GYALPOIZHING KEY BIODIVERSITY AREA CONSERVATION ACTION PLAN

-Securing habitat of Pallas's Fish Eagle-

(2023-2033)

DIVISIONAL FOREST OFFICE, MONGAR
DEPARTMENT OF FORESTS AND PARK SERVICES
MINISTRY OF ENERGY AND NATURAL RESOURCES

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4. Kurichu Hyro Power Plant
5. Department of Road, Lingmithang
6. Gyalpoizhing Higher Secondary School
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8. Gewog Administrations (Mongar, Drepong, Chali and Saling)
9. Thromde Representative, Gyalpoizhing town
10. Natural Resource Development Corporation Limited, Menchugang
11. Lingmithang Park Range Office , Phrumshing National Park

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Ministry of Energy and Natural Resources
Department of Forests and Park Services

Royal Government Endorsement and Approval

Gyalpoizhing Key Biodiversity Area Conservation Action Plan
1st July 2023 – 30th June 2033.

"In accordance with and as per the provisions of the Forest and Nature Conservation Act of Bhutan, 1995"

Submitted for Approval

Chief Forestry Officer
Mongar Forest Division.

Forwarded for Approval

Chief Forestry Officer
Nature Conservation Division

Approved by

DIRECTOR
Department of Forests and Park Services

FOREWORD

Bhutan's rich biodiversity has been secured by the network of protected areas for the past many decades. However, the state of forests and biodiversity are equally rich beyond the protected areas in Bhutan. On the contrary, the areas beyond protected areas faces considerable threats from anthropogenic disturbances and economic development, and this poses risk to many globally threatened habitats and species found therein. Across the globe, such areas of conservation significance have been addressed by the "other effective area-based conservation measures" or OECMs, an area set aside towards achieving the long term and effective in-situ conservation of biodiversity outside of protected areas. OECMs complement protected areas through sustained, positive conservation outcomes, even though they may be managed primarily for other reasons.

The Key Biodiversity Areas (KBA) in Bhutan, at a global scale is part of the OECMs and is, therefore, adopted towards securing conservation of areas and species that are of conservation significance in Bhutan. Of the many potential KBA sites in the country, the Department has identified and prioritized 11 sites in various Divisional Forest Offices, that requires urgent conservation interventions. For these 11 sites, key interventions have been identified, and has been and is being presented in this conservation action plan as per the guidelines on KBA. The KBA sites classified will serve as in-situ conservation of biodiversity beyond the protected areas.

These classified KBAs are expected to bring in improved conservation outcomes, that are crucial for the functioning of the environment through the provision of essential ecosystem services. It is essential for the processes that support all life on Earth, including humans. These KBAs are expected to address the issues of biodiversity loss and ecosystem degradation due to threats such as pollution, overexploitation of natural resources, introduction of invasive species and habitat loss.

I am happy to note that we continue to prioritize conserving our natural resources, while balancing ourselves with the need to economically develop the nation. I applaud all concerned officials from the Department for coming up with this conservation action for the first set of KBAs classified in the country and wish you all success in implementing the actions.

(Lobzang Dorji)
Director

View of Key Biodiversity Area from Bongdema

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Chapter 1: Introduction

1.1.Background

1.1.1 KBA and the importance

As per IUCN, Key Biodiversity Areas (KBA) are the sites contributing significantly to global persistence of biodiversity, however in Bhutan, it is pertaining to, areas outside protected area networks contributing significantly to the global and/or national persistence of biodiversity. It provides safeguard for the protection of threatened and/or endemic species facing the risk of local extinction for its persistence, protection of critical habitat and ecosystem to ensure enabling conditions for species persistence and flow of ecosystem services and in-situ conservation of biodiversity beyond the protected areas. The KBA identification process involves two stages, at national level and then registration at the international KBA list upon meeting criteria at both the levels. The KBA at Gyalpoishing is assessed under A1c/A1d.

1.1.2. Species (status and conservation importance)

Pallas's Fish Eagle (PFE) is listed as endangered in IUCN red list due to its declining population owing to habitat destruction. At global level the total population is estimated at 4500 matured individuals in its home range spreading across nine countries, China, India, Bangladesh, Myanmar, Nepal, Kajakshtan, Mongolia, Russia and Pakistan. Bhutan has very small dispersed population with very limited population information. Due to shrinkage and destruction of habitat, there was steady decline in the population in Bhutan and around the world, however no detailed study is being carried out in Bhutan. PFE was observed to be dwelling in the area for more than two decades as per the record.

1.1.3. Other species

The habitat serves as an important bird area for both terrestrial and migratory winter birds. Migratory birds are observed to be inhibiting the area in the winter months and using the site as route transit to migrate to other places in the south. Some of the important species includes, White Bellied Heron, Black Necked Crane and Golden Mahseer with other 23 species of water birds and 52 species of terrestrial birds and 10 species of fish. The area is also diverse in vegetation with 83 species of plants.

1.2. Description of KBA

The KBA at Gyalpoizhing was proposed in the year 2021 along the Kurrichhu river basin at Gyalpoizhing, Mongar for the conservation of Pallas's Fish Eagle (PFE). The KBA boundary falls in Chali, Saling, Mongar and Drepong gewogs covering an area of 2.65 km^2 with the central location reference at Latitude: 26.85 and Longitude 90.77. The altitude varies from 415 to 485 meters above sea level. The site in particular starts from Nuchi in the lower part of Gyalpoizhing extending up to Kurizampa towards North stretching in an area of 10km distance.

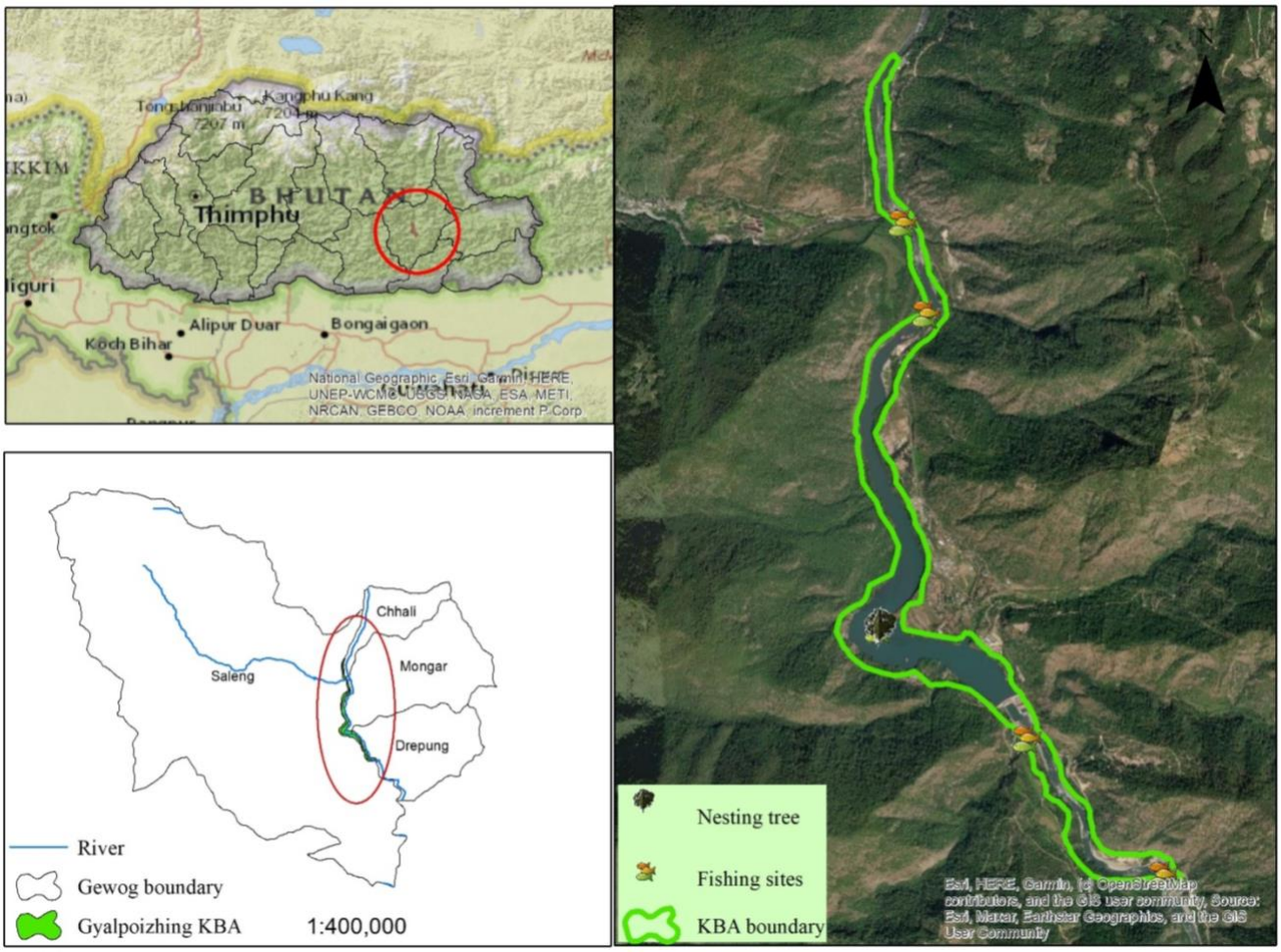

Figure I. Map of Gyalpoizhing KBA

Chapter 2: Threat and Challenges

2. Threat identification and ranking

Pallas's fish eagle in Bhutan and in particular in Gelpoishing area are faced with numerous direct threats, which are the major deterrent factors towards its conservation. Using the Miradi threat ranking principle, the various threats identified were ranked based on a score for three dimensions of scope, severity, and irreversibility, culminating to final score. Threats were ranked as very high (score 11-16), high (score 7-11), medium (4-6) and low (<4). Habitat degradation and forest fire are found to be the most severe threat to conservation of this eagle, with the overall threat rating falling under medium category. Six other threats fall under low threat ranking category (Table 1).

Table 1. Threat ranking for KBA

Threats \ Targets	Protection and conservation of species and its habitat	Enhancement/ Diversification of local livelihood opportunities	Summary Threat Rating
Decline in food source	Low		Low
Forest fire	High	Medium	Medium
Noise pollution	Medium		Low
Landslide and sedimentation	Low	Not Specified	Low
Fish passange and injury	Medium		Low
Habitat degradation	High		Medium
Water pollution	Low		Low
Ellectrocution and collision	Medium		Low
Summary Target Ratings:	High	Low	**Overall Project Rating** Medium

2.1. Habitat degradation

The population in the KBA area and its buffer zone (<500m) are growing exponentially, due to which its impact on biodiversity and environment have become worrisome. Currently there are 5 rural house buildings, 20 urban houses, 5 monasteries, 12 government institutions, 1 brick factory, 2 stone crushing plants, 1 hydro-electric dam and a bore hole located in and within 500m from the KBA site. These developments have led to increasing use of natural resources from the KBA sites impacting the habitat to great extent.

Figure II. Illegal felling in KBA

2.2. Forest fire

In the last 10 years, 2 incidences of forest fires were recorded within KBA site. This has led to destruction large patch of forested areas within the KBA and its adjoining areas. The dry environment coupled with pine forest has imposed serious risk of large forest fires in the area.

Figure III. Forest fire threat in KBA

2.3. Electrocution and collision

Electrocution on power lines is an important human-related cause of bird mortality and an important conservation issue worldwide. Besides impacts on bird populations, electrocutions cause power outages, resulting in damage to power line network integrity. The electric transmission line, telephone and television line along the river in KBA site can pose a serious threat to birds.

2.4. Noise pollution

The noise generated from stone crushing plant, bricks factory and RBM collection sites can affect the bird's behavior, their fitness, breeding, growth and even lead to chronic stress. Though found negligible in the current ranking scenario, this threat will likely have serious adverse effects in the long run.

Figure IV. Surface collection sites cause of noise disturbance in KBA

2.5. Water pollution

Pollution is the release of foreign substances into the water bodies, making aquatic ecosystems unhealthy for humans and aquatic organisms alike. In Gelpoishing, point sources are mostly industrial effluent directly released into the water system, including the waste from the stone crusher plant, vehicle workshops located along the riverbanks. It has direct adverse effects on the habitat and life of the aquatic ecosystem. Non-point sources arise from agriculture using fertilizer and pesticides, and from dumping of solid waste along the riverside.

Figure V. Water pollution due to use of machineries

2.6. Landslide and sedimentation

Landslides often occur in KBA site resulting in deposit of sediments in the river. The heavy deposit of silt was observed in reservoir in dam area, resulting in growth of vegetations and obscuring the view during fishing by eagle. Road widening and farm road construction are other major sources of extra sediments that get dumped into the valleys and ultimately into the river system. Such deposits also disturb spawning and holding areas of fishes.

Figure VI. Landslide and sedimentation in the habitat area

2.7. Decline in food source

The construction of a dam has altered the aquatic environment of the area, affecting the fish populations. The impact includes conversion of a lotic into a lentic pond ecosystem, loss of movement path, blockage in inter-connected pathways of migratory fish in the rivers. Mortality resulting from fish passage through hydraulic turbines or over spillways during downstream migration is unavoidable. The large number of fishes is also either injured or even killed during release of water from the dam reservoir.

Figure VII. Illegal fishing

2.8. Conceptual Framework

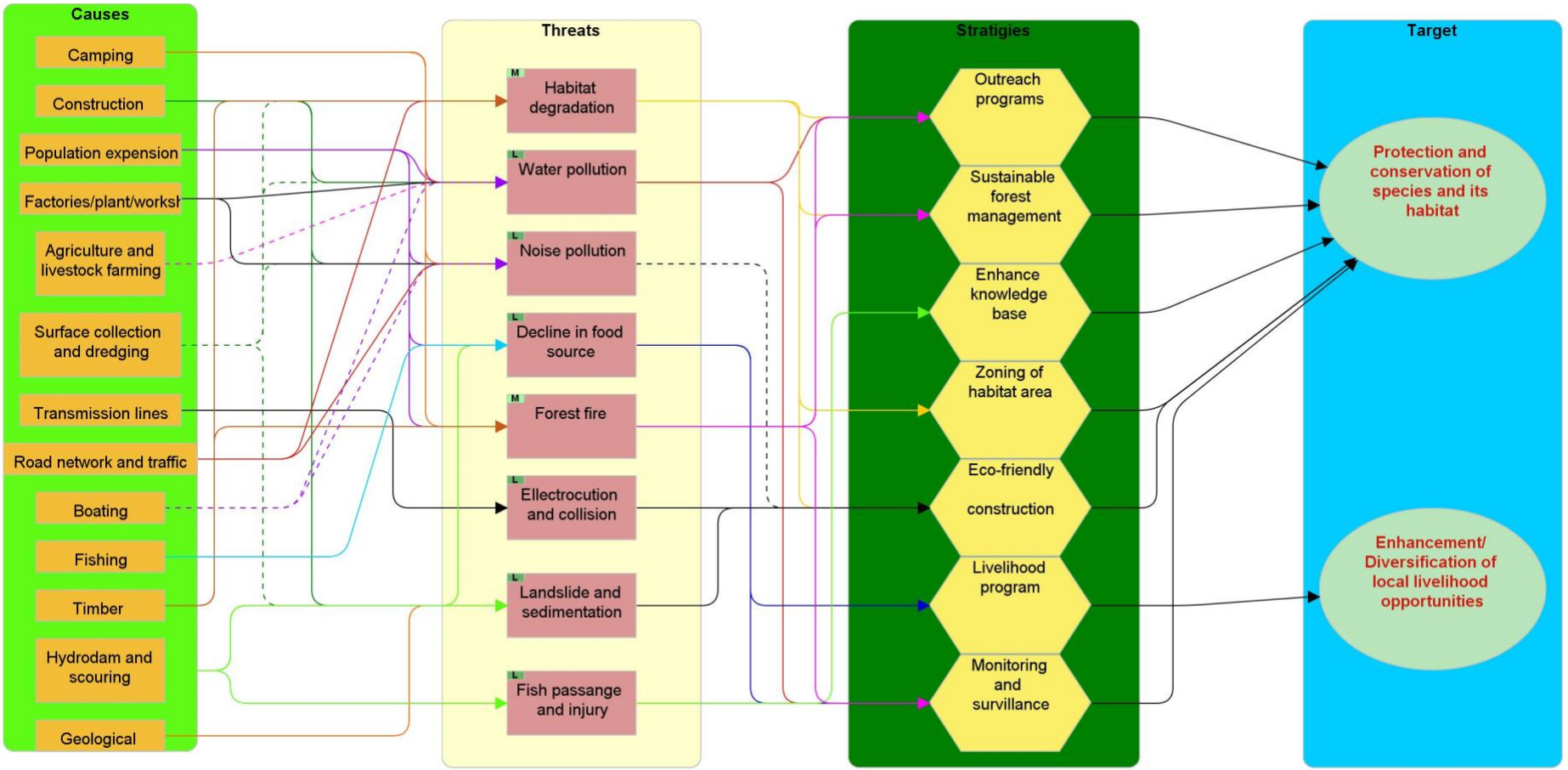

Figure VIII. Conceptual framework of threats and management strategies

Chapter 3: Action Plan

3.1.Vision

Conservation of the Pallas's Fish Eagle and its habitat

3.2.Objective(s) and outputs.

1) Protection and conservation of species and its habitat.
2) Enhancement/Diversification of local livelihood opportunities.

Table 2. Action plan and funding outlay

Objectives	Strategies	Action	Year (July 2023-June 2033) along with budget (in Nu.m)										Remarks
			Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	
Objective 1: Protection and conservation of species and its habitat	1.Information on distribution behavior and ecology of Pallas's fish eagle and associated species generated	Action 1. 1 Study on behavior, distribution and ecology of PFE	0.15				0.15						KBA area
		Action 1.2 Assess the effectiveness of fish ladder for migratory fish species	0.3										Kurichum Dam
		Action 1.3 Document fish diversity within KBA site	0.3			0.1				0.1			KBA area
	2.Monitoring and surveillance of KBA enhanced	Action 2. 1 Identify and demarcate critical habitat and resource collection sites	1										KBA area
		Action 2.2 Maintenance of existing forest office	0.2										Gelpoishing Range
		Action 2.3 Construction of forest range office			8								Gelpoishing Range
		Action 2.4 Improve monitoring system at check gates		1.5									Kurizampa
		Action 3.6 Procurement and supply of forest fire fighting equipments		0.6									KBA area

		Action 3.7 Review and monitoring of KBA action plan					0.1					0.3	
	3. Sustainable Forest management ensured	Action 3.1 Revision of Local Forest Management Plan							0.3				Drepong
		Action 3.2 Scientific management of local forest management area	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Drepong
		Action 3.3: Implement FMU operation activities	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	Lingmithang FMU
		Action 3.4 Capacity building of CFMG		0.5					0.5				CFs under 4 Gewogs
		Action 3. 5 Creation of plantation along river banks		0.3			0.1				0.1		Gelpoishing to Kurizampa
	4.Ensured eco-friendly constructions within KBA	Action 4.1 Conduct stakeholder consultation on adoption of eco-friendly construction models	0.1				0.1					0.1	All stakeholders in KBA
		Action 4.2 Construction of retaining walls/check dams in landslide prone areas			1				0.5				Dam side in KBA
	5.Outreach programs on Pallas's fish eagle conservation conducted	Action 5.1 Development of sign and signage for KBA sites	0.1										Strategic point in KBA site (nesting, fishing, entrance to KBA)
		Action 5.2 Promote citizen science initiative to collect data as a part of educational program		0.2				0.1			0.1		Students from Gelpoishing and Lingmithang
		Action 5.3 Create conservation awareness on KBA among local people and appropriate stakeholders	0.2					0.2				0.2	4 Gewogs

Objective 2: Enhancement and diversification of local livelihood opportunities	6.Enhance livelihood through ecotourism activities and improved farming	Action 6.1 Landscaping and beautification of the area	1	0.5	0.5								Gelpoishing/Kurizampa
		Action 6.2 Development of camping sites and construction of bird viewing decks			1	0.5							KBA area (Majathang)
		Action 6.3 Support eco-friendly river rafting along Kurichu								1.5			
		Action 6.4 Support private fishery farming				0.5							4 Gewogs
Total			**3.6**	**3.85**	**10.75**	**1.35**	**0.7**	**0.55**	**1.55**	**1.85**	**0.45**	**0.85**	**25.5**

Chapter 4: Monitoring and Evaluation

4.1.Institutional arrangements

Within the DoFPS, the Divisional Forest Office, Mongar will take lead role in implementing the activities projected in the action plan in close collaboration with Nature Conservation Division. The implementation of the research and development component of the plan will be backstopped by UWIFoRT and other academic institutions under the Royal University of Bhutan (RUB). Technical and institutional support from stakeholders such as Department of Agriculture (DoA) and Department of Livestock (DoL) under MoAF, Department of Tourism, National Environment Commission (NEC), Clean Bhutan, Bhutan Power Corporation (BPC), Kurichu Hydro Power Plant and respective Local Government (LG) offices will be sought for effective implementation of the actions prescribed in this conservation action plan.

4.2.Work plan and budget

The total estimated cost required to implement this action plan for the duration of 10 years is Nu. 25.2 million (2023-2033) as reflected in the logical framework. The financing and implementation of this action plan will be a collaborative effort of Divisional Forest Office, Mongar and Nature Conservation Division under Department of Forests and Park Services. The action plan will be submitted to GEF-UNDP Ecotourism Project, Bhutan for Life project, World Wildlife Fund (WWF) Bhutan, Bhutan Trust Fund for Environmental Conservation (BTFEC), etc for possible funding. We will also contact various international partners to secure consistent and sustainable financing for conservation of Pallas's fish eagle in the long run.

4.3.Monitoring and evaluation

The implementation of the plan will be jointly monitored annually by Divisional Forest Office, Mongar and Nature Conservation Division under Department of Forests and Park Services. A mid-term review of the plan will be carried towards the end of fourth year of plan implementation. The logical framework and implementation plan will be used for monitoring and evaluation by using indicators provided.

Table 3. Annual work plan, output indicator and target

Objectives	Action	Output Indicator	Baseline	Unit	Yearly target									
					Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Objective 1: Protection and conservation of species and its habitat	Action 1.1 Study on behavior, distribution and ecology of PFE	Report	NA	Nos	1				1					
	Action 1.2 Assess the effectiveness of fish ladder for migratory fish species	Report	NA	Nos	1									
	Action 1.3 Document fish diversity within KBA site	Report	1	Nos	1			1				1		
	Action 2.1 Identify and demarcate critical habitat and resource collection sites	PFE habitat classified into zones	NA	Nos	1									
	Action 2.2 Demarcate surface collection sites	Surface and RBM collection sites mapped	4	Nos	1									
	Action 2.3 Maintenance of existing forest office	Structure maintained	1	Nos	1									
	Action 2.4 Construction of forest range office	New structure	NA	Nos			1							
	Action 2.5 Improve monitoring system at check gates	Effective monitoring system installed	NA	Nos		1								
	Action 2.6 Procurement and supply of forest fire fighting equipments	Equipment procured	10 sets	Set		20								
	Action 2.7 Review and monitoring of KBA action plan	Monitoring and evaluation report	NA	Nos					1					1
	Action 3.1 Revision of Local Forest Management Plan	Management plan	1	Nos								1		
	Action 3.2 Scientific management of local forest management area	Area managed	25 Ha	Ha	2	2	2	2	2	2	2	2	2	2

	Action 3.3 Implement FMU operation activities	Operation plan developed	1	Nos	1	1	1	1	1	1	1	1	1	1
	Action 3.4 Capacity building of CFMG and NWFG	CFMGs and NWFMGs trained				13					13			
	Action 3.5 Creation of plantation along river banks	Area planted	10 Ha	Ha		3								
	Action 4.1 Conduct stakeholder consultation on adoption of eco-friendly construction models	Coordination meetings conducted	3	Nos	1				1					1
	Action 4.2 Construction of retaining walls/check dams in landslide prone areas	Sites maintained	NA	Nos			2				1			
	Action 5.1 Development of sign and signage for KBA sites	Sinages installed	NA	Nos	4									
	Action 5.2 Promote citizen science initiative to collect data as a part of educational program	Schools trained	NA	Nos		2				1			1	
	Action 5.3 Create conservation awareness on KBA among local people and appropriate stakeholders	Outreach programs conducted	NA	Nos	4					4				4
Objective 2: Enhancement and diversification of local livelihood opportunities	Action 6.1 Landscaping and beautification of the area	Area maintained	50 Ha	Ha	20	10	10							
	Action 6.2 Development of camping sites and construction bird viewing decks	Camping sites developed	NA	Nos			1							
	Action 6.3 Support eco-friendly river rafting along Kurichu	Groups supported	NA	Nos								1		
	Action 6.4 Support private fishery farming	Gewogs supported	NA	Nos				2						

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Annexure 1.

Sl. No.	Species (Common name)	Scientific name	Family	Total count	Habitat
1	Ashy-throated Warbler	*Phylloscopusmaculipennis*	Phylloscopidae	1	TB
2	Barn Swallow	*Hirundorustica*	Hirundinidae	12	TB
3	Black Bulbul	*Hypsipetesleucocephalus*	Pycnonotidae	8	TB
4	Black-chinned Yuhina	*Yunianigrimenta*	Zosteropidae	53	TB
5	Black-crowned Night Heron	*Nycticoraxnycticorax*	Ardeidae	2	WB
6	Black-necked Grebe	*Podicepsnigricollis*	Podicipedidae	4	WB
7	Blue Rock Thrush	*Monticolasolitarius*	Muscicapidae	5	TB
8	Blue Whistling Thrush	*Myophonuscaeuleus*	Muscicapidae	5	WB
9	Blue-throated Barbet	*Megalaimaasiatica*	Ramphastidae	4	TB
10	Blyth's Leaf Warbler	*Phylloscopusmagnirosstris*	Sylviidae	1	TB
11	Bronzed Drongo	*Dicrurusaeneus*	Dicruridae	4	TB
12	Brown Dipper	*Cincluspallasii*	Cinclidae	15	TB
13	Brown Shrike	*Laniuscristatus*	Laniidae	1	TB
14	Chestnut-bellied Nuthatch	*Sitta (castanea) cinnamoventris*	Sittidae	1	TB
15	Common Green Magpie	*Cissachinensis*	Corvidae	6	TB
16	Common Hoopoe	*Upupaepops*	Upupidae	1	TB
17	Common Kestrel	*Falco tinnunculus*	Falconidae	3	TB
18	Common Kingfisher	*Alcedoatthis*	Alcedinidae	8	WB
19	Common Moorhen	*Gallinulachloropus*	Rallidae	1	WB
20	Common Pigeon	*Columba livia*	Columbidae	34	TB
21	Common Sanpiper	*Actitishypoleucos*	Scolopacidae	8	WB
22	Common Stonechat	*Saxicolatorquatus*	Muscicapidae	4	TB
23	Common Tailorbird	*Orthotomussutorius*	Cisticolidae	43	TB
24	Crested Kingfisher	*Megaceryleugubris*	Alcedinidae	2	WB
25	Crimson Sunbird	*Aethopygasiparaja*	Nectariniidae	40	TB
26	Emerald Dove	*Chalcophapsindica*	Columbidae	1	TB
27	Eurasian Tree Sparrow	*Passer montanus*	Passeridae	34	TB
28	Goosander	*Mergus merganser*	Anatidae	24	WB
29	Great Cormorant	*Phalacrocoraxcarbo*	Phalacrocoracidae	92	WB
30	Great Crested Grebe	*Podicepscristatus*	Podicipedidae	25	WB
31	Greater NecklacedLaughingthrush	*Garrulaxpectoralis*	Leiothrichidae	10	TB
32	Green-billed Malkoha	*Rhopodytestristis*	Cuculidae	1	TB
33	Grey Bushchat	*Saxicolaferreus*	Muscicapidae	16	TB
34	Grey Wagtail	*Motacillacinerea*	Motacilidae	7	WB
35	Grey-backed Shrike	*Laniustephronotus*	Laniidae	12	TB
36	Grey-headed Canary Flycatcher	*Culicicapaceylonensis*	Stenostiridae	1	TB
37	Grey-headed Woodpecker	*Picuscanus*	Picidae	3	TB
38	Himalayan Bulbul	*Pycnonotusleucogenys*	Pycnonotidae	135	TB
39	Hodgson's Redstart	*Phoenicurushodgsoni*	Muscicapidae	46	TB
40	Kalij Pheasant	*Lophuraleucomelanos*	Phasianidae	2	TB
41	Large-billed Crow	*Corvusmacrorhynchos*	Corvidae	74	TB
42	Lemon-rumped Warbler	*Phylloscopuschloronotus*	Phylloscopidae	1	TB
43	Little Bunting	*Emberizapusilla*	Emberizidae	7	TB
44	Little Forktail	*Enicurusscouleri*	Muscicapidae	4	WB
45	Mallard	*Anasplatyrhynchos*	Anatidae	2	WB
46	Nepal House Martin	*Delichonnipalense*	Hirundinidae	2	TB
47	Olive-backed Pipit	*Anthushodgsonsi*	Motacilidae	18	TB

48	Oriental Magpie Robin	*Copsychussaularis*	Muscicapidae	25	TB
49	Oriental Turtle Dove	*Streptopeliaorientalis*	Columbidae	30	TB
50	Oriental White-eye	*Zosteropspalpebrosus*	Zosteropidae	166	TB
51	Osprey	*Pandionhaliatus*	Accipitridae	1	WB
52	Pallas Fish Eagle	*Haliaeetuslecoryphus*	Accipitridae	3	WB
53	Plumbeous Water Redstart	*Rhyacornisfulliginosa*	Muscicapidae	80	WB
54	Red-rumped Swallow	*Cecropisdaurica*	Hirundinidae	8	TB
55	Red-vented Bulbul	*Pycnonotuscafer*	Pycnonotidae	269	TB
56	River Lapwing	*Vanellusduvaucelii*	Charadriidae	12	WB
57	RufescentPrinia	*Priniarufescens*	Cisticolidae	6	TB
58	Rufous Woodpecker	*Micropternusbrachyurus*	Picidae	2	TB
59	Rusty-cheeked Scimitar Babbler	*Pomatorhinuserythrogenys*	Timaliidae	11	TB
60	Scaly Thrush	*Zootheradauma*	Turdidae	2	TB
61	Scaly-breasted Munia	*Lonchurapunctulata*	Estrildidae	6	TB
62	Scarlet Minivet	*Pericrocotusflammeus*	Campephagidae	22	TB
63	Slaty-backed Forktail	*Enicurusschistaceus*	Muscicapidae	27	WB
64	Small Niltava	*Niltavamacgrigoriae*	Muscicapidae	1	TB
65	Streaked Spiderhunter	*Arachnotherea magna*	Nectariniidae	2	TB
66	Striated Laughingthrush	*Garrulaxstriatus*	Leiothrichidae	1	TB
67	Wallcreeper	*Tichodromamuraria*	Tichodromadidae	3	TB
68	Whiskered Yuhina	*Yuniaflavicollis*	Zosteropidae	6	TB
69	White Wagtail	*Motacilla alba*	Motacilidae	75	WB
70	White-breasted Waterhen	*Amaurornisphoenicurus*	Rallidae	3	WB
71	White-capped Redstart	*Rhyacornisleucura*	Muscicapidae	48	WB
72	White-crested Laughingthrush	*Garrulaxleucolophus*	Leiothrichidae	28	TB
73	White-throated Kingfisher	*Halcyon smyrnensis*	Alcedinidae	3	WB
74	Yellow-bellied Fantail	*Chelidorhynxhypoxanthus*	Rhipiduridae	10	TB

Annexure 2.

Sl. No.	***Name of species***	***Family***
1	*Angullia bengalensis*	*Anguillidae*
2	*Neolissochilus hexagonolepis*	*Cyprinidae*
3	*Garra birostris*	*Cyprinidae*
4	*Garra cf. quadratriostris*	*Cyprinidae*
5	*Garra lissorhynchus*	*Cyprinidae*
6	*Parachiloglanis sp.*	*Sisoridae*
7	*Pseudechenesissulcata*	*Sisoridae*
8	*Psilorhynchushomaloptera*	*Psilorhynchidae*
9	*Schistura reticulofascata*	*Nemacheilidae*
10	*Schizothorax progastus*	*Cyprinidae*

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