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# TURGA PUMPED STORAGE PROJECT (4x250 MW) WEST BENGAL



## Final Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY

**Consultant:**

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### **WAPCOS LIMITED**

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development  
76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
Email: [dam@wapcos.co.in](mailto:dam@wapcos.co.in), [aht@wapcos.co.in](mailto:aht@wapcos.co.in)  
Website: <http://www.wapcos.gov.in>

**December 2017**

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## 1. INTRODUCTION

The proposed Turga Pumped Storage Project is located in the south-western fringe of Ajodhya plateau near Baghmundi village in the Purulia District, West Bengal. The proposed project envisages construction of a Rockfill dam across Turga Nala at higher reaches, a concrete gravity dam and a Rockfill dam across a saddle at lower reaches, an underground powerhouse in between the two reservoirs to generate 100MW peaking power.

The project was initiated with the officials of WAPCOS site office and the JICA survey team on 12<sup>th</sup> November 2017, for Ecological field survey for Asian elephant. The assessment of elephant's migratory path could be done by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.).



FIG-1.GOOGLE EARTH IMAGE SHOWING LAYOUT PLAN OF PROJECT COMPONENTS



## 2. PROJECT LOCATION

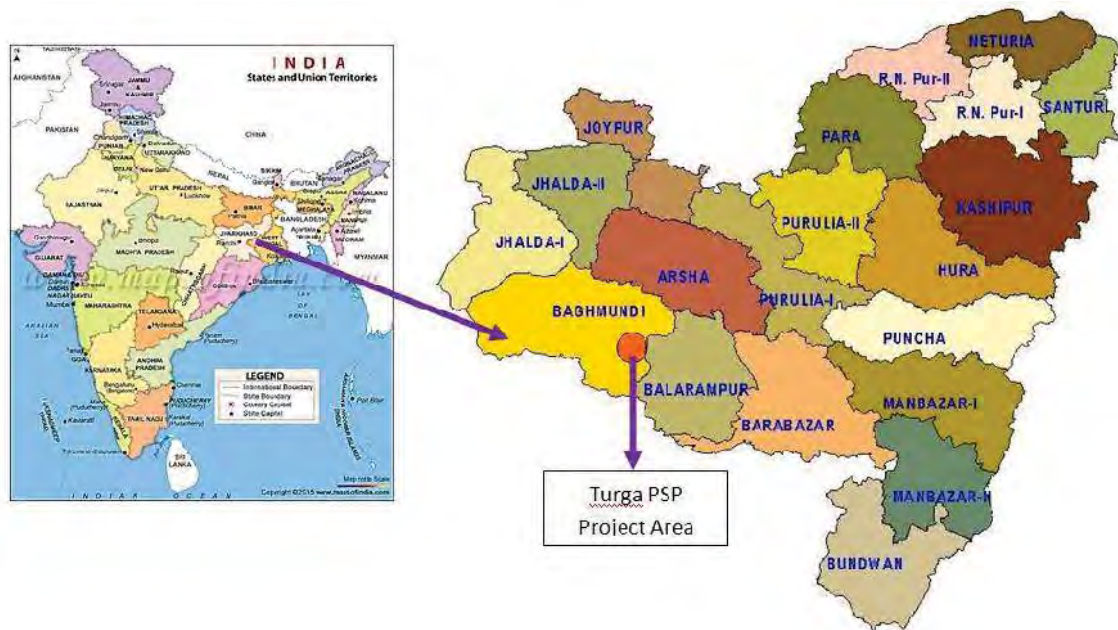


FIG-2. PROJECT LOCATION

## 3. SCOPE OF WORK

It consists of two studies, Ecological field survey and Interviews survey for elephants.

### 3.1 Ecological field survey for Asian elephant (*Elephants maximus*)

#### *Study on Legislative and Regulatory Considerations*

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).



### 3.2 Interview survey for elephant

**Group interview with the following participants were proposed:**

- Ajodhya Forest Range Officer
- Bagmundi Forest Range Officer
- Representatives of Forest Protection Committees under the project area

### 4. KEY PERSONNEL'S

The aforesaid scope of works were carried out by team of WAPCOS, JICA Study Team & WBSEDCL as listed below:

<b>WAPCOS</b>	<ol style="list-style-type: none"><li>1. Sh. Manoranjan Mondal, Engineer – in-charge</li><li>2. Miss. Chandrima Bandopadhyay, Co-ordinator (Reporter)</li><li>3. Sh. Ramesh Chandra, Plotter</li><li>4. Sh. Santosh Mahato, Recorder</li><li>5. Sh. Purnachanda Mandi, Supervisor</li><li>6. Sh. Sunil Mandi, Guide</li><li>7. Sh. Suchand Murmu, Guide</li></ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"><li>1. Mr. Harada, Team Leader</li><li>2. Mr. Hirokatsu Utagawa, Environment Expert</li><li>3. Ms. Masami Takahata, Enviro. Social</li></ol>
<b>WBSEDCL</b>	<ol style="list-style-type: none"><li>1. Sh. Amitava Kayal, Chief Engineer (PSPD)</li><li>2. Sh. Tusar kanti Chatterjee, Divisional Engineer (Civil)</li><li>3. Ms. Olivia Kabiraj Bose, Asst. Manager (HR &amp; A)</li><li>4. Sh. Madhab Koley, Sub-Assistant Engineer (Civil).</li></ol>

## **5. METHDOLOGY ADOPTED**

The elephant survey studies were carried out from 11th November 2017 to 23rd November 2017. The complete task was completed in two phase- Field Survey; Interview Survey; which are explained in detail below:

### **5.1 ECOLOGICAL FIELD SURVEY**

The field survey was conducted in the survey area from 12<sup>th</sup> November, 2017 through 20<sup>th</sup> November, 2017 by the team of experts of JICA assisted by WAPCOS team of Supervisor, Coordinator, Recorder, Plotter and Guide.

During ecological field survey for Asian elephant, WAPCOS's team in the guidance of forest rangers and presence of experts of JICA study team found and traced out the signs of Elephant movement by means of tracing elephant droppings, mud stains on trees, footprints, food marks etc. Based on the findings, the team collected information regarding seasonal migration pattern of Asian Elephants in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pumped Storage Project.

Based on the traced path, the team of experts from JICA deduced that the path is clear of the surface project components, and reservoir area and may not affect the migratory path in future.

The daily report for the said survey depicting the path and co-ordinates of points passed through are included in the report given in **Annexure A** along with photographs of the signs.

The consolidated map of Elephant's migratory path based on the daily input is presented below along with some photographs of the Elephants presence field signs:

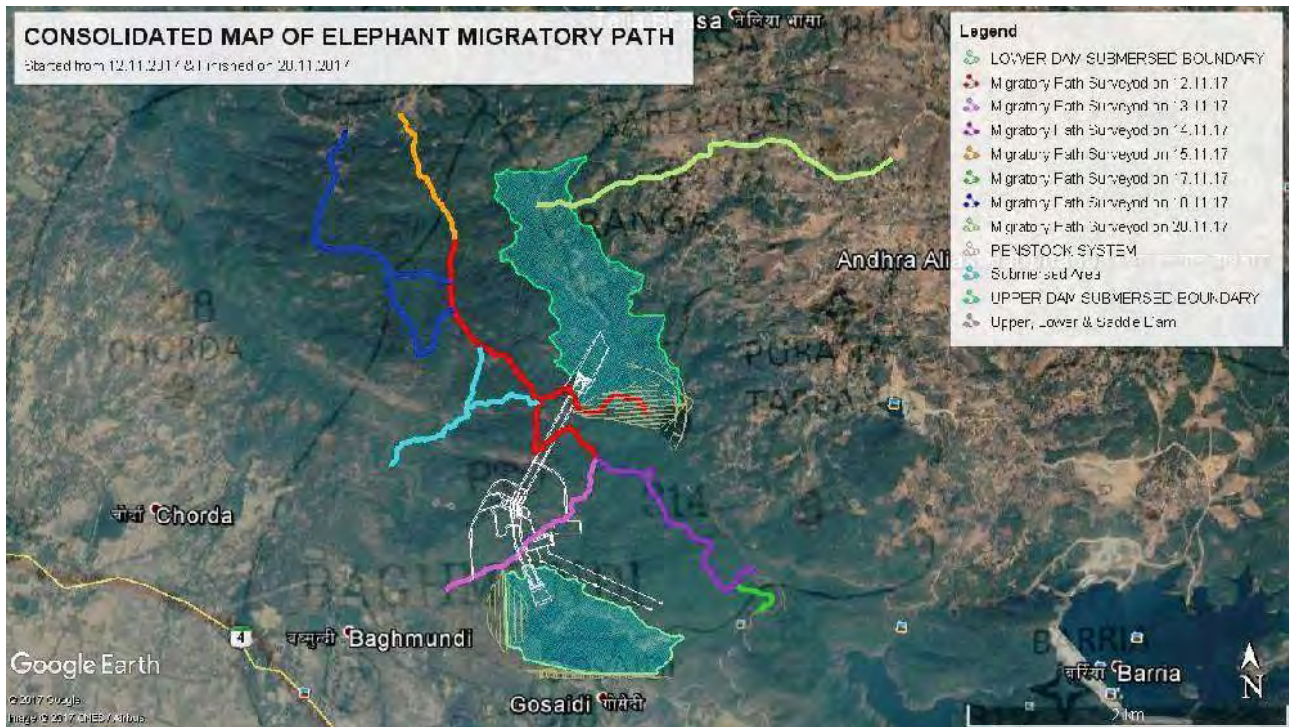


FIG-3. CONSOLIDATED MAP OF ELEPHANT'S MIGRATORY PATH



FIG-4. TRACES OF ELEPHANT'S PRESENCE





**FIG-5. Elephant Footprint trace noted on 12.11.2017**



**FIG-6. Elephant Footprint measurement noted on 12.11.2017**





**FIG-7. JICA & WAPCOS team at site on 12.11.2017**



**FIG-8. Elephant mark trace on vegetation on 13.11.2017**





**FIG-9. Elephant mark trace on soil on 14.11.2017**



**FIG-10. Elephant dropping trace on 17.11.2017**



On 21<sup>st</sup> November 2017, the team surveyed and collected the soil samples surrounding the project area as per the request of JICA study team.

**Photographs:**



**FIG-11. SOIL SAMPLE COLLECTION**

## **5.2 INTERVIEWS SURVEY**

The interview survey was conducted at the survey area on 22<sup>nd</sup> November, 2017 through 23<sup>rd</sup> November, 2017 with the help of Guide and Translator.

The interviews and group discussions were carried out in the presence of representatives from various villages of Baghmundi & Ajodhya Block and several questions were asked as per the format of JICA study team and are attached as **Annexure B**.

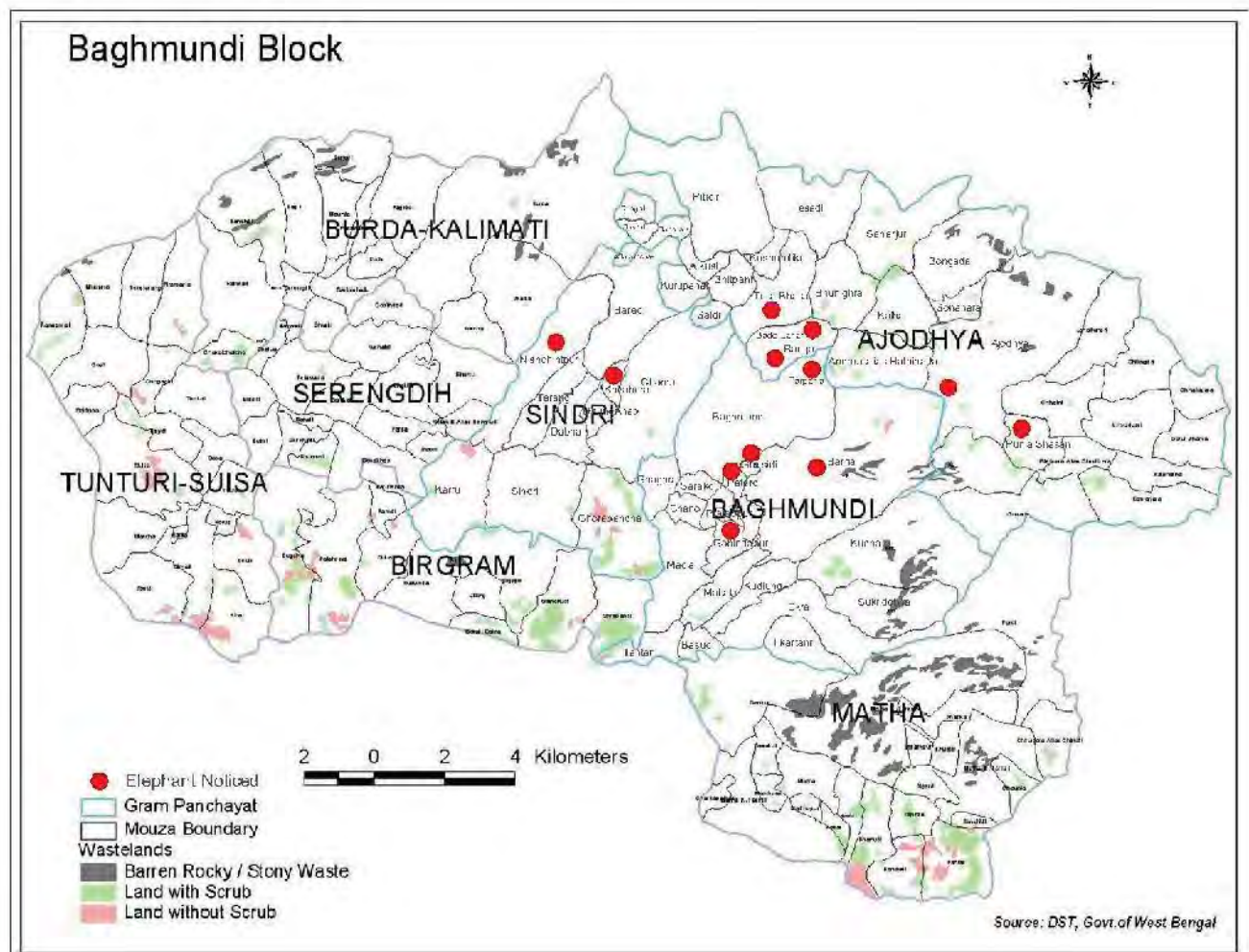


FIG-12. CONSOLIDATED MAP OF LOCATION OF PARTICIPANTS

### 5.3 MEETING AT DISTRICT FOREST OFFICE

Apart from the scope of works explained above, a combined meeting was held in-between WAPCOS official, the JICA survey team, WBSEDCL official and District Forest Officer on 11.11.2017. The objective of the meeting was to discuss impact of Project on Elephant's movement what-so-ever. The officials present in the meeting are listed below:

**Key Personnel's present:**

The following personnel's were present during the meeting:

**District Forest Office:**

Sh. Ramprasad Badana, District Forest Officer (DFO)

**WAPCOS officials:**

Sh. Manoranjan Mondal, Dy. Chief Engineer & Project Manager

**JICA survey team:**

1. Mr. Madoka Harada, Team Leader
2. Mr. Utagawa, Environment Expert

**WBSIEDCL officials:**

Sh. Saurabh Chakrobarty, Assistant Engineer (Civil) (PSPD)

**Excerpt:**

During the meeting, the elephant's existence in the Turga Project site or its probability to enter the area during construction period was discussed with the District Forest Officer (DFO). According to DFO, the elephant does not reside in the Turga project site, they only travel from this path for the search of fodder and water bodies. During the harvesting period, they migrate for 2 to 3 months for fodder, and in dry season they migrate for the search of water bodies. According to DFO, in the first season there may be a probability of elephant entering the project site, for which adequate preventive measures could be taken. However, in event of elephant entering the project area, the elephant movement could be controlled by organized 'Hulla party'.

During the succeeding years, the elephants may not enter the project area that there are no active water bodies in the project site. Moreover, as per his opinion elephants or any wild animals get violent or restless only when they see people clicking photographs or in order to protect their calves. During construction, these incidents may rarely happen.



Also he informed that they are trying to increase elephant's habitat in other parts of the forest by constructing check dams to increase the water bodies, planting fodder so that the path of wild animals can be restricted.



**FIG-13. PHOTOGRAPHS OF GROUP DISCUSSIONS/ INTERVIEW**

On 24<sup>th</sup> November, 2017, the study team discussed the matter and concluded the study as per the section 6: Conclusion given below.

## 6. CONCLUSION

The definitive elephant survey studies were carried out from 11th November 2017 to 23rd November 2017 by the expert's team of JICA assisted by the tea of WAPCOS Ltd., in the project area to access the elephant movement and its impact of the project construction activities and the project thereafter, on such movements.

The following conclusions were derived by the expert team of JICA based on the study:

1. There is no habitat of the Elephants in and around the project area.
2. The Elephant movement was found in the project area which is very seasonal.



**October-2017\_Elephant's Droppings**



**November-2017\_Elephant's Droppings**

As could be seen from the photographs, the elephant's droppings in the month of October-2017 were fresh while in the month of November-2017, it looks old. Thus, confirming that elephant's migration through this path is only seasonal.

3. The movement of Elephants lies outside the location of Project components thereof.

The same could be derived from the migratory path ascertained in the **Fig. 3** above.

Therefore, the construction activities wouldn't affect the Elephant migration pattern.

Based on above, it could be clearly drawn that the Project doesn't affect the Elephants movement nor the movement will affect the construction of the Project. However, adequate preventive measures could be taken beforehand for successful timely completion of the Project.

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## Annexure A

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## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-12/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development  
76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
Email: dam@wapcos.co.in, aht@wapcos.co.in  
Website: <http://www.wapcos.gov.in>

**November 2017**

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  - 4.2 INTERVIEW SURVEY OF ELEPHANT
    - 4.2.1 SURVEY AREA
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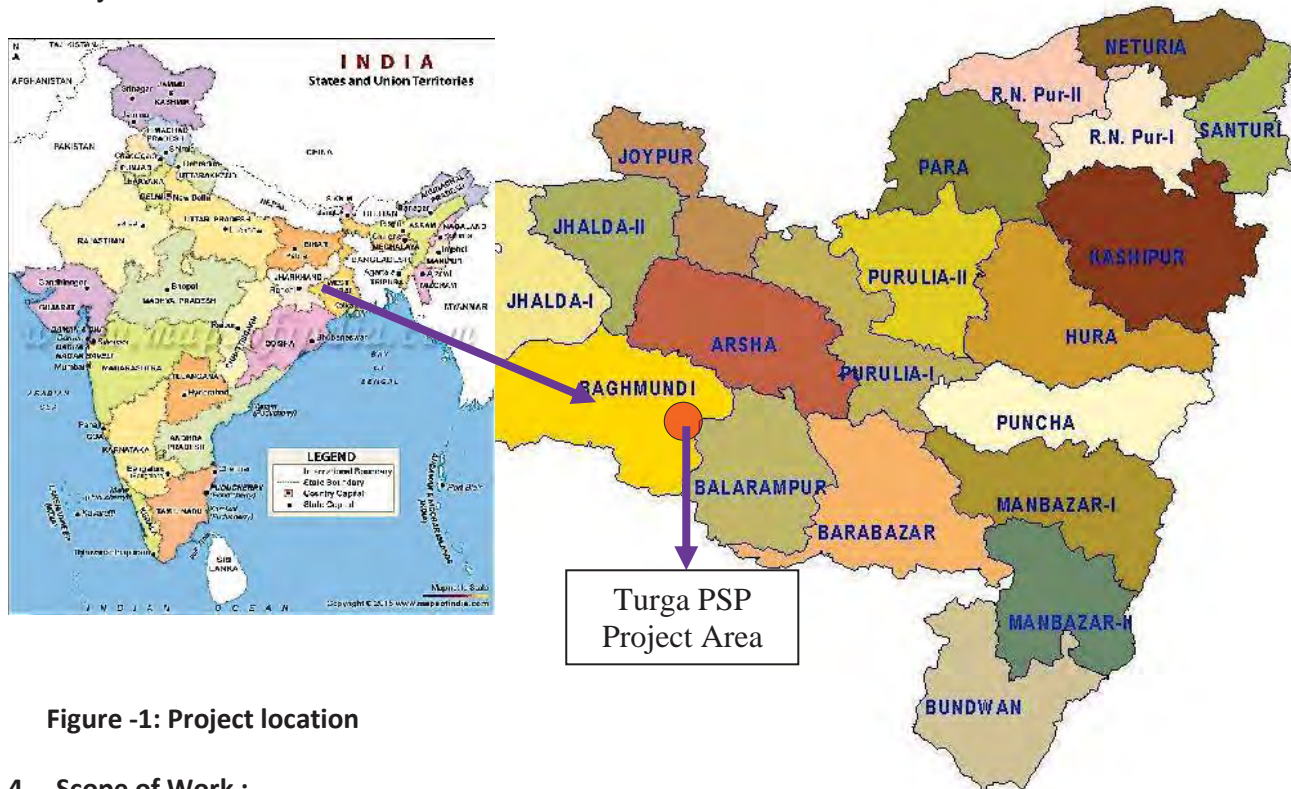
**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from today i.e. 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

**2. PROJECT OBJECTIVE:**

The objective of the survey as per ToR, is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**



---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.

## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 12.11.17 is pleasant and dry with less humidity. The temperature is about 27<sup>o</sup> C, weather is clear.

## 6. Field Survey on 12.11.17

A team comprising of WAPCOS and the JICA survey team started the survey, from the route which was followed as directed by a guide, i.e. a person from the surrounding village. The schedule is as follows:-

1. WAPCOS and the JICA survey team commenced its journey from PPSP guest house at 8 am and reached left abutment of the Upper Dam axis at 8:45am by vehicle.
2. Then the team started walking from left side of the upper dam axis and reached at the Turga nala near V-notch. Then the team adopted the path where some foot prints were noticed. During discussion, the guide informed us that elephants might have adopted

this path for drinking water. All the data have been recorded by GPS. Then the team reached the summit i.e. junction point around 10.30 am.

3. After reaching the summit, guide showed the survey team elephant's main track of migration. They informed the team, this track is also used by the villagers for their day to day activities. Thereafter the team began elephant's main track survey around 10:48am. On the way elephant's foot print, droppings and its traces on vegetation were noticed in a close proximity and the same have been recorded by means of GPS and photographs.
4. Elephant's main track survey was finished approximately around 1:36pm.

Daily Details are given below:

### 6.1 Daily Details

<b>LOCATION</b>	Upper Dam area
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	Right abutment of proposed upper dam area
<b>Survey Date</b>	12/11/2017
<b>Survey Time</b>	8:00 AM to 2:00PM
<b>Access to the site</b>	PPSP guest house to Turga Upper dam left abutment via PPSP lower/upper dam road, Jilingtadh more and Ranga more.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Sh. Manoranjan Mondal, Engineer – in-charge</li> <li>2. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>3. Sh. Ramesh Chandra, as a Plotter</li> <li>4. Sh. Santosh Mahato, as a Recorder</li> <li>5. Sh. Purnachanda Mandi, as a Supervisor</li> <li>6. Sh. Sunil Mandi, as a Guide</li> <li>7. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>



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<b>Type of data collected</b>	Footprints of elephants, other traces of elephants like its drop, traces on vegetation, traces on rocks etc.
<b>Migratory path of elephant</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1:** Migratory Path of Elephants Surveyed on 12.11.2017



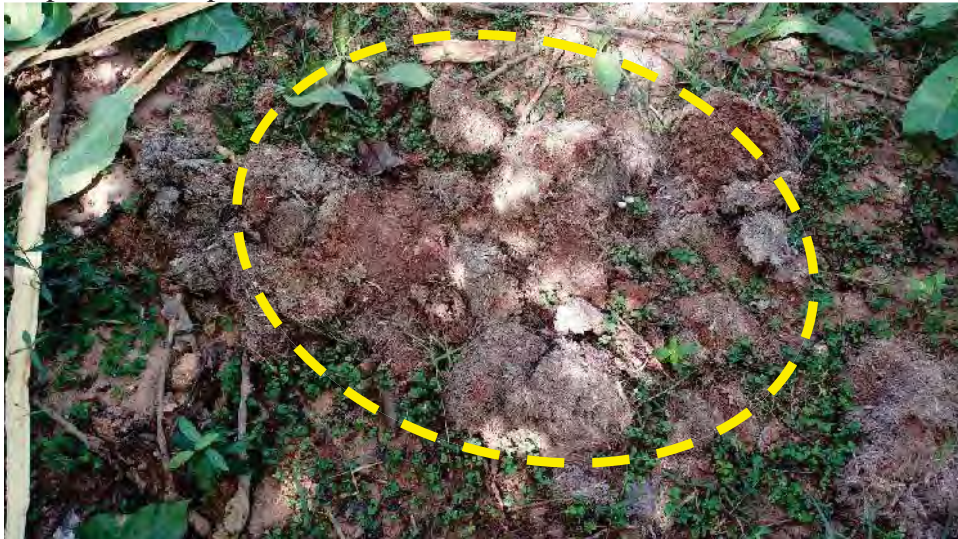
**Annexure-I: Photographs**



Elephant's Footprint



Elephant's Footprint



Elephant's Droppings



Elephant's Droppings





Elephant's traces on vegetation



Elephant's Footprint



JICA survey team conducting survey





Elephant's traces on vegetation



Elephant's traces on vegetation



WAPCOS Team and the JICA survey team



WAPCOS Team and the JICA survey team



<b>Annexure-II-GPS Data</b>				
<b>ELEPHANT'S PATH</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	404716	2567451	9:33:56	FOOT PRINT
2	404714	2567450	9:36:35	FOOT PRINT
3	404699	2567453	9:41:14	FOOT PRINT
4	404697	2567956	9:45:15	FOOT PRINT
5	404679	2567459	9:46:30	FOOT PRINT
6	404644	2567463	9:49:07	FOOT PRINT
7	404587	2567463	9:53:44	FOOT PRINT
8	404566	2567456	9:55:46	FOOT PRINT
9	404547	2567506	9:58:35	FOOT PRINT
10	404522	2567393	10:01:13	FOOT PRINT
11	404506	2567380	10:02:33	FOOT PRINT
12	4004490	2567380	10:07:50	FOOT PRINT
13	404427	2567378	10:10:52	FOOT PRINT
14	404370	2567396	10:14:13	FOOT PRINT
15	404350	2567444	10:15:52	FOOT PRINT
16	404347	2567469	10:16:52	FOOT PRINT
17	404333	2567491	10:17:59	FOOT PRINT
18	404322	2567504	10:18:44	FOOT PRINT
19	404319	2567506	10:21:06	FOOT PRINT
20	404325	2567534	10:22:24	FOOT PRINT
21	404307	2567540	10:24:14	FOOT PRINT
22	404252	2567516	10:28:05	FOOT PRINT
23	404150	2567476	10:29:51	FOOT PRINT
24	404133	2567468	10:30:51	FOOT PRINT
<b>ELEPHANT'S MAIN TRACK</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	403619	2568500	10:48:15	START POINT
2	403610	2568441	10:49:45	FOOT PRINT
3	403586	2568392	10:54:30	STREAM
4	403588	2568336	10:55:48	
5	403587	2568308	10:59:21	FOOT PRINT
6	403586	2568294	11:04:56	FOOT PRINT
7	403586	2568275	11:07:27	FOOT PRINT
8	403584	2568253	11:10:31	FOOT PRINT
9	403583	2568227	11:12:44	JUNCTION
10	403574	2568232	11:15:44	LEPSITADH TO MAHADEV BERA
11	403560	2568234	11:36:59	LEPSITADH TO MAHADEV BERA
12	403580	2568183	11:38:45	
13	403584	2568112	11:44:05	



14	403577	2568089	11:47:09	STREAM
15	403580	2568078	11:49:02	FOOT PRINT
16	403596	2568060	11:50:18	JUNCTION
17	403568	2568045	11:55:01	ANOTHER ROOT
18	403635	2567979	11:55:58	
19	403658	2567940	11:59:10	FOOT PRINT
20	403680	2567904	12:00:31	
21	403693	2567886	12:04:56	FOOT PRINT
22	403766	2567813	12:05:23	
23	403813	2567791	12:07:38	
24	403804	2567765	12:09:54	
25	403903	2567759	12:12:57	
26	403954	2567691	12:13:57	
27	403987	2567634	12:17:26	
28	404017	2567603	12:18:37	FOOT PRINT
29	404066	2567554	12:21:10	FOOT PRINT
30	404077	2567508	12:25:48	FOOT PRINT
31	404095	2567470	12:27:36	FOOT PRINT
32	404117	2567430	12:30:42	FOOT PRINT
33	404099	2567381	12:37:21	
34	404096	2567338	12:39:44	FOOT PRINT
35	404095	2567256	12:46:34	
36	404094	2567233	12:57:28	FOOT PRINT
37	404076	2567169	13:01:44	
38	404081	2567123	13:06:39	JUNCTION
39	404086	2567106	13:13:59	
40	404089	2567140	13:16:52	FOOT PRINT
41	404144	2567183	13:20:49	FOOT PRINT
42	404182	2567202	13:23:25	FOOT PRINT
43	404222	2567238	13:25:46	FOOT PRINT
44	404276	2567269	13:27:44	
45	404317	2567269	13:29:21	FOOT PRINT
46	404345	2567249	13:30:22	FOOT PRINT
47	404398	2567162	13:31:57	FOOT PRINT
48	404454	2567120	13:34:24	FOOT PRINT
49	404454	2567105	13:35:16	FOOT PRINT
50	404471	2567069	13:36:23	END POINT

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## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



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## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
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76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
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**November 2017**

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The objective of the survey as per ToR is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**

---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.

## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 13.11.17 is partly sunny. The temperature is about 18<sup>o</sup> C.

## 6. Field Survey on 13.11.17

A team comprising of WAPCOS and the JICA survey team began the journey for survey from 8 am and finished at 12 noon from downstream of the Upper Dam axis towards the lower reservoir. The route was guided by a person from the surrounding village (guide). Detail schedule is as follows:-

1. Same as on 12/11/2017, survey team commenced its journey from PPSP guest house at 8 am and reached the left abutment of Upper Dam axis at 8:45am by vehicle.
2. The route was same as on 12/11/2017 till the Turga nala near V-notch. Today, the team approached another path as directed by the guide. While walking on this route, the survey team reached the point where the survey of 12/11/2017 was finished at 9:30am.



3. Then from this point, survey team began walking on the main route of elephant's migration as informed by the guide. Here again elephant's foot prints, droppings, its traces on vegetation, stone and its hair were found and the same have been recorded by the same means of GPS and photographs. As per the guide information, this route is also adopted by the villagers for its daily activities.
  
4. Elephant's main track survey was finished approximately around 11:15am.

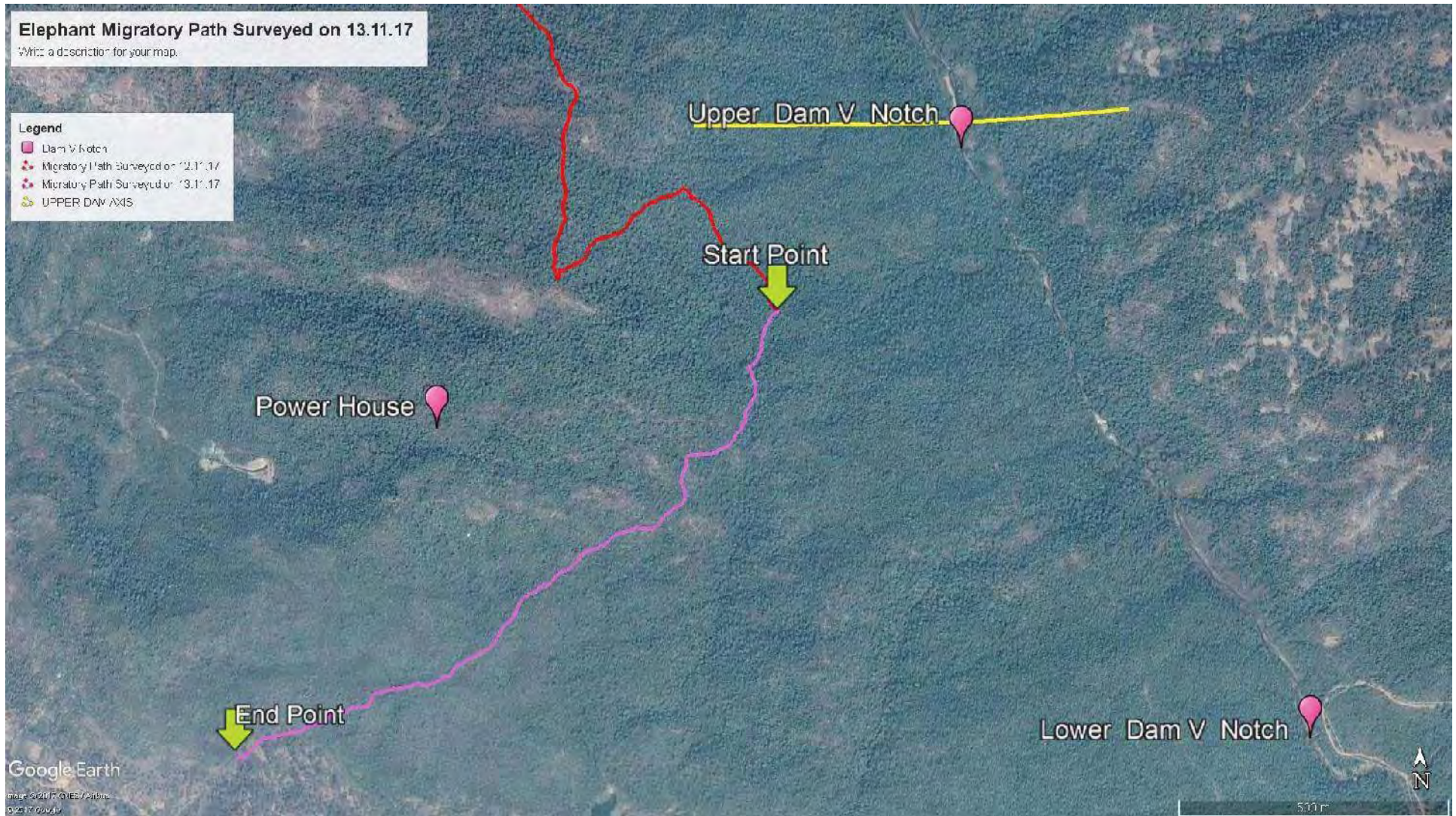
Daily Details are given below:

### 6.1 Daily Details

<b>LOCATION</b>	Upper Dam area
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	D/s of the upper dam axis
<b>Survey Date</b>	13/11/2017
<b>Survey Time</b>	8:00 AM to 12 noon
<b>Access to the site</b>	PPSP guest house to Turga Upper dam left abutment via PPSP lower/upper dam road, Jilingtadh more and Ranga more.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Sh. Manoranjan Mondal, Engineer – in-charge</li> <li>2. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>3. Sh. Ramesh Chandra, as a Plotter</li> <li>4. Sh. Santosh Mahato, as a Recorder</li> <li>5. Sh. Purnachanda Mandi, as a Supervisor</li> <li>6. Sh. Sunil Mandi, as a Guide</li> <li>7. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>
<b>Type of data collected</b>	Footprints of elephants, other traces of elephants like its drop, traces on vegetation, traces on rocks etc.
<b>Migratory path of elephant</b>	Enclosed in Plate-I

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<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1:** Migratory Path of Elephants Surveyed on 13.11.2017



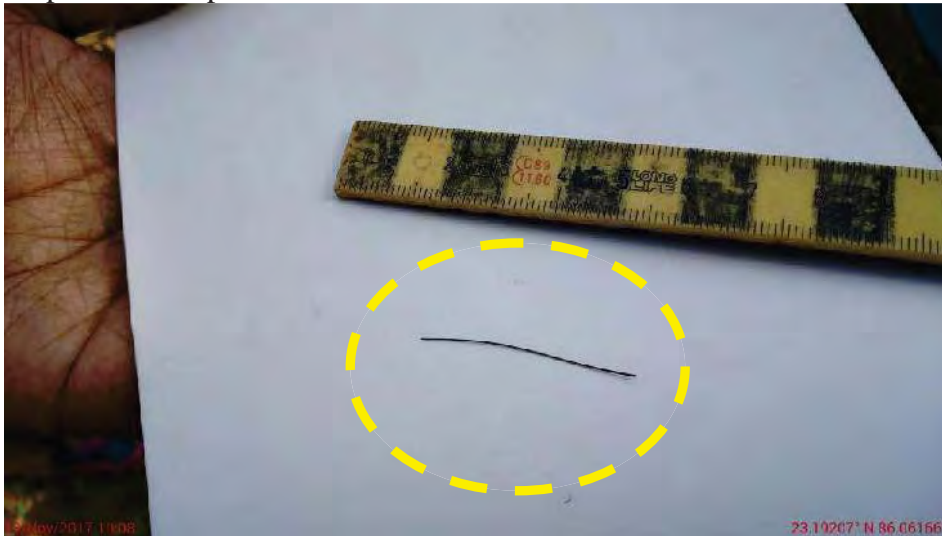
**Annexure-I: Photographs**



Elephant's Footprint



Elephant's Footprint

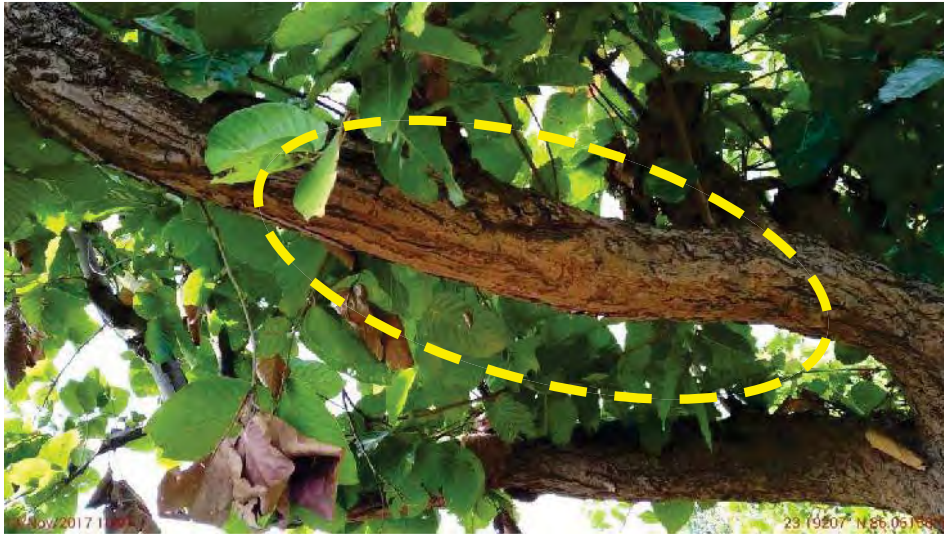


Elephant's Hair

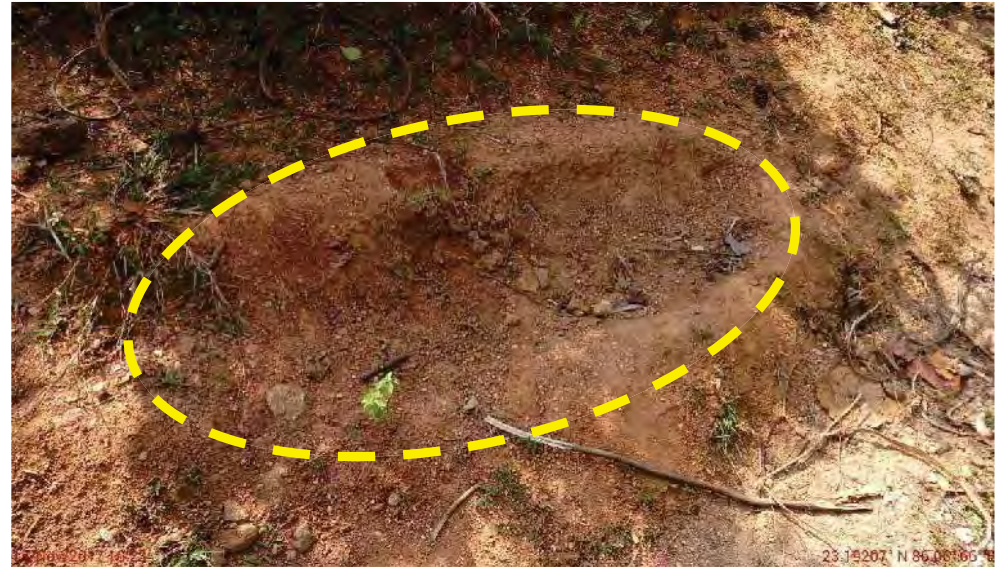


Elephant's Droppings





Elephant's traces on vegetation



Elephant's traces on mud



WAPCOS Team and the JICA survey team



WAPCOS Team and the JICA survey team

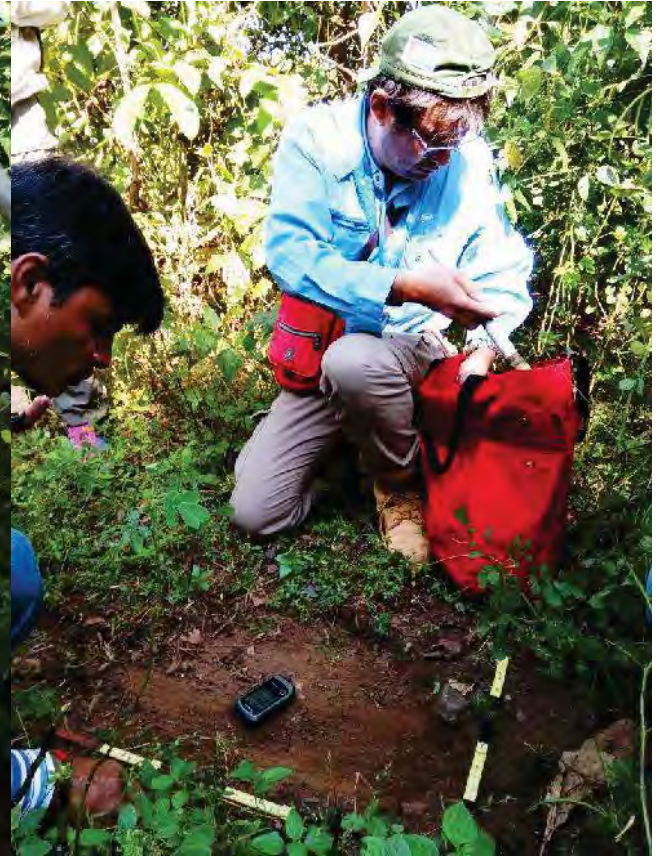




Elephant's traces on vegetation



JICA survey team conducting survey



JICA survey team conducting survey



<b>Annexure-II-GPS Data</b>				
<b>ELEPHANT MAIN TRACK</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	404471	2567069	9:33:56	Start point
2	404451	2567047	9:36:35	Foot print
3	404440	2567003	9:41:14	Stone broken
4	404421	2566969	9:43:07	Stream & Foot print
5	404404	2566980	9:48:06	Foot print
6	404424	2566960	9:51:29	Foot print
7	404432	2566939	9:53:51	Foot print
8	404412	2566872	9:56:15	Stream
9	404371	2566824	10:00:14	
10	404317	2566811	10:01:21	Foot print
11	404303	2566735	10:01:56	
12	404249	2566682	10:05:28	Foot print
13	404191	2566670	10:11:20	
14	404105	2566627	10:16:24	
15	404041	2566569	10:20:26	Elephant trace
16	404023	2566556	10:28:29	Foot print
17	403976	2566509	10:32:39	
18	403931	2566452	10:34:55	
19	403864	2566415	10:37:25	
20	403809	2566377	10:41:00	
21	403739	2566370	10:54:05	Stream
22	403702	2566358	10:56:04	
23	403671	2566334	11:04:23	Stream
24	403620	2566317	11:08:30	
25	403492	2566273	11:09:31	
26	403466	2566256	11:11:10	End point



## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-14/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development

76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
Email: dam@wapcos.co.in, aht@wapcos.co.in  
Website: <http://www.wapcos.gov.in>

**November 2017**

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1. PREAMBLE
2. PROJECT OBJECTIVE
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    - 4.1.2 SCHEDULE
  - 4.2 INTERVIEW SURVEY OF ELEPHANT
    - 4.2.1 SURVEY AREA
    - 4.2.2 SURVEY METHOD AND EXPECTED OUTCOME AS PER SCHEDULE
    - 4.2.3 PERSONEL REQUIRED
    - 4.2.4 SCHEDULE
5. TOPOGRAPHY AND CLIMATE
6. FIELD SURVEY ON 14.11.17
  - 6.1 DAILY DETAILS

MIGRATORY PATH OF ELEPHANT	-	PLATE – I
PHOTOGRAPHS	-	ANNEXURE – I
GPS DATA	-	ANNEXURE- II



**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

**2. PROJECT OBJECTIVE:**

The objective of the survey as per ToR is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**

---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.

## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 14.11.17 is partly sunny. The temperature is about 19<sup>o</sup> C.

## 6. Field Survey on 14.11.17

A team comprising of WAPCOS and the JICA survey team commenced its journey from 8 am and finished at 12 noon from downstream of the Upper Dam axis towards the lower dam V-notch area. Today's route was started from the end point of the 12/11/2017 which is also the starting point of 13/11/2017. Same as previous days, the team was guided by a person from the village. The schedule is as follows:-

1. The survey team initiated its journey of elephant survey for Turga PSP from PPSP guest house at 8 am and reached left abutment of the Upper Dam axis at 8:45am by vehicle same as previous two days.



2. Then again, the team started its journey on foot from left side of the upper dam axis and reached at the Turga nala near V-notch. The path adopted by the team was same as on 13/11/2017 to reach the junction point. The team reached the path around 9:25 am.
3. Today, a third track as directed by the guide was travelled from the junction point. On the way elephant's foot print was clearly visible because of the soft soil of the terrain. The same can be seen from the Anneure-I: Photographs. Also its droppings, its traces on vegetation and mud were noticed and recorded via GPS and photographs. This route is also adopted by the villagers for its day to day activities as informed by the guide. The survey on this track was finished around 11:50am.

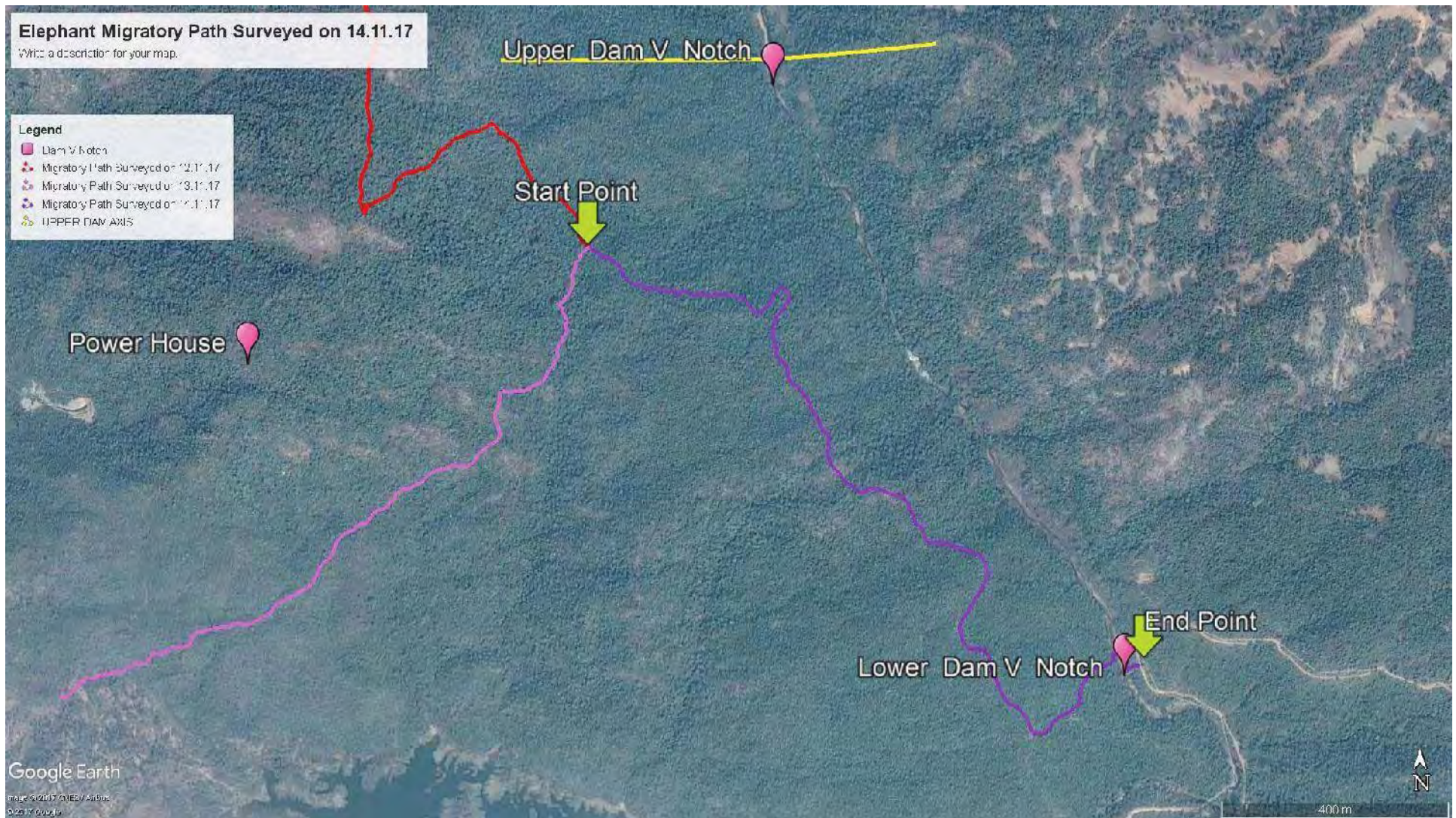
Daily Details are given below:

### 6.1 Daily Details

<b>LOCATION</b>	Upper Dam area
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	D/s of the upper dam axis
<b>Survey Date</b>	14/11/2017
<b>Survey Time</b>	8:00 AM to 12 noon
<b>Access to the site</b>	PPSP guest house to Turga Upper dam left abutment via PPSP lower/upper dam road, Jilingtadh more and Ranga more.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>2. Sh. Ramesh Chandra, as a Plotter</li> <li>3. Sh. Santosh Mahato, as a Recorder</li> <li>4. Sh. Purnachanda Mandi, as a Supervisor</li> <li>5. Sh. Sunil Mandi, as a Guide</li> <li>6. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>
<b>WBSDECL</b>	Sh. Madhab Koley, Sub-assistant engineer
<b>Type of data collected</b>	Footprints of elephants, other traces of elephants like its drop, traces on vegetation,

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	traces on rocks etc.
<b>Migratory path of elephant</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1: Migratory Path of Elephants Surveyed on 14.11.2017**



**Annexure-I: Photographs**



Elephant's traces on vegetation



Elephant's Droppings



Elephant's traces on stone



WAPCOS Team and the JICA survey team





Elephant's traces on vegetation



Elephant's Footprint



Elephant's traces on vegetation





Elephant's Footprint



Elephant's Footprint



JICA survey team conducting survey





Elephant's traces on vegetation



JICA survey team conducting survey



JICA survey team conducting survey

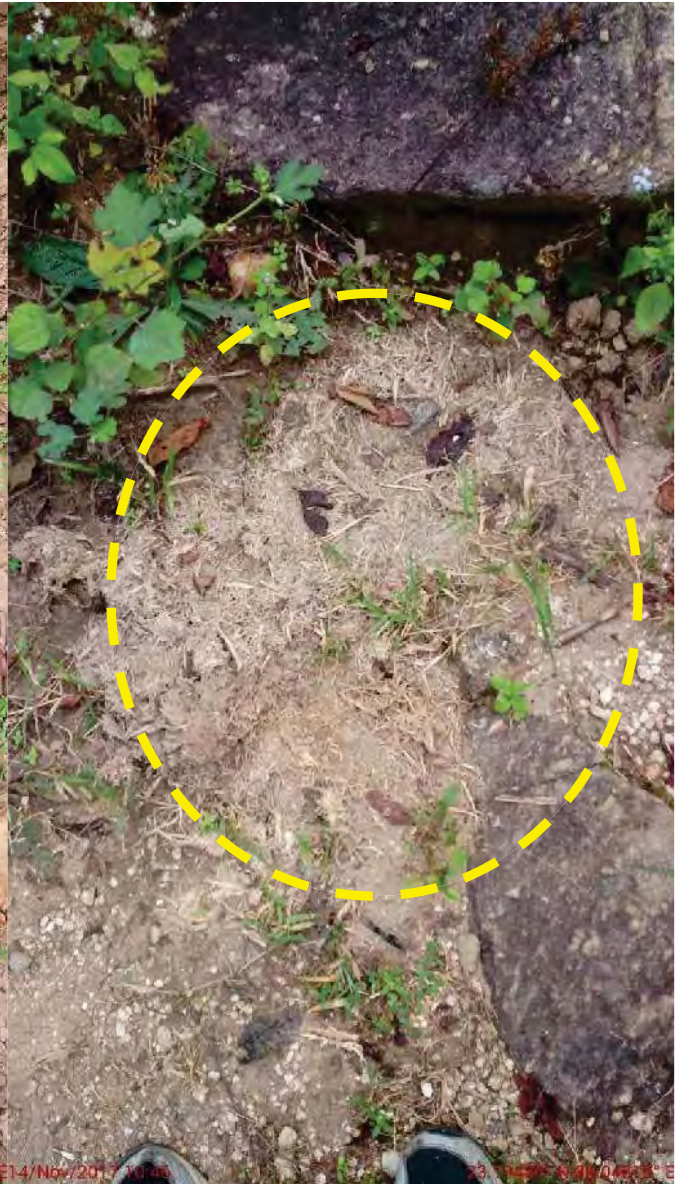




Elephant's traces on stone



Elephant's Footprint



Elephant's Droppings



Annexure-II-GPS Data				
ELEPHANT MAIN TRACK				
SR.NO	EASTING	NORTHING	TIME	REMARKS
1	404471	2567069	9:25:24	Start point
2	404476	2567065	9:27:47	
3	404482	2567061	9:29:03	Foot Print
4	404491	2567054	9:30:20	Foot Print
5	404509	2567045	9:31:57	Foot Print
6	404527	2567033	9:33:14	Foot Print
7	404533	2567018	9:34:01	Foot Print
8	404539	2567013	9:35:10	Foot Print
9	404589	2566993	9:37:14	
10	404618	2566989	9:39:26	Foot Print
11	404626	2566989	9:46:06	Foot Print
12	404636	2566982	9:50:00	
13	404646	2566988	9:50:53	Foot Print
14	404682	2566979	9:53:00	Foot Print
15	404712	2566981	9:57:06	Foot Print & trace on vegetation
16	404735	2566979	9:58:37	Foot Print
17	404747	2566979	10:02:30	Foot Print
18	404765	2566956	10:11:26	Foot Print
19	404772	2566948	10:12:13	Foot Print
20	404779	2566944	10:13:15	Foot Print
21	404820	2566996	10:16:46	Foot Print
22	404818	2566992	10:18:13	Foot Print
23	404832	2566970	10:21:52	Foot Print
24	404823	2566960	10:26:01	Foot Print
25	404806	2566892	10:29:56	Foot Print
26	404811	2566879	10:32:16	Foot Print
27	404828	2566839	10:34:42	Trace on mud
28	404864	2566791	10:40:11	Foot Print
29	404889	2566742	10:46:28	
30	404903	2566715	10:53:23	
31	404905	2566676	10:54:44	Foot Print
32	404935	2566642	10:56:44	
33	405010	2566624	10:59:55	
34	405056	2566579	11:05:28	
35	405075	2566540	11:08:21	Foot Print
36	405138	2566520	11:11:02	Foot Print
37	405179	2566507	11:13:45	Foot Print
38	405175	2566442	11:26:04	Foot Print
39	405145	2566398	11:27:38	Foot Print
40	405191	2566334	11:30:06	Foot Print
41	405200	2566289	11:34:07	
42	405215	2566266	11:35:10	

43	405249	2566233	11:36:57	Foot Print
44	405274	2566188	11:38:57	Turning point
45	405301	2566192	11:40:27	
46	405338	2566221	11:42:55	Foot Print
47	405376	2566287	11:45:53	
48	405425	2566318	11:48:17	
49	405433	2566326	11:50:14	Stream/Lower Dam V- notch/End point

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## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-15/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development

76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
Email: [dam@wapcos.co.in](mailto:dam@wapcos.co.in), [aht@wapcos.co.in](mailto:aht@wapcos.co.in)  
Website: <http://www.wapcos.gov.in>

**November 2017**

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1. PREAMBLE
2. PROJECT OBJECTIVE
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4. SCOPE OF WORK
  - 4.1 ECOLOGICAL FIELD SURVEY FOR ASIAN ELEPHANT (ELEPHANTS MAXIMUS)  
STUDY ON LEGISLATIVE AND REGULATORY CONSIDERATIONS
    - 4.1.1 SURVEYORS REQUIRED
    - 4.1.2 SCHEDULE
  - 4.2 INTERVIEW SURVEY OF ELEPHANT
    - 4.2.1 SURVEY AREA
    - 4.2.2 SURVEY METHOD AND EXPECTED OUTCOME AS PER SCHEDULE
    - 4.2.3 PERSONEL REQUIRED
    - 4.2.4 SCHEDULE
5. TOPOGRAPHY AND CLIMATE
6. FIELD SURVEY ON 15.11.17
  - 6.1 DAILY DETAILS

MIGRATORY PATH OF ELEPHANT	-	PLATE – I
PHOTOGRAPHS	-	ANNEXURE – I
GPS DATA	-	ANNEXURE- II



**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

**2. PROJECT OBJECTIVE:**

The objective of the survey as per ToR is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**

---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

#### **4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

#### **4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.



## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 15.11.17 is partly cloudy. The temperature is about 21<sup>0</sup> C.

## 6. Field Survey on 15.11.17

A combined team of WAPCOS and the JICA survey team initiated the journey for survey from 8 am and finished at 11:30am. The route was started from Saldih village and finished at the starting point of 12/11/2017. The schedule is as follows:-

1. Today, WAPCOS and the JICA survey team embarked its journey towards Saldih village from PPSP guest house at 8 am and reached the location at 9:15am by vehicle.
2. Then the team started walking on the upslope of the hill as per the direction of the guide. The team reached its destination around 9:45am while recording the migration track with the help of GPS and photographs.

3. In this elephant's survey on the main track, few foot prints were noticed. This track is also used by villagers for their everyday work.

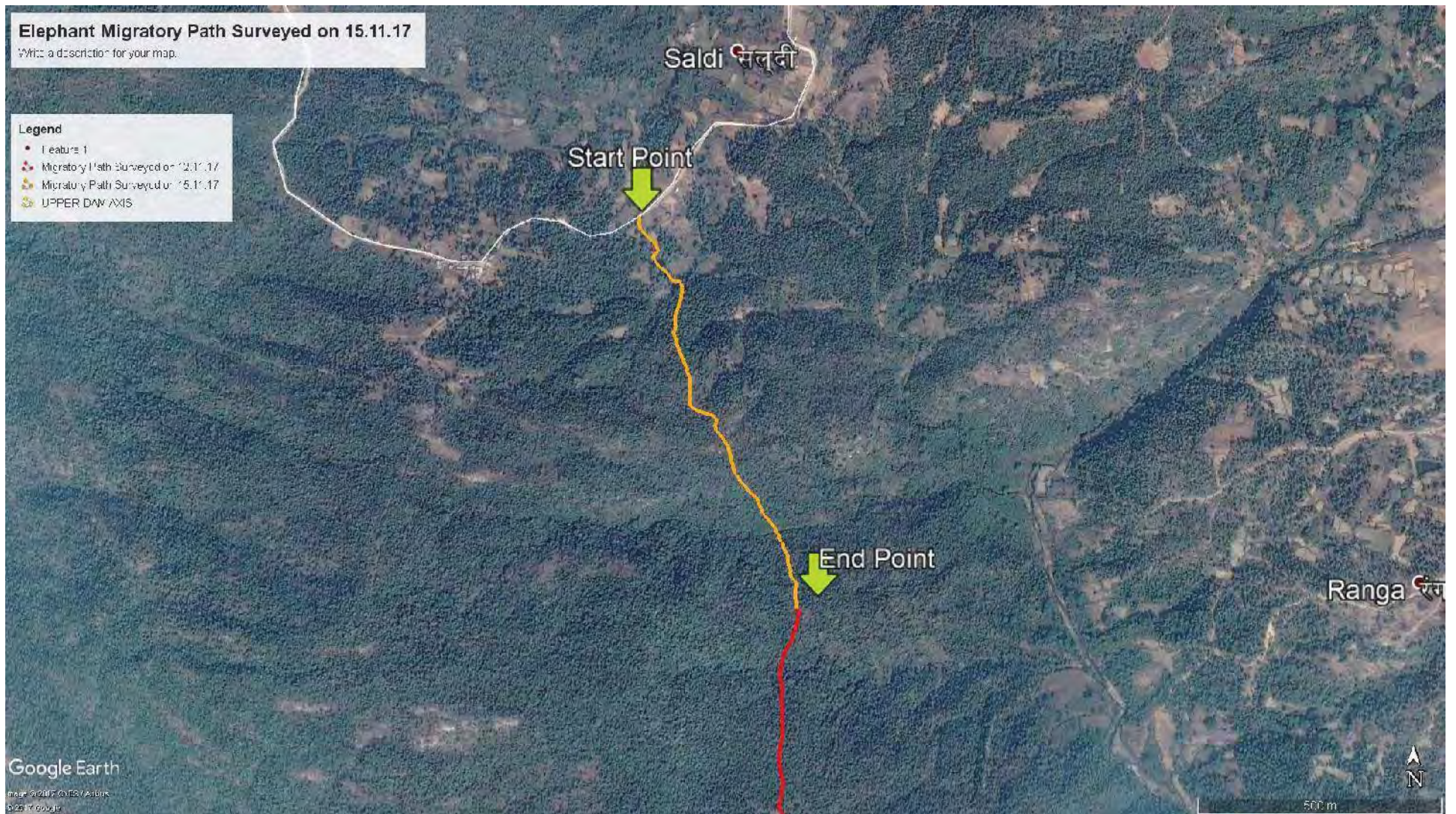
Daily Details are as follows:

### 6.1 Daily Details

<b>LOCATION</b>	Upper Dam area
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	Saldih village
<b>Survey Date</b>	15/11/2017
<b>Survey Time</b>	8:00 AM to 11:30am
<b>Access to the site</b>	PPSP guest house to Saldih village via PPSP lower/upper dam road, Jilingtadh more, Ranga more, Tarpania, Ranga, Bhuighara and Tiliyavasa road.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>2. Sh. Ramesh Chandra, as a Plotter</li> <li>3. Sh. Purnachanda Mandi, as a Supervisor</li> <li>4. Sh. Sunil Mandi, as a Guide</li> <li>5. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>
<b>WBSEDCL</b>	Sh. Madhab Koley, Sub-assistant engineer
<b>Type of data collected</b>	Few Footprints of elephants
<b>Migratory path of elephant</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)







**Plate-1:** Migratory Path of Elephants Surveyed on 15.11.2017



**Annexure-I: Photographs**



WAPCOS Team and the JICA survey team

<b>Annexure-II-GPS Data</b>				
<b>ELEPHANT MAIN TRACK</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	403292	2569318	9:17:11	Start point
2	403374	2569183	9:20:51	Stream
3	403368	2569072	9:23:15	
4	403400	2568972	9:24:59	
5	403465	2568861	9:27:24	
6	403580	2568665	9:32:46	Stream
7	403601	2568588	9:36:28	
8	403607	2568577	9:36:57	Foot Print
9	403629	2568487	9:41:30	End point

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## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-16/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development

76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
Email: [dam@wapcos.co.in](mailto:dam@wapcos.co.in), [aht@wapcos.co.in](mailto:aht@wapcos.co.in)  
Website: <http://www.wapcos.gov.in>

**November 2017**

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1. PREAMBLE
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MIGRATORY PATH OF ELEPHANT	-	PLATE – I
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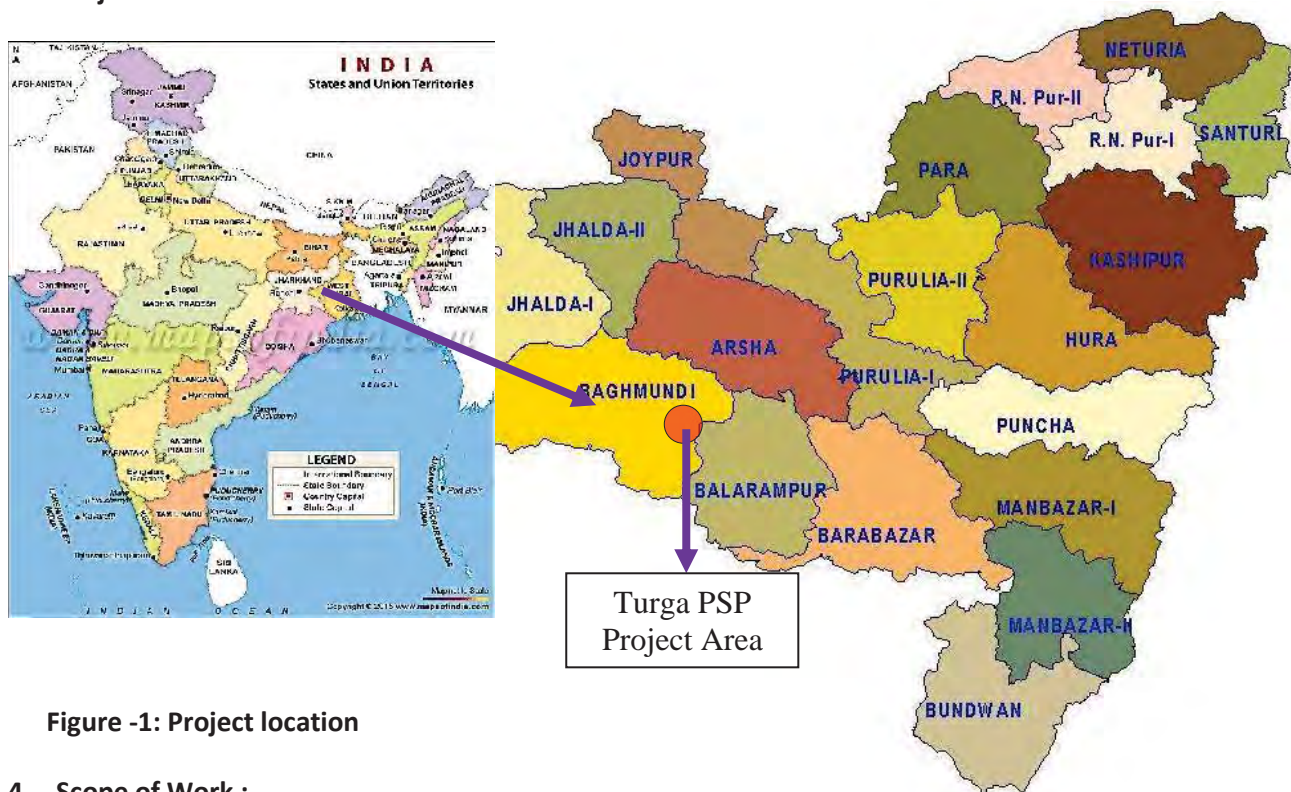
**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

**2. PROJECT OBJECTIVE:**

The objective of the survey as per ToR is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**

---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.



## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 16.11.17 is cloudy. The temperature is about 20<sup>o</sup> C.

## 6. Field Survey on 16.11.17

WAPCOS and the JICA survey team made a start for the survey from 8 am and finished at 12:30pm. The route was started from right bank of Turga nala. The detailed schedule is as follows:-

1. WAPCOS and the JICA survey team embarked its journey from PPSP guest house at 8 am and reached left abutment of the Upper Dam axis at 8:45am by vehicle.
2. Then the team started walking from left side of the upper dam axis and reached at the Turga nala near V-notch. Today's route was started around 10am after reaching its start point as per the guidance of the guide.

3. Now, the team commenced its journey towards Hadhaddi quarry around 10:01am. The first elephant's foot print was noticed at 10:06am. Thereafter several elephant's footprint was noticed at close interval. So the survey team continued its journey on that path. Later elephant's traces on vegetation were also found. While continuing on this path, the team reached Hadhaddi quarry around 11:58am. On the way; elephant's foot print, droppings and its traces on vegetation were recorded by means of GPS and photographs.
  
4. Elephant's main track survey was finished approximately around 12:25pm. Most of the villagers use this track for their day to day activities.

Daily Details are given below:

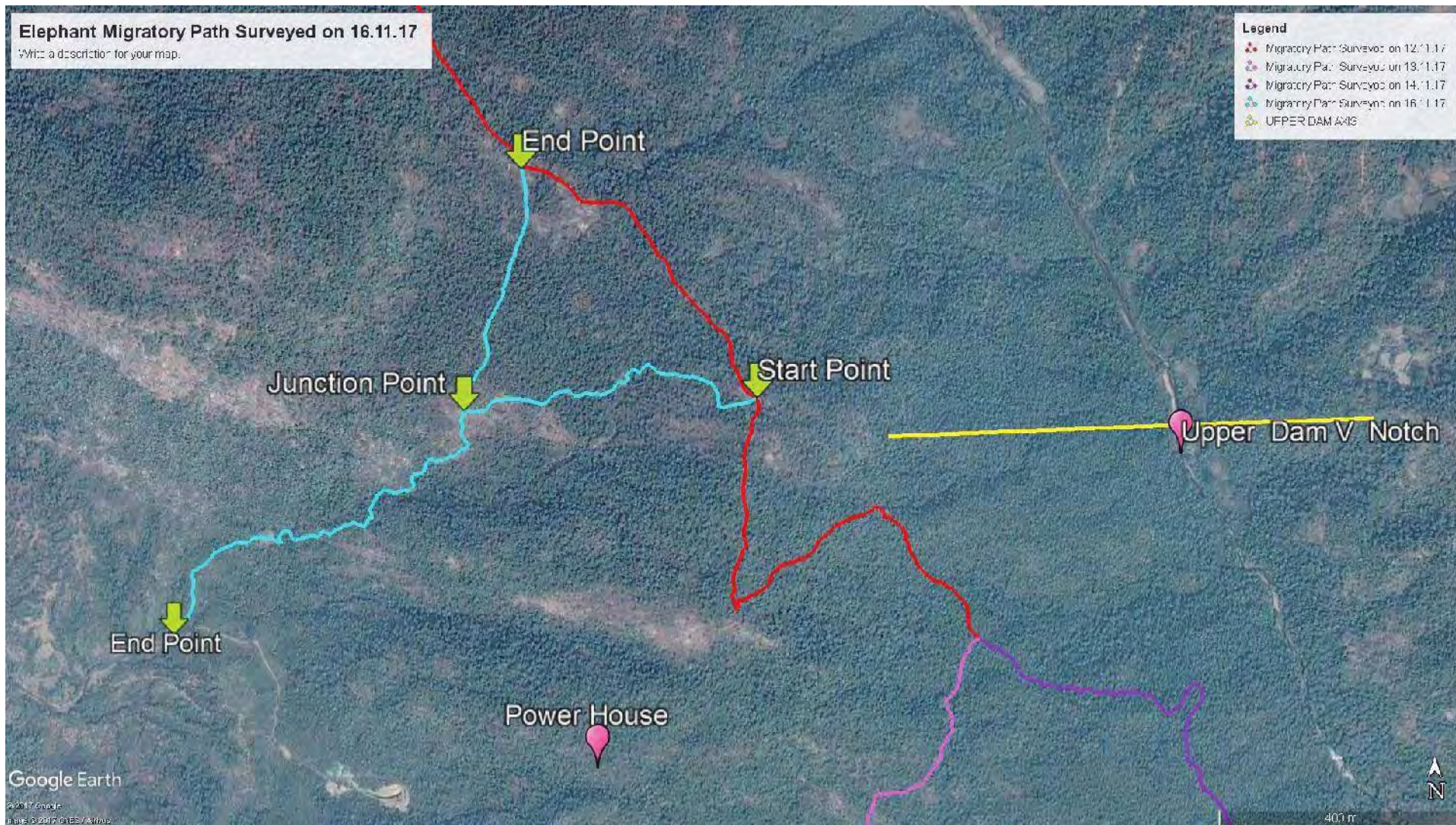
### 6.1 Daily Details

<b>LOCATION</b>	Upper Dam area
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	Right bank of Turga nala & Hadhaddi nala
<b>Survey Date</b>	16/11/2017
<b>Survey Time</b>	8:00 AM to 12:30pm
<b>Access to the site</b>	PPSP guest house to Turga Upper dam left abutment via PPSP lower/upper dam road, Jilingtadh more and Ranga more.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>2. Sh. Ramesh Chandra, as a Plotter</li> <li>3. Sh. Purnachanda Mandi, as a Supervisor</li> <li>4. Sh. Sunil Mandi, as a Guide</li> <li>5. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>
<b>WBSEDCL</b>	Sh. Madhab Koley, Sub-assistant engineer
<b>Type of data collected</b>	Footprints of elephants, other traces of elephants like its drop, traces on vegetation, traces on rocks etc.



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<b>Migratory path of elephant</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1: Migratory Path of Elephants Surveyed on 16.11.2017**



**Annexure-I: Photographs**



Elephant's Footprint



Elephant's Footprint



Elephant's Footprint



Elephant's Footprint





Elephant's Footprint



Elephant's Footprint

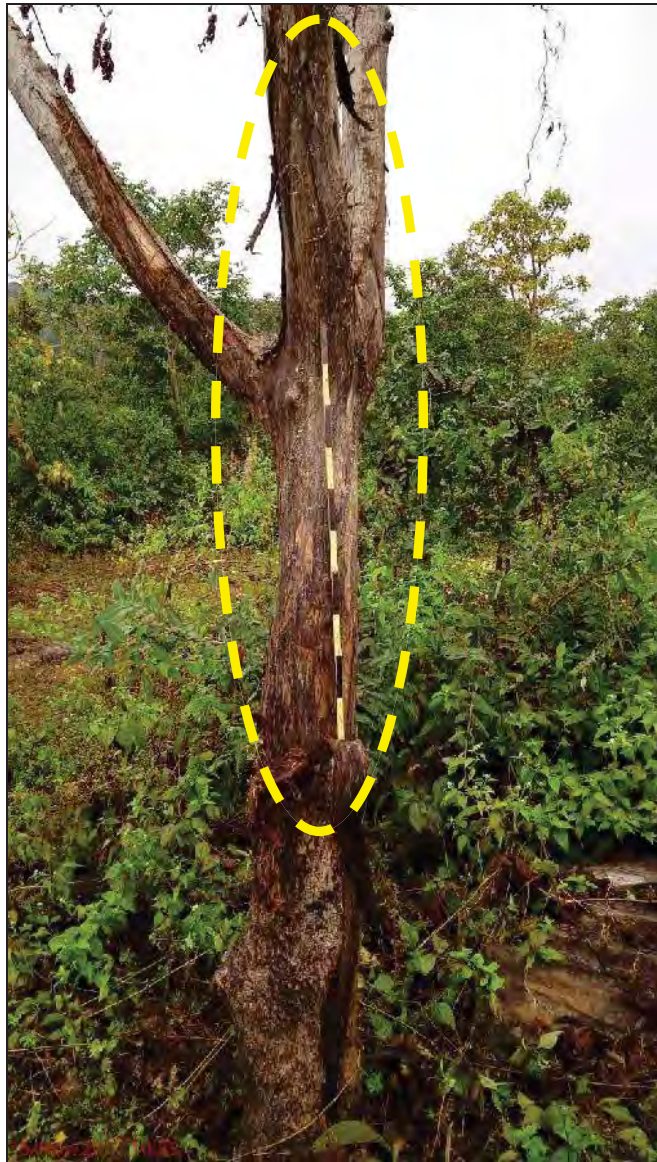


WAPCOS Team and the JICA survey team

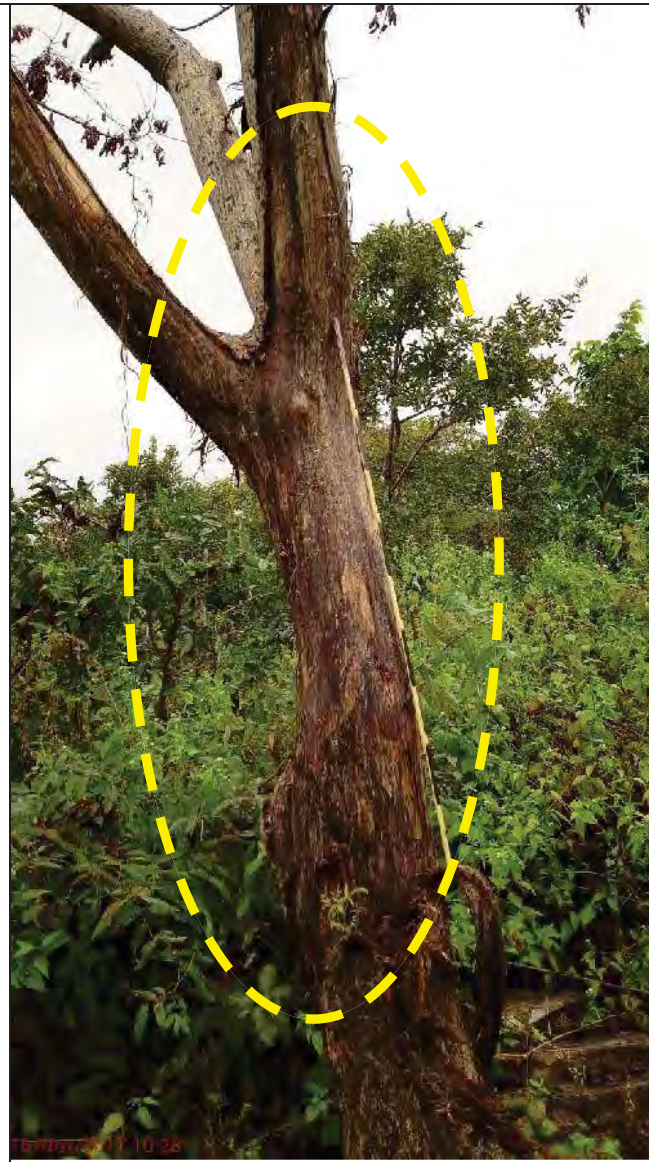


Elephant's Footprint

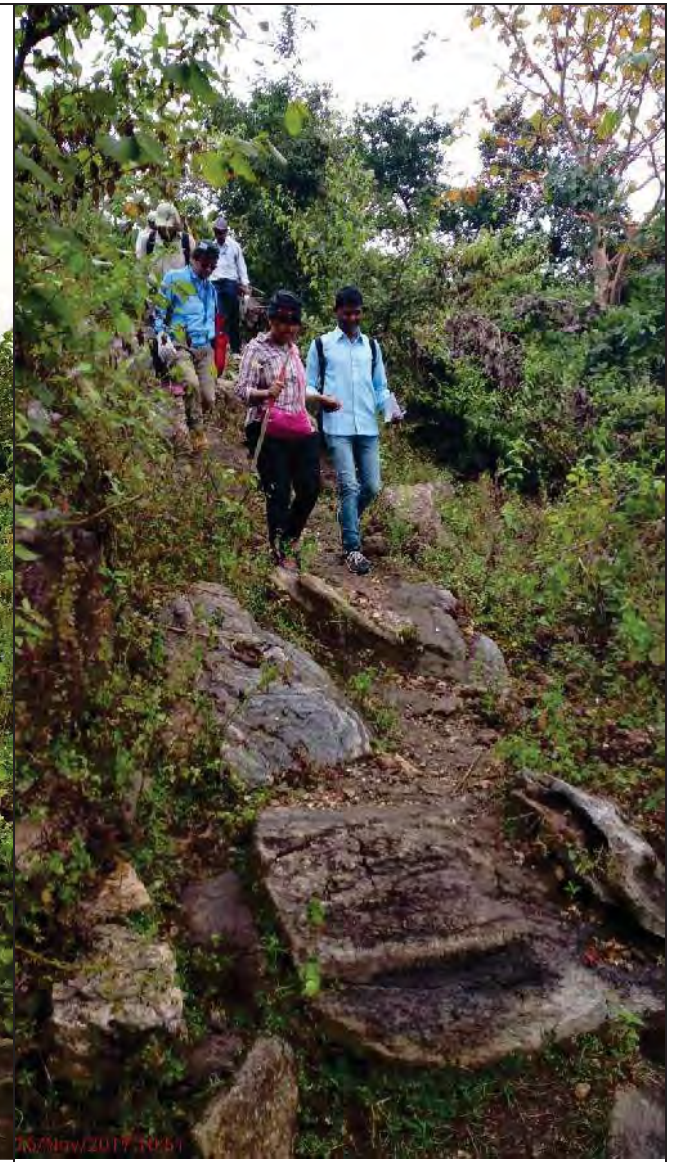




Elephant's traces on vegetation



Elephant's traces on vegetation



WAPCOS Team and the JICA survey team



Annexure-II-GPS Data				
ELEPHANT MAIN TRACK				
SR.NO	EASTING	NORTHING	TIME	REMARKS
1	404129	2567461	10:01:48	Start Point
2	404054	2567436	10:03:43	
3	404024	2567484	10:06:03	Foot Print
4	403996	2567488	10:07:33	Foot Print
5	403962	2567493	10:09:37	Foot Print
6	403930	2567495	10:11:07	Foot Print
7	403914	2567495	10:12:34	Stream
8	403910	2567482	10:13:34	Foot Print
9	403881	2567466	10:15:51	Foot Print
10	403875	2567464	10:16:49	Foot Print
11	403837	2567459	10:18:30	Foot Print
12	403829	2567458	10:19:02	Foot Print
13	403777	2567447	10:21:07	Foot Print
14	403756	2567451	10:22:19	Foot Print
15	403723	2567454	10:24:24	Traces on Vegetation
16	403652	2567439	10:31:41	Junction point
17	403666	2567480	10:33:20	Foot Print
18	403694	2567577	10:37:19	Foot Print
19	403718	2567625	10:39:12	
20	403722	2567629	10:50:40	
21	403738	2567679	10:53:05	FOOT PRINT
22	403751	2567711	10:56:08	FOOT PRINT
23	4037758	2567745	10:57:18	
24	403756	2567775	10:57:39	FOOT PRINT
25	403749	2567812	11:09:25	End Point - 1
26	403655	2567388	11:13:08	
27	403615	2567362	11:13:47	
28	403570	2567336	11:20:34	
29	403561	2567320	11:22:52	
30	403562	2567318	11:24:59	Stream
31	403496	2567305	11:28:52	Foot Print
32	403482	2567262	11:38:10	
33	403478	2567264	11:48:18	Foot Print
34	403383	2567233	11:50:06	
35	403346	2567225	11:51:08	
36	403319	2567237	11:56:16	
37	403285	2567224	11:58:17	Hadhadi Rock Quarry
38	403221	2567215	12:12:28	
39	403108	2567058	12:25:32	End Point - 2





## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-17/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development

76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
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Website: <http://www.wapcos.gov.in>

**November 2017**

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    - 4.1.2 SCHEDULE
  - 4.2 INTERVIEW SURVEY OF ELEPHANT
    - 4.2.1 SURVEY AREA
    - 4.2.2 SURVEY METHOD AND EXPECTED OUTCOME AS PER SCHEDULE
    - 4.2.3 PERSONEL REQUIRED
    - 4.2.4 SCHEDULE
5. TOPOGRAPHY AND CLIMATE
6. FIELD SURVEY ON 17.11.17
  - 6.1 DAILY DETAILS

MIGRATORY PATH OF ELEPHANT	-	PLATE – I
PHOTOGRAPHS	-	ANNEXURE – I
GPS DATA	-	ANNEXURE- II



**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

**2. PROJECT OBJECTIVE:**

The objective of the survey as per ToR, is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**

---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.



---

## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 17.11.17 is pleasant and dry with less humidity. The temperature is about 21<sup>o</sup> C, weather is cloudy.

## 6. Field Survey on 17.11.17

A combined team of WAPCOS and the JICA survey team started the survey, from the route which was followed as directed by a guide. Today's survey was commenced at 8am and finished around 11am. The schedule is as follows:-

1. WAPCOS and the JICA survey team initiated its journey from PPSP guest house at 8 am and reached near lower dam V-notch around 9am. The team started walking on the upslope of the hill, and then a track was shown by the guide, where elephant's were found walking during its migration period. So, the team initiated its journey on this track around 9:10am.

2. While walking on this path, the team found a footprint of elephant around 9:14am. Also, its droppings were found. But there were no marks on vegetation. As per the local guide, plants of this area are not eatable by elephants.
3. The path was surveyed by means of GPS and subsequently coordinates and time were recorded which is depicted in Annexure-II. Also photographs were clicked and few are enclosed in Annexure-I.
4. Elephant's main track survey was finished near Bamani falls approximately around 10:15am.

Daily Details are as follows:

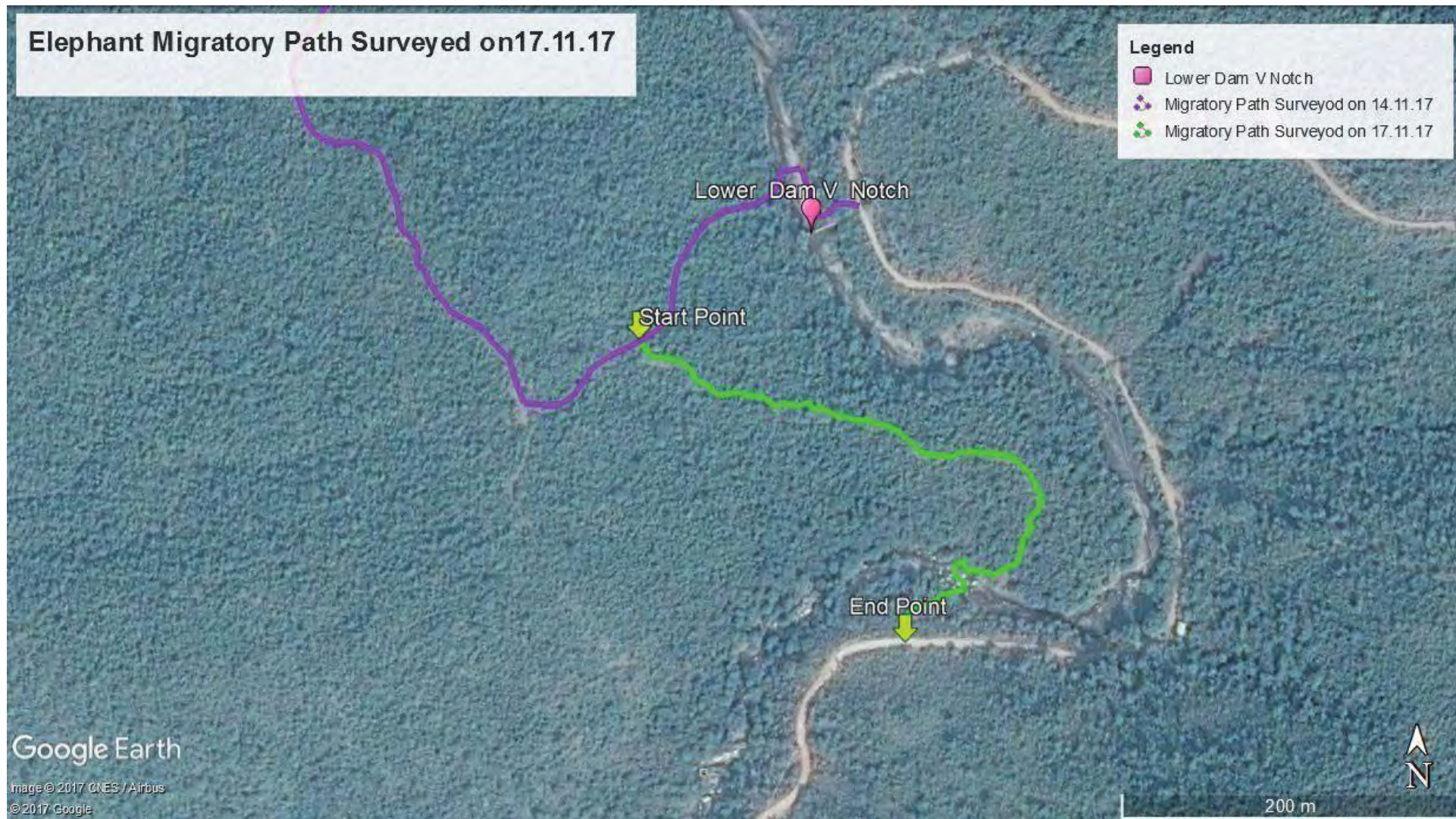
### 6.1 Daily Details

<b>LOCATION</b>	Lower dam V-notch
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	D/s of the upper dam axis
<b>Survey Date</b>	17/11/2017
<b>Survey Time</b>	8:00 AM to 11:00AM
<b>Access to the site</b>	PPSP guest house to Turga Lower dam V-notch via Bagmundi - Sirkabad- Purulia State Highway.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Sh. Manoranjan Mondal, Engineer – in-charge</li> <li>2. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>3. Sh. Ramesh Chandra, as a Plotter</li> <li>4. Sh. Santosh Mahato, as a Recorder</li> <li>5. Sh. Purnachanda Mandi, as a Supervisor</li> <li>6. Sh. Sunil Mandi, as a Guide</li> <li>7. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>
<b>WBSEDCL</b>	Sh. Madhab Koley, Sub-assistant engineer
<b>Type of data collected</b>	Footprints and droppings of elephants



---

<b>Migratory path of elephant</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1:** Migratory Path of Elephants Surveyed on 17.11.2017



**Annexure-I: Photographs**



Elephant's Footprint



Elephant's Footprint



WAPCOS Team and the JICA survey team



Elephant's Footprint





Elephant's Droppings



Elephant's Footprint



Elephant's trace on mud



Elephant's Droppings

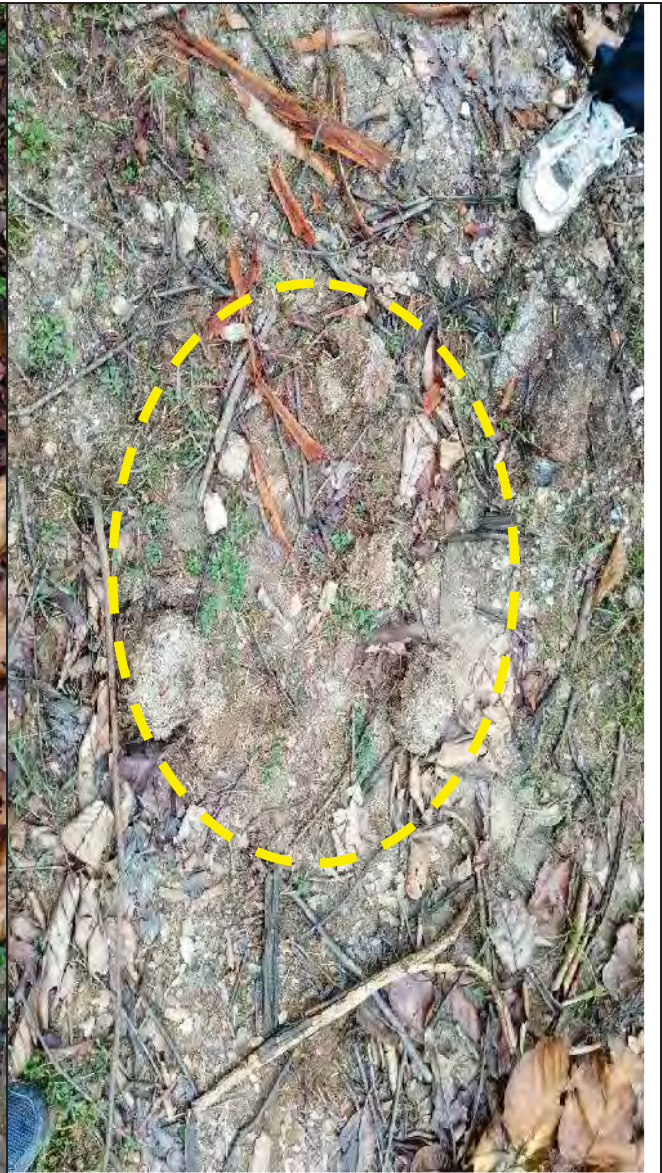




Elephant's Droppings



17/Nov/2017 09:25  
Elephant's Footprint



Elephant's Droppings



<b>ELEPHANT MAIN TRACK</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	405426	2566319	9:10:05	Start point
2	405346	2566221	9:13:37	
3	405347	2566214	9:14:39	Foot Print
4	405344	2566209	9:17:07	Foot Print
5	405362	2566210	9:21:20	Foot Print
6	405373	2566201	9:22:24	Foot Print
7	405385	2566192	9:25:32	Traces on Mud
8	405403	2566191	9:27:21	Droppings
9	405421	2566186	9:28:20	Foot Print & Dropping
10	405424	2566183	9:43:27	Foot Print
11	405444	2566185	9:45:29	Foot Print
12	405448	2566181	9:46:57	
13	405463	2566178	9:48:25	Droppings
14	405502	2566164	9:51:55	Droppings
15	405561	2566154	9:53:04	
16	405571	2566150	9:53:53	Foot Print
17	405583	2566120	9:56:08	Foot Print
18	405576	2566113	9:57:08	Foot Print
19	405537	2566075	10:04:55	
20	405500	2566050	10:06:08	End Point / Bagmundi - Sirkabad- Purulia State Highway





## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-18/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development

76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
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**November 2017**

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    - 4.2.1 SURVEY AREA
    - 4.2.2 SURVEY METHOD AND EXPECTED OUTCOME AS PER SCHEDULE
    - 4.2.3 PERSONEL REQUIRED
    - 4.2.4 SCHEDULE
5. TOPOGRAPHY AND CLIMATE
6. FIELD SURVEY ON 18.11.17
  - 6.1 DAILY DETAILS

MIGRATORY PATH OF ELEPHANT	-	PLATE – I
PHOTOGRAPHS	-	ANNEXURE – I
GPS DATA	-	ANNEXURE- II



**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

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The objective of the survey as per ToR, is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, food marks etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**

---

***Study on Legislative and Regulatory Considerations***

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.



## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 18.11.17 is pleasant and dry with less humidity. The temperature is about 21<sup>0</sup> C, weather is cloudy with drizzle at times.

## 6. Field Survey on 18.11.17

A team comprising of WAPCOS and the JICA survey team started the survey at 8am and completed around 1:30pm, from the route which was followed as directed by a guide. The schedule is as follows:-

1. WAPCOS and the JICA survey team embarked its journey towards Saldih village same as on 15/11/2017 from PPSP guest house at 8 am and reached the location at 9:15am by vehicle.
2. Then the team started walking on the upslope of the hill and reached the route as on 12/11/2017. As per the direction of the guide, two branches are there of the route of

12/11/2017 where elephant's are found migrating. So, the team started walking on the first branch around 9:45am. Again, same as previous days foot prints were noticed on this path. This path was finished around 10:01 am. As usual, GPS was used to record the path and photographs were clicked.

3. Now, the team started walking on the second branch around 10:25am. In this elephant's survey on the main track, foot prints and droppings were found in a very close proximity. The details have been depicted in Annexure-II.
4. The survey of this path was finished around 11:45am.

Daily Details are given below:

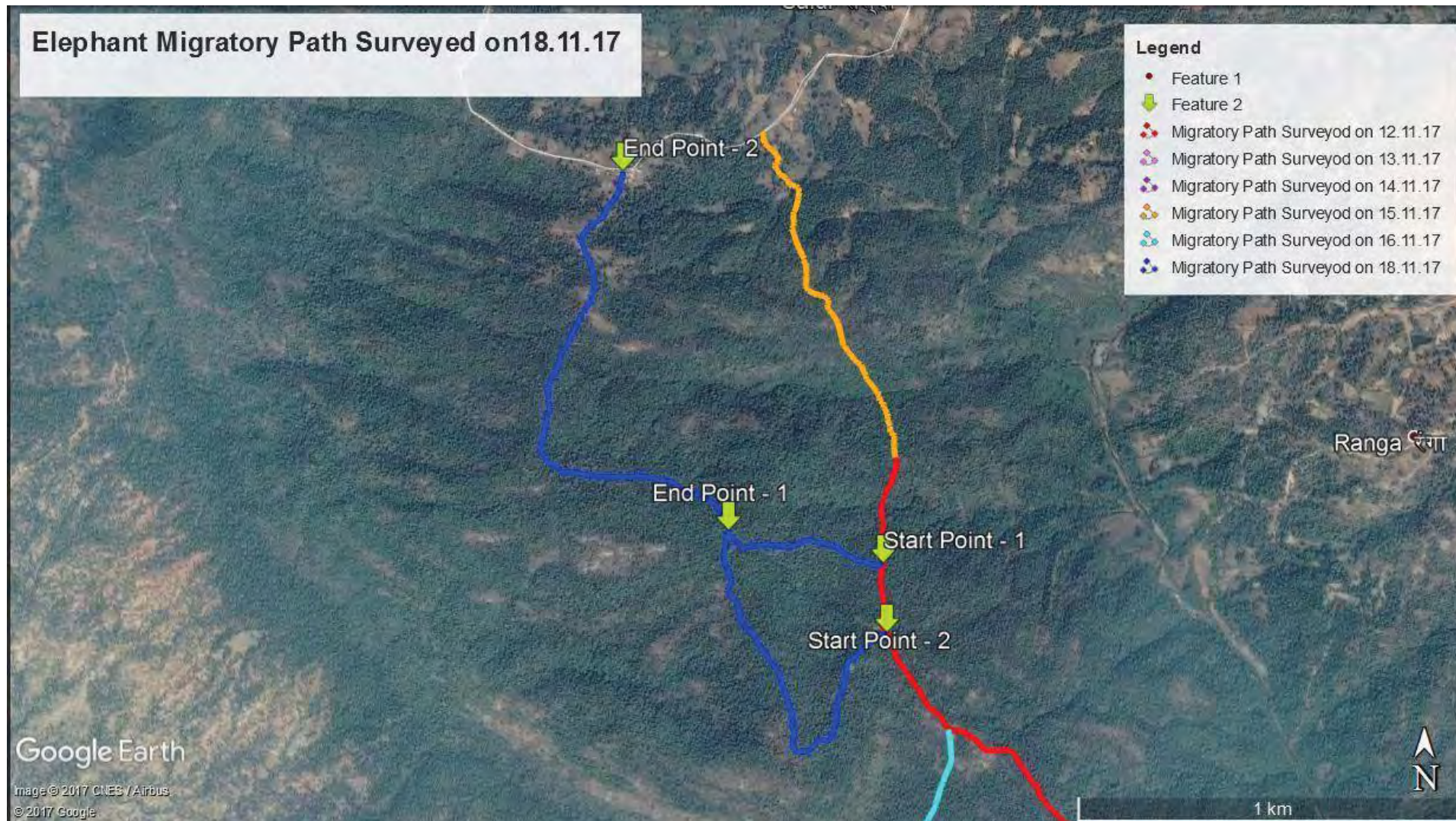
### 6.1 Daily Details

<b>LOCATION</b>	Upper Dam area
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	Saldih village
<b>Survey Date</b>	18/11/2017
<b>Survey Time</b>	8:00 AM to 1:30PM
<b>Access to the site</b>	PPSP guest house to Saldih village via PPSP lower/upper dam road, Jilingtadh more, Ranga more, Tarpania, Ranga, Bhuighara and Tiliyavasa road.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>2. Sh. Ramesh Chandra, as a Plotter</li> <li>3. Sh. Santosh Mahato, as a Recorder</li> <li>4. Sh. Purnachanda Mandi, as a Supervisor</li> <li>5. Sh. Sunil Mandi, as a Guide</li> <li>6. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	<ol style="list-style-type: none"> <li>1. Mr. Harada, Team Leader</li> <li>2. Mr. Utagawa, Environment Expert</li> </ol>
<b>WBSEDCL</b>	Sh. Madhab Koley, Sub-assistant engineer
<b>Type of data collected</b>	Footprints of elephants, other traces of elephants like its drop, traces on vegetation,



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	traces on rocks etc.
<b>Migratory path of elephant</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1:** Migratory Path of Elephants Surveyed on 18.11.2017



**Annexure-I: Photographs**



Elephant's Footprint



Elephant's Footprint



Elephant's Footprint



Elephant's Footprint





Elephant's Droppings



Elephant's Droppings



WAPCOS Team and the JICA survey team



WAPCOS Team and the JICA survey team





Elephant's Footprint



Elephant's Footprint



WAPCOS Team and the JICA survey team



<b>Annexure-II-GPS Data</b>				
<b>ELEPHANT MAIN TRACK</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	403585	2568229	9:45:02	Start Point of Route 1
2	403492	2568258	9:49:10	
3	403456	2568283	9:50:06	
4	403418	2568288	9:50:56	
5	403369	2568287	9:51:59	
6	403349	2568279	9:52:38	Foot Print
7	403225	2568286	9:56:41	
8	403223	2568290	9:58:56	
9	403202	2568318	10:00:47	Foot Print
10	403198	2568320	10:01:42	End of Route 1
11	403595	2568059	10:25:04	Start Point of Route 2
12	403527	2568016	10:31:20	
13	403492	2567979	10:32:32	
14	403488	2567943	10:33:41	Foot Print
15	403479	2567930	10:34:37	Foot Print
16	403477	2567907	10:35:42	Foot Print
17	403469	2567895	10:36:45	Stream
18	403465	2567834	10:38:44	Foot Print
19	403455	2567819	10:40:12	
20	403449	2567801	10:41:49	Foot Print
21	403433	2567799	10:43:37	Foot Print
22	403429	2567797	10:44:26	Foot Print
23	403422	2567795	10:45:12	Droppings
24	403397	2567774	10:47:14	Foot Print
25	403389	2567770	10:48:19	Foot Print
26	403354	2567807	10:50:28	Foot Print
27	403356	2567832	10:53:49	Foot Print
28	403349	2567877	10:55:17	Foot Print
29	403333	2567928	10:56:51	
30	403309	2567985	10:58:22	Droppings
31	403301	2567993	10:59:00	Foot Print
32	403284	2568027	11:00:37	Foot Print
33	403281	2568034	11:02:59	Foot Print
34	403220	2568143	11:07:30	Foot Print
35	403198	2568164	11:08:46	Foot Print
36	403200	2568182	11:09:29	Foot Print
37	403200	2568211	11:10:33	Foot Print
38	403187	2568244	11:11:40	Foot Print
39	403187	2568262	11:12:40	Foot Print
40	403200	2568328	11:15:24	Foot Print
41	403055	2568444	11:19:30	Foot Print
42	402998	2568455	11:20:34	
43	402988	2568457	11:20:54	
44	402901	2568458	11:22:57	



45	402834	2568465	11:24:12	
46	402782	2568474	11:25:11	
47	402752	2568491	11:25:53	
48	402743	2568573	11:27:39	
49	402749	2568613	11:28:20	
50	402751	2568676	11:29:26	
51	402779	2568744	11:30:43	
52	402805	2568792	11:31:32	
53	402830	2568848	11:32:32	
54	402845	2568869	11:36:36	
55	402868	2568926	11:38:05	
56	402842	2569024	11:39:56	
57	402937	2569220	11:43:31	End of Route 2





## TURGA PUMPED STORAGE PROJECT (4x250 MW), WEST BENGAL



### Daily Report on ELEPHANT SURVEY FOR TURGA PSP UNDER JICA PREPARATORY SURVEY-20/11/2017

**Consultant :**



## WAPCOS LIMITED

(A Government of India Undertaking – Ministry of Water Resources)  
International Consultants in Water Resources, Power and Infrastructure Development

76-C, Institutional Area, Sector – 18,  
Gurgaon – 120015, Haryana (INDIA)  
Telephone: 0124-2340670, Fax: 0124-2340670  
Email: [dam@wapcos.co.in](mailto:dam@wapcos.co.in), [aht@wapcos.co.in](mailto:aht@wapcos.co.in)  
Website: <http://www.wapcos.gov.in>

**November 2017**



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1. PREAMBLE
2. PROJECT OBJECTIVE
3. PROJECT LOCATION
4. SCOPE OF WORK
  - 4.1 ECOLOGICAL FIELD SURVEY FOR ASIAN ELEPHANT (ELEPHANTS MAXIMUS)  
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    - 4.1.1 SURVEYORS REQUIRED
    - 4.1.2 SCHEDULE
  - 4.2 INTERVIEW SURVEY OF ELEPHANT
    - 4.2.1 SURVEY AREA
    - 4.2.2 SURVEY METHOD AND EXPECTED OUTCOME AS PER SCHEDULE
    - 4.2.3 PERSONEL REQUIRED
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5. TOPOGRAPHY AND CLIMATE
6. FIELD SURVEY ON 20.11.17
  - 6.1 DAILY DETAILS

MIGRATORY PATH OF ELEPHANT	-	PLATE – I
PHOTOGRAPHS	-	ANNEXURE – I
GPS DATA	-	ANNEXURE- II

**1. PREAMBLE :**

J-Power awarded the work of Environmental and Social Investigation studies to WAPCOS. Now, J-Power entrusted to WAPCOS to carryout field survey on Elephants in the Turga Pump Storage Project area. As per the schedule WAPCOS team started the field survey on elephants at site from 12.11.17 with the JICA survey team for Turga Pumped Storage Project, 1000 MW under JICA Preparatory survey.

**2. PROJECT OBJECTIVE:**

The objective of the survey as per ToR, is to collect latest data and information regarding seasonal migration pattern of Asian Elephants and collect their information by finding field signs (elephant droppings, mud stains on trees, footprints, traces on trees, traces on stones etc.) in the surroundings of the Upper reservoir area mainly along streams in the forest and scrub area of Turga Pump Storage Project.

**3. Project Location :**



**Figure -1: Project location**

**4. Scope of Work :**

It consists of two studies, Ecological field survey and Interviews survey for elephants.

**4.1 Ecological field survey for Asian elephant (Elephants maximus)**



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**Study on Legislative and Regulatory Considerations**

- Survey Area:

The survey area is surrounding area of the upper reservoir planned site, mainly along streams in the forest/scrub area.

- Survey method and expected outcome:

Line censuses along streams are conducted along streams in the forest/scrub area to clarify seasonal migration pattern by finding field signs (elephant droppings, mud stains on trees, footprints, food marks, dead bodies, etc.).

**4.1.1 Surveyors required**

- Supervisor

Personnel who is in charge of the field survey and reporting

- Guide

Person who is familiar with the survey area and lead away with cutting grass and shrubs

- Recorder

Person who records the field signs with a digital camera and handwriting memo, survey lines and points with Global Positioning System (GPS)

- Plotter

Person who draws digital figures and maps based on the field survey results

- Coordinator (Reporter)

Person who compiles the survey report as an electronic file and booklet

**4.1.2 Schedule**

The survey shall be conducted at the survey area on 11th November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15th, 2017.

## 4.2 Interviews survey for elephants

### 4.2.1 Survey Area

### 4.2.2 Survey method and expected outcome as per schedule

### 4.2.3 Personnel required

- Guide

Person who is familiar with the survey area and leads the JICA Study Team to the interviewees.

- Translator

Person who assists the JICA Study Team through translations.

### 4.2.4 Schedule

The survey shall be conducted at the survey area on 21st November, 2017 through 24th November, 2017. The survey will be completed the whole survey including reporting by December.15<sup>th</sup> 2017.

## 5. Topography & Climate :

The climate today i.e. 20.11.17 is hot and humid. The temperature is about 21<sup>0</sup> C, weather is clear with a hazy sunshine.

## 6. Field Survey on 20.11.17

WAPCOS and the JICA survey team initiated its journey for survey from 8 am and finished at 11:30am. The route of the survey was started from Barelahar village. Detail schedule is as follows:-

1. WAPCOS and the JICA survey team commenced its journey from PPSP guest house at 8 am and reached Ranga village at 9am.
2. Then the team started walking towards Barelahar village as described by the guide from the previous incidence, of elephants entering the village and travelling on the nearby path. The survey of this path was started from Barelahar village at 9:12am.

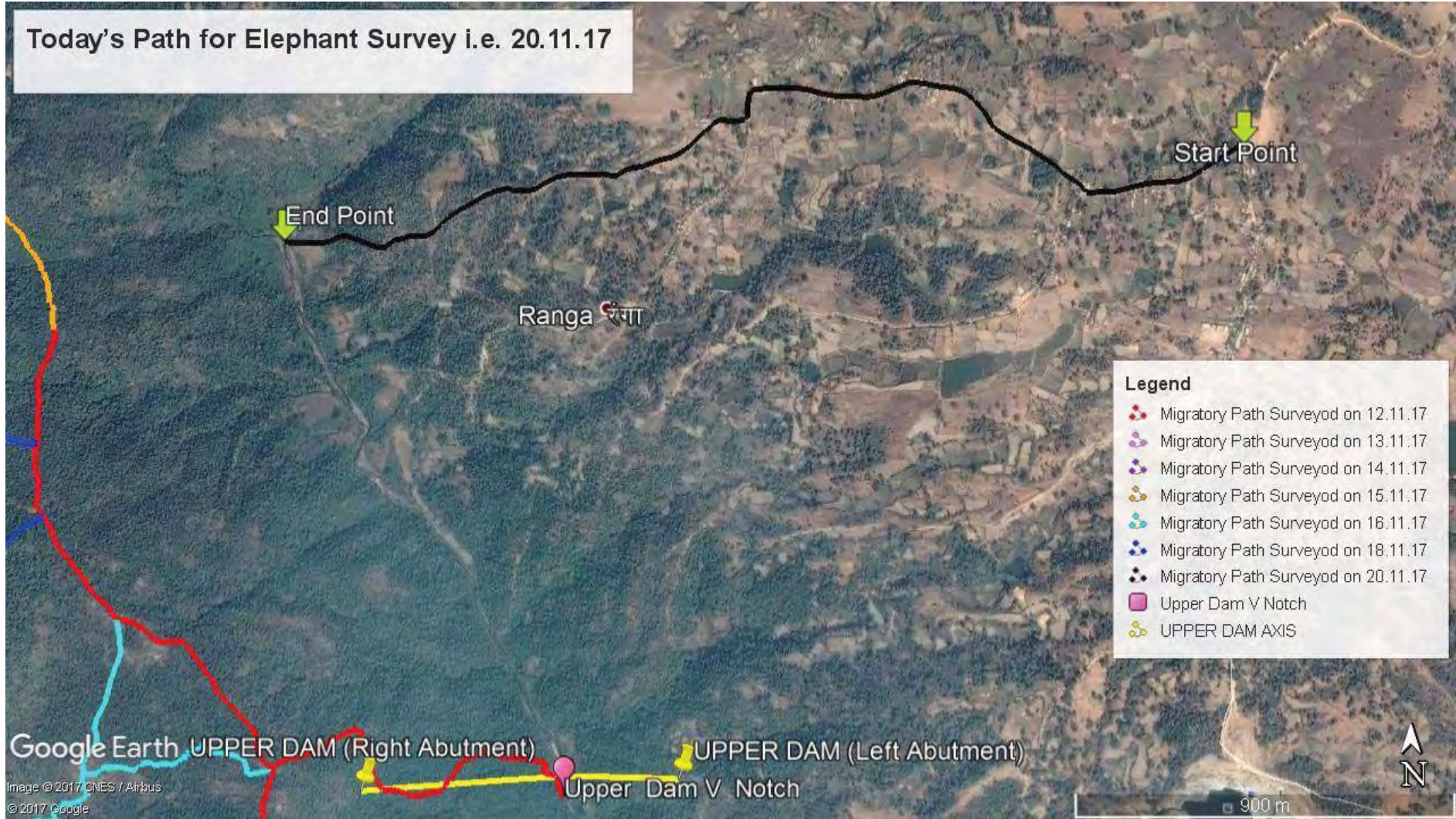


3. While walking on this path, the team didn't notice any elephant's footprint, droppings, and its traces on vegetation or on stone.
4. The team finished the route near Turga nala around 9:46am.

Daily Details are given below:

### 6.1 Daily Details

<b>LOCATION</b>	Barelahar village
<b>Nearby stream</b>	Turga nala
<b>Nearby Landmark</b>	Ranga Post Office
<b>Survey Date</b> <b>Survey Time</b>	20/11/2017 8:00 AM to 11:30am
<b>Access to the site</b>	PPSP guest house to Barelahar village via PPSP lower/upper dam road, Jilingtadh more, Ranga more, Tarpania village and Ranga village.
<b>Officials present</b>	
<b>WAPCOS</b>	<ol style="list-style-type: none"> <li>1. Miss. Chandrima Bandopadhyay, as a Co-ordinator (Reporter)</li> <li>2. Sh. Ramesh Chandra, as a Plotter</li> <li>3. Sh. Santosh Mahato, as a Recorder</li> <li>4. Sh. Purnachanda Mandi, as a Supervisor</li> <li>5. Sh. Sunil Mandi, as a Guide</li> <li>6. Sh. Suchand Murmu, as a Guide</li> </ol>
<b>JICA survey team</b>	Mr. Utagawa, Environment Expert
<b>WBSEDCL</b>	Sh. Madhab Koley, Sub-assistant engineer
<b>Type of data collected</b>	No data found
<b>Today's path</b>	Enclosed in Plate-I
<b>Photographs</b>	Enclosed As Annexure – I
<b>Survey method</b>	GPS data (enclosed as Annexure - II)



**Plate-1:** Today's Path for Elephant Survey i.e. on 20.11.2017



**Annexure-I: Photographs**



WAPCOS and The JICA survey team

<b>Annexure-II-GPS Data</b>				
<b>Today's TRACK</b>				
<b>SR.NO</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>TIME</b>	<b>REMARKS</b>
1	406425	2568908	9:12:28	Start point
2	405148	2568946	9:27:24	-
3	405017	2568879	9:29:52	-
4	404925	2568859	9:31:26	-
5	404772	2568837	9:33:50	-
6	404713	2568830	9:34:47	-
7	404566	2568774	9:37:18	-
8	404377	2568695	9:40:44	-
9	404318	2568715	9:42:08	-
10	404280	2568724	9:43:43	-
11	404242	2568712	9:44:32	-
12	404175	2568711	9:45:36	-
13	404138	2568716	9:46:31	End point





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## Annexure B

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## Minutes of Meeting

### Elephant Survey Interview held on 22.11.2017

As per the schedule, a meeting cum interview was held among the officials of WAPCOS, JICA survey team, WBSEDCL, Bagmundi Forest Range Officials, Forest Protection Committee and the villagers in respect of the elephant's survey interview on 22.11.2017 at 11am in the Bagmundi forest range. Total 19 people were interviewed today.

The members present in the meeting are given below:

#### **WAPCOS officials:**

1. Sh. Manoranjan Mondal, Dy. Chief Engineer & Project Manager
2. Ms. Chandrima Bandopadhyay, Sr. Engineer
3. Sh. Ramesh Chandra, Jr. Programmar.

#### **JICA survey team:**

1. Mr. Madoka Harada, Team Leader
2. Ms. Masami Takahata, Enviro. Social.

#### **WBSEDCL officials:**

1. Sh. Tusar kanti Chatterjee, Divisional Engineer (Civil)
2. Sh. Madhab Koley, Sub-Assistant Engineer (Civil).

#### **Bagmundi Forest Range Officials:**

1. Sh. Monoj kumar Mallla, Range Officer
2. Sh. Saheb Mahato, Bit Officer
3. Sh. Sitaram Mahato, Bit Officer.

#### **Forest Protection Committee:**

1. Members from Tarpania village
2. Members from Nishchinpur village
3. Members from Barria village
4. Member from Khirabera village

After a brief introductory welcome, Sh. Manoranjan Mondal, Dy. Chief Engineer & Project Manager gave a detailed explanation to all interviewees gathered in the Forest Range Office for the purpose of elephant's survey interview. During the interview, interviewees filled a questionnaire form prepared by the interviewers is enclosed in **Annexure-II**.

Also, the team asked the interviewees whether they receive any kind of alert of elephant approaching their area from the Forest Range Office or not. So, the interviewees informed that they receive message via telephone call from the Forest Range Office.

Again, the team came to know from the interviewees that they burst fire crackers, beat drums or via Hulla party drive out the elephants from their area. The meeting cum interview was finished approximately around 12:20pm.

Lastly, after the meeting cum interview session, the team including WAPCOS, the JICA survey team, WBSEDCL and a Bagmundi Forest Range Official headed towards the villages surrounding the project area located in the Bagmundi forest range. In these villages, the team randomly selected the villagers who filled a questionnaire form and were interviewed regarding the elephant's act. Photographs clicked during the interview are enclosed in **Annexure-I**.



Annexure:I Photographs



Interview session at Baghmundi Forest Range Office



Interview session at Baghmundi Forest Range Office



Interview session at village



WAPCOS, the JICA survey team and WBSEDCL





Interview session at village



Interview session at village



Interview session at village



Interview session at village



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22/11/2017

Questionnaire No, 01

**A-1 General Information (Personal)**

1: Name of interviewee	SAHEB MAHATA
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 25)
3: Village (mouza) name	
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other( )
5: Telephone No.	8926378200

**A-2 General Information (Group / Organization)**

Name of Organization BAGH MUNDI FOREST BEAT Offices

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
SAHEB MAHATA (DR/FO BMD)	25	Deputy Ranger	8926378200

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: 04/09/2017 at night
	Where: Baghmundi Forest Area
	How often:
	How many elephant: Group
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as follows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No		Rs:
5: Other	Yes / No		Rs:

b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

Some times in ~~summer~~ winter season in every year

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAI DI / BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?				
	Use Cakes, Hula				
	Have you attend some countermeasures of seminar or workshop against elephant?				
	Yes / No <input checked="" type="checkbox"/> (if you answered "Yes" please answer following question.)				
		When	Subject	Organization	
<input type="checkbox"/>	Seminar				
<input type="checkbox"/>	Workshop				
<input type="checkbox"/>	Other				
No	Please select your reasons from bellow items				
<input type="checkbox"/>	No idea	<input type="checkbox"/>	Not enough money	<input type="checkbox"/>	Busy with work
<input type="checkbox"/>	Other ( )				

Sahab Mahata  
DR/FO, Baghmundi

Thank you very much for your cooperation

Name of interviewer:

Mundaf







b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
 BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried? <i>use Caster, Shooch light, Denk mobil &amp; Faise</i>		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.)		
		When	Subject
	<input checked="" type="checkbox"/> Seminar	<i>20.8.2016 &amp; 01.9.2017</i>	<i>Harta Padi Gosep</i>
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )		

*Selarasu Makoto*  
 DP/FR B.O Kalimati Beat

Thank you very much for your cooperation

Name of interviewer:

*Mudal*



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 22 / 11 / 2017

Questionnaire No, 03

A-1 General Information (Personal)

1: Name of interviewee	NITAI MONDAL
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 36 yrs)
3: Village (mouza) name	Nischintapur
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other
5: Telephone No.	9609210487

A-2 General Information (Group / Organization)

Name of Organization Nischinto Forest Committee

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
NITAI MONDAL	36	Member	9609210487

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Every Year
	Where: Paddy field, sometimes Jungle
	How often: 4 times
	How many elephant: Group elephant
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No	Paddy	Rs: 4000.00
5: Other	Yes / No		Rs:

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: \_\_\_\_\_ )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.		
		When	Subject
	<input type="checkbox"/> Seminar		
	<input type="checkbox"/> Workshop		
	<input type="checkbox"/> Other		
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items		
	<input checked="" type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work
	<input type="checkbox"/> Other ( _____ )		

*तुमको शुक*

*Ramesh chandog*

Thank you very much for your cooperation

Name of interviewer:



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22/11/2017

Questionnaire No, 04

A-1 General Information (Personal) *KHIRABERA EPC FPC*

1: Name of interviewee	RAHUL CHANDRA MAHATO
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 38 years)
3: Village (mouza) name	Khirabera
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	09800938969 / 8348405068

A-2 General Information (Group / Organization)

Name of Organization *Khairabera FPC*

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
RAHUL CHANDRA MAHATO	38 years	Members	9800938969

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : 2017 September
	Where : <i>Night Forest and Agriculture Land</i>
	How often : <i>Regular</i>
	How many elephant : <i>Single / Group (up to 12 Nos)</i>
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input checked="" type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input checked="" type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

*near by Khirabera.*

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No	<i>Paddy.</i>	Rs:
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: *KHIRABERA* )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried? <i>use crackers</i>			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input checked="" type="checkbox"/> Seminar	<i>2016</i>	<i>Wild life conservation</i>	<i>Forest Depart ment</i>
	<input checked="" type="checkbox"/> Workshop			
<input type="checkbox"/> Other				
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other (			

*Ramesh chandra*

Thank you very much for your cooperation

Name of interviewer:

*Rahul Chandra Mahato*



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22 / 11 / 2017

Questionnaire No. 05

**A-1 General Information (Personal)**

1: Name of interviewee	BHIM MANDI
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 48 years)
3: Village (mouza) name	Tarpania
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	X

**A-2 General Information (Group / Organization)**

Name of Organization *Tarpania Committee*

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

<input checked="" type="checkbox"/> Yes	When: 2017, August
	Where: Jungle Tarpania
	How often: 1 (one) time
	How many elephant: One (01)
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input checked="" type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs: —
2: House	Yes / No	Destroyed the Roof	Rs: 1500 / —
3: Livestock	Yes / No		Rs: —
4: Crop	Yes / No		Rs: —
5: Other	Yes / No		Rs: —

b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>	<i>only once</i>
-----	--	------------------

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
 BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: *Tarpania* )

b-4: Do you have countermeasure for against elephant *NO*

Yes	What kind of countermeasures have you tried?		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No <input checked="" type="checkbox"/> (if you answered "Yes" please answer following question.)		
		<i>When</i>	<i>Subject</i>
	<input type="checkbox"/> Seminar		
	<input type="checkbox"/> Workshop		
	<input type="checkbox"/> Other		
No	Please select your reasons from bellow items		
	<input checked="" type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work
	<input type="checkbox"/> Other ( )		

*Handwritten signature*

*Ramesh chandra*

Thank you very much for your cooperation

Name of interviewer:



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 22 11- 17

Questionnaire No, 

0	6
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A-1 General Information (Personal)

1: Name of interviewee	Nilkantha Maora
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: )
3: Village (mouza) name	Baghmundi
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	9732368327

A-2 General Information (Group / Organization)

Name of Organization FPC Baghmundi

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Nilkantha Maora	45	MEMBER	9732368327

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : night - oct 2017
	Where : <del>at</del> Baghmundi
	How often : <del>once</del> approx 4 times some times
	How many elephant : Three times group.
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input checked="" type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No	Paddy.	Rs:
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
 BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried? use crackers		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.		
		When	Subject
	<input checked="" type="checkbox"/> Seminar	oct. 2016	congestion
<input checked="" type="checkbox"/> Workshop		at Nand Lal	
<input type="checkbox"/> Other			
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )		

Thank you very much for your cooperation

Name of interviewer:

Prudal

Nalkantha Masra



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 22/11/2017

Questionnaire No.

07

A-1 General Information (Personal)

1: Name of interviewee	Purna chandra Mandi
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 22y )
3: Village (mouza) name	Tazpania Baghmundi - 105
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other (Labour )
5: Telephone No.	7319238226

A-2 General Information (Group / Organization)

Name of Organization Tazpania forest protection group

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Purna chandra Mandi	22y	Members	7319238226

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Night August to September 2016
	Where: Agriculture land
	How often: Same time
	How many elephant: 2 Numbers
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input checked="" type="checkbox"/> Night (After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No	Destroyed the roof	Rs: 2000/-
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No	Eaten paddy crops	Rs: 1000/-
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: )

b-4: Do you have countermeasure for against elephant

✓ Yes	What kind of countermeasures have you tried? <i>use crackers</i>			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input checked="" type="checkbox"/> Seminar	<i>oct-2016</i>	<i>conservation</i>	<i>Forest DEPT</i>
	<input checked="" type="checkbox"/> Workshop		<i>of wildlife</i>	
<input type="checkbox"/> Other				
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other (			

*Ramesh chandra*

Thank you very much for your cooperation

Name of interviewer:

*Purna chandra Mandi*  
*(Interviewee)*



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22/11/2017

Questionnaire No, 08

**A-1 General Information (Personal)**

1: Name of interviewee	Krishna ch. Majhi
2: Sex and age	<input type="checkbox"/> Male <input type="checkbox"/> Female (Age: 48 )
3: Village (mouza) name	Nizhchinda Pur.
4: Occupation	<input checked="" type="checkbox"/> Farmer <input checked="" type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	8159845487

**A-2 General Information (Group / Organization)**

Name of Organization *Machintpur Forest protection committee*

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Krishna ch. Majhi	48	Member	8159845487

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics.

Yes	When: 2015
	Where: Forest
	How often: Twice or thrice
	How many elephant: 1 nos then 10 nos
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input checked="" type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

2017

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	<input checked="" type="checkbox"/> Yes / No	Eaten Paddy crop	Rs: 2500/- to 3000/-
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: *Nishtinpur*)

b-4: Do you have countermeasure for against elephant

<input checked="" type="checkbox"/> Yes	What kind of countermeasures have you tried?			
	Have you attend some countermeasures of seminar or workshop against elephant? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No (if you answered "Yes" please answer following question.			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other				
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items			
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work	
	<input type="checkbox"/> Other ( )			

*Krishna Ch. Majhi*

*CB 22/11/2017*

Thank you very much for your cooperation

Name of interviewer:



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22/11/2017

Questionnaire No, 09

**A-1 General Information (Personal)**

1: Name of interviewee	Rohidas Majhi
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 62)
3: Village (mouza) name	Nishtinpur
4: Occupation	<input checked="" type="checkbox"/> Farmer <input checked="" type="checkbox"/> Fisher <input type="checkbox"/> Other (Paddy cultivation)
5: Telephone No.	-

**A-2 General Information (Group / Organization)**

Name of Organization Forest Protection Committee

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Rohidas Majhi	62	Member	-

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : 2015
	Where : Forest
	How often : Once
	How many elephant : 11 nos
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input checked="" type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No	Eaten Paddy	Rs: 2500/-
5: Other	Yes / No		Rs:

2017

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAKDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: *Nishtjapur* )

b-4: Do you have countermeasure for against elephant

<input checked="" type="checkbox"/> Yes	What kind of countermeasures have you tried?			
	Have you attend some countermeasures of seminar or workshop against elephant? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No (if you answered "Yes" please answer following question.			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other				
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items			
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work	
	<input type="checkbox"/> Other ( )			

*Rohi das Majhi*

*CB 20/11/2017*

Thank you very much for your cooperation

Name of interviewer:



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22/11/2017

Questionnaire No, 10

**A-1 General Information (Personal)**

1: Name of interviewee	Sanat Mishra Beera
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 31)
3: Village (mouza) name	Nischintapur
4: Occupation	<input checked="" type="checkbox"/> Farmer <input checked="" type="checkbox"/> Fisher <input type="checkbox"/> Other
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization Nischintapur Forest Protection Committee

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Sanat Beera	31	Member	

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: 2 yrs ago (2015)
	Where: Nischintapur forest
	How often: 3 times
	How many elephant: 11 (eleven)
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input checked="" type="checkbox"/> Morning (5 to 11am) 10am <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	

b-2: Did you suffer from elephant's act? Please choose items as bellows

NO

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No		Rs:
5: Other	Yes / No		Rs:

b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: *Nischintapur*)

b-4: Do you have countermeasure for against elephant *NO*

Yes	What kind of countermeasures have you tried?			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other				
No	Please select your reasons from bellow items			
	<input checked="" type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work	
	<input type="checkbox"/> Other (			

*Ramesh chandra*

Thank you very much for your cooperation

Name of interviewer:

*Somat Bessa*



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22 / 11 / 2017

Questionnaire No, 11

**A-1 General Information (Personal)**

1: Name of interviewee	Joyram Hansda
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 30 )
3: Village (mouza) name	Dalgubera, Bandguti, (105)
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	8167009097

**A-2 General Information (Group / Organization)**

Name of Organization Dalgubera, Bandguti, Balrajula,

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Joyram Hansda	30	Forest Committee member	8167009097

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Augst to Oct 2017
	Where: Agriculture Land
	How often: sometime
	How many elephant: 7 - 8 Nos
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No <input checked="" type="checkbox"/>		Rs:
2: House	Yes / No <input checked="" type="checkbox"/>		Rs:
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Rs:
4: Crop	Yes / No <input checked="" type="checkbox"/>	Paddy	Rs: 3000.00
5: Other	Yes / No <input checked="" type="checkbox"/>		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
 BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: *Purna Tarpania*)

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?		
	<i>use CRACKER</i>		
	Have you attend some countermeasures of seminar or workshop against elephant?		
	Yes / No (if you answered "Yes" please answer following question.)		
		<i>When</i>	<i>Subject</i>
<input checked="" type="checkbox"/>	Seminar	<i>Oct 2016</i>	
<input checked="" type="checkbox"/>	Workshop		
<input type="checkbox"/>	Other		
No	Please select your reasons from bellow items		
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work
	<input type="checkbox"/> Other (		

*Ramesh chandra*

Thank you very much for your cooperation

Name of interviewer:

*Joyram Hansda*



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22/11/2017

Questionnaire No. 

1	2
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**A-1 General Information (Personal)**

1: Name of interviewee	Tapan chandra Mahato
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: )
3: Village (mouza) name	Bareria
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	7872410547

**A-2 General Information (Group / Organization)**

Name of Organization F.P.C. - Bareria

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Tapan chandra Mahato	42	president	7872410547

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When:	October - 2017
	Where:	agriculturer land and in Village
	How often:	Three time in a Month
	How many elephant:	single / group
	Time zone:	<input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-	

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No	Destroyed the wall	Rs: 10,000/-
3: Livestock	Yes / No		Rs:
4: Crop	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No	Ate Paddy	Rs: <del>20,000</del> 2000/-
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI / BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: )

b-4: Do you have countermeasure for against elephant

Yes ✓	What kind of countermeasures have you tried?		
	use crackers		
	Have you attend some countermeasures of seminar or workshop against elephant?		
	Yes / No (if you answered "Yes" please answer following question.		
		When	Subject
<input checked="" type="checkbox"/>	Seminar	2016	conservation by forest Dept
<input checked="" type="checkbox"/>	Workshop	2016	of-wild life
<input type="checkbox"/>	Other		
No	Please select your reasons from bellow items		
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work
	<input type="checkbox"/> Other (		

Ramesh chandry

Thank you very much for your cooperation

Name of interviewer:

Tapan ch. Mahato

(Interviewee)



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22<sup>nd</sup> 11 117

Questionnaire No, 13

**A-1 General Information (Personal)**

1: Name of interviewee	
2: Sex and age	<input type="checkbox"/> Male <input type="checkbox"/> Female (Age: )
3: Village (mouza) name	
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization

*Baghmundi Forest Range Office*

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
<i>Shree Manoj Kumar Datta</i>	<i>34 yr</i>	<i>Forest Range officer</i>	<i>87688 94777</i>

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

<i>Yes</i>	When :	
	Where :	
	How often :	<i>Some times in monsoon &amp; winter season in every year</i>
	How many elephant :	<i>12/15 number of herd of elephants (12 nos)</i>
	Time zone :	<input checked="" type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input checked="" type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No		

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No		Rs:
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

Same times in November & winter season in every year -

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAKDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI / BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.		
		<i>When</i>	<i>Subject</i>
			<i>Organization</i>
	<input checked="" type="checkbox"/> Seminar	Three times in each year	Conservation of wild life and management of Govt of N.S.
	<input checked="" type="checkbox"/> Workshop	Five times in each year	Training on firework party & Self-protection - 20 -
	<input type="checkbox"/> Other		Frank wild Elephants also Road show, making jamun, meeting and conducting
No	Please select your reasons from bellow items regarding conservation of wild elephants & movements of wild elephants.		
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work
	<input type="checkbox"/> Other ( )		

Thank you very much for your cooperation

Name of interviewer:

Mundal

*Handwritten signature and initials in the bottom left corner.*



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 22/11/2017

Questionnaire No, 14

A-1 General Information (Personal)

1: Name of interviewee	Mongala Mondol
2: Sex and age	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female (Age: 46)
3: Village (mouza) name	Nishtipur
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other
5: Telephone No.	-

A-2 General Information (Group / Organization)

Name of Organization - Forest Protection Committee, Nishtipur

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Mongala Mondol	46	Member	-

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

<input checked="" type="checkbox"/> Yes	When: 2017
	Where: Field
	How often: 2 to 3 times
	How many elephant: 25 nos.
	Time zone: <input checked="" type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input checked="" type="checkbox"/> Night (After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as follows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No	Ate Paddy	Rs: 4000/-
5: Other	Yes / No		Rs:

b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: *Nishtimpur* )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.			
		When	Subject	Organization
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other				
No	Please select your reasons from bellow items			
	<input checked="" type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work	
	<input type="checkbox"/> Other ( )			

CB 22/11/2017  
Thank you very much for your cooperation

Name of interviewer:

अमित अग्रवाल



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22 / 11 / 17

Questionnaire No, 15

**A-1 General Information (Personal)**

1: Name of interviewee	Jhema Rani Meera
2: Sex and age	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female (Age: 36)
3: Village (mouza) name	Gosaidi
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other (House wife)
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Oct 2017
	Where: Gosaidi
	How often: once
	How many elephant: one
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No <input checked="" type="checkbox"/>		Rs:
2: House	Yes / No <input checked="" type="checkbox"/>		Rs:
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Rs:
4: Crop	Yes / No <input checked="" type="checkbox"/>		Rs:
5: Other	Yes / No		Rs:



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 22 / 11 / 17

Questionnaire No, 15

A-1 General Information (Personal)

1: Name of interviewee	Jhema Rani Meera
2: Sex and age	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female (Age: 36)
3: Village (mouza) name	Gosaidi
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other (House wife)
5: Telephone No.	

A-2 General Information (Group / Organization)

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics,.

Yes	When: Oct 2017
	Where: Gosaidi
	How often: once
	How many elephant: one
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No <input checked="" type="checkbox"/>		Rs:
2: House	Yes / No <input checked="" type="checkbox"/>		Rs:
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Rs:
4: Crop	Yes / No <input checked="" type="checkbox"/>		Rs:
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: )

b-4: Do you have countermeasure for against elephant **NO**

Yes	What kind of countermeasures have you tried?			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
	<input type="checkbox"/> Other			
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input checked="" type="checkbox"/> Other ( <i>not necessary</i> )			

*कुम्हार तारी बुडा*

*Ramesh chandoy*  
Thank you very much for your cooperation

Name of interviewer:

**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22 / 11 / 17

Questionnaire No, 16

**A-1 General Information (Personal)**

1: Name of interviewee	Sibal Pasamank
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 40 )
3: Village (mouza) name	Pathardi
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other (Service Private (Hotel))
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Oct 20, 17
	Where: Pathardi
	How often: once
	How many elephant: one
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
4: Crop	Yes / No		Rs:
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAKDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.		
		When	Subject
	<input type="checkbox"/> Seminar		
	<input type="checkbox"/> Workshop		
	<input type="checkbox"/> Other		
No	Please select your reasons from bellow items		
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work
	<input type="checkbox"/> Other ( Not Required )		

श्री राम चंद्र

Ramesh chand  
Thank you very much for your cooperation

Name of interviewer:

**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 21 11 / 2017

Questionnaire No, 1 7

**A-1 General Information (Personal)**

1: Name of interviewee	Bidyadhar Mahato
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 31 )
3: Village (mouza) name	Baraiya
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	95 64 6393 63

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

**b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;**

Yes	When :	Oct 2017
	Where :	On the road
	How often :	3 times
	How many elephant :	1 to 2
	Time zone :	<input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-	

**b-2: Did you suffer from elephant's act? Please choose items as bellows**

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / <del>No</del>		Rs:
2: House	Yes / <del>No</del>		Rs:
3: Livestock	Yes / <del>No</del>		Rs:
4: Crop	Yes / <del>No</del>		Rs:
5: Other	Yes / <del>No</del>		Rs:



b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant  
No

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
 BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: *Baseigya* )

b-4: Do you have countermeasure for against elephant

<input checked="" type="checkbox"/> Yes	What kind of countermeasures have you tried?			
	<i>Cracker</i>			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.)			
		<i>When</i>	<i>Subject</i>	<i>Organization</i>
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
	<input type="checkbox"/> Other			
No	Please select your reasons from bellow items			
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work	
	<input type="checkbox"/> Other (			)

*CB 21/11/2017*

Thank you very much for your cooperation

Name of interviewer:

*Bidyadhar Mahato*

**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22 / 11 / 2017

Questionnaire No,

18

**A-1 General Information (Personal)**

1: Name of interviewee	Sushanto Kumar
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 18 )
3: Village (mouza) name	Gobindopur
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When :
	Where :
	How often :
	How many elephant :
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1:Person	Yes / No		Rs:
2:House	Yes / No		Rs:
3:Livestock	Yes / No		Rs:
4:Crop	Yes / No		Rs:
5:Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
 BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/ Others (Specify: \_\_\_\_\_ )

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?		
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.)		
		<i>When</i>	<i>Subject</i>
	<input type="checkbox"/> Seminar		
	<input type="checkbox"/> Workshop		
	<i>Organization</i>		
<input type="checkbox"/> Other			
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( <i>elephants are bad</i> )		

*CB 22/11/2017*

Thank you very much for your cooperation

Name of interviewer:

**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 22 / 11 / 2017

Questionnaire No, 19

**A-1 General Information (Personal)**

1: Name of interviewee	Baisaki Kumar
2: Sex and age	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female (Age: 40 )
3: Village (mouza) name	Gobindopur
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

<input checked="" type="checkbox"/> Yes	When : Oct - 2017
	Where : Field
	How often : 2 times
	How many elephant : 1
	Time zone : <input checked="" type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Amount of damage (Rs)
1: Person	Yes / No		Rs:
2: House	Yes / No		Rs:
3: Livestock	Yes / No		Rs:
<input checked="" type="checkbox"/> 4: Crop	<input checked="" type="checkbox"/> Yes / No	Ate paddy	Rs: 5000/-
5: Other	Yes / No		Rs:



b-3: Do you always see the elephant in the same place?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
---	-----------------------------

b-3-1: If you answered "Yes" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / Others (Specify: *Gobindopur*)

b-4: Do you have countermeasure for against elephant

Yes	What kind of countermeasures have you tried?			
	Have you attend some countermeasures of seminar or workshop against elephant? Yes / No (if you answered "Yes" please answer following question.)			
		When	Subject	Organization
	<input type="checkbox"/> Seminar			
	<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other				
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items			
	<input type="checkbox"/> No idea	<input type="checkbox"/> Not enough money	<input type="checkbox"/> Busy with work	
	<input type="checkbox"/> Other ( )			

*CB*  
*22/11/2017*

Thank you very much for your cooperation

Name of interviewer:

Date: 22/11/17

Bayamundi Range office





Attendance (Interview)

Sl No.	Name	Sig.
01.	Tapan chandra Mahato	Japan ch. Mahato
02.	Nil Kantha Mani	PK manee
03.	Puzna chandra Mandi	Puzna ch. Mandi
04.	Joyram Hansda	Joyram Hansda
05.	Ganapati	Ganapati
06.	Rohi das Mishra	Rohi das Mishra
07.	Kaishma ch. Majhi	Kaishma ch. majhi
08.	Sarad Bebra	Sarad Bebra
09.	Rohi das Mishra	Rohi das Mishra
10.	Rahul Chandra Mahato	Rahul Chandra Mahato



Bagroundi Range office

Interview Attendance

Sl. NO.	Name	Signature
11.	D. L. Anand Kumar Dalmia	 D. L. Anand Kumar Dalmia
12.	Sitaraul Mahata	 Sitaraul Mahata
13.	Sahab Mahata	 Sahab Mahata
14.	Atul Kumar	 Atul Kumar

## Minutes of Meeting

### Elephant Survey Interview held on 23.11.2017

Again as per the schedule, today i.e. on 23.11.2017 at 11:20am a meeting cum interview was held among the officials of WAPCOS, the JICA survey team, WBSEDCL, Ajodhya Forest Range Officials, Forest Protection Committee and the villagers in respect of the elephant's survey interview in the Ajodhya forest range office. Total 13 people were interviewed today.

The members present in the meeting are given below:

#### **WAPCOS officials:**

1. Sh. Manoranjan Mondal, Dy. Chief Engineer & Project Manager
2. Ms. Chandrima Bandopadhyay, Sr. Engineer
3. Sh. Ramesh Chandra, Jr. Programmer.

#### **JICA survey team:**

1. Mr. Madoka Harada, Team Leader
2. Ms. Masami Takahata, Enviro. Social.

#### **WBSEDCL officials:**

1. Sh. Amitabh Kayal, Chief Engineer (PSPD)
2. Sh. Tusar kanti Chatterjee, Divisional Engineer (Civil)
3. Ms. Olivia Kabiraj Bose, Asst. Manager (HR & A)
4. Sh. Madhab Koley, Sub-Assistant Engineer (Civil).

#### **Ajodhya Forest Range Officials:**

1. Sh. Sagar Chakrabarti, Range Officer  
& other officials of Ajodhya Forest Range.

#### **Forest Protection Committee:**

Members from Ranga village

Following a brief introductory welcome, Sh. Manoranjan Mondal, Dy. Chief Engineer & Project Manager gave a detailed explanation to the entire gatherings in the Forest Range Office for the purpose of elephant's survey interview.

Subsequently Ajodhya Forest Range Officials, Forest Protection Committee and the villagers filled a questionnaire form prepared by the interviewers is enclosed in **Annexure-II**. In the meeting, the interviewees informed the team that they beat drums, burst fire crackers, burn firelight from the fuel provided by the Forest Range Office, torchlight and via Hulla party drive out the elephants from their area. The meeting cum interview was finished approximately around 12:30pm.

Then after the meeting cum interview session, the team including WAPCOS, the JICA survey team and WBSEDCL headed towards the villages surrounding the project area located in the Ajodhya forest range. In these villages, the team randomly selected the villagers who filled a questionnaire form and were interviewed regarding the elephant's act. Photographs clicked during the interview are enclosed in **Annexure:I**.



Annexure:I Photographs



Interview session at Ajodhya Forest Range Office



Interview session at Ajodhya Forest Range Office



Interview session at village



Interview session at village





Interview session at village



Interview session at village



Interview session at village



Interview session at village



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant  
Elephant Survey Questionnaire**

Date of interview: 23 / 11 / 17  
Questionnaire No. 01

**A-1 General Information (Personal)**

1: Name of interviewee	Sagar Chakrabarty
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 55)
3: Village (mouza) name	
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other( )
5: Telephone No.	9933423717

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Sagar Chakrabarty	56	Range Officer	9933423717

**B Questionnaire**

**b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;**

Yes	When : Month _____ /Year _____
	Where (Place) : <span style="margin-left: 100px;">N.A</span>
	No. of times : <span style="margin-left: 100px;">N.A</span>
	How many elephant : <span style="margin-left: 100px;">N.A</span>
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
<input checked="" type="checkbox"/> No	-

**b-2: Did you suffer from elephant's act? Please choose items as bellows**

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No	N.A	Yes / No	Rs.
2: House	Yes / No	N.A	Yes / No	Rs.
3: Livestock	Yes / No	N.A	Yes / No	Rs.
4: Crop	Yes / No	N.A	Yes / No	Rs.
5: Other	Yes / No	N.A	Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

- N/A

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others

(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

✓ Yes	<p>What kind of countermeasures have you tried?</p> <p>distribution to the villagers - a) crackers b) burnt mobil c) use in driving away elephants from village side</p>
No	<p>Please select your reasons from bellow items</p> <p><input type="checkbox"/> No idea    <input type="checkbox"/> Not enough money    <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )</p>

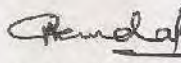
b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes /  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other	arranged by a team of staff from 2016-17		

  
Signature of interviewee

  
Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**  
**Elephant Survey Questionnaire**

Date of interview: 23 / 11 / 2017  
 Questionnaire No, 02

**A-1 General Information (Personal)**

1: Name of interviewee	MAHESWAR HANSDA
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 62 yrs.)
3: Village (mouza) name	Ranga
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	X

**A-2 General Information (Group / Organization)**

Name of Organization Range Forest Protection Committee

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Maheswar Hansda	62	President	—

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

<input checked="" type="checkbox"/> Yes	When: Month <u>October</u> / Year <u>2017</u>
	Where (Place): <u>Jungle</u>
	No. of times: <u>2 times</u>
	How many elephant: <u>8-10 nos.</u>
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input checked="" type="checkbox"/> Morning (5 to 11am) <input checked="" type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input type="checkbox"/> Night (After 9pm)
No	

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
2: House	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
4: Crop	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
5: Other	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.



b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAUDI/  
 BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others  
 (Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried?
No	Please select your reasons from bellow items <input checked="" type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes / No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input checked="" type="checkbox"/> Other	2016	Elephant chase	Forest Department

Training

Signature of interviewee

*[Handwritten signature]*

*[Handwritten signature]*

Signature of interviewer

Thank you very much for your cooperation



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 23/11/17

Questionnaire No, 03

A-1 General Information (Personal)

1: Name of interviewee	Sawan ch. Mahato
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 38 )
3: Village (mouza) name	Sunai-dih,
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other (Forest Staff)
5: Telephone No.	

A-2 General Information (Group / Organization)

Name of Organization Ajoalwa forest range office,

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : Month <u>oct</u> Year <u>2017</u>
	Where (Place) : <u>9 pm punisaban</u>
	No. of times : <u>1</u>
	How many elephant : <u>1</u>
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No		Yes / No	Rs.
2: House	Yes / No		Yes / No	Rs.
3: Livestock	Yes / No		Yes / No	Rs.
4: Crop <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes / No	<u>Ate Paddy</u>	<input checked="" type="checkbox"/> Yes / No	Rs.
5: Other	Yes / No		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / HATHINADA / Others

(Specify: *puni basan*)

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

<input checked="" type="checkbox"/> Yes	What kind of countermeasures have you tried? <i>Crackers, Halla party</i>
<input type="checkbox"/> No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input checked="" type="checkbox"/> Workshop	<i>Ajodhya</i>	<i>Drive out elephant</i>	<i>Forest range office</i>
<input type="checkbox"/> Other			

*Suman Ch. Mahato*  
Signature of interviewee

*EB*  
*23/11/2017*  
Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 23/11/17

Questionnaire No, 04

**A-1 General Information (Personal)**

1: Name of interviewee	Dhiren Gouram
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 31 )
3: Village (mouza) name	Rarga
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization *Rarga FPO R*

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Dhiren Gouram	31	Member	9800696643

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : Month <u>Oct</u> Year <u>2017</u>
	Where (Place): <u>Rarga</u>
	No. of times : <u>2</u>
	How many elephant : <u>2</u>
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1:Person	Yes / No		Yes / No	Rs.
2:House	Yes / No		Yes / No	Rs.
3:Livestock	Yes / No		Yes / No	Rs.
4:Crop	Yes / No	<u>Rarga Ate Paddy</u>	Yes / No	Rs.
5:Other	Yes / No		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others

(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

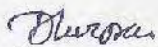
Yes	What kind of countermeasures have you tried?
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

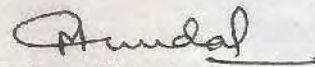
Yes /  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input checked="" type="checkbox"/> Workshop			
<input type="checkbox"/> Other			



Signature of interviewee



Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 23 / 11 / 2017

Questionnaire No. 05

**A-1 General Information (Personal)**

1: Name of interviewee	KARTICK SING MURA
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 52)
3: Village (mouza) name	
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other (Service Forest Guard)
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization Agodhya Forest Range office, Purulia

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Kartick Sing Mura	52	Forest Guard	8159873790

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Month <u>August</u> Year <u>2017</u>
	Where (Place): <u>Maize, Kalafulia village</u>
	No. of times: <u>once (1 time)</u>
	How many elephant: <u>2</u>
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input checked="" type="checkbox"/> Night (After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	if "Yes" then Claimed Amount
1: Person	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
2: House	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
4: Crop	Yes / No <input checked="" type="checkbox"/>	Maize damage	Yes / No	Rs. 1000.00
5: Other	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.



b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others  
(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;.

<input checked="" type="checkbox"/> Yes	What kind of countermeasures have you tried?  Hulla Party
<input type="checkbox"/> No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes /  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input checked="" type="checkbox"/> Seminar	2017	Elephant chase	With Forest Protection Committee by FRO (Forest Range office)
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			

*Kandick Singh Mhara*  
Signature of interviewee

*Arundal*  
Signature of interviewer

Thank you very much for your cooperation



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 23/11/2017

Questionnaire No, 06

A-1 General Information (Personal)

1: Name of interviewee	Tapan Kumar Tudu
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 45 )
3: Village (mouza) name	Ayodhya
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other( Service )
5: Telephone No.	-

A-2 General Information (Group / Organization)

Name of Organization - ~~Forest guard~~ Ayodhya Range office

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Tapan Kumar Tudu	45	Forest guard	-

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Month <u>April</u> Year <u>2016</u>
	Where (Place): <u>Tilgavasa (Forest)</u>
	No. of times: <u>1 times</u>
	How many elephant: <u>1</u>
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input checked="" type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / <del>No</del>		Yes / No	Rs.
2: House	Yes / <del>No</del>		Yes / No	Rs.
3: Livestock	Yes / <del>No</del>		Yes / No	Rs.
4: Crop	Yes / <del>No</del>		Yes / No	Rs.
5: Other	Yes / <del>No</del>		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others

(Specify: *Tilyavasa* )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

<input checked="" type="checkbox"/> Yes	What kind of countermeasures have you tried? <i>Crackers</i>
<input type="checkbox"/> No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes /  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			

*[Signature]*  
Signature of interviewee

*[Signature]*  
23/11/2017  
Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant  
Elephant Survey Questionnaire**

Date of interview: 28 / 11 / 17

Questionnaire No. 07

**A-1 General Information (Personal)**

1: Name of interviewee	Chittaranjan Maity
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 38 )
3: Village (mouza) name	Ajodhya
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other ( Service )
5: Telephone No.	8900261240

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Chittaranjan Maity	38	DR/FR	8900261240

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Month _____ / Year _____
	Where (Place):
	No. of times:
	How many elephant:
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input type="checkbox"/> Night (After 9pm)
No	✓

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No		Yes / No	Rs.
2: House	Yes / No		Yes / No	Rs.
3: Livestock	Yes / No		Yes / No	Rs.
4: Crop	Yes / No		Yes / No	Rs.
5: Other	Yes / No		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
 BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others  
 (Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried? <i>Disturbance to the villagers Crazakess</i> <i>Swat mobil</i> <i>kul on</i>
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes / No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input checked="" type="checkbox"/> Other	<i>many times</i>	<i>to give any</i> <i>from</i> <i>village sides.</i>	<i>forest department</i>

*Chittaranjan Maity*  
 Signature of interviewee

*Ramesh chandog*  
 Signature of interviewer

Thank you very much for your cooperation



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 23.11.2017

Questionnaire No.

08

A-1 General Information (Personal)

1: Name of interviewee	Georimuth kormathor
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 56)
3: Village (mouza) name	Ajodhya
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input checked="" type="checkbox"/> Other (Sorkhise)
5: Telephone No.	8145 333 634

A-2 General Information (Group / Organization)

Name of Organization Ajodhya Range office

1: Name of interviewee	2: Age	3: Position	4: Telephone No.
Georimuth kormathor	56	Bungalow Chowkidar	

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Month <u>October</u> Year <u>2017</u>
	Where (Place): <u>Sahbaha</u>
	No. of times: <u>Two</u>
	How many elephant: <u>one</u>
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon (12 to 4pm) <input checked="" type="checkbox"/> Evening (5 to 8pm) <input type="checkbox"/> Night (After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
2: House	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
4: Crop	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
5: Other	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
 BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others  
 (Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried? use electro on Hulla rooti
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes / No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input checked="" type="checkbox"/> Workshop	July 2017	Elephant drive	Forest Range Officer
<input type="checkbox"/> Other			

Signature of interviewee

*Prof. Sathya Narayan*

*Ramesh chandra*

Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 20 / 11 / 17

Questionnaire No. 09

**A-1 General Information (Personal)**

1: Name of interviewee	Papesh chandra Tiudu
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: )
3: Village (mouza) name	Telliabhara
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	9475506224

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

**b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;**

Yes	When :	Month <u>October</u> / Year <u>2017</u>
	Where (Place) :	<u>Teliabhara village road</u>
	No. of times :	<u>once (01)</u>
	How many elephant :	<u>01 (one)</u>
	Time zone :	<input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input checked="" type="checkbox"/> Night(After 9pm)
No	-	

**b-2: Did you suffer from elephant's act? Please choose items as bellows**

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
2: House	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
3: Livestock	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
4: Crop	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.
5: Other	Yes / No <input checked="" type="checkbox"/>		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA /  TELIA BHASA /  SALDI /  SARAUDI /  PRATAP PUR /  MADLA /  BARRIA /  GOSAIDI /  
 BAGHMUNDI /  PURNA TARPANIA /  RANGA /  BARE LAHAR /  HATHINADA / Others  
(Specify: \_\_\_\_\_ )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried?
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items <input checked="" type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( _____ )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes /  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			

*Parash ch. Tudu*  
Signature of interviewee

*Ramesh chandry*  
Signature of interviewer

Thank you very much for your cooperation



JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant

Elephant Survey Questionnaire

Date of interview: 23 / 11 / 17

Questionnaire No. 10

A-1 General Information (Personal)

1: Name of interviewee	Gandhaswari Murmu
2: Sex and age	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female (Age: 35 y.)
3: Village (mouza) name	Bhugora
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other (Housewife)
5: Telephone No.	

A-2 General Information (Group / Organization)

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

B Questionnaire

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics.

Yes	When: Month _____ / Year _____
	Where (Place):
	No. of times:
	How many elephant:
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input type="checkbox"/> Night (After 9pm)
No	

b-2: Did you suffer from elephant's act? Please choose items as follows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No		Yes / No	Rs.
2: House	Yes / No		Yes / No	Rs.
3: Livestock	Yes / No		Yes / No	Rs.
4: Crop	Yes / No	paddy	Yes / No	Rs.
5: Other	Yes / No		Yes / No	Rs.



b-3: Do you always see the elephant in the same place?

Yes	No
-----	----

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/  
BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others  
(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried?
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input checked="" type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes / No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			

Signature of interviewee

*Ramesh chandra*  
Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 28/11/2017

Questionnaire No. 11

**A-1 General Information (Personal)**

1: Name of interviewee	Santosh Manna
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 24)
3: Village (mouza) name	Tellabasha.
4: Occupation	<input type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other (student)
5: Telephone No.	9475012927

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When: Month <u>April</u> Year <u>2017</u>
	Where (Place): <u>Tellabasha forest</u>
	No. of times: <u>12</u>
	How many elephant: <u>single / group.</u>
	Time zone: <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input checked="" type="checkbox"/> Afternoon (12 to 4pm) <input type="checkbox"/> Evening (5 to 8pm) <input checked="" type="checkbox"/> Night (After 9pm)
No	-

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No		Yes / No	Rs.
2: House	Yes / No		Yes / No	Rs.
3: Livestock	Yes / No		Yes / No	Rs.
4: Crop	Yes / No	<u>Paddy</u>	Yes / No	Rs.
5: Other	Yes / No		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA /  TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / HATHINADA / Others

(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried? <i>use fire</i>
No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes /  No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			

*Santosh Marmu*  
Signature of interviewee

*Ramesh chandru*  
Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 23 / 11 / 17

Questionnaire No, 

1	2
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**A-1 General Information (Personal)**

1: Name of interviewee	Sukhati Soren
2: Sex and age	<input type="checkbox"/> Male <input checked="" type="checkbox"/> Female (Age: 23y )
3: Village (mouza) name	Teliabasha
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : Month _____/Year _____
	Where (Place) :
	No. of times :
	How many elephant :
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No <input checked="" type="checkbox"/>	

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No		Yes / No	Rs.
2: House	Yes / No		Yes / No	Rs.
3: Livestock	Yes / No		Yes / No	Rs.
4: Crop	Yes / No	paddy	Yes / No <input checked="" type="checkbox"/>	Rs.
5: Other	Yes / No		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	No <input checked="" type="checkbox"/>
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA / TELIA BHASA / SALDI / SARA KDI / PRATAP PUR / MADLA/ BARRIA/ GOSAIDI/

BAGHMUNDI/ PURNA TARPANIA/ RANGA/ BARE LAHAR/HATHINADA/ Others

(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried?
No <input checked="" type="checkbox"/>	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes / No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop			
<input type="checkbox"/> Other			

*Sukhyati Saren*

Signature of interviewee

*Ramesh chandry*

Signature of interviewer

Thank you very much for your cooperation



**JICA feasibility Study for the Construction of Turga Pumped Storage Power Plant**

**Elephant Survey Questionnaire**

Date of interview: 23 / 11 / 17

Questionnaire No, 

1	3
---	---

**A-1 General Information (Personal)**

1: Name of interviewee	Rasbehari Yadu
2: Sex and age	<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (Age: 55)
3: Village (mouza) name	Jelashaha.
4: Occupation	<input checked="" type="checkbox"/> Farmer <input type="checkbox"/> Fisher <input type="checkbox"/> Other( )
5: Telephone No.	—

**A-2 General Information (Group / Organization)**

Name of Organization

1: Name of interviewee	2: Age	3: Position	4: Telephone No.

**B Questionnaire**

b-1: Have you ever seen elephant? Please answer "Yes" or "No" then go to more specifics;

Yes	When : Month <u>Oct</u> Year <u>2017</u>
	Where (Place) : <u>Jelashaha forest</u>
	No. of times : <u>seven times</u>
	How many elephant : <u>seven</u>
	Time zone : <input type="checkbox"/> Early morning (Before 5am) <input type="checkbox"/> Morning (5 to 11am) <input type="checkbox"/> Afternoon(12 to 4pm) <input checked="" type="checkbox"/> Evening(5 to 8pm) <input type="checkbox"/> Night(After 9pm)
No	

b-2: Did you suffer from elephant's act? Please choose items as bellows

Item	Yes or No	Part of damage	Reported to FRO	If "Yes" then Claimed Amount
1: Person	Yes / No		Yes / No	Rs.
2: House	Yes / No		Yes / No	Rs.
3: Livestock	Yes / No		Yes / No	Rs.
4: Crop	Yes / No		Yes / No	Rs.
5: Other	Yes / No		Yes / No	Rs.

b-3: Do you always see the elephant in the same place?

Yes	<input checked="" type="checkbox"/> No
-----	--

b-3-1: If you answered "Yes/No" please tick the name of village where you see the elephant

BHUNIGHRA /  TELIA BHASA / SALDI / SARAUDI / PRATAP PUR / MADLA / BARRIA / GOSAIDI /  
BAGHMUNDI / PURNA TARPANIA / RANGA / BARE LAHAR / HATHINADA / Others  
(Specify: )

b-4: Do you have countermeasure for against elephant. Please answer "Yes" or "No" then go to more specifics;

Yes	What kind of countermeasures have you tried?
<input checked="" type="checkbox"/> No	Please select your reasons from bellow items <input type="checkbox"/> No idea <input type="checkbox"/> Not enough money <input type="checkbox"/> Busy with work <input type="checkbox"/> Other ( )

b-5 Have you attend some countermeasures of seminar or workshop against elephant?

Yes / No

(if you answered "Yes" please answer following question

	When	Subject	Organization
<input type="checkbox"/> Seminar			
<input type="checkbox"/> Workshop	Jan 2017	elephant drive	Forest Dept.
<input type="checkbox"/> Other			

Signature of interviewee

*Ramesh chadrey*  
Signature of interviewer

Thank you very much for your cooperation

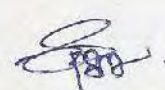
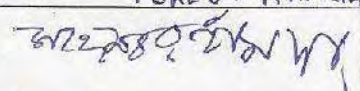
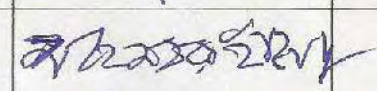

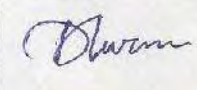
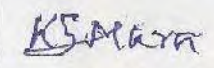
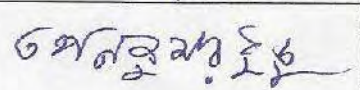
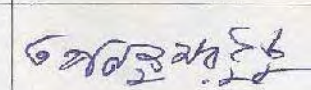
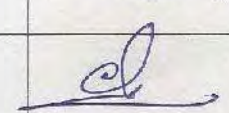


**INTERVIEWS SURVEY FOR ELEPHANTS**

**NAME OF THE PROJECT:** TURGA PUMPED STORAGE PROJECT, PURULIA, WEST BENGAL, INDIA

**DATE AND VENUE:** 23.11.17, AJOYDHA FOREST RANGE OFFICE, AJOYDHA, PURULIA, WEST BENGAL

**ATTENDANCE**

SL. NO	NAME AND DESIGNATION	DEPARTMENT/VILAGE/	SIGNATURE	REMARKS
1	SAGAR CHAKRABORTY FOREST RANGERS	FOREST		
2		Ranga		
3	Jwan ch. Mukherjee	Forest		
4	Dwaraj Kumar	Ranga		
5	Kartick Sing Maza F. G.	F. G. Ajodhya		
6		Forest Guard Ajodhya		
7	Chittaranjan Maity	DR/FR		
8	Geopinath Kumar	B. E. Ajodhya	