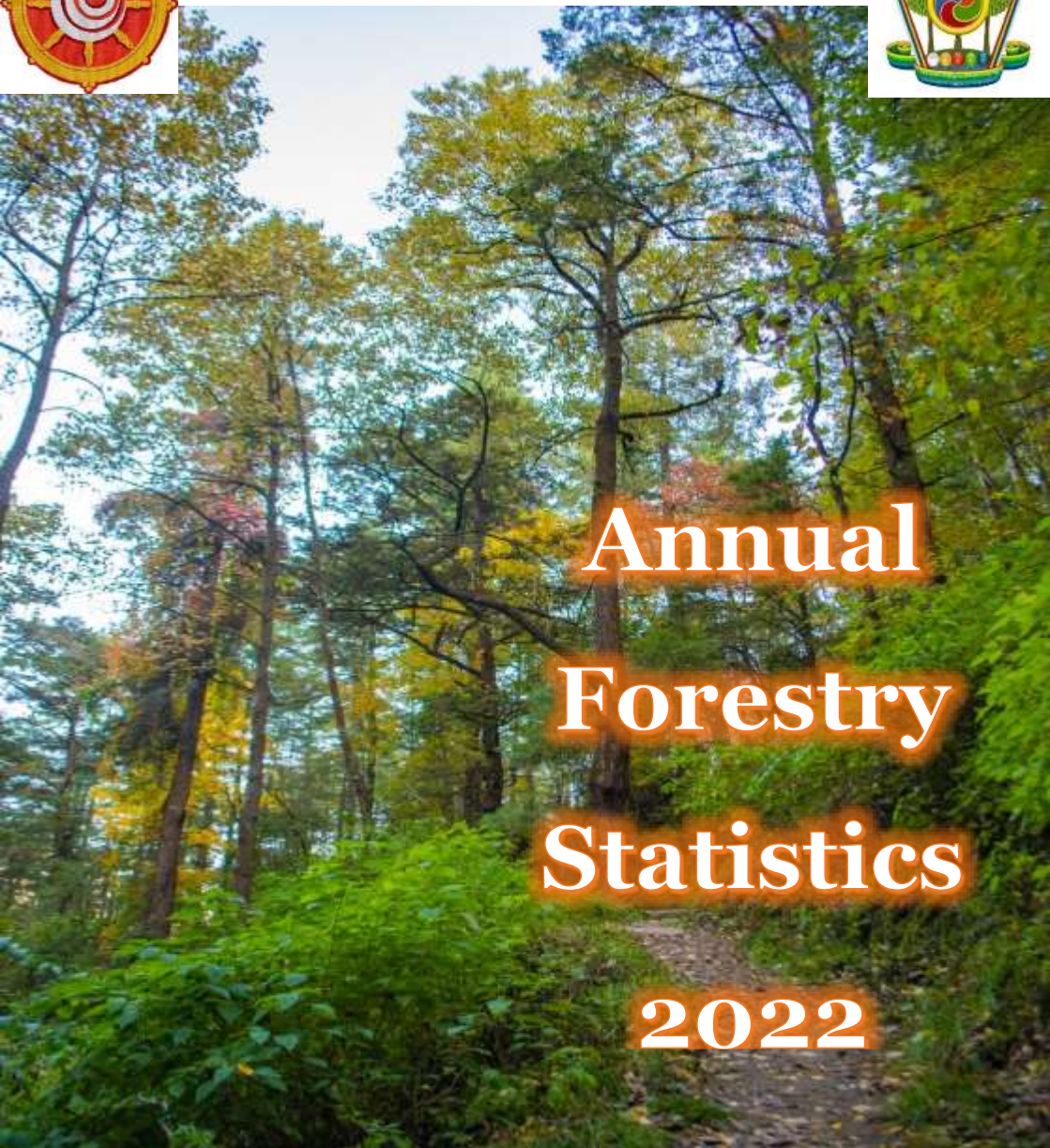




ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF ENERGY AND NATURAL RESOURCES
DEPARTMENT OF FORESTS AND PARK SERVICES

A photograph of a forest landscape with tall trees and a dirt path, serving as the background for the title text.

Annual Forestry Statistics 2022

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FOREWORD

Forests are a crucial form of natural capital, providing a range of essential ecosystem services that are increasingly under threat due to the effects of climate change and human activities. The sustainable management of forests is essential for the sustenance of livelihoods and socioeconomic development, prompting policy makers, researchers, and decision makers to collect and analyze data on these resources. In order to provide stakeholders with the most up-to-date and reliable information on forest management, resource utilization, and the challenges faced, the Department of Forests and Park Services, is pleased to publish the Annual Forestry Statistics 2022. This report is based on the data collected and analyzed from the Forest Information Reporting and Monitoring System (FIRMS), which is updated in real-time from the field offices.

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 also extend my congratulations to the Forest Monitoring and Information Division for taking the lead in publishing 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), 2022 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 Forest Information Reporting and Monitoring System (FIRMS) database, an online system that gathers data from 14 Divisional Forest Offices and 10 Protected Area Offices. In addition, the data was validated from Online Forestry Service (OFS), Government to Citizen (G2C) System, Spatial Monitoring and Reporting Tool (SMART) and Functional Divisions to support analysis.



Besides providing update on the state of Protected Areas (PAs), Forest Management Units (FMUs), Local Forest Management Area (LFMAs), Community Forests (CFs), and Non-Wood Forest Management Produce (NWFP) groups., it also includes relevant information on plantations, forestry clearance, rescue & rehabilitation and Wood Based Industries (WBIs) and wildlife offences.

In addition to revenue generated from the selling of NWFP, River Bed Material auction sites, and booklet fees, it also emphasizes the difficulties in managing Bhutan's forest resources, including forest fire, conflicts between people and wildlife, and forest offense.

2. Key Facts

Sl.No.	Forest Statistics	
1	Total Forest Area (Ha)	2,717,161.64
2	Forest Cover Percent (%)	71
3	Broad leaved forest (Ha)	1,763,899.46
	Broad leaved forest (%)	46%
4	Conifer forest (Ha)	953,262.18
	Conifer forest (%)	25
5	Basal area per hectare (m2/ha)	40
6	Growing Stock per hectare (m3)	346
7	Biomass Stock per hectare (AGB, BGB, DoM: t/ha)	362.35
8	Carbon per hectare (AGB, BGB, DoM: t/ha)	170.77
9	Soil Carbon per hectare	64.07
10	Forest Carbon Stock	645.12
Forest Management Regimes		
1	Protected Area (%)	43.48
2	Biological Corridors (%)	7.73
3	Royal Botanical Park (RBP) (%)	0.24
4	* Protected Area Network (%)	51.44
5	National Parks (No.)	5
6	Wildlife Sanctuaries (No.)	4
7	Strict Nature Reserve (No.)	1
8	Biological Corridors (No.)	8
9	Forest Management Units (No.)	21
	Forest Management Units Area (Ha)	195,684.89
10	Total Community Forest (No.)	842
	Household involved in CF(No.)	34,266
	Total Area of CF(Ha)	112,549.18
11	Local Forest Management Area (Nos)	76
	Local Forest Management Area (Ha)	314,475.54
12	Ramsar sites (No.)	3
	Ramsar site Area (Ha)	1,231.82
13	Payment for Environment Services (No.)	4

	Payment for Environment Services Area (Ha)	2,973
14	Watershed (No.)	186
15	Wood-based industries (No.)	615
16	NWFP Groups (No.)	161
Functional and Field Offices		
17	Functional Division	4
18	Divisional Forest Office	14
19	Divisional Range Office	42
20	Divisional Beat Office	80
21	Divisional Check post	39
22	Park/ Strict Reserve/ Wildlife Sanctuaries	10
23	Park Range Office	33
24	Park Guard Post	20
25	Park Check post	5

*Protected area network (%) =sum of Protected area (%), Biological Corridors (%) and Royal Botanical Park (%)

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 Forest Research and Training (UWIFoRT). Additionally, there are 14 Divisional Forest Offices and 10 Protected Areas, 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](#) & [Table 3](#) shows details of check post, recreational and visitor centers.

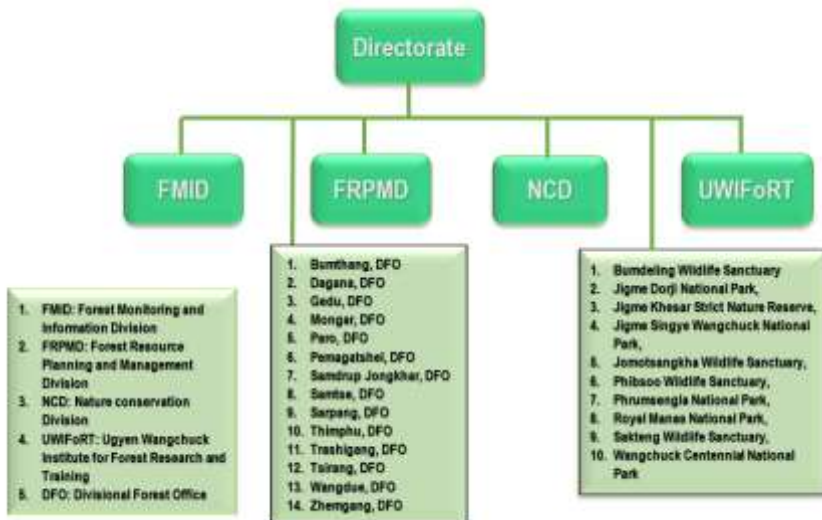


Figure 1: Organogram of DoFPS

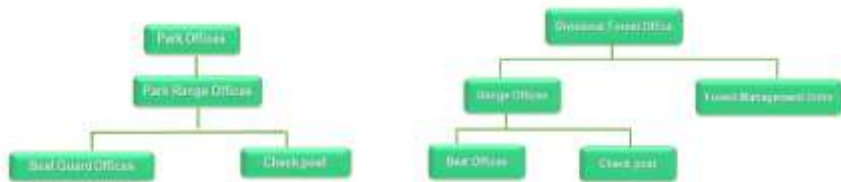


Figure 2: Organogram of field offices

Table1: Field offices information

Sl.No.	Office	Dzongkhag	Range Office	Beat Office	Range Gewog	
1	Divisional Forest Office, Bumthang	Bumthang	Bumthang	Tang	Tang	
			Chumey		Chokhor	
		Trongsa	Trongsa	Drakteng	Drakteng	Drakteng
				Tashiling	Tashiling	Tashiling
				Langthel	Langthel	Langthel
				Nubi	Nubi	Nubi
		2	Divisional Forest Office, Dagana	Dagana	Drujeygang	
	Tsangkha					
	Lajab					
	Khebisa					
Dagapela				Goshi		
				Tsendagang		
				Dorona		
				Trashinging		
				Geserling		
Lhamoizingkha				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
				Yadhi	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	
					Nangaycholing	
					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	Dekiling	
				Chhudzom	Chudzom	
			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	
			Duksum	Jamkhar	Jamkhar	
				Tongzhang	Tongzhang	
				Ramjar	Ramjar	
Thragom	Yallang					
		Trashiyangtse				

			Yangtse	Khamdang	Khamdang	
				Toetsho	Toetsho	
					Yangtse	
12	Divisional Forest Office, Tsirang	Tsirang	Tsirang		Kikhorthang	
					Tsholingkhar	
					Dunglagang	
					Goserling	
					Semjong	
					Rangthaling	
			Tsirangtoe		Tsirangtoe	
					Phuntenchu	
			Mendrelgang		Sergithang	
					Sergithang	
					Sergithang	
			13	Divisional Forest Office, Wangdue	Wangdue	Wangdue
Kazhi						
Bjena						
Nyisho						
Gasello		Gasetshogom				
		Gasetshowom				
		Nahi				
Kamichu		Daga				
		Athang				
		Thedtsho				
		Rubesa				
		Rubesa				
Nobding		Gagtey-Phobji	Gangtey			
			Phobjikha			
			Athang			
			Dangchu			
			Sephu			
Punakha		Lobesa	Thinleygang			
			Barp			
		Punakha		Talo		
				Tshochasa		
				Chhubu		

				Samdingkha	Toewang
				Kabesa	Kabjisa
				Shengana	Shenga Bjimi
				Guma	Guma
				Dzomi	Dzomi
14	Divisional Forest Office, Zhemgang	Zhemgang	Zhemgang	Buli	Nangkor
				Tali	
				Mangdichu	Trong
		Khomshar	Digala	Bardo	
			Shingkhar	Shingkhar	
		Panbang	Goshing	Goshing	
			Bjoka	Bjoka	
	Ngangla				
15	Bumdeling Wildlife Sanctuary	Trashiyangtse	Dungzam	Shingphel	Bumdeling
				Womanang	
		Mongar	Serzhong	Aja	Sherimuhung
		Lhuentse	Khoma	Singyedzong	Khoma
Tsikang					
16	Jigme Dorji National Park	Thimphu	Soe		Soe
		Paro		Tsento (part)	
				Doteng (part)	
		Thimphu	Lingzhi		Lingzhi
				Naro	
		Gasa	Gasa		Kawang (part)
					Khatoed
					Khamead.
			Laya		Laya
		Punakha	Lunana		Lunana (part)
	Tewang (part)				
	Chubu (part)				
Ruenchena	Kabisa (part)				
			Goenshari		
17	Jigme Khesar Strict	Haa	Bji	Loli, Tshona & Chala	Bji

	Nature Reserve		Sanhbaykga	Yaba	Sangbaykha
			Gakiling	-	Gakiling
18	Jigme Singye Wangchuck National Park	Trongsa	Langthel	Chendebji	Langthel
			Nabji		Korphu
		Zhemgang	Tingtibi		Tingtibi
		Wangduephodrang	Taksha	Adha	Athang
19	Jomotsangkha Wildlife Sanctuary	Samdrup Jongkhar	Samdrupcholing		Phuntshothang
					Martshalla
					Samrang
					Pemathang
		Jomotshangkha		Menjiwoong	Langchenphu
					Lauri
			Serthi		
20	Phibsoo Wildlife Sanctuary	Sarpang	Phibsoo		Singye
			Nichula		Nichula
21	Phrumsengla National Park	Bumthang	Ura		Ura
					Chumey
		Mongar	Lingmethang	Sengor	Saling
					Tsamang
		Lhuentse	Phawan	Zangkhar	Jarey
					Metsho
22	Royal Manas National Park	Sarpang	Manas	Tanzima	Ngangla
			Gomphu	Tingtibe	Trong
				Pangtang	Pankhar
		Zhemgang	Umling	Karanamakara	Umling
					Taraythang
23	Sakteng Wildlife Sanctuary	Trsahigang	Merak		Merak
			Sakteng		Sakteng
			Joenkhar		Sakteng
24	Wangchuck Centennial National Park	Bumthang	Chokhor	Tang	Tang
				Dhur	Chokhor
		Lhuentse	Dungkar	Ney	Gangzur
					Kurtoed

		Wangduepho drang	Sephu		Sephu
		Trongsa	Nubi		Nubi

Table 2: Check post

Sl.No.	Offices	Check Post
1	Divisional Forest Office, Dagana	Sunkosh
		Lhamozingkha
2	Divisional Forest Office, Gedu	Bumpagang, Wangkha
		Allay, Pasakha
		Pling Main Gate
		Pling Gate 2 (Bau Bazar)
		Rinchending
		Piping ICP (Bjemichu)
3	Divisional Forest Office, Mongar	Sherichu
		Kurizampa
		Tangmachu
4	Divisional Forest Office, Paro	Haa Check post
		Jewphu Checkpost
5	Divisional Forest Office, Pemagatshel	Kheri Goenpa, Zobel
		Pelzomthang
		Tshobaley
6	Divisional Forest Office, Samdrup Jongkhar	Main Gate
		Mothanga, Dewathang
		Pinchina/Charkilo
7	Divisional Forest Office, Samtse	Samtse Main Gate Boarder
		Jitti, Sangacholing
		Nyoenpaling, Pugli
		Yoezergang, Halalay
		Amochu
		Pendenling (Gomtu)
		Bhimtar, Norbugang
8	Divisional Forest Office, Sarpang	Sershong
		Indo-Bhutan Border Checkpost, Gelephu
		Shechamthang
9	Divisional Forest Office, Thimphu	Chamgang
		Chunzom

		Hongtsho
10	Divisional Forest Office, Trashigang	Zangpozor, Khamdang
		Kheri, Samkhar
		Tshozor, Wamrong
11	Divisional Forest Office, Tsirang	Damphu
12	Divisional Forest Office, Wangdue	Wangdu Bridge
		Chuzomsa, Bjana
13	Divisional Forest Office, Zhemgang	Tingtibi
14	Bumdeling Wildlife Sanctuary	Tsarzam
15	Phrumsengla National Park	Gagtongzam
16	Royal Manas National Park	Mesergang (Panbang)
17	Jigme Dorji National Park	Dodena Check Post
18	Jomotsangkha Wildlife Sanctuary	Jomotsangkha, Langchenphu

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, Gedu	Gharial Conservation Center	Chhukha	Phuntsholing Thomdey
5	Divisional Forest Office, Sarpang	Southern Wildlife Rescue and Rehabilitation Center	Sarpang	Jigemeiling
				Dikiling
6	Divisional Forest Office, Thimphu	Royal Botanical Park, Lampelri	Punakha	Teob
		Royal Takin Preserve, Motithang	Thimphu	Thim Throm
7	Divisional Forest Office, Zhemgang	Bermo Botanical Garden	Zhemgang	Trong

4. Forest Management Areas

Forests in Bhutan are managed under different management regimes; Protected Areas (PA) network, Forest Management Units (FMU), Local Forest Management Areas (LFMA), Community Forests (CF) and Private Forests (PF), [Figure 3](#).

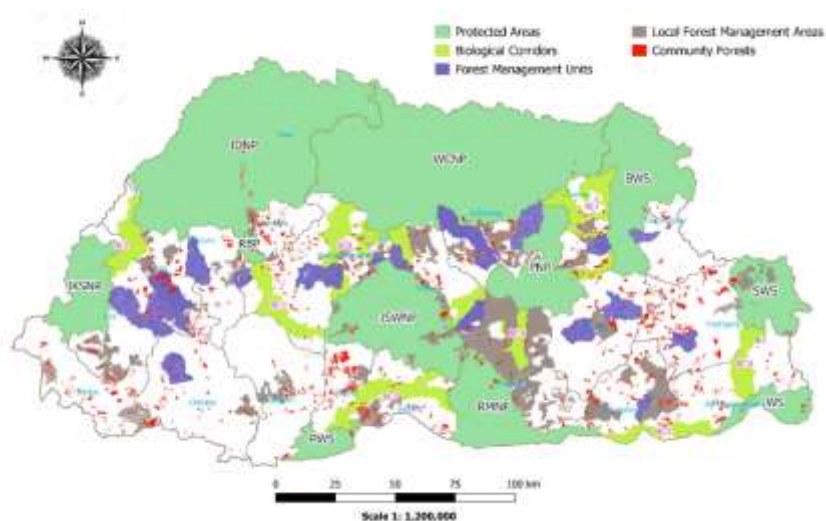


Figure 3: Forest Management Area

4.1 Current Status

Currently, there are 842 Community Forest in Bhutan, covering 112,549.18 hectares and managed by 34,266 households ([Table 4](#)). Wangdue Phodrang Dzongkhag has the greatest number of 90 Community Forests.

Table 4: No. of Community Forests by Dzongkhag

Sl. No.	Dzongkhag	CF (No)	Member household (No)	Area (Ha)
1	Bumthang	38	1,111.00	4,062.56
2	Chukha	62	2,043.00	4,922.53

3	Dagana	35	1,473.00	3,291.88
4	Gasa	7	189.00	646.80
5	Haa	24	765.00	2,783.05
6	Lhuntse	37	1,131.00	3,902.49
7	Mongar	37	2,226.00	11,635.57
8	Paro	30	1,638.00	5,012.53
9	Pemagatshel	54	2,657.00	5,250.23
10	Punakha	45	1,444.00	4,870.01
11	Samdrup Jongkhar	50	2,005.00	5,910.96
12	Samtse	65	2,647.00	7,218.66
13	Sarpang	35	1,475.00	4,708.95
14	Thimphu	22	932.00	3,238.83
15	Trashigang	58	3,180.00	12,998.27
16	Trashiyangtse	39	1,784.00	5,561.53
17	Trongsa	30	990.00	3,597.85
18	Tsirang	50	2,889.00	9,558.83
19	Wangdue Phodrang	90	2,436.00	7,165.17
20	Zhemgang	34	1,251.00	6,212.48
Total		842	34,266.00	112,549.18

As of 2022, there are 76 Local Forest Management Areas (LFMA) in Bhutan, which span over 314,475.54 hectares. Wangdue and Zhemgang Dzongkhag have the greatest number of LFMA (eight). Details for each Dzongkhag's specific LFMA can be found in the [Table 5](#).

Table 5: 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
		Lajab	5,597.00
4	Haa	Bjee	1,732.00
		Esue	339.00
		Gakiling	5,442.00
		Katsho	712.00
		Sama	325.00
		Sombgyakha	4,960.00
5	Lhuentse	Tsenkhar	2,706.20
		Gangzur	6,673.40
		Jarey	3,888.90
		Menbi	4,617.00
		Metsho	5,726.40
6	Mongar	Drepong	4,181.00
		Mongar	3,101.00
		Mongar (BWS)	2,100.10
		Saleng	2,116.00
		Thangrong	1,421.00
		Tsamang	3,928.05
7	Paro	Dogar	1,263.00
		Doteng	3,240.00
		Lamgong	1,309.00
		Shaba	769.00
		Shari	1,600.00
		Tsento	1,952.00
8	Pema Gatshel	Dechenling	12,745.31
		Yurung	2,833.00
		Zobel	5,028.40
9	Punakha	Barp	2,770.20
		Toeb	2,562.00

10	Samdrup Jongkhar	Orong	8,700.00
		Samrang	4,132.00
		Wangphu	7,153.00
11	Samtse	Namgaycholing	2,777.70
12	Sarpang	Chudzom	6,208.47
		Dekiling	3,767.00
		Gakidling	3,884.00
		Nichula	1,738.70
		Sompangkha	1,536.00
13	Thimphu	Chang	7,911.50
		Geney	3,805.00
14	Trashi Yagtse	Bumdeling	-
15	Trashigang	Samkhar	5,206.50
		Shongphu	2,821.00
		Thrimsing	5,025.00
		Yallang	2,209.00
		Yangneer	2,907.00
16	Trashiyangtse	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	Daga	21,043.90
		Dangchu	1,858.50
		Gangtey	1,377.00
		Kabji	3,219.00

		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
Total			314,475.54

In order to take conservation program forward, 51.44 percent of the country's geographical area is managed under 10 PA and 8 Biological Corridors (BC) and 1 Botanical Park (Table 6).

Table 6: Protected area network in Bhutan

Sl. No.	Protected Area Network	Notification year	Dzongkhag	Area Km sq.)
1	Bumdeling Wildlife Sanctuary	1993	Lhuentse	1,534.24
			Mongar	
			Trashiyangtse	
2	Jigme Dorji National Park	1993	Gasa	4,374.06
			Paro	
			Punakha	
			Thimphu	
3	Jigme Khesar Strict Nature Reserve	1993	Haa	784.22
			Samtse	
4	Jigme Singye Wangchuck National Park	1993	Sarpang	1,730.06
			Trongsa	
			Tsirang	
			Wangdue Phodrang	
			Zhemgang	

5	Jomotsangkha Wildlife Sanctuary	1993	Samdrup Jongkhar	362.49
6	Phrumsengla National Park	1993	Bumthang	906.65
			Lhuentse	
			Mongar	
			Zhemgang	
7	Phibsoo Wildlife Sanctuary	1993	Sarpang	287.18
			Dagana	
8	Royal Manas National Park	1993	Pema Gatshel	1,057.02
			Sarpang	
			Zhemgang	
9	Sakteng Wildlife Sanctuary	1993	Trashigang	742.46
10	Wangchuck Centennial National Park	2008	Bumthang	4,914.63
			Lhuentse	
			Wangdue Phodrang	
			Gasa	
			Trongsa	
11	Royal Botanical Park	2004	Punakha	91.20
			Thimphu	
12	JDNP-JKSNR Biological Corridor (BC1)	1999	Haa	255.55
			Paro	
13	RBP-JSWNP Biological Corridor (BC 2)	1999	Wangdue Phodrang	291.76
14	JSWNP-PWS-RMNP Biological Corridor (BC 3)	1999	Sarpang	407.12
			Tsirang	
15	JSWNP-PNP-RMNP Biological Corridor (BC 4)	1999	Trongsa	594.65
			Zhemgang	
16	JWS-RMNP Biological Corridor (BC 5)	1999	Pema Gatshel	205.83
			Samdrup Jongkhar	

17	JWS-SWS Biological Corridor (BC 6)	1999	Samdrup Jongkhar	232.77
			Trashigang	
18	BWS-PNP-WCNP Biological Corridor (BC 7)	1999	Lhuentse	419.66
			Mongar	
19	JSWNP-WCNP Biological Corridor (BC 8)	1999	Trongsa	558.60
			Wangdue Phodrang	
Total				19,750.16



To cater to the developmental need of the country for timber, 21 Forest Management Units (FMUs) are established covering 195,684.89 hectares (Table 7).

Table 7: Forest Management Units in Bhutan

Sl.No.	Dzongkha g	Forest Managem ent Unit (FMU)	Establi shment year	Plan Cycle	Total FMU area (ha)	Forested area (ha)	Forest area cover (%)	Annual Allowable Cut (AAC) - m ³		Total
								Commerci al	Rural	
1	Bumthang	Dawathang	2000	2	15,173.80	13,308.61	87.71	6,900.00	4,000.00	10,900.00
		Rudongla	2002	2	14,686.58	12,368.91	84.22	12,000.00	2,999.00	14,999.00
		Karshong	1994	2	6,008.54	5,579.39	92.86	6,200.00	1,500.00	7,700.00
2	Chukha	Metapchhu	2007	1	10,676.53	10,099.00	94.59	4,400.00	630.00	5,030.00
3	Haa	Haa East	1987	3	6,580.99	5,690.50	86.47	nil	500.00	500.00
		Lon Chhu	2010	1	12,664.49	8,846.00	69.85	5,300.00	1,000.00	6,300.00
		Sele La	1997	2	9,155.72	8,497.65	92.81	6,790.00	2,440.00	9,230.00
4	Mongar	Korila	1993	2	13,137.00	6,922.00	52.69	1,100.00	2,700.00	3,800.00
		Lingmithang	1997	2	10,490.00	10,125.00	96.52	8,900.00	500.00	9,400.00
5	Paro	Paro- Zonglela	1992	3	15,803.00	12,322.02	77.97	3,993.71	1,124.82	5,118.53
		Bitekha	2006	1	7,260.10	6,199.00	85.38	3,600.00	900.00	4,500.00
6	Thimphu	Chamgang- Helela	1993	2	4,508.78	4,320.87	95.83	nil	1,800.00	1,800.00
		Gidakom	1977	4	13,100.00	9,435.29	72.03	5,000.00	2,400.00	7,400.00

7	Trashi Yangtse	Dongdechu	2001	2	4,856.00	3,172.00	65.32	3,965.00	1,249.83	5,214.83
8	Trongsa	Chendebji	1996	2	7,852.98	6,912.12	88.02	4,700.00	2,000.00	6,700.00
9	Wangdue	Khotokha	1984	3	9,281.00	8,785.90	94.67	7,900.00	1,900.00	9,800.00
		Gogona	2005	1	8,080.60	4,490.00	55.57	5,161.00	1,167.00	6,328.00
10	Zhemgang	Wangdigang	1992	3	8,759.00	7,511.25	85.75	nil	2,100.00	2,100.00
11	Lhuentse	Rongmanchu	2007	1	6,403.13	5,713.00	89.22	2,700.00	500.00	3,200.00
12	Trashigang	Khaling Kharungla	1996	2	7,110.30	5,553.68	78.11	900.00	400.00	1,300.00
13	Pemagatshel	Khengzore	2019	1	4,096.35	4,069.15	99.34	3,700.00	400.00	4,100.00
Total					195,684.89	159,921.34	81.72	93,209.71	32,210.65	120,020.36



4.2. Plans approved in 2022

Forest management regimes are dynamic living document that continuously harmonizes forestry, conservation, livelihood and national dependencies on natural resources. A total of 57 CF plans, 9 LFMA plans, 4 PA plans, 4 BC plans and 2 FMU plans are approved in 2022 (Table 8, Table 9, Table 10 and Table 11).

Table 8: Community Forestry Plans Approved in 2022

Sl. No.	Dzongkhag	CF_Name	Member household (No)	Area (Ha)	AAC (m ³ /yr)
1	Bumthang	Bepzur	29	61.01	134.53
2	Chukha	Bjemo	14	27.00	43.95
		Chungkha Chigthuen	60	106.00	68.91
		Gyelwaringa	75	235.00	1,015.17
		Norbuling	50	78.57	73.84
		Sangay Choling	29	76.10	73.15
		Wangkha Risum	11	62.00	105.00
		Yanglaykha	15	23.00	10.41
3	Gasa	Deychong Samdrup Gongphel	25	50.29	189.97
		Tashithubar (Tashithongmen)	11	27.21	203.76
4	Lhuntse	Jalang	26	71.40	144.74
5	Mongar	Drangmaling	22	122.13	556.76
		Muhung Tshowog Gongphel (Muhung)	83	254.00	625.43
6	Paro	Druk Tshenden	110	150.00	272.00
		Ugyen Dralo	14	40.87	16.69
7	Pemagatshel	Chimung Doendrupling	51	74.00	91.94
		Nomey Memang	16	43.00	235.03
		Tshelingore	31	74.00	174.21
8	Punakha	Dakchung Norbuling	39	244.12	479.78
		Jeligang (Bjiligang)	27	99.00	164.58

		Samden	33	58.00	315.61
9	Samdrup Jongkhar	Devithane	55	195.00	256.41
		Drongshing	32	69.27	207.96
		Gomdar Kuenga Choling (Kuengacholing)	39	60.02	128.84
		Jangchubling	40	87.02	143.37
		Martang Phunsum Jurmay	27	88.00	181.16
		Sansari Shanti	29	32.39	32.46
		Sergi Riduen	39	66.00	42.08
		Yarsing Chongi	112	477.08	852.67
10	Samtse	Bukay A Dham	30	51.14	95.81
		Pinsum	95	223.65	350.51
11	Sarpang	Gakidling	63	133.74	57.94
		Gaseylo	34	39.50	31.90
		Pema Yoezer	58	110.50	132.00
13	Trashigang	Dechenchoeling	55	161.00	15.60
		Dewaling	34	145.48	123.00
		Pam	64	76.00	330.40
		Pemathang	70	196.00	524.40
		Samdrup Gongphel	90	221.00	79.93
		Wakhar	13	117.00	61.37
14	Trashi Yangtse	Brogsergang	50	137.90	142.27
		Chogphelphu	65	106.80	241.19
		Tajarong	13	25.45	57.72
15	Trongsa	Changray	19	91.00	56.12
16	Tsirang	Darshingang	26	227.43	474.48
		Dhajay	78	320.09	101.11
		Dzamling Nordzay	39	58.94	85.29
		Lhasoelthang	71	28.32	61.90
		Reserboo	63	97.10	82.13
		Samding	96	498.74	440.46
17		Peyling-Longtey	28	90.83	596.71

	Wangdue Phodrang	Ridha	46	82.60	206.12
		Shingkhey Gaki	29	115.00	157.42
18	Zhemgang	Budashi	61	137.47	457.00
		Khomshar	96	162.00	2,097.00
		Radhi	23	60.80	134.70
		Thinleygang	39	96.37	230.00
Total			2671	6,863.33	14,264.87

Table 9: Local Forest Management Plans approved in 2022

Sl. No.	Gewog	Dzongkhag	Gross Area	Area covered by Plan	AAC (m ³ /year)
1	Chudzom	Sarpang	22,026.79	6,208.47	1,968.00
2	Dechenling	Pema Gatshel	13,568.31	12,745.31	1,114.00
3	Kana	Dagana	19,311.00	1,497.00	575.00
4	Lajab	Dagana	9,097.66	5,597.00	10,311.00
5	Zobel	Pema Gatshel	6,406.00	5,028.40	1,499.00
6	Nahi	Wangdue Phodrang	6,755.00	1,727.40	2,186.00
7	Dangchu	Wangdue Phodrang	17,152.00	1,858.50	2,510.00
8	Nichula	Sarpang	13,897	1,738.70	775.00
9	Jarey	Lhuentse	3,989.88	3,888.90	2,427.00
Total			98,306.64	40,289.68	23,365.00

Table 10: Park and Biological Corridor Plans revised in 2022

Sl. No.	Protected Area Network	Notification year	Dzongkhag	Plan cycle
1	Jomotsangkha Wildlife Sanctuary (JWS)	1993	Samdrup Jongkhar	2023-2033
2	Phipsoo Wildlife Sanctuary (PWS)	1993	Sarpang	2022-2032
			Dagana	
3	Royal Manas National Park (RMNP)	1993	Pema Gatshe	2023-2033
			Sarpang	
			Zhemgang	
4		2008	Bumthang	2023-2032

	Wangchuck Centennial National Park (WCNP)		Lhuentse	
			Wangdue Phodrang	
			Gasa	
			Trongsa	
5	JDNP-JKSNR Biological Corridor (BC1)	1999	Haa	2023-2033
			Paro	
6	JSWNP-PNP-RMNP Biological Corridor (BC 4)	1999	Trongsa	2023-2032
			Zhemgang	
7	BWS-PNP-WCNP Biological Corridor (BC 7)	1999	Lhuentse	2023-2032
			Mongar	
8	JSWNP-WCNP Biological Corridor (BC 8)	1999	Trongsa	2022-2032
			Wangdue Phodrang	

Table 11: Forests Management Unit Plans revised in 2022

Sl. No.	FMU	Total FMU area (ha)	Forested area (ha)	Annual Allowable Cut (AAC) - m3		
				Commercial	Rural	Total
1	Paro-Zonglela	15,803.00	12,322.02	3,993.71	1,124.82	5,118.53
2	Gidakom	13,100.00	9,435.29	5,000.00	2,400.00	7,400.00

4.3. Non-Wood Forest Product (NWFP) groups in Bhutan

161 NWFP groups are registered in the country managed by 6, 439 households through sustainable management plans, (Table 12). In 2022, eight plans were revised (Table 13).

Table 12: NWFP Groups in Bhutan

Sl. No.	Dzongkhag	NWFP Groups	Member Households (Nos.)
1	Bumthang	Chungphel Shingmen Management Group	42
		Mushroom Conservation & Market Group	42
		Pangkhar Mushroom Group	25
		Shingkhar Mushroom Group	34
		Somthrang Mushroom Group	17

		Ye-Rang Khuenphen Bamboo Tshogpa	37
2	Chhukha	Betar NWFP Group	16
		Bosokha Broom Grass Management Group	17
		Drukdingsa Cane Management Group	32
		Metekha NWFP Management Group	9
		Mondokha Cane Management Group	12
		Sarphu Broom Grass Management Group	32
		Serina Broom Grass Management Group	36
		Tshangkhu Broom Grass Management & Marketing Group	21
		3	Dagana
Damchuna Shingmen Tshogpa	46		
Dangraybu Shingmen Tshogpa	27		
Devi Shingmen Tshogpa	41		
Dorjiphu Shingmen Tshogpa	41		
Farmer Group of Lhamoyzingkha	139		
Gangtokha NWFP Group	66		
Homa Shingmen Tshogpa	51		
Kusumbari NWFP Group	23		
Laptshakha Shingmen Tshogpa	21		
4	Gasa	NWFP group	263
5	Lhuentse	Lagay Shingmen Tshogpa	51
		Jasabi Nakapani Group	13
		Lauri Gaki Shingmein Thuenkey Tshogpa	30
		Lekpachu Shingmen Nyamrup Tshokpa	27
		Oongar NWFP Management and Marketing Group	33
		Singye Dzong Sangzoe Management Group	19

6	Mongar	Aja Illicium graifithii Management group	19
		Broksar Shingmen Thuenkey Tshogpa	18
		Cherup Desho Zinchong and Dulen Tshogpa	11
		Gelgong Tsherzoo Group (CF)	26
		Jabgang NWFP (Community Cane) management and Marketing Group	35
		Mnagling NWFP Management and marketing group	14
		Resa Shingmen Thuenkey Nyamrup Detshen	30
		Sengor NWFP Management Group	21
		Shingmen Nyamrub Detshen	39
		Shingmen Nyamrub Tshogpa	96
		Tsangkhar Amla Group	27
		Tshakaling NWFP Management Group	45
		Yengkarseng NWFP Management and Marketing Group	15
		7	Paro
Luchu Shamu Tshogpa	20		
Soe Yaktsa Ngomen Tshogpa	19		
8	Pemagatshel	Bongmen Detshen	17
		Chhimoong Shingmeon Theonkei Detsen	17
		Chokhorling NWFP Group	11
		Dagore Shingmen Gongphel Detshen	42
		Dezama NWFP Group	10
		Gamung NWFP Group	34
		Gashari NWFP	10
		Gonpung NWFP Group	38
		Kerong NWFP group	13
		Khengzore Shingmen Detshen	43
		Labar Shingmen Detshen	26

		Menchu Pipla mgt group	10
		Namdaling Pipla Zinchong Detshen	43
		Ngangrey NWFP Zhingchong Tshogpa	31
		Norbugang NWFP	27
		Pangthang Sokpo tsho NWFP Group	29
		Raling Shingmen Detshen	26
		Tokari Shingmen Detshen	33
		Tomey Zimzore Shingmen Detshen	33
		Tshelingore NWFP group	32
		Woongchiloo Chighten Tshogpa	65
		Yangmalashing Pipla Group	34
		Zobel Bamboo Management Group	37
9	Punakha	Petari Thuendrel NWFP group	37
10	Samtse	Lahatar NWFP Collection and Management Group	12
		Majuwa Pangkha Group	38
		Namseling NWFP Collection and Marketing Group	17
11	Sarpang	Bumpa Shingmen Dulan Tshogpa	86
		Doringphu Shingmen Tshogpa	36
		Lower Muga softbroom Management & Marketing Group	28
		Pemaling Pakshe Tshogpa	11
		Ratey Pani Softbroom Management & Marketing Group	51
		Sangkha Soft Broom Management and Marketing Group	51
		Shawali Bamboo Marketing Group (merged with Pakeygang CF)	28
		Tashiling Shingmin Dulen and Thongdrel Tshogpa	18
		Thruendrel Shingmen Tshogpa	55

12	S/Jongkhar	Barkalagna Shingmein Thuenkay Wongbab Tshogpa	21
		Baytsheling Shingmein Yargay Gongphel Tshogpa	15
		Bazor Fremi NWFP Management and Marketing Group	41
		Chitori Shingmein Tshogpa	9
		Denchi Chituen NWFP Group	19
		Denphu Shingmein Tshogpa	28
		Deptsang Shingmein Thuenkyed Kuenthin Norphel Tshogpa	26
		Dungmanba Shingmein Gakey Pelzom Tshogpa	66
		Kakaney group	37
		Lauri Gaki Shingmein Thuenkey Tshogpa	104
		Mawong Chirphen Shingmein Thuenked Tshogpa	40
		Mawong Chirphen Shingmein Thuenkey Tshogpa	32
		Momring Shingmein Thuenkey Tshogpa	53
		Potala NWFP Group	53
		Remung group (Remong Lhundrup Shingmen Gongphel Tshogpa)	25
		Renang Shingmein Thuenkey Tshogpa	20
		Risum Tsholing shingmein Tshogpa	46
		Rongchanglu NWFPs Group	17
		Samten group, Tsholingkhar	35
		Serthi Shingmein Yargay Phunsum Tshogpa	47
		Shingmin Natshok Detshen	117
		Tashithangjay shingmein Thuenkay Yuntan Mijur Phuensum Tshogpa	15
		Thekcho Choling Goenpa Shingmein Tshogpa	19
		Thungshing Yubephodrang Shingmin Detshen	11

		Woongthi Shingmein Natshok Thueldrel Tshogpa	23
		Zangthi Shingmein Thuenkey Tshogpa	107
13	Tashiyangtse	Bimkhar bamboo management group	49
		Litchen Daphne Management Group	19
14	Thimphu	Community Mushroom Management	80
		Gangri Phunsum NWFP Group	73
		Jhom Daga Ngomen Tshogpa	83
		Naro Gangrey Ngomen Tshogpa	28
		Tshetrim Yugal Forest Product Management Group	82
15	Trashi Yangtse	Bumdir Herbal Tea Manangement Group	13
		Cheng NWFP Management Group	137
		Longkhar NWFP Management Group	13
		Phuntsho Thingyee Tshogpa	10
16	Trashigang	Achudongkar Bamboo Management Group	49
		Rubia Management and Marketing Group	17
		Chew Kachap NWFP Group	7
		Gengkhar Chorgensey Tshogpa	34
		Khashitang Khaloo Tshogpa	10
		Kuenphen Poina Tshogpa	8
		Merak Ngoshing Zinchong Tshokpa	78
		Shingkhar Ngomen Tshogpa	10
		Wangphu Choling Dhom Leshi Group	137
17	Trongsa	Chella Zenthozylum Management group	17
		Dungdung Kuenphen Namrub Shingmen Tshogpa	41
		Monpa Selwai Yoezer Tshogpa	43
		Namther Throgmen Tshogpa	52

		Orchid Management Group	33
18	Tsirang	Batesay NWFP Group	12
		Tashilling Sarekarthap Deytshen	20
19	Wangdue	Beyulangdra Non-Wood Forest Product Group	56
		Dangchu NWFP Management Group	218
		Eusa NWFP Management Group	60
		Gorgoen Shingmen Thoenketh Management group	40
		Lamjithang NWFP Management Group	80
		Ngomen Meto Pema NWFP Group	183
		Phangyul-Kumchi-Goenkha NWFP group	64
		Rukha Naktshel Thunkhung Tshogpa/Rukha Non wood Forest Products Management Plan	72
		Taksha yuesum non wood forest product group	65
		20	Zhemgang
Goling Jamphe Shingmin Thoenkhung Tshogpa	45		
Kaktrong NWFP Management Group	35		
Kamati Pipla Management Group	20		
Lamtang NWFP Management & Marketing Group	52		
Mamung Bamboo Management Plan	16		
Marangduth NWFP Management & Marketing Group	25		
Ngala NWFP Management Group	46		
NWFP group management and Marketing plan	28		
Nyakhar Shingmin Gongphel Tshogpa	30		

		Panabe NWFP Management Group	17
		Pongchola Bamboo Management Group	24
		Salapong NWFP Management Group	17
		Shobling Shingmin Thoenkhung Tshogpa	10
		Tshaidang Shingmin Gongphel Tshogpa	28
		Zangbi Bamboo Management Plan	16
Total			6,439

Table 13: List of NWFP plans revised in 2022

Sl. No.	Name of NWFP Group	Gewog	Name of NWFP Group	Species	Member Household (Nos.)
1	Lagay Shingmen Tshogpa	Tsenkhar, Lhuentse	Lagay Shingmen Tshogpa	<i>Rubia cordifolia</i> , <i>Paris polyphylla</i> , <i>Diplazium esculentu</i> , <i>Elatosteme lineolatum</i> , <i>Borinda</i>	67
2	Balung NWFP Management and Marketing Plan	Balung, Dagana	Balung NWFP Management and Marketing Plan	<i>Plectocomis himalayana</i>	30
3	Bana NWFP group	Lajab, Dagana	Bana NWFP group	<i>Plectocomia himalayana</i>	25
4	Mushroom Conservation & Market Group	Ura, Bumthang	Mushroom Conservation & Market Group	<i>Tricholoma matsutake</i>	42
5	Yengkhar seng NWFP Management	Drametse, Mongar	Yengkhar seng NWFP Management	<i>Paris polyphylla</i> , <i>Daphne</i>	15

	ent and Marketing Group		and Marketing Group	<i>spp., Rubia cordifolia</i>	
6	Bumpa Shingmen Dulan Tshogpa	Chudzom, Sarpang	Bumpa Shingmen Dulan Tshogpa	<i>Swertia chirata, Thysolaena latifoli, Rubia cordifolia, Pouzolzia spp, Piper longum, Paris polyphylla</i>	86
7	Doringphu Shingmen Tshogpa	Jigmecholing, Sarpang	Doringphu Shingmen Tshogpa	<i>Rubia cordifoli, Piper longum, Piper pedicellatum, Persea gamblei, swertia chirayita, Choerospondia axillari, Plectocomia himalayan, litsea cubel</i>	36
8	Tashiling Shingmin Dulen and Thongdrel Tshogpa	Jigmecholing, Sarpang	Tashiling Shingmin Dulen and Thongdrel Tshogpa	<i>Rubia cordifoli, Tshangja and bamboo shoot,</i>	18
Total					319

5. Resources Utilization

5.1. Timber

A total of 187,938.92 m³ of timber was extracted through Department and Natural Resources Development Corporation Limited (NRDCL). Out of the total timber extracted, 71,185.86 m³ was directly allotted by Department and 1,16,753.06 was allotted through NRDCL. In addition, the Department allotted 55,456.27m³ of firewood. Table 14 shows the total timber allotted directly by the Department while the Table 15 &

Table 16 shows the firewood allotted at rural and commercial rate respectively.

Table 14: Timber allotted by DoFPS

Sl. No.	Offices	Rural		Commercial	
		Volume (m ³)	Royalty (Nu)	Volume (m ³)	Royalty (Nu)
1	Divisional Forest Office, Bumthang	2,163.97	250,369.18	8,442.35	1,262,657.70
2	Divisional Forest Office, Dagana	546.69	15,863.55	189.17	52,074.63
3	Divisional Forest Office, Gedu	371.80	9,373.20	3,893.84	782,144.15
4	Divisional Forest Office, Mongar	5,267.99	81,281.71	404.60	201,138.55
5	Divisional Forest Office, Paro	3,313.24	34,494.85	1,137.66	487,639.38
6	Divisional Forest Office, Pema Gatshel	369.70	3,372.02	229.61	17,394.90
7	Divisional Forest Office, Samdrup Jongkhar	1,127.14	13,300.00	796.17	126,930.29
8	Divisional Forest Office, Samtse	1,342.30	18,452.81	3,764.55	700,227.81
9	Divisional Forest Office, Sarpang	1,399.25	11,860.00	5,490.15	1,283,886.00
10	Divisional Forest Office, Thimphu	2,340.35	17,598.12	2,163.92	399,542.32
11	Divisional Forest Office, Trashigang	3,325.49	78,224.70	3,307.77	1,166,310.60
12	Divisional Forest Office, Tsirang	5.01	506.00	0.99	379.88

13	Divisional Forest Office, Wangdue	4,619.61	67,536.60	924.81	120,813.00
14	Divisional Forest Office, Zhemgang	1,271.61	21,736.01	335.89	152,402.71
15	Bumdeling Wildlife Sanctuary	1,825.65	14,443.46	665.56	156,219.19
16	Jigme Dorji National Park	488.44	20,927.64	2,402.48	562,285.40
17	Jigme Khesar Strict Nature Reserve	129.09	4,480.00	0.23	180.00
18	Jigme Singye Wangchuck National Park	68.01	1,680.21	46.99	21,917.36
19	Jomotsangkha Wildlife Sanctuary	3,249.61	14,140.00	877.55	217,053.05
20	Phibsoo Wildlife Sanctuary	2.70	200.00	6.54	3,618.00
21	Phrumsengla National Park	75.17	9,165.70	744.18	119,238.55
22	Royal Manas National Park	337.47	2,879.81	768.98	91,268.66
23	Sakteng Wildlife Sanctuary	162.43	13,736.00	127.62	32,942.85
24	Wangchuck Centennial National Park	535.94	18,255.10	125.59	42,111.51
Total		34,338.66	723,876.67	36,847.20	8,000,376.49



Figure 4: Rural timber marking



Figure 5: Commercial timber extraction

Table 15: Firewood allotted by DoFPS (rural)

Sl. No.	Name of office	Rural	
		Volume (m ³)	Royalty (Nu)
1	Divisional Forest Office, Bumthang	2,979.39	151,849.58
2	Divisional Forest Office, Dagana	1,160.87	27,439.99
3	Divisional Forest Office, Gedu	1,193.05	30,378.00
4	Divisional Forest Office, Mongar	5,300.68	119,496.77
5	Divisional Forest Office, Paro	804.45	8,692.00
6	Divisional Forest Office, Pema Gatshel	420.32	8,141.78
7	Divisional Forest Office, Samdrup Jongkhar	397.20	6,914.92
8	Divisional Forest Office, Samtse	2,516.67	79,618.00
9	Divisional Forest Office, Sarpang	1,818.94	57,540.00
10	Divisional Forest Office, Thimphu	459.97	4,506.40
11	Divisional Forest Office, Trashigang	4,768.09	105,409.70
12	Divisional Forest Office, Tsirang	56.57	1,710.00
13	Divisional Forest Office, Wangdue	1,806.29	47,456.43
14	Divisional Forest Office, Zhemgang	292.81	7,875.00
15	Bumdeling Wildlife Sanctuary	1,744.96	39,565.71
16	Jigme Dorji National Park	1,964.74	45,093.95
17	Jigme Khesar Strict Nature Reserve	16.00	360.00
18	Jigme Singye Wangchuck National Park	33.77	960.19
19	Jomotsangkha Wildlife Sanctuary	247.94	540.79
20	Phrumsengla National Park	1,643.54	28,852.01
21	Royal Manas National Park	16.00	180.00
22	Sakteng Wildlife Sanctuary	1,540.91	45,443.52
23	Wangchuck Centennial National Park	3,408.91	93,227.46
Total		34,592.07	911,252.20

Table 16: Firewood allotted by DoFPS (commercial)

Sl. No.	Name of office	Commercial	
		Volume (m3)	Royalty (Nu)

1	Divisional Forest Office, Bumthang	483.82	52,623.04
2	Divisional Forest Office, Dagana	641.86	15,582.89
3	Divisional Forest Office, Gedu	8,070.29	83,271.50
4	Divisional Forest Office, Mongar	418.82	8,203.10
5	Divisional Forest Office, Paro	48.14	2,400.00
6	Divisional Forest Office, Pema Gatsel	1,135.56	23,487.69
7	Divisional Forest Office, Samdrup Jongkhar	631.13	14,200.22
8	Divisional Forest Office, Samtse	2,759.42	62,814.98
9	Divisional Forest Office, Sarpang	12.00	270.00
10	Divisional Forest Office, Thimphu	325.57	4,846.36
11	Divisional Forest Office, Trashigang	857.56	19,358.00
12	Divisional Forest Office, Tsirang	106.00	1,247.92
13	Divisional Forest Office, Wangdue	61.91	1,698.43
14	Divisional Forest Office, Zhemgang	534.07	7,807.06
15	Bumdeling Wildlife Sanctuary	1.42	1,125.00
16	Jigme Dorji National Park	24.00	540.00
17	Jigme Khesar Strict Nature Reserve	1,434.51	31,357.33
18	Jigme Singye Wangchuck National Park	225.88	3,293.75
19	Jomotsangkha Wildlife Sanctuary	52.00	1,170.00
20	Phrumsengla National Park	968.89	18,339.00
21	Royal Manas National Park	838.04	1,273.67
22	Sakteng Wildlife Sanctuary	341.31	10,500.93
23	Wangchuck Centennial National Park	892.00	20,070.00
Total		20,864.20	385,480.87

The Department allotted 1,16,753.06 m³ of timber to NRDCL in 2022, out of which 74,039.55 m³ was extracted from FMU and 42,713.51 m³ from

ad hoc areas (outside FMUs) by NRDCL based on the FMU operational plan and approval provided by Department (Table 17 & Table 18)

Table 17: Timber allotted from FMU

Sl. No.	Name of the FMU	Rural		Commercial	
		Planned standing vol (m ³)	Standing volume achieved (m ³)	Planned standing vol (m ³)	Standing volume achieved (m ³)
1	Karshong	1,500.00	178.71	1,158.18	1,538.39
2	Dawathang	4,000.00	2,556.00	12,666.32	10,396.29
3	Rodungla	2,900.00	592.88	-	-
4	Chendebji	2,000.00	93.02	2,351.01	2,868.98
5	Khotokha	1,800.00	1,681.02	5,965.30	6,535.80
6	Gogona	1,167.00	1,189.64	3,839.97	3,966.98
7	Dongdechu	1,250.00	6.56	2,319.34	1,003.49
8	Khaling Kharungla	400.00	491.35	714.00	842.58
9	Khengzore	400.00	-	1,992.79	807.89
10	Zonglela	2,877.00	1,178.38	2,620.01	6,956.07
11	Haa-East	-	-	-	1,104.47
12	Selela	2,400.00	2,945.23	4,030.99	4,752.24
13	Lonchu	1,000.00	757.78	3,472.30	2,472.17
14	Bitekha	900.00	550.20	3,611.74	2,372.92
15	Gidakom	1,000.00	1,168.79	3,670.00	7,166.07
18	Lingmithang	500.00	268.11	3,532.47	5,018.61
19	Korilla	2,700.00	2,384.34	-	64.60
20	Rongmanchu	500.00	130.00	-	-
Total		27,294.00	16,172.01	51,944.43	57,867.54

Table 18: Timber allotted from areas outside managed areas

Sl. No.	Ad-hoc Areas	Planned Standing vol (m ³)	Standing volume achieved (m ³)
1	Bark Beetle Infestation Batsaphu, Haa (Paro)	759.75	759.75

2	Bark Beetle infestation at WCNP (Bumthang)	12,560.00	3,134.85
3	Bark Beetle Infestation Uruk, Bumthang (Bumthang)	5,000.00	-
4	Other ad hocs from territorial divisions and Protected areas	20,000.00	35,834.00
5	Bark Beetle infestation at Ura (Bumthang)	468.48	-
6	Scientific thinning from 100 ha SRF	2,832.06	2,832.00
7	Timber extraction from Project Area (Zhemgang)	2,065.40	152.91
Total		43,685.69	42,713.51

5.2. NWFP allocation.

The Table 19 & Table 20 shows different NWFP issued by the Department in 2022 and the corresponding revenue collected.

Table 19: NWFP (plant) allotted by DoFPS)

Sl. No.	NWFP	Unit	Quantity	Revenue (Nu)
1	Artimesia	Kilogram	400.00	800.00
2	Bamboo	Bundle	1,188.00	9,496.00
		Number	9,566.00	3,172.00
3	Bamboo chips	m ³	1,560.00	9,750.00
4	Bamboo shoots	Number	100.00	200.00
5	Banana leaves	Head Load	332.00	1,660.00
6	Bulbophyllum umbellatum	Bundle	20.00	1,040.00
7	Cane shoot	Bundle	487.00	1,948.00
		Head Load	3.00	12.00
		Number	150.00	200.00
8	Charcoal	Kilogram	4,635.00	27.00
		m ³	5,888.00	43,750.00
9	<i>Cinnamomum spp (Dalchini)</i>	Number	130.00	360.10
10	<i>Cinnamomum tamala (Tezpat)</i>	m ³	8.00	180.00
11	<i>Daphne spp (Bark)</i>	Kilogram	3,841.00	2,004.60
12	<i>Edgeworthia spp. (Bark)</i>	Kilogram	400.00	240.00
13	<i>Gentiana spp.</i>	Kilogram	240.00	3,840.00
14		Bundle	5.00	20.00

	<i>Hippophae salicifolia</i>	Kilogram	3,050.00	12,200.00
15	<i>Juniperus spp.</i>	Bundle	20.00	80.00
		m ³	52.00	140.00
16	<i>Knema tenuinevia</i>	Kilogram	200.00	1,000.00
		m ³	8.00	180.00
17	Large Bamboo	m ³	353.00	3,020.00
		Number	74,520.00	94,682.00
		Truckload	1.00	160.00
18	Small bamboo	Bundle	4,882.75	5,774.00
		m ³	8.00	40.00
		Number	27,111.00	20,019.20
19	Leaf mould	m ³	4,598.00	34,210.00
		Truckload	9.00	400.00
20	Leaves of juniper (Incense)	Head Load	52.50	210.00
		Kilogram	822.00	1,848.00
		m ³	220.00	1,100.00
		Truckload	7.00	280.00
21	Lemongrass oil	Litre	135.00	675.00
22	Mushroom	Kilogram	428.00	4,360.00
23	<i>Nardostachys jatamansi (Pangpoe)</i>	Kilogram	3,564.00	7,128.00
24	<i>Neomicrocalamus andropogonifolus (Ringshoo)</i>	Bundle	50.00	5.00
25	<i>Neopicrorhiza scrophulariiflora</i>	Kilogram	514.99	-
26	<i>Ophiocordyceps sinensis (Cordyceps)</i>	Kilogram	876.52	7,360,458.00
		Number	32.00	19,200.00
27	Orchid	Clump	20.00	800.00
28	<i>Picorrhiza spp</i>	Kilogram	177.00	2,124.00
29	Pine needle	Head Load	2.00	20.00
		m ³	40.50	136.00
		Truckload	12.00	144.00
30	<i>Piper nigra</i>	Kilogram	1,045.00	20,900.00
31	<i>Pouzolzia spp.</i>	Kilogram	8,598.00	15,596.00
32	<i>Rhodiola spp.</i>	Kilogram	4,776.00	9,552.00
33	<i>Rhododendron antopogon</i>	Kilogram	3,879.00	7,756.00
34	<i>Rhododendron setosum</i>	Kilogram	35.00	110.00

35	<i>Rhododendron spp</i>	Kilogram	1,220.00	2,440.00
36	<i>Rubia cordifolia</i>	Kilogram	27,909.00	442,648.00
37	Shilajit	Kilogram	509.00	4,072.00
38	<i>Tanacetum nubigenum, (Khenkar-Dzo)</i>	Kilogram	18.00	42.00
39	<i>Thysanolaena latifolia (Broom grass)</i>	Bundle	1,061.00	2,565.00
40	Wildlings (Saplings)	Bundle	50.00	100.00
		Number	1,072.00	2,342.01
41	Woodburr	Number	450.00	4,500.00
42	<i>Zanthoxylum armatum</i>	Kilogram	6,637.00	800.00
Total				8,162,515.91

Table 20: NWFP (surface collection materials) allowed by DoFPS

Sl. No.	NWFP	Unit	Quantity	Revenue (Nu)
1	Boulder	m ³	217,112.00	1,009,320.00
2	Boulder & stone	m ³	38,967.20	192,536.00
3	Clay soil	m ³	3,309.00	16,580.00
4	Colour soil	kg	12,660.00	19,560.00
		m ³	212.00	830.00
5	Gravel	m ³	259,130.80	1,586,155.35
6	Quartzite	m ³	5,552.00	52,950.00
7	River bed materials	m ³	426,856.00	2,099,760.00
8	Sand	m ³	454,946.63	2,431,283.90
9	Stone	m ³	386,010.62	1,603,225.44
10	Stone & boulder	m ³	13,592.00	67,880.00
11	Stone chips	m ³	133,667.00	270,295.00
12	Stone dust	m ³	8,754.00	24,710.00
12	Top soil	m ³	7,040.00	74,650.00
Total				9,449,735.69

6. RBM Export Sites

The Department received an upfront revenue of 19 million from the auction of nine new River Bed Material (RBM) export sites spanning over 147.270 acres and accounting volume of 2,682,007.605 MT. Additionally,

37 million on the reserve price has been generated through allotment of 26 existing RBM export sites covering 656.49 acres (Table 21 & Table 21)

Table 21: 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, Gedu	5.00	31.43	572,387.45	1,980,944.16
2	Divisional Forest Office, Pemagatshel	1.00	13.70	249,497.55	1,300,000.00
3	Divisional Forest Office, Samtse	2.00	79.90	1,455,098.85	14,681,977.75
4	Divisional Forest Office, Sarpang	1.00	22.24	405,023.76	1,957,500.00
Total		9.00	147.27	2,682,007.61	19,920,421.91

Table 22: Existing RBM export sites reallocated on Reserved Price

Sl. No.	Office	Existing Export Site	Area (in acre)	Volume (MT)	Upfront payment (25% of reserve price in Nu.)
1	Divisional Forest Office, Gedu	4.00	138.40	2,520,471.60	7,100,684.02
2	Divisional Forest Office, Samtse	17.00	422.06	7,377,964.29	25,188,807.24
3	Divisional Forest Office, Sarpang	5.00	96.03	1,748,850.35	52,552.88
Total		26.00	656.49	11,647,286.24	37,545,194.14

7. Fee collection

The Department generated additional revenue through collection of various fees in 2022 (Table 23).

Table 23: Fees collected

Sl.No.	Source	Amount (Nu.)
1	Boating fee	10,300.00
2	Camping fee	2,030.00
3	Certificate of origin	25,390.00
4	Cordyceps permit fee	826,460.00
5	Ecotourism	110.00
6	Export permit fee	1,555,790.00
7	Export service charge	363,137.00
8	Filming fee	47,000.00
9	Fishing fee	834,860.00
11	Import permit fee	122,800.00
12	Permit fee*	2,388,510.00
13	Power chain fee	14,560.00
14	Research Fee	15,000.00
15	Environment clearance Fee	161,600.00
16	Visitor fee	3,135,170.00
Total		45,524,717.00

Permit fee* includes GFPMO, ITMO, COSTDMO, G2C PERMIT

8. Forestry Services

8.1. Wildlife Rescue and Rehabilitation

The Department attended 163 wildlife rescue and rehabilitation cases in 2022. Sarpang and Thimphu field offices had the highest number of rescue operations, whereas Gasa being the lowest as illustrated in Figure 6. Out of the rescued animals, 100 were released back into the wild, 34 died during or post rescue operation, 2 were translocated to a new location, 22 escaped during rescue and 18 are currently undergoing rehabilitation (Figure 7).

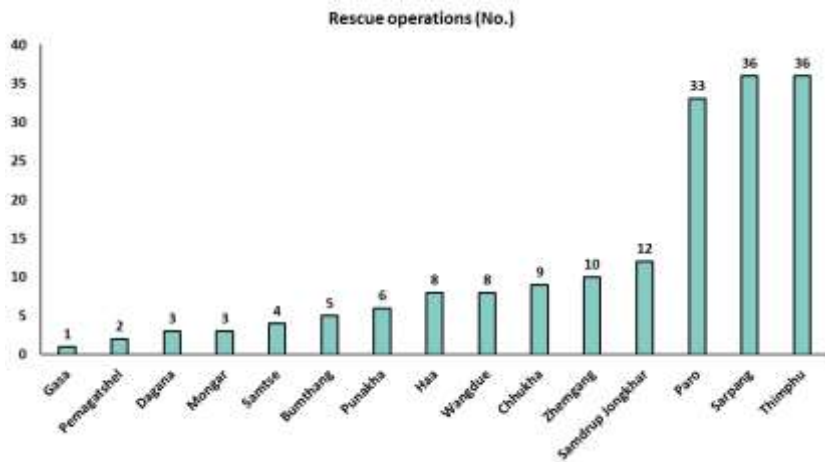


Figure 6: Dzongkhag wise rescue operation

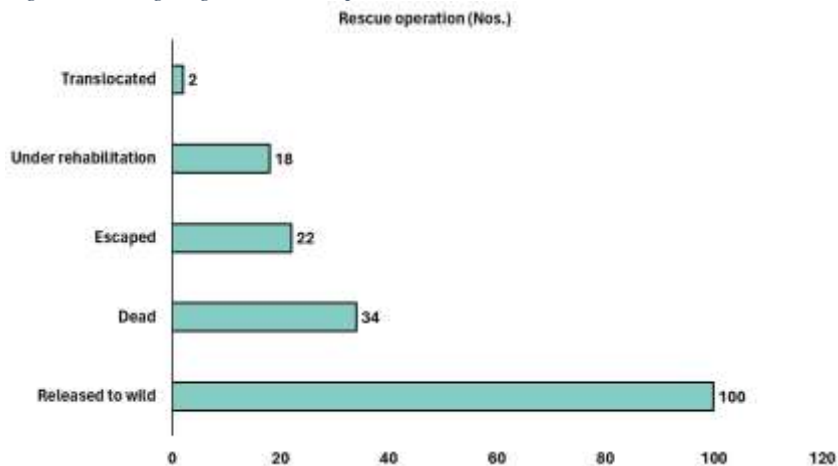


Figure 7: Types of rescue operation

Table 24: Office wise rescue and rehabilitation of wild animals

Sl.No.	Name of Head Office	Dzongkhag	Animal	Rescue operations (No.)
1	Divisional Forest Office, Bumthang	Bumthang	<i>Muntiacus muntjak</i>	1
			<i>Naemorhedus goral</i>	1

			<i>Rusa unicolor</i>	1
			<i>Sus scrofa</i>	1
2	Divisional Forest Office, Dagana	Dagana	<i>Paguma larvata</i>	1
			<i>Ursus thibetanus</i>	1
3	Divisional Forest Office, Gedu	Chhukha	<i>Ursus thibetanus</i>	1
			<i>Cuon alpinus</i>	1
			<i>Elephas maximus</i>	1
			<i>Ictinaetus malayensis</i>	1
			<i>Muntiacus muntjak</i>	2
			<i>Pavo cristatus</i>	1
			<i>Rusa unicolor</i>	1
			<i>Spilornis cheela</i>	1
4	Divisional Forest Office, Mongar	Mongar	<i>Felis nipalensis</i>	1
			<i>Ophiophagus hannah</i>	1
			<i>Ptyas korros</i>	1
5	Divisional Forest Office, Paro	Paro	<i>Bos gaurus</i>	3
			<i>Ursus thibetanus</i>	1
			<i>Capricornis sumatraensis thar</i>	3
			<i>Muntiacus muntjak</i>	15
			<i>Naemorhedus goral</i>	3
			<i>Rusa unicolor</i>	5
			<i>Sus scrofa</i>	3
6	Divisional Forest Office, Pema Gatshel	Pemagatshel	<i>Ursus thibetanus</i>	2
7	Divisional Forest Office, Samdrup Jongkhar	Samdrup Jongkhar	<i>Rhabdophis subminiatus</i>	2
			<i>Lycodon aulicus</i>	3
			<i>Rusa unicolor</i>	1
8	Divisional Forest Office, Samtse	Samtse	<i>Pavo cristatus</i>	1
			<i>Boiga cyanea</i>	1
			<i>Naja</i>	1
			<i>Python bivittatus</i>	1
9	Divisional Forest Office, Sarpang	Sarpang	<i>Columba livia domestica</i>	1
			<i>Paguma larvata</i>	3

			<i>Python sebae</i>	3
			<i>Trachypithecus geei</i>	3
			<i>Ursus thibetanus</i>	3
			<i>Macaca assamensis</i>	2
			<i>Manis pentadactyla</i>	1
			<i>Muntiacus muntjak</i>	6
			<i>Orthriophis taeniurus yunnanensis</i>	1
			<i>Pavo cristatus</i>	8
			<i>Sus scrofa</i>	1
			<i>Tyto alba</i>	1
			<i>Varanus sp</i>	2
10	Divisional Forest Office, Thimphu	Thimphu	<i>Bos gaurus</i>	1
			<i>Mustela nivalis</i>	1
			<i>Ursus thibetanus</i>	11
			<i>Arborophila torqueola</i>	1
			<i>Macaca assamensis</i>	5
			<i>Muntiacus muntjak</i>	3
			<i>Myophonous caeruleus</i>	1
			<i>Naemorhedus goral</i>	2
			<i>Rusa unicolor</i>	7
			<i>Schizothorax plagiostomus</i>	1
			<i>Sus scrofa</i>	1
			<i>Tyto alba</i>	2
11	Divisional Forest Office, Wangdue	Punakha	<i>Cuon alpinus</i>	1
			<i>Felis nipalensis</i>	1
			<i>Ketupa nipalensis</i>	1
			<i>Muntiacus muntjak</i>	3
		Wangdue	<i>Ursus thibetanus</i>	1
			<i>Muntiacus muntjak</i>	2
			<i>Naemorhedus goral</i>	2
			<i>Panthera pardus</i>	1
			<i>Rusa unicolor</i>	1
			<i>Sus scrofa</i>	1

12	Divisional Forest Office, Zhemgang	Zhemgang	<i>Capricornis sumatraensis thar</i>	1
			<i>Felis nipalensis</i>	1
			<i>Naemorhedus goral</i>	1
			<i>Orthriophis taeniurus yunnanensis</i>	1
			<i>Python bivittatus</i>	1
			<i>Rusa unicolor</i>	2
13	Jigme Dorji National Park	Gasa	<i>Rusa unicolor</i>	1
14	Jigme Khesar Strict Nature Reserve	Haa	<i>Ursus thibetanus</i>	5
			<i>Muntiacus muntjak</i>	1
			<i>Rusa unicolor</i>	2
15	Jigme Singye Wangchuck National Park	Zhemgang	<i>Capricornis sumatraensis thar</i>	1
			<i>Semnopithecus schistaceus</i>	2
16	Jomotsangkha Wildlife Sanctuary	Samdrup Jongkhar	<i>Cryptelytrops erythrurus</i>	1
			<i>Macaca assamensis</i>	1
			<i>Muntiacus muntjak</i>	1
			<i>Oreocryptophis porphyraceus</i>	1
			<i>Python bivittatus</i>	1
			<i>Viverra zibetha</i>	1
17	Phibsoo Wildlife Sanctuary	Dagana	<i>Ardea insignis</i>	1
		Sarpang	<i>Rufous-necked Hornbill</i>	1
Total				176

Table 25: Types of Rescues and Rehabilitation

Sl. No.	Animal	Dead (Nos.)	Escaped (Nos.)	Released to wild (Nos.)	Translocated (Nos.)	Under rehabilitation (Nos.)
1	<i>Bos gaurus</i>		4			
2	<i>Columba livia domestica</i>			1		
3	<i>Mustela nivalis</i>			1		

4	<i>Paguma larvata</i>			4		
5	<i>Python sebae</i>			3		
6	<i>Rhabdophis subminiatus</i>			2		
7	<i>Trachypithecus geei</i>	3				
8	<i>Ursus thibetanus</i>	3	11	5	2	5
9	<i>Arborophila torqueola</i>			1		
10	<i>Ardea insignis</i>					1
11	<i>Boiga cyanea</i>			1		
12	<i>Capricornis sumatraensis thar</i>	1		4		
13	<i>Cryptelytrops erythrurus</i>			1		
14	<i>Cuon alpinus</i>			2		
15	<i>Elephas maximus</i>		1			
16	<i>Felis nipalensis</i>	1		2		
17	<i>Ictinaetus malayensis</i>	1				
18	<i>Ketupa nipalensis</i>			1		
19	<i>Lycodon aulicus</i>			3		
20	<i>Macaca assamensis</i>		3	3		2
21	<i>Manis pentadactyla</i>			1		
22	<i>Muntiacus muntjak</i>	13		21		
23	<i>Myoponus caeruleus</i>					1
24	<i>Naemorhedus goral</i>	4	1	2		2
25	<i>Naja naja</i>			1		
26	<i>Ophiophagus hannah</i>			1		
27	<i>Oreocryptophis porphyraceus</i>			1		

28	<i>Orthriophis taeniurus yunnanensis</i>			2		
29	<i>Panthera pardus</i>			1		
30	<i>Pavo cristatus</i>			3		7
31	<i>Ptyas korros</i>			1		
32	<i>Python bivittatus</i>			3		
33	<i>Rufous-necked Hornbill</i>			1		
34	<i>Rusa unicolor</i>	6	2	13		
35	<i>Schizothorax plagiostomus</i>			1		
36	<i>Semnopithecus schistaceus</i>			2		
37	<i>Spilornis cheela</i>	1				
38	<i>Sus scrofa</i>	1		6		
39	<i>Tyto alba</i>			3		
40	<i>Varanus sp</i>			2		
41	<i>Viverra zibetha</i>			1		
Total		34	22	100	2	18

8.2. Wood Based Industries

The wood-based industries (WBIs) are defined as all industries that use wood as a primary raw material and shall include those industries as listed in as per Rule No. 178 and 206 of the Forest and Nature Conservation Rules and Regulations of Bhutan (FNCRR), 2017. As of now, 615 WBIs are registered in Bhutan. Paro Dzongkhag has the highest WBIs with 107 followed by Tashiyangtse Dzongkhag with 73 numbers. The Dzongkhag wise distribution of WBI is in [Figure 8](#). [Figure 9](#) shows the types of WBI in the country. Amongst the list, the most common type of WBI registered is the furniture unit (327) and least common are charcoal manufacturing unit, paper manufacturing unit, particle board, plywood factory, stationary sawmill and plywood factory.

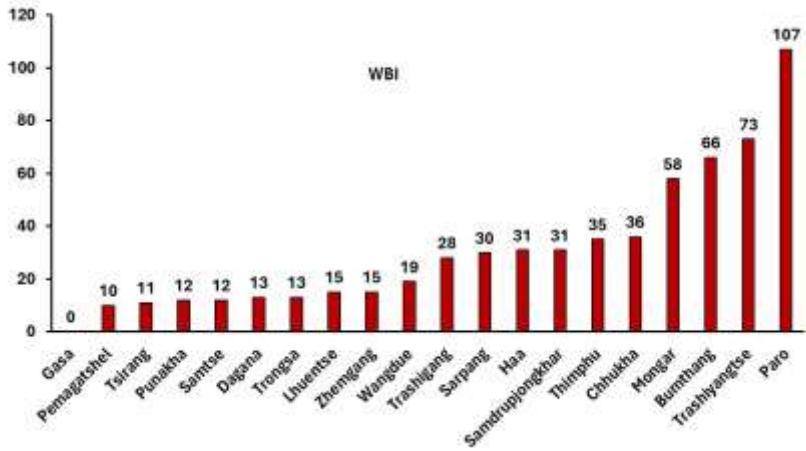


Figure 8: Dzongkhag wise WBI

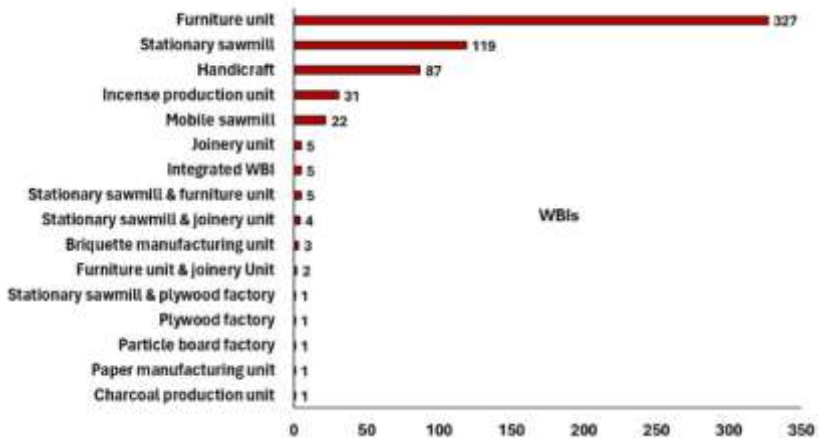


Figure 9: Types of WBI

8.3. Plantation

Since 1947, the country has been engaged in forest plantation activities, with the Department of Forests and Park Services playing a central role. In 2016, the responsibility for creating and maintaining new plantations were transferred to Green Bhutan Corporation Limited (GBCL), a state-owned cooperation. Under this arrangement, the Department collaborates with GBCL in identifying suitable sites, allocating plantation funds, providing technical guidance and supervision during implementation, and monitoring the progress of the plantations. GBCL predominantly carries out afforestation and reforestation activities, the Department coordinates certain plantations associated with national events or community forestry initiatives. Additionally, the NRDCL is involved in reforestation efforts within the FMU. **Table 26, Table 27, Table 28 & Table 29** shows the plantation created and maintenance of plantation in 2022.

Table 26: Plantation created and maintained by NRDCL in FMU

Sl.No.	FMU	Plantation created (ha)	Plantation maintained (Ha)
1	Lonchu	0.00	14.24
2	Korilla	0.00	24.34
3	Selela	0.00	8.93
4	Zonglela	1.40	35.10
5	Lingmithang	5.00	23.07
6	Karshong	0.00	0.00
7	Dongdechu	3.20	7.52
8	Khaling Kharungla	7.75	25.73
9	Haa East	0.00	9.24
10	Gidakom	5.46	17.19
11	Gogona	0.00	14.83
12	Dawathang	0.00	3.00
13	Khengzore	1.97	0.00
Total		24.78	183.19

Table 27: Plantation created by field offices in coordination with CFMGs

Sl. No.	Lead	Dzongkhag	Location name	Area planted (Ha)
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1	Community Forest Management Group	Wangdue	Gomo CF, Nidupchu	0.40
2	Community Forest Management Group	Wangdue	Kuenley CF, Bjjokha-Wangkha	0.40
3	Community Forest Management Group	Wangdue	Tsekakha CF	0.80
4	Divisional Forest Office, Mongar	Mongar	Jalang CF	1.00
5	Divisional Forest Office, Tsirang	Tsirang	Horongay under Tashithang	1.00
6	Divisional Forest Office, Tsirang	Tsirang	Tungpani, Norbugang	1.00
Total				4.60

Table 28: New plantation maintained by GBCL

Sl. No.	Office	Location name	Total area (ha)
1	Divisional Forest Office, Bumthang	Bumophai	10.00
		Dorjigonpa, above cremation	10.00
		Dorjigonpa, below highway	8.00
		Dumjeegonpa	9.00
		Hamay	4.00
		Kawdhang	12.00
		Lepang, Taktse	16.00
		Nyala Teng-II	6.00
		Nyala-Wog	2.00
		Thilee-Zur-I	4.02
		Thilee-Zur-II	4.00
2	Divisional Forest Office, Gedu	Lower Barsa	10.00
3	Divisional Forest Office, Mongar	Babanang	6.00
		Braksharang	2.00
		Changshing Gonpa	4.00
		Chompa	3.50
		Gangzur	4.00
		Lungdama Wang	4.00

		Murmur	3.00
		Rongtoe	2.63
		Shingthangbrangsa	6.66
		Yangbary/Ngyangrithar	1.00
		Zachu	15.00
4	Divisional Forest Office, Pema gatsel	Denshingyoe	5.00
		Dolepchen	7.53
		Jashar Gonpa	4.60
5	Divisional Forest Office, Samdrup Jongkhar	Gerwa	5.00
6	Divisional Forest Office, Tashigang	Demkhar	20.00
7	Divisional Forest Office, Tashigang	Bartsam	45.00
		Demkhar	20.00
		Doksum	0.50
		Dungonpa	1.00
		Gazari	20.00
		Toktseri	20.00
8	Divisional Forest Office, Tsirang	Balaypothi Dhunga	6.00
		Damphu	6.00
		Dangragaon	20.00
		Gairigaon	20.00
		Rickeydangra	25.00
9	Divisional Forest Office, Wangdue	Dungdungnesa	12.50
		Gobja	23.50
10	Divisional Forest Office, Zhemgang	Phulabi	3.00
11	Jigme Khesar Strict Nature Reserve	Near Dungkhag Office	2.50
		Nebi gonpa	2.50
12	Jigme Singye Wangchuck National Park	Rangthang	6.00
13	Jomotsangkhag Wildlife Sanctuary	Lauri	5.00
14	Phrumsengla National Park	Chokona	2.69

Total**430.13****Table 29: Plantation maintained by field offices**

Sl.No.	Division	Location	Total area (ha)
1	Divisional Forest Office, Dagana	Sibsooni	1.00
		Jangsa	4.00
2	Divisional Forest Office, Mongar	Chompa	0.89
3	Divisional Forest Office, Samtse	Nunai	1.50
4	Divisional Forest Office, Sarpang	Malbans	2.00
		SWRRC	5.00
5	Divisional Forest Office, Thimphu	Kuenselphodrang (GWR pltn)	5.00
6	Divisional Forest Office, Tsirang	Sallari	4.00
7	Divisional Forest Office, Wangdue	Along Linkana road	1.60
		Dzong to Changyul	Linear
		Thangzona	4.00
		Zomlingthang	4.40
8	Jomotsangkha Wildlife Sanctuary	Aipoli	1.00
Total			34.39

8.4. Forestry Clearance

The Department issued 2,793 forestry clearances for various purposes (Figure 10) covering 3,608.527 hectares. In addition, 2,276 forestry clearances were issued for Removal of forest produce from private land covering 2,066.06 hectare.

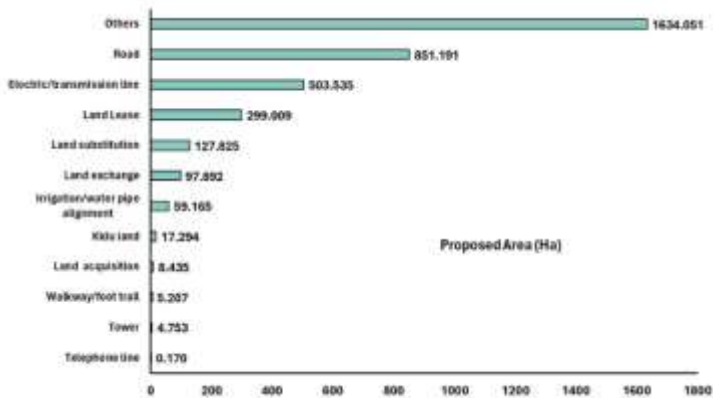


Figure 10: FC issued for various purposes

9. Challenges

9.1. Forest Fire

A total of 52 forest fires occurred in 2022, resulting in damage to an area of 5,171.87 hectares. The number of forest fires recorded in 2021 was 45, which is seven fewer than in 2022 (Figure 12). Agriculture debris burning, electric short circuits, roadside workers, smokers, children, and unknown causes were the main reasons for the forest fires in 2022. Of the total damaged area, 4,297.99 hectares were lost due to unknown reasons (Figure 13).



Figure 11: Forest fire

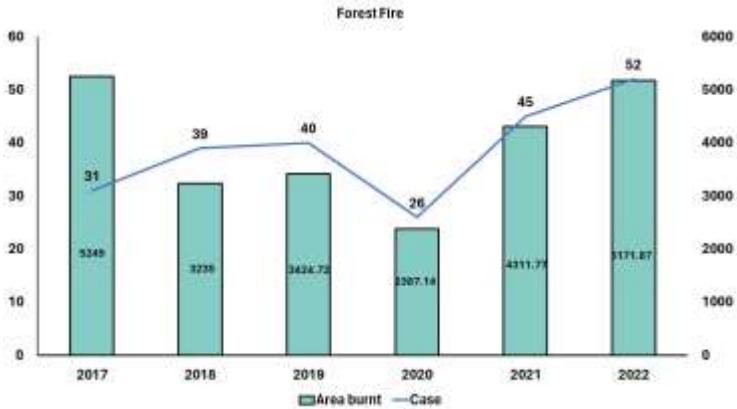


Figure 12: Forest fire incidences (2017-2022)

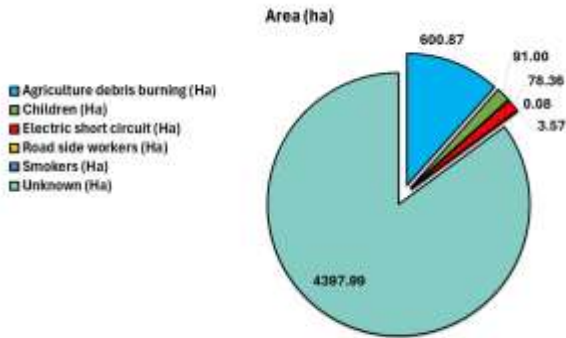


Figure 13: Area affected by forest fire

9.2. Forest Offence

In 2022, a total of 1,284 forest offences were apprehended, which is an increase of 20 cases compared to the earlier year. (Table 30), The highest number of forest offences is related to illegal logging and forest fires being the lowest. Forest offence cases has peaked in 2020 with 1917 case apprehended while it was lowest in the year 2017 with 1150 cases (Figure 14)

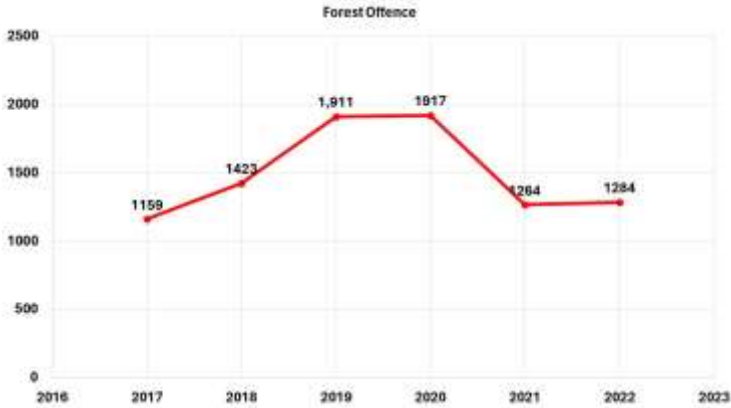


Figure 14: Forest offence (2017-2022)

Table 30: Forest offence

Sl. No.	Offence Type	Cases (Nos.)	Fine and Compensation (Nu)
1	Aquatic	215	1,351,950.00
2	Forest Fire	11	597,800.00
3	Illegal timber	705	20,556,902.68
4	Land Related	43	1,010,735.93
5	NWFP	244	4,708,290.87
6	Timber misuse	43	733,513.11
7	Wildlife poaching	23	519,000.00
Total		1,284	29,478,192.59

9.3. Human Wildlife Conflict

Bhutan recorded 155 conflict incidents in 2022, [Table 31](#). As part of Safe System Approach to address human-wildlife conflicts, especially human-tiger conflicts (HTCs), the Department of Forests and Park Services (DoFPS) launched the Gewog Tiger Conservation Tshogpa (GTCT) in 2022. It is a community-based initiative initially piloted in six Gewogs spanning Trongsa, Zhemgang, and Bumthang Dzongkhags. Currently, there are 13 GTCT sites with 800 beneficiary members and 1800 insured livestock. GTCT was initiated to offer an integrated, community-driven solution for managing and mitigating HTCs. GTCT focuses on reducing financial losses to local communities due to tiger-related livestock

depredation through compensation mechanisms and is guided by robust bylaws that support various actions to prevent, mitigate, respond to, predict, and monitor HTC. The formation of Tiger Quick Response Teams within GTCT enhances conflict management, reducing risks to both human livelihoods and tiger populations

Table 31: Types of Human Wildlife Conflict

Sl. No.	Types	Incidences (No)
1	Livestock kill	44
2	Human Death	2
3	Human Injury	1
4	Crop affected	59
5	Others	49

Table 32: Livestock kill

Sl. No.	Predator name	Livestock name	Affected parties	Number of kills
1	Common Leopard	Goat	1	7
		Jersey	4	8
		Jersey calf	1	2
		Ox	1	1
2	Himalayan black bear	Cattle	1	1
		Pig	1	7
3	Leopard cat	Sheep	1	18
4	Snow leopard	Mule	1	1
		Yak	2	2
5	Tiger	Cattle	4	4
		Dzo-zom	2	2
		Horse	2	2
		Jatsham	3	3
		Jersey	10	10
		Jersey calf	1	1
		Local ox	2	2
Mithun	1	1		

		Ox	2	2
		Yak	4	7
6	Wild dog	Yak	1	20
Total			45	101

Table 33: Human Death and Injuries

Sl. No.	Predator Type	HWC	Affected parties	Number
1	Elephant	Human death	1	1
		Human injury	1	1
2	Himalayan black bear	Human death	1	1
Total			3	3

Table 34: Crop Damage

Sl. No.	Wildlife	Crop affected	Affected parties	Area of cropland (Acre)
1	Elephant	Bamboo	1	0.02
		Banana	10	1.66
		Betel nut	28	17.98
		Cardamom	5	4.76
		Maize	1	0.20
		Millet	1	0.10
		Orange	1	0.10
		Others		0.20
		Paddy	7	2.98
2	Wild boar	Paddy	5	13.36
Total			59	41.36

Table 35: Other HWC

Sl. No.	Predator Type	HWC	Affected parties	No.
1	Elephant	Indirect conflict evidences	46	1
		Killed by human		1
		Property damage		38
2	Himalayan black bear	Property damage		7

3	Tiger	Indirect conflict evidences		2
Total				49

10. Staff under DoFPS

The Department has 1568 employees serving in 2022, out of which 1298 are male and 279 female employees. Figure 15 shows the details of technical and non-technical staffs under DoFPS.

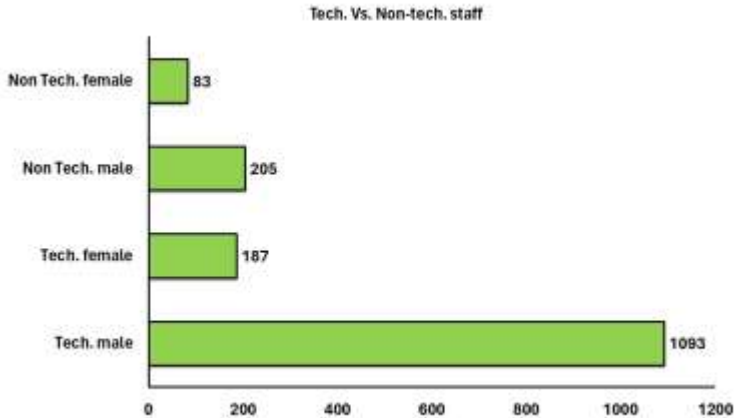


Figure 15: Staffs under DoFPS



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