

## **Project Update: April 2015**

### **Overview**

The goal of the project is to formulate a relevant and sustainable LAS Community Based Conservation Program to protect and conserve the species of LAS in the eastern lowlands of Nepal. It is designed to ensure interventions for LAS conservation are appropriate, relevant and effective. Thus, the first three months of the project had mainly focused on capacity building of research team, training, development of research and awareness materials. During this period, the project team had also facilitated focused group discussions, field visits and meetings with local communities, key informants and technical experts to establish in depth insights and information relevant to the project.

### **Project Components – Phase 1**

The main focus of activities in the first quarter of the project implementation included the following

1. Capacity Building of Project Team and Research Development
  - a) Formation of conservation cum research team from local schools
  - b) Technical training of research team and empowerment for community visit
  - c) Formulation of checklist, questionnaire and other research materials
2. Focused group discussions, field visits and meetings with stakeholders
  - a) Site photographs of LAS and participating communities
  - b) GIS Maps of existing LAS Colonies
  - c) Case study on Jharmauro (An organ of Lesser Adjutant Stork which is used as traditional Values by certain ethnic group)
3. Awareness Campaign Materials - Designing of posters and Hoarding Board
4. Linking of conservation project outputs to social media platforms e.g. Facebook
5. Problems encountered and action taken
6. Quarterly Plans for Phase 2, 3 & 4
7. Recommendations and Conclusion

The expected project outputs from the above activities were realized within the project schedule and cost estimates. During project implementation problems were encountered and the report also provides insights to action taken in mitigating project risks. Enclosed are site photographs and brief descriptions of activities (see annexures and tables attached).

**Table 1. Project Implementation Matrix 2015**

Quarter 1 Completed – Phase 1			Quarter 2 Plan – Phase 2			Quarter 3 & 4 Plan - Phase 3 & 4					
December	January	February	March	April	May	June	July	Aug	Sept	Oct	Nov
<ul style="list-style-type: none"><li>• Formation of conservation cum research team</li><li>• Training for conservation and research team</li><li>• Check list and questionnaire development</li><li>• Linking our conservation project with social media</li></ul>	<ul style="list-style-type: none"><li>• Preliminary field visit in existing colonies of the LAS</li><li>• Preliminary field visit report preparation</li></ul>	<ul style="list-style-type: none"><li>• Meeting with communities</li><li>• Meeting with experts</li><li>• Conservation awareness material preparation</li><li>• Submission of first quarter report to donor</li></ul>	<ul style="list-style-type: none"><li>• Meeting with experts</li><li>• Meeting with communities</li><li>• Finalization of conservation awareness material (posters, banner, hoarding boards)</li><li>• Field Visits</li><li>• Conservation awareness program in eastern lowlands of Nepal ( in schools, communities, community forest user groups, and other identified stakeholders)</li><li>• Formation of conservation awareness group in each location<ul style="list-style-type: none"><li>• Submission of second quarter report to donor</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Final research report preparation based on field visit</li><li>• Radio program</li><li>• Documentary preparation</li><li>• Local conservation group formation</li><li>• Publication Declaration of LAS conservation area and Installation of hoarding boards</li><li>• Submission of quarterly report (August)</li><li>• Publications news in local news paper and media</li></ul>	<ul style="list-style-type: none"><li>• Final report submission to donor</li><li>• Submission manuscript for the publications in journal</li></ul>						

**Shantosh Karki, LAS Conservation Team Leader, 2015**

## 1. Capacity Building of Project Team and Research Development

### a) Formation of conservation cum research team from local schools

Given the awareness meeting conducted by the project officer in December 2014, students became more aware of the degrading environment and biodiversity of the eastern Nepal. Students were greatly encouraged to take part in the project and 14 student volunteers opted to join the project as the conservation/research team members. They understood the need to contribute towards the conservation of biodiversity and habitat protection of LAS and its population in eastern Nepal. They also recognized the urgency to create awareness to protect the biodiversity of Nepal's flora and fauna. They are current students of Biology department of Damak Campus, Jhapa Nepal.

(See volunteer group list – Annexure 3).

In this regard, the team members have carried initial research activities and will progressively continue to do so as per the project plan. They will conduct necessary activities in the Eastern Lowlands of Nepal in order to carry out conservation and research program, where our core project team will also actively engage to achieve the target of project.

Demo 1. LAS Project Discussions with Student Volunteer Group, (Damak-14, Jhapa, Easter Nepal (December 20) (Damak Multiple Campus)



P1. LAS Project team and Volunteers



P2. LAS Project team and volunteers learning about GPS, research methodology etc.

### b) **Technical training of research team and empowerment for community visits**

After the formation of conservation and research team, one day training on research methodology, GPS uses, stakeholder mapping were carried out.

### c) **Formulation of checklist, questionnaire and other research materials**

After the training, a checklist and questionnaires were developed to conduct field survey. (See annex 2).

## 2. Focused group discussions, field visits and meetings with stakeholders

To make better understanding of field and challenges of the field, a preliminary field visit was carried out. During the preliminary field survey information on status of bird and its habitat, its threat and conservation challenges were collected. Also meetings with local communities, stakeholders such as -community forest user group, forest officers, children's club, youth clubs, schools etc. were also done.

A total of seven days were spent in the field in order to gather vital information about birds in all the existing colonies of LAS. Since December is breeding season for LAS, we counted total number of chicks and total number adults as shown in Table 2. The conservation threats of the birds were also collected using questionnaire developed.

The Meeting with Experts and Community People One level of consultation was held with Lecturers of Zoology, Botany and Environmental Science from Damak Multiple Campus, Mechi Multiple Campus, Bhadrapur, and Post Graduate Campus, Biratnagar in January regarding conservation strategy formulation for conservation of LAS, their recommendation has been integrated in conservation strategy.



Discussion with Lecturers of Damak Multiple Campus

Similarly, community level meeting were also organized in Urlbari (site H), Sarnamati (Site C) and Site K regarding conservation strategy and conservation measures. Both the consultation meeting with experts and community people went fruitful. Communities are ready to conserve the population of LAS, but they wanted to learn more about conservation measures through regular conservation programs.

For the conservation programs they said about school program and community based conservation program would be helpful increase their awareness level about LAS.



## a) Site Photographs of LAS Conservation Project, 2015



With local people at Site K



Interview with Local women in Site H



Interview with Local People at Site C



LAS nest tree at Site K



Interview with local herders about threat of LAS at Side E



Cutting of nest has become major threat of LAS at Site F





With Local people at Site C



With Local children at Site K



LAS colony at Site C



Observing LAS colony at Site G



LAS colony at Site E



LAS colony at Site H

### Results of Preliminary field visits

Table 2. Total current population of LAS in eastern lowlands of Nepal (IN breeding season) and map of colonies is shown in figure 1 and figure 2.

Location	No. of Nest	No. of Chicks	No. of Adult birds	Names of Nest Trees	Current Total Population	Previous population	GPS coordinates	Conservation Threat(s)/ Remarks
Site A	0	0	0		0	2	26°41'35.36"N 87°40'38.78"E	No population recorded this time
Site B	0	0	0		0	2	26°37'28.69"N 87°40'19.39"E	No population recorded this time
Site C (Sarna Mati VDC )	11	10	22	<i>Bombax ceiba</i>	32	54 (16 Nests, 32 Adults and 22 Chicks)	26°31'28.20"N 87°52'57.96"E (T1)  26°31'21.81"N 87°52'59.64"E (T2)  26°31'30.00"N 87°52'59.64"E (T3)	Population has been decreased significantly
Site C1	2	0	4	<i>Bombax ceiba</i>	4	Newly Identified Location	26°40'14.88"N 87°53'20.88"E	
Site D (Tarahara Forest 1)	7	9	12	<i>Bombax ceiba</i>	20	35	26°42'40.51"N 87°16'47.15"E Site D	
Site E (Tarahara Forest 2)	5	8	8	<i>Bombax ceiba</i>	17	17	26°42'43.42"N 87°16'40.31"E Site E	
Site E1	1	0	2	<i>Bombax ceiba</i>	2	New Nest Tree	26°42'39.45"N 87°16'36.08"E	

Site F (Barampur Community Forest)	0	0	0	<i>Bombax ceiba</i>	0	18	26°42'58.75"N 87°15'59.83"E	No population recorded this time, Lack of conservation awareness
Site G (Urlabari Forest grove 1)	0	0	0	<i>Adina Cardofoia</i>	0	52	26°39'37.99"N 87°35'49.71"E	This colony was biggest colony in 2010/11, but now no LAS were recorded, The LAS population moved from this place because of thunder storm hit the tree as said by local. But it can also be observed that continuous habitat encroachment from local people due to lack of awareness.
Site H Urlabari Forest Grove 2	7	7	5	<i>Adina cardofoia</i>	26	6	26°39'44.72"N 87°36'2.83"E (T1)	It's been three years that they migrated to Urlabari Forest Grove 2.
	6	7	7	<i>Adina cardofoia</i>			26°39'43.22"N 87°36'3.36"E (T2)	
Site I (Bhaunne 1)	0	0	0			6		
Site J (Bhaunne 2)	0	0	0			8		
Site K (Sunabarsi T1)	3	5	4	<i>Bombax ceiba</i>	9	35	26°30'55.45"N	
							87°34'27.27"E	
Site K1 (Sunabarsi T2)	8	12	9	<i>Bombax ceiba</i>	21	(New Location Identified)	26°31'23.58"N 87°34'9.33"E	
Site K2 (Sunbarsi T3)	1	0	2	<i>Bombax ceiba</i>	2	(New Location Identified)	26°31'26.48"N 87°34'10.05"E	



Site L (Koshi Tappu WR)	0	0	0	No population recorded (But previously it was believed to have LAS colonies in these places)
Site M (Kechana)	0	0	0	
Site N (Mahendra Nagar)	0	0	0	
Site O (Rangeli)	0	0	0	

## Distribution of Lesser Adjutant Storks Nesting Colonies:

Based on the information collected from field, following distribution map has been prepared to show the nesting colonies of lesser adjutant storks in eastern lowlands of Nepal.

Figure 1: Distribution of Map of LAS colonies in Eastern Lowlands of Nepal

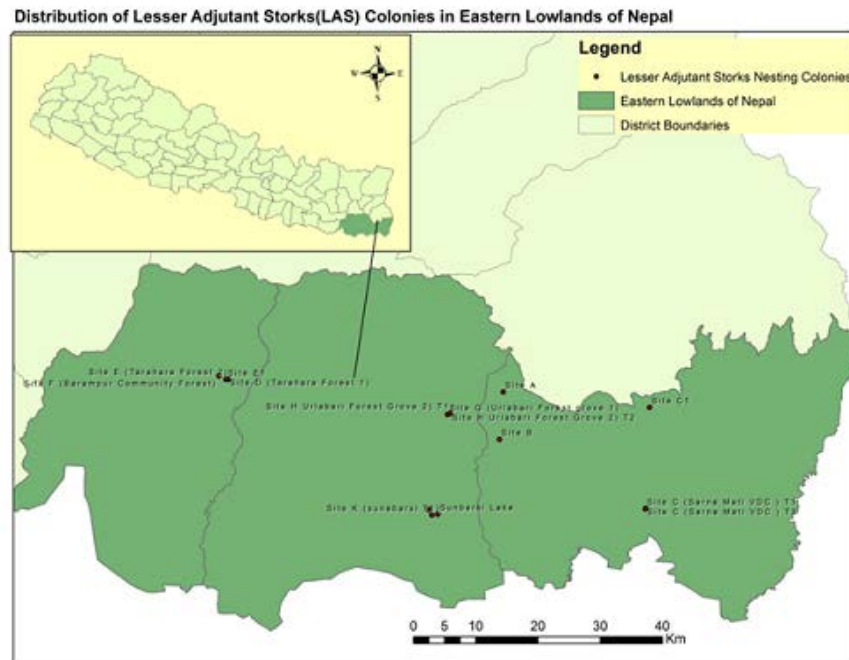
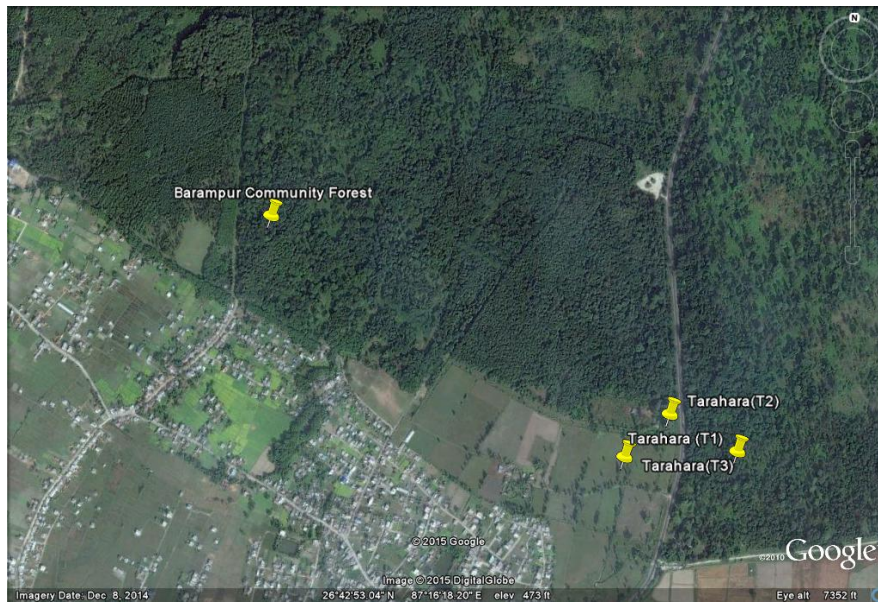
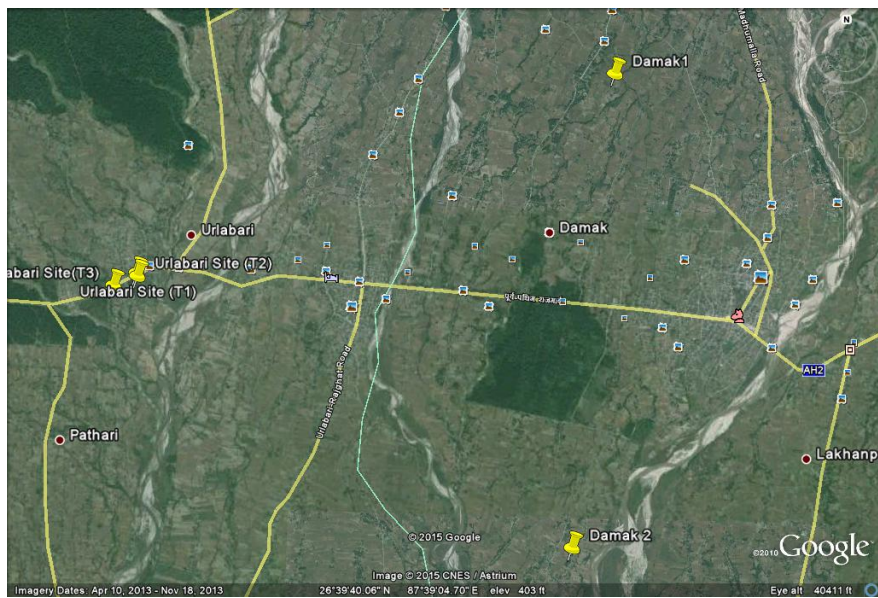


Figure 2. Maps (GPS points and location of Colony) Source (Google earth)



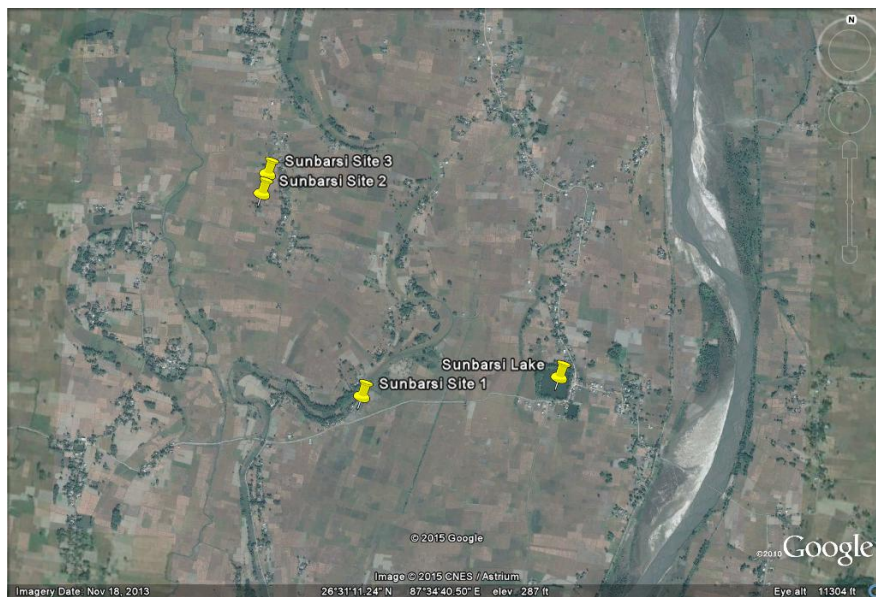


P2. Map showing Site D (Tarahara 1), E (Tarahara 2& 3) and F



P3. Map of Site A (Damak 1) and B (Damak 2),



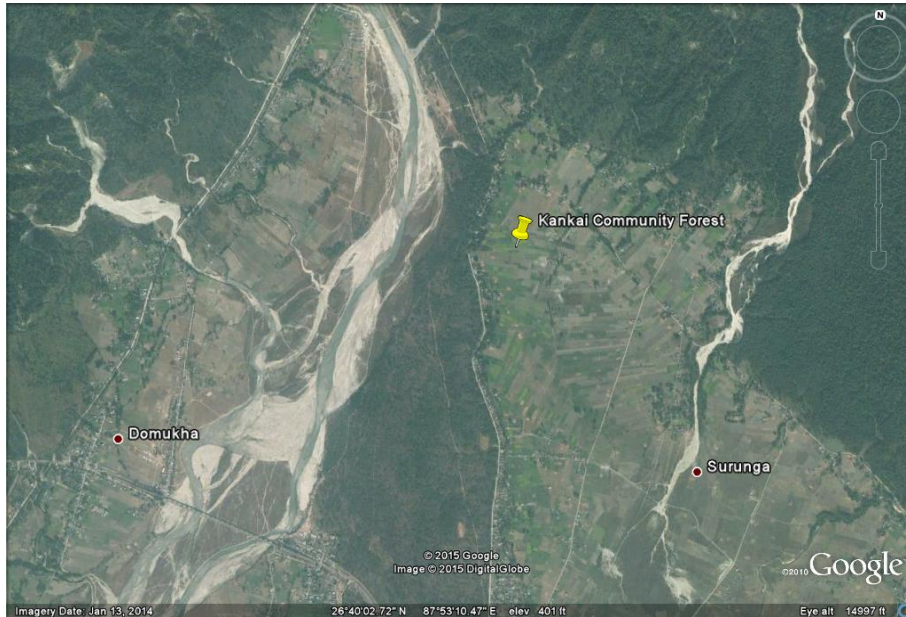


P4. Map of Site K (Sunbarsi 1, 2 and 3) with colonies



P5. Map of Site C (Sarnamati VDC) with LAS colonies shown as Raniban CF T1, T2 and T3





P6. Map of Site C1( kankai Community forest) newly identified colony of LAS

### c. Case Study about Jharmauro (An organ of Lesser Adjutant Stork which is used as traditional Values by certain ethnic group)

The case study is an interesting and mysterious story about the bird – LAS. A member of the community spoke to us (conservation-research team) that a special organ which is situated at the forehead of the bird – lives forever. It is a belief long held by an ethnic group called Dhami that it is cure for snake's bites. They also believe that it can protect their homes from snakes. The local name of the organ called Jharmauro. It is believed to live forever, if it is removed from the bird's head while alive. At Site K, he demonstrated this by placing the organ in a bowl of water. Immediately the organ started bubbling when he kept it in the water.

The direct or indirect implication of the belief is that it contributes to the demand of the Jharmauro which leads to the demise of the LAS through poaching thus, decrease of the bird's population over time.



Left: Demonstrating that this organ is still alive, and can breathe. Middle: Picture of Jharmauro(an organ which is inside the Fore head of LAS). Right: A guy showed our conservation team a special organ of LAS

### 3. Awareness Campaign Materials - Designing of posters and Hoarding Boards

The draft design and contents of poster and hoarding board have been prepared with expert consultations. The team has further sent it to the Bird Expert and Conservation Personnel for feedback and comments. On final revision and approval of experts, posters and hoarding board will be printed and displayed in key public locations to build awareness and visibility among local communities. This is expected to be completed on or before April 2015.

Figure 1. LAS Poster – Conserve Lesser Adjutant Storks and Its Habitats



### Linking conservation activities with Social Media

To visualize and aware wider audiences and stakeholders, a Facebook group and a Facebook page on Conservation of lesser adjutant storks have been developed. And all the conservation activities have been posted.

<https://www.facebook.com/pages/Save-Lesser-Adjutant-Stork-and-its-habitat-in-Nepal/335708713281733>

Similarly, preparation for a documentary is underway by the team which will be published on Youtube shortly.

### 4. Problems encountered and action taken

The challenges encounter in phase 1 were- collecting information from community about conservation threats of LAS as community people are not aware about the conservation of LAS,

identification of new colonies remained difficult because of lack of available information about these birds and low conservation level of local people etc.

## **5. Quarterly Plans for Phase 2, 3 & 4**

As per the project design, going forward the team will conduct activities stated in the project implementation matrix – phase 2 (see table 1). The key objectives include completion of awareness campaign materials, rolling out of awareness campaigns and formulation of community groups as key conservationists of the LAS and protectors of its habitats. Further details are as follow:

- **Consultation with experts**

One level of consultation was held with Lecturers of Zoology, Botany and Environmental Science from Damak Multiple Campus, Mechi Multiple Campus, Bhadrapur, and Post Graduate Campus, Biratnagar in January regarding conservation strategy formulation for conservation of LAS, their recommendation has been integrated in conservation strategy. Similarly, another level consultation with bird experts in the eastern Nepal will be done, which is targeted for second quarter.

- **Conservation Awareness Program**

After consultation with expert and community meeting conservation awareness program will be carried out.

- **Designing of Radio program**

Similarly content for the radio program on conservation of lesser adjutant stork is being prepared, basically this radio program will raise the conservation issues from the field, this activity will be carried in July to December.

- **Documentary preparation**

Documentary on the Lesser Adjutant Storks will be prepared in the third quarter of the year and will be broadcasted on social media and if possible on local radio and television.

## **6. Recommendations and Conclusions**

The initial phase of the project had tremendous results in terms of verifying the empirical evidence on the decline of the LAS population. The field survey revealed significant decrease of number of LAS birds from 240 in October 2010 to 133 in December 2014. It confirms that the LAS species is facing tremendous conservation threats. The lack of conservation awareness, excessive use of pesticides, continuous degradation and encroachment of its habitat, lack of conservation efforts poses as major threat to its survival. Consultations with community and experts have been important steps towards formulation of proper conservation strategy and have helped to effective implementation of bottom up approach.

**Annex 1: Name of Research/Conservation Team**

1. Shova Limbu
2. Hari Thapa
3. Rajan Niraula
4. Pratima Karki
5. Pratikshya Neupane
6. Rasila Khadka
7. Bikash Adhikari
8. Anish Karki
9. Poonam Upreti
10. Prakriti Bhattarai
11. Namita Pathak
12. Anjana Kadariya
13. Rejina Bista
14. Ranjita Thapa

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## Annex-2

### Questionnaire for the HH survey:

a. General Information of HH		
S.N.	Questions and Filters	Coding Categories
1.	Respondent ID No./ GPS Location	
2.	Name of VDC/Municipality	
3	Ward Number	
4	Sex	
5	How Old are you?	
6	Have you ever attended school?	Yes..... No..... Non Formal education
7	If yes, What is the highest grade have you completed?	Grade Completed
8	What is you main occupation?	Agriculture..... Government Job..... Private job..... Business..... Wage labour..... Other (specify).....
9	Do you have your own land?	Yes.....No.....
10	If yes, How much land do you have?	.....Bigha .....kattha.....dhur....
11	What are source of energy at your home?	Firewood..... Dungcake..... Agriculture residue..... Bio gas..... Kerosene..... Electricity..... LP Gas..... Other (specify).....
12	What is the source of firewood and fodder?	National Park Estension area.... Government Managed forest..... Private Land..... Community Forest..... Other Specify.....
13	How much amount of firewood and ofdder do you bring per month? (bhari/month)	Firewood (bhari/month)..... Fodder (bhari/month).....
14	Who collects firewood and fodder form your house?	Male/ Female
Section-B		
15	What kind of crops do you grow in your field?	Maize..... Wheat..... Paddy..... Mustard..... Others (specify).....
16	Which crops do you grow in how much land?	paddy. ....bigha ..... kattha .....dhur maize . . ....bigha ..... kattha .....dhur rice. .... bigha ..... kattha.....dhur mustard .....bigha ..... kattha .....dhur others .....bigha. .... kattha .....dhur

17	What is their average yield? Bora/Kattha(per season)	a) paddy ..... b) maize..... c) mustard..... d) wheat ..... e) others .....
<b>b. Information about Lesser Adjutant Stork</b>		
18	Do you recognize Lesser Adjutant Stork?	Yes..... No.....
19	Indicate kind of evidence found with tick	a. Dropping..... B. Sighting.....
20	Describe the place where sign was found	a. trail                      b. base of tree                      c. terraced field d. rocky area                      e. streamline
21	If a sighting how many LAS were seen in a group.	.....
22	How is LAS like? Describe distinctive physical feature?	
23	How many LAS do you think use this area?	
	Where it found?	a. Community Forest                      b. Paddy Field c. Road side tree                      d. Government Forest e. Swamp
24	Is there any Community Forest?	a. Yes                      b. No
	Name it	
25	Do LAS come to your agriculture field?	Yes.....No.....
26	Are they here all year or seasonally?	a. all year                      b. seasonally
27	What is your opinion about Las	a. good                      b. bad                      c. no opinion.
28	Should they be protected or eliminated & why?	
29	Do local people and any kinds of benefits about LAS?	
30	Have you seen the nest of LAS?	a. Yes                      b. No.
31	In which season LAS hatch chicken?	a. Winter                      b. Summer                      c. Other
32	How many eggs do the LAS hatch in one hatching, Do you like to collect egg of LAS?	A
33	Do the LAS live with other birds?	
34	Are the LAS poached?	a. Yes                      b. No
35	Do the grazing in forest affect the LAS?	a. Yes                      b. No.
36	Do the human activities in forest affect the LAS?	a. Yes                      b. No
37	Have you ever seen dead LAS?	a. Yes                      b. No
38	If yes how did it die?	a. Killed by man                      b. died of disease c. any other reason
39	Does community forest User Groups organize some programme for the conservation of LAS, If they do so, what type of programme, do they organize?	
40	Do NGO, INGO's GO run programme for the conservation of habitat of LAS & LAS itself?	a.Yes                      b.No
41	Are the people who poach LAS punished?	a. Yes                      b. No
42	If they are punished, what type of punishment do the FCG give?	
43	Who poach the LAS	a. Villagers                      b. Outsiders                      c. Childern
44	Different types of tools used in poaching	a. Share                      b. Catapull                      c.Gun                      d. Hand catch
45	Do you want to give any suggestion for Conservation of LAS.	
<b>c. Livestock and other activities</b>		
46	Do you have live stock	Yes.....NO.....

47	If Yes, What types of Live stock do you have?	Cow/Ox.....Buffalos.....Pigs..... Goats.....Other(specify).....
48	Do you have access to use forest products?	Yes..... No.....
49	If Yes, What kind of forest products you are allowed to collect?	Fuel Wood..... Fodder and Forage..... Medicinal Plants..... NTFPs..... Other (specify).....

### Questionnaire for Park Authority & Community Forest User Groups

1. Do you find any nest colony of these birds within the Wildlife Reserve/Community Forest?
2. Is here any research has been done regarding this bird?
3. Do you feel that this the safe place for LAS?
4. Does National park/CF cover sufficient feeding site for LAS?
5. What do you think, is this WR/CF cover suitable habitat for LAS?
6. Have you launched any programme to conserve this birds?
7. Have any Organization and Individuals launched any programme? If yes, When and who/Which Organization?
8. Is there any problem faced due to LAS?
9. What do you suggest to conserve these Birds?
10. Near by Water bodies..... Distance:..... Coverage: .....

## Bird Field Data Sheet:

Survey Area:

Date:

Researcher: Shantosh Karki , CDES, TU

Team Number:

[illegible]



# Baseline surveys

Survey area \_\_\_\_\_

Date: \_\_\_\_\_

Team Number \_\_\_\_\_ Team Leader \_\_\_\_\_

Site number: \_\_\_\_\_

Site location and description *(brief description using landmarks, photograph number, etc. so site can be located again)*

Map Name \_\_\_\_\_ AMG Zone \_\_\_\_\_

Map scale \_\_\_\_\_

*(topographic map gives AMG zone, easting and northing)*

Easting \_\_\_\_\_

*(6 digits; should be recorded mid-point along transect)*

Altitude \_\_\_\_\_

*(from topographic map, written in metres)*

Northing \_\_\_\_\_

*(7 digits; should be recorded mid-point along transect)*

Start time (24 hour)

Temperature at start (write in Celsius)

Finishtime (24 hour)

Temperature at finish (write in Celsius)

Wind (tick)

☐

1. Calm

☐

2. light, leaves rustle

☐

3. Moderate, branches move

☐

4. Strong, tops of trees move

Moon (tick)

☐

1. No moon

☐

2. less than or equal to 1-4 moon

☐

3. less than or equal to 1/2 moon

☐

4. less than or equal to 3/4 moon

☐

5. between 3/4 and full moon

☐

6. full moon

Rain (tick)

☐

1. dry

☐

2. light drizzle

☐

3. constant drizzle

☐

4. heavy rain

☐

5. mist, fog or heavy haze

Cloud cover (in percentage of sky) \_\_\_\_\_