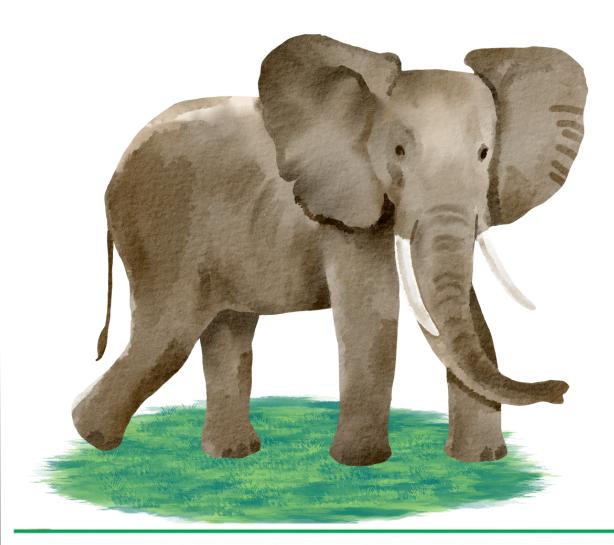






## GAJA SANRAKSHAN PROJECT IN ODISHA

Activities 2024-25
Implementation Partner - SNEHA NGO



TPC@DL | TPN@DL | TPS@DL | TPW@DL

(A Joint Venture of Tata Power and Government of Odisha)

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### **About Gaja Sanrakshana Project in Odisha**

Gaja Sanrakshana in Odisha focuses on hotspots around elephant reserves and corridors. It aims to reduce causalities through on-ground technical and educational intervention, collaborative efforts with the wildlife and forest departments, and habitat conservation to ensure a healthy elephant population in the State. The project also aims to realize SDGs 1, 2, 13, and 15 in Odisha by reducing human-wildlife conflict and improving the livelihoods of low-income families through resilient systems and efficient resource management.

Tata Power's aim in elephant conservation is not only to minimize electrocution deaths but also to preserve and facilitate an increase in their Indigenous populations by lowering natural and unnatural deaths due to various diseases, poaching and preventable accidents, creating a more conducive environment for them in their natural corridor and implementing measures that encourage protection of elephant habitats.

Before launching the project, extensive interaction meetings were held with the Forest Department to incorporate their inputs, and TPCODL also conducted a baseline study through SNEHA-NGO in Angul and Dhenkanal districts between Jan – Apr 2022 to assess the ground reality, which further helped to formulate the plan of action for implementation.



### **MoU between Tata Power & SNEHA NGO**

Tata Power has entered into an MoU with SNEHA NGO, for the implementation of The Gaja Sanrakshana project. This project, effective from April 2024 for three years, is based on a Comprehensive Action Plan developed by the Forest Department (Government of Odisha). The project has clear milestones and a timeline for achieving the defined outcomes. This collaborative approach, which aims to safeguard Odisha's elephant population, effectively emphasizes community participation and involves all relevant stakeholders directly or indirectly affected by human-elephant conflicts.

Furthermore, the project will foster convergence and collaboration among various departments and organizations at departmental and grassroots levels. Notably, the collaboration includes Tata Power Discoms, namely TP Central Odisha Distribution Limited, TP Western Odisha Distribution Limited, TP Northern Odisha Distribution Limited, and TP Southern Odisha Distribution Limited, indicating a concerted effort towards minimization of Human – Elephant conflict through collaborative efforts in active consultation and coordination with the Forest Department (Govt. of Odisha).

# PROJECT INITIATION



### **Project Initiation - Human Resources & Office Setups**

The project hit the ground running as soon as the Memorandum of Understanding was signed on April 4, 2024 with the immediate recruitment of a Project-in-Charge and a Field Officer, having a long experience in working for protection of elephants and mitigation of Human Elephant Conflict.

A Sociologist with rich and relevant experience of working for local communities joined SNEHA soon as the Project Officer who would drive the convergence initiatives.

During initial meetings with senior forest department official, there was a there was a felt need to have a Biologist in the team to study Elephant behaviour and profiling. A Field Biologist was deputed from Zoological Survey India for a long term study.

Consequent to finalization of the initial project area, Field Assistants and support staff were recruited and by the middle of May,2024, a full fledged team was ready to begin the project activities.

Office spaces were identified and established simultaneously in Bhubaneswar (State office) and Khajuriakata, Hindol Range, Dhenkanal (Field Station) by the end of April,2024 and became operational in the first week of May,2024.



# Project Initiation Initial Meetings with Forest Department officials

Meetings were held on 15th April,2024 with Dr. Manoj Nair - CCF (Chief Conservator of Forests) - Wildlife, to identify critical hot spot areas, and with Mr. Gajanan Lade, the DCF (Deputy Conservator of Forests) & Head of JTF to deliberate on the need for a study of elephants for long term solutions. The initial project area was defined and concluded during these meetings.

SNEHA's Executive Director, one of its Advisors – Mr. Mohan Raj of WWF and the Project in Charge met with the DFO (Divisional Forest Officer ) of Dhenkanal and the DFO of Angul Forest Division on 18th April,2024 and 8th June,2024 respectively to seek their support and begin the project activities. Both the DFO's assured all support for the Gaja Sanrakshana project.

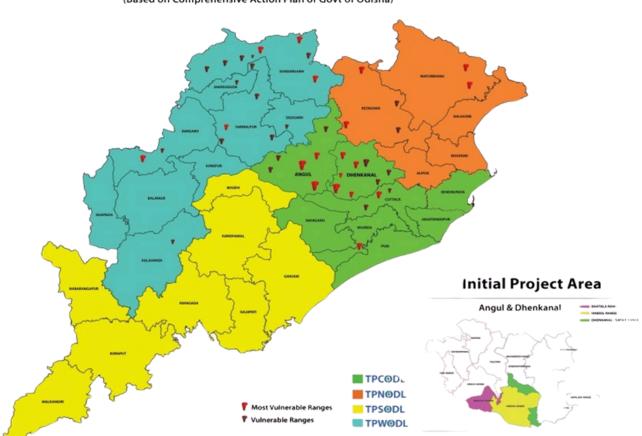
The initial project area was finalized as Hindol Range of Dhenkanal Forest Division and Bantala Range of Angul Forest Division. On a request during the initial meeting with the DFO of Dhenkanal, two forest sections – Meramandali and Bhapur of Dhenkanal-Sadar range, were added due to frequent elephant movement and presence and several incidents of elephant electrocution cases respectively.



# Project Initiation Map Showing Initial Project Area on Odisha Map

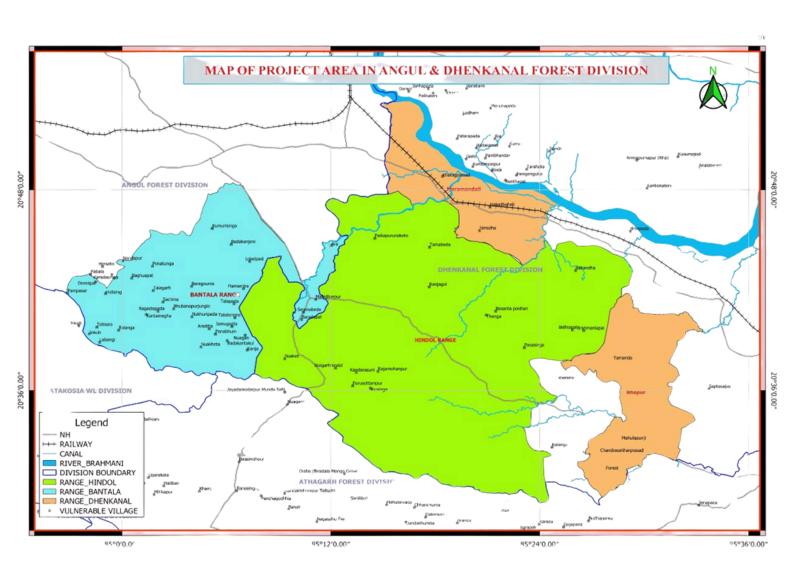
### **Human Elephant Conflict Ranges in Odisha**

(Based on Comprehensive Action Plan of Govt of Odisha)





# Project Initiation Map Showing geographical details of Initial Project Area





### **Advisors to Gaja Sanrakshana Project**

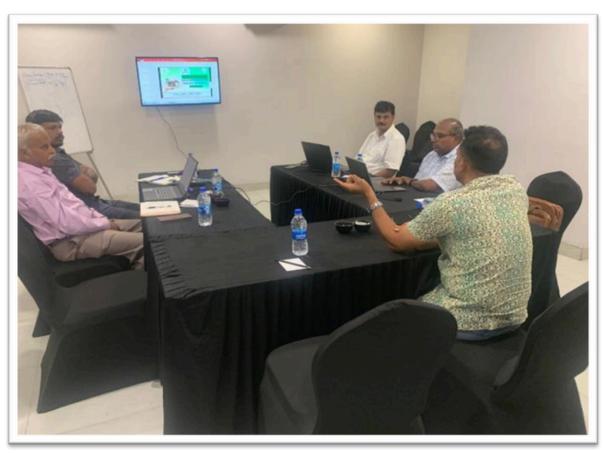
Dr. Raman Sukumar (Retired Professor of Indian Institute of Science, Bengaluru & Advisor to Govt. of Odisha) was met on 6th April 2024 at IIS, Bengaluru, for advice on project strategies. He appreciated the community centric approach and assured all support as and when required.

Mr. Mohan Raj (Consultant to WWF India) was with SNEHA-NGO during the planning stage and played a key role in kick starting the project.

Dr. Bivash Pandav (Senior Professor and Scientist - Endangered Species Management Department, Wildlife Institute of India, Dehradun) met the SNEHA team in Bhubaneswar on 18th April 2024, during which he agreed on the project concept and strategies and suggested working closely with the community to gain their support and goodwill.

Dr. Pratyush Mohapatra (Scientist-E & Officer in-charge, Zoological Survey of India), was met on 8th May,2024 at ZSI's Head Office in Kolkata who facilitated SNEHA's meeting with Dr. Dhritee Banerjee, Director of ZSI to obtain an in-principle consent to study cropraiding elephants in Dhenkanal.

# Initial Meeting with Dr. Bivash Pandav on 18th Apr'24 and with Dr. Pratyush Mohapatra on 8th May'24



Meeting with Dr. Bivash Pandav in Bhubaneswar



Meeting with Dr. Pratyush Mohapatra at ZSI, Kolkata



# Project Initiation Induction Workshop & Immersion Meeting

Induction Workshop: A three day Induction Workshop for the new recruits of SNEHA was conducted at Hotel Nirupama, beside Kapilash Wildlife Sanctuary, Dhenkanal from 26th to 28th May 2024. SNEHA's activities, systems and processes were introduced, along with all the aspects of the planned activities like prevention of loss of human and elephant lives, crops and properties. Sessions on ecology and elephant behavior, elephant conservation by Dr. Pratyush, and, technical methodologies to mitigate HEC by Mr. Mohan Raj, and, convergence to enhance livelihood, village survey methodology etc by Mr. Ramasamy Krishnan were taken up. Tata Power representatives from the CSR team, DFO Dhenkanal and TPCDOL-Dhenkanal & Angul attended some of the sessions.

Immersion Meeting: A day long Immersion Meeting was organized by SNEHA-NGO on 29th May 2024 at CYSD Conference Hall, Bhubaneswar under the chairmanship of Mr. Himal Tewari, CHRO, Tata Power. The project's logo was unveiled before detailed presentation and discussion ensued on project deliverables, elephant electrocution and prevention, tools and technologies to prevent loss of life and property, ecology & behavior of elephants etc. The meeting concluded with a Plan of Action derived from a brain storming session. It was also concluded that the project shall be scaled to other new areas with basic ground work in a phased manner.

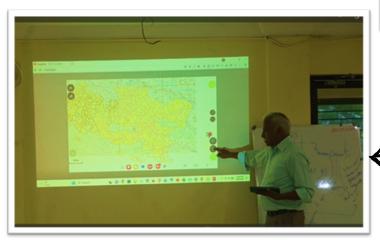


# Induction Workshop for Team SNEHA Sessions by Experts



**Induction Workshop in progress** 

### Dr. Pratyush's session on Elephant behaviour



And the second s

Mr. Mohan Raj's session on GIS Mapping

DM-TPCODL, Angul addressing the participants





# Induction Workshop Vertical Hanging Fence Training & Demonstration



Practical session on the making of Hanging Solar Fence



# Induction Workshop Orientation & Demonstration of Thermal Drone by DFO, Dhenkanal



**DFO-Dhenkanal demonstrating a Thermal Drone** 



Thermal Drone about to take off



### Immersion Meeting between Tata Power & SNEHA-NGO



**Immersion meeting with Tata Power in progress** 



Mr. Himal Tewari, CHRO, Tata Power explaining a point



### **Immersion Meeting between Tata Power & SNEHA-NGO**



**Brain Storming Session in progress** 



**Group Photograph to conclude the Immersion meeting** 

TIGHT OF A MAIN

# MEETINGS WITH FOREST DEPARTMENT OFFICIALS

### Meeting with the PCCF (Wildlife) and Chief Wildlife Warden

On 6th July,2024, Mr. Ramasamy Krishnan, Dr Bivash Pandav, senior scientist at WII, Mr. Mohan Raj, Consultant at WWF, Dr. Pratyush Mohapatra, senior scientist at ZSI, Mr. Ranjit Kumar Patnaik, Project in Charge, and. Mr. Haree Krishna, ZSI Field Biologist met with Mr Susanta Nanda, PCCF (Wildlife) and Chief Wildlife Warden, and Dr Manoj Nair, CCF (Wildlife).

The meeting was primarily to seek permission to work on the Gaja Sanrakshana project in the project area and to discuss certain key points that required the concurrence of the forest department.

### The following were the key takeaways from this crucial meeting:

- Model Solar Powered Fencing, the Hanging type, was proposed to be set up in some affected villages in the current project area which can be emulated in other areas in future. The Chief Wildlife Warden was requested to see if the department can bear the cost under the Jana Surakhya Gaja Rakhya community fencing scheme. Mr. Nanda responded positively with an assurance to support.
- Capacity enhancement of Gaja Sathis and Anti-Depredation Squads, using training manuals of WWF, translated to Odia language, was discussed and agreed upon.
- The need to regulate and set guidelines to control the privately fixed poor quality solar fencings and equipment, especially the Energizer was discussed and it was agreed that there should be a white paper on the same.



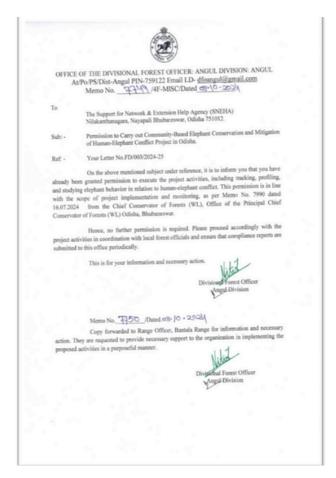
# Meeting with the PCCF (Wildlife) and Chief Wildlife Warden....contd...

- To improve the conviction rate, SNEHA proposed to impart training on wildlife laws and framing of chargesheets by a professional Lawyer who has vast experience in dealing with wildlife crime.
- Since there is a need to have skilled Elephant Trackers, SNEHA
  proposed to provide the necessary training by expert Elephant Trackers
  and the Chief Wildlife Warden urged SNEHA to organize the same as
  soon as possible.
- On the issue of Radio Collaring problem Tuskers, it was agreed upon that SNEHA would support in the selection of right elephants for radio collaring.
- Profiling of Elephants was discussed and SNEHA was advised to study and profile each elephant and respective family/herd in the project area.
- It was suggested that there be a corpus fund from which families of victims of fatal elephant encounters can be supported in terms of livelihood and skills training that could provide jobs to family members.
- Crowd gathering around elephants, especially the youth who harass and tease them was discussed. Since police support is difficult to get, it was concluded that other means may be explored to sensitize the local youth.

# Official letters subsequent to meeting with the PCCF (Wildlife) and Chief Wildlife Warden

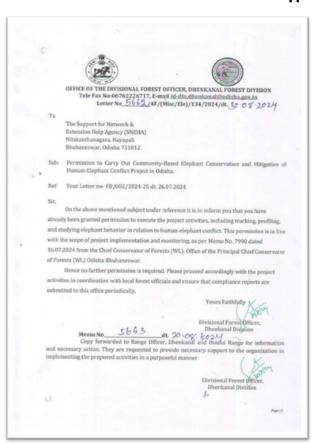






### Letter of approval from the PCCF-Wildlife

### Letter of approval from DFO-Angul Division





### Meeting with the RCCF (Angul Circle) & Plan of Action

Soon after the permission to begin the project was received from the office of PCCF (Wildlife) & Chief Wildlife Warden on 16th July,2024, SNEHA's ED and his core team met with the RCCF, Mr. S.S.Khora.

Apart from the discussion on various HEC issues, the meeting focused on solutions that would use AI & Sensors to replace the manually triggered Early Warning Systems. He urged SNEHA to come out with such solutions to prevent human kills and elephant electrocutions in Bantala and Hindol ranges.

A virtual meeting was called by him on 17th August 2024 which was attended by DFO-Dhenkanal, ACF - Angul, ED-SNEHA-NGO and Project-in-Charge of SNEHA. During the meeting probable dates and venues of capacity building training programmes for Elephant Squad / RRT team members, Gaja Sathis, and Anti-Depredation Squad members were discussed.

It was also decided that, to start with, a basic training on Elephant Tracking would be imparted to Elephant Squad members followed by advanced training. Apart from capacity building, it was decided that Model/Pilot village to initiate Vertical Hanging Solar Powered Fencing under the Jana Surakhya Gaja Rakhya community fencing scheme would be proposed by SNEHA.

# PREVENTION OF ELECTROCUTION



# Prevention of Electrocution of Elephants Threat mapping, intelligence & patrolling

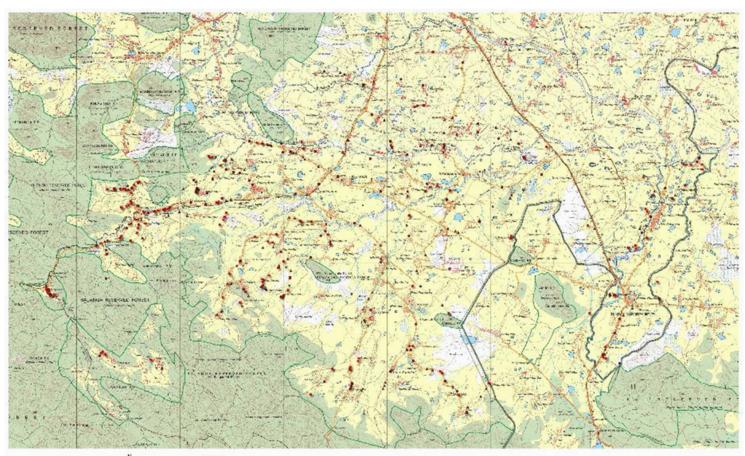
Prevention of Elephants getting electrocuted, being one of the primary mandates for the project, this activity was given the top most priority from day one. SNEHA's field team kept vigil, gathered intelligence, and, provided crucial data and information to carry out joint patrolling by Forest Department and TPCODL in a focused manner.

Equipped with Voltage Detectors for safety, SNEHA's field assistants did a thorough survey, took photographs on Note Cam App with GPS Coordinates and reported details of each spot on a daily basis. The data and information were collated, put into excel sheets, mapped using GIS and shared periodically till end of Jan'25 with the two Divisional Managers of TPCODL and the DFOs of Dhenkanal and Angul.

- (1) Solar Powered Fencings 447 points were reported of which 166 were in Angul and 281 in Dhenkanal. Such fences were reported as most of them were of poor quality and susceptible to electrocution.
- (2) GI Wire Fencings 302 points were reported of which 147 were in Angul and 155 in Dhenkanal. Such fences are liable to be be charged from domestic source or LT power line.
- (3) Unbarricaded Transformers 196 points were reported of which 97 were in Angul and 99 in Dhenkanal. Such transformers can be a source for hooking of live wire for poaching or fencing.
- (4) Sagging Overhead Powerlines 32 such points were reported of which 7 were in Angul and 25 in Dhenkanal. Most of the sagging lines were rectified in quick time in Angul while some continue to exist in Dhenkanal.
- (5) Live Wire for Poaching 52 locations have been identified and reported of which 13 were in Angul and 39 in Dhenkanal. Such locations regular hot spots and reported along with nearest power source.



# Prevention of Electrocution Map showing Threat Spots in Bantala Range, Angul







ANGUL FOREST DIVISION- Electrocution all Threat Spots of Bantala Range



# Prevention of Electrocution Map showing Threat Spots in Hidol & Sadar Ranges, Dhenkanal



**An unbarricaded Transformer** 



One of the many Live Wire Poaching spots



A solar powered fence



A fence made of GI Wires



**A Sagging Overhead Powerline** 



**An Open transformer** 

# Prevention of Electrocution Identified Threat Spots to support joint patrolling...contd...



**A GI Wire Fence** 



**An Open Transformer** 



A crudely erected solar powered fence



**A GI Wire Fence** 



**A GI Wire fence** 



A crudely erected Solar Powered fence

# Prevention of Electrocution Identified Threat Spots to support joint patrolling...contd...



One of the Live Wire Poaching Spots





# Prevention of Electrocution Intelligence Network & Active participation in Joint Patrolling

Intelligence Network: Intelligence reports regarding hooking of live wire for poaching and fencing and other contraptions like Bait Bombs are vital for curbing illegal activities that lead to elephant deaths. While SNEHA's Field Assistants are always on the lookout for any information and tip-offs, some Informers on a fixed cum variable remuneration were engaged in critical areas to gather and report discreetly. Incentives and rewards to the informers as well local farmers, village volunteers (Gaja Sathis) strengthened the intelligence network resulting in crucial information on poachers which were shared with the range officers and whenever required with the DFOs. The network resulted in five cases of seizures, three of them in Angul and two in Dhenkanal. Apart from these, several list of suspected poachers were also shared with the DFO,Dhenkanal.

Active Participation in Joint Patrolling: Joint Patrolling by Forest Department and TPCODL staff during the night was a regular affair before the project began but equipped with a list of threat spots shared by SNEHA the patrolling was intensive in vulnerable hot spots. SNEHA's Field Assistants joined the joint patrolling trips which have resulted in a more focused and effective exercise. In the last ten months SNEHA Field Staff participated in over 460 night patrolling trips in respective areas and across the project area.



# Prevention of Electrocution Seizures with inputs from SNEHA





GI Wires for Live Wire Poaching seized from Khinda Section & Khanja Section of Bantala range



### **SNEHA's Participation in Night Patrolling**



Night Patrolling in Hindol Range, Dhenkanal



Night Patrolling in Bantala Range, Angul



Night patrolling in Hindol Range, Dhenkanal



Night Patrolling in Bantala Range, Angul





Night Patrolling in Sadar Range, Dhenkanal



Night Patrolling in Hindol Range, Dhenkanal



Night Patrolling in Sadar Range, Dhenkanal



Night Patrolling in Bantala Range

TATA POSEE

# CO-ORDINATION **MEETINGS** TO PREVENT **ELECTROCUTION** FOR **FOREST** DEPARTMENT & TATA POWER

### **Household Survey**

The primary objective of the study was to assess the socio-economic impact of human-elephant conflicts on communities residing in the project area, which would lead to critical inputs to strategize mitigation activities and initiate Convergence of government line departments. The survey was designed to gather both qualitative and quantitative data from the villages with the objective of gathering a holistic view of the issues with a strong emphasis on identifying actionable solutions to mitigate conflicts and improve livelihoods.

QField App was implemented for collecting village survey data using a Tablet enabling information to be spatially recorded and imported directly to GIS for temporal and spatial analysis.

Approximately 15-30 households from each selected village were surveyed, depending on the village size and intensity of human-elephant conflict. About 200 villages from Dhenkanal-Sadar, the Hindol forest range of the Dhenkanal division, and 50 villages of the Bantala forest range of the Angul Forest division were selected for the survey, ensuring geographical diversity and coverage of both high and low conflict zones.

The survey reached 6412 households with responses from 1139 and 5273 respondents of the Angul and Dhenkanal forest divisions, respectively.



### **Household Survey by Field Assistants**



**Survey in progress in Hindol Section** 



Survey continuing during monsoon in Bantala



Survey in progress in Khajuriakata section, Hindol



Survey in progress in Bampa Section, Hindol

### **Household Survey Findings**



Some of the key findings from the Household Surveys were:

- $\bullet$  Houses: 32.77 % had Kuccha houses, 5.20 % had Semi-Kuccha houses and 62.02 % had Pucca houses.
- Primary Occupation: 35.36 % in Agriculture, 55.60 in Daily Labour, 1.17 % in Animal Husbandry, 2.71 % in various services and 5.16 % in others like trading, transport etc.
- Land Details (in acres): Ownership 15374.333, Cultivated 8840.786, Uncultivated 4882.799 and Barren 541.143.
- Location of the agricultural / plantation fields: Close to village 30.44 %, in between village and forests 34.75 % and Periphery of forests 34.81 %.
- Crop Production: Paddy 81.17 %, Vegetables 17.04 %, Mushrooms 0.16 %, Sugarcane 0.25 & Groundnuts 1.39 %.
- Income from Crops: Paddy- 79.12~%, Vegetables 16.18~%, Mushrooms 0.37~%, Sugarcane 0.09~%, Groundnut 2.06~% and Others 2.17~%.
- Domestic Animals (in no's): Cows 4483, Bullocks 734, Buffaloes 94, Goats & Sheep – 12578, Poultry – 167898.
- Depredating Animals: Elephant 28.35 %, both Elephant & Wild Boar 50.03 %, Wild Boar 11.57 % and Monkey & Others 10.04 %.
- Since when they have been seeing elephants: 2.68 % since 1-2 years, 26.78 % since 3-5 years, 56.60 % since 5- 10 years and 13.94 % since 10 20 years.



- Crop Depredation: 76.43 % of cultivated land was entered into by wild animals and depredated partially/completely, of which Paddy was 86.76 %, Vegetables was 10.32 %, Sugarcane - 0.08, Groundnuts - 1.61 % and others - 1.23 %.
- $\bullet$  Orchards Depredation: Mango 57.45 %, Cashew 29.69 % , Banana 3.26 % and Others 9.60 %.
- Depredation Time: Day Time 0.80 %, Early Morning 0.76 %, Late evening 13.41 %, and Night 85.03 %.
- Storage of Farm Produce: Buried 0.05 %, Inside homes 63.76 %, Outside homes 0.28 % and Not storing (sold instantly) 35.92 %.
- Crop Insurance: Only 4.24 % had crop insurance.
- Compensation Claims: Applied & received 13.60 %, Applied & under process – 3.54 %, Applied and rejected – 12.12 % and Did not apply – 70.74 %.
- Awareness of Government Compassionate Scheme & Anukampa App –
   Only 8.33 % had knowledge about the Anukampa App and its operation and the various scheme details.
- $\bullet$  House Damage by Elephants Fully Damaged 33.40 % and Partially Damaged 66.60 % .
- Crop Protection by Farmers Watch & Guard 80.38 %, Solar Powered Fence – 4.02 %, GI Wire Fence – 1.22 %, Barbed Wire Fence – 1.08 % and None – 13.30 %.
- $\bullet$  Human Casualties in elephant encounters: 98.55 % said it was by Lone Tuskers.



- Purpose of entering Forests: Firewood 62.60 %, Flowers, fruits, seeds, leaves 0.87 %, Medicinal herbs 0.02 %, Honey 0.06 %, for Shortcut path 2.26 %, Worship 1.58 % and None 32.61 %.
- $\bullet$  Latrines: 67.83 % had latrines of which only 62.55 % used them while 32.17 % did not have one.
- Open Defecation: 22.36 % went to barren lands, 3.74 % went to Cultivated lands, 7.22 % went to forests, 2.03 % went to Plantation areas, and 64.64 % did not defecate outside.
- $\bullet$  Power lines passing through cultivated lands: 15.47 % of the farmlands had powerlines passing through them.

# COMMUNITY MEETINGS



#### **Panchayat & Village level Community Meetings**

A Panchayat level Meeting was organized on 17th December 2024 at Nabakishorepur panchayat, Bhimbori section, Hindol range, Dhenkanal. The participants included ward members, presidents, secretaries, and farmers of all the villages of the panchayat. The meeting was attended by the DFO, Dhenkanal, DM, TPCODL, Dhenkanal, Hindol's Range Officer & his team and SNEHA's core team. The meeting concluded with a pledge to protect the elephant from electrocution and bait bombs.

Apart from regular informal meetings at the village level by SNEHA's Field Assistants, twelve formal village level meetings were also organized by SNEHA in coordination with Forest Department's Range Officer and staff on human animal conflict and on illegal hooking in the villages known to have records of illegal hooking of live wire for poaching.

On a request from the DFO of Athamalik Division, TPCODL and SNEHA organized village level meetings at Sisukata, Loharpada and Bantol on 19th Dec'24. The three vulnerable villages which had recorded electrocution of elephants and other wild animals come under the Dhandatopa range and Electrical section of Boinda, Angul.



# Community Meetings Panchayat & Village level



**DFO-Dhenkanal at Bhimbori's Community Meeting** 



**Project-in-charge at Nabakishorepur Meeting** 



**Meeting with villagers of Sisukata** 



**Meeting with villagers of Bantol** 



**Meeting with villagers of Hindol Block** 





Meeting with villagers of Loharpada



Meeting with villagers of Lokeiposi



# CAPACITY BUILDING & TRAINING

### সমূদ্র স্থান স্থা

#### **Capacity Building & Training**

As decided at the initial stage, training modules were prepared for :

- (1) Elephant Squad members and train some of them to become Elephant Trackers.
- (2) Formal training for the Gaja Sathis to have a result oriented volunteer base.

Booklet for Elephant Tracker Training: For the training sessions on Elephant Tracking for Elephant Squad Members, SNEHA prepared reading material which was duly approved by the CCF-Wildlife, Govt. of Odisha. The reading material was translated into the vernacular language Odia, and copies were printed as per the number of participants.

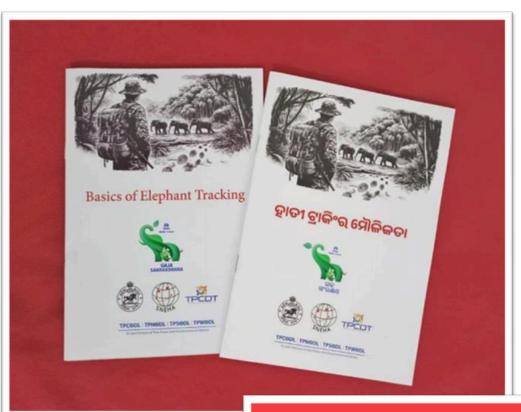
Booklet for Gaja Sathi Training: SNEHA has translated to Odia, relevant portions from the book – "Field Manual for Managing Human Elephant Conflict" prepared by World Wildlife Fund for Nature (WWF) in association with Project Elephant – MoEF & CC, Govt. of India. Necessary approvals were obtained from WWF before translating and printing the booklets. These booklets were given to the Gaja Sathis as reference materials during their training.



#### **Capacity Building & Training**

#### **Training Booklets:**

Elephant Tracking in Odia & English HEC Manual for Gaja Sathis







#### **Elephant Tracking:**

#### **Basics of Elephant Tracking**

Trainer - Abhimanyu Madhusudan from the Wildlife Institute of India, having a rich experience in tracking elephants conducted one day workshops in seven batches for 123 elephant squad members and 28 Foresters and Forest Guards from the two divisions. The participants attended the basic training at seven different locations during which theory sessions were followed by on-field practical training in forests close by.

The participants appeared in a written quiz before the training (to test their fundamentals) and after the training (to test their learning) to help identify suitable candidates for the advanced level training. The participants were also observed closely during the sessions to judge their potential. The participants expressed their new found knowledge about elephant behaviour and learnt the basics of tracking, with a strong emphasis on safety.

# Out of the 123 elephant squad members, 42 elephant squad members (24 from Dhenkanal & 18 from Angul) were shortlisted to attend the advanced level 3-day training in two batches.



**Basic Training in progress by WII Trainer** 



**Basicc Training in progress** 





**Practical session during Basic Training** 



A group photo after the Basic training



A briefing before practical session at Hindol



**Group photo after Basic training in Dhenkanal Range** 



A group photo after the Basic training

#### **Elephant Tracking:**



#### **Advanced level Elephant Tracking**

SNEHA's Field Biologist from ZSI, assisted by SNEHA's Elephant Trackers were the trainers. The sessions included on-the-field rigorous training sessions inside elephant habitat on how to get close to the elephants without being detected along with safety and survival tactics.

The Advanced level Elephant Tracking training for Angul was conducted on 28th, 29th & 30th of October 2024 in and around the Anti-Poaching Watch Tower at Antulia, Angul and the training for Dhenkanal was conducted on 7th, 8th & 9th Nov'24 at the Kapilash Elephant Rescue Centre near Kapilash Wildlife Sanctuary, Dhenkanal.

The highlight of the training at Kapilash sanctuary was a real life tracking of a injured juvenile female elephant who was successfully tracked by one of the three groups put on the job who brought her for treatment at the rescue center.

Final Selection of Elephant Trackers: SNEHA's trainer recommended 8 elephant trackers from Angul and 12 elephant trackers from Dhenkanal to form expert teams in respective ranges/divisions. The DFOs were formally informed that the recommended trackers can further hone their skills during tracking exercises on the field by SNEHA.



Recap of Basics before Advanced sessions in Dhenkanal



**Briefing during Advanced Training in Angul** 



Advanced level session in progress in Angul



**Survival Tips during advanced session** 



Survival tactics being demonstrated



Looking for tell tale signs of elephant movement



Importance of physical fitness



Tree climbing using a rope



Tree top as vantage point and for safety



#### **Training for Gaja Sathis**

Over 600 village volunteers were trained to ensure that they work in tandem with Forest Department Staff and also TPCODL staff. The participants were given an insight into elephant behaviour and ecology apart from defining their crucial role to inform and participate in preventing loss of human lives, properties and crop as well as unnatural death of elephants, especially by electrocution and bait bomb.

Six training programmes were organized in November, 2024 which was attended by 428 Gaja Sathis from Dhenkanal and two training programmes were organized in December, 2024 which was attended by 174 Gaja Sathis from Angul.

The training was delivered by SNEHA's Field Officer who has a rich experience in mitigating conflict as well as capacity building.

Rewards were announced for the Gaja Sathis for information that will lead to seizure and arrest of those who hook live wire for poaching and fencing.

The Gaja Sathis took an oath to protect elephants, stop eating bush meat while dissuading others in the village from doing the same.



**DFO-Dhenkanal at one of the training sessions** 



**DFO-Angul at one of the training sessions** 





Oath taking in progress in Bantala range



**Training session in progress** 



Training session in progress in Rasol Section, Hindol



A Gaja Sathi tells about his learnings



Training session in progress at Bantala range



Oath taking in progress in Hindol range

# PUBLIC AWARENESS CAMPAIGNS

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#### **Awareness Campaigns**

#### **Street Plays - awareness through traditional Art forms:**

The popularity of traditional art forms is slowly waning in rural India but whenever these are performed, people believe and accept the messages from the artists.

Pala Art form: During the months of October and November 2024, a team of Nayagarh district's Pala artists from 'eKalakar'agency performed in 160 villages of the project area with messages on the need for Human Elephant Co-existence.

**Ghoda Nacha Art form**: Artists from Sri Sri Gupteswar Kala Parisada, Narsinghpur, Cuttack performed in 52 villages of the project area and one at the Magha Mela at Joranda, Dhenkanal during January and February, 2025.

Both the art forms addressed the various challenges of protecting and conserving elephants and their role in our mythologies, environment, and ecosystem. The threat of electrocution, the methods to prevent human casualties, the caution to the youth against harassing elephants were covered. The street plays also covered the compassionate (Anukampa) scheme and alternative crops and alternative income through the convergence of government schemes.















#### **Awareness Campaigns**

#### **Wall Paintings:**

Wall Paintings were done at 18 locations in the project area. The theme and content of the paintings was to dissuade the youth in the area from chasing, teasing and harassing elephants as stress and resentment among the elephants will result in attacks on innocent old people.

#### Social Media (WhatsApp) Awareness Messages & Alerts:

During the household survey, over 3,000 phone numbers of those having smart phones were collected and a group was created to provide awareness messages as well as early alerts about presence of elephants.

In the last 9 months nearly 100 awareness messages about Dos & Don't's to prevent human casualties, about crop protection measures, about alternative crops, about alternative incomes were conveyed apart from early alerts to caution about presence of elephants near villages.











#### **Survey of Mango Orchards and Cashew Plantations -**

This survey is primarily to prevent human casualties and any threat of electrocutions of elephants.

Every year elephants and humans vie for the same fruits during summer when Mango and Cashew fruits ripen, more so since Dhenkanal and Angul are known to have a lot of Mango orchards and several large cashew plantations. Early in the morning, sometimes before day break, during the months of May, June & July, people venture out to collect ripe mangoes and cashew but the elephants are already there taking shelter and feeding on ripe fruits. Significant number of human casualties happen during May, June and July each year which are also season for Jackfruit, Bael, Wood Apple, and, collecting Kendu leaves.



SNEHA carried out an extensive survey of Mango orchards and Cashew plantations in the project area locating each orchard along with GPS coordinates with the objective of identifying villages close to fruit orchards where announcements and awareness meetings can be carried out in the month of April , May and June to prevent human casualties and also to focus patrolling in these areas to prevent elephant electrocutions.

In Dhenkanal's project area 212 Mango Orchards and 188 Cashew plantations spread across 83 villages were identified. In Angul's project area 296 Mango Orchards and 6 Cashew plantations spread across 69 villages were identified. These locations have been shared with the respective DFOs.









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# AWARENESS CAMPAIGNS IN SCHOOLS



#### **Awareness Campaigns for School Students**

#### **World Elephant Day Celebration:**

World Elephant Day was celebrated on 12th August,2025 in a grand way in six schools of Hindol Block. About 1900 students got directly or indirectly involved in the event to make people of the region aware of the importance of the day and motivate the society to work towards Human-Elephant Co-Existence.

To encourage the students to join the movement, two competitions (Drawing/painting & Essay) were held in the six schools from the 8th to the 10th of August as a build up to the grand event on the 12th of August, where the winners received the prizes. The topic of the competition was "Human-Elephant Co-Existence", in which 270 students from the six schools participated, and 36 students were selected as winners.

The DFO of Dhenkanal was the Chief Guest of the main event event of 12th August, while the Guests of Honour were Head CSR- TPCODL, DM, Dhenkanal- TPCODL, Range Officer- Hindol and President of SSVM school where the grand event was organized. After motivational talks by the Guests of Honour, 36 awards were given to the Drawing & Essay Competition winners by the Chief Guest and other Guests of Honour followed by a traditional art form - "Ghoda Nacha" performance.

#### **Competitions Snapshots:**







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#### Main Event - 12th Aug'24



Welcome message by SSVM staff & students



Jhoti - Chita by SSVM students



Prizes being handed over by CSR-Head, TPCODL



**DFO-Dhenkanal addressing the gathering** 





Prizes being given away by DFO-Dhenkanal



Cultural program - Ghoda Nacha to conclude session



#### **Wildlife Week Celebration:**

To celebrate the Wildlife Week from October 2nd to 8th, SNEHA selected two schools in the Hindol range to raise awareness among school children on the role of wild animals and imbibing love for all wild animals, including our national heritage animal, the elephant.

The first programme was conducted at Barsingha High School in Barsingha village on October 5th October 2024, and the second at Khaliborei High School in Khaliborei on 8th October 2024. Over 100 students from each school enthusiastically attended the programmes along with some stakeholders, including parents who are farmers and Women SHG members.

A quiz program on wildlife in India was conducted, and on the spot, prizes were given to the winners, followed by an oath-taking by all present during the event.

SNEHA took the opportunity to talk to some SHG members separately at Barsingha to sensitize them about open defecation and how they can play a role in dissuading others in their community.



**SNEHA's Field Officer with Barsingha Students** 



A quiz session with prizes for SHG women





SNEHA's Field Officer with Women SHG members



A group photo in Barsingha High School, Hindol



Students enacting a play



**Quiz competition for students** 



Oath taking at Khaliborei School, Hindol

#### **Urja Mela:**

The Urja Mela is Tata Power's flagship event, designed to inspire students with critical knowledge on Climate Change, the Circular Economy, Energy Conservation, and the Sustainable Development Goals (SDGs). Through engaging activities such as science model presentations, poster making, essay writing, and quiz competitions, Tata Power aims to empower young minds across Odisha to lead climate action initiatives.



State Level Urja Mela: SNEHA participated in the State Level Urja Mela was organised by Tata Power at KT Global School in Khordha, Odisha, on November 13th, 2024, which was the first of its kind in the state. A short animation video about the plight of elephant calves after losing their family members to electrocution and the ray of hope from the Gaja Sanrakshana project was created and played continuously in the stall. Appropriate display boards were also put up. A large elephant balloon ensured that the SNEHA stall attracted maximum students and visitors.

District Level Urja Mela: SNEHA also participated in the district Level Urja Mela at B.B. High School in Dhenkanal town for the Dhenkanal district on 3rd February, 2025. SNEHA participated by displaying the various threats to the Elephants, the short animation video about the plight of elephant calves, and anchoring a session on Human Elephant conflict and Co-existence

#### Awareness Campaigns for School Students State Level Urja Mela at Khordha



Tata Power's senior CSR team visits SNEHA's stall



A group photo with a giant size elephant baloon



#### Awareness Campaigns for School Students District Level Urja Mela, Dhenkanal



School students pledge to conserve Elephants

School learning about various threats to Elephants



# MODEL VILLLAGE FENCING



#### **Model Vertical Hanging Fences & Model Villages**

In order to showcase the most effective Vertical Hanging Solar Fence in the region along with farming of alternative crops, generation of additional income etc., SNEHA carried out a detailed survey, had detailed discussion with villagers and identified three villages - Khairabahali and Bhingira of Hindol Range, Dhenkanal and Kantamegha of Bantala Range, Angul.

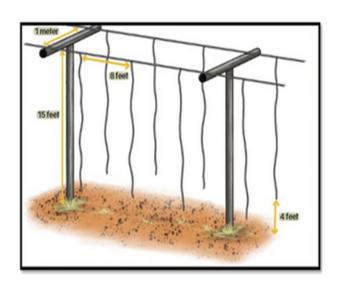
Installing such fences around the agricultural lands to protect crops, reestablish cash crops, and reduce human-wildlife conflict while promoting sustainable agricultural practices along with developing alternate livelihood opportunities through the convergence support by line departments of the Odisha government.

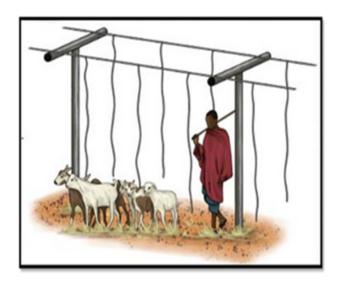
Vertical Hanging fences are resilient, more effective, and can be better managed if installed properly. The hanging wires cannot be pushed or pulled by elephants even with the tusks as the end of the wires are free and have no attachments. The wires knock vertically into the elephant causing a larger body area shock than a cross wire from a typical elephant fence. People and livestock can still move across the fence if there is enough space between the wires.

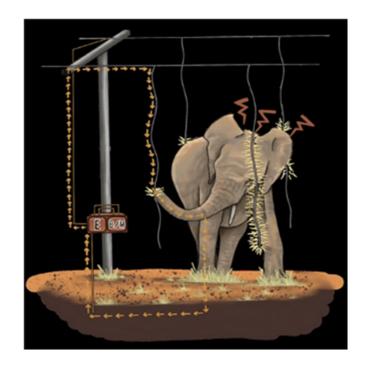
The proposed installation will be an experiment in the pilot village and its success can be showcased and replicated across many other conflict-prone villages.



# Model Vertical Hanging Fences & Model Villages - Illustrations









# Model Vertical Hanging Fences & Model Villages - Meetings with Community



Meeting with villagers of Kantamegha



Meeting with villagers of Bhingira



Meeting with villagers of Khairabahali



Meeting with villagers of Kantamegha, Bantala Range

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# CONVERGENCE OF GOVERNMENT DEPARTMENTS TO MITIGATE HEC



# Convergence of Government Departments to mitigate HEC

#### **District level Convergence Workshops**

Dhenkanal - On 29th October 2024, the core team of SNEHA met the Collector of Dhenkanal district - Shri Somesh Kumar Upadhyay to initiate the Convergence of livelihood issues in Dhenkanal's project area. The same day Mr. Sumit Kar - DFO, Dhenkanal was met to seek his coordination for the district level workshop.

Angul - On 30th October 2024, the core team of SNEHA met the Collector of Angul district - Shri Abdaal M. Akhtar to initiate the Convergence of livelihood issues in Angul's project area. The same day Mr. Nitish Kumar - DFO, was met to seek his coordination for the district level workshop.

On 3rd December 2024, the district level workshop was organized for Angul project area at the Circuit House in Angul town. On 18th December 2024 for Dhenkanal project area, the workshop was organized in the premises of the Collectorate in Dhenkanal town.

While the Angul workshop was chaired by the RCCF and co-chaired by the District Collector & Magistrate and convened by the DFO, the Dhenkanal workshop was chaired by the District Collector & Magistrate and convened by the DFO. Both the workshops were attended by some key department heads and senior officers from TPCODL who were presented the Household Survey findings.



## District level Convergence Workshop at Angul on 3rd Dec'24



**District Level Convergence Workshop in progress** 

#### **ED-SNEHA presenting the Household Survey Findings**



# District level Convergence Workshop at Dhenkanal on 18th Dec'24

**ED-SNEHA presenting the Household Survey Findings** 





**District Level Convergence Workshop in progress** 

#### **Block level Convergence Workshops**



Following the district level workshops and subsequent approval of the Minutes of the Meeting by the Collector and the RCCF, the Block level convergence workshops were initiated. For Angul block (Bantala Range) it was conducted on 15th Feb'25 and for the Hindol Block on 7th Mar'25.

The Angul & Hindol Block level workshops, initiated by the Block Administration – BDO-Angul & Sub Collector-Hindol respectively, and convened by the ACF, Angul & Range Officer, Hindol respectively, aims to address the critical issues of human-wildlife conflict and promote sustainable livelihoods in the Bantala forest range of Angul Forest Division and Hindol forest range of Dhenkanal Division by bringing together forest officials, and line departments.

The workshops, chaired by the BDO-Angul and Sub Collector-Hindol respectively and attended by the Block level line department representatives, focused on understanding the socio-economic challenges faced by local communities to initiate solutions for crop protection, develop alternative livelihood strategies, alternative crops, and capacity-building of local inhabitants.

A Poster designed to create awareness on reduction of Human Elephant Conflict was unveiled during both the events.

## Block level Convergence Workshop at Angul on 15th Feb'25





Presentation of survey findings in progress

**Unveiling the Poster on HEC mitigation** 





Line Departments of Angul Block at the meeting

## Block level Convergence Workshop at Hindol Block office on 7th March,2025





Line Departments of Hindol Block at the meeting

Presentation of survey findings in progress



**Unveiling the Poster on HEC mitigation** 



## **Gram Panchayat Level Awareness Workshop for Bantala Range:**

On 19th Mar'25, Gram panchayat Level Training & Awareness Workshop on Mitigation of Human Elephant Conflict was organized for Bantala Range with the active participation of elected representatives - Sarpanch, Ward Members and Samiti Sabhya from 17 Gram panchayats of Angul Block.

Forest Range Officer, Bantala along with his Section Foresters were also present during the training programme. This learnings from this training is expected to percolate down to local villagers coming under each ward member and also pave way to initiate convergence activities at the grass root levels.

The workshop would also help participants to implement government schemes through convergence in their respective villages.

Gram Panchayat Level Awareness Workshop for Hindol Range has been scheduled for the 1st week of Apr'25.







## First Convergence activity Handing over Chicks for backyard Poultry

SNEHA did a survey of remote villages in Hindol Range and shortlisted beneficiaries to augment their incomes in three villages of Dandiri Panchayat, Hindol range of Dhenkanal and approached the concerned government department for necessary support.

On 17th Mar'25, a total of 131 beneficiaries (61 Gen, 47 SC, 22 ST, and 1 OBC category, 75 women and 56 men) received 2,620 Banaraj chicks (20 per beneficiary) along with financial support of ₹1,000 per beneficiary for poultry shed construction.

This assistance was provided under the Rural Backyard Poultry Rearing Scheme (State Plan 2024-25) through an intersectoral convergence program with the Fisheries and Animal Resource Development Department (FARD) in Hindol block, Dhenkanal district.

## Handing over Chicks for backyard Poultry in three villages of Dandiri Panchayat, Hindol Range





# ELEPHANT BEHAVIOUR STUDY & PROFILING



## **Elephant Behaviour Study & Profiling**

Elephant Profiling is the process of Individual characterization of elephants based on certain unique morphological features like pigmentation, tear & fold of the ear, shape of the back, tail length, tail hair, tusk shape & size etc. Combining and comparing one or more features will separate elephants into individuals. Profiling can be used to mark and track elephants based on their conflict history and behaviour.

Rogue elephants which regularly cause harm to people are identified using the profiling data and radio collared to reduce loss of human lives and property by alerting the public in advance. SNEHA's Biologist team tracks such elephants to identify them for radio collaring.

Till now more than 86 individuals including 21 Tuskers have been profiled by SNEHA's biological team.

During one of the radio collaring exercise, SNEHA's field biologist team actively participated to identify the target candidate.

## **Tracking:**







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## **Profiling - some samples:**

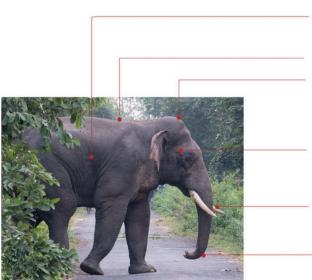
Age Group: Prime Adult: Above Age 30 Years

Sex: Male

Footprint Perimeter: 154 CM

Approximate Height: 10 to 10.5 Feet





Body Score 7/10 (Scapular bulges slightly visible)

Humped & sloping back

Raised head domes.

Peak musth period before mating (04 Dec 2024)

Thick, intermediate tusk angle, approx. 3 Ft. outer length

Medium trunk



Clear raised domes

Left Ear - Folded forward into round complete fold. Ear short angled away from the head. No tears & holes.

Prominant pigmentation.

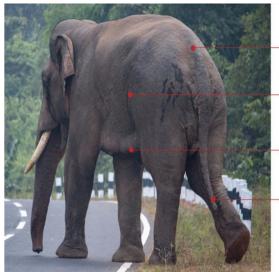
Right Ear - Slight incomplete forward fold.

Ear short angled away from the head.

Pronimanmt tear on right end flap.

Prominant pigmentation (less than left ear)

Parallel medium tusks



Humped sloping back shape

Body Score 7/10 (Pelvic bulges slightly visible)

Uplifted abdomen

-Tail length upto hind knee with no hair and kink

## MEDIA / SOCIAL MEDIA MEDIA SENSTITIZATION



## **Sensitizing Social Media Groups & Media Professionals**

## **WhatsApp Groups:**

On the 14th of Jan'25, on a request from DFO, Dhenkanal, Group Admins of three local WhatsApp groups were called for a meeting to sensitize them. While appreciating their role in cautioning locals about the presence and movement of elephants on roads and near villages to prevent loss of life and property, the adverse effects of their postings were also pointed out. The postings of photos and descriptions of Tuskers could attract ivory poachers, the postings of elephant presence attract youth to the spot who harass them, resulting in human casualties elsewhere of old people, and finally graphic photos of human deaths agitate the public and aggravate their resentment towards elephants.

### **Media Professionals:**

A workshop was organized by IIMC (Indian Institute of Mass Communication), Dhenkanal in association with the Dhenkanal Forest Division on 27th Feb'25 in which SNEHA had also participated. The half-day session covered a presentation on Elephant behaviour and ecology, key suggestions to avoid negative interpretations and a presentation by the DFO on effect of climate change, development versus environment with an appeal to the media professionals to raise awareness among citizens and provide positive news to involve people in the mitigation of Human Elephant interaction.



Meeting with Social Media - WhatsApp groups of Hindol



**Meeting with Media professionals of Dhenkanal** 

## EARLY WARNING SYSTEMS





Partnering with Delhi based IT company – Kalpvaig Tecnologies, who had already implemented the early warning systems in Chattisgarh and were in the process of implementing in Jharkhand, SNEHA had procured the Early Warning Systems to be tried on a pilot basis in the Gaja Sanrakshana project

The Kalpvaig systems not only triggers the Hooters but also send out voice calls and short messages to all the villagers who have registered as subscribers.

The solar-powered, GSM-based smart siren is designed for autonomous operation in even the most remote locations. Using Al-powered real-time detection, it seamlessly integrates with collared wild animals, trap cameras, and the mobile app to monitor elephant movements. The siren automatically triggers when an elephant is detected within a 1-10 km range, providing early warnings to villages.

For added safety and control, the system provides area-wise siren access to authorized individuals, allowing them to manually activate the siren via the mobile app in case of a sudden wild animal appearance. With a 1 km audible range, this IoT-enabled siren ensures rapid alerts and better protection for communities, is Solar-powered and fully automated.







SNEHA selected three most vulnerable villages of Khajuriakata forest section of Hindol Range, Dhenkanal to begin the pilot run. The villagers responded enthusiastically and were more than happy to cooperate and safeguard the Hooters.

On 3rd March,2025, on the occasion of the World Wildlife Day, a team from SNEHA visited each of the three villages to operationalize the Early Warning System. The Hooters were triggered and the Sirens blared loudly to reach evert nook and corner of the village announcing the arrival of the system.

The Early Warning System promises to -

- •Prevent Human Casualties by alerting presence of elephants so that people are aware and take precautions.
- •Reduce Crop Damage as timely alerts would enable villagers to use appropriate.
- •Protect Elephants as preventing loss of life and property would prevent retaliation by people.
- •Improve Coexistence by reducing negative interactions with elephants.
- •Support long term conservation efforts by reducing conflicts and promoting cohabitation.
- •Enhance Government and Community Coordination as it would lead to better response strategies.



## GOING FORWARD EXPANSION TO OTHER REGIONS



## **Going Forward - Expansion to other regions**

SNEHA, with consent from the Forest Department and approvals from Tata Power plans to expand the project areas a proposal for which has been submitted to Tata Power. The additional areas are:

- (1) More areas in Current Forest Divisions coming under TPCODL The next two years would see some of the project activities getting replicated in two more ranges of Angul Forest Division Talcher & Angul-Sadar and two more ranges of Dhenkanal Forest Division Mahabirod and Kamakhyanagar West.
- (2) More forest ranges of other forest divisions from the JTF's Comprehensive Action Plan, located in the other three DISCOMs. The following ranges are being proposed –
- •Baripada Division Rasgovindpur & Betnoti Ranges
- •Bonai Division Koida Range
- Sambalpur Division Sambalpur-Sadar Range
- •Keonjhar Division Champua & Keonjhar-Sadar Range Ghumsur North Division – Mujhagada, Tarsing & Galery Ranges

## Going Forward - Expansion to other regions - Map showing proposed Ranges

