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Project Proposal

Details of proposal

A. Background and justification

Map 1: Global Distribution Range of Bengal Florican

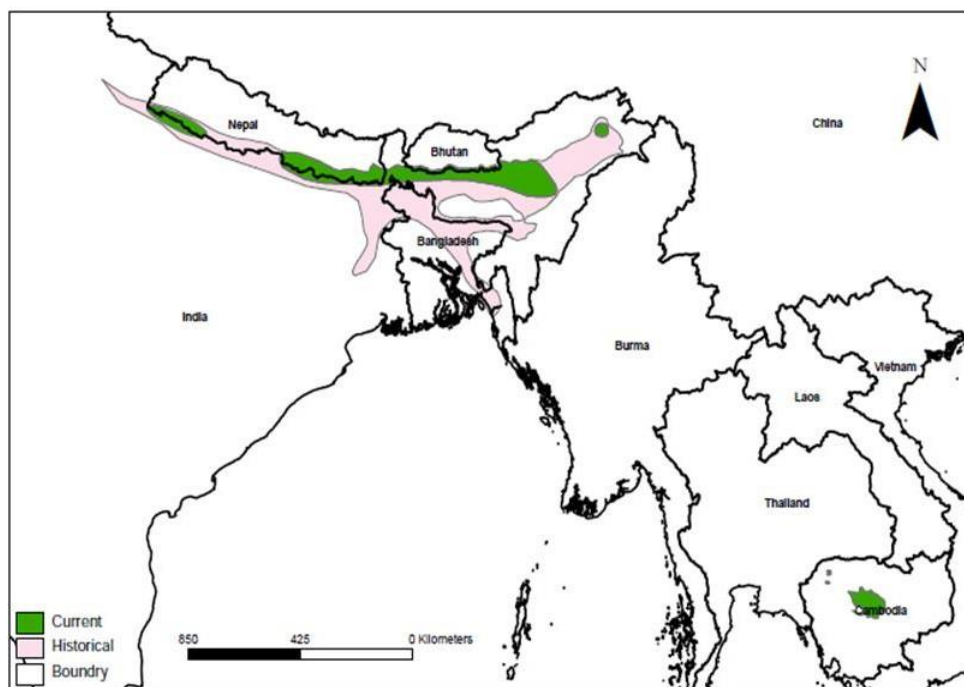
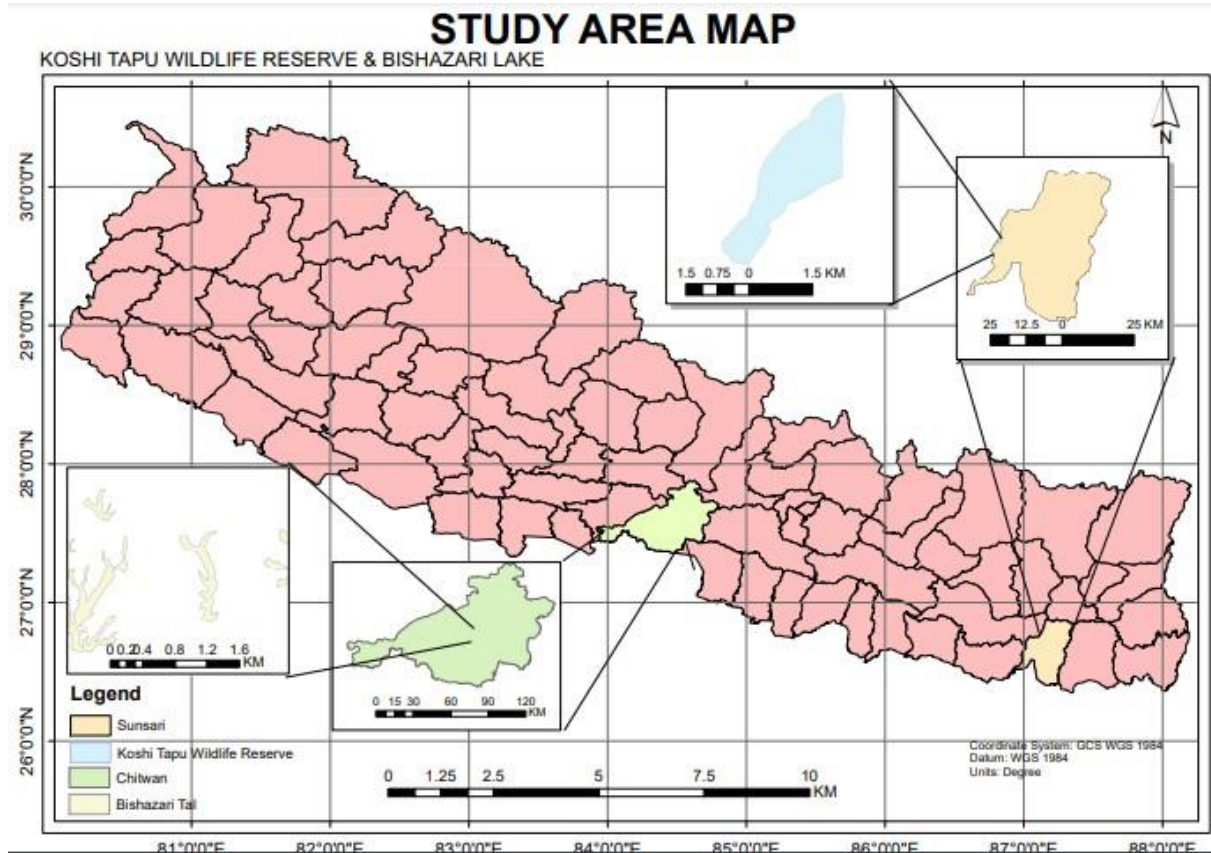


Figure 1: Bengal Florican Distribution Range (Action Plan for Nepal 2016-2020)

Globally the Bengal Florican is distributed in two isolated populations, *Houbaropsis bengalensis* is found in South Asia in the Terai area of Nepal and India while *H. b. blandini* is distributed in South East Asia in Cambodia. It is one of the largest species of bustards, standing at around 80 cm in height and weighing between 1.3 and 1.9 kg. It has a distinctively long neck, deep brown upperparts, and white underparts, with a crest of long feathers at the back of its head. Grasslands are the prime habitat of florican. In Nepal, the population is estimated between 65 and 100 individuals. In Nepal, this bustard occurs in alluvial grasslands dominated by *Imperata cylindrica* in Chitwan National Park, Bardia National Park, Suklaphanta Wildlife Reserve, Koshi Tappu Wildlife Reserve, and Koshi Barrage area. It is one of the nine protected birds of Nepal under Schedule I of the National Parks and Wildlife Conservation (NPWC) Act 2029 (1973) and is included in CITES Appendix I.



The different periods of time, the Government has come up with several plans and programs to increase the numbers of this species. NPWC Act 2029 BS (1973) with fourth amendment 2049 BS (1992), Forest Act 2049 BS (1993), Buffer Zone Management Regulation, 2052 BS (1996), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 1973 are some of the legal and policy frameworks in Nepal that outlined the protection of Bengal Floricans. This shows the importance of these birds in nature. There are only a few numbers of research done on the breeding ecology of Bengal florican so the current habitat mapping and potential habitat modeling for this bird would be an important aspect for the study of this bird and aid up to protect them and increase their number.

The Koshi Tappu Wildlife Reserve is a protected area in the Terai of eastern Nepal covering 176 km² of wetlands in the Sunsari, Saptari and Udayapur Districts. It comprises extensive reed beds and freshwater marshes in the floodplain of the Kosi River, and grassland which is an appropriate habitat for Bengal florican. So, this study aims to trace the number of Bengal florican in Koshi Tappu Wildlife Reserve and prepare a potential habitat model based on current habitat scenarios.

Beeshazari is a surface and ground water fed natural fresh water lake located in the buffer zone of Royal Chitwan National Park. It is situated in the inner Terai valley (doon) of central Nepal in between the Mahabharat Mountain Range to the north and the Siwalik Range to the south. The lake bed is situated on the laterite soil. The site is a habitat for some of the endangered species like Bengal Florican and other aquatic animal and plant species.

B. The problem(s) to be addressed

The Bengal Florican is threatened by habitat loss due to the conversion of grasslands to croplands and the destruction of wetlands for aquaculture. It is also threatened by the illegal hunting of birds for food and feathers, as well as by egg collecting. As a result, the population has declined significantly in recent years. Conservation efforts are underway to protect this species, including the establishment of protected areas and the implementation of community-based conservation initiatives. But these efforts lack a systematic approach to identify the current status of Bengal Florican in Ramsar sites like Koshi Tappu which is one of the prime habitats for this bird. Prior to these, we even lack the geodatabase including the characteristics of this species, which can be later used to uplift the status of Bengal Florican.

C. Objective(s)

General Objective(s):

Goal 1: Addressing the Drivers of Wetland Loss and Degradation

Target 1, 2, 4- Human activities on wetlands are increasing rapidly. Local government and different other organizations have initiated the concept of using wetlands wisely without hampering the life of existing flora and fauna. Our study on one of the critically endangered species will help to create awareness in local communities and will help to eradicate the drivers impacting wetland loss and degradation.

Goal 2: Effectively Conserving and Managing the Ramsar Site Network

Target 5, 6- The study of critically endangered species and its suitability habitat mapping will lead to restoration of ecology through proper planning and management. The number of those species will be counted and will be updated in a database which has not been updated since last 10 years. National database for these kinds of endangered species is not even in practice in Nepal. So this will be a milestone to store data and the database of Bengal Florican will be a pilot project. The similar database can be designed for other endangered species in days to come.

Goal 3: Wisely Using All Wetlands

Target 10, 11, 13- Local youth from Koshi Tappu Wildlife Reserve will be utilized to convey the importance of Bengal Florican for ecosystem restoration. These tasks will be well demonstrated among the local government. Engaging youth from respective communities will help to raise awareness and will prioritize saving the life of specific birds.

Goal 4: Enhancing Implementation

Target 14, 16: Study of critically endangered species at Koshi Tappu Wildlife Reserve will be examined using different spatial and non-spatial datasets available and the results obtained from this project will be presented and workshops will be organized with locals of specific areas. Furthermore, this project work will be posted with reports and posters in different platforms.

Specific Objectives:

- To collect the population data of Bengal Florican and identify the current habitat of the species, and prepare a potential habitat area model (current and potential habitat mapping showing suitable and threatened areas in two Ramsar Sites).
- To prepare a national geodatabase prototype for threatened waterbird species initiating with Bengal Florican as an example in the current study.
- To provide an awareness campaign among local stakeholders including municipal bodies, and conservation authorities on the preservation of Bengal Florican.

- To train and educate the local youth on endangered species conservation and equip them with skills to monitor and count the Bengal florican population as youth engagement in preserving and promoting the species would encourage them to expand the program for other threatened waterbird species in days to come.

D. Outputs

- Current population count of Bengal florican and distribution/habitat maps for the species in these sites in Khosi Tappu Wildlife Reserve and Beeshajari Lake.
- National geodatabase prototype for critically endangered aquatic bird species with data initially for Bengal florican.
- Awareness workshop which includes importance, prevention and promotion of Bengal florican and other endangered aquatic bird species.
- Youth involvement in conducting field surveys and preparing a case study containing monitoring guidelines for engaging youths in surveying endangered aquatic bird species as citizen scientist.

E. Activities

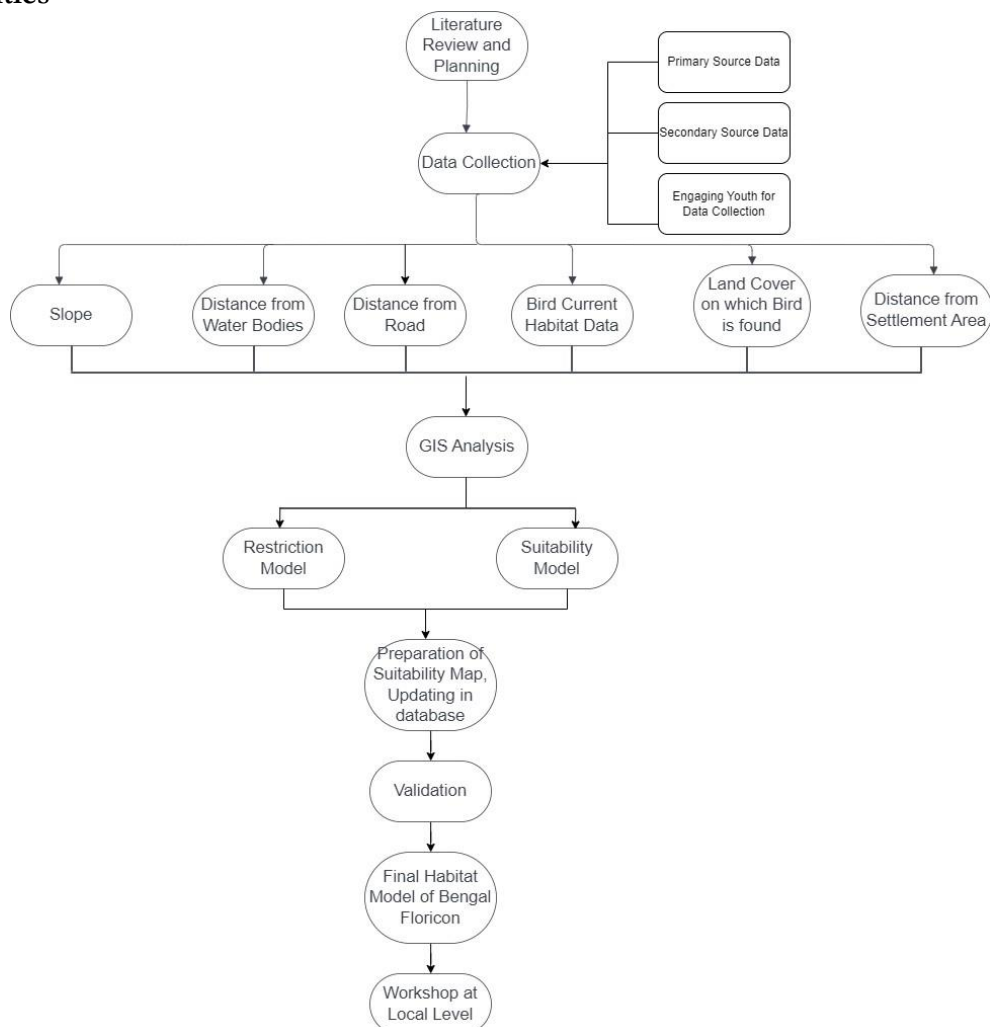


Fig. 1: Overall Methodology

1. Output 1: Current population count of Bengal florican in Khosi Tappu Wildlife Reserve and Beeshajari Lake.

- 1.1 Getting permits to enter the National Parks (where Ramsar Sites are location) and preparing logistics for the field survey
- 1.2 Collecting population data and geospatial information on the habitat and landcover in the Ramsar Sites and the adjacent buffer areas during autumn (October) and during spring (late March to April). The population data on Bengal florican will be conducted following the procedures acceptable to the Convention on Wetlands as indicated in the Strategic Framework.
- 1.3 Preparing distribution map of the species featuring habitat characteristics

2. Output 2: National geodatabase for critically endangered aquatic bird species, initially for Bengal florican

- 2.1 Preparing the backend of the database and including the data for population count of Bengal Florican, their habitat, distribution, land cover information, and other related features
- 2.2 Preparation of Website (frontend) for effective dissemination of data to different stakeholders including ministry, wetland authorities, municipal bodies, researches, and students.

3. Output 3: Awareness workshop which includes importance, prevention and promotion of Bengal florican and other endangered aquatic bird species.

- 3.1 Communicating with various stakeholders including municipal bodies, conservation authorities and local communities
- 3.2 Advertisement of awareness workshop using posters and pamphlets
- 3.3 Conducting workshop for awareness at local communities with participants of around 25 with at least 40% female at each study area i.e. Koshi tappu wildlife reserve and Bishajari lake.
- 3.4 Conducting two workshops for use of database and dissemination of data to different stakeholders at study area.

4. Output 4: Youth involvement for preparing monitoring guidelines for endangered aquatic bird species which might be used in long term for other species

- 4.1 Select youth from local eco-clubs, schools and colleges to volunteer in the survey.
- 4.2 Prepare protocols to involve youth to measure abundance of aquatic birds, in particular the Bengal Florican, and other habitat characteristics.
- 4.3 Train youths for the survey, involve them in the survey, and compare the data collected by the youths and our team.
- 4.4 Disseminate a case study with monitoring guidelines during workshops to concerned authorities, ministry, and local level to conduct a similar project.

F. Logical frame of the project

Problems	Objectives	Outputs	Activities
<i>No update of Bengal Florican number in wetlands since last 10 years</i>	<i>To collect the population data of Bengal Florican, identify the current habitat of the species, and prepare a potential habitat area model (current and potential habitat mapping showing suitable and threatened area in two Ramsar Sites)</i>	<i>Current population count and habitat mapping of Bengal florican in Khosi Tappu Wildlife Reserve and Beeshajari Lake</i>	<ul style="list-style-type: none"> • <i>Getting permits to enter the National Parks (where Ramsar Sites are location) and preparing logistics for the field survey</i> • <i>Collecting population data and geospatial information on the habitat and landcover in the Ramsar Sites and the adjacent buffer areas.</i> • <i>Preparing distribution map of the species featuring habitat characteristics</i>
<i>No specific national database of Endangered Aquatic Bird species</i>	<i>To prepare a national geodatabase prototype for threatened waterbird species initiating with Bengal Florican as an example in the current study.</i>	<i>National geodatabase prototype for critically endangered aquatic bird species with data initially for Bengal florican.</i>	<ul style="list-style-type: none"> • <i>Preparing the backend of the database and including the data for population count of Bengal Florican, their habitat, distribution, land cover information, and other related features</i> • <i>Preparation of Website (frontend) for effective dissemination of data to different stakeholders including ministry, wetland authorities, municipal bodies, researches, and students.</i>
<i>Lack of awareness and participation of local communities and</i>	<i>To provide an awareness campaign among local stakeholders including municipal bodies and</i>	<i>Awareness workshop which includes importance, prevention and promotion of Bengal</i>	<ul style="list-style-type: none"> • <i>Communicating with various stakeholders including municipal</i>

<p><i>different stakeholders in conserving endangered species like Bengal florican</i></p>	<p><i>conversion authorities on the preservation of Bengal Florican</i></p>	<p><i>florican and other endangered aquatic birds species</i></p>	<p><i>bodies, conservation authorities and local communities</i></p> <ul style="list-style-type: none"> • <i>Advertisement of awareness workshop using posters and pamphlets</i> • <i>Conducting workshop for awareness at local communities</i>
<p><i>Lack of monitoring guideline for identifying and counting endangered aquatic species like Bengal florican</i></p>	<p><i>To train and educate the youth on endangered species conservation and equip them with skills to monitor and count the Bengal florican population</i></p>	<p><i>Youth involvement in conducting field surveys and preparing a case study containing monitoring guidelines for engaging youths in surveying endangered aquatic bird species as citizen scientists.</i></p>	<ul style="list-style-type: none"> • <i>Florican as a pilot project for endangered aquatic bird species</i> • <i>Prepare protocols to involve youth to measure abundance of aquatic birds, in particular the Bengal Florican, and other habitat characteristics.</i> • <i>Train youths for the survey, involve them in the survey, and compare the data collected by the youths and our team.</i> • <i>Disseminate a case study with monitoring guidelines during workshops to concerned authorities, ministry, and local level to conduct a similar project.</i>

F. Project management arrangements and stakeholders

<p>Composition of Experts/Stakeholders</p>	<p>Key roles and responsibilities</p>
<p>Er. Shangharsha Thapa (Team leader) and the Team</p>	<ul style="list-style-type: none"> • Setting up overall methodology. Generally planning and organizing field study,

Output 4: Activity 1: Select youth from local eco-clubs, schools and colleges to volunteer in the survey.													
Activity 2: Prepare protocols for youth													
Activity 3: Train youths													
Activity 4: Disseminate case study with monitoring guidelines in workshops													

I. Budget

i) Budget summary

Exchange rate applied: 1 US dollars (USD) = 131 [NPR]

Funding Source	Total funds (local currency)	Total funds (US dollars)
NWF	2386000	18,213.74
Implementing Organization	000.00	000.00
Other sources of funding	000.00	000.00
TOTAL	2386000	18,213.74

ii) Overall itemized budget

Exchange rate applied: 1 US dollars (USD) = 131 [NPR]

Description of budget item	Unit Cost	Number of Unit	NWF (local currency)	Implementing organization and other sources of funding	Total	Total
(include unit costs where appropriate)	(local currency)				(local currency)	(USD)
1. SALARIES / WAGES COSTS						
1.1 Experts <i>Wage for 1 person per day= Nrs.3000 Unit Cost=Wages for 2 people per day(NRs 3000*2 = NRs 6000) Unit= duration of employment on thisproject (8 days)</i>	6000	8	48000		48000	366.41
1.2 Field Staff / Equipment operators <i>No. of person = 3 Wage for 1 person per day= NRs1500 Unit Cost= Wages for 3 people per day(NRs 1500*3 =4500) Unit= duration of employment on thisproject (15 days)</i>	4500	15	67500		67500	515.27
1.3 Per diems (10 local people*4 days) <i>No. of persons = 10 Wage for 1 person per day = NRs350 Unit Cost = Wages for 10 peopleper day (NRs 350 * 10 = 3500)Unit = duration of employment (40 days)</i>	3500	40	140000		210000	1603.05
1.4 Project Staff <i>No. of persons = 2 Wage for 1 person per day = NRs 1500 Unit Cost = Wages for 2 people per day (NRs 1500 * 2 = 3000)Unit = duration of employment (30 days)</i>	3000	30	90000		90000	687.02
SUB-TOTAL:					415500	3171.75

2. TRAVEL, ACCOMMODATION COSTS AND WAGES						
2.1 Vehicle (van) rent for field work: 4 days per Site; For 2 Sites = 8 days (Unit)	45000	8	360000	-	360000	2748.09
2.2 Accommodation for training sessions, field work and workshop in 2 Sites (total) Number of persons = 6 Cost for 1 person per night = NRs 1500 Unit cost = Cost for 6 persons per night (NRs 1500 * 6) = NRs 3000 Unit = nights (40 nights)	9000	40	360000	-	360000	2748.09
2.3 Accommodation for local people Number of persons = 10 Cost for 1 person per night = NRs 1500 Unit cost = Cost for 10 persons per night (NRs 1500 * 10) = NRs 15000 Unit = days (10 days)	15000	10	150000		150000	1145.04
SUB-TOTAL:					870000	6641.22
3. DATABASE PREPARATION						
3.2 Database server			195,000		195000	1488.55
3.3 Website design with integrated backend			325,000		325000	2480.92
3.4 Handheld GPS Purchase	50000	4	200,000		200000	1526.78
3.5 Binocular	18000	4	72,000		72000	549.62
SUB-TOTAL:					792000	6045.87
Costs of planned activities:						
4. COST OF PUBLICATIONS, VIDEOS/DVDs, CDs etc.						
4.1 Buying Secondary Data (landuse data, meteorological data, road network data) * Data to be purchased from Survey Department, Nepal in bulk. Unit cost = 1 (bulk cost of data)	10000	1	10000		10000	76.34
4.2 Printing training guidelines (75 pages), fieldwork protocols (75 pages), Unit cost: Laminated/hard-paper color printing (trainings conducted near wetlands in sub-tropical forest, hence require waterproof materials) Unit = 150 pages (total) * This cost is incorporated for a trainings.	390	150	58,500		58,500	446.57
4.3 Distribution (Local Government) * This distribution will incorporate hard copy and soft copies of maps, reports, database access. Distribution will be conducted in bulk (standard rate of the organization)	20000		20000		20000	152.67
SUB-TOTAL:					88500	675.57
5. COST OF WORKSHOP(S) / TRAINING COURSE(S)						

5.1 Posters/ Pamphlets/ T-shirts/ Stationery (Copy and Pen) * This cost is incorporated for workshops. Unit cost (1 poster + 1 pamphlet + 1 T-shirt + Stationery) = NRs 48,000 Unit = 25 people	4800	25	120000		120000	916.03
SUB-TOTAL:					120000	916.03
6. MISCELLANEOUS						
6.1 Monitoring from Ministry of Environment (2 times, 2 persons, 8 days total) Accommodation(A): No of person=2 Per Day Cost for 2 people: NRs. 2500 Daily Allowance (C): No of person=2 Per day allowance for 2 people: NRs 10,000 Unit Cost Total = NRs 12,500 Unit = days (4 days)	12,000	8	100000		100000	763.36
SUB-TOTAL:					100000	763.36
TOTAL:					2386000	18,213.74

J. Follow Up

- Interaction with the local government for the progress of the completed task and workshop on local level.
- See the trend/count in the number of endangered bird species and use of the database designed for promoting these endangered species.

K. Bibliography

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