

REPORT

DISTRIBUTION MAPPING AND HABITAT ASSESSMENT OF WHITE-BELLIED HERON IN PHIBSOO WILDLIFE SANCTUARY



Grant Recipient: Kinga Norbu
Designation: Forestry Officer
Contact No.: +975 17903174 / +975 77903174
Email address: kingan@moaf.gov.bt

Permanent Address: Village: Wangdicholing
Gewog: Chhoekor
Dzongkhag: Bumthang

Work Address: Phibsoo Wildlife Sanctuary, DoFPS, MoAF, Singye Gewog, Sarpang
Contact No.: PABX: +975 17151663 / CFO: +975 17151667

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1. PROJECT TITLE

Distribution mapping and habitat assessment of White-Bellied Heron in Phibsoo Wildlife Sanctuary

2. SUMMARY

There are about 200 White-Bellied Heron (WBH) individuals left in the world, of which 13% existing in Bhutan. WBH started visiting Phibsoo Wildlife Sanctuary (PWS) since 2014, maximum numbers being three observed along Longa and Phibsoo rivers. The nationwide studies carried out until now revealed prevalence of WBH mostly in Chirpine forest ecosystem. However, in PWS it has been residing the sub-tropical broadleaf forest.

PWS assume that due to habitat disturbance by Punatshangchu phase I & II hydro power construction, WBH may be relocating its residency. It was also doubted that the PWS could be a foraging ground, owing to crow flight distance of 8 - 12 Km from Punatshangchu. However, no confirmation study has been conducted so far, except for recording of basic data on visual observation.

Point transect method has been adopted to carry out WBH Survey in a transect length of 37.4 km within elevational range of 188 – 693 masl. Data recording is being done in the WHB monitoring data sheet developed by RSPN and SMART¹ interface developed for wildlife monitoring.

Despite monitoring at least once in a month from January – May 2018, WHB could not be sighted, which does not mean it was absent. May be monitoring timing did not coincide with the WBH's visit. However, monitoring need to intensify through SMART wildlife monitoring system, which has already been rolled out in PWS and will be incorporated in second conservation management plan (2018-2023) for ensuring its long-term conservation.

3. PROJECT OBJECTIVES

In order to confirm permanent residency of the WBH in PWS and preference of sub-tropical broadleaf forests, monthly monitoring has been carried out from January through May 2018. However, WBH couldn't be sighted during the study period. Nevertheless, observational data from 2014 to 2017 suggests its prevalence in Longa and Phibsoo rivers of PWS, mostly during fall to winter months.

Preliminary habitat assessment conducted jointly with RSPN, IUCN and PWS revealed that these two rivers could be potent WBH habitat. These two river valleys have the potentials for releasing captive bred WBH, thereby contributing to RSPN's objective of increasing WBH population in the wild through breeding program initiated since 2017. However, detail assessment is a must.

¹ SMART: Spatial Monitoring and Analysis Reporting Tool (wildlife monitoring tool with inbuilt database and it's a configurable model)

4. PROJECT AREA

The study has been carried out along two rivers of Longa and Phibsoo with their primary tributaries. Survey covered 37.4 km within elevational range of 188 – 693 masl (Figure 1).

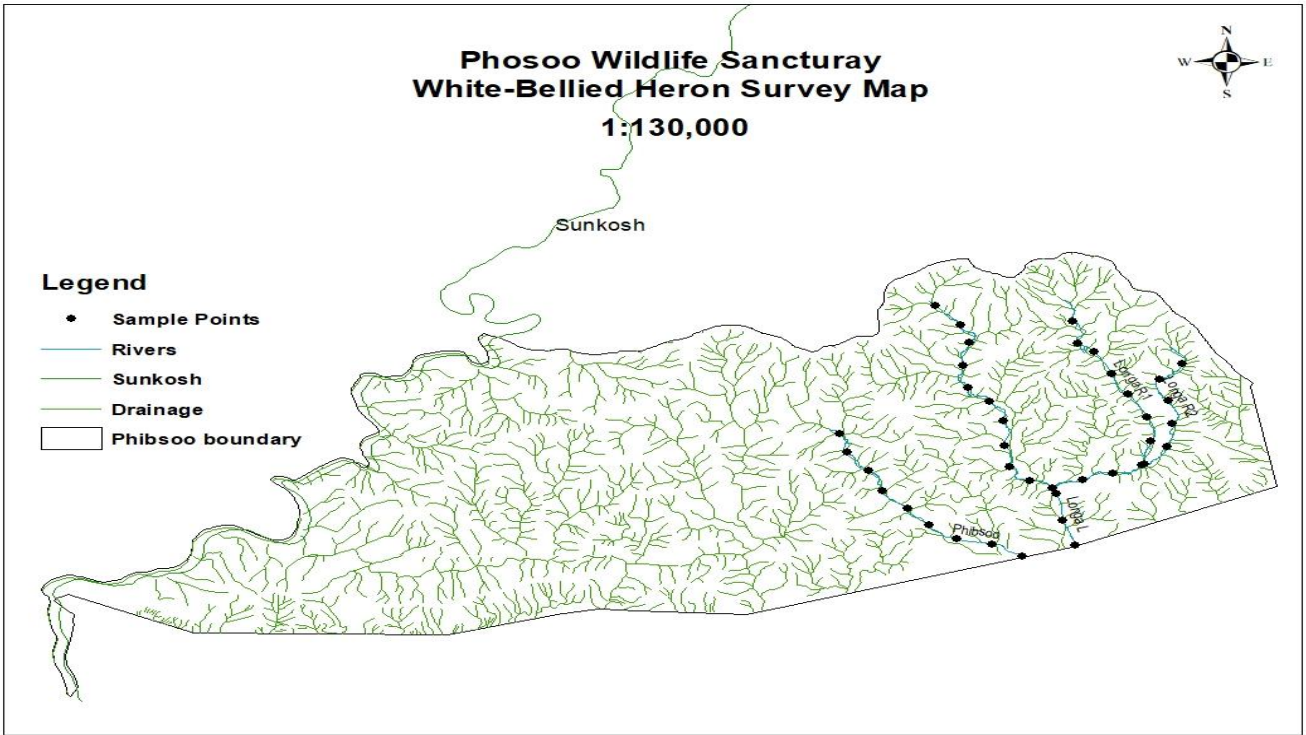


Figure 1: WBH survey map

5. METHODOLOGY

Point transect method has been adopted to carry out WBH monitoring survey within transect length of 37.4 km spread over elevational range of 188 – 693 masl. Data recording was being done in the WHB monitoring data sheet developed by RSPN and SMART interface developed for wildlife monitoring (Annexure 1). Initial survey was conducted in January 2018, while from February onwards monthly monitoring has been carried out until May 2018, as shown in monitoring intensity and area coverage map (Figure 2). A concrete report could not be generated, as for the entire study period WBH could not be sighted.

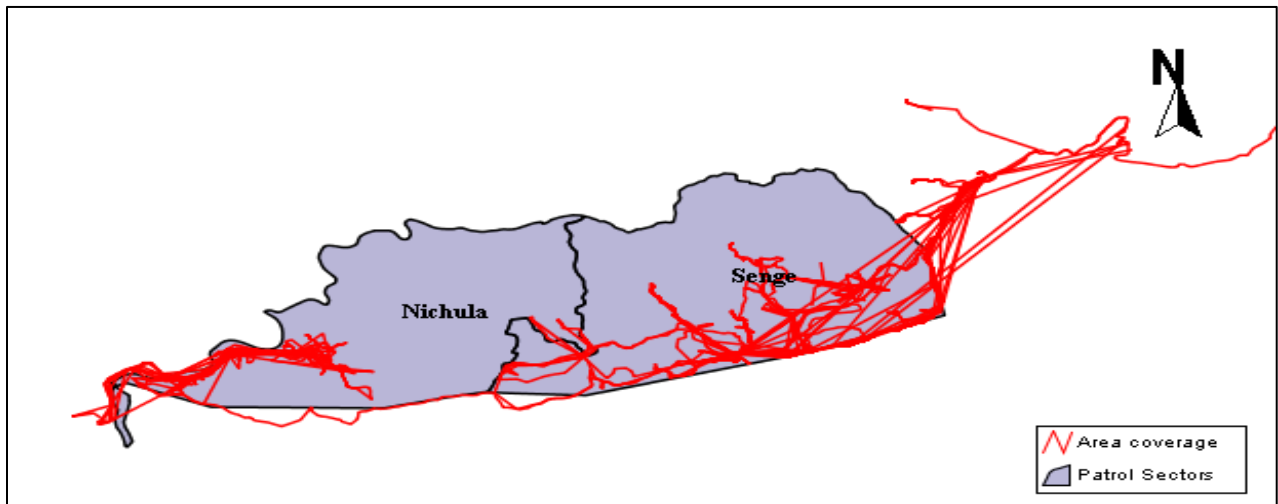


Figure 2: WBH monitoring intensity and area coverage

6. PROJECT SUSTAINABILITY AND LONG-TERM CONSERVATION

The study of WBH has an equal importance for PWS as for the RSPN. The information generated through this study will become a part of 2nd PWS conservation management (2018-2023). Expanding of WBH study is deemed important in future, as PWS has 11 rivers and stream including Sunkosh upon securing fund. These rivers are fully protected from illegal fishing and under content monitoring through SMART. In addition, PWS has the potential of securing WBH habitat for its area extension has been granted by the government till Sunkosh in Tsirang district. Visit of WBH since 2014 is an indication that PWD could be potent habitat. However, detail time series assessment of its habitat is necessary.

7. BUDGET UTILIZATION

A sum of **Nu. 50000.00** (*Fifty thousand*) only received from the RSPN has been used for procuring survey equipment, which was one-time investment and can repeatedly be used for future surveys. Survey equipment are procured following FY 2017-2018 quotation rated of DoFPS, MoAF.

Table 1: Budget utilization statement

Sl. No.	Particulars	Unit	Rate	Qty	Amount (Nu.)	Remarks
1	Batteries for GPS	Pair	150.0	10.0	1500.0	
2	Binocular	No	11000.0	1.0	11000.0	
3	Transportation		1850.0	4.0	7400.0	Transportation of staff to survey site
4	Transportation		1650.0	2.0	3300.0	
5	TADA to staff	Head	8000.0	2.0	16000.0	
6	Training of forest rangers on survey methods and data collection	Head	250.0	21.0	5250.0	Food and refreshment served to training workshop participants
	Mineral water	No	20.0	20.0	400.0	
	Tea and snacks	No	45.0	42.0	1890.0	
7	Presentation of WBH study report to PWS management and discussion on future plans	Head	250.0	9.0	2250.0	Food and refreshment served to participants attending and discussion of WHB conservation plans
	Mineral water	No	20.0	15.0	300.0	
	Tea and snacks	No	45.0	18.0	810.0	
	Total				50100.0	

Annexure 1: SMART monitoring data sheet

Observation ID	Observation Date	Observation Time	Coordinates		No. of Females	No. of Males	No. of Young	No. of Individuals Sighted
			Northing	Easting				

Annexure 2: RSPN monitoring datasheet



WHITE-BELLIED HERON MONITORING FORM

PLACE.....

DATE

DATA COLLECTED BY

TIME	Nos. of Birds				Remarks					
	1	2	3	4	Flying	Fishing	Basking	Walking	Feeding	Others
5:30-6:30 am										
6:30-7:30 am										
7:30-8:30 am										
8:30-9:30 am										
9:30-10:30 am										
10:30-11:30 am										
11:30-12:30 pm										
12:30-1:30 pm										
1:30-2:30 pm										
2:30-3:30 pm										
3:30-4:30 pm										
4:30-5:30 pm										
5:30-6:30 pm										