



ROYAL GOVERNMENT OF BHUTAN  
MINISTRY OF ENERGY AND NATURAL RESOURCES  
DEPARTMENT OF FORESTS AND PARK SERVICES



# Annual Forestry Statistics 2023

Published by: Forest Monitoring and Information Division,  
Department of Forests and Park Services,  
Ministry of Energy and Natural Resources,  
Thimphu, Bhutan, 2024



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## C. FOREWORD

Forests harbor a wealth of natural resources that provide tangible benefits and play a critical role in providing a range of ecosystem services such as mitigating the impacts of climate change. The tangible benefits include forest resources such as timber, fuelwood, medicinal plants, and other non-wood forest products which help in the sustenance of rural livelihood as well as promote socioeconomic development.

The Department of Forest and Park Services (DoFPS) as custodian of the management of forests resources cater to the needs of the people in allocation of resources and providing of forestry services for various developmental activities through 24 field offices. The services are provided through an online application platform and the records of resources allocated are entered and maintained in an information management system called the Forest Information Reporting and Monitoring System (FIRMS). FIRMS has over 230 data managers from field offices, feeding the information into the system and facilitating the entry of information on transit of forest produce at the various forest check posts.

The DoFPS as part of the annual progress assessment and reporting to the information need of policy makers, researchers, and decision makers analyze these resource allocation data and disseminate the information through the publication of the Annual Forestry Statistics (AFS). The AFS 2023 provides a concise information on forest resource management and services delivered including resource utilization and some of the issues and challenges the forestry sector.

I would like to acknowledge the hard work and dedication of all the colleagues in the field and functional offices in achieving the goals of the Department. I would like to specially congratulate the Forest Monitoring and Information Division for coming up with this booklet for the benefit of all stakeholders.

Tashi Delek!

(Lobzang Dorji)  
Director  
Department of Forests and Park Services  
Ministry of Energy and Natural Resources

## 1. Introduction

The Annual Forestry Statistics (AFS), 2023 offers details about the Department of Forests and Park Services (DoFPS) operational activities, services, and diverse programs. The report's contents are derived from the newly enhanced Forest Information Reporting and Monitoring System (FIRMS) database (version II), which is a web-based system that gathers data from 14 Divisional Forest Offices and 10 Protected Area Offices. FIRMS has about 230 varied data managers with 24 main data managers in the division or park head offices handling the data submitted by the respective offices under them. The information for program specific modules on forest management regimes such as Protected Areas (PAs), Forest Management Units (FMUs), Local Forest Management Areas (LFMAs), Community Forests (CFs), and Non-Wood Forest Product (NWFP) Management groups, were augmented with additional data provided by the program section heads from the functional divisions.

Besides providing an update on the state of PAs, FMUs, LFMAs, CFs and NWFP groups, the booklet also includes relevant information on plantations, forestry clearances, rescue & rehabilitation activities, Wood Based Industries (WBIs), forest offences and Human Wildlife Conflict (HWC) incidences.

At the outset, the report presents key information on resource allocation in terms of the volume of timber allocated by the Department and the timber extraction achievement from various sources including the timber from FMUs allotted through Natural Resources Development Corporation Limited (NRDCL) along with the royalty collected for the year. The report also provides information on the quantity and the royalty collected from the supply of NWFPs (plants and surface collection) and the fees collected from various permits.

## 2. Key Facts

Sl.No.	Forest Statistics	
1	Total Forest Area (ha)	2,676,545.42
2	Forest Cover Percent (%)	69.71
3	Broad leaved forest (ha)	1,819,649.63
	Broad leaved forest (%)	47.39
4	Conifer forest (ha)	856,895.79
	Conifer forest (%)	22.32
5	Basal area per hectare (m <sup>2</sup> /ha)	32.74
6	Growing Stock per hectare (m <sup>3</sup> )	283.65
7	Biomass Stock per hectare (AGB, BGB, DoM: t/ha)	271.5
8	Carbon per hectare (AGB, BGB, DoM: t/ha)	127.62
9	Soil Carbon per hectare	68.12
10	Forest Carbon Stock (Million tonnes)	523.87
Forest Management Regime		
1	Protected Area (%)	43.48
2	Biological Corridors (%)	8.29
3	Royal Botanical Park (RBP) (%)	0.24
4	Protected Area Network (%) <sup>1</sup>	52
5	National Parks (No.)	5
6	Wildlife Sanctuaries (No.)	4
7	Strict Nature Reserve (No.)	1
8	Biological Corridors (No.)	9
9	Forest Management Units (No.)	21
	Forest Management Units Area (ha)	193,155.70

<sup>1</sup> \*Protected Area Network (%) =sum of Protected area (%), Biological Corridors (%) and Royal Botanical Park (%)



10	Total Community Forest (No.)	823
	Household involved in CF (No.)	32,843
	Total Area of CF (ha)	130,199.20
11	Local Forest Management Area (Nos)	85
	Local Forest Management Area (ha)	379,272.49
12	Ramsar sites (No.)	3
	Ramsar site Area (ha)	1,231.82
13	Wood-based industries (No.)	485
14	NWFP Groups (No.)	136
<b>Functional and Field Offices</b>		
17	Functional Division	4
18	Divisional Forest Office	14
19	Divisional Range Office	42
20	Divisional Beat Office	76
21	Divisional Check post	33
22	Park/ Strict Reserve/ Wildlife Sanctuaries	10
23	Park Range Office	32
24	Park Guard Post	14
25	Park Check post	5
26	Visitor centers & recreational areas	7



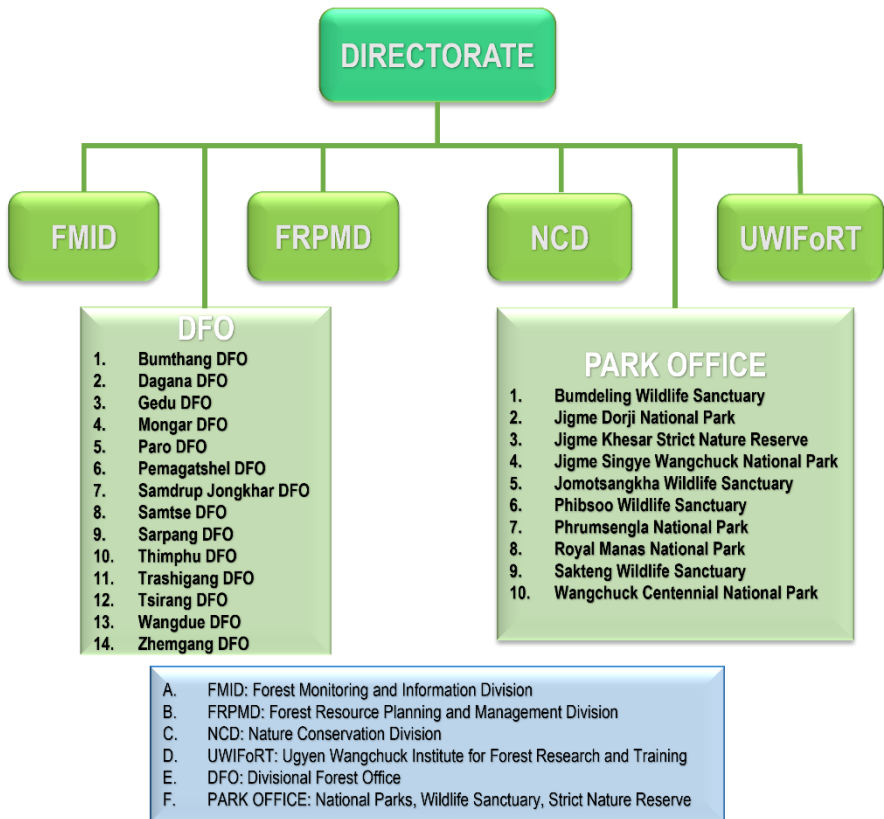
### 3. Organogram

Department of Forests and Park Services is one of the oldest Departments, established in 1952. The Department is organized into four Functional Divisions, including Forest Monitoring and Information Division (FMID), Forest Resources Planning and Management Division (FRPMD), Nature Conservation Division (NCD), and Ugyen Wangchuck Institute for Forestry Research and Training (UWIFoRT). Additionally, there are 14 Divisional Forest Offices and 10 Park Offices, which consist of National Parks, Wildlife Sanctuaries, and Strict Reserves as given in the [Figure 1](#).

#### **Mandates of the Department**

1. Manage and utilize Bhutan's forests for sustainable production of economic and environmental goods and services to meet the needs of the people.
2. Enhance long term sustainability of Bhutan's biodiversity and ecosystem services through management of natural habitats including wetland.
3. Facilitate and collaborate for effective and integrated watershed management.
4. Sustainable forest management through effective application of science and technology including participation of communities for socio-economic benefits.
5. Forest landscape restoration for social, ecological and economic benefits.
6. Forestry research to generate and disseminate scientific knowledge to enhance forest and biodiversity management to support implementation and ecologically sound policies.
7. Periodic monitoring of forest resources and evaluation to ensure sustainable management and information dissemination.

The main role of Functional Divisions is to formulate program-based plans and provide technical backstopping to field offices while field offices implement projects and activities. Divisional Forest Offices and Park Offices are further divided into sub offices as given in the [Figure 2](#). Details of field offices and jurisdictions are given in the [Table 1](#). [Table 2](#) shows number of check posts under field offices and [Table 3](#) shows number of recreational and visitor centres.



**Figure 1: Organogram of DoFPS**

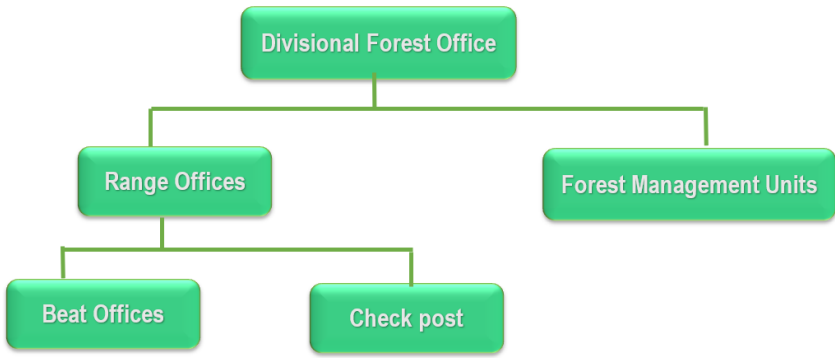
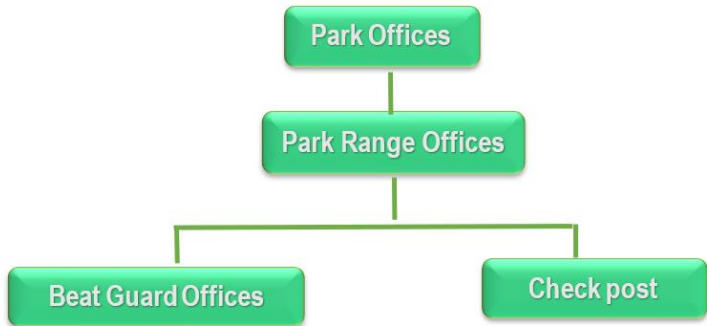


Figure 2: Organogram of field offices

**Table1: Field offices information**

Sl.No.	Office	Dzongkhag	Range Office	Beat Office	Range Gewog		
1	Divisional Forest Office, Bumthang	Bumthang	Bumthang	Tang	Tang		
			Chokhor		Chokhor		
		Trongsa	Chumey		Chumey		
			Trongsa	Drakteng	Drakteng		
				Tashiling	Tashiling		
				Langthel	Langthel		
				Nubi	Nubi		
2	Divisional Forest Office, Dagana	Dagana	Drujeygang		Drujeygang		
					Tsangkha		
					Lajab		
					Khebisa		
			Dagapela		Goshi		
					Tsendagang		
					Dorona		
					Trashiding		
		Lhamoizingkha		Geserling			
				Lhamoizingkha			
				Karmaling			
			Dagana		Tseza		
					Kana		
				Khebisa			
		3	Divisional Forest Office, Gedu	Chhukha	Phuentsholing	Pasakha	Samphaling
							Phuntsholing
							Logchina
Tsimasham	Chapcha				Chapcha		
	Wangkha				Bjabchoe		
					Bongo (Part)		
	Metakha (Part)						
	Dungna (Part)						

					Geling (Part)
			Gedu	Darla	Darla
					Bongo
					Gataena
				Kungkha	Geiling (Part)
					Dungna
					Logchina (Part)
					Phuntsholing (Part)
4	Divisional Forest Office, Mongar	Mongar	Mongar		Mongar
				Salaphu	Chali
					Tsakaling
				Chaskhar	Chaskhar
					Thangrong
					Ngatshang
				Dramitse	Balam
					Dramitse
					Narang
			Gyelpozhing		Drepong
				Kengkhar	Kengkhar
					Jurmey
				Nagor	Gongdue
					Silambi
		Lhuentse	Lhuentse		Gangzur
				Tangmochu	Minjay
					Menbi
				Autsho	Tsenkhar
5	Divisional Forest Office, Paro	Paro	Paro		Wangchang
					Hungrel
					Doteng
					Dopshari
					Lamgong

					Shaba	
					Lungnyi	
				Jitsephu	Tsento	
				Dawakha	Dogar	
		Haa	Haa		Katsho	
					Bjee	
					Samar	
					Essu	
6	Divisional Forest Office, Pema Gatshel	Pema Gatshel	Pema Gatshel		Khar	
					Shumar	
					Zobel	
				Nanong	Nanong	
				Nganglam		Noorbugang
					Dechheling	
					Chokhorling	
				Yurung		Yurung
					Chimung	
					Chongshing	
		Dungmaed	Dungmaed			
7	Divisional Forest Office, Samdrup Jongkhar	Samdrup Jongkhar	Samdrup Jongkhar	Dewathang	Dewathang	
				Orong	Orong	
				Gomdar	Gomdar	
				Wangphu	Wangphu	
8	Divisional Forest Office, Samtse	Samtse	Tashicholing		Pemaling	
					Namgaycholing	
					Tashicholing	
				Tendruk	Tendruk	
					Norgaygang	
			Norbugang		Norbugang	
					Ugyentse	
	Sangacholing	Sangacholing				

				Yoeseltse	Yoeseltse
			Samtse		Samtse
				Tading	Tading
				Phuntshopelri	Phuntshopelri
			Dophuchen		Dophuchen
				Dumtoed	Dumtoed
				Denchukha	Denchukha
9	Divisional Forest Office, Sarpang	Sarpang	Sarpang		Singye
					Gakidling
					Shomphangkha
					Dekiling
					Chhudzom
			Gelephu	Jigmecholing	Jigmecholing
					Sershong
					Chuzergang
					Gelephu
		Samtenling			
10	Divisional Forest Office, Thimphu	Thimphu	Thimphu	Dechencholing	Kawang
				Langjophakha	
				Simtokha	Chang
				Hongtsho	
			Khasadrapchu	Genekha	Geney
11	Divisional Forest Office, Trashigang	Trashigang	Radhi	Bidung	Bidung
				Shongphu	Shongphu
				Phongmey	Phongmey
					Radhi
			Wamrong	Thrimshing	Thrimshing
				Lumang	Lumang
				Khaling	Khaling
				Kangpara	Kangpara
			Trashigang	Samkhar	Samkhar



				Udzorong	Udzorong
				Yangner	Yangner
				Kanglung	Kanglung
				Bartsham	Bartsham
		Trashiyangtse	Duksum	Jamkhar	Jamkhar
				Tongzhang	Tongzhang
				Ramjar	Ramjar
				Thragom	Yallang
			Yangtse	Khamdang	Khamdang
				Toetsho	Toetsho
					Yangtse
12	Divisional Forest Office, Tsirang	Tsirang	Tsirang		Kikhorthang
					Tsholingkhar
					Dunglagang
					Goserling
					Semjong
					Rangthaling
			Tsirangtoe		Tsirangtoe
					Phuntenchu
				Sergithang	Sergithang
			Mendrelgang		Mendrelgang
					Barshong
					Patshalling
13	Divisional Forest Office, Wangdue	Wangdue	Wangdue	Chuzomsa	Phangyul
					Kazhi
					Bjena
					Nyisho
				Gasello	Gasetshogom
					Gasetshowom
					Nahi
				Kamichu	Daga

					Athang
					Thedtsho
					Rubesa
			Nobding	Gagtey-Phobji	Gangtey
					Phobjikha
					Athang
					Dangchu
					Sephu
		Punakha	Lobesa	Thinleygang	Toebisa
					Barp
			Punakha	Talo	Talo
				Tshochasa	Lingmukha
				Samdingkha	Chhubu
					Toewang
				Kabesa	Kabjisa
				Shengana	Shenga Bjimi
				Guma	Guma
				Dzomi	Dzomi
14	Divisional Forest Office, Zhemgang	Zhemgang	Zhemgang	Buli	Nangkor
				Tali	
				Mangdichu	Trong
			Khomshar		Bardo
				Shingkhar	Shingkhar
			Panbang	Goshing	Goshing
				Bjoka	Bjoka
					Ngangla
15	Bumdeling Wildlife Santuary	Trashiyangtse	Dungzam	Shingphel	Bumdeling
				Womanang	
		Mongar	Serzhong		Sherimuhung
		Lhuentse	Khoma	Singyedzong	Khoma

16	Jigme Dorji National Park	Thimphu	Soe		Soe	
		Paro			Tsento (part)	
						Doteng (part)
		Thimphu	Lingzhi		Lingzhi	
					Naro	
					Kawang (part)	
		Gasa	Gasa	Khamaed	Khatoed	
					Khamead.	
			Laya		Laya	
			Lunana		Lunana (part)	
		Punakha	Ruecheyna		Tewang (part)	
	Chubu (part)					
	Kabisa (part)					
	Goenshari					
17	Jigme Khesar Strict Nature Reserve	Haa	Bji		Bji	
			Sanhbaykga		Sangbaykha	
			Gakiling		Gakiling	
18	Jigme Singye Wangchuck National Park	Trongsa	Langthel	Chendebji	Langthel	
			Nabji		Korphu	
		Zhemgang	Tingtibi		Tingtibi	
	Wangduephodrang	Taksha	Athang		Athang	
19	Jomotsangkha Wildlife Sanctuary	Samdrup Jongkhar	Samdrupcholing		Phuntshothang	
					Martshalla	
					Samrang	
					Pemathang	
			Jomotshangkha		Langchenphu	
		Lauri				
		Minjiwoong	Serthi			
20	Phibsoo Wildlife Sanctuary	Sarpang	Phibsoo		Singye	
			Nichula		Nichula	
21		Bumthang	Ura		Ura	

	Phrumsengla National Park	Mongar	Lingmethang	Sengor	Chumey
				Tsamang	Saling
		Lhuentse	Phawan	Zangkhar	Tsamang
					Jarey
					Metsho
22	Royal Manas National Park	Sarpang	Manas		Ngangla
			Gomphu	Tingtibi	Trong
				Pangtang	Pankhar
		Zhemgang	Umling		Umling
					Taraythang
23	Sakteng Wildlife Sanctuary	Trsahigang	Merak		Merak
			Sakteng		Sakteng
			Joenkhar		Sakteng
24	Wangchuck Centennial National Park	Bumthang	Chokhor	Tang	Tang
					Chokhor
		Lhuentse	Dungkar	Ney	Gangzur
					Kurtoed
		Wangduephodrang	Sephu		Sephu
Trongsa			Nubi		

**Table 2: Check posts**

Sl. No.	Offices	Name/Location	Type
1	Divisional Forest Office, Dagana	Lhamozingkha	ICP
2	Divisional Forest Office, Gedu	Allay, Pasakha	ICP
		Pling Main Gate	ICP
		Rinchending	ICP
		Piping (Bjemichu)	ICP
3	Divisional Forest Office, Mongar	Sherichu	CP
		Kurizampa	CP
		Tangmachu	CP
4	Divisional Forest Office, Paro	Haa Check post	CP
		Jewphu Checkpost	CP

5	Divisional Forest Office, Pemagatshel	Pelzomthang	ICP
		Tshobaley	CP
6	Divisional Forest Office, Samdrup Jongkhar	Samdrup Jongkhar Main Gate	ICP
		Phuentsho Rabtenling	ICP
		Pinchinang/Charkilo	ICP
7	Divisional Forest Office, Samtse	Samtse Main Gate Boarder	ICP
		Jitti, Sangacholing	ICP
		Nyoenpaling, Pugli	ICP
		Yoezergang, Halalay	ICP
		Amochu	ICP
		Pendenling (Gomtu)	ICP
		Yangphelthang (Bhimtar), Norbugang	ICP
8	Divisional Forest Office, Sarpang	Sershong	ICP
		Indo-Bhutan Border Checkpost, Gelephu	ICP
		Shechamthang (Hilley)	ICP
9	Divisional Forest Office, Thimphu	Chamgang	CP
		Chunzom	CP
		Hongtsho	CP
10	Divisional Forest Office, Trashigang	Zangpozor, Khamdang	CP
		Kheri, Samkhar	CP
		Tshozor, Wamrong	CP
11	Divisional Forest Office, Wangdue	Wangdue Bridge	CP
12	Divisional Forest Office, Zhemgang	Mangdichu, Tingtibi	CP
13	Bumdeling Wildlife Sanctuary	Tsazam	CP
14	Phrumsengla National Park	Gagtongzam	CP
15	Royal Manas National Park	Mesergang (Panbang)	CP
16	Jigme Dorji National Park	Dodena Check Post	CP
17	Jomotsangkha Wildlife Sanctuary	Jomotsangkha, Langchenphu	ICP

\*CP: refers to the Check Post manned by forestry staff; ICP: refers to Integrated Check Post manned by Royal Bhutan Police officials

**Table 3: Visitor centers and Recreational Areas under DoFPS**

Sl. No.	Head Office	Name	Dzongkhag	Gewog
1	Bumdeling Wildlife Sanctuary	BWS Visitor center	Trashiyangtse	Yangtse
		Bumdeling recreational site	Trashiyangtse	Bumdeling
2	Jigme Dorji National Park	Dodena Visitor Information Center	Thimphu	Kawang
3	Phrumsengla National Park	PNP Visitor Information Center	Bumthang	Ura
4	Divisional Forest Office, Sarpang	Southern Wildlife Rescue and Rehabilitation Center	Sarpang	Jigemeiling
				Dikiling
5	Divisional Forest Office, Thimphu	Royal Takin Preserve, Motithang	Thimphu	Thim Throm
6	Divisional Forest Office, Thimphu	Royal Botanical Park, Lampelri	Punakha	Teob
7	Divisional Forest Office, Zhemgang	Bermo Botanical Garden	Zhemgang	Trong



## 4. Forest Management Areas

Forests in Bhutan are managed under different management regimes namely PA network, CF, FMU and LFMA (Figure 3).

PA are geographical areas which are declared as National Park (NP), Wildlife Sanctuary (WS), Strict Nature Reserve (SNR), Biological Corridor (BC), or any conservation area declared by the parliament of Bhutan and dedicated and managed to achieve the long-term goal of conservation of nature with associated ecosystem services and sociocultural values.

CF is a form of forestry practice wherein the forest resource management authority of a State Reserved Forest Land (SRFL) is given to local communities.

FMU is area of SFRL designated as production forest area for timber harvesting operated mainly by the NRDCL.

LFMA is a designated forest area intended to bring the remaining SRFL under scientific management for sustained supply of forest products and ecosystem services. This focuses on sustainable management of all forest resources which are not covered by PA, CF and FMU.

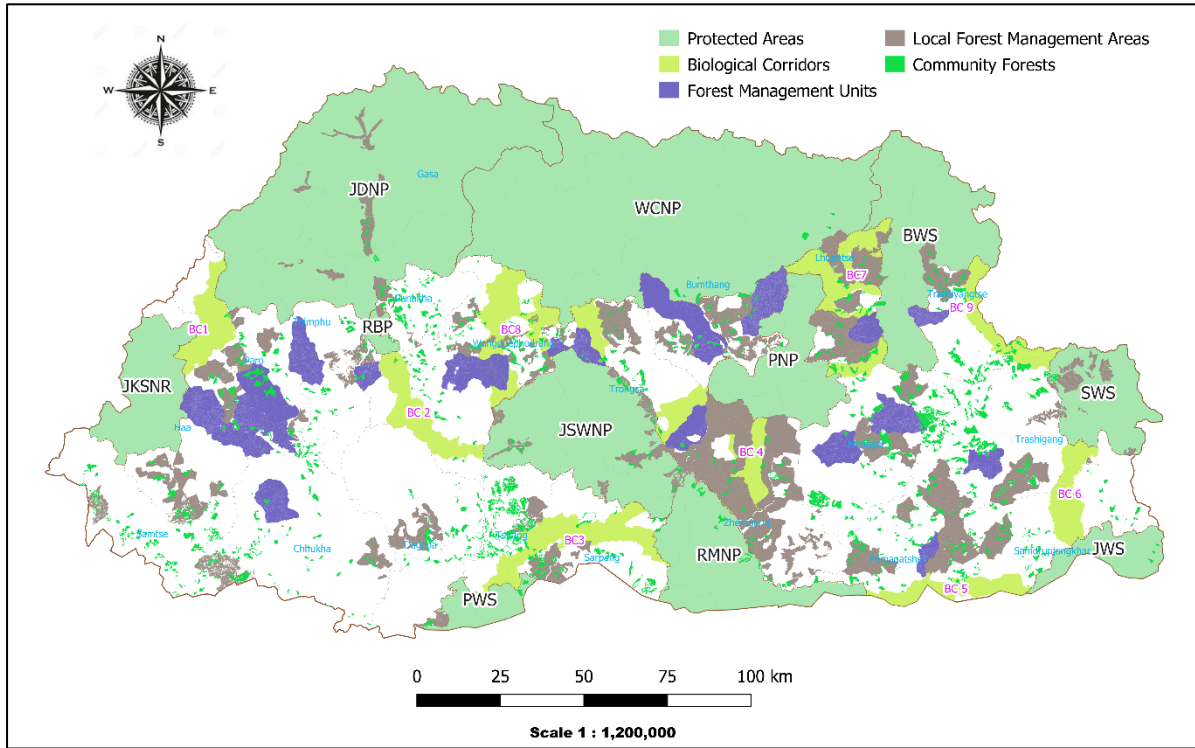


Figure 3: Conservation and Sustainable Forest Management Map



#### 4.1 Protected Areas Network

In order to take conservation program forward, 52 percent of the country's geographical area is managed under 10 PA, 9 BC and 1 Royal Botanical Park, RBP (Table 4).

**Table 4 Protected area network in Bhutan**

Sl. No	Protected Area Network	Notification year	Dzongkhag	Area (Km <sup>2</sup> )	Forest Area (Km <sup>2</sup> ) <sup>2</sup>	Forest Area (%)
1	Bumdeling Wildlife Sanctuary	1993	Lhuentse	1,534.24	887.13	57.82
			Mongar			
			Trashi Yangtse			
2	Jigme Dorji National Park	1993	Gasa	4,374.06	1,088.53	24.89
			Paro			
			Punakha			
			Thimphu			
3	Jigme Khesar Strict Nature Reserve	1993	Haa	784.22	415.32	52.96
			Samtse			
4	Jigme Singye Wangchuck National Park	1993	Sarpang	1,730.06	1,593.92	92.13
			Trongsa			
			Tsirang			
			Wangdue Phodrang			
			Zhemgang			
5	Jomotsangkha Wildlife Sanctuary	1993	Samdrup Jongkhar	362.49	328.94	90.74
6	Phrumsengla National Park	1993	Bumthang	906.65	839.98	92.65
			Lhuentse			
			Mongar			
			Zhemgang			
7	Phibsoo Wildlife Sanctuary	1993	Sarpang	287.18	268.74	93.58
			Dagana			
8	Royal Manas National Park	1993	Pema Gatsel	1,057.02	1,023.22	96.80

<sup>2</sup> Forest area calculated from the forest cover map, 2022

			Sarpang			
			Zhemgang			
9	Sakteng Wildlife Sanctuary	1993	Trashigang	742.46	516.99	69.63
10	Wangchuck Centennial National Park	2008	Bumthang	4,914.63	1,464.82	29.81
			Lhuentse			
			Wangdue Phodrang			
			Gasa			
			Trongsa			
11	Royal Botanical Park (RBP)	2004	Punakha	91.20	90.12	98.82
			Thimphu			
12	JDNP-JKSNR Biological Corridor (BC1)	1999	Haa	255.55	108.41	42.42
			Paro			
13	RBP-JSWNP Biological Corridor (BC 2)	1999	Wangdue Phodrang	291.76	285.84	97.97
14	JSWNP-PWS-RMNP Biological Corridor (BC 3)	1999	Sarpang	407.12	396.56	97.41
			Tsirang			
15	JSWNP-PNP-RMNP Biological Corridor (BC 4)	1999	Trongsa	594.65	561.36	94.40
			Zhemgang			
16	JWS-RMNP Biological Corridor (BC 5)	1999	Pema	205.83	196.34	95.39
			Gatsel			
			Samdrup Jongkhar			
17	JWS-SWS Biological Corridor (BC 6)	1999	Samdrup Jongkhar	232.77	222.38	95.54
			Trashigang			
18	BWS-PNP-WCNP Biological Corridor (BC 7)	1999	Lhuentse	419.66	392.06	93.42
			Mongar			
19	JSWNP-WCNP Biological Corridor (BC 8)	1999	Trongsa	558.60	483.30	86.52
			Wangdue Phodrang			
20	BWS-SWS Biological Corridor (BC 9)	2023	Trashigang	216.00	197.30	91.34
			Trashi Yantse			
<b>Total</b>				<b>19,966.15</b>	<b>11,361.25</b>	<b>56.90</b>

## 4.2 Community Forests

Currently, there are 823 CF sites in Bhutan, covering 130,407.35 hectares managed by 32,952 households (Table 5).

Wangdue Phodrang Dzongkhag has the highest number with 91 community forests.

**Table 5: Community Forests**

SI.No.	Dzongkhag	CF (No.)	Member household (No.)	Area (ha)
1	Bumthang	38	1,034	3,981.95
2	Chukha	62	2,001	4,882.18
3	Dagana	36	1,369	3,520.55
4	Gasa	7	164	625.01
5	Haa	24	785	3,137.50
6	Lhuntse	38	1,171	4,431.10
7	Mongar	35	2,193	10,988.21
8	Paro	29	1,518	4,569.32
9	Pemagatshel	54	2,490	4,812.03
10	Punakha	42	1,427	25,093.22
11	Samdrup Jongkhar	46	1,907	6,288.56
12	Samtse	64	2,541	6,615.50
13	Sarpang	35	1,349	4,962.25
14	Thimphu	21	843	2,354.63
15	Trashigang	54	3,009	13,400.26
16	Trashi Yangtse	39	1,675	5,654.54
17	Trongsa	28	870	3,216.05
18	Tsirang	49	3,067	9,824.68
19	Wangdue Phodrang	91	2,476	7,159.72
20	Zhemgang	31	1,063	4,890.09
<b>Total</b>		<b>823</b>	<b>32,952</b>	<b>130,407.35</b>

### 4.3 Forest Management Units

To cater to the developmental need of the country for timber, 21 FMUs are established covering 193,155.70 hectares (Table 6).

**Table 6: Forest Management Units in Bhutan**

Sl. No.	Dzongkhag	Forest Management Unit (FMU)	Establish m-ent year	Plan Cycle	Total FMU area (ha)	Forested area (ha) <sup>3</sup>	Forest area cover (%)	Annual Allowable Cut (AAC) - m <sup>3</sup>		
								Commerc ial	Rural	Total
1	Bumthang	Dawathang	2000	3	16,827.80	13,173.47	78.28	6,900.00	4,000.00	10,900.00
		Karshong	1994	3	6,000.36	5,357.58	89.29	6,200.00	1,500.00	7,700.00
		Rodungla	2002	2	14,488.91	12,261.57	84.63	12,000.00	2,999.00	14,999.00
2	Chukha	Metapchhu	2007	2	10,676.52	9,789.34	91.69	4,400.00	630.00	5,030.00
3	Haa	Haa East	1987	4	6,221.23	5,003.89	80.43	nil	500.00	500.00
		Lon Chhu	2010	2	12,568.25	7,789.58	61.98	5,300.00	1,000.00	6,300.00
		Sele La	1997	3	9,114.47	8,207.67	90.05	6,790.00	2,440.00	9,230.00
4	Lhuentse	Rongmanchu	2007	2	6,400.10	5,567.74	86.99	2,700.00	500.00	3,200.00
5	Mongar	Korila	1993	3	12,325.02	9,858.25	79.99	1,100.00	2,700.00	3,800.00
		Lingmethang	1997	3	10,490.15	9,957.59	94.92	8,900.00	500.00	9,400.00
6	Paro	Bitekha	2006	2	6,863.23	5,457.76	79.52	3,600.00	900.00	4,500.00
		Zonglela	1992	3	14,117.99	9,730.03	68.92	3,993.71	1,124.82	5,118.53
7	Pemagatshel	Khengzore	2019	1	4,083.24	3,975.71	97.37	3,700.00	400.00	4,100.00

<sup>3</sup> Forest area calculated from the forest cover map, 2022

8	Thimphu	Chamgang- Helela	1993	3	4,395.06	4,113.10	93.58	nil	1,800.00	1,800.00
		Gidakom	1977	4	13,101.25	8,316.53	63.48	5,000.00	2,400.00	7,400.00
9	Trashigang	Khaling Kharungla	1996	3	7,035.27	5,255.58	74.70	900.00	400.00	1,300.00
10	Trashi Yangtse	Dongdechu	2001	2	4,857.52	4,776.18	98.33	3,965.00	1,249.83	5,214.83
11	Trongsa	Chendebji	1996	3	7,841.94	6,549.58	83.52	4,700.00	2,000.00	6,700.00
12	Wangdue Phodrang	Gogona	2005	2	8,080.60	6,774.09	83.83	5,161.00	1,167.00	6,328.00
		Khotokha	1984	3	8,907.29	8,130.10	91.27	7,900.00	1,900.00	9,800.00
13	Zhemgang	Wangdigang	1992	2	8,759.50	7,688.45	87.77	nil	2,100.00	2,100.00
<b>Total</b>					<b>193,155.70</b>	<b>157,733.79</b>	<b>81.66</b>	<b>93,209.71</b>	<b>32,210.65</b>	<b>125,420.36</b>

#### 4.4 Local Forest Management Areas

As of 2023, there are 85 LFMA in Bhutan, which span over 379,272.49 hectares. Wangdue Phodrang Dzongkhag has the largest area of 57,966.06 hectares covered by 10 LFMA plans.

Table 7 shows the details of the distribution of the LFMA by Gewog and Dzongkhag.

**Table 7: Local Forest Management Areas in Bhutan**

Sl.No.	Dzongkhag	Gewog	Area (ha)
1	Bumthang	Chokor	3,450.00
		Chumey	5,228.00
		Tang	10,008.00
		Ura	5,187.00
2	Chukha	Geteyna	5,089.00
3	Dagana	Kana	1,497.00
		Khebesa	1,000.00
		Laja	1,000.00
		Lajab	5,597.00
4	Gasa	Khatoed Khamaed	7,134.80
		Laya	5,211.80
5	Haa	Bjee	1,732.00
		Esue	339.00
		Gakiling	5,442.00
		Katsho	712.00
		Sama	325.00
		Sombgyakha	4,960.00
6	Lhuntse	Gangzur	6,673.40
		Jarey	3,888.90
		Khoma	10,041.30

		Menbi	4,617.00
		Metsho	5,726.40
7	Mongar	Drepong	4,181.00
		Mongar	3,101.00
		Mongar (BWS)	2,100.10
		Saleng	2,116.00
		Shelrimuhung	5,409.30
		Thangrong	1,421.00
		Tsamang	3,928.05
		8	Paro
Doteng	3,240.00		
Lamgong	1,309.00		
Shaba	769.00		
Shari	1,600.00		
Tsento	1,952.00		
9	Pema Gatshel	Dechenling	12,745.31
		Nanong	7,317.50
		Yurung	2,833.00
		Zobel	5,028.40
10	Punakha	Barp	2,770.20
		Toeb	2,562.00
11	Samdrup Jongkhar	Orong	8,700.00
		Samrang	4,132.00
		Wangphu	7,153.00
12	Samtse	Namgaycholing	2,777.70
13	Sarpang	Chudzom	6,208.47
		Dekiling	3,767.00
		Gakidling	3,884.00
		Nichula	1,738.70

		Sompangkha	1,536.00
14	Thimphu	Chang	7,911.50
		Geney	3,805.00
		Lingzhi Naro	1,367.10
15	Trashigang	Kangpara	2,255.09
		Samkhar	5,206.50
		Shongphu	2,821.00
		Thrimsing	5,025.00
		Yallang	2,209.00
		Yangneer	2,907.00
16	Trashy Yangtse	Bumdeling	2,934.00
		Tongmajangsa	1,387.00
		Yangtse	8,340.00
17	Trongsa	Korphu	3,543.40
		Nubi	10,403.00
18	Tsirang	Dunglagang	1,645.00
		Khikhorthang	553.20
		Phuntenchu	2,155.00
		Semjong	149.20
		Sergithang	5,237.11
19	Wangdue Phodrang	Bjena	7,404.00
		Daga	21,043.90
		Dangchu	1,858.50
		Gangtey	1,377.00
		Gasetsho Wom	1,674.50
		Kabji	3,219.00
		Khazhi	14,753.76
		Nahi	1,727.40
		Phobji	3,250.40



		Sephu	1,657.60
20	Zhemgang	Bardo	11,793.00
		Bjokha	2,540.00
		Goshing	2,179.00
		Nangkor	24,334.00
		Nangla	3,862.00
		Shingkhar	2,956.00
		Trong	3,386.00
<b>Total</b>			<b>379,272.49</b>

#### 4.5 Non-Wood Forest Product (NWFP) groups in Bhutan

136 NWFP groups are registered in the country managed by 5,490 households through sustainable management plans (Table 8).

**Table 8: NWFP Groups in Bhutan**

Sl. No.	Dzongkhag	Group Name	Members Household (Nos)
1	Bumthang	Ura Mushroom Conservation and Marketing Group	183
2	Chhukha	Betar NWFP Group	16
		Drudingsa NWFP Management and Marketing Plan	32
		Metakha NWFP Management and Marketing Group	9
		Modokha NWFP Management and Marketing Group	20
		Sarphu Broom Grass Management Group	32
3	Dagana	Balung NWFP Management and marketing group	30
		Devitar Nagtshel Shingmen Tshogpa	69
		Dorjiphu Nagtshel Shingmen Tshogpa	44
		Homa Shingmen Tshogpa	51
		Laptshakha Shingmen Tshogpa	21

4	Gasa	Laya Ngomen Tshokpa (NWFP group)	262
5	Lhuentse	Goney-Wambur Shingmen Tshokpa	63
		Lekpachu Shingmen Detshen	8
		Ney Kuenphen Jakpai Tshogpa	61
		Singyedzong Sangzey Management group	18
6	Mongar	Aja Illicium griffithii Management group	17
		Balam Shingmen Detshen	109
		Broksar Shingmen Thuenkhen Detshen	18
		Deysho Cherub Dulen Detshen	11
		Gayek Non-Wood Forest Product Management and Marketing Group	9
		Tsakaling Gewog NWFP Management Group	46
		Yengkhartsheng NWFP Marketing and Management Group	15
		Mangling Ragwang Chithuen Shingmen Detshen	14
		Resa Shingmen Thuenken Nyamrup Dhetshen	30
		Tsangkar Shingmen Detsen	45
		Jabgang NWFP group	28
7	Paro	Drakey Chinto Ngomen Tshogpa	22
		Luchu Shamu Tshogpa	19
		Yaksa Ngomoen Tshogpoa	21
8	Pemagatshel	Bongman NWFP Management and Marketing Group	13
		Chimong Gongphel Shingmen Thoenkey Detshen	16
		Dagore Shingmen Gongphel Detshen	44
		Dezema NWFP Group	8
		Gamung NWFP	31
		Gashari NWFP Group	9
		Gonpung Shingmen Detshen	33
		Keroung NWFP Group	13
		Khengzor NWFP	37
		Labar Chithuen NWFP	20
		Menchu pipla/NWFP Group	10
Ngangray NWFP Group	33		

		Norbugang NWFP Group	28
		Tokari Shingmen Detshen	17
		Tomi-Zimzore NWFP group	27
		Tshelingore NWFP Management and Marketing	31
		Wongborang NWFP group	10
		Wongchelo Chigthuen Tshogpa	54
		Yangmalashing Pipla Group	34
9	Punakha	Petari Thuendrel NWFP group	37
10	Samtse	Majuwa_Pangkha NWFP Management and Marketing Group	38
		Namseling NWFP management Group	22
11	Sarpang	Bumpa Shingmin Dulen Tshopa	85
		Doringphu NWFP Management and Marketing Group	44
		Lower Muga Bamboo Shoot harvesting and marketing	28
		Pemaling Pagshing Tshopa	11
		Rateypani Soft Broom Management and Marketing Group	39
		Sangkha (Soft Broom) NWFP Group	35
		Thongjazor Yargay Pakshing Tshogpa (old name: Shawali Bamboo & NWFP)	29
		Tashiling Shingmin Dulen and Tsongdrel Tshogpa	9
		Thuendrel NWFP Management &Marketing Group	57
12	Samdrup Jongkhar	Beytseling Shingmein Yargay Gongphel Tshogpa	13
		Dungmanma Shingmein Gakey Pelzom	56
		Kakanay Shingmein Thuenkyed Tshogpa	37
		Lauri Gaki Shingmein Thuenkyed Tshogpa	92
		Mawong Chirphen Shingmein Thuenkyed Tshogpa	40
		Momring Shingmein Thuenkyed Tshogpa	48
		Patpanadang Shingmein Dondru tshogpa	12
		Raynang Shingmein Thuenkyed Tshogpa	15
		Samten Shingmen Thuenkyed Tshogpa (Samten group Tsholingkhar)	37

		Thekcho Choeling Gonpa Shingmein Tshogpa	8
		Woongthi Shingmein Natshok Thuendrel Tshogpa	18
		Zangthi-Tshothang Shingmein Thuenkyed Tshogpa	79
		Chitori Shingmein Thuenkyed	6
		Deptsang Shingmein Thuenkyed Tshogpa (Deptsang Shingmein Thuenkyed Kuenthin Norphel Tshogpa)	28
		Risum Tsholing Shingmein Thuenkyed Tshogpa	35
		Serthi Shingmein Thuenkyed Tshogpa	54
		Tashithangjay Shingmein Thunekyed Tshogpa (Tashithangjay Shingmein Thuenkay Yunten Mijur Phuensum Tshogpa)	18
		Bazor-Fremi Non-Wood Forest Products Management Plan	46
		Denchi Non-Wood Forest Products Management Plan	19
		Rongchanglu NWFP	17
		Dupthob Shingmin Detshen	33
		Pangthang NWFP	69
		Potala Shingmin Drongdey Nagtshel	53
		Remung Lhuendrup Shingmin Gongphel Detshen (Remung group)	26
		Thungshing Yubephodrang Shingmin Detshen	11
13	Trashi Yangtse	Phuntshog Thingney Tshogpa	10
		Bimkhar Bamboo Management Group	49
		Lengkhar Tsoy Wongbab Tshogpa	13
		Lichen Daphne Management Group	19
		Lengkhar Tsoy Wongbab Tshogpa	16
		Bumdir Herbal Tea Management Group	13
		Cheng NWFP Management Group	13
		Longkhar NWFP Management Group	13
14	Thimphu	Gangri Phunsum Ngomen Tshokpa	74
		Jomolhari Ngomoen Tshogpa	40

		Genye Mushroom Management Group (Community Mushroom Management)	126
		Jhom Daga Ngomen tsokpa	82
15	Trashigang	Chewchew Khachap Chetrin Tshogpa	6
		Kuenphen Poina Tshokpa	7
		Yumzang Semthuen Non-wood Forest Produce Management and Marketing group	60
		Bepam Sorbang Group /Sorbang Group	17
		Gengkhar Bangsee Group /Bangshe	11
		Sakteng Lhayul Sangzey Detshen	21
16	Trongsa	Namther Throgmen Tshogpa	28
		Chella Zanthoxylum Management Group	17
		Jongthang Zanthoxylum Management Group	30
		Karshong Bamboo Management Group	20
		Simphu Orchid Management Group	33
		Mongpa Selwai Yoezer Tshokpa (part of CF)	59
17	Tsirang	Batasey Non-Wood Forest Products	12
		Serzhong and Menchuna NWFP management & marketing Group	20
		Tashiling Non-wood Forest Products Management & Marketing Plan	20
18	Wangdue Phodrang	Dangchu Gewog Chithun NWFPs Group	170
		Gorgoen Shingmen Thoenketh Management Group	42
		Lamjithang NWFP Management Group	80
		Rukha Nagtshel Thunken Tshogpa / Rukha Naktshel Thunkhung Tshogpa	72
		Phangyul-Kumchi Gyenkha Group	64
		Phobjikha NWFP Management and Marketing Group	368
		Ngomen Meto Pema NWFP Group	186
		Beyulangdra Shingmaen Thuendrel Dhang Tshongdrel Tshogpa	56
19	Zhemgang	Mamung Bamboo Management group	16
		Panabe NWFP Group	17
		Pongchula Pema Choling Tsharzew Group	16
		Salapong NWFP group	17

	Zangbe shingmen Duelen Dang Tshongdrel Dhetshen	11
	Dali Shingmen Tshogpa	28
	Goling Jamphel Thoengkhang Tshogpa	45
	Kamati Pipla Management Group	19
	Lamtang NWFP Group	52
	Ngangla-Trong Shingmen Tshogpa	46
	Non wood Forest product Management and Marketing Group	25
	Nyakhar Dueng Shingmen Gongphel Tshogpa	30
	Shobling Singmen Tshopka	10
	Tsaidang Shingmenn Tshogpa	28
	Bjoka Gongphel Tsharzo Tshogpa	173
	<b>Total</b>	<b>5,495</b>



## 5. Forest Management Plans approved and revised in 2023

Forest management plans are dynamic living document that continuously harmonizes forestry, conservation, livelihood and national dependencies on natural resources. A total of 6 conservation management (2 Parks, 1 WLS and 3 BCs) plans, 7 CF plans and 17 LFMA plans were approved while 96 CF plans, were revised in 2023 (Table 9, Table 10, Table 11 and Table 12). In 2023, 2 NWFP plans were approved and 27 plans were revised (Table 13 & Table 14)

**Table 9: Park and Biological Corridor Plans revised in 2023**

Sl.No.	Protected Area Network	Notification year	Dzongkhag	Plan cycle
1	Jomotsangkha Wildlife Sanctuary (JWS)	1993	Samdrup Jongkhar	2023-2033
2	Royal Manas National Park (RMNP)	1993	Pemagatshel Sarpang Zhemgang	2023-2033
3	Wangchuck Centennial National Park (WCNP)	2008	Bumthang Lhuntse Wangdue Phodrang Gasa Trongsa	2023-2032
4	JDNP-JKSNR Biological Corridor (BC1)	1999	Haa Paro	2023-2033
5	JSWNP-PNP-RMNP Biological Corridor (BC 4)	1999	Trongsa Zhemgang	2023-2032
6	BWS-PNP-WCNP Biological Corridor (BC 7)	1999	Lhuentse Mongar	2023-2032

**Table 10: Community Forestry Plans Approved in 2023**

Sl. No.	Dzongkhag	CF Name	Member household (no)	Area (ha)	AAC (m <sup>3</sup> /yr)
1	Haa	Gyaljong	28	134.39	211.33
2	Lhuentse	Ney Gyalwang	65	325.00	1033.98
3	Punakha	Aechey	7	1.39	20.60
4	Samtse	Tinteray	51	159.05	218.26
5	Trashi Yangtse	Desa-Shakshing	15	95.54	222.00

		Kurtang Peg	27	77.71	15.36
6	Wangdue Phodrang	Garzhikha	22	96.00	313.71
<b>Total</b>			<b>215</b>	<b>889.08</b>	<b>2035.25</b>

**Table 11: Local Forest Management Plan approved in 2023**

Sl. No	Dzongkhag	Gewog	Gross Area (ha)	Area covered by Plan (ha)	AAC (m <sup>3</sup> /year)
1	Gasa	Khatoed Khamaed	43,619.00	7,134.80	11,374.00
		Laya	96,700.50	5,211.80	5,010.00
		Lingzhi Naro	66,815.70	1,367.10	522.00
2	Lhuntse	Gangzur	53,510.14	6,673.40	2,486.00
		Khoma	65,367.44	10,041.30	7,482.00
		Metsho	21,877.56	5,726.40	4,679.00
3	Mongar	Shelrimuhung	30,190.51	5,409.30	2,300.00
4	Pemagatshel	Nanong	8,170.00	7,317.50	3,866.00
5	Samtse	Namgaycholing	12,731.87	2,777.70	762.00
6	Trashigang	Kangpara	34,363.95	2,255.09	7,320.00
7	Trashiyangtse	Bumdeling	2,934.00	2,934.00	2,934.00
8	Wangdue Phodrang	Bjena	11,893.00	7,404.00	2,934.00
		Gasetsho Wom	20,820.00	1,674.50	1,871.00
		Khazhi	62,910.00	14,753.76	2,159.00
<b>Total</b>			<b>531,903.67</b>	<b>80,680.65</b>	<b>55,699.00</b>

**Table 12: Community Forestry Plans Revised in 2023**

Sl. No.	Dzongkhag	CF Name	Member household (no)	Area (ha)	AAC (m <sup>3</sup> /yr)
1	Bumthang	Domkhar Lhuendupcholing	43	168.08	273.81
		Gyal Lyonkhar	52	169.57	384.67
		Singye	44	132.14	292.67
2	Chukha	Amalley	21	52.00	28.00
		Dopham Evergreen	44	119.00	62.87
		Drukdingsa	18	79.00	110.14
		Mondokha	21	20.11	27.19
		Puensum	71	94.10	47.80



		Samdoen	19	46.00	60.25
		Sarphu	11	32.72	33.71
		Thadra	39	111.81	96.20
3	Dagana	Gatsholing	47	235.33	376.33
		Norbu Dungkar	26	68.97	43.51
		Norbuling	21	48.44	49.98
		Samdrupcholing	26	76.99	118.15
4	Haa	Dorib Yarkyel Puensum	45	179.15	161.18
		Druk Balamna	51	169.91	224.45
		Mochu	25	125.00	193.19
		Sertena	34	163.07	241.93
5	Lhuentse	Changkala Lhabtsen Karmo	22	64.80	128.28
		Denkaling Renysa	14	73.26	152.17
		Dhur Dhendrupling	60	244.52	590.26
		Kharshong Norden	60	285.02	177.08
		Tadongchen	83	425.17	381.71
		Tangrung	11	60.47	109.76
		Zangkar Serjan Lhamo	31	70.80	88.00
6	Mongar	Khalong Kuenpheling	79	389.00	688.82
		Serzhong	106	517.04	870.01
		Takhambi	65	462.00	296.40
		Washogpa	46	185.87	299.78
7	Paro	Druk Pegong	49	189.00	192.81
		Nami Nichu	26	160.32	192.08
8	Pemagatshel	Kuenzang Choling	12	38.19	31.97
		Menchu Jagartala	34	137.70	318.35
		Nyaskhar Toenchang	17	20.97	50.35
		Pangthang Norbuling	11	69.80	203.01
		Pangthangdaza	29	47.92	144.64
		Sangaycholing	22	78.90	172.93
		Tadzong	43	80.50	169.40
		Tsheshingzore Nengshingborang	73	251.47	494.60
9	Punakha	Gadhen Drongyuel	25	157.00	593.40
		Gawpay	66	175.00	490.16

		Jazhikha	17	38.30	82.00
		Norbuling	31	66.90	126.01
		Pelri	39	179.00	560.50
		Phendey	43	205.52	467.47
		Samdrup	53	150.75	547.57
		Serigang	46	56.00	95.85
10	Samdrup Jongkhar	Langchen Agurung Norbuthang	20	117.32	101.62
		Monmola	37	72.06	69.43
		Tshochen Khatey Gakiling	17	78.48	140.53
		Ugyencholing	18	55.68	78.47
		Woongthi-Sazora	20	112.10	189.66
11	Samtse	Amalay	53	77.40	129.90
		Basantey	31	134.75	183.87
		DhakaGoan	20	75.89	133.89
		Gaurav	35	66.61	134.72
		Ghalleygoen	47	150.61	229.56
		Khendong	17	64.71	95.96
		Majuwa	25	33.00	40.58
		Rong-Queng	23	47.82	71.73
		Sahakari	22	69.51	119.10
		Thotney	28	157.35	279.02
		Thunuwa	82	243.00	239.55
		Titiring	39	404.09	175.41
		Yugyug	38	93.48	110.61
12	Sarpang	Dungmin	44	170.11	134.00
		Lungsigang	36	143.70	163.22
		Rejuk	15	75.96	45.25
		Samkhara	32	114.96	83.30
		Sarbugang	13	63.02	98.10
		Yargaythang	62	154.56	133.69
13	Thimphu	Chamina	21	57.00	52.96
		Domche	24	72.00	112.60
		Tshagphu Tag Tshey Tse	50	150.00	283.32
14	Trashigang	Korphu Kuenphen	89	620.22	636.07

		Mongka	70	290.00	394.85
		Sherkaling	47	434.75	774.54
15	Trashi Yangtse	Circirla	62	521.70	403.74
16	Trongsa	Baysam	11	22.15	24.53
		Bjee	14	76.00	94.02
		Gagar	14	69.92	263.00
		Jangbi Nyamrup	23	73.98	81.95
		Pangzur Phuensum	28	155.86	376.00
		Semjee Norbu Lingkha	19	100.16	253.00
		Taktse	48	234.00	451.56
17	Tsirang	Chortengang	48	246.23	176.56
		Gadhenjong	66	271.50	166.74
		Norbuchoeiling	35	175.00	357.90
		Norbuling	30	73.66	108.18
		Phuentshog	17	73.95	225.80
		Thakorling	78	408.78	279.53
18	Wangdue Phodrang	Busa Wangdi Goenpa	41	79.21	50.95
		Gella Chikthuen	41	123.40	62.93
		Rukubji	71	220.84	133.62
19	Zhemgang	Tshaidang	29	177.20	474.90
<b>Total</b>			<b>3,621</b>	<b>14,476.27</b>	<b>20,961.82</b>

**Table 13: NWFP plans approved in 2023**

Sl. No.	Dzongkhag	Gewog	Name of NWFP Group	Species	Member Household (Nos.)
1	Trashigang	Sakteng	Yumzang Semthuen NWFP Management & Marketing Group	<i>Daphne bolua</i>	60
2			Sakteng Lhayul Sangzey Detshen	<i>Rhododendron anthopogon, R. setosum, Saussurea gossipiphora, Tanacetum atkinsonii, Cassiope fastigiata, Ajanía nubigenum, Thamnolia vermicularis, Swertia wardii, Nardostachys jatamansi</i>	21
<b>Total</b>					<b>81</b>

**Table 14: NWFP plans revised in 2023**

Sl. No	Dzongkhag	Gewog	Name of NWFP Group	Species	Member Household (Nos.)
1	Chukha	Shampelling	Betar NWFP management and marketing group	<i>Thysanolaena spp., Bamboo</i>	16
2	Gasa	Laya	Laya Incense and medicinal plants management group	<i>Aconitum spp. (Aconite, tshendu, tshendug, shodu, maanchen, bish, bikma), Picorrhiza spp./ Neopicrorhiza scrophulariifolia (Kutki, putishing), Exedia Spp. (Sue Shamu), Juniperus spp. (Shukpashing), Nardostachys grandiflora / jatamansi (Jatamansi, pang-poe), Tanacetum nubigeum (Kheng kaar),</i>	287

				<i>Tricholoma matsutake</i> (Sangay shamu), <i>Canarium</i> spp. (Gokul-dhup, Poekar), <i>Rhododendron anthopogon (ciliatum)</i> / <i>setosum</i> (Balu / sulu), <i>Mecanopsis simplicifolia</i> (Upelmetog), <i>Rheum spiciforme</i> (chi tsa), <i>Rhuem Nobilea</i> (chukhar metog),	
3	Paro	Tsento	Yaksa	<i>Neopicrohiza scrophlariiflora</i> , <i>Nardostachys grandiflora</i> , <i>Fritilaria</i> spp, <i>Rhododendron anthopogon</i> , <i>Rhododendron setosum</i> , <i>Juniperous recarva</i> , <i>Tanacetum</i> spp	21
4	Pemagatshel	Shumar	Gamung NWFP Management and Marketing Group	<i>Rubia cordifolia</i> , <i>Pouzolzia sanguine</i> and <i>Piper pedicellatum</i>	31
5	Samdrup Jongkhar	Lauri	Baytseling Shingmein Yargay Gongphel Tshogpa	<i>Rubia cordifolia</i> (La-nyi-roo-Sh), <i>Pouzolzia sanguinea</i> (Yongjiba-Sh), <i>Elatosteme lineolatum</i> (Drimmom), <i>Plectocomia himalayana</i> (Phashi-Sh), Mushroom, <i>Diplazium esculentum</i> (Dhawai-Sh), <i>Daphne bolua</i> (Shogushing-Sh), <i>Illicium griffithii</i> (Khaila chinang-Sh), <i>Litsea cubeba</i> (Nenshing -Sh), <i>Girardina diversifolia</i> (Zangroo-Sh), <i>Paris polyphylla</i> (Thoksampa-Sh), <i>Gultheria fragentissima</i> (Sakchongma-Sh), <i>Calamus acanthospathus</i> (Menji-Sh), <i>Zanthoxylum armatum</i> (Ghee-Sh), <i>Swertia chirayita</i> (Khalu-Sh)	18

		Dungmanma Shingmein Gaki Pelzom Tshogpa	<i>Rubia cordifolia</i> (La-nyi-roo-Sh), <i>Pouzolzia sanguinea</i> (Yongjiba-Sh), <i>Elatosteme lineolatum</i> (Drimmom), <i>Plectocomia himalayana</i> (Phashi-Sh), Mushroom, <i>Diplazium esculentum</i> (Dhawai-Sh), <i>Daphne bolua</i> (Shogushing-Sh), <i>Illicium griffithii</i> (Khaila chinang-Sh), <i>Litsea cubeba</i> (Nenshing -Sh), <i>Girardiana diversifolia</i> (Zangroo-Sh), <i>Paris polyphylla</i> (Thoksampa-Sh), <i>Gultheria fragentissima</i> (Sakchongma-Sh), <i>Calamus acanthospathus</i> (Menji-Sh), <i>Zanthoxylum armatum</i> (Ghee-Sh), <i>Swertia chirayita</i> (Khalu-Sh), <i>Gultheria fragentissima</i> (SakchongmaSh)	83
		Lauri Gaki Shingmein Thuenkyed Tshogpa	<i>Rubia cordifolia</i> , <i>Pouzolzia sanguinea</i> , <i>Elatosteme lineolatum</i> , <i>Plectocomia himalayana</i> , Mushroom, <i>Diplazium esculentum</i> , <i>Chimonobambusa callosa</i> , <i>Daphne bolua</i> , <i>Borinda grossa</i> , <i>Illicium griffithii</i> , <i>Girardiana diversifolia</i> , <i>Swertia chirata</i> , <i>Viscum nepalensis</i>	92
		Momring Shingmein Thuenkyed Tshogpa	<i>Rubia cordifolia</i> , <i>Pouzolzia sanguinea</i> , <i>Elatosteme lineolatum</i> , <i>Plectocomia himalayana</i> , Mushroom, <i>Diplazium esculentum</i> , <i>Chimonobambusa callosa</i> , <i>Daphne bolua</i> , <i>Borinda grossa</i> , <i>Illicium griffithii</i> , <i>Girardiana diversifolia</i> , <i>Swertia chirata</i> , <i>Viscum nepalensis</i> , <i>Litsea cubeba</i> , <i>Juglans regia</i> , <i>Onosma hookeri</i>	48
		Patpanadang Shingmein Dondrup Tshogpa	<i>Rubia cordifolia</i> , <i>Pouzolzia sanguinea</i> , <i>Elatosteme lineolatum</i> , <i>Plectocomia himalayana</i> , Mushroom, <i>Diplazium esculentum</i> , <i>Chimonobambusa callosa</i> , <i>Daphne bolua</i> , <i>Borinda grossa</i> , <i>Girardiana diversifolia</i> , <i>Viscum nepalensis</i> , <i>Thysanolaena maxima</i> , <i>Paris polyphylla</i> , <i>Zanthoxylum armatum</i>	12

			Thekcho Choeling Gonpa Shingmein Tshogpa	<i>Rubia cordifolia, Pouzolzia sanguinea, Elatosteme lineolatum, Diplazium esculentum, Mushroom, Chimonobambusa callosa, Daphne bolua, Borinda grossa, Illicium griffithii, Girardiana diversifolia, Swertia chirata, Viscum nepalensis, Plectocomia himalayana, Paris polyphylla, Juglans regia</i>	8
			Woongthi Shingmein Natshok Thuendrel Tshogpa	<i>Rubia cordifolia, Pouzolzia sanguinea, Elatosteme lineolatum, Plectocomia himalayana, Mushroom, Diplazium esculentum, Daphne bolua, Borinda grossa, Illicium griffithii, Girardiana diversifolia, Litsea cubeba, Paris polyphylla, Chimonobambusa callosa</i>	18
			Zangthi-Tshothang Shingmein Tshogpa	<i>Rubia cordifolia, Pouzolzia sanguinea, Elatosteme lineolatum, Plectocomia himalayana, Mushroom, Diplazium esculentum, Girardiana diversifolia, Swertia chirata, Viscum nepalensis, Paris polyphylla, Daphne bolua, Chimonobambusa callosa, Borinda grossa, Illicium griffithii, Juglans regia, Gultheria fragrantissima</i>	131
6	Samtse	Dophuchen	Majuwa_Pangkha NWFP management and marketing group	<i>Patsa, fern, Chirata, Tupistra nutans, Damru, other medicinal plants</i>	41
		Sangacholing	Namseling NWFP Management and Marketing Group	<i>Fern, Damru, Zanthoxylum, Tupistra nutans, Piper beteloides, Rubia cordifolia</i>	23

7	Sarpang	Gadkiling	Ratey Pani Softbroom management and marketing group	<i>Thysanolaena latifolia</i>	39
		Gakidling	Sangkha	<i>Broomgrass, Putka (honey bee), Fern, Tupistra nutans, Elatostema, Musa spp, Bamboo, Cane, Wallachia oblongifolia, Persea fructifera)</i>	35
		Jigmecholing	Thuendrel NWFP Management and Marketing Group	<i>Piper pedicellatum, Rubia cordifolia, Piper hamiltonii, Plectocomia himalayana, Persea gamblei, Litsea cubeba, Thysanolaena latifolia, Dendrocalamus hamiltonii, Tupistra nutans, Viscum articulatum, orchids</i>	57
		Serzhong	Pema Yoezerling Bamboo Management and Marketing Group,	<i>Melocanna braceferra, Bambusa alamii, Bambusa tulda, Bambusa clavata, Dendrocalamus skkimensis, Bambusa nutans</i>	11
		Sompangkha	Thongjazor Yargay Pakshing Tshogpa	<i>Bambusa nutans, Bambusa tulda, Dendrocalamus hameltonii, Meloconna braccifera</i>	29
8	Thimphu	Naro	Gangri Phuensum Ngomoen Tshogpa, Naro	<i>Meconopsis simplicifolia, Chrysosplenium nudicaule, Geranium tuberaria, G. refractum, Pluerospermum hookeri, Selinum vaginatum, Tanacetum nubigenum, Rhododendron anthopogon, R. setosum, Juniperus squamata, J. indica, Nardostachys grandiflora, Picrorhiza kurroa, Fritillaria delavayi, Rheum nobile, Podophyllum hexandrum, Taaxacum eriopodum, Rheum austral, Myricaria rosea, Meconopsis paniculata, Aconotium orochryseum, A. laciniatum, Dactylorhiza hatagirea, Jaescuhkea oligosperma, Meconopsis discigera, Corydalis criispa, Onosma hookeri, Rhodiola crenulata, Salvia castanea, Gentiana algida, Lalium nanum, Primula sikkimensis, Saussurea obvallat, Paris polyphylla, Cantharellus cibarius, Juniperus wallichina, Heracleum obtusifolium, Gentiana</i>	75



				<i>robusta, Carum carvi, Rhododendron glaucophyllum, Ephedra gerardiana,</i>	
		Soe	Jomolhari	<i>Neopicrohiza scrophlariiflora, Nardostachys grandiflora, Fritilaria spp, Rhododendron anthopogon, Rhododendron setosum, Juniperous recarva, Tanacetum spp</i>	40
9	Trashi Yangtse	Bumdeling	Cheng NWFP management Group	<i>Bamboo (Borinda grossa), Daphne and Satuwa/ Thoksampa (Paris polyphylla)</i>	11
			Longkhar	<i>Daphne bolua, Bamboo, Tshar, Wood Burr, Paris polyphylla</i>	12
		Khamdang	Rubia cordifolia Management & Marketing Group	<i>Rubia cordifolia</i>	16
10	Wangdue Phodrang	Dangchu	Dangchu NWFP Marketing and Management Group	<i>Paris polyphylla, Algae and Borinda grossa.</i>	170

11	Zhemgang	Phangkhar	Panabe Bamboo Management group	<i>Bamboo, Phyllanthus emblica, Zanthoxylum armatum, Bambusa nutuns, Castonopsis nuts, Ambrawa, Dendrocalamus hamiltonii, Piper pedicillatum, Elatosteme lineolatum</i>	16
			Pongchula Pemacholing Tsarzew Tshogpa	<i>Cane, Bamboo, Mushroom, Yula</i>	16
<b>Total</b>					<b>1,356</b>



## 6. Resource Utilization

The chapter provides information on the quantity and the amount of royalties and fees collected through the allotment of timber, NWFPs.

### 6.1 Timber

The Department allotted a total standing volume of 1,67,267.12 m<sup>3</sup> of timber (Table 15) and 84,616.89 m<sup>3</sup> of firewood (Table 16) from various sources (Table 17 & Table 18) in 2023. Table 19 provides the details of firewood allotted by whole tree and tree part volume. The volume of rural timber allotted for various uses are highlighted in Table 20. The timber extraction achievement from Scientific Thinning, FMUs and ad hoc areas is provided in Table 21, Table 22 & Table 23.

**Table 15: Timber allotted by DoFPS**

Sl.No.	Offices	Rural		Commercial	
		Volume (m <sup>3</sup> )	Royalty (Nu.)	Volume (m <sup>3</sup> )	Royalty (Nu.)
1	Divisional Forest Office, Bumthang	5,903.28	123,628.00	23,757.77	6,270,730.12
2	Divisional Forest Office, Dagana	2,233.77	21,374.00	1,546.47	164,339.33
3	Divisional Forest Office, Gedu	1,747.02	18,925.18	1,848.09	182,141.18
4	Divisional Forest Office, Mongar	5,901.19	53,680.93	5,500.39	1,266,041.06
5	Divisional Forest Office, Paro	6,468.01	53,178.00	19,811.80	4,681,043.81
6	Divisional Forest Office, Pema Gatshel	1,027.20	8,530.00	450.36	223,367.37
7	Divisional Forest Office, Samdrup Jongkhar	1,022.95	5,420.00	395.77	122,806.74
8	Divisional Forest Office, Samtse	2,143.75	33,910.00	297.75	94,862.11
9	Divisional Forest Office, Sarpang	1,163.40	11,060.00	1,631.67	823,683.35
10	Divisional Forest Office, Thimphu	4,910.44	39,310.00	20,579.49	3,858,823.84

11	Divisional Forest Office, Trashigang	24,988.15	61,978.00	125.56	27,029.47
12	Divisional Forest Office, Tsirang	592.54	4,280.00	1,629.81	244,062.97
13	Divisional Forest Office, Wangdue	6,716.22	70,623.25	6,839.73	1,497,943.94
14	Divisional Forest Office, Zhemgang	887.25	11,920.00	797.24	174,421.73
15	Bumdeling Wildlife Sanctuary	258.41	4,880.00	161.94	61,367.68
16	Jigme Dorji National Park	2,788.73	22,804.40	3,020.53	989,792.27
17	Jigme Khesar Strict Nature Reserve	916.59	26,370.00	12.00	60.00
18	Jigme Singye Wangchuck National Park	748.98	20,016.00	382.05	76,640.61
19	Jomotsangkha Wildlife Sanctuary	2,046.95	15,960.00	3,597.41	404,669.61
20	Phibsoo Wildlife Sanctuary	28.92	1,600.00	-	-
21	Phrumsengla National Park	296.88	11,620.00	291.12	51,676.11
22	Royal Manas National Park	301.80	3,710.00	0.21	30.00
23	Sakteng Wildlife Sanctuary	333.48	4,880.00	318.14	27,064.00
24	Wangchuck Centennial National Park	827.58	53,898.00	18.33	4,774.17
<b>Total</b>		<b>74,253.49</b>	<b>683,555.76</b>	<b>93,013.63</b>	<b>21,247,371.47</b>

**Table 16: Firewood allotted by DoFPS**

Sl.No.	Offices	Rural		Commercial	
		Volume (m <sup>3</sup> )	Royalty (Nu.)	Volume (m <sup>3</sup> )	Royalty (Nu.)
1	Divisional Forest Office, Bumthang	4,145.56	42,056.00	1,859.10	116,128.76
2	Divisional Forest Office, Dagana	1,986.29	37,221.00	1,247.28	46,487.79
3	Divisional Forest Office, Gedu	983.37	18,890.00	7,971.00	100,071.28

4	Divisional Forest Office, Mongar	4,686.89	108,438.39	1,612.16	69,099.07
5	Divisional Forest Office, Paro	1,370.19	14,672.50	202.80	3,240.00
6	Divisional Forest Office, Pema Gatshel	184.69	5,270.00	817.54	18,537.50
7	Divisional Forest Office, Samdrup Jongkhar	134.48	5,400.00	863.00	19,327.50
8	Divisional Forest Office, Samtse	7,019.97	144,817.00	5,591.00	126,537.50
9	Divisional Forest Office, Sarpang	2,807.86	62,910.00	2,977.67	67,788.5
10	Divisional Forest Office, Thimphu	113.60	2,838.00	4,003.87	146,149.32
11	Divisional Forest Office, Trashigang	5,708.40	131,656.00	2,889.68	68,064.42
12	Divisional Forest Office, Tsirang	91.07	2,880.00	-	-
13	Divisional Forest Office, Wangdue	3,779.75	72,704.00	1,705.75	374,395.87
14	Divisional Forest Office, Zhemgang	351.98	11,196.00	749.31	23,649.76
15	Bumdeling Wildlife Sanctuary	1,689.96	38,884.26	328.13	24,069.55
16	Jigme Dorji National Park	1,883.34	29,518.00	7,931.84	50,124.64
17	Jigme Khesar Strict Nature Reserve	90.01	2,140.00	48.00	900.00
18	Jigme Singye Wangchuck National Park	273.11	12,219.93	72.84	10,860.59
19	Jomotsangkha Wildlife Sanctuary	715.60	14,460.00	1,093.68	57,831.03
20	Phibsoo Wildlife Sanctuary	8.00	180.00	-	-
21	Phrumsengla National Park	565.14	9,960.00	494.28	14,070.00
22	Royal Manas National Park	27.28	550.00	144.00	3,240.00
23	Sakteng Wildlife Sanctuary	116.23	2,880.00	1,205.85	51,581.52
24	Wangchuck Centennial National Park	1,673.43	37,187.00	401.91	6,590.00
<b>Total</b>		<b>40,406.20</b>	<b>808,928.08</b>	<b>44,210.69</b>	<b>1,398,744.60</b>

**Table 17: Rural timber and firewood allocated by source**

Source	Timber			Firewood		
	Volume (m <sup>3</sup> )	Volume (%)	Royalty (Nu.)	Volume (m <sup>3</sup> )	Volume (%)	Royalty (Nu.)
SRFL not covered by management regime	44,134.26	59.4%	325,090.48	24,978.65	61.8%	552,863.76
Forest Management Unit	11,265.19	15.2%	133,254.88	3,148.94	7.8%	69,023.89
Local Forest Management Areas	9,709.28	13.1%	86,324.00	2,014.17	5.0%	44,172.50
Community Forest	5,593.37	7.5%	59,582.00	6,632.29	16.4%	62,980.00
Parks/Wildlife Sanctuaries/Strict Nature Reserve	3,512.76	4.7%	78,024.40	2,747.19	6.8%	57,605.93
Private registered land	38.63	0.1%	1,280.00	880.96	2.2%	22,192.00
Institutional land	-	-	-	4.00	0.0%	90.00
<b>Total</b>	<b>74,253.49</b>	<b>100%</b>	<b>683,555.76</b>	<b>40,406.20</b>	<b>100%</b>	<b>808,928.08</b>

**Table 18: Commercial timber and firewood allocated by source**

Source	Timber			Firewood		
	Volume (m <sup>3</sup> )	Volume (%)	Royalty (Nu.)	Volume (m <sup>3</sup> )	Volume (%)	Royalty (Nu.)
Forest Management Unit	56,041.25	60.3%	12,213,605.11	9,367.28	21.1%	488,594.10
SRFL not covered by management regime	13,943.30	15.0%	3,439,929.98	18,777.58	42.4%	711,605.94
Local Forest Management Areas	11,947.38	12.8%	2,259,932.26	1,080.23	2.4%	34,489.02
Community Forest	6,387.67	6.9%	1,681,773.81	1,565.45	3.5%	47,048.81

Parks/Wildlife Sanctuaries/Strict Nature Reserve	3,750.93	4.0%	1,164,171.93	8,648.42	19.5%	95,959.47
Institutional land	837.43	0.9%	106,531.87	176.49	0.4%	17,239.76
Seized timber	77.49	0.1%	381,426.51	40.44	0.09%	-
BBPL (Lease land)	28.18	0.03%	-	4,391.22	9.9%	1,507.50
Wood Based Industries	-	-	-	80.00	0.18%	-
Private registered land	-	-	-	72.00	0.16%	900.00
Municipal Forest	-	-	-	11.58	0.03%	1,400.00
<b>Total</b>	<b>93,013.63</b>	<b>100%</b>	<b>21,247,371.47</b>	<b>44,210.69</b>	<b>100%</b>	<b>1,398,744.6</b>

**Table 19: Firewood allotment by whole tree (standing) and tree part (other)**

Timber Species	Rural			Commercial		
	Standing vol. (m <sup>3</sup> )	Other vol. (m <sup>3</sup> )	Total vol. (m <sup>3</sup> )	Standing vol. (m <sup>3</sup> )	Other vol. (m <sup>3</sup> )	Total vol. (m <sup>3</sup> )
Conifer	5,830.65	3,862.79	9,693.44	667.33	11,855.65	12,522.98
Broadleaved	9,838.62	20,874.14	30,712.76	1,298.51	30,389.20	31,687.71
<b>Total</b>	<b>15,669.27</b>	<b>24,736.93</b>	<b>40,406.20</b>	<b>1,965.84</b>	<b>42,244.85</b>	<b>44,210.69</b>

**Table 20: Rural timber allotted for various purposes**

Use Category	Purpose	Conifer (m <sup>3</sup> )	Broadleaved (m <sup>3</sup> )	Total (m <sup>3</sup> )
Timber	New house construction	47,174.99	10,948.80	58,123.79
	Rural house renovation	2,879.29	6,037.59	8,916.88
	Rural construction	1,742.90	1,035.27	2,778.17
	Construction of livestock shed	268.15	172.92	441.07
	Construction of kitchen	54.56	129.59	184.15
	Lhakhang renovation	69.64	-	69.64
	Furniture	14.72	45.91	60.63
	Construction of toilet	21.86	11.96	33.82
	Construction of watch tower	22.77	6.97	29.74
	Project in rural area	3.70	12.28	15.98
	Agricultural tool	-	3.08	3.08
Fencing posts	Fencing farm land	1,283.49	866.46	2,149.95
	Fencing house	87.39	164.42	251.81
	Fencing institutional offices	15.29	-	15.29
	Chadri	4.93	-	4.93
	Fencing post allotted to NRDC	0.11	-	0.11
Flag poles	Hosting for dead case	840.24	139.92	980.16
	General Hosting	34.44	73.68	108.12
Other use	Temporary shed at rural location	19.18	30.61	49.79
	Mushroom cultivation	-	28.00	28.00



	Shuttering	6.64	-	6.64
	Rural bridge	-	1.74	1.74
<b>Total</b>		<b>54,544.29</b>	<b>19,709.20</b>	<b>74,253.49</b>

**Table 21: Scientific thinning volume**

Office	Dzongkhag	Gewog	Thinning Area Name	Use Category	Volume (m³)
Divisional Forest Office, Thimphu	Thimphu	Chang	RTC Scientific Thinning	Timber	7,255.59
			Hongtsho Scientific Thinning		4,258.38
Jigme Dorji National Park		Kawang	Gabthang, Tokchu, Dolamkencho, Chubutsawa	Timber	1,385.46
				Firewood	5,648.00
<b>Total</b>					<b>18,547.43</b>

**Table 22: Standing Timber Volume achievement from FMUs in 2023**

Sl.No.	Name of the FMU	Rural		Commercial	
		Planned standing vol (m <sup>3</sup> )	Standing volume achieved (m <sup>3</sup> )	Planned standing vol (m <sup>3</sup> )	Standing volume achieved (m <sup>3</sup> )
1	Bitekha	900.00	453.15	3,613.77	2,083.71
2	Chamgang	-	665.45	-	-
3	Chendebji	2,000.00	426.16	3,599.26	504.00
4	Dawathang	4,000.00	2,385.30	15,000.00	13,020.39
5	Dongdechu	1,250.00	-	3,252.40	175.85
6	Gidakom	2,400.00	1,845.00	5,167.68	5,216.66
7	Gogona	1,144.36	1,183.54	7,439.52	5,771.46
8	Haa-East	725.93	725.93	1,409.03	2,613.36
9	Karshong	1,500.00	195.03	5,296.25	6,027.61
10	Khaling Kharungla	400.00	348.66	771.51	44.45
11	Khengzore	400.00	-	973.07	-
12	Khotokha	1,900.00	2,073.23	7,472.09	8,579.82
13	Kikhar action plan	-	-	2,357.00	-
14	Korilla	2,700.00	3,491.25	-	-
15	Lingmithang	500.00	505.64	5,900.00	7,282.14
16	Lonchu	1,000.00	670.73	96,290.00	4,793.50
17	Rodungla	2,999.00	170.43	12,356.97	9,565.25
18	Rongmanchu	500.00	453.59	-	190.49
19	Selela	2,440.00	1,762.18	-	3,264.33
20	Zonglela	1,124.82	1,917.81	2,696.69	10,683.94
<b>Total</b>		<b>27,884.11</b>	<b>19,273.08</b>	<b>173,595.24</b>	<b>79,816.96</b>

**Table 23: Timber allotted from ad hoc areas**

Sl. No.	Ad-hoc Areas	Planned Standing volume (m <sup>3</sup> )	Standing volume achieved (m <sup>3</sup> )
1	Bark Beetle Infestations, Transmission Lines, Farm roads, land lease, etc..	40,361.75	27,232.56

## 6.2 NWFP allocation

The Table 24 & Table 25 shows the quantity of different NWFPs allotted by the Department in 2023 along with corresponding royalties collected.

**Table 24: NWFP (plant) allotted by DoFPS**

Sl. No.	NWFP	Unit	Quantity	Royalty (Nu.)
1	<i>Abies densa</i>	Head Load	300	600
		Truckload	1	20
2	<i>Acacia catechu</i> (Khair)	Numbers	20	600
3	<i>Acer cambellii</i>	Numbers	25	50
4	<i>Acorus calamus</i> (Sweet-flag, bojho, chudar, chudarla, bartsi)	Numbers	50	50
5	<i>Agave americana</i>	Numbers	3,000	3,900.00
6	<i>Arundinaria</i> spp. (Sanu maling or negalo)	Bundle	21	135
7	Bamboo chips	Head Load	1	160
		Truckload	3	320
8	Bamboo mat	Meter	100	-
		Numbers	2,315	1,440.00
9	<i>Bambusa alamii</i>	Numbers	2,339	1,734.00
10	<i>Bambusa balcooa</i>	Numbers	305	270
11	<i>Bambusa clavata</i>	m <sup>3</sup>	370	-
		Numbers	17,085	4,932.00
		Truckload	622	200
12	<i>Bambusa multiplex</i>	Numbers	480	740
13	<i>Bambusa nutans</i> subsp. <i>cupulata</i>	Numbers	3,285	1,672.00
14	<i>Bambusa</i> spp. (Mugi bans, dhanu bans, chile bans, pagshing or pagshi, mal bans, jhushing, jushi or gren, taru bans, shingaray or bangay bans, katha or valka bans)	Bundle	67	145
		Head Load	15	60
		Numbers	13,811	8,602.00
		Truckload	217	2,560.00
15	<i>Bambusa tulda</i>	Numbers	120	120

		Truckload	1	-
16	<i>Bambusa vulgaris</i>	Numbers	1,900	1,660.00
17	<i>Bombax ceiba</i> (Semal, pema-geysershing)	Kilogram	20	40
18	<i>Borinda grossa</i> (Baa, rhui, shee or shi)	Bundle	21	168
		Numbers	4,570	1,040.00
19	Briquette	Kilogram	6,000	-
20	<i>Calamus acanthospathus</i>	Head Load	27	108
		Numbers	20	-
21	<i>Calamus</i> and <i>Daemonorops</i> spp. (Gauribet, tshim, minji, bet, tshar, tsha)	Head Load	164	656
		Numbers	266	296
		Truckload	1	800
22	<i>Calamus flagellum</i>	Numbers	50	-
23	<i>Calamus latifolius</i>	Bundle	1	4
		Truckload	81	324
24	<i>Cephalostachyum capitatum</i>	Cubic Feet	64	768
25	Charcoal	Kilogram	42,530	3,706.00
26	<i>Chimonobambusa callosa</i>	Bundle	105	840
		Numbers	475	475
27	<i>Chimonobambusa</i> spp. (Yue or u, rawa, ra shu, karay bans)	Bundle	7	56
		Numbers	3,188	3,188.00
28	<i>Daphne</i> spp. (Daphne, dey-nap, kagatey, kagati)	Kilogram	11,699	5,219.40
29	<i>Delphinium brunonianum</i> (Jagaypay)	Kilogram	35	140
30	<i>Dendrocalamus giganteus</i>	Numbers	2,251	2,302.00
		Truckload	600	1,000.00
31	<i>Dendrocalamus hamiltonii</i> Munro var. <i>edulis</i>	Numbers	3,246	886
32	<i>Dendrocalamus hamiltonii</i> var. <i>hamiltonii</i>	Numbers	5,707	3,166.00
		Truckload	1	-
33	<i>Dendrocalamus hookeri</i>	Numbers	30	-
34	<i>Dendrocalamus sikkimensis</i>	Numbers	810	800
35	<i>Dendrocalamus</i> spp. (Pagshi, tama bans, choya or ban bans, leeshing or	Numbers	13,169	5,984.00

	gugsho, soo, bhalu or kalo bans, zhang, dhungre bans, demtshar or dem chherring, zang, guliyo tama bans, su or pagshi, rachhasi bans)	Truckload	351	-
36	Dismantled bamboo	Numbers	800	-
37	<i>Edgeworthia</i> spp. (Dey-kap, argaley, argali)	Kilogram	1,200	720
38	<i>Exedia</i> Spp. (Sue Shamu)	Kilogram	100	400
39	Ferns	Bundle	40	160
40	<i>Ficus</i> spp.	Bundle	48	192
		Numbers	24	31.2
41	<i>Fragaria nubicola</i> (Detasazin)	Numbers	100	100
42	<i>Fragesia</i> spp (Dragon Head Bamboo)	Bundle	75	600
		Numbers	12,164	12,105.00
		Truckload	1	120
43	<i>Ganoderma lucidum</i> (Cobra mushroom)	Numbers	350	350
44	<i>Gentiana robusta</i> (keechay karmo)	Numbers	3	146.25
45	<i>Geranium refractum</i> (laagang)	Numbers	76	76
46	<i>Halenia elliptica</i> (chakti)	Kilogram	12	48
47	<i>Illicium griffithii</i> (Doomleeshing, wounba chinang)	Kilogram	230	460
48	<i>Juniperus</i> spp. (Juniper, dhupi, shoop)	Bundle	3	12
		Head Load	4,601	17,428.00
		Kilogram	900	1,800.00
		m <sup>3</sup>	8.5	391.86
		Truckload	15	580
49	Lemon grass oil	Kilogram	35	175
		Litres	225	1,125.00
		Metric Ton	1	-
50	<i>Lepisorus contortus</i> (Drakpaypa)	Kilogram	21	84
51	<i>Meconopsis horridula</i> (tsher ngen)	Kilogram	30	120
52	<i>Nardostachys grandiflora</i> / <i>jatamansi</i> (Jatamansi, pang-poe)	Kilogram	15,289	122,370.00
53	<i>Ophiocordyceps sinensis</i> (Yartsa-guenboob, yartsagumba)	Kilogram	190.24	1,536,578.74
		Numbers	8,099	-

54	<i>Oroxylum indicum</i> (Totola, tshampaka)	Numbers	100	-
55	<i>Persea</i> spp. (Gulee, phamphal, wild avocado)	Numbers	150	1,500.00
56	<i>Persea</i> spp. (Kawla)	Numbers	18	216
57	<i>Phyllanthus emblica</i> (Amla, chooru)	Kilogram	445	2,225.00
58	<i>Picorrhiza</i> spp./ <i>Neopicorrhiza scrophulariifolia</i> (Kutki, putishing)	Head Load	50	600
		Kilogram	3,774	45,288.00
59	<i>Pinus roxburghii</i> (Khotey salla, thangchuu) needle	Truckload	7	120
60	<i>Pinus walliciana</i> (needles)	Head Load	25	50
		Truckload	13	260
61	<i>Piper nigrum</i>	Kilogram	410	8,200.00
62	<i>Piper</i> spp. (except <i>P. longum</i> ) (Round pipla, pipiling)	Kilogram	745	6,100.00
63	<i>Plectocomia himalayana</i> (Patsha)	Head Load	112	485.4
		Truckload	5	4,000.00
64	<i>Pouzolzia</i> spp. (Chipley, yongjiba, yangziba or yongeebu)	Kilogram	15,397	24,020.00
65	<i>Primula sikkimensis</i>	Kilogram	170	1,700.00
66	<i>Rhododendron anthopogon</i> (ciliatum) / <i>setosum</i> (Balu / sulu)	Bundle	5	6.5
		Kilogram	26,107	51,914.00
		Truckload	62.5	125
67	<i>Rhododendron</i> spp.	Bundle	39	50.7
		Numbers	80	80
68	<i>Rosa macrophylla</i> (Rose)	Kilogram	150	600
69	<i>Rubia cordifolia</i> (Rubia, majito, tsoy)	Kilogram	50,312.	702,416.00
70	<i>Rubus biflorus</i>	Head Load	1,000	16,000.00
		Kilogram	480	7,680.00
71	<i>Salvia castanea</i> (Jiptse Chenpo)	Numbers	6	72.6
72	<i>Sarcococca hookeriana</i>	Bundle	12	624
73	<i>Saussurea lappa</i> (Ruta)	Kilogram	1,000	-
74	<i>Selinum wallichianum</i>	Numbers	12	12
75	Shilajit	Kilogram	73	929
76	<i>Swertia chirayita</i> (Chirata, latij)	Kilogram	370	-

77	<i>Tanacetum nubigeum</i> (Kheng kaar)	Kilogram	10	20
78	<i>Thalictrum reniforme</i> (ngotin)	Numbers	3	70.56
79	<i>Thysanolaena</i> spp. (Tsakusha, kucho, amleso)	Bundle	207	-
		Head Load	272	-
80	<i>Tricholoma matsutake</i> (Sangay shamu)	Kilogram	88	1,760.00
81	<i>Tupistra nutans</i> (Ground orchid, wang pemo, wang pem, nakima, shan khuley)	Numbers	115	130
82	Wildings	Bundle	45	58.5
		Numbers	848	911
83	Wood burr	Numbers	77	1,860.00
84	<i>Yushania hirsuta</i>	Numbers	108	216
85	<i>Yushania</i> spp. (Hima, malingo or maling, mingma & meg, zing)	Bundle	2,471	10,620.00
		Head Load	10	80
		m <sup>3</sup>	35	-
		Numbers	3,038	3,482.00
86	<i>Zanthoxylum armatum</i> (Timbur, thingay)	Kilogram	4,913	-
<b>Total</b>				<b>2,652,591.71</b>

**Table 25: NWFP (surface collection materials) allotted by DoFPS**

Sl. No.	Surface Collection Product	Unit	Quantity	Royalty (Nu.)
1	Aggregates	m <sup>3</sup>	570,136.23	499,610.00
2	Boulder (rock fragment with size greater than 25.6 cm (10.1 in) in diameter.)	m <sup>3</sup>	641,206.09	917,472.48
3	Clay soil	m <sup>3</sup>	29,576.00	148,420.00
4	Colour soil	Kg	7,200	5,200.00
5	Dolep	m <sup>3</sup>	688	3,360.00
6	Granular Sub Base (GSB) material	m <sup>3</sup>	79,311.00	397,960.56
7	Gravels	m <sup>3</sup>	506,050.46	2,102,118.00
8	Leaf mould	m <sup>3</sup>	6,988.00	47,140.00
9	Quartz	m <sup>3</sup>	16	80

10	Red soil	m <sup>3</sup>	144	400
11	Riverbed material	m <sup>3</sup>	202,803.00	307,000.00
12	Sand	m <sup>3</sup>	590,882.79	2,001,902.82
13	Stone	m <sup>3</sup>	365,021.00	1,449,146.06
14	Stone chips	m <sup>3</sup>	21,915.00	67,560.00
15	Stone Dust	m <sup>3</sup>	17,065.63	32,120.00
16	Top soil	m <sup>3</sup>	5,816.00	59,572.00
<b>Total</b>				<b>8,039,061.92</b>

### 6.3 RBM Export Sites

The Department received an upfront revenue of Nu.12.22 million from the auction of five new River Bed Material (RBM) export sites spanning over 344.69 acres and accounting to RBM volume of 6,277,321.94 metric tonnes (Table 26). Additionally, Nu.0.145 million has been generated based on the reserve price through the allotment of one RBM export site covering 7 acres (Table 27).

**Table 26: New RBM export sites**

Sl. No	Office	New Export Auction Site (No.)	Auction Area (in acre)	Volume (MT)	Upfront payment (25% of bid amount in Nu.)
1	Divisional Forest Office, Dagana	5	104.19	1,897,456.19	6,882,542.83
2	Divisional Forest Office, Pemagatshel	1	2.70	49,171.05	380,000.00
3	Divisional Forest Office, Samtse	3	39.04	710,976.96	3,012,500.00
4	Divisional Forest Office, Sarpang	4	52.76	960,838.74	1,953,853.51
5	Jomotshangkha Wildlife Sanctuary	5	146.00	2,658,879.00	-
<b>Total</b>		<b>18</b>	<b>344.69</b>	<b>6,277,321.94</b>	<b>12,228,896.34</b>



**Table 27: RBM export site allocated on Reserved Price**

Sl. No.	Office	New Export Site	Area (in acre)	Volume (MT)	Upfront payment (25% of reserve price in Nu.)
1	Divisional Forest Office, Samtse	1	7.00	42,492.03	145,735.28

#### 6.4 Fee collection

The Department generated additional revenue of Nu. 17.68 million through collection of various fees in 2023 (Table 28).

**Table 28: Fees collected**

Sl. No.	Type	Source	Amount (Nu.)
1	Ecotourism	Boating	3,410.00
		Gharial farm	408,750.00
		Park entry	11,970,750.00
		Vehicle	5,850.00
2	General	Cordyceps Certificate of Origin	12,930.00
		Cordyceps collection permit	277,150.00
		COSTDMO	117,356.00
		Export fee	56,148.00
		Export service charge	204,520.00
		Fishing fee	2,621,510.00
		Forestry clearance fee	106.00
		Free grant permit	180.00
		G2C permit	41,883.00
		GFPMO	1,301,071.00
		Import fee	241,373.00
		Internal Movement of Cordyceps	3,710.00
		Internal Movement Order (IMO)	3,770.00

	ITMO	97,810.00
	Marking fee	111,483.00
	Mobile sawmill registration	500.00
	Power chain registration	105,680.00
	Power chain renewal	11,060.00
	Primary wood-based industry (except power chain) registration	19,500.00
	Research fee	25,000.00
	Secondary wood-based industry registration	14,500.00
	Secondary wood-based industry renewal	250.00
	Service charge	49,585.00
	<b>Grand Total</b>	<b>17,678,835.00</b>



## 7. Forestry Services

### 7.1 Wildlife Rescue and Rehabilitation

The Department attended to 158 wildlife rescue and rehabilitation cases in 2023. Thimphu and Saprang Dzongkhag have the highest number of rescue operations (Figure 4). The office wise number of wildlife rescue and rehabilitation is provided in (Table 29). Out of the rescued animals, 92 were released back into the wild, 25 died during or post rescue operation, 8 escaped during rescue and 30 are currently undergoing rehabilitation (Figure 5) and (Table 30).

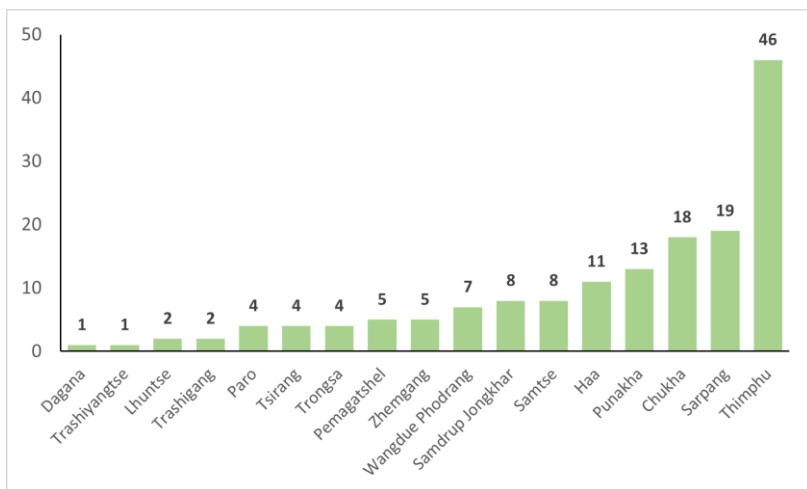


Figure 4: Dzongkhag wise rescue operation

Table 29: Office wise rescue and rehabilitation of wild animals

Sl. No.	Name of Head Office	Dzongkhag	Animal	Rescue operations (No.)
1	Divisional Forest Office, Bumthang	Trongsa	<i>Macaca assamensis</i>	1
			<i>Rusa unicolor</i>	2
			<i>Ursus thibetanus laniger</i>	1
2	Divisional Forest Office, Dagana	Dagana	<i>Python bivittatus</i>	1

3	Divisional Forest Office, Gedu	Chukha	<i>Aceros undulatus</i>	1
			<i>Ahaetulla nasuta</i>	1
			<i>Ailurus fulgens</i>	1
			<i>Lycodon aulicus</i>	1
			<i>Macaca assamensis</i>	1
			<i>Muntiacus muntjak</i>	2
			<i>Ophiophagus hannah</i>	1
			<i>Petaurista</i>	1
			<i>Rusa unicolor</i>	1
			<i>Ursus thibetanus</i>	3
			<i>Ursus thibetanus laniger</i>	3
			<i>Python bivittatus</i>	2
			4	Divisional Forest Office, Mongar
<i>Naja kaouthia</i>	1			
5	Divisional Forest Office, Paro	Paro	<i>Bos gaurus</i>	1
			<i>Moschus leucogaster</i>	1
			<i>Muntiacus muntjak</i>	2
			<i>Rusa unicolor</i>	1
6	Divisional Forest Office, Pemagatshel	Pemagatshel	<i>Sus scrofa</i>	2
			<i>Python bivittatus</i>	2
			<i>Bungarus niger</i>	1
7	Divisional Forest Office, Samdrup Jongkhar	Samdrup Jongkhar	<i>Lycodon aulicus</i>	1
			<i>Manis pentadactyla</i>	1
			<i>Ophiophagus hannah</i>	1
			<i>Python bivittatus</i>	1
			<i>Assamese macaque</i>	1
8	Divisional Forest Office, Samtse	Samtse	<i>Boiga gokool</i>	1
			<i>Bos gaurus</i>	2
			<i>Muntiacus muntjak</i>	2
			<i>Naja kaouthia</i>	1
			<i>Ophiophagus hannah</i>	1

			<i>Ahaetulla nasuta</i>	1			
9	Divisional Forest Office, Sarpang	Sarpang	<i>Boiga gokool</i>	1			
			<i>Muntiacus muntjak</i>	9			
			<i>Ophiophagus hannah</i>	1			
			<i>Sus scrofa</i>	1			
			<i>Ursus thibetanus</i>	1			
			<i>Ursus thibetanus laniger</i>	1			
			<i>Python bivittatus</i>	2			
			<i>Athene brama</i>	1			
			10	Divisional Forest Office, Thimphu	Thimphu	<i>Bos gaurus</i>	2
<i>Capricornis sumatraensis thar</i>	1						
<i>Moschus leucogaster</i>	2						
<i>Muntiacus muntjak</i>	5						
<i>Naemorhedus goral</i>	1						
<i>Rusa unicolor</i>	22						
<i>Sus scrofa</i>	2						
<i>Tragopan satyra</i>	1						
<i>Tyto alba</i>	1						
<i>Ursus thibetanus</i>	4						
<i>Ursus thibetanus laniger</i>	4						
<i>Muntiacus muntjak</i>	1						
11	Divisional Forest Office, Tsirang	Tsirang				<i>Naemorhedus goral</i>	2
						<i>Naja kaouthia</i>	1
			<i>Cuculus canorus</i>	1			
12	Divisional Forest Office, Wangdue Phodrang	Punakha	<i>Gypaetus barbatus</i>	1			
			<i>Lutrogale perspicillata</i>	1			
			<i>Muntiacus muntjak</i>	4			
			<i>Rusa unicolor</i>	2			
			<i>Strix leptogrammica</i>	1			
			<i>Sus scrofa</i>	3			
			<i>Muntiacus muntjak</i>	3			

		Wangdue Phodrang	<i>Naja kaouthia</i>	1
			<i>Rusa unicolor</i>	2
			<i>Semnopithecus sp.</i>	1
			<i>Muntiacus muntjak</i>	1
13	Divisional Forest Office, Zhemgang	Zhemgang	<i>Naja kaouthia</i>	1
			<i>Ninox scutulata</i>	1
			<i>Paradoxurus hermaphroditus</i>	1
			<i>Trachypithecus geei</i>	1
			<i>Trachypithecus geei</i>	1
14	Bumdeling Wildlife Sanctuary	Trashiyangtse	<i>Muntiacus muntjak</i>	1
15	Jigme Khesar Strict Nature Reserve	Haa	<i>Capricornis sumatraensis thar</i>	1
			<i>Naemorhedus goral</i>	2
			<i>Paguma larvata</i>	1
			<i>Rusa unicolor</i>	3
			<i>Ursus thibetanus</i>	4
16	Jomotshangkha Wildlife Sanctuary	Samdrup Jongkhar	<i>Elephas maximus</i>	1
			<i>Lycodon aulicus</i>	1
			<i>Muntiacus muntjak</i>	1
17	Phibsoo Wildlife Sanctuary	Sarpang	<i>Varanus bengalensis</i>	1
			<i>Python bivittatus</i>	1
18	Sakteng Wildlife Sanctuary	Trashigang	<i>Ailurus fulgens</i>	1
			<i>Muntiacus muntjak</i>	1
<b>Total</b>				<b>158</b>

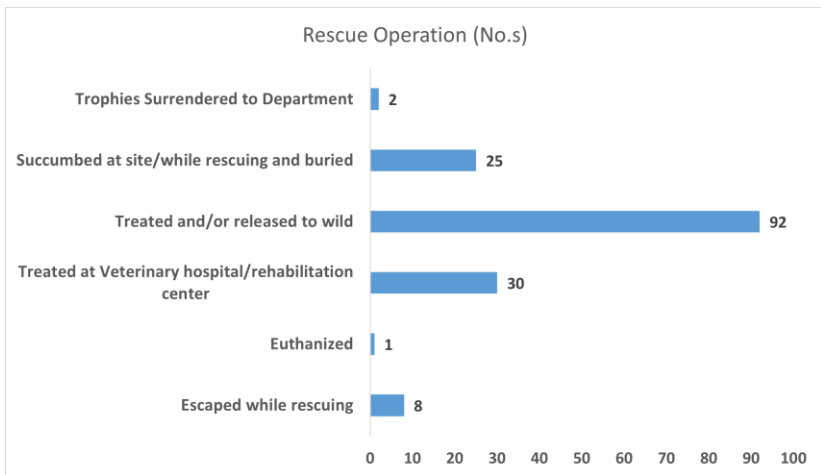


Figure 5: Types of Rescue Operation

Table 30: Types of Rescues and Rehabilitation

Sl. No.	Animal	Escaped while rescuing	Euthanized	Taken for treatment or being treated at Veterinary hospital/rehabilitation center	Treated and/or released to wild	Succumbed at site/while rescuing and buried	Trophies surrendered to Department
1	<i>Aceros undulatus</i>				1		
2	<i>Ahaetulla nasuta</i>				2		
3	<i>Ailurus fulgens</i>				2		
4	<i>Assamese macaque</i>				1		
5	<i>Athene brama</i>			1			
6	<i>Boiga gokool</i>				2		
7	<i>Bos gaurus</i>				3	2	
8	<i>Bungarus niger</i>				1		
9	<i>Capricornis sumatraensis thar</i>				2		

10	<i>Cuculus canorus</i>				1		
11	<i>Elephas maximus</i>			1			
12	<i>Gypaetus barbatus</i>			1			
13	<i>Lutrogale perspicillata</i>					1	
14	<i>Lycodon aulicus</i>				3		
15	<i>Macaca assamensis</i>			1		1	
16	<i>Manis pentadactyla</i>				1		
17	<i>Moschus leucogaster</i>			3			
18	<i>Muntiacus muntjak</i>		1	8	17	6	1
19	<i>Naemorhedus goral</i>	1			2	2	
20	<i>Naja kaouthia</i>				5		
21	<i>Ninox scutulata</i>				1		
22	<i>Ophiophagus hannah</i>	1			3		
23	<i>Paguma larvata</i>				1		
24	<i>Paradoxurus hermaphroditus</i>					1	
25	<i>Petaurista</i>				1		
26	<i>Python bivittatus</i>				9		
27	<i>Rusa unicolor</i>			3	22	8	
28	<i>Semnopithecus sp.</i>	1					
29	<i>Strix leptogrammica</i>			1			
30	<i>Sus scrofa</i>			4	2	2	
31	<i>Trachypithecus geei</i>			1			
32	<i>Tragopan satyra</i>			1			



33	<i>Tyto alba</i>			1			
34	<i>Ursus thibetanus</i>	5		3	3	1	
35	<i>Ursus thibetanus laniger</i>			1	6	1	1
36	<i>Varanus bengalensis</i>				1		
	<b>Total</b>	<b>8</b>	<b>1</b>	<b>30</b>	<b>92</b>	<b>25</b>	<b>2</b>

## 7.2 Wood Based Industries

As of now, there are 485 WBIs operational in Bhutan. Thimphu Dzongkhag has the highest number of WBIs. The Dzongkhag wise distribution of WBI is shown in (Figure 6). Table 31 shows the types of WBI in the country.

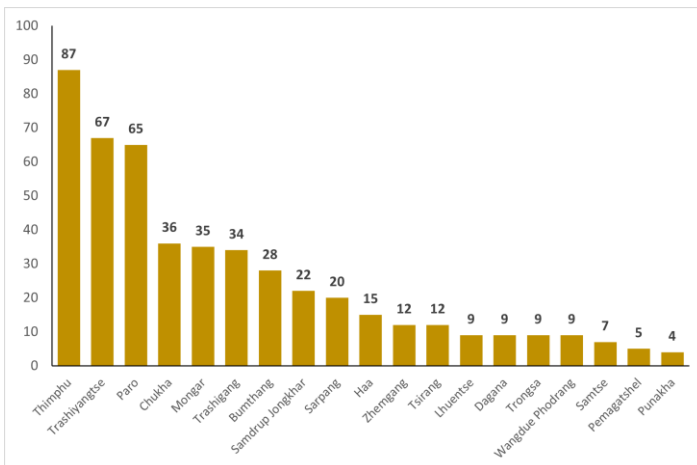


Figure 6: Wood based industries in each dzongkhag

Table 31: Number of Wood Based Industries by type

Sl. No.	WBI type	No.s
1	Furniture Unit	257
2	Stationary sawmill	99
3	Wood Handicraft Units	66

4	Incese Manufacturing Unit	25
5	Mobile sawmill	12
6	Paper Factory	10
7	Logging	8
8	Particle Board Factory	2
9	Green Charcoal Manufacturing Unit	1
10	Block Board	1
11	Kattha Unit	1
12	Ply wood factory	1
13	Wood Joinery	1
14	Wood Briquette	1
<b>Total</b>		<b>485</b>

### 7.3 Plantation

A total of 235,905 acres of SRFL were brought under plantation. From these 38 % of the areas was planted as enrichment plantation followed by 31% reforestation and 30 % afforestation (Table 32). The achievements of plantation creation and maintenance in FMUs is provided in Table 33.

**Table 32: Plantation created by field offices in coordination with CFMGs, GBCL**

Sl. No.	Office	Gewog	Classification	Type	Category	Species	No.s Planted	Area (Acre)
1	Divisional Forest Office, Bumthang	Nubi	Enrichment plantation	Enrichment plantation	Mono culture	<i>Cupressus comeyana</i>	550	14.83
2	Divisional Forest Office, Gedu	Chapcha	Afforestation	Community plantation	Mono culture	<i>Juglans regia</i>	1,000	1.00
						<i>Juglans regia</i>	1,823	1.50
						<i>Juglans regia</i>	500	0.50
		Sampheling	Afforestation	Community plantation	Mixed plantation	<i>Alnus nepalensis</i>	600	2.17
					<i>Bambusa nutans</i>	150		
3	Divisional Forest Office, Mongar	Balam	Afforestation	Community plantation	Mixed plantation	<i>Thysanolaena latifolia</i>	174	1.50
					Mixed plantation	<i>Exbucklandia populnea</i>	130	1.10
						<i>Michelia champaca</i>	3	
						<i>Nyssa javanica</i>	45	

		Chali	Afforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>	18	2.00	
						<i>Juglans regia</i>	54		
						<i>Pinus bhutanica</i>	167		
						<i>Quercus griffithii</i>	3		
					Mixed plantation	<i>Quercus semecarpifolia</i>	200		3.00
						<i>Thysanolaena latifolia</i>	250		
		Chaskhar	Reforestation	Community plantation	Mono culture	<i>Pinus roxburghii</i>	200	0.84	
		Drametse	Afforestation	Community plantation	Mixed plantation	<i>Bambusa balcooa</i>	40	1.00	
						<i>Exbucklandia populnea</i>	60		
						<i>Schima wallichii</i>	70		
		Gangzur	Enrichment plantation	Enrichment plantation	Mono culture	<i>Toona ciliata</i>	3,200	9.06	
						Reforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>
<i>Michelia champaca</i>	2,300								
<i>Morus sp.</i>	300								
<i>Toona sp.</i>	1,040								

		Gongdue	Afforestation	Community plantation	Mono culture	<i>Bambusa balcooa</i>	120	2.00
			Reforestation	Community plantation	Mixed plantation	<i>Juglans regia</i>	50	1.50
						<i>Phoebe sp.</i>	150	
					Mixed plantation	<i>Bambusa balcooa</i>	80	2.00
						<i>Juglans regia</i>	100	
		Mono culture	<i>Bambusa balcooa</i>	150	2.00			
		Kengkhar	Reforestation	Community plantation	Mixed plantation	<i>Boehmeria rugulosa</i>	350	2.50
						<i>Dendrocalamus hookeri</i>	200	
						<i>Gmelina arborea</i>	150	
					Mixed plantation	<i>Boehmeria rugulosa</i>	210	2.00
						<i>Gmelina arborea</i>	450	
						<i>Pinus bhutanica</i>	100	
Menbi	Afforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>	200	2.30		
				<i>Pinus bhutanica</i>	450			
				<i>Schima wallichii</i>	115			

					Mixed plantation	<i>Exbucklandia populnea</i>	250	2.32			
						<i>Pinus bhutanica</i>	150				
						<i>Schima wallichii</i>	100				
					Mono culture	<i>Toona ciliata</i>	700	1.83			
						<i>Pinus roxburghii</i>	765	1.78			
					Enrichment plantation	Enrichment plantation	Mixed plantation	<i>Acer sp.</i>	1,685	7.41	
								<i>Exbucklandia populnea</i>	2,425		
								<i>Michelia sp.</i>	582		
								<i>Nyssa javanica</i>	28		
					Mongar	Afforestation	Urban/Avenue plantation	Mixed plantation	<i>Bauhinia purpurea</i>	7	0.99
									<i>Cassia fistula</i>	85	
									<i>Jacaranda mimosifolia</i>	268	
						Reforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>	100	1.79
									<i>Juglans regia</i>	100	
<i>Michelia sp.</i>	200										
<i>Toona sp.</i>	100										

		Narang	Afforestation	Community plantation	Mixed plantation	<i>Betula sp.</i>	12	5.10
						<i>Quercus griffithii</i>	70	
						<i>Schima wallichii</i>	40	
		Saling	Reforestation	Community plantation	Mono culture	<i>Bambusa nutans</i>	450	0.70
		Silambi	Reforestation	Community plantation	Mono culture	<i>Bambusa balcooa</i>	180	3.00
					Mono culture	<i>Bambusa balcooa</i>	150	1.00
		Thangrong	Reforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>	60	0.35
						<i>Michelia sp.</i>	20	
						<i>Pinus roxburghii</i>	40	
		Tsakaling	Enrichment plantation	Enrichment plantation	Mixed plantation	<i>Acer sp.</i>	25	3.20
						<i>Betula sp.</i>	15	
						<i>Exbucklandia populnea</i>	50	
						<i>Michelia sp.</i>	20	
						<i>Schima wallichii</i>	40	
Tsenkhar	Reforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>	1,130	5.94		
				<i>Juglans regia</i>	550			

4	Divisional Forest Office, Pemagatshel	Chokhorling	Enrichment plantation	Enrichment plantation	Mixed plantation	<i>Duabanga grandiflora</i>	350	11.27
						<i>Michelia champaca</i>	215	
						<i>Phoebe sp.</i>	230	
						<i>Terminalia myriocarpa</i>	290	
						<i>Toona ciliata</i>	270	
		Yurung	Reforestation	Community plantation	Mixed plantation	<i>Juglans regia</i>	2,540	24.96
				<i>Phoebe attenuata</i>	2,729			
				<i>Pinus roxburghii</i>	1,000			
5	Divisional Forest Office, Samdrup Jongkhar	Orong	Reforestation	Social Forestry Day plantation	Mixed plantation	<i>Cupressus sp.</i>	150	1.55
						<i>Exbucklandia populnea</i>	150	
						<i>Michelia sp.</i>	300	
6	Divisional Forest Office, Thimphu	Thim Throm	Afforestation	Social Forestry Day plantation	Mixed plantation	<i>Quercus griffithii</i>	300	1.14
7	Divisional Forest Office, Trashigang	Shongphu	Afforestation	Community plantation	Mixed plantation	<i>Exbucklandia populnea</i>	520	5.46
						<i>Juglans regia</i>	1,300	
						<i>Michelia champaca</i>	965	



						<i>Morus laevigata</i>	15	15.91
					Mixed plantation	<i>Exbucklandia populnea</i>	520	
						<i>Juglans regia</i>	1,523	
						<i>Michelia champaca</i>	965	
						<i>Morus laevigata</i>	15	
					Mixed plantation	<i>Exbucklandia populnea</i>	520	9.88
						<i>Juglans regia</i>	1,500	
						<i>Michelia champaca</i>	965	
						<i>Morus laevigata</i>	15	
						Yalang	Enrichment plantation	Enrichment plantation
8	Divisional Forest Office, Tsirang	Barshong	Afforestation	Community plantation	Mixed plantation	<i>Pinus roxburghii</i>	34	1.00
						<i>Tectona grandis</i>	600	
					Mixed plantation	<i>Tectona grandis</i>	1,000	2.00
						<i>Terminalia myriocarpa</i>	100	
						<i>Toona ciliata</i>	100	
	Goserling	Afforestation			<i>Michelia doltsopa</i>	300	1.00	

		Mendrelgang	Afforestation	Community plantation	Mixed plantation	<i>Tectona grandis</i>	400	0.50		
				Community plantation	Mixed plantation	<i>Tectona grandis</i>	200		<i>Terminalia myriocarpa</i>	100
		Rangthangling	Afforestation	Community plantation	Mixed plantation	<i>Tectona grandis</i>	600	1.00		
		Tsholingkhar	Afforestation	Community plantation	Mixed plantation	<i>Quercus griffithii</i>	200	1.00		
						<i>Tectona grandis</i>	4,000			
		9	Divisional Forest Office, Zhemgang	Bardo	Enrichment plantation	Enrichment plantation	Mixed plantation	<i>Acer sp.</i>	1,500	7.41
								<i>Juglans regia</i>	2,000	
								<i>Michelia sp.</i>	300	
								<i>Phoebe sp.</i>	1,000	
					Reforestation	Water source plantation	Mixed plantation	<i>Bambusa nutans</i>	500	4.94
Goshing	Afforestation			Community plantation	Mixed plantation	<i>Aquilaria malaccensis</i>	250	1.00		
						<i>Michelia champaca</i>	150			
		<i>Tectona grandis</i>	250							
			Mixed plantation	<i>Aquilaria malaccensis</i>	300	1.00				

						<i>Michelia champaca</i>	150	
						<i>Tectona grandis</i>	200	
				Mixed plantation		<i>Aquilaria malaccensis</i>	400	1.00
						<i>Michelia champaca</i>	100	
						<i>Tectona grandis</i>	170	
		Enrichment plantation	Enrichment plantation	Mixed plantation		<i>Michelia champaca</i>	325	1.00
						<i>Tectona grandis</i>	325	
	Ngangla	Afforestation	Community plantation	Mixed plantation		<i>Juglans regia</i>	30	0.99
						<i>Michelia champaca</i>	400	
						<i>Pinus roxburghii</i>	20	
						<i>Tectona grandis</i>	150	
	Shingkhar	Enrichment plantation	Enrichment plantation	Mixed plantation		<i>Acer sp.</i>	1,100	4.94
						<i>Juglans regia</i>	1,500	
						<i>Michelia sp.</i>	400	
						<i>Toona sp.</i>	200	
	Trong	Reforestation		Mixed plantation		<i>Choerospondias axillaris</i>	8	2.47

				National significant plantation		<i>Cupressus sp.</i>	40	
						<i>Michelia champaca</i>	30	
						<i>Spondias pinnata</i>	30	
10	Royal Manas National Park	Phangkhar	Enrichment plantation	Enrichment plantation	Mixed plantation	<i>Aquilaria malaccensis</i>	122	4.50
						<i>Michelia champaca</i>	500	
						<i>Tectona grandis</i>	1,500	
						<i>Toona ciliata</i>	100	
					Mixed plantation	<i>Aquilaria malaccensis</i>	400	1.00
						<i>Michelia champaca</i>	100	
						<i>Tectona grandis</i>	100	
					Mixed plantation	<i>Phoebe sp.</i>	1,000	1.98
					Mixed plantation	<i>Duabanga grandiflora</i>	290	4.99
						<i>Michelia champaca</i>	132	
<i>Morus laevigata</i>	86							
<i>Phoebe sp.</i>	730							

						<i>Toona ciliata</i>	987	
			Reforestation	Community plantation	Mixed plantation	<i>Duabanga grandiflora</i>	149	2.00
		<i>Michelia champaca</i>				92		
		<i>Phoebe sp.</i>				745		
		<i>Toona ciliata</i>				214		
					Mixed plantation	<i>Duabanga grandiflora</i>	300	2.00
					<i>Michelia champaca</i>	100		
					<i>Toona ciliata</i>	800		
		Umling	Enrichment plantation	Enrichment plantation	Mono culture	<i>Aquilaria malaccensis</i>	8,000	15.00
						<i>Aquilaria malaccensis</i>	500	0.50
		<b>Total</b>					<b>82,302</b>	<b>235.91</b>

**Table 33: Plantation created and maintained by NRDCI in FMUs**

FMU	Plantation Creation (ha)	Achievement (ha)	Plantation Maintenance (ha)	Achievement (ha)
Chendebji	0	0	4	4
Lonchu	0.7	0	14.24	0
Korilla	0	7.34	36.15	31.68
Selela	0	0	5.78	5.78
Zonglela	5.7	5	11.58	11.58
Lingmithang	10	10	30.21	30.21
Karshong	0	0	0	0
Dongdechu	0	0	13.44	15.24
Khaling Kharungla	2.25	2.25	29.17	29.17
Betekha	3.5	3.5	0	0
Chamgang	0	0	0	0
Rongmanchu	5	5	0	0
Haa East	0	0	21.22	21.22
Gidakom	5.05	0	21.22	21.22
Gogona	0	0	14.93	14.83
Khotokha	0	0	0	0
Dawathang	0	0	5	2
Rhodungla	0	0	0	0

Metpachu	0	0	0	0
Khengzore	1.92	0.58	0	0
Wangdigang	0	0	0	0
<b>Total</b>	<b>34.12</b>	<b>33.67</b>	<b>206.94</b>	<b>186.93</b>

## 7.4 Forestry Clearance

The Department issued 2,954 forestry clearances for various purposes (Figure 7) covering 5,130.93 acres. In addition, 1,655 forestry clearances were issued for removal of forest produce from Private Registered Land (PRL) covering 2,958.77 acres (Table 34).

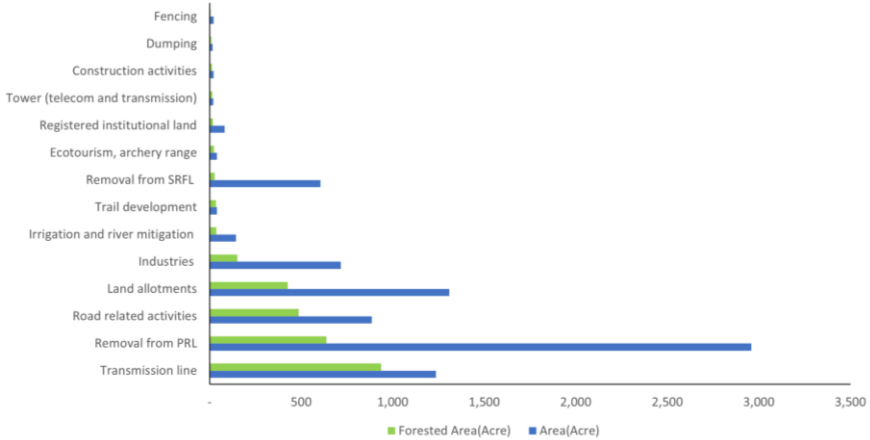


Figure 7: FC issued for various purposes

Table 34: Forestry clearance issued by purpose group

Sl. No.	Purpose Group	Area(Acre)	Forested Area(Acre)	Total Volume (m3)
1	Transmission line	1,234.86	936.90	80,647.63
2	Removal from Private Registered Land	2,958.77	636.41	48,776.45
3	Road related activities	885.31	486.11	14,426.86
4	Land allotments (exchange, kidu land etc.)	1,307.29	425.34	14,224.75
5	Industries (Dredging, quarry, crushing plant)	716.33	151.25	2,205.39
6	Irrigation and river mitigation	143.09	36.18	21,748.31
7	Trail development	39.12	33.53	123.25



8	Removal from SRFL (cable crane installation, solar power project)	604.81	26.40	4,083.44
9	Ecotourism, archery range, fire line	40.11	22.14	345.69
10	Registered institutional land	81.76	16.76	181.39
11	Tower (telecom and transmission)	19.31	13.41	1,943.09
12	Construction activities	21.92	12.12	1,716.10
13	Dumping	16.16	8.94	325.84
14	Fencing	20.86	3.91	76.53
	<b>Total</b>	<b>8,089.01</b>	<b>2,908.24</b>	<b>190,824.7</b>



## 8. Challenges in forestry sector

This chapter presents the figures related to some of the challenges facing the forestry sector in terms of loss of forest area to forest fire, incidences of different forest offences reported and the record of human wildlife conflicts encountered.

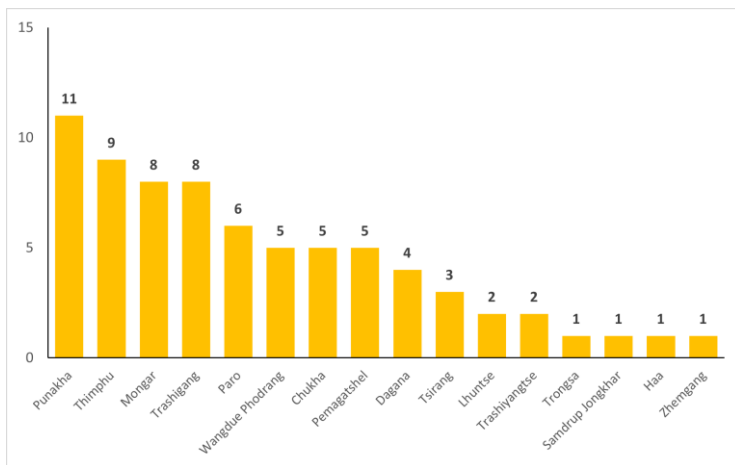
### 8.1. Forest Fire

A total of 72 forest fires occurred in 2023, resulting in damage to an area of 10,059.31 hectares mostly in Chir pine forest with 8,971.58 hectares (Table 35). Punakha Dzongkhag had the highest forest incidence (Figure 8), whereas Mongar Dzongkhag has the largest burned area of 5,742 hectares followed by Trashigang Dzongkhag with 1,225.81 hectares.

**Table 35: Forest fire burned area and volume of timber damaged**

Sl. No.	Offices	Dzongkhag	Forest Type	Burned Area (Ha)	Volume (m <sup>3</sup> )
1	Bumdeling Wildlife Sanctuary	Lhuntse	Chir pine Forest	259.40	1,423.08
2	Divisional Forest Office, Bumthang	Trongsa	Chir pine Forest	39.34	176.50
3	Divisional Forest Office, Dagana	Dagana	Chir pine Forest	92.47	259.78
			Cool Broadleaved Forest	0.81	1.09
			Subtropical Forest	1.42	-
4	Divisional Forest Office, Gedu	Chukha	Blue pine Forest	0.38	59.70
			Cool Broadleaved Forest	8.31	2.05
			Warm Broadleaved Forest	0.53	2.40
5	Divisional Forest Office, Mongar	Lhuntse	Chir pine Forest	37.66	-
		Mongar		5,742.79	366.46
6	Divisional Forest Office, Paro	Haa	Blue pine Forest	771.00	221,884.96
		Paro		7.45	55.69
7	Divisional Forest Office, Pemagatshel	Pemagatshel	Chir pine Forest	445.02	-
			Cool Broadleaved Forest	0.05	-
			Warm Broad-	0.81	0.16

			leaved Forest		
8	Divisional Forest Office, Thimphu	Thimphu	Blue pine Forest	257.24	518.90
9	Divisional Forest Office, Trashigang	Trashigang	Chir pine Forest	1,225.81	104.77
		Trashiyangtse		245.28	767.90
10	Divisional Forest Office, Tsirang	Tsirang	Warm Broad-leaved Forest	1.10	11.49
			Chir pine Forest	2.83	-
11	Divisional Forest Office, Wangdue Phodrang	Punakha	Chir pine Forest	388.49	112.53
			Cool Broadleaved Forest	0.59	6.77
		Wangdue Phodrang	Chir pine Forest	376.15	35.47
			Warm Broad-leaved Forest	38.04	2.79
12	Divisional Forest Office, Zhemgang	Zhemgang	Chir pine Forest	48.77	12.00
13	Jigme Dorji National Park	Punakha	Chir pine Forest	56.24	1.09
14	Jomotsangkha Wildlife Sanctuary	Samdrup Jongkhar	Chir pine Forest	11.33	-
<b>Total</b>				<b>10,059.31</b>	<b>225,805.58</b>



**Figure 8: Dzongkhag wise count of forest fire incidence**

## 8.2. Forest Offence

In 2023, a total of 1,318 forest offences were apprehended, which is an increase of 20 cases compared to the earlier year. The highest number of forest offences is related to illegal timber extraction, followed by illegal harvesting of NWFP, aquatic and fishing and waste dumping or pollution being the lowest (Table 36)

**Table 36: Forest offence**

Sl. No.	Offence Type	Cases (Nos.)	Revenue (Nu.)
1	Aquatic and Fishing	234	830,000.00
2	Forest Fire	18	65,000.00
3	Illegal Timber	640	12,120,347.17
4	Land Related Offence	44	1,928,904.78
5	NWFP	306	7,909,614.17
6	Timber Misuse	24	654,465.97
7	Waste/Pollution	5	98,750.00
8	Wildlife & Poaching	29	289,875.00
9	Others	18	198,286.05
<b>Total</b>		<b>1,318</b>	<b>24,095,243.14</b>

### 8.3. Human Wildlife Conflict

Rural communities are significantly impacted by Human-Wildlife Conflict, which remains a major issue. Table 37 shows that Bhutan recorded 223 conflict incidents in 2023. Further information on these cases can be found in Table 38, Table 39, Table 40 and Table 41 which provide details on the wildlife involved in each conflict.

**Table 37: Types of Human Wildlife Conflict**

Sl. No.	Conflict Types	Incidences (No.)
1	Crop Damage	116
2	Crop Damage, Property Damage	13
3	Human Death	1
4	Human Injury	2
5	Livestock Depredation	46
6	Livestock Depredation, Crop Damage	1
7	Livestock Depredation, Property Damage	1
8	Property Damage	43
<b>Total</b>		<b>223</b>

**Table 38: Livestock kill**

Sl. No.	Predator name	Livestock name	Affected parties (No.s)	Number of kills
1	Asiatic golden cat	Goat	2	7
2	Common leopard	Jabaa	2	2
		Jersey	2	2
		Pig	1	1
		Thrabam	1	1
3	Himalayan black bear	Goat	2	2
		Jersey	1	1
		Yak	1	1
4	Tiger	Donkey	1	2
		Horse	7	9
		Jabaa	1	1
		Jatsha	1	1

		Jatsham	4	4
		Jersey	6	7
		Nublang	1	1
		Thrabam	7	7
		Yak	2	3
		Yangku	1	1
		Yangkum	4	4
5	Wild dog	Jatsha	1	1
		Jersey	1	2
		Yak	1	2
<b>Total</b>			<b>50</b>	<b>62</b>

**Table 39: Human Death and Injuries**

Sl. No.	Wildlife	HWC	Affected parties	Number
1	Elephant	Human death	1	1
		Human injury	1	1
2	Guar	Human injury	1	1
<b>Total</b>			<b>3</b>	<b>3</b>

**Table 40: Crop Damage**

Sl. No.	Wildlife	Crop	Affected parties (No.s)	Area of cropland (Acre)	No.s Affected
1	Assamese macaque	Maize	1	0.299	
		Paddy	1	0.299	
2	Barking deer	Banana	1	0.025	1
		Bitter buckwheat	1	0.499	
		Maize	3	0.496	
		Vegetables	3	0.06	
		Wheat	3	0.089	
3	Capped langur	Vegetables	1	0.01	
4	Elephant	Bamboo	3	0.338	
		Banana	16	3.848	10

		Betal nut	24	3.331	167
		Bitter buckwheat	1	1.999	
		Ginger	1	0.499	
		Litchi	1		1
		Maize	7	4.471	
		Millet	3	0.168	
		Paddy	16	9.962	
		Vegetables	3	0.803	
5	Gaur	Wheat	2	1.419	
6	Golden langur	Maize	1	1.236	
7	Grey langur	Vegetables	1	0.01	
8	Himalayan black bear	Apple	3	0.089	3
		Maize	8	2.571	
		Paddy	1	0.2	
		Vegetables	1	0.01	
		Wheat	1	0.049	
9	Sambar deer	Wheat	2	0.03	
10	Wild pig	Betal nut	1	0.494	
		Maize	4	1.117	
		Paddy	2	0.499	
		Potatoes	24	1.852	
		Vegetables	3	0.055	
<b>Total</b>			<b>143</b>	<b>36.827</b>	<b>240</b>

**Table 41: Property Damage**

Sl. No.	Wildlife	Affected parties (No.s)	No.s Damaged
1	Elephant	58	247
2	Himalayan black bear	33	466
3	Wild boar	1	1
<b>Total</b>		<b>92</b>	<b>714</b>

### 9. Staff under DoFPS

The Department had a total staff strength of 1,457 with 276 non-technical and 1181 technical staff. Figure 9 shows the gender wise composition of staff in 2023.

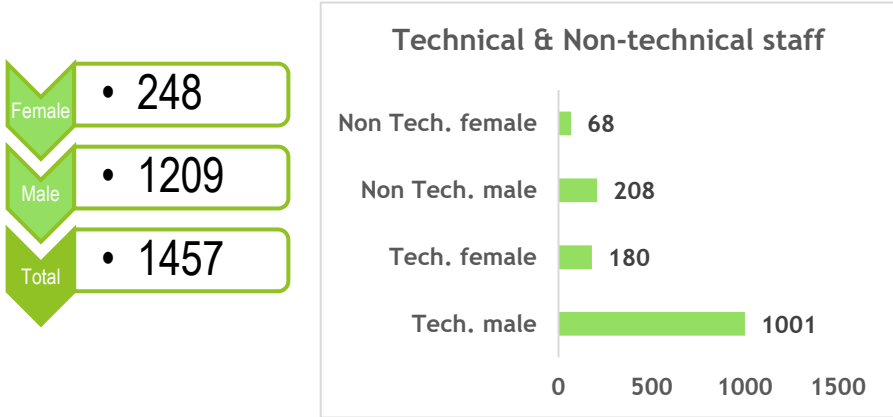


Figure 9: Gender-wise staff strength







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