (88) of the total (169) targets as outcomes i.e. with real change in people lives, change in structure and functioning of society, and in the health of the planet, while the authors recognize 81 targets relate to the process targets (Figure 1). Of the total (81) process targets, 62 are "means of implementation - MoI¹ (i.e. 43 targets within SDG 1-16 letter-designated e.g. 1.a and 1.b) and 19 targets under SDG 17) targets and other 19 targets relate to policy measures.

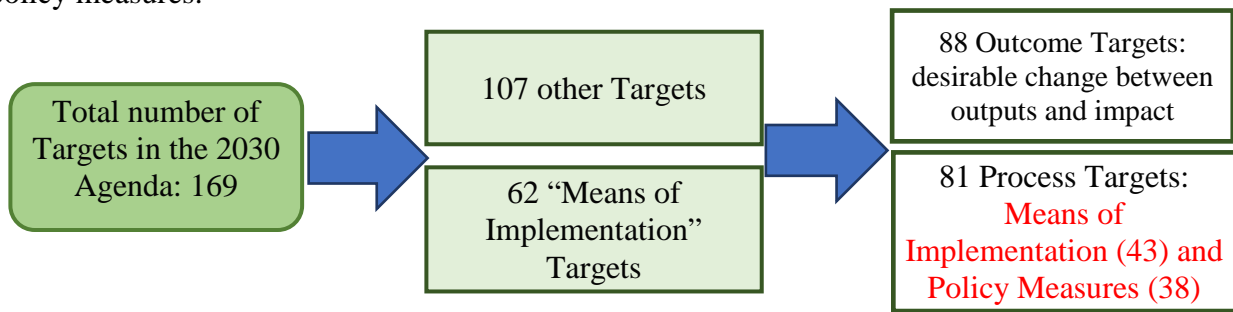


Figure 1: Classification of Targets of 2030 Agenda as per the Pathways and Effects to People's live

Source: OECD (2016)

Of the total (88) outcome targets, 28 targets are related to people-centered, while 38 and 22 are society-wide and environment-focused respectively. Outcomes under the people-centered targets are generally tangible, and aim at direct improvement in people's lives. Society-wide outcome targets aim at political, economic, or social structure such as equality, inclusion, justice and peace, while environment-focused outcome targets include climate resilience, sustainable production, conserve biodiversity and ecosystem management.

¹The UN defines the MoI as 'the interdependent mix of financial resources, capacity- building, technology development and transfer, inclusive and equitable globalization and trade, regional integration, as well as the creation of an enabling environment required to implement new sustainable development agenda.

The classification of the SDGs and their targets indicates that there are strong inter-linkages between goal areas and targets. Therefore, progress on one goal can reinforce progress in other goal areas and vice versa. At the target level, the analysis illustrates process-level targets can be critical means to achieve outcome-type targets. Understanding the nature and functions of goals and targets and their classification is thus critical to identify the way of contribution that forests and forest-related activities make to achieve the SDGs and associated targets.

Integration of SDGs into Nepal's Development Frameworks

Nepal has formally made a commitment for the shared progress with the 2030 Agenda for Sustainable Development and SDGs 2016-2030. Nepal was probably one of the first countries to produce a SDG baseline study report in 2017 (NPC, 2017a). Nepal further assessed the national situation of each SDG from national perspective, and examined their relevancy in the national context. The findings of the study confirm that most of the SDGs are consistent with the fundamental rights of citizen enshrined in the Nepal's New Constitution (2015) which aspires to bring Nepal a prosperous and well-being state.

The SDGs are consistent with the fundamental rights of the citizens enshrined in the Constitution of Nepal. Article 51 (F2) of the Constitution guarantees an inclusive socio-political and economic development and a wide range of basic and fundamental rights including equality, justices, prosperity, clean environment, education and right against discrimination. The constitution, under the directive principles and policies include several national level thematic policies, which are arguably consistent with intent of some of the SDGs. Some of these policies are conservation and utilization of natural resources, social justice, and inclusion, agricultural and land reform, economic, industrial and ecommerce. The constitution has a provision to form a parliamentary committee to monitor and evaluate the implementation of performance of these principles and policies. These inclusive constitutional provisions along with the enforcing mechanism have created an enabling environment to implement SDGs with spirit of "leaving-no-one-behind".

Nepal has expressed its ownership of the SDGs and their implementation commitment by establishing SDGs-specific institutional set up. Nepal has proposed to implement SDGs related activities under the collaborative guidance of three high-level committees: A national steering committee chaired by the Prime Minister is the apex body. Implementation, coordination, and

monitoring committee is another committee, which is chaired by the Vice Chairperson of the National Planning Commission (NPC). The third category is thematic committee. There are eight thematic working committees, which are chaired by NPC Members. These thematic groups support the two high-level committees and work in areas of economic development, sustainable production and gender mainstreaming, social development, agriculture development and drinking water, coordination, governance, energy development and climate change, and infrastructure development.

NPC is the focal institution of Nepal to facilitate SDGs implementation. The commission has developed a quantitative baseline of each SDGs and targets to provide the inputs of each SDG to integrate and re/align them into existing policies and plans (NPC, 2015, NPC, 2017b). Previous and ongoing periodic plan along with the other sectoral master plans, policies, and programs are re/aligned with the SDGs and their associated targets. Recently developed concept notes of the Nepal's Long-Term Vision, 2021 (AD 2043) envisions of "Prosperous Nepal and Happy Nepali".

Linkage between Forestry Sector and SDGs

Forests provide food, fiber, medicine, and fuel wood for more than one billion people worldwide. Forest and trees are vital source of income and well-being for rural population, particularly, indigenous people and smallholders (FAO, 2014). Globally, over 1.6 billion (25% of the total global population) people depend on forests for subsistence, livelihood, employment, and income generation (FAO, 2017). Forests are home to nearly 820 million people of tropics who live in and near forests and Savannas (FAO, 2018). This suggests that forests and trees are gradually being recognized greater global relevance.

Nepal is an example among many countries, where the forestry sector has become a fundamental sector to local and national development, rural livelihood and economic development. Country's forests are the basic source of timber, fuel wood, fodder, and medicine wherein over 65 % people particularly from poor families directly rely on forests. Besides, forests play a critical role for the mitigation and adaptation of climate change, protection of soils and water. Additionally, Nepal's forests are home to several terrestrial floral and faunal diversities. Besides, direct contribution of forests to the social and economic development, indirect/intangible services derived from the forests enhance ecological resilience and moderate environment.

Forestry Sector's Contribution to Sustainable Development Goals

The 2030 Agenda explicitly describes forests only in SDG 15 to deal with life on land. This goal specifically addresses environmental issues, calling for sustainable use of terrestrial ecosystems, sustainable management of forests, and a halt to land degradation and biodiversity loss. However, other goals and their targets are also relevant to forests and forest related plans and programs. In this regard, there are few efforts have been made at global, national, and local level. Table 2 illustrates how and to what extent the forests and forestry sector contribute to the SDGs and its targets.

Table 2: Contribution of Forestry Sector to SDGs and Targets from Selected Literatures (Parentheses are targets)

SDGs	Contribution with Disaggregation of Targets					Goal Level Contribution		
	FAO (2018)	UNSPF (2017)	Jong et al. (2018)	FSC (2016)	Aryal et al. (2019)	Katila et al. (2017)	FECOF UN (2017)	Poudel & Adhikari (2017)
1	3 (1.1, 1.4 and 1.5)	2 (1.1 and 1.4)	1 (1.4)	1 (1.5)	7 (1.1, 1.2, 1.3, 1.5, 1a, & 1b)	1	1	1
2	2 (2.1 and 2.3)	1 (2.4)	3 (2.2, 2.3 and 2.4)	1 (2.4)	5 (2.1, 2.3, 2.4, 2.5, & 2a)	1	1	1
3	0	0	2 (3.8 and 3.9)	0	3 (3.7, 3.9, & 3c)	0	1	1
4	0	1 (4.4)	0	0	3 (4.1, 4.5, & 4.7)	0	1	1
5	2 (5.5 and 5.a)	1 (5.a)	0	2 (5.5 and 5.a)	4 (5.1, 5.5, 5a, & 5c)	0	1	1
6	1 (6.6)	1 (6.6)	1 (6.6)	4 (6.4, 6.5, 6.6 and 6.7)	5 (6.1, 6.3, 6.5, 6.6, & 6b)	1	1	1
7	2 (7.1 and 7.2)	1 (7.2)	1 (7.2)	1 (7.2)	2 (7.1 & 7b)	1	1	1
8	2 (8.3 and 8.9)	1 (8.3)	2 (8.4 and 8.9)	4 (8.4, 8.5, 8.8 and 8.9)	8 (8.1, 8.2, 8.3, 8.5, 8.6, 8.8, 8.9, & 8.10)	1	1	1
9	0	1 (9.3)	2 (9.2 and 9.3)	0	4 (9.1, 9.2, 9.3, & 9b)	0	1	1
10	0	0	0	0	4 (10.1, 10.2, 10.3, & 10.4)	0	0	1
11	2 (11.4 & 11.7)	0	4 (11.4, 11.7, 11.a & 11.c)	0	2 (11.1 & 11.4)	0	1	0
12	4 (12.2, 12.5, 12.6 & 12.7)	5 (12.2, 12.5-12.7, 12.a)	1 (12.2)	7 (12.1, 12.2, 12.5, 12.6, 12.7, 12.8, & 12.a)	2 (12.2 & 12b)	0	1	0
13	3 (13.1, 13.2 & 13.3)	2 (13.1 & 13.3)	2 (13.1 & 13.2)	1 (13.1)	4 (13.1, 13.2, 13.3, & 13b)	1	1	1

Forestry Sector's Contribution to Sustainable Development Goals

	13.3)							
14	0	2 (14.2 & 14.5)	1 (14.2)	0	1 (14.1)	0	0	0
15	6 (15.1-15.5 & 15.a)	11 (15.1-15.4, 15.6-15.9, 15.a, 15.b & 15.c)	8 (15.1-15.5, 15.7, 15.9 & 15.b)	7 (15.1, 15.2, 15.3, 15.4, 15.5, 15.7, 15.8 & 15.c)	11 (15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 15.1, & 15.b)	1	1	1
16	0	5 (16.3, 16.5, 16.6, 16.7 & 16.10)	4 (16.3, 16.5, 16.6 & 16.7)	4 (16.3, 16.5, 16.6 & 16.7)	8 (16.3, 16.4, 16.5, 16.6, 16.7, 16.10, 16a, & 16b)	1	1	1
17	0	10 (17.1-17.3, 17.6, 17.7, 17.14, & 17.16-17.19)	0	3 (17.1, 17.11 & 17.17)	7 (17.1, 17.8, 17.11, 17.14, 17.15, 17.17, & 17.19)	0	0	0
Total targets & SDGs	27 Targets of 10 SDGs	43 Targets of 14 SDGs	31 Targets of 12 SDGs	35 Targets of 11 SDGs	80 Targets of 17 SDGs	8 SDGs	14 SDGs	13 SDGs

Source: FAO (2018); Jong et al. (2018); FSC (2016); Poudel and Adhikary (2017); UNSPF (2017), FECOFUN (2017), Aryal et al. (2019)

These studies provide some hints on the forestry sector contributes to the SDGs and their targets. However, there is a lack of in-depth study on how and to what extent Nepal's forestry sector contributes to achieving SDGs and its targets.

Objectives and Methodology Used

The overall objective of this study was to assess the level of and extent of forestry sector contribution to achieving the SDGs and their targets. Specifically, the study focussed on:

- Identifying the SDGs and targets that are relevant to and contributed by the forestry sector
- Assessing the contribution of different forest management regimes to the selected SDGs and targets
- Identifying critical pathways that strengthen the contribution of forestry sector to achieving the SDGs.

The study has been underpinned by the “Contribution Analysis Tool” under the broader cause-effect relationship to arrive a credible causal claims through the result change framework (Mayne, 2008, 2012). This tool is structured by six key steps shown in Box 1. These steps were a part of reiterative approach to build the logic and evidence (causal claims) in a rigorous and reliable manner.

At the first step relates to formulate a study framework with reference to the “Contribution Analysis Tool” whereby Nepal specific SDGs and their targets were sorted as suggested by the National Planning Commission (Step

1). The targets of each SDGs were reorganized based on the process-based and outcome-based targets, and the outcome-based targets were further categorized on the basis of people-centered, society-wide, and environment related (Step 2). In the third step, relevant evidences and claims for SDGs and corresponding targets were collected through desk-based review including reports, scientific literatures and policy and legislative instruments, interview and interaction (Step 3). The relevant SDGs and targets and the level of contributions of Nepal’s forestry sector to these respective targets were defined by the national level stakeholders’ consultation workshop whereby experts checked the relevancy of evidences assigned to each target (Step 4). Based on the evidences and their own experiences, stakeholders ranked the level of forestry sector’s contribution to the SDGs by assigning 1, 2, and 3 for low, medium, and high respectively.

The contribution of different forest management regimes (i.e. CF, LHF, BZCFs, Colla F, Government-managed Forests and Protected Area/National Park) to the identified SDGs and targets by national stakeholders’ consultation workshop were verified through consultation with forest user groups and forestry stakeholders in the field (Chitwan and Rupandehi district), participatory observation and official records. During the consultations, additional information of

Box 1: Contribution Analysis

Step 1: Set out the cause-effect issue (problem) to be addressed

Selection of Goal and Targets– literature review – relevance, applicability, data availability, policy and practice

Step 2: Develop a theory of change to it

Group the selected SDG targets into Outcome and Process

Step 3: Gather the existing evidence on the theory of change

Gather the evidences and influencing factors that exists from previous measurement, evaluation, and relevant researches (for Process-Policy Target– Rapid Integrated Policy Assessment-RIPA and for outcomes Targets – assessment/evaluation reports, researches and literatures)

Step 4: Assemble and assess the contribution claim, and challenges to it –

Input from stakeholder workshop participants)

Step 5: Seek out additional evidences – Assess additional evidence to enhance the credibility of the contribution claim

(Set out contribution story, causal claim, case study and field verification)

Step 6: Revise and strengthen the contribution theory

Build the more credible contribution claim, reassess its strengths and weaknesses

Source: Mayne (2008, 2012)

each target was collected to verify and consolidate the relevancy (Step 5). Additionally, a rapid integrated policy assessment (RIPA) was undertaken to understand the relevancy of existing policies and legislative instruments with the SDGs.

SDGs and associated targets contributed by forestry sectors were presented in terms of number and the level of constitution to each SDG by analyzing the weighted-total. Contribution of forestry sector was further analyzed in relation to outcome-based and process-based targets, and sub-categories of outcome-based targets were again clustered into people-centered, society-wide, and environment focused. Regime-wise comparative analysis of SDGs and targets contributed by Nepal's forestry sector were illustrated in descriptive table and figure. The findings of the study were shared with national stakeholders for their additional inputs and suggestions.

Results and Findings

The analysis shows that Nepal's Forestry Sector contributes to 82 targets of 16 SDGs. This accounts for 52.23 % of the total targets 157 identified by NPC in the context to Nepal. The results demonstrate that Nepal's forestry sector makes a certain level of contribution to every target (12 of the 12) of SDG 15, while it contributes to just one target of SDG 17 of the total 19 targets under this SDG (Figure 2).

Level of contribution of forestry sector to each SDG was determined by calculating weighted-total of each SDG. For this, level of contribution of forestry sector to each target was first determined during the expert consultation by assigning 1, 2, and 3 for low, medium, and high contribution respectively. Weighted-total of each SDG was calculated by dividing the total sum of assigned value of targets of each SDG by the highest total possible value of each SDG. The highest level of contribution value would be 1.

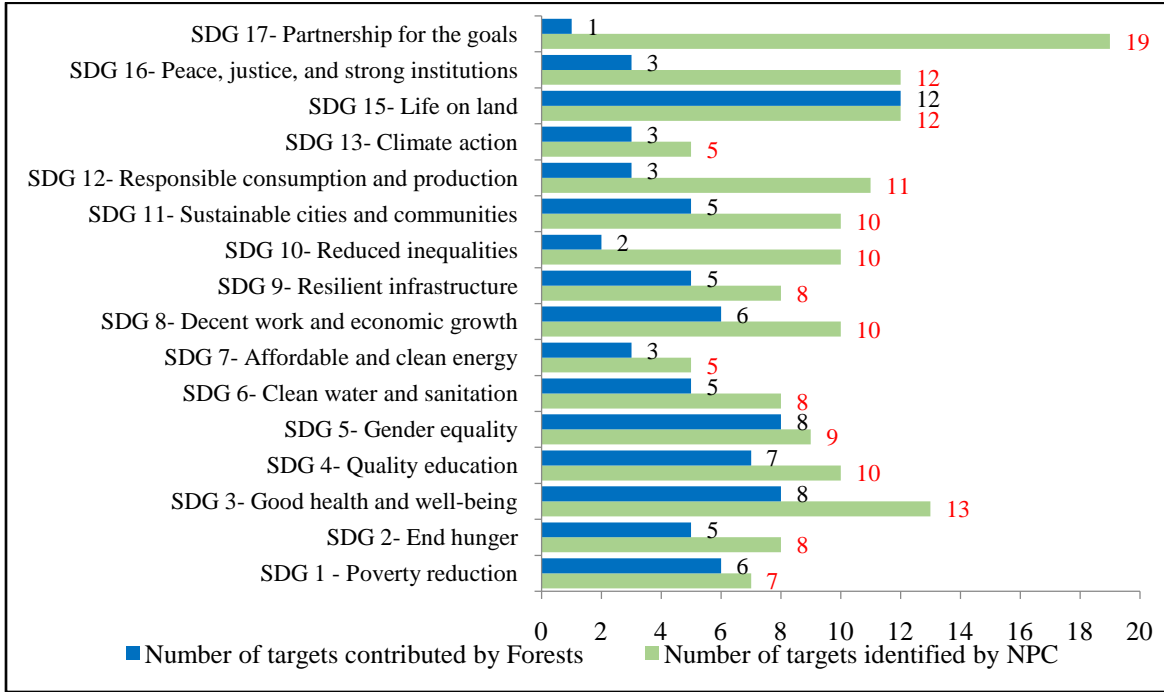


Figure 2: Number of targets of SDG contributed by Nepal's Forestry Sector (from Evidence analysis)

The analysis shows that Nepal's forestry sector makes the highest contribution to the SDG 13 (climate action) (Figure 2). Interestingly, SDG 9 (Build resilient infrastructure and inclusive and sustainable industrialization) has been marked as the second highest contribution, while SDG 1 and 2 have been marked as the third and fourth a highest contribution respectively from the forestry sector. Similarly, SDG 15 has been assessed as the fifth highest goal contributed by forestry sector. SDG 16 and 17 were found to be the least contributed, which each has 0.33 (Figure 3).

The analysis reveals that forestry sector contributes to total 63 (76.23%) outcome-based targets, while the sector contributes to achieve 19 (23.18%) process-based targets (Figure 4). Goal wise, every target of SDG 2, 3, 4, 7, 10, and 16 belong to outcome-based targets contributed by the forestry sector. Of the total 12 targets of SDG 15, 50% (6) targets fall in either process-based or outcome-based targets in each SDG.

Forestry Sector's Contribution to Sustainable Development Goals

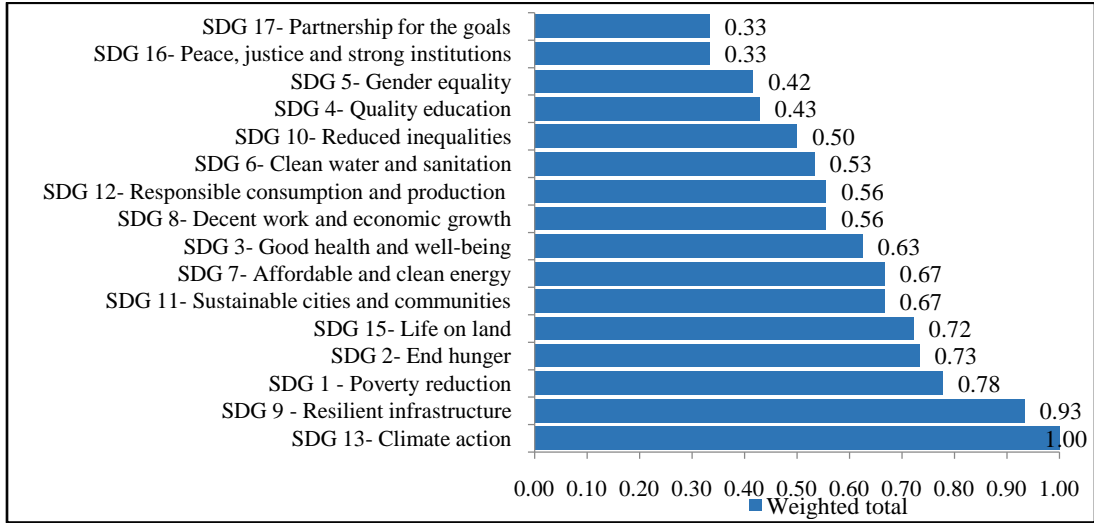


Figure 3: Level of Forestry Sector Contribution to different SDGs (weighted- total1 indicates the highest contribution)

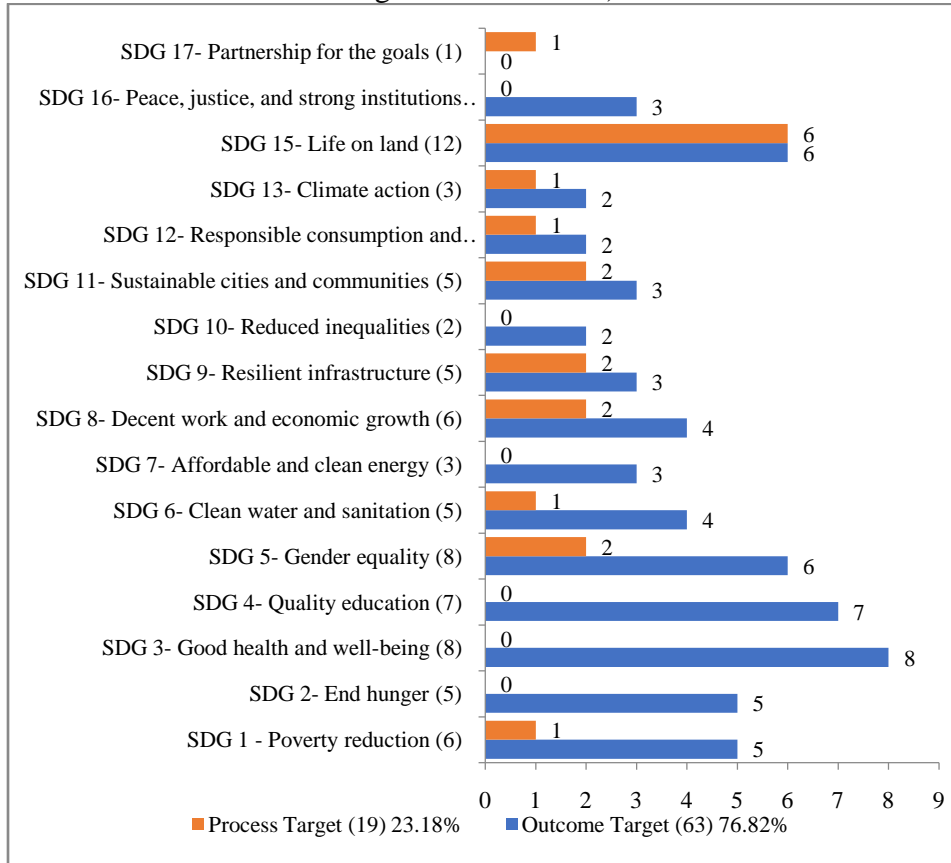


Figure 4: Process and Outcome-based Targets of 16 SDGs Contributed by Forestry Sector

Similarly, the results show that forestry sector contributes to almost equal number of people-centered (25) and society-wide targets (24), while environment related targets were 14 (Figure

5). People-centered targets mostly belong to SDGs 1, 2, 3, and 4, which suggest that FS contributes to individual people in the areas of poverty reduction, hunger, health, and education. Similarly, more environmental-focused targets belong to SDGs 2, 6, 7, 12, 13 and 15, while society-wide targets belong to SDGs 4, 5, 9, 10, and 16.

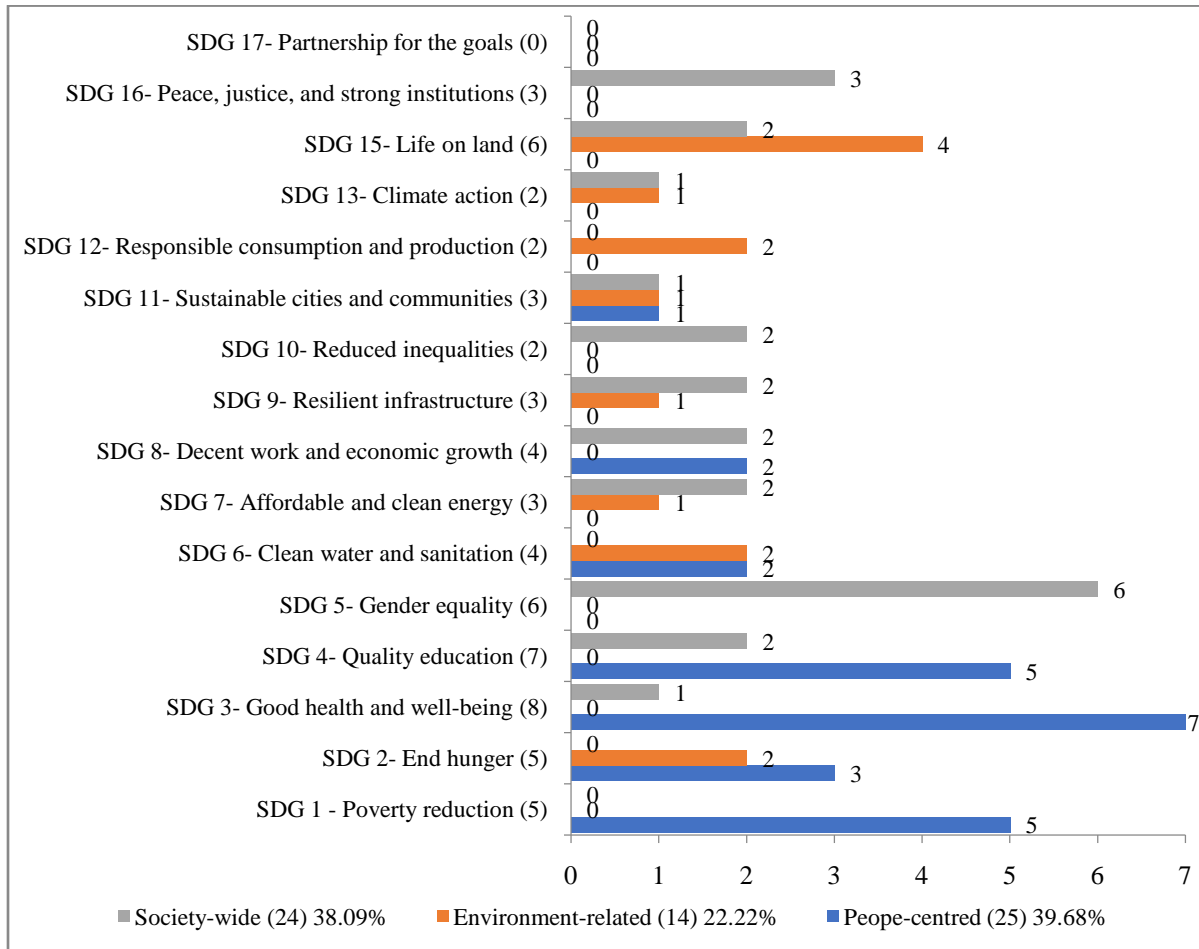


Figure 5: Categories of outcome targets (63) based on impact targets

Contribution of different Forest Management Regimes to SDGs

This study collected evidences from six management regimes including community forests (Kankali CFUG, Chitwan), collaborative forests (Lumbini Collaborative Forest, Rupandehi), leasehold forests (Saunepani Leasehold Forest, Chitwan), buffer zone community forests (Baghmara BZCF), government-managed forests (Division Forest Office Chitwan) and protected areas (Chitwan National Park). The evidences were gathered from these case study community-managed forest groups and two government agencies. The purpose of collection of these

evidences was to verify the claims and evidences through the desk-based review, interaction, reports, and stakeholder consultation. Evidences show that Baghamara BZCFs contribute to 82 targets of 16 SDGs (Table 6). This accounts for nearly 52.2% targets out of the total 157 targets for 16 SDGs identified by NPC. Kankali CFUG contributes to 78 targets. Saunepani leasehold forest contributes to the least number of targets (28 targets), while Lumbini Collaborative Forest, Government-Managed Forests in Chitwan and Chitwan National Protected Area contributes to 41, 67, and 70 targets respectively. Evidences from the representative groups do not represent the each forest management regimes due to the evidences were collected from one sampled group of each regime. However, the collective evidences from six management regimes sufficiently support to claim the Nepal's forestry sector contribution to achieve SDGs and their targets as stated above figure 2-5.

Table 2: Contribution of Different Forest Management Regimes to SDGs

Goals	Targets and activities related to the Targets	Contribution of different forest management regimes to SDGs					
		Community Forests	Leasehold Forest	Buffer Zone Forest	Collaborative Forest	Gov-managed Forest	Protected Areas (National Parks)
Goal 1. No Poverty in all its forms everywhere	1.1 Income generating activities targeting income-poor households	√	√	√	√	√	√
	1.2 Income generating activities targeting land less and land-poor households (Dalit and socially marginalized households)	√	√	√	√	√	√
	1.3 Allocate group fund for emergency to provide to income poor households	√	√	√	√	√	√
	1.4 Form cooperative (saving and credit groups) and increasing accessing to landless, land poor and income poor households	√	√	√	x	√	√
	1.5 Awareness raising on increasing women holding property, campaign against dowry practice	√	x	√	x	x	x
Goal 2. End Hunger, achieve food security and	2.1 Family feeding based on age - children and ageing family members	√	√	√	x	√	√
	2.2. Activities about the	√	x	√	x	√	x

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improved nutrition and promote sustainable agriculture	raising awareness on malnutrition						
	2.3 Increase land productivity – leaf litter or other approaches of increasing manure, fertilizer	√	√	√	√	√	√
	2.4 Activities related increase year-round irrigation facilities	√	x	√	x	√	√
	2.5 Establishment of community seed bank (crop seed)	x	x	√	x	√	x
Goal 3. Ensure healthy lives and promote well-being for all at all ages.	3.1 Activities related to mitigate maternal mortality, support in establishment of birthing center, and birthing with the help of skilled health workers	√	x	√	x	x	√
	3.2 Support to reduce children (below 5 years_ mortality	√	√	√	x	x	√
	3.3 Support to reduce HIV, TB and Malaria,	√	x	√	x	x	x
	3.4 Health activity related to adults, reduce mortalities	v	√	√	√	√	√
	3.5 Support use of alcohol control, drug rehabilitation center	√	√	√	x	x	x
	3.6 Support to reduce death from road traffic	x	x	√	x	x	x
	3.8 Support reproductive and contraceptive, increase enroll of poor people in health activities	x	x	√	x	x	x
3.9 Support alternative energy to reduce mortality causing from household air pollution	√	√	√	√	√	√	
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	4.1 Support increasing girl enrolment in school, support students completing primary education	√	√	√	√	√	√
	4.2 Support regular attendance in school	√	x	√	√	√	√
	4.3 Activities related to girls' enrolment in school – such as scholarship, vocational education	√	x	√	√	√	√
	4.4 Support vocational training targeting youths, increase internet users	√	x	√	x	x	√
	4.5 Support activities eliminating gender discrimination and disparities (campaign against gender discrimination)	√	x	√	x	√	x

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	4.6 Support non-formal education to increase literacy rate - numerical (read and write)	√	x	√	x	√	√
	4.7 Support enhancing human capital – such as training	√	x	√	x	x	√
Goal 5. Achieve gender equality and empower all women and girls	5.1 End all forms of discrimination against all women and girls everywhere- such as campaign against unequal wages between women and men	√	x	√	√	√	x
	5.2 Eliminate all forms of violence against all women and girls – domestic violence	x	x	x	x	√	x
	5.3 Eliminate all harmful practices, such as child, early and forced marriage	x	x	√	x	x	x
	5.4 Reduce women's domestic workload creating opportunities for paid work	x	√	√	x	x	√
	5.5 Enhance women's participation in decision-making and leadership positions	√	x	√	√	√	√
	5.6 Awareness activities reproductive rights, contraceptive use and sexual relation	√	x	x	x	x	x
	5.a Support activities related to increase women's ownership of property	√	x	x	x	x	√
	5.b Increase access to communication – such as internet, mobile	x	x	x	x	x	x
Goal 6. Ensure availability and sustainable management of water and sanitation for all.	6.1 Activities supporting safe drinking water	√	x	√	√	√	√
	6.2 Support sanitation activities, domestic waste	√	√	√	√	√	√
	6.3 Management of industrial waste (near village)	√	x	√	x	x	√
	6.4 Support water use efficient activities – reduce water waster	√	x	√	x	√	√
	6.5 Integrated water use and management	√	x	√	√	√	√
	6.6 Use of water harvest technology – conservation pond, rainwater harvesting	√	x	√	√	√	√
Goal 7. Ensure access to affordable, reliable,	7.1 Support accessing to energies – electricity	√	√	√	√	√	√
	7.2 Alternative energy – hydroelectricity	x	x	√	x	√	x

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sustainable and modern energy for all.	7.3 Support energy efficiency activities – use of electric motor	x	x	√	x	√	√
Goal 8. Ensure access to affordable, reliable, sustainable and modern energy for all.	8.1 Forest-based enterprises that enhance per-capita income	√	x	√	x	√	√
	8.2 Diversify income generating activities including forest related activities	√	√	√	√	√	√
	8.3 Employment opportunities, increase households' access to financial services such as cooperative	√	√	√	√	√	√
	8.5 Full and long-term employment and decent work for women and men	√	x	√	√	x	√
	8.6 Youth focused activities	√	x	√	x	x	√
	8.7 Reduce child labor and child working-hours	x	x	√	√	x	x
	8.8 Adoption of measures reducing and avoiding fatal and injuries, enhance working environment	√	x	√	√	√	√
	8.9 Develop policies and increase eco-tourism management	√	√	√	x	√	√
	8.10 Increase commercial bank, life insurance	x	x	x	x	x	√
	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization, foster innovation.	9.1 Support foot trail and road construction	√	x	√	√	√
9.2 Support sustainable industrialization contributing to national economic and employment		√	x	√	x	√	√
9.3 Financial support to small-scale industry and enterprises		√	x	√	x	√	√
9.4 Support environment conscious (low carbon) infrastructure and enterprise development		√	x	√	x	√	√
9.5 Scientific Research in economic and development activities		√	x	√	x	√	√
9.c Supporting communication means such as mobile		√	x	x	√	√	√
Goal 10. Reduce inequality within and among countries	10.1 Activities that support reducing inequality among gender, caste and between poor and rich	√	√	√	√	√	√
	10.2 Adopt gender equity, maintain transparency through public audit, public hearing	√	√	√	√	√	√

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Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.1 Incentives and provision in forest product distribution to income-poor and landless households	√	√	√	√	√	√
	11.3 Development of cities in a planned and systematic way	√	x	x	x	√	x
	11.4 Supporting to conserve cultural practices and religious places (e.g. temple, monastery, Mosque/Masjid etc.)	√	√	√	√	√	√
	11.5 Supporting activities that mitigate injuries from natural disasters	√	x	√	x	√	√
	11.6 Activities reduce environmental pollution -air and dust pollution	√	x	√	x	x	x
	11.7 Organize village and city cleaning campaign, promote green cities in village	√	√	√	x	x	√
Goal 12. Ensure sustainable consumption & production patterns	12.1 Adopt sustainable conservation, management, and utilization (harvesting) of forest product indicated in Forest Operational Plans.	√	x	√	√	√	√
	12.2 Adopt efficient and effective measures of harvesting to reduce damage thereby reducing quantity of forest products in recent years	√	x	√	√	√	√
	12.4 Practices of recycling – e.g. plastic	√	x	√	x	√	√
Goal 13. Take urgent action to climate change and its impacts.	13.1 Strengthen resilience and increase carbon sequestration and carbon stocks (climate change mitigation activities)	√	x	√	√	√	√
	13.2 Implementation of climate change adaptation such as local adaptation plan of action (LAPA), climate smart farming, smart village, include climate change adaptation activities in Forest Operational Plan	√	x	x	x	√	x
	13.3 Educating and raising awareness in climate change mitigation and adaptation activities – school education, club, women group. Development of human resource and climate change conscious Group Activities	√	x	√	√	√	√
Goal 14. Conserve and sustainably use the	x	x	x	x	x	x	

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oceans, seas and marine resources for sustainable development.							
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	15.1 Clear plan for conservation, restoration, and sustainable use of forests and ecosystem, water/wetlands resources (lake, ponds), conservation of protected areas thereby increase forest density	√	x	√	√	√	√
	15.2 Activities – sustainable management of forests, degraded forests – forest nursery, plantation in public land	√	√	√	√	√	√
	15.3 Increase forest density, protection of rivulets and riverbanks	√	x	√	√	√	√
	15.4 Conservation of environmentally sensitive water sources	√	x	√	√	√	√
	15.5 Take urgent actions to protect endangered flora and faunal species (e.g. restrict harvesting of rare and endangered tree species,) increase rhino and tiger population	√	√	√	√	√	√
	15.6 Equitable benefit sharing of forest product	√	√	√	√	√	√
	15.7 Strict rules and regulations and fine to illegal poaching and harvesting of wildlife and plants respectively to control poaching	√	x	√	√	√	√
	15.8 Inclusion of measures, plans and policies of invasive plant and wildlife in Forest Group's Operational plan	√	√	√	x	√	√
	15.9 Gradual improvement of forest condition and wildlife status (overall biodiversity status)	√	√	√	√	√	√
	15.a. Identification of sustainable funding sources	√	x	√	√	√	√
	15.b. Sufficient allocation of budget for conservation of forests and biodiversity	√	x	√	√	√	√
15.c. Fully controlled of illegal poaching of wild animals and illegal harvesting of forest products	√	x	√	x	√	√	
Goal 16. Promote peaceful and	16.3 Development of accountable mechanism of forest groups towards forests	√	√	√	√	√	√

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inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	users (e.g. through transparency, public audit)						
	16.5 Adopt participatory decision-making and planning approach	√	√	√	x	√	√
	16.7 Increase of women and marginalized people in public decision-making process	√	√	√	x	√	√
Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	17.1 Advocate and encourage local level governments to allocate enough budget for community development and	√	x	√	x	√	√
	17.3 Implementation of community development activities with the funding support of donor	√	x	√	√	√	√
	17.6 Improvement of communication mechanism among forest users and with relevant stakeholders	√	x	√	x	√	x
	17.19 Increase proportion of children under 5 years of age whose births and deaths have been registered (marriage registration, senior citizen registration)	√	x	√	x	x	x
	Total Target contributed by forest management regime	78	28	82	41	67	70

Key Findings

Forestry sector has generally a greater scope and potential to make the SDGs contribution. However, trade-offs between SDGs and their targets exist whereby activities to achieve targets of one SDG may negatively affect to achieve other SDGs. Goal wise, contribution of forestry sector contributes to climate change action potentially due to current priorities of forestry sector policies and plans on climate change related activities. At the target level, Nepal forestry sector contributes to relatively a larger number of outcome-based targets compared to process-based targets. This can be due to benefits derived from the forests directly assists multiple sectors including education, agriculture, health, and infrastructures development. However, forestry sector contributes to less number of process-based targets, which indicates that forestry sector policies and legislations have not been well integrated with the other sectors' policies and legislations.

Although the evidences were collected from one forest groups and institution of six forest management regimes through a case study approach, this presents indicative results and finding. The findings indicate the contribution of forests to SDGs varies across the management regimes. This suggests that Nepal's forest management regimes have inconsistent priorities in their forest activities, resource use and budget allocation. For example, BZCFs contribute to larger number of targets, and LFs contribute to the least number of targets. This is probably due to the fact that size of forests and revenue and the distribution of revenue and benefits can determine the extent to which different forest regimes contributes to achieving the SDGs.

Most of the sectoral and cross-sectoral policies and legislative instruments in Nepal had been formulated before SDGs. However, the spirit of these instruments is still in line with the 2030 agenda and SDGs. Nevertheless, there is a gap of linkage between sectoral and cross-sectoral policies, while this is a must to attain SDGs achievement as SDGs and their targets are multi-dimensional and indivisible. There are few national forest related policies and legislative instruments and local practices that positively contribute to achieving the SDGs.

Moving Forward

An integrated framework of policy-making is critical to make the progress towards the SDGs and associated targets through the forestry sector of Nepal. Forest related strategies and plans

developed prior to SDGs need to be reviewed and to align with SDGs. These policies and plans need to be coherence and to be integrated at three levels of governments i.e. federal, province and local levels to maximize the outcomes and efficiency to the SDGs. Dedicated financial resources are crucial to implement these SDGs-focused activities. A study is essential to understand and identify the nature and the extent of trade-off between SDGs in the context of Nepal's Forestry Sector to facilitate the formulation of SDGs-focused forestry sector policies and programs. Specific recommendations are as follows.

- Integrate SDGs into Forestry Sector Planning Framework
- Capacity Building at National and Local Level
- Policy Coherence- Federal, Provincial and Local
- Development of Disaggregate Data System and Monitoring
- Generation of Dedicated Financial Resources
- Localization of SDGs - Transforming goal to Outcome
- Understanding the Relationships among SDGs

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