

Project Update: June 2022

This second report provides an update to the research findings from March to June 2022 in the study area. In these months, the abundance and distribution monitoring for yellow-breasted bunting (YBB) were continued in the same manner as before, via the field survey using the point-count approach. During this period, the threat assessment in the field via direct observations (as stated in the first report) was accompanied by the semi-structured questionnaire interviews at all nine lakes of the study area. A set of 40 questionnaires was administered in the households residing near the lakes during the survey interviews (except for Kamalpokhari where 25 households were surveyed as there were fewer households residing near the lake and 40 interviews were done collectively for Khaste and Neureni Lakes as they are right next to each other). The respondents consisted of residents, including farmers, hoteliers, community forest user members and other concerned authorities. The questionnaire survey assisted to understand local people's perception on need of conservation of YBB as well as rank the threats (assessed via direct field-observation) to recognise the major threats by using Friedman Ranked T-test approach.

There were not any records of direct sighting of YBB recorded in these months except for Phewa lake area. Altogether, 155 number of YBB was sighted in count stations of the Phewa Wetland in March 2022 whereas none were sighted in the following months.

Via literature review and field visit in the respective lakes, the five major threats were identified for all the nine lakes in the study area. These were documented as recreational activities, use of the chemical fertilisers in the adjoining agricultural fields, cattle grazing, water pollution, and habitat destruction (in terms of preferred vegetation structure and composition). The ranking of these identified threats by the respondents for each lake in the study area was conducted with the mean rank (using the Friedman ranked t- test) as presented in the tables below for the respective sites:

Table 1: Threat rank in Kamalpokhari Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	4	8	8	16	64	4.20
Chemical fertilisers	36	4	60	0	0	2.28
Cattle grazing	12	68	8	12	0	2.06
Water pollution	4	84	8	0	4	2.06
Habitat destruction	8	0	4	0	88	4.40

In Kamalpokhari Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 1). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: water pollution, and cattle grazing followed by use of chemical fertilisers, recreational activities, and habitat destruction.

Table 2: Threat rank in Dipang Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	20	15	0	0	65	2.38
Chemical fertilisers	0	17.50	72.50	7.50	2.50	4.13
Cattle grazing	0	75	12.5	12.5	0	3.35
Water pollution	2.5	57.5	15	25	0	3.54
Habitat destruction	92.5	0	0	0	7.5	1.61

In Dipang Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 2). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: habitat destruction, followed by recreational activities, cattle grazing, water pollution, and use of chemical fertilisers.

Table 3: Threat rank in Gunde Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	10	2.5	2.5	0	85	3.24
Chemical fertilisers	0	0	0	0	100	3.59
Cattle grazing	0	0	0	0	100	3.59
Water pollution	0	2.5	0	0	97.5	3.54
Habitat destruction	100	0	0	0	0	1.05

In Gunde Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 3). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: habitat destruction, followed by recreational activities, water pollution, cattle grazing, and use of chemical fertilisers.

Table 4: Threat rank in Neureni and Khaste Lakes

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	0	0	0	45	55	3.96
Chemical fertilisers	0	22.5	5	20	52.5	3.41
Cattle grazing	5	95	0	0	0	1.78
Water pollution	2.5	2.5	2.5	37.5	55	3.79
Habitat destruction	65	0	0	27.5	7.5	2.06

In Neureni and Khaste Lakes, the ranking of the five major threats as perceived by the local people is shown above (Table 4). The main threats with respect to their intensity

levels (in the descending order) were found to be in the order: cattle grazing, followed by habitat destruction, use of chemical fertilisers, water pollution and recreational activities.

Table 5: Threats' rank in Begnas Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	0	52.5	15	25	7.5	2.21
Chemical fertilisers	0	2.5	5	65	27.5	3.98
Cattle grazing	7.5	42.5	0	5	45	3.09
Water pollution	0	0	60	15	25	3.32
Habitat destruction	10	35	2.5	52.5	0	2.40

In Begnas Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 5). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: recreational activities, followed by habitat destruction, cattle grazing, water pollution, and use of chemical fertilisers.

Table 6: Threat rank in Rupa Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	5	12.5	0	0	82.5	4.12
Chemical fertilisers	0	2.5	20	77.5	0	2.90
Cattle grazing	0	5	52.5	40	2.5	2.31
Water pollution	0	30	25	25	20	2.48
Habitat destruction	5	12.5	0	52.5	30	3.19

In Rupa Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 6). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: cattle grazing, followed by water pollution, use of chemical fertilisers, habitat destruction, and recreational activities.

Table 7: Threat rank in Maidi Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	0	0	12.5	37.5	50	3.65
Chemical fertilisers	0	0	0	55	45	3.69
Cattle grazing	0	10	0	32.5	57.5	3.63
Water pollution	10	10	65	0	15	2.55
Habitat destruction	10	47.5	32.5	10	0	1.49

In Maidi Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 7). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: habitat destruction, followed by water pollution, cattle grazing, recreational activities, and use of chemical fertilisers.

Table 8: Threat rank in Phewa Lake

Threats	Ranks (% of the Respondents)					Mean Rank
	Very High	High	Medium	Low	Very Low	
Recreational activities	12.5	0	0	2.5	85	4.71
Chemical fertilisers	35	62.5	0	0	2.5	2.40
Cattle grazing	10	15	75	0	0	3.51
Water pollution	100	0	0	0	0	1.58
Habitat destruction	57.5	2.5	40	0	0	2.80

In Phewa Lake, the ranking of the five major threats as perceived by the local people is shown above (Table 8). The main threats with respect to their intensity levels (in the descending order) were found to be in the order: water pollution, followed by use of chemical fertilisers, habitat destruction, cattle grazing, and recreational activities.



Figures 1 (above) and 2 (below): Community-level questionnaire survey in field site





Figure 3: Interview with the local people in study area