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IN THE HIGH COURT OF ODISHA: CUTTACK

W.P.(C) NO.14706 OF 2022

GITA ROUT ... Petitioner

-VERSUS-

STATE OF ODISHA & OTHERS
... Opp. Parties

**AFFIDAVIT FILED BY CHAIRMAN CUM
CONVENOR, JOINT TASK FORCE IN
COMPLIANCE OF ORDER DATED 22.12.2022**

I, Manoj V. Nair, aged about 48 years, S/o N. Vasudevan Nair working as Director, Nandankanan and i/c Chief Conservator of Forests (additional charge) at the O/o Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar do hereby solemnly affirm and state as under:

Manoj Nair

1. That I am working as Chief Conservator of Forest (additional charge) in the O/o Principal Chief Conservator of Forest (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar and am competent to swear this Affidavit.
2. That the aforementioned Writ Petition was listed for hearing before this Hon'ble Court on dt 22.12.2022 where it was ordered at Paragraph – 6 as follows:

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[Signature]


“6.....Certain further suggestions have been given from the side of the petitioners by the counsel appearing on their behalf in the virtual presence of the JTF. Dr Nair will take those into consideration while drawing up the action plan. It will be open to the respective counsel to give their written suggestion to the JTF at the earliest”.

3. It is humbly submitted that the suggestions given during the aforesaid hearing from the side of the petitioners, include *inter alia*, increasing the elephant fodder species in plantations, increasing the compassionate amount and the measures to be taken for mitigating man-elephant conflict in mining areas. The suggestions have duly been taken into consideration while drawing of the Comprehensive Action Plan (CAP).

4. It is further humbly submitted that this Hon’ble Court vide one of their earlier orders dt. 15.11.2022 directed as follows:

“5..... The court expects that a more detailed granular action plan on each of these aspects giving specific timelines will be placed before the Court on the next date. The Court has impressed upon the JTF that they should address two other issues: one concerns preventive measures to be adopted avoid deaths of elephants due to rail accidents and a

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comprehensive compensation scheme to address the issue of crop and vegetables loss as well as loss of human lives and injuries suffered as a result of the man-animal conflict.

"7-----Mr.Nair has taken on board the suggestion of Miss Purabi Patra that the JTF will consult Mr. Suvendu Mallik , Honorary Wildlife Warden , Khordha and Dr. Biswajit Mohanty , who is a wildlife expert.

5. That with regards to the directions at Para 5 and 7, of the aforementioned order, it is humbly submitted that a detailed granular action plan having specific timelines has been prepared by the JTF. Duly taking into account the direction of the Hon'ble Court, three key documents were referred to viz. '*Elephant Carrying Capacity of Odisha's Forests*' (Final Report submitted to Odisha Forest Department by Asian Nature Conservation Foundation in 2018), '*The Strategic Action Plan for Conservation of Elephants in the East Central Region with Special Emphasis on Mitigation of Human-Elephant Conflict*' (draft submitted by Drafting Committee to Project Elephant Division Ministry of Environment, Forest & Climate Change in 2021), and '*Report of the Karnataka Elephant Task Force*' (draft submitted by Task Force Members to High Court of Karnataka in Sept. 2012). Further, the presentation made before the Hon'ble Court (and taken

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into record), made by Dr R.Sukumar, Honorary Professor, Centre of Ecological Sciences, IISc Bangalore and Member, National Board of Wildlife and Member of this JTF was also crucial in terms of providing overall guiding principles considered while drafting the CAP.

During the preparation of the CAP the Chairman JTF has also consulted Mr. Subhendu Mallik, Honorary Wildlife Warden, Khordha and Dr. Biswajit Mohanty, Wildlife Expert and has incorporated relevant suggestions given by them.

Further Circle level consultative workshops have also been carried out in all forest circles viz, Angul, Baripada, Berhampur, Bhawanipatna, Bhubaneswar, Koraput, Rourkela and Sambalpur circles involving Honorary Wildlife Wardens, PRI members, NGOs, Civil Society Organizations, VSS / EDC members, Local Wildlife Conservationists, etc. and relevant points from each circle level workshops have also been incorporated while preparing the CAP.

Further, JTF has also taken the views furnished by the counsels and the written suggestions given from the side of the petitioner by the counsels appearing on their behalf, during the preparation of the said plan.

The salient points of the Comprehensive Action Plan are as follows:

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i. A zone-based approach

The overarching guiding principles adopted were to address the burning issue of human-elephant conflict, minimize accidental death of both elephants and humans by restricting the spatial spread of conflict by adopting a zonation approach with a vision to maintain a long-term viable population of 1700-1800 elephants in Odisha within the ecological and social carrying capacity with minimum incidence of human-elephant conflict and consequent death of humans and elephants.

• Zone I: Elephant Conservation Zone. This will be a conservation zone for elephants. Minimal human interference. Aim is to give strict protection, ensure no change in land-use, improve habitat quality and retain the optimum number of elephants within them throughout the year within the ecological carrying capacity.

• Zone II: Co-existence zone. Aim is to increase habitat quality and viability and reduce conflict by long-term strategies, discourage destructive land-use practices, promote scientific eco-restoration of degraded forests and encourage wildlife-friendly land-use, thereby inducing elephants to stay within such area's year-long. Further, to identify and secure corridors for ensuring connectivity to maintain fully functional elephant meta populations in fragmented landscapes.

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- Zone III: Conflict Mitigation Zone. Aim is to reduce conflict by short-term strategies, minimize human and elephant deaths and to retain a minimum viable number of elephants as per social carrying capacity. Problem herds/individuals may be translocated to Zone I or II, depending on the specific case.
 - Zone IV: Exclusion or Elephant Removal Zone. Aim is to maintain the zone as a no-go area for elephants. Elephants straying into this zone to be captured and translocated forthwith to identified locations.
- ii. (a) To achieve the vision and the management objectives envisaged under each Zone, a ten-pillar strategy with short-term, medium-term and long-term action points under each is envisaged. A total of 17, 19 and 158 long, medium and short-term interventions respectively have been suggested along with time-lines, periodicity and those responsible for implementing them. These have been included in a document titled '**Comprehensive Action Plan for Conservation of Elephants & Mitigation of Human-Elephant Conflict in Odisha - Executive Summary and Action Points**'. This contains a 10-pillar strategy under which Long-term (LT), Medium-term (MT) and Short-term (ST) action points which have been given under 10 thematic pillars. The abstract of the same is as follows:

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Sl. No	Name of the Thematic Pillar	No of LT	No of MT	No of ST
1	Human-elephant conflict mitigation	0	2	17
2	Inter-departmental co-ordination	2	1	22
3	Protection, enforcement and prosecution	2	4	36
4	Elephant habitat, corridors and connectivity	4	2	14
5	People's participation, education & awareness	1	0	16
6	Habitat management for increased productivity	8	4	6
7	Human resource management & capacity building	0	1	20
8	Wildlife health management and disease control	0	0	8
9	Research & application of technology	0	4	15
10	Monitoring	0	1	4
	Total	17	19	158

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(b) The gist of the major action points under each thematic pillar with the timeline/periodicity and agency responsible are as follows:

I. Human-elephant conflict mitigation

- To strengthen ongoing monitoring through coordination with stakeholders is being done regularly at various levels an Advisory and Monitoring Committee on Human Wildlife Conflict chaired by the Chief Secretary, Odisha to render advice, monitor periodically and enhance inter-departmental co-ordination in the State to address human-wildlife conflict issues as prepared to be constituted by the state.
- Every division should have a Human Wildlife Conflict Management Action Plan and strategy in place where the aim will be to ensure zero conflict-induced casualty

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of humans, elephants and minimize damage to crops and property. [Within six months action by DFO]

- Revision of compassionate payment for both Human Death, Crop loss, Human Injury and Property Damage by wild animals after holding extensive public consultations. [Within six months by the State Govt.]
- Solar fencing, using the recently launched *Jana Surakhya Gaja Rakhya* should be taken up in all vulnerable areas. [Individual need based at Division Level / To be initiated forthwith.]
- Formation of Mobile Veterinary Units in Keonjhar, Angul, Sambalpur and Bhubaneswar Circles to address capture and relocation of elephants and other wildlife. [Within one year action by WLHQ / Circles]

II. Inter-departmental co-ordination

- District level Human Wildlife Conflict Mitigation Committee under chairmanship of Collector to be constituted by the Government. Superintendent of Police and heads of relevant line departments will be represented with concerned DFO being Member Secretary. [Within six months/ Action by Collector & DFO / Minutes of meetings to be sent through RCCF to HQ]
- DISCOMs to ensure frequent patrolling in vulnerable location to check illegal hooking and also take necessary legal action against the offenders. Besides bare conductors in elephant movement area shall be well insulated either through AB cabling or insulated conductors in addition the other preventive measures to check electrocution to be taken off by them. [Within a year / DISCOMs / WLHQ]

III. Protection, Enforcement and Prosecution

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- DFO must be empowered to collect CDR of Wildlife Criminals relevant to the wildlife offence case directly from service provider under 65-B Indian Evidence Act. [Within Six Months / Action by State Govt / Home Dept.]
- Ensure booking of cases in the local police station where arms / explosives /poison is involved in wildlife cases. [Immediate action by RO/DFO]
- Establishment of Fast track court with Special Public Prosecutor/APP to ensure speed trial of wildlife offences cases. [Within One Year / Action by Govt. of Odisha / State Wildlife HQ.]
- Engagement of Legal Expert at Circle level to hand hold preparation of case records in Wildlife Offence cases. [Within Two Months /Action by RCCF]

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IV. Elephant Habitat Zonation, Corridors and Connectivity

- Adopt a zonation approach of the state with four zones viz. Zone 1: Elephant Conservation Zone, Zone 2: Elephant-Human Co-existence Zone, Zone 3: Conflict Mitigation Zone and Zone 4: Elephant Removal (or Exclusion) Zone after due ground truthing and corridor study. [Within 1-2 years / Action by WLHQ]
- Commissioning of at least a year-long (1-2 years) study covering all seasons by a national institution to assess the functionality and feasibility of the 14 identified elephant corridors and the additional

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corridors mentioned in the ANCF report of 2018 to be commissioned. [Within six months / To be completed within 1-2 years / Action by State Govt. / WLHQ]

- Proposal for notification of Hadgarh- Kuldiha Elephant Corridor as a Conservation Reserve to be expedited. [Immediately / Action by State Govt., MoEF & CC]

V. People's Participation, Education & Awareness

- A Core Committee to enhance people's participation in wildlife conservation to be formed in every division consisting of Honorary Wildlife Warden, NGOs, PRI Members, EDC & VSS members, Local influential people, Local MLAs & MP. [Within 3 Months/ Bimonthly (Once every 6 months) / Action by DFO & minutes of meetings to be sent through RCCF to the WLHQ]
- A volunteer group of villagers to be formed in villages acutely affected by Human-Elephant conflict. This should be spear-headed by *Gaja Sathis* who shall also rope in community / individuals to participate in the *Jan Surakhya Gaj Rakhya* scheme. [Within six months – one year / Action by DFO, RO, Forester & Forest Guard]

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VI. Habitat Management for Increased Productivity

- Instead of a piece-meal approach to habitat improvement, a holistic habitat 'restoration' approach to be followed (water, soil, forage), wherein clearly identified degraded patches (5-25 hectares or more) to be continuously managed in the long-term. Cluster approach for habitat improvement to be followed. [Consultations to be initiated immediately for the Workshop/ Long-term / Action by WLHQ/RCCF/DFO]

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- 5-year action plan to be developed for weed eradication in such identified areas. Extensive and persistent weed removal to be done along with planting up with palatable species of grasses, herbs/forbs, shrubs, and fruit/fodder trees. Suggested list appended. [Within one year/ to be implemented thereafter for 5-10 years / Action by Division Level]
- In all Regional Wildlife Management Plans, Site Specific Wildlife Management Plans, at least 25% funds to be ear-marked for habitat improvement and all plantation drives within elephant rich RFs (Zone I&II), at least 50% of planting material will have to be from a list of elephant food plants in other elephant movement areas at least 20% to be planted. [Policy to be formulated and regulated through the State / Within 6 months]

VII. Human Resource Management & Capacity Building

Expeditious steps to fill up the vacancy positions of Forest guard (2297 no), Forester (435 no), Deputy ranger (129 no.), Ranger (136 no.), ACF (104 no) and DCF (17 no.) for effective protection and monitoring of Sch- 1 species as soon as possible. [Within 1-3 years / Action by Govt. of Odisha]

- Capacity building of all categories of staff and all stakeholders including local people in rescue, emergency anti-depredation activities, tranquilization, shifting and management of conflict situations inclusive of safety measures. [Ongoing but to be improved/strengthened by WLHQ/RCCF/DFO]
- Create adequate number of posts of Veterinarians within the Forest Department considering their crucial role in wildlife health management, rescue and rehabilitation. Fill up existing vacancies. [Existing but to be enhanced / Within one year / Action by the State Govt.]

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VIII. Wildlife Health Management and Disease Control

- Strengthening of Centre for Wildlife Health with modern diagnostic facilities and adoption of new technologies for easy and quick diagnosis of disease of wild animals. Establishment of Forensic Laboratory at Nandankanan Zoological Park. [Continuous programme action by Project Coordinator, CWH / PCCF (WL) & CWLW, Odisha]

IX. Research & Application of Technology

- To take measures for early listing and hearing of the writ petition no W.P.(C) No. 14049 of 2019 & W.P.(C) No. 14050 of 2019 and take steps for filling up the existing vacancies of Research Officers in the State Wildlife Headquarters. [Within six months / Action by WLHQ/GOO]
- Each Circle should have a Research & Monitoring Cell having at least two Research Scholars. [Within one year / Action by RCCF]
- Undertake periodic elephant population estimation following standard protocols. [Collaboration with Project Elephant and a National Institution of repute (Within one year / Action by WLHQ)]

X. Monitoring

- Strengthening daily monitoring and regular analysis of iWLMS/OFMS/mSTRIPES data at Division and Circle levels for effective protection / patrolling strategy for preventing elephant deaths. This should be ensured by the Elephant Crime Control Cell of the Divisions and Circles respectively. Monthly report in prescribed format should be send by all Divisions to the Circles and RCCFs should compile and send to WLHQ with their specific observations/comments. [Ongoing but to be enhanced / Action by DFO, RCCF/WLHQ]

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- iii. The document titled 'Comprehensive Action Plan for Conservation of Elephants & Mitigation of Human-Elephant Conflict in Odisha - Executive Summary and Action Points' is annexed here with as annexure W/1.
- iv. The detailed text elaborating the points mentioned thereof including the maps for the Comprehensive Action Plan is under preparation and will be submitted within a month before this Hon'ble Court for kind appraisal and further directions.
- 6. That the humble Opposite Parties craves leave of this Hon'ble Court to make further submissions and file further affidavits, in the interest of justice and effective adjudication by this Hon'ble Court.
- 7. That the facts stated above are true to the best of my knowledge, belief and based on available records.

Mang V Meani

Identified by:

Chafu & Bhup Swain

Mang V Meani

DEPONENT

Asst. A.G's Office

Chief Conservator of Forests (WL)
O/o the PCCF(WL) & CWLW
Odisha, Bhubaneswar

Place: Cuttack

Date: 17-1-2023

Certified that Cartridge papers are not available

[Signature]
ADDL STANDING COUNSEL



The deponent being identified by @. Swain Adv. Clerk Asst. A.G.'s office. swears on oath & solemnly affirms before me on dt: 17/01/2023 that the facts stated above are true to his/her knowledge.

[Signature] 17/01/2023.
Notary for Cuttack Town
Govt. of Odisha

[Faint, illegible handwritten text]

Mob. No :- 8926192755
nairmanojvasudevan@gmail.com

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Annexure W/1

**COMPREHENSIVE ACTION PLAN FOR CONSERVATION OF
ELEPHANTS & MITIGATION OF HUMAN-ELEPHANT
CONFLICT IN ODISHA**



EXECUTIVE SUMMARY & ACTION POINTS

Submitted by

**THE JOINT TASK FORCE FOR THE PROTECTION OF
WILDLIFE INCLUDING ELEPHANTS IN THE STATE.
GOVT. OF ODISHA**

17.01.2023

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Chief Conservator of Forests (W/L)
O/o the FCCF(WL) & CWLW
Odisha, Bhubaneswar

Preface

This document contains the Executive summary of the Comprehensive Action Plan (CAP) for conservation of elephants & mitigation of human-elephant conflict in Odisha prepared by the Joint Task Force (JTF) constituted on 13.09.2022 vide No. FE-WL-CASE-0009-2022/16368/FE & CC pursuant to the Order dated 08.08.2022 and Order dated 25.08.2022 of the Hon'ble High Court of Orissa passed in W.P.(C) PIL No. 14706 of 2022 (Gita Rout vrs. State of Odisha and Others).

As per the directions of the Hon'ble Court vide its order dated 25.08.2022, and re-iterated vide Order dated 15.11.2022, this Comprehensive Action Plan (CAP) was prepared.

The drafting of the CAP was done by the following team of official and co-opted members:

a)	Chief Conservator of Forests (Wildlife) O/O PCCF (Wildlife)	Chairman
b)	One Deputy Conservator of Forests, two Asst. Conservator of Forests, three Forest Rangers from FE & CC Department	Members
c)	One SP/Addl. SP, two Inspectors of Police, three Sub-Inspectors of Police on deputation	Members
d)	Prof. Raman Sukumar, Asian Nature Conservation Foundation	Co-opted Member (Wildlife Expert)
e)	Sri Jitasatru Mohanty, IFS(Retd.), Save Elephant, Foundation Trust	Co-opted Member (Wildlife Expert)
f)	Dr. Prajna Panda, National Coordinator, Elephant Cell, Project Elephant, MoEF & CC	Co-opted Member (Wildlife Expert)
g)	Sri Aditya Chandra Panda, Honorary Wildlife Warden, Angul District	Member (engaged voluntarily on wildlife issues)
h)	Sri Lalit Mohan Sahu, Honorary Wildlife Warden. Deogarh District	Member (engaged voluntarily on wildlife issues)

The Executive Summary and the Summary of the Action Points under 10-pillar strategy is elaborated herein. The detailed CAP with running text, maps and Annexures are under preparation gives an elaborate treatment of the above Summary.

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 Chief Conservator of Forests (WL)
 O/o the PCCF(WL) & CWLW
 Odisha, Bhubaneswar

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Sl. No	Name of the Thematic Pillar	No of Long-Term Action points	No of Medium-term Action points	No of Short-term Action Points	Page number
1	Human-elephant conflict mitigation	0	2	17	14
2	Inter-departmental co-ordination	2	1	22	18
3	Protection, enforcement and prosecution	2	4	36	24
4	Elephant habitat, corridors and connectivity	4	2	14	31
5	People's participation, education & awareness	1	0	16	35
6	Habitat management for increased productivity	8	4	6	38
7	Human resource management & capacity building	0	1	20	42
8	Wildlife health management and disease control	0	0	8	46
9	Research & application of technology	0	4	15	47
10	Monitoring	0	1	4	50
	Total	17	19	158	51

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Executive Summary

The Asian Elephant is a keystone species whose presence is essential for the proper structure and functioning of the forest ecosystem. It is our national heritage animal having deep ties to our mythology, traditions and cultural heritage. Wild elephants are presently distributed over an area of about 125,000 km² across 22 states of the country. Presently, elephants are distributed across four major elephant-bearing regions of India, of which the East Central region encompasses Odisha and its neighbouring States. This region supports the third largest elephant population of about 3200 elephants, which constitutes one-tenth of the country's wild elephant population. As per the figures of the 2017 All-India synchronized elephant census, around 1976 elephants occur in the state of Odisha. This comprises 63% of the elephant population in the East Central region and about 6.6% of the country's wild elephant population. Elephant presence which was recorded in 37 out of 50 divisions in the All-India Synchronized Elephant Census, 2017 has now spread to 39 divisions. Odisha has 19 Protected Areas (PAs) of which, elephant presence has been recorded in 13 PAs. In addition, it has and three Elephant Reserves (ERs) viz. Mayurbhanj ER, Sambalpur ER and Mahanadi ER, together encompassing 8508.95 sq.km.

The elephant landscape in the East Central region has been witnessing increasing levels of human-elephant conflict (HEC) during the past three decades and Odisha is no exception. The two prime factors for the escalating conflict between humans and elephants are habitat loss and fragmentation driven by anthropogenic activities such as infrastructure projects, mining, expansion of roads, railway lines and electric lines and also biotic pressure from forest-dependent communities. These have risen multi-fold in the recent times with inevitable pressure of development which also is a felt need of local people. On an average, 83 elephants are killed annually due to various reasons such as disease, electrocution, train hits, poisoning and hunting. The HEC in the State claims around 112 human lives annually. The increasing levels of HEC have resulted in considerable public resentment and concern which has led to the filing of the PILs, the consequent formation of the Joint Task Force. As per the directions of the Hon'ble Court vide its order dated 25.08.2022, and re-iterated vide Order dated 15.11.2022, this Comprehensive Action Plan (CAP) was prepared.

During the process of preparation of the said plan, three key documents were referred to viz. a. '*Elephant Carrying Capacity of Odisha's Forests*' (Final Report submitted to Odisha Forest Department by Asian Nature Conservation Foundation in 2018), b. '*The Strategic Action Plan for Conservation of Elephants in the East Central Region with Special Emphasis on Mitigation*

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of *Human–Elephant Conflict* (draft submitted by Drafting Committee to Project Elephant Division Ministry of Environment, Forest & Climate Change in 2021), and c. '*Report of the Karnataka Elephant Task Force*' (draft submitted by Task Force Members to High Court of Karnataka in Sept. 2012). Further, the presentation made by Dr R. Sukumar, Hon. Professor, Indian Institute of Science, Bangalore, Member of National Board of Wildlife and Member, Joint Task Force, Govt. of Odisha taken into record by the Hon'ble Court was also a crucial document in terms of overall guiding principles considered while drafting the CAP. Major approaches have been taken from these three documents, and at times, *in toto*. The overarching guiding principles adopted were to address immediately the burning issue of human-elephant conflict, aim to minimize accidental death of both elephant and humans by restricting the spatial spread of conflict and have a vision of maintaining a viable population of elephants in the State with acceptable levels of conflict in the long run.

According to the Carrying Capacity Report of 2018 cited above, the elephant population of Odisha, as determined since 1979 using the crude direct count methods, has remain practically constant at 1800-2000 individuals. At the same time, the numbers of elephants in neighbouring states such as Chhattisgarh and southern West Bengal have increased by about 400 individuals, pointing to a growth rate of 1.5-2.0% per annum in Odisha and Jharkhand with the growing numbers migrating to the other two states. This is indicative of the carrying capacity of Odisha's forests to sustain elephants being reached. *The trends indicate that perhaps about 1700-1800 elephants can at most be sustained and managed within the larger forested landscapes of Odisha with tolerable levels of elephant-human conflicts* (Sukumar et.al, 2018). Therefore, it becomes important to have a pragmatic vision for long-term conservation of elephants in the State taking into account this fact. The following vision has been framed accordingly.

Vision

To maintain a viable population of about 1700-1800 elephants in Odisha in the long run within the ecological and social carrying capacity with minimum incidence of human-elephant conflict and consequent death of humans and elephants.

Towards achieving this vision, a Zonation approach as detailed below has been adopted.

Zonation

Rationale

To achieve this vision in the long run, say 25 years, a targeted approach with clear delineation of zones with specific management interventions would be required with a target of an approximate number of elephants aimed to be supported in a given habitat in each zone within

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its carrying capacity. The zonation approach of the state should be based on habitat quality and viability, elephant use and movement, spatial configuration of forest fragments and corridors, human population, developmental imperatives, pattern and degree of human-elephant conflict. Some of this data is not available and will take time to collect and analyse. However, based on available data and information gathered from the field a tentative zonation has been attempted. This preliminary zonation can be fine-tuned/modified in periodic intervals when fine-grained data is available after due ground-truthing and commissioning of studies.

Classifying Elephant Habitats:

[The approach is to use the classification adopted by the Karnataka Elephant Task Force]

A zone-based approach adopted from the Report of the Karnataka Elephant Task Force set up in 2012 by the Hon'ble High Court of Karnataka has been used to arrive at various zones and make recommendations for the management of elephants in the state through conservation of habitat, protection of elephants, mitigation of conflict, strengthening of administrative structures and institutions, participation of local communities, and scientific research and monitoring.

The zone-based approach is briefly outlined below:

Zone I: Elephant Conservation Zone

This zone is constituted by the existing three Elephant Reserves. This region encompasses the larger and more-intact forested habitats. The emphasis within this zone would be affording maximum protection to elephants against illegal killing, maintaining long-term habitat integrity at the landscape scale through protecting and strengthening corridors, preventing elephants from moving into agricultural land and settlements both along the periphery and within enclaves and increasing the carrying capacity by sustained eco-restoration and habitat management.

Zone II: Elephant-human Co-existence Zone

This zone constitutes the ranges immediately adjoining these Elephant Reserves, in ranges connecting these elephant reserves and those adjacent with good elephant habitat. These areas have RFs with good forest cover, sparse human presence and has long-term potential for elephant survival. Here the elephant populations would number in the hundreds, connected to the major conservation zone, and ranging between them, over a largely intact habitat in which conflicts are manageable and would qualify for experimenting with a model of coexistence with people.

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Zone III: Conflict Mitigation Zone

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This Zone contains areas which witness moderate to high HEC, good to patchy forest cover and scattered elephant populations spread spatially over a large area throughout the state. Here the elephant populations would number in the several tens or rarely reaching hundreds, either isolated or connected to the major conservation zone, but ranging over a restricted or a fragmented habitat in which conflicts are high which require regular mitigatory interventions.

Zone IV: Elephant Removal (or Exclusion) Zone

This Zone consists of areas with very high human density, urban and peri-urban areas with very less forest cover and no historical presence of elephants. The elephant-removal zone would include areas where small or isolated groups of elephants, with questionable viability, or solitary male elephants or all-male groups range over a predominantly human-settled landscape, where the social and economic costs to maintaining the elephants are unacceptably high and where no co-existence is possible.

As per the distribution of elephants recorded during the 2017 elephant census, and the available data from iWLMS and information from divisions, it is estimated that the number of elephants that can be maintained as per the zonation approach would be about 1700-1800 as follows:

Zone I: Elephant Conservation Zone

This zone is constituted by the existing three Elephant Reserves. Mayurbhanj Elephant Reserve can accommodate about 550-600 elephants once sustained habitat improvement measures result in increasing its carrying capacity. Mahanadi and Sambalpur Elephant Reserves together can support about 250-300 elephants with habitat improvement and village relocations in Satkosia Tiger Reserve.

Zone II: Elephant-human Co-existence Zone

This zone constitutes the ranges immediately adjoining these Elephant Reserves, in ranges connecting these elephant reserves and those adjacent with good elephant habitat, about 550-600 elephants can reside. Further, about 60-80 elephants can be accommodated in the only elephant habitat south of Mahanadi encompassing Kalahandi North and South and Baliguda Forest divisions. This region also has two PAs viz. Karlapat and Kotgarh Wildlife Sanctuaries.

Zone III: Conflict mitigation Zone

This Zone contains areas which witness moderate to high HEC, good to patchy forest cover and scattered elephant populations. This zone has currently about 200-250 elephants.

T.C. - attached
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O/o the PCCF(WL) & CWLW
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It is expected that with the long-term improvement of elephant habitats in Zone I and II, many of the adjoining elephants in Zone III would move into them. However, it is important to understand that Zone I and Zone II (ERs and the connecting landscapes) would have the best prospects for long-term survival and conservation of the elephant population of Odisha state.

A draft list of divisions/ranges in each zone have been listed below and has to be fine-tuned after due ground truthing and finalisation of corridor study. Meanwhile indicative management action points can be initiated forthwith as suggested.

ZONE: I				
MAYURBHANJ ELEPHANT RESERVE				
SL.NO	CIRCLE	DIVISION (7 Nos)	RANGE (33 Nos)	NO. OF RANGE
1	Baripada	Balasore WL	Soro	2
2			Kuldiha	
3		Baripada	Bangiriposi	4
4			Deuli	
5			Baripada	
6			Kaptipada	
7		Karanjia	Karanjia	4
8			Satkosia WL	
9			Thakurmunda	
10			Dudhiani	
11		Keonjhar WL	Anandapur	2
12			Hadagarh	
13		Rairangpur	Manada	5
14			Rairangpur	
15			Badampaharh	
16			Bahalda	
17			Bisoi wl	
18		Similipal North WL	Talabandha WL	7
19			Kendumundi WL	
20			Chahala WL	
21			Gurguria WL	
22			Barehipani WL	
23			Nawana North WL	
24			Thakurmunda WL	
25		Similipal South WL	Nawana south WL	9
26			Ubk WL	
27			Pithabata North WL	
28			Podadiha WL	
29			Bhanjabasa WL	
30			National Park WL	
31			Jenabil WL	
32			Pithabata South WL	
33			Dukura WL	

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SAMBALPUR ELEPHANT RESERVE				
SL. NO.	CIRCLE	DIVISION (1 No)	RANGE (3 Nos)	NO OF RANGES
1	Sambalpur	Bamra WL	Khalasuni	3
2			Badrama	
3			Jamankira	
MAHANADI ELEPHANT RESERVE				
SL. NO.	CIRCLE	DIVISION (6 Nos)	RANGE (12 Nos)	NO OF RANGES
1	Angul	Athagarh	Narsinghpur West	1
2		Athamalik	Athamallik	1
3		Mahanadi WL	Chhamundia	3
4			Banigochha (West)	
5			Kusang	
6		Satkosia WL	Pampasar	5
7			Purunakote	
8			Tikarpada	
9			Raigoda WL	
10			Jillinda	
11	Bhubaneswar	Nayagarh	Gania	1
12	Berhampur	Boudh	Madhapura	1

ZONE: II (A)				
Ranges immediately adjoining Sambalpur Elephant Reserve				
SL. NO.	CIRCLE	DIVISION	RANGE	NO. OF RANGES
1	Angul	Angul	Chhendipada	1
2		Athamalik	Bamur	2
3			Handapa	
4	Sambalpur	Bamra WL	Khalasuni	2
5			Badrama	
6		Rairakhol	Girischandrapur	5
7			Naktideul	
8			Charmal	
9			Rampur	
10			Mochibahal	
11		Sambalpur	Sadar	2
12			Padiabahal	
13		Rourkela	Deogarh	Reamal
14	Deogarh			

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Ranges immediately adjoining Mahanadi Elephant Reserve				
SL. NO.	CIRCLE	DIVISION	RANGE	NO. OF RANGES
1	Angul	Angul	Angul	2
2			Bantala	
3		Athagarh	Narsinghpur East	3
4			Narsinghpur West	
5			Badamba	
6		Athamalik	Athamallik	3
7			Dhandatopa	
8			Madhapur	
9		Dhenkanal	Dhenkanal	2
10			Hindol	
11	Berhampur	Boudh	Madhapura	2
12			Purunakatak	
13	Bhubaneswar	Nayagarh	Gania	1

Zone: II (B) Ranges connecting the 3 Elephant Reserves and those with good elephant habitats					
SL. No	CIRCLE	DIVISION (21 Nos)	RANGE (54 Nos)	No of Ranges	
1	Angul	Angul	Jarapada	3	
2			Angul		
3			Bantala		
4		Athagarh	Narsinghpur East	3	
5			Narsinghpur West		
6			Badamba		
7		Athamalik	Bamur	5	
8			Athamallik		
9			Dhandatopa		
10			Handapa		
11			Madhapur		
12			Dhenkanal	Hindol	1
13		Berhampur	Satkosia WL	Pampasar	2
14	Purunakote				
15	Berhampur	Baliguda	Belghar	2	
16			Kotagarh		
17		Boudh	Madhapura	1	
18		Ghumsur North	Tarasing	1	
19	Bhubaneswar	Nayagarh	Daspalla	1	
20	Baripada	Keonjhar_WL	Deogaon wl	2	
21			Brahmanipal		
22		Rairangpur	Rairangpur	2	
23	Bahalda				

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24	Bhawanipatna	Kalahandi North	Madanpur Rampur	3	
25			Narla		
26			Bhawanipatna		
27		Kalahandi South	Biswanathpur		2
28			Karlapat Sanctuary		
29	Subarnapur	Ullunda	1		
30	Rourkela	Bonai	Tamra	3	
31			Jarda		
32			Sole		
33		Deogarh	Barkote	4	
34			Deogarh		
35			Khamar		
36			Pallahara		
37		Rourkela	Panposh	3	
38			Banki		
39			Bisra		
40		Keonjhar	Ghatagaon	2	
41			Telkoi		
42		Sambalpur	Bamra WL	Badrama	4
43	Jamankira				
44	Kuchinda				
45	Bamara				
46	Sadar				
47	Sambalpur		Padiabahal	3	
48			Dhama		
49	Rairakhol		Girischandrapur	6	
50			Naktideul		
51			Charmal		
52			Rampur		
53			Mochibahal		
54	Rairakhol				

ZONE: III (CONFLICT-PRONE RANGES)			
SL NO.	CIRCLE	DIVISION	RANGE
A. MOST VULNERABLE RANGES			
1	Angul	Dhenkanal	Hindol
2		Dhenkanal	K.Nagar (West)
3		Dhenkanal	Dhenkanal
4		Dhenkanal	Mahabirod
B. MODERATE VULNERABLE RANGES			
5	Angul	Dhenkanal	Sadangi
6		Angul	Chhendipada
7		Angul	Talcher
8	Baripada	Balasure WL	Kuldiha wl
9		Baripada	Rasgobindpur
10	Rourkela	Keonjhar	Champua
11		Rourkela	Biramitrapur
12		Rourkela	Kuarmunda
13	Sambalpur	Bargarh	Padampur

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C. VULNERABLE RANGES			
14	Angul	Dhenkanal	K. Nagar (East)
15		Dhenkanal	Kapilash
16		Athagarh	Badamba
17		Athagarh	Khuntuni
18		Athagarh	Athgarh
19		Athagarh	Narsinghpur (E)
20		Athagarh	Narasinghpur (W)
21		Satkosia WL	Purunakote wl
22		Satkosia WL	Pampasar
23		Angul	Angul
24		Angul	Bantala
25		Angul	Kaniha
26		Athmallik	Handapa
27		Cuttack	Dalijora
28	Baripada	Similipal South	Jenabil
29		Baripada	Kaptipada
30		Baripada	Betnati
31		Keonjhar WL	Hadgarh
32		Karanja	Dudhiani
33	Bhawanipatna	Kalahandi (s)	Karlapat
34	Bhubaneswar	Khurdha	Tangi
35	Rourkela	Deogarh	Deogarh
36		Deogarh	Khamar
37		Keonjhar	Ghatgaon
38		Keonjhar	Bhuyan & Juangpirh
39		Keonjhar	Keonjhar
40		Rourkela	Bisra
41		Rourkela	Banki
42		Rourkela	Rajgangpur
43		Sundargarh	Sundargarh
44		Sundargarh	Ujalpur
45		Sundargarh	Bargaon
46	Bonai	Koira	
47	Sambalpur	Jharsuguda	Bagdihi
48		Sambalpur	Sadar
49		Bargarh	Ghees
50		Rairakhol	Naktideul
51		Rairakhol	Rairakhol

The above is a draft list of divisions/ranges to be included in each zone based on available information and data from iWLMS. It may be noted that in the case of very few ranges, they fall under both Zone I and Zone II; similarly, few ranges fall under Zone II and Zone III. These have to be fine-tuned by appropriately including the relevant sections under each zone after due ground truthing and also after incorporating findings of the proposed corridor study. However, this applies to only a relatively small area and will not have any impact on the larger set of management action points suggested for implementation. Therefore, the indicative action points listed below under the 10-pillar strategy can be initiated forthwith.

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10-pillar strategy

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To achieve the vision and the management objectives envisaged under each Zone, a ten-pillar strategy with short-term, medium-term and long-term action points under each has been envisaged.

The abstract of the same is as follows:

Sl. No	Name of the Thematic Pillar	No of LT Action points	No of MT Action points	No of ST Action Points
1	Human-elephant conflict mitigation	0	2	17
2	Inter-departmental co-ordination	2	1	22
3	Protection, enforcement and prosecution	2	4	36
4	Elephant habitat, corridors and connectivity	4	2	14
5	People's participation, education & awareness	1	0	16
6	Habitat management for increased productivity	8	4	6
7	Human resource management & capacity building	0	1	20
8	Wildlife health management and disease control	0	0	8
9	Research & application of technology	0	4	15
10	Monitoring	0	1	4
	Total	17	19	158

NB: Some of the action points will have short-term and medium-term implications as also long-term in some cases.

The summary of the Comprehensive Action Plan is given in the ensuing pages, giving specific granular details, indicative timelines and agency responsible for implementing them. It may be noted that many of the action points are already ongoing but requires renewed focus, enhancement, expansion and more critically, regular monitoring.

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ACTION POINTS UNDER 10-PILLAR STRATEGY

I. HUMAN-ELEPHANT CONFLICT MITIGATION
(19 Action Points, MT-2, ST-17)

ST: Short-term (<1 year)

MT: Medium-term (1-5 years)

LT: Long-term (>5 years)

Sl. No.	Recommended Activity	Time Line/Periodicity	Nodal Agency/ Level within the Forest department
1	To strengthen ongoing monitoring through coordination with stakeholders is being done regularly at various levels an Advisory and Monitoring Committee on Human Wildlife Conflict chaired by the Chief Secretary, Odisha to render advice, monitor periodically and enhance inter-departmental co-ordination in the State to address human-wildlife conflict issues, especially human-elephant conflict (HEC) to be constituted by the State.	Within six months Once every six months	Government of Odisha
2	Consolidate efforts at resolving HWC happening now by preparing a Human Elephant Conflict Management Action Plan and strategy where the aim will be to ensure zero conflict-induced casualty of humans, elephants and minimise damage to crops and property. All vulnerable villages to be mapped therein. The conflict mitigation plan for a division should be broadly compatible with the overall goals of elephant conservation in the state and the mitigation plan of the adjoining divisions.	Within six months	DFO
3	The present mechanism of disbursing compassionate grants using the 'Anukampa' app has resulted in a quick turn around time. However, the functioning of the app need to be given wide publicity among local people and the existing issues (cases of encroached land, absentee owners, tenant cultivators etc) have to be eliminated to ensure complete user satisfaction.	Within three months	WLHQ/DFO/ORSAC
4	Staff of Jana Seva Kendra of each division to be trained in filling up of Anukampa app applications.	Within six months	DFO / Dt. Adm.

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6	The DFOs need to have a revolving fund (like the District Red Cross Fund) from where emergency compassionate payment can be made for emergency compassionate payments resulting from cattle kills, property damage or crop loss as a result of Human-Wildlife Conflict (HWC) along the lines of existing norms for payment in cases of human death.	Within six months	WLHQ
7	Revision of compassionate payment for both Human Death, Crop loss, Human Injury and Property Damage by wild animals. Linking damages sustained due to crop loss to periodic rise in MSPs may be considered.	Within six months	Govt./ PCCF(WL)
8	In case of bona fide destruction of house by elephants, DFO may recommend the owner to be included as a beneficiary under <i>Biju Pacca Ghar Yojana</i> of the State Government	Ongoing DFOs to facilitate	Govt. of Odisha / WLHQ
9	Strengthening of existing Early Warning Systems for early detection and warning of elephants' movements using mobile phones, Bulk SMS, Radio Programme, Tower Lights, ANIDERS, Public Announcement for quick communication.	Ongoing	WLHQ/ DFO
10	Strengthening of existing preventive measures such as High Mast Lights, Solar Lights in edges of villages, provision of LED/solar chargeable torch lights to villagers, community grain bins, paddy harvesters, underground grain bins, steel storage bins etc.	Ongoing	DFO
11	Strengthen ongoing efforts by operationalizing a Rapid Response Teams (including staff trained in tranquilization) in all Divisions and at the Circle Level to reduce response time of forest department staff during emergency situations arising due to incursion of elephants into human habitations/cultivation.	Ongoing Within 2-6 months	RCCF/.DFO / Range
12	Identify strategic locations where barriers (trenches/solar fences/stone walls) have to be deployed to prevent incursion of wild elephants to human settlement/cultivations. These have to be planned after due thought, ground-truthing and should not be counter-productive.	Within 1 year	DFO

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13	<p>Solar fencing, using the recently launched <i>Jana Surakhya Gaja Rakhya</i> to be taken up in all vulnerable areas. This should be compatible with the landscape and zonal approaches of elephant conservation and management and carefully planned to avoid it being counter-productive.</p> <p>The use of portable (removable) solar power fences which has been found to be effective in Sri Lanka can be tried out on a pilot basis in selected areas.</p>	Within 1-2 years	Division Level
14	<p>Innovative ways of using solar fencing ensuring community participation has to be devised by the DFOs. Community-driven solar fencing has given rich dividends in southern states.</p>	Within six months	DFO
15	<p>Strengthening of existing Elephant Rescue Centres at Kumarkhunti (Chandaka) and Kapilash with provision of Tranquilization and Rescue Teams and engagement of Veterinarians.</p> <p>Establishment of new such facilities at Sambalpur, Rourkela and Baripada circles.</p>	<p>Ongoing</p> <p>Within 1 year</p> <p>Within 2-5 years</p>	State Govt./WLHQ/RCCF
16	<p>Training of existing departmental elephants and mahouts for use as <i>kunkis</i> during elephant depredation, patrolling and radio-collaring operations. Technical expertise from other states (W.Bengal, Karnataka, Madhya Pradesh, Assam) etc may be sought.</p> <p>Procurement of <i>Kunki</i> elephants from Karnataka.</p>	<p>Ongoing; Within 6 Months</p> <p>Within 6 months</p>	WLHQ/ RCCF/ DFO
17	<p>Every Circle having scattered elephant population should have an Action Plan for capture and translocation (or retention in captivity as may be decided by the CWLW) of problematic elephants from the conflict prone areas including development of necessary logistics, staff roles and clear prior identification of possible release sites.</p>	<p>Within 6 months</p> <p>To be periodically modified and updated.</p>	DFOs / Guided by RCCF
18	<p>To improve existing inter-state co-ordinating mechanisms, RCCF of Circles having inter-state movement of elephants to have a meeting with his/her counter-part of the neighbouring state before the migratory season to ensure inter-state co-operation and prevent erection of unnecessary</p>	<p>Ongoing</p> <p>Once a year</p>	RCCF

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	obstructions/barriers and indiscriminate driving operations. CWLs of the adjoining elephant-bearing States of the East-Central landscape to have a consultation meeting once a year to discuss the interstate movement of elephants and common issues relating to elephant management. Project Elephant to take the lead in this.	Once a year	Project Elephant, MoEF&CC
19	Strengthening of Circle-level Veterinary facilities by having Mobile Veterinary Units in Keonjhar, Angul, Sambalpur and Bhubaneswar Circles to address capture and relocation of elephants and other wildlife.	Ongoing Within one year	WLHQ / Circles

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II. INTER-DEPARTMENTAL CO-ORDINATION
(35 Action Points, LT-2, ST-33)

Human Wildlife Conflict Mitigation Committee			
Sl. No.	Recommended Activity	Time Line/ Periodicity	Nodal Agency/ Level within the Forest department
1	District level Human Wildlife Conflict Mitigation Committee under chairmanship of Collector to be constituted. Superintendent of Police and heads of relevant line departments will be represented with concerned DFO being Member Secretary.	Within four months Monthly	WLHQ/DFO Minutes of meetings to be sent through RCCF to HQ
Police Department			
2	Monthly Wildlife Crime Prevention and Enforcement meeting with Superintendent of Police to discuss issues on the topic.	Within three months Monthly	Nodal DFO Minutes of meetings to be sent through RCCF to HQ
3	Strengthen existing mechanisms of crowd control by preparing a mob/crowd control plan to in vulnerable areas with the help of District Administration and Police Department for control of Mob during straying of elephants to human settlement. Use of S/144 under CrPC should be employed wherever required.	Within 3 months	DFO/ Collector/ SP
4	Enhance co-ordination with local police officials for apprehending habitual and repeat offenders, request for CDR and TDR, call tracking and cracking down on illegal arms manufacturing units. Booking of offences under Arms Act and Explosive Substances Act.	Ongoing Immediate	Forest Dept./ JTF with Police Dept./ STF

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Railway Department			
5	Regular co-ordination meetings are to be carried out between officials of Forest Department and that of various Zones of Indian Railways (East coast Railway, South Eastern Railway, S.E Central Railway) at appropriate levels and periodicity.	Ongoing Quarterly. Bimonthly Monthly	PCCF WL. RCCF DFO
6	Strengthen functioning of elephant squads already deployed to track the movement of elephants near railway lines and ensure night patrolling using experienced, well-equipped, trained and skilled staff.	Ongoing	
7	Strengthen the 24x7 Railway Control Rooms functioning in Khordha Road, Sambalpur and Bandhamunda with deployment of trained forest staff to ensure seamless transmission of elephant movement information from the field to prevent accidental train hits.	Ongoing	RCCF/DFO
8	Ensure that Advisory regarding preventing train accidents involving elephants issued by PCCF(WL) vide Memo No 4978 dated 21.05.2018 is followed scrupulously.	Ongoing	RCCF/DFO
9	Solar fencing to be carried out along railway lines at vulnerable locations to check crossing of railway line by elephants. This has to be done after careful thought, ground-truthing and joint verification with Railways in places where absolutely required and should not be counter-productive. Side barriers should be done in both sides and never on one side alone. Similarly watch-towers to be erected in sites adjoining railway lines where they are absolutely required. Avoid dumping of food waste/municipal waste in forested areas near railway lines.	To be mapped within six months and prioritized To be mapped in six months and prioritized	DFO/Railways

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10	Fixing of fluorescent signage along the railway tracks to alert the loco pilots. Total 372 locations have been identified for fixing and 111 nos. of signage have been fixed by railways. The rest has now to be completed.	Ongoing; to be completed within 6 months Periodically thereafter wherever found necessary	DFO / Railways
11	Ensure reduction of the speed of the train passing through elephant inhabited forests or accident-prone areas as per the caution order issued due to presence of elephant herds near the railway track. Non-compliance to be followed by DFOs to higher officers of Railways	Ongoing As and when such incidents occur	Railways
12	During construction of overpass/under pass, to the extent possible, most of the materials should be prefabricated elsewhere so that the construction process does not hinder animal movement. No construction to be allowed between 6 PM and 6 AM.	Immediate	DFO/Executing Agency
Roads & Highways			
13	Regular co-ordination meetings with National Highways Authority of India (NHAI) are to be carried out to review progress of mitigation projects and discuss prevention of accidents.	Ongoing Six Month Quarterly Monthly	WLHQ RCCF DFO
14	Fixing signages on additional crossing points and maintenance of 370 signages already in place. Speed-breakers to be made in regular crossing points. Signages in points where no longer elephant use is noticed to be removed and re-posted in suitable locations.	Ongoing Rest within 6 months	DFO / NHAI
15	49 numbers of underpasses have been identified for highway projects (new and expansion projects). The ones yet to be constructed have to be started.	Ongoing. Pursue immediately Monthly reviews	DFO/NHAI

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16	11 numbers of elephant under passes are under progress (Rimuli-Rajamunda, Tileibani-Sambalpur, Talcher-Kamakshya Nagar, Kamakshya Nagar-Duburi and Cuttack-Angul.) and need to be expedited.	Ongoing Immediately	DFO/Executing Agency
17	Monitor use of elephant and wildlife use of mitigation infrastructure already in place including five under passes which have already been completed in Keonjhar Forest Division. Special drive to mitigate impact of canals by ramps/bridges and wherever present, examine their efficacy. Eg. Rengali Canal, overpasses over Manjore Canal etc. In case of inappropriate design leading to non-use, the same has to be rectified /modified.	Within a year Periodically	DFO / User Agency / Irrigation Dept.
18	Regular patrolling on highways by Highway Squads at vulnerable elephant crossing locations, to alert the commuters on elephant movement as well as facilitate crossing of the road by the elephants.	Ongoing Regularly	DFO
Agriculture Department, Animal Husbandry Department, Fisheries Dept and other line departments for livelihood development			
19	Explore the possibility of change in crops/cropping pattern in order to reduce elephant conflict in pilot projects in select localities. (Short duration crops such as millets/ Elephant-repellent crops such as Chilly, Ginger etc)	Pilots can be tried soon; if successful to be replicated and continued long-term.	DFO/ Agriculture Existing Officer
20	Promotion of innovative agro-horticulture, high yielding stall-fed livestock rearing, poultry, pisciculture to promote livelihood of local people and offset their losses due to traditional paddy cultivation.	Can be started soon to continue for long-term	Dept of Agriculture / Animal Husbandry / Fisheries / DFO
SPECIAL FOCUS ON PREVENTING ACCIDENTAL & DELIBERATE ELECTROCUTION OF ELEPHANTS			
INTER-DEPARTMENTAL COORDINATION			
21	Regular co-ordination meetings are to be conducted with Energy Dept./DISCOMs to regularly monitor the progress of the above as well as ironing out other issues.	Monthly. Monthly. Monthly. Quarterly	RO/JEE RO/DFO/SDO/EXECUTIVE ENG. EXECUTIVE ENG./RCCF/DFO DISCOM Authority/ PCCF WL.

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PREVENTIVE MEASURES AND ENFORCEMENT			
22	DISCOMs to ensure frequent patrolling in vulnerable locations to check illegal looking and should also take necessary legal action against such offenders	Within 6 months	DISCOM
23	The exercise already covered to identify and map vulnerable points of electrocution in each Division (Sagging lines/ tilted poles/ interposing poles where required/ habitual hooking villages) is to be updated and periodically monitored. Accordingly appropriate mitigation measures have to be undertaken. DFOs should ensure cabling by the DISCOMs of 4444 km of bare conductors and 31,000 of vulnerable points which have been identified in elephant movement areas. These have to periodically updated after joint verification.	Every 6 Months	DISCOMs/ DFO
24	Ensure insulation of 11KV & LT lines passing through forest areas. In particularly vulnerable areas such as inside PAs with dense elephant movement, the feasibility of underground transmission lines to be explored.	Within one year	DISCOM
25	Dismantling of defunct solar power fencing to be ensured by individuals/community to eliminate charging by unscrupulous elements. DFO to take a special drive on this.	Immediate	RO/DFO/DISCO M.
26	Ensure fitting of spikes on electric poles and barricading of substations/unprotected transformers, lift irrigation points in forest and forest fringe areas.	Within Six months	RO/DFO/DISCO M.
27	Joint patrolling of Forest and Energy Department staff along vulnerable stretches of transmission lines in elephant movement areas and villages prone to illegal hooking by GPS mounted vehicles to be done regularly. DFO to undertake monthly review on this.	Ongoing Periodically	DFO/RO / DISCOM
28	Ensure sharing of trip record immediately by electricity department to forest department by WhatsApp.	Immediate	JEE/Forester/RO

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29	Most of the electrocution deaths of elephants happen due to accidentally while coming into contact with charged wires kept for wild pigs, either for crop protection or poaching, whose population has grown in many areas. Scientific and legal ways of controlling the population of wild pigs to be explored and implemented in a site-specific and transparent manner drawing from similar examples in other states.	Within six months	WLHQ
PROSECUTION			
30	Under Electricity Act.2003 cases shall be booked by electricity department against offenders where electrocution death of wildlife has occurred due to illegal hooking.	Immediate	RO/JEE/SDO/Executive Engineer.
31	The Energy Dept. officials should be present in all electrocution cases and should be investigated by electrical inspector.	Immediate	IO/DFO/JEE/SDO/ Executive Engineer.
32	Filing of police case by Energy Department in the local police station.	Immediate	JEE/SDO/Executive Engineer.
TECHNICAL UPGRADATION			
33	Upgradation of electrical infrastructure and use of technology to prevent death due to electrocution. For LT distribution, fuse wires of standard rating to be used for circuit breaker. Further, (Miniature Circuit Breaker) MCB to be used in the substations of all forest fringe villages for tripping electricity.	Within 6 Months	DISCOM
34	Ensure working of primary substations (PS) in all electrical control rooms of 11 KV. Lines. In case of any illegal hooking from 11 KV line, cut off power instantaneously.	Immediate	R.O/JEE/SDO, Electrical.
CAPACITY BUILDING			
35	Capacity Building training should be organized at Range level for identification of wildlife deaths due to electrocution. The details in the next page in Annexure-1.	Within one month.	DFO/RO/JTF/DISCOM.
36	Capacity Building for front line staff of DISCOM to prevent illegal hooking.	Within 6 Months.	DISCOM

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III. PROTECTION, ENFORCEMENT AND PROSECUTION
(42 Action Points, LT-2, MT-4, ST-36)

Sl. No.	Recommended activity	Timeline/ Periodicity	Nodal agency/ Within the level of forest Department.
1	Ongoing filling up of vacancy positions at all levels of regular frontline and supervisory staff to be expedited as to ensure man in position in all field level positions.	Highest priority Regularly thereafter	State Govt.
2	Formation of dedicated, trained and physically fit 'Elephant Tracking Teams' to be raised in conflict and poaching-prone divisions to closely follow, track, monitor and photograph elephants. They should be ideally drawn from local tribal villagers who have an innate sense of jungle craft. These ETTs should be separate from routine protection squads. Training in elephant tracking may be provided from experienced elephant trackers in Southern States.	Within one year	DFO
3	Augment the number of Protection Squads in particularly vulnerable areas after careful analysis in each division. Protection squads should be drawn from local villages, physically fit, motivated and given adequate training and equipment. Their movement and output should be carefully monitored and findings acted upon.	Ongoing Immediately Saturate within 1-2 years phase-wise	DFO/RCCF/WLHQ
4	Strengthen the functioning of the Elephant Protection and Wildlife Crime Control Cell at Wildlife HQ. Wherever not present in Circle and Division level, put in place for close monitoring of elephants. Activities will include daily monitoring of adult tuskers, inter-divisional movement and predictive early warning for crop depredation, wildlife crime prevention, investigation and prosecution with special emphasis on developing intelligence networks, arresting habitual offenders and timely	Ongoing Immediate to be completed within a month	RCCF/DFO

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	prosecution of ongoing cases aiming to achieve significant proportion of conviction.		
5	Develop independent, diffused and effective intelligence networks at all levels and even at the level of individual officers. Allotment of secret funds made for this to be closely monitored. Actionable intelligence from the field leading to crime prevention should be the key aim.	Ongoing but need to be made effective with immediate priority. To be completed within 6 months To be maintained thereafter	All levels
6	Ensure strengthening of functioning of 24x7 Control Room at HQ, Circle and Division levels	Ongoing Within one month	WLHQ / RCCF/DFO
7	Ensure Strengthening of functioning of Toll-free number at Circle and WLHQ and give wide publicity regarding the same.	Ongoing Immediate	WLHQ / Circle
8	Preparation of Criminal Data base and Criminal Dossier at State HQ /Circle HQ.	Ongoing Within Six Months To be regularly updated.	WLHQ /RCCF
9	Preparation of Wildlife Crime dossier and Maintenance of Surveillance register (phone / presence) of habitual/repeat offenders.	Ongoing Within 3 Months To be regularly updated.	DFO/ Range Office
10	Wildlife & Forest Offence Meeting (Discuss & review pending investigation and trail case special efforts should be made to arrest absconder and monitor the activity of habitual offenders).	Immediately Monthly Quarterly	Range Level/ Division Level RCCF Level

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11	Meeting with Police and DISCOMs about suspected wildlife criminals/ illegal hooking/ Management of Man-animal Conflict in HEC area. Pursuing of cases under Arms Act to be booked by police and under Electricity Act by DISCOM staff.	Within 2 months Monthly	DFO/Police/DISCOM
12	Joint Enforcement (Combined patrolling) with DISCOM field staff for checking illegal hooking in suspected areas.	Ongoing Once a week	Range Level/DISCOM
13	Ensure preparation of Wildlife Crime Risk Maps and Wildlife Protection Plan covering spatial and temporal extent of wildlife crime within the division. <i>Inter alia</i> , it shall contain details of habitual villages, village <i>haats</i> , entry routes of poachers and vulnerable areas prone to poaching (hotspots) by various techniques such as snaring, foothold traps, illegal hooking, illicit liquor brewing, poisoning, illegal machan over water bodies, artificial salt licks prepared by poachers etc. Movement/temporary camping of any outsiders including wandering tribes/snake-charmers should also be closely monitored. Similarly unprotected dug wells, unprotected transformers, lift irrigation points, defunct solar fences, other vulnerable points for illegal hooking should also be mapped. This Plan along with details of periodic meetings and reporting framework should mandatorily form part of the handing over note of the DFO to his successor.	Within six months	Range/Division Level
14	Ensure regular foot patrolling and night patrolling (Random and Surprise) by staff, RO, ACF & DFO along aforementioned poaching/crime hotspots.	Ongoing but requires strengthening and close monitoring.	Supervising Officers & DFO

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15	Extensive touring and night halts covering all vulnerable areas of poaching by supervising officers in the field.	Ongoing but requires strengthening and close monitoring.	HQ officers - 5 days/month RCCF- 10 days/ Month DFO-12 days / Month ACF-15 days / Month RO-15 days / Month
16	RCCFs to ensure inter-divisional and joint-divisional patrolling in vulnerable areas and also have joint Protection Camps in bordering areas of divisions.	Ongoing in some Circles but to be put in place immediately in others. Saturate within 2-5years	RCCF
Infrastructure Development.			
17	A comprehensive plan should be prepared about availability of protection infrastructure such as Protection Camps/Anti-Poaching Barrack/ Staff Quarter/ Watch tower etc. in each division, especially in 'no-man's land' along divisional boundaries. These should be taken up and saturated.	Within one year Can go on for 5-10 years	Division Level
18	Elephant Proof Barriers (Elephant Proof Trench/ Stone Wall Guard/ Solar fencing) to be erected as per Site Specific Action Plan. Existing ones to be renovated for efficacy and wherever defunct and not required to be filled up. To be carefully deployed after proper ground-truthing and should not be counter-productive. While selecting sites, special attention to be given to ensure that traditional movement paths, paths to water sources etc are not blocked or elephants diverted to nearby areas. RCCFs to carefully analyse and monitor.	Ongoing Within 1-5 years Can continue as a long-term measure too.	Division Level/RCCF

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19	Solar fencing using the recently launched <i>Jana Surakhya Gaja Rakhya</i> should be taken up in all vulnerable areas after due diligence of its utility and efficacy. The use of portable (removable) which has been found to be effective in Sri Lanka can be tried out on a pilot basis in selected areas. Same caveats as above to apply.	Just launched and need to be scaled up. Within one year	Division Level
20	Monitoring of effective deployment of Vehicles (including GPS Mounted) for protection and anti-depredation duty. Specialised customised RRT vehicles may be introduced on a pilot basis.	Ongoing	Division Level
21	Effective use of VHF network with maintenance of VHF register in the Division and Range HQs.	Ongoing. To be revived immediately where defunct.	Division Level
22	In case of electrocution case of elephants due to illegal hooking, DISCOM staff to be present and also book cases under the relevant Act. In case of human death, due to illegal hooking in forest areas, Police to book cases and inform the Forest Dept.	Immediate	DISCOMs/Police Dept/Forest Dept
23	Deployment of Drones (including night vision and IR-camera mounted) in vulnerable areas and also on routes used by criminals. CCTV cameras to be installed in check gates and vulnerable entry gates.	Ongoing Immediate To be saturated in 1-2 years and maintained thereafter	Division Level
24	Close monitoring of use of Apps like OFMS/ M-Stripes and iWLMS for detection of Wildlife offence cases	Ongoing but major improvement required. Immediate	Division Level/Circle Level/WLHQ
25	Ensure use of concealed Trap Cameras (including IR-enabled ones) along suspected routes used by poachers	Within one year	Division Level
26	Explore proposal for insurance coverage for members of Anti-poaching Squad in case of any eventualities during patrolling.	Immediately	DFO/WLHQ

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Crime detection, enquiry and prosecution.			
27	Effective site investigation and collection of evidence following detection of wildlife crime.	Ongoing but requires major improvement Immediate	Range and Division level
28	Investigating Officer should ensure preparation of fool-proof case records in case of all wildlife cases, especially for scheduled species. DFO to cross check and forward all PRs with supervision note.	Ongoing but to be made effective Immediate	DFO/JTF
29	DFO must be empowered to collect CDR of Wildlife Criminals relevant to the wildlife offence case directly from service provider under 65-B Indian Evidence Act	Within 6 months	State Govt / Home Dept.
30	Meeting with Forest Department and STF for sharing of information on wildlife crime	Immediately Monthly	WLHQ /JTF/STF
31	To ensure submission of final Prosecution Report within a stipulated period of 60 days from the date of arrest of accused.	Immediate.	Division level.
32	Wildlife crime control should be mandatorily included in the agenda in the Senior Officers meeting of the district	Immediate Monthly	DFO
33	Ensure booking of cases in the local police station where arms / explosives /poison is involved in wildlife cases.	Immediate.	RO/DFO
34	Establishment of Fast track court with Special Public Prosecutor/APP to ensure speed trial of wildlife offences cases	Within one year	Govt. of Odisha / State Wildlife HQ.
35	Engagement of Legal Expert at Circle level to hand hold preparation of case records in Wildlife Offence cases.	Within 3 months	RCCF
36	Guide I.Os in effective investigation and prosecution of wildlife cases and ensure inter-agency co-ordination.	Ongoing but to be scaled up. Immediate.	JTF/Legal expert in Circles.
37	Perusal of judgment in acquittal cases and prefer appeal to the high court. Oppose bail applications strongly whenever moved by the accused.	Not followed everywhere. Immediate.	DFO / JTF

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38	Explore provision of financial incentive in case of wildlife offence detection to informer/ Sources by amendment of the Act (Odisha Reward for detection of) Forest Offence Rule, 2004	Within six months	WLHQ
39	Effective use of Secret Fund to maintain a wide and effective intelligence network.	Ongoing with limited success. Major improvement required.	DFO/RCCF/ Wildlife HQ.
40	Establish close co-ordination with the Wildlife Forensic Laboratory of the Wildlife Institute of India so as to decrease the turn-around time for receiving reports on samples sent as part of evidence in wildlife crimes.	Ongoing but needs improvement Immediate	DFO/Hand-holding by JTF
41	Facilities of State Forensic Science Laboratory to be used in helping collect scientific evidence in wildlife crime cases. An MoU may be signed.	Within six months	DFO/WLHQ
42	Establishment of a Wildlife Crime Forensic Laboratory at Nandankanan with technical aid from Wildlife Institute of India. Once certified, this will be a major asset for quickly obtaining test reports which will aid prosecution.	Within 3 years	State Govt. / WLHQ

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4	Ensure compliance of all stipulated points as mentioned in the SSWLPs, for those projects in place and currently operational. DFO to verify and report to RCCF who then will report to the WLHQ.	Can be started immediately and completed within a year.	DFO/RCCF
5	Provision for pre-project consultation to be done to factor in appropriate mitigation plans/alternative alignments etc in case of major infrastructure projects, especially linear infrastructure to avoid 'fait accompli' situations	Within six months	Nodal Wing of FHQ/WLHQ, DFO
6	In highways in mining districts, parking of trucks in vulnerable elephant crossing areas during night time hampers smooth crossing of elephants. Such spots should be designated as no-parking zones and signages erected to that effect.	Within 3 months	DFO/RCCF
7	Ensure completion of ongoing Overpass construction on the three crossing points identified by the State Forest Department on the distribution canal of Manjore dam for movement of elephants between Mahanadi and Sambalpur Elephant Reserves.	Immediately	DFO Athamalik, Angul RRB Division
8	Provision of underpasses/overpasses to be made in the Site-Specific Wildlife Conservation Plans on the crossing points that pose as a barrier for movement of elephants in all developmental projects involving linear infrastructure.	Ongoing To be saturated within 5-10 years	NHAI, Railways, SFDs / Irrigation Dept
Identification and protection of elephant corridors			
9	Commissioning of at least a year-long (1-2 years) study covering all seasons by a national institution to assess the functionality and feasibility of the 14 identified elephant corridors and the additional corridors mentioned in the ANCF report of 2018.	Within six months To be completed within 1-2 years	State Govt. / WLHQ

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10	Proposal for notification of Hadgarh-Kuldiha Elephant Corridor as a Conservation Reserve to be expedited.	Immediately	State Govt., MoEF & CC
11	Once identified, each corridor should have a Corridor Management Plan to chalk out and implement interventions. The same agency who has carried out the study can be given the responsibility or can be part of the original ToR.	Within one year of identification of corridors.	RCCF / DFOs
Spreading of awareness among stakeholders in elephant corridor areas			
12	Awareness programs should be carried out for various stakeholders to create awareness and garner public support. Details given in Chapter V.	Ongoing Periodically	Division
13	Signages on elephant corridors should be erected after identification of elephant corridors.	Within 1 year	DFO
14	Involving children from schools and colleges located in the fringe villages in awareness activities	Ongoing Every 3-6 months	DFO, Civil Society Organisations
Removal of encroachment in corridors & consolidation			
15	Illegal settlements/land-use in elephant corridor areas to be identified and removed. Wildlife-friendly land-use to be promoted in case of private lands.	To be initiated soon where evident. Long Term	DFO/RCCF
16	Land purchase wherever feasible. Voluntary relocation of people to whom rights/individual titles have been granted under FRA,2006.	To be initiated once corridor study completed To go on for 10-15 years	CAMPA funds of MoEF&CC
Regular monitoring of elephant corridors			
17	Involve local people in monitoring of use of elephant corridors.	Immediately	SFD and local community

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IV. ELEPHANT HABITAT, CORRIDORS AND CONNECTIVITY
(20 Action Points, LT-4, MT-2, ST-14)

Sl. No.	Recommended activity	Timeline/ Periodicity	Nodal agency
A. Rationalizing and securing Elephant Habitats			
1	<p>Adopt a zonation approach of the state based on habitat quality and viability, elephant use and movement, spatial configuration of forest fragments and corridors, human population, developmental imperatives, pattern and degree of human-elephant conflict.</p> <p>Zone 1: Elephant Conservation Zone</p> <p>Zone 2: Elephant-human Co-existence Zone</p> <p>Zone 3: Conflict mitigation Zone</p> <p>Zone 4: Elephant Removal (or Exclusion) Zone</p> <p>A draft list of divisions/ranges in each zone have been listed and has to be fine-tuned after due ground truthing and finalisation of corridor study. Meanwhile indicative management action points can be initiated forthwith as suggested.</p>	Within 1-2 years	WLHQ
B. Connectivity between habitats			
3	<p>Each division should have a Connectivity Map where wildlife crossing points and crucial cross-over sites between forest patches are mapped and earmarked for mitigation. Wherever linear infrastructure projects (railways, roads, canals, slurry and water pipelines etc) have fragmented habitats, mitigation measures have to be provided. This will also include overhead electric lines.</p> <p>All new linear infrastructure projects will necessarily incorporate a animal passage plan.</p>	<p>To be completed within one year</p> <p>Provision exists but must be enforced.</p>	<p>DFO</p> <p>User Agency/DFO</p>

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18	Road/rail traffic passing through elephant corridors should be regulated, especially at night.	Ongoing In identified stretches	SFD and NHAI and Railways
Inter-state consultative meetings			
19	State level consultative meetings should be organized to discuss issues pertaining to movement of elephants across inter-state elephant corridors.	Ongoing Yearly	SFDs of Odisha, West Bengal, Jharkhand, Andhra Pradesh, Chhattisgarh
Work closely with other agencies			
20	Work with NTCA to identify elephant corridors that overlap with tiger corridors to jointly secure these corridors	Within 1 year Secure within 5-10 years	WLHQ and NTCA

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V. PEOPLE'S PARTICIPATION, EDUCATION & AWARENESS
(17 Action Points, LT-1, ST-16)

SI No	Recommended Activity	Time Line/ Periodicity	Nodal Agency/ Level within the Forest department
1	A Core Committee to enhance people's participation in wildlife conservation to be formed in every division consisting of Honorary Wildlife Warden, NGOs, PRI Members, EDC & VSS members, Local influential people, Local MLAs & MP.	Within 3 Months Bimonthly (Once every 6 months)	DFO Minutes of meetings to be sent through RCCF to the WLHQ
2	Framing of precautionary measures (Do's & Don'ts) to be adopted by local people during incursion of elephants into villages/ Crop Fields and to be widely circulated among the community for awareness in vulnerable areas. A list of indicative Do's & Don'ts is depicted in the poster appended in the relevant Chapter.	Ongoing	RCCF/ DFO
3	For spreading such awareness campaigns, vernacular language to be used in both audio- and audio-visual mode involving local villages, PRI members, VSS & EDC members. Gaja Sathi volunteers shall spear-head this activity.	Ongoing Monthly	Forest Guard & Forester in each range to be supervised by DFO
4	Conduct formal meetings emphasizing attempt to achieve 'zero accidental death of elephant and human beings' in conflict prone ranges.	Ongoing Quarterly	Forest Guard, Forester, RO & DFO
5	Film shows: short duration film should be prepared narrating need for protection and conservation of elephant along with mitigation methods of human-elephant conflict and be screened in vulnerable villages frequently.	Ongoing Periodically	RCCF/DFO

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6	Rural Folk song / Religious song / Street plays – <i>Daskhatia, Palla, Gotipuanacha</i> etc should be exhibited emphasizing on the concept of aforesaid theme in problematic villages.	Ongoing in many divisions. To be replicated in others. Within 2-3 months Once in a fortnight during crop depredation season.	Division/Range/Section Forest Guard & Forester
7	Awareness Campaign by social media – To be used in peri-urban, urban and other areas having internet penetration.	Ongoing Regularly	HQ/RCCF/DFO/RO
8	Poster / Signage / wall painting – This should be done at places of people's congregation within villages.	Ongoing	DFO/RO
9	Radio and T.V Shows- Awareness campaigns / Alerts should be made in AIR and popular electronic media preferably local channels.	Ongoing Regularly	DFO
10	Brand Ambassadors – Celebrities from film industry / cricket & other sports / athletes should be involved to spread the message for protection of elephants in electronic media for better impact and larger outreach.	Within 6 months	RCCF/DFO
11	Professional agencies should be hired to prepare films, signages, posters, wall paintings etc for successful campaigns.	Within 6 months to one year	RCCF/DFO
12	DFOs to prepare a panel of NGOs/NGIs to help them execute such activities	Within 6 months	DFO/RO
13	A volunteer group of villagers to be formed in villages acutely affected by Human-Elephant conflict. This should be spear-headed by <i>Gaja Sathis</i> . Roping in community / individuals to participate in the <i>Jan Surakhya Gaj Rakhya</i> scheme	Within six months – one year	Forest Guard, Forester & ROs

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14	<i>Mo Jungle-Mo Parivesh</i> : The district administration should take up massive awareness programs on wildlife conservation in schools and colleges	Within one year	District Administration
15	Document all good practices and successful case studies in human-elephant conflict mitigation and replicate them in other divisions. A compilation of these should find a place in the Annual Report of the State Wildlife HQ.	Ongoing but to be strengthened to enable completion of an exhaustive repository.	DFO / RCCF / WLHQ
16	Promote/Incentivise toilets to be built in all households under 'Swachh Bharat' programme, especially in areas frequented by elephants to sensitize people to use their toilets instead of going to the fields to attend call of nature.	To be pursued in 2-6 months in pilot areas.	WLHQ/DFOs
17	Use of innovative eco-tourism practices to watch and photograph elephants may be tried at a pilot level to aid income generation among local villagers and also foster a sense of ownership among them.	Within 2-10 years	Local people / Tourism Dept / DFO

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
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VI. HABITAT MANAGEMENT FOR INCREASED PRODUCTIVITY
(18 Action Points, LT-8, MT-4, ST-6)

Sl. No.	Recommended activity	Timeline/Periodicity	Nodal agency / Level within FD
Stratifying elephant habitats			
1	In each elephant-bearing division, stratify beats into Good, Medium and Poor elephant habitats based on forage, water, cover and disturbance and identify areas that are intact elephant habitats. A map to be prepared showing all prominent habitat features including water bodies, dense and open forests, meadows and grassland etc. so that key elephant habitats may be delineated.	Within Six months	Division Level
Improving Elephant Habitat			
2	Instead of a piece-meal approach to habitat 'improvement', a holistic habitat 'restoration' approach to be followed, wherein clearly identified degraded patches (5-25 hectares or more) to be continuously managed in the long-term. Experts in this field to be invited for a Workshop and their advice sought for forming an Action Plan on this, especially in PAs.	Consultations to be initiated immediately for the Workshop. Long-term	WLHQ/RCCF/DFO
3	Map extensive weed-infested areas [emphasizing on most nefarious species such as <i>Chromolaena odorata</i> , <i>Mikania micrantha</i> , <i>Cassia tora</i> , <i>Lantana camara</i>] in all divisions and ear mark area for weed eradication.	Within 1-2 years	Division Level
4	A 5-year action plan to be developed for weed eradication in such identified areas. Extensive and persistent weed removal to be done along with planting up with palatable species of grasses, herbs/forbs, shrubs, and fruit/fodder trees. Suggested list appended.	Within one year To be implemented thereafter for 5-10 years	Division Level

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5	In all Regional Wildlife Management Plans, Site Specific Wildlife Management Plans, at least 25% funds to be ear-marked for habitat improvement.	Policy to be formulated within six months Regularly	Forest HQ / WLHQ
6	In all plantation drives within elephant rich RFs (Zone I&II), at least 50% of planting material will have to be from a list of elephant food plants and nursery stock to be accordingly developed. In other elephant movement areas at least 20% to be planted.	Policy to be formulated within six months	WLHQ/Division
7	Follow wildlife-friendly norms specified in the Wildlife Conservation (Overlapping) Working Circles prescribed in the Working Plans while undertaking forestry operations. Routine climber-cutting, bush-clearance, roadside clearance etc to be avoided. Working Plans for divisions with high elephant populations should necessarily include a chapter for elephant conservation and management	Ongoing To be enforced Immediately	Division Level PCCF, Working Plan Officers
8	Restoration of degraded/blank patches by enrichment plantations of fodder/food species.	Ongoing but more focus required. Should go on for 10 years at the least	Division Level
9	Restoration of degraded meadows by site-specific strategies.	Ongoing but enhance focus and should go on for 10 years at the least	Division Level
10	Mining area restoration plan should focus on wildlife and habitat restoration including planting of bamboo and elephant food plants and also appropriate water conservation and harvesting methods.	Ongoing but needs focus. Within 1-2 years but go on for 10-20 years Regularly	Division level

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Plantation of Bamboo, Ficus and preferred elephant food plants			
11	Raise Bamboo plantations of <i>Dendrocalamus strictus</i> [rhizome/seed ball] wherever possible.	Ongoing but requires massive scaling up. Short-term/Medium term & Long-term.	Division Level
12	Ensure improvement of degraded bamboo forests using accepted silvicultural practices.	Ongoing but requires massive scaling up. Short-term/Medium term & Long-term	Division / OFDC
13	Enforce prevention of bamboo shoot (<i>karadi</i>) collection by local people in elephant bearing areas. Ensure adequate supply of bamboo rhizomes and encourage them to plant for self-sufficiency. Alternative livelihood to be planned for habitual <i>karadi</i> collectors.	Short-term Medium-term	Division Level
14	Planting of Ficus species especially <i>Ficus bengalensis</i> in all suitable areas with due protection. In addition, preferred elephant food trees (fruits/leaves/bark) to be planted extensively. Assisted planting of Ficus species on standing snags/dying trees so as to enhance their survival percentage.	Ongoing but requires massive scaling up. Immediately Short-term/Medium term & Long-term	Division Level
15	Develop captive fodder farms near elephant rescue centres as well as in divisions having captive elephants	Ongoing in some areas and needs replication. Within 1-5 years	Division
Water Sources and other habitat improvement measures			
16	Development of water resources in carefully chosen areas by catchment treatment plans and SMC works including WHS, LBS, BWCDs, SSDs and also digging of waterbodies to ensure pinch period water availability. Saturation to be achieved over time.	Ongoing but requires rationalisation. Short-term and medium-term till saturation over the long run.	Division Level

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17	Reduce the presence of scrub cattle and livestock in elephant areas, and contamination of waterholes by wallowing buffaloes. Supply of high-yielding stall-fed cattle can be tried in pilot basis with support from V&AH Dept.	Medium-term	Division Level
Forest fire prevention and control			
18	Fire management / control measures which are already in place to be followed meticulously. Special care to be taken to manage fire in key elephant habitat areas.	Ongoing Fire season	DFO/RCCF

Short-term: <1 year / Medium term: 1-5 years / Long-term: > 5 years

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VII. HUMAN RESOURCE MANAGEMENT & CAPACITY BUILDING
(21 Action Points, MT-1, ST-20)

SL No.	Recommended activity	Time line / periodicity	Nodal Agency / level within Forest Department
1	Ongoing filling up of vacancy positions at all levels of regular frontline and supervisory staff to be expedited as to ensure man in position in all field level positions.	Highest priority Regularly thereafter	Govt. of Odisha
2	Designation of a Prosecution Range Officer in each Division for constant liasoning with the Courts, effective prosecution and timely filing of PRs.	Within 6 months	DFO
3	<p>Capacity building of frontline staff:</p> <p>Frontline staff of Forest Department should be trained on the following subjects: -</p> <ul style="list-style-type: none"> a. Managing straying of elephants to Human habitation and mitigation of Human Elephant Conflict. b. Intelligence collection, Detection, enquiry, case record preparation, and prosecution of Wildlife Offence cases to the designated court. c. Tranquilization Techniques and Rescue and rehabilitation of problematic elephants d. Habitat Management, weed eradication and propagation of high-quality grassland, nursery techniques of food and fodder species. e. Use of new technology and apps in wildlife monitoring <p>Every elephant-bearing division should have a Core Group of 10-15 young staff trained in rescue, emergency anti-depredation activities, tranquilization, shifting and management of conflict situations.</p>	<p>Ongoing but to be improved/strengthened</p> <p>Quarterly</p> <p>Existing in few circles but should be enhanced.</p> <p>Within six months</p>	<p>WLHQ/RCCF/ DFO</p> <p>DFO</p>
4	Create adequate number of posts of Veterinarians within the Forest Department considering their crucial role in wildlife health management, rescue and rehabilitation. Fill up existing vacancies forthwith.	Existing but to be enhanced Within six months	Govt. of Odisha / WLHQ

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5	<p>Capacity building of Gaja Sathis, Civil Society (VSS members/ Community Groups): Training on preliminary operational methods for managing the depredation should be given to the Gaja Sathis, VSS members/ Community Groups. They should be equipped with knowledge and technique for operation and maintenance of depredation devices and deterrent methods.</p>	<p>Ongoing but to be strengthened. Within six months</p> <p>Periodically</p>	DFO
6	<p>Capacity building of Veterinarians: On rescue, treatment and rehabilitation of problematic/ injured elephant/ PM of elephant and treatment of Captive Elephants.</p>	<p>Ongoing but to be strengthened. Within six months to 1 year</p> <p>Periodically</p>	WLHQ
7	<p>Capacity building of officers of the rank of RO, ACF and DCF To be scheduled with the support of WCCB, BPSPA, WWF, WTI utilising the services of eminent resource persons on themes such as intelligence gathering, surveillance, modern methods such as CDR tracking, cyber-crime; crime scene investigation, case-record preparation, and prosecution.</p>	<p>Ongoing but needs strengthening. Within six months</p> <p>Periodically</p>	RCCF/WLHQ
8	<p>Capacity building of mahouts: Enhance training on husbandry, care and management of captive elephants and kunki training so that they can effectively function during Human Elephant Conflict situations.</p>	<p>Within 6 Months to one year</p> <p>Periodically</p>	WLHQ/DFO
9	<p>Include Wildlife Management, Wildlife Health Monitoring and Human-Elephant Conflict (HEC) mitigation in the syllabus for IFS and OFS officers and also in curriculum of the Forester and Forest Guard training and refresher courses in Nicholson Forester Training School, Champua, Forester Training School, G.Udayagiri, Forester Training School, Ghatikia, Bhubaneswar, Mooney Forest Guards School, Angul</p>	<p>Existing but can be more focussed on field practicality and efficacy.</p> <p>Within six months to one year</p>	CCF Training and Development

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10	Conduct thematic short-term training programme on HEC mitigation for Forester and Forest Guards in the aforesaid schools.	Ongoing Every year	CCF Training and Development
11	Handpick and nominate ROs for 3-month certificate diploma course in WL management course in the Wildlife Institute of India (WII)	Ongoing Every year	PCCF (WL)
12	Handpick and nominate ACFs / DCFs in 10-month certificate diploma course in WL management course in the Wildlife Institute of India (WII)	Ongoing Every year	PCCF (WL)
13	Organizing Awareness-cum-Animal Health Camps in forest fringe areas for clinical examination, screening against diseases, deworming and treatment of any specific diseases of domesticated animals and birds.	Ongoing Yearly	Chief District Veterinary Officer / Divisional Forest Officers
14	Training of Veterinarians on Tranquilization / sedation, treatment of sick and injured wild animals, conducting post-mortem examination of carcass and scientific collection, preservation and dispatch of morbid samples to laboratories. Forest field staff to be trained to Assist Veterinarians.	Ongoing Once in a year	Director, AH&VS, Cuttack / PCCF (WL) & CWLW, Odisha
15	Give recommendations to include Wildlife Health, Rescue and Rehabilitation as a Special Paper in the syllabus of the degree course in Veterinary Sciences in CVS, OUAT, Bhubaneswar.	Within one year	WLHQ / CVS, OUAT
16	Training and awareness of sub-divisional and district level judicial officers on the gravity of wildlife crime, illegal wildlife trade and role of Forest Department in tackling these.	Ongoing Periodically	OJA, Cuttack in collaboration with WLHQ
17	Training and awareness of sub-divisional and district level police officers on the gravity of wildlife crime, illegal wildlife trade and their role in supporting Forest Dept in apprehending habitual wildlife criminals, tackling menace of illegal fire-arms etc.	Within one year Periodically	BPPA, Bhubaneswar in collaboration with WLHQ
18	Training and awareness of Loco Pilots, linemen and Level-Crossing staff to prevent accidents involving elephants.	Within six months Periodically	RCCF/DFO

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19	Training and awareness of Medical Officers, Tahsildars and IICs for quick processing of compassionate payment claims for human death to be done.	Within six months Periodically	RCCF/DFO
20	Institute division level prizes for acknowledging/rewarding meritorious frontline staff/squad members in mitigating conflict, protection of wildlife, crime control and enforcement or awareness and education. Special prizes for exceptional work to be put in place.	Within six months Periodically	DFO
21	Similar ways of recognising exceptional services of civil society members also to be put in place.	Ongoing	WLHQ/RCCF/ DFO

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VIII. WILDLIFE HEALTH MANAGEMENT AND DISEASE CONTROL
(8 Action Points, ST-8)

SL No.	Recommended activity	Time line / periodicity	Nodal Agency / level within Forest Department
1	Preventive vaccination of domesticated animals in forest fringe area against vaccine preventable diseases such as Hemorrhagic septicemia (HS), Black Quarter (BQ), Anthrax and Foot and Mouth Disease (FMD).	Ongoing Biannual except in case of anthrax where annual vaccination will be done.	Chief District Veterinary Officer / Divisional Forest Officers
2	Animal Disease Surveillance on commonly occurring diseases of domesticated animals and birds and physical surveillance on wild elephants.	Ongoing Continuous programme	Director, AH&VS, Cuttack / Divisional Forest Officers
3	Strengthening of Centre for Wildlife Health with modern diagnostic facilities and adoption of new technologies for easy and quick diagnosis of disease of wild animals. Enable its recognition as a recognized Forensic Laboratory.	Ongoing Continuous programme	Project Coordinator, CWH / PCCF (WL) & CWLW, Odisha
4	Disinfection of water bodies within forest areas preferably before and after monsoon	Ongoing Twice in a year	Engineers of RWSS / Divisional Forest Officers
5	Treatment of sick / injured wild elephants: the field staff of forest department will follow the Standard Operating Procedure (SOP) already circulated by State WLHQ.	Ongoing but needs to be more effective As and when required	Chief District Veterinary Officer / Divisional Forest Officers
6	Conducting Post Mortem (PM) examination of dead wild elephants and scientific collection of morbid materials for laboratory examination by a team of local Veterinarians.	Ongoing but needs to be more effective As and when required	Chief District Veterinary Officer / Divisional Forest Officers
7	Preparation of a new SOP for PM and circulation to all field officers in the Divisions and Circle	Within 1 Month	ADVO, WLHQ
8	Control of Emerging Diseases in wild elephants	In case of occurrence.	Chief District Veterinary Officer / Divisional Forest Officers

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IX. RESEARCH & APPLICATION OF TECHNOLOGY
(19 Action Points, MT-4, ST-15)

Sl. No.	Recommended activity	Timeline/ Periodicity	Nodal agency / Level within FD
1	Fill up the existing vacancies of Research Officers in the State Wildlife Headquarters.	Within six months	WLHQ/GOO
2	Each Circle should have a Research & Monitoring Cell having at least two Research Scholars.	Within one year	RCCF
3	GIS Cell of each Division and Circle should be strengthened and detailed land-use, land cover maps prepared and updated regularly.	Ongoing Immediately	
4	Undertake periodic elephant population estimation following standard protocols. [Collaboration with Project Elephant and a National Institution of repute]	Within one year	WLHQ
5	Strengthen close monitoring of elephant herds by trackers, supplemented by photographs/videos by them to realistically estimate sex/age-class distribution so as to decipher demographic parameters and trajectory of population change.	Ongoing Within 3 months / Continuous	Division / Circle / WLHQ
6	Commission a study covering both the wet and the dry seasons to assess the status of identified corridors including new corridors listed by ANCF to be completed within two years.	Within 2 months	WLHQ
7	Radio-collaring studies should be carried out in select localities of the State to elucidate habitat use, ranging and patterns of crop depredation. Candidate animals could be Matriarchs, Adult bulls, Lone bulls.	Within 6 months To be continued at regular intervals	WLHQ / Circle
8	Employ drones for detecting, tracking and monitoring elephants, and assess sex and age-class breakup of herds.	Ongoing but needs to be extended to all divisions. Immediately	Division

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9	Pilot project to assess efficacy of various types of barriers on a pilot basis (community solar fences, rubble walls, steel channel/rail bars etc.)	Within 1-2 years	Division
10	Use of camera traps also to be made for understanding elephant presence and habitat use and individual identification of tuskers.	Ongoing in some divisions. To be extended to all. Immediately / Continuous	Division
11	Take up pilot project on the use of emergent technology including ground impact detection sensor technology/temperature and movement sensors etc to detect and give early warning of presence of elephants, especially on identified crossing points across railway tracks.	Within 1-2 years	RCCF/DFO
12	Take up pilot projects on the use and efficacy of low-cost bio-deterrents such as chilly bombs, use of bee-boxes, elephant-repelling crops, lure crops as well as acoustic deterrents (bee-sound, tiger roars) etc. which have been tried across the country.	Within a year	RCCF/DFO
13	Study of peoples' perceptions on HEC and people's participation involving social scientists / organisations.	Within three months	WLHQ/Circles
14	Commission study on the use of linear infrastructure mitigation measures such as Elephant Underpasses and Overpasses in select divisions.	Within one year Can be extended to other areas phase-wise.	WLHQ/Circles
15	Studies to understand social carrying capacity and also the changing trends in human tolerance and traditional co-existence between elephants and local people in select landscapes involving reputed local universities.	Within a year To be continued and extended to other areas	WLHQ / RCCF/DFO
16	Study on elephant habitat quality with special reference to palatable tree, shrub, climber and grass species and also meadow management practices with an aim to improve these. [One each in Mayurbhanj, Mahanadi and Sambalpur Elephant Reserves]	Within two years	WLHQ/Circles

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17	Disease surveillance and monitoring in all elephant reserves and PAs with elephants	Ongoing At regular intervals	Divisions with hand-holding from Veterinary Dept. and Universities.
18	Long-term ecological monitoring stations to assess bioclimatic variables using automatic data loggers should be installed in all PAs. Similarly, assessment of stream flow, soil profiles etc to assess ecosystem services evaluation.	Within 1-2 years	WLHQ
19	AI-based Intrusion Detection System (IDS) already deployed by Northern Frontier Railway (NFR) in Lunding and Alipurduar divisions to be extended to select stretches in Odisha. Similar other technologies such as Intelligent Seismic Sensing System for Elephant Movement Detection (eleSeisAlert) being developed by CSIR-Central Scientific Instruments Organisation (CSIO), Chandigarh and open-source sensor warning system EleSense-IoT to be explored for pilot-level implementation.	Within 6 months	Railways

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X. MONITORING
(5 Action Points, MT-1, ST-4)

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Sl No	Recommended Activity	Time Line/ Periodicity	Nodal Agency/ Level within the Forest department
1	<p>Strengthen daily monitoring and regular analysis of iWLMS/OFMS/mSTRIPES data at Division and Circle levels for effective protection / patrolling strategy for preventing elephant deaths. This should be ensured by the Elephant Protection and Wildlife Crime Control Cell of the Division and Circles respectively.</p> <p>Monthly report in prescribed format should be send by all Divisions to the Circles and RCCFs should compile and send to WL HQs with their specific observations/comments.</p>	<p>Ongoing but to be enhanced</p> <p>Immediately</p> <p>Monthly</p>	<p>DFO, . RCCF/WLHQ</p>
2	<p>Ensure monitoring of smaller and scattered population by the circle-level Committees constituted under the chairmanship of Chief Wildlife Warden and to suggest steps for safety and security of those elephants vide Office order No. 7223 dated 02.08.2021</p>	<p>Immediately</p> <p>Monthly</p>	<p>RCCF</p>
3	<p>MOU has been signed between PCCF (WL) & CWLW, Odisha of Indian Institute of Science, Bangalore for radio-collaring of 3 nos of elephants in Angul, Dhenkanal, Keonjhar, Rairakhol, Athagarh, Athamallik & Chandaka WL divisions for monitoring of their movement. This may be expedited.</p> <p>Further radio collaring of identified and candidate animal (adult tusker, matriarchs, solitary males, captured individuals to be released back) to be carried out in select localities of the State.</p>	<p>Within 6 Months</p> <p>Maybe initiated within a year's time and continued thereafter</p>	<p>WLHQ</p> <p>WLHQ/DFO</p>

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4	<p>Focus on the recently initiated efforts to prepare a photographic profile of tuskers in all elephant bearing divisions and vetting to be done at the Circle level.</p> <p>This needs to be continued and refined over time.</p>	<p>Preliminary efforts in some divisions but need to be intensified.</p> <p>Within 6 months</p> <p>Updation and analysis at regular intervals</p>	<p>DFO / RCCF/WLHQ</p>
5	<p>Analysis of sex/age-class break-up of elephant herds through periodic monitoring so as to arrive at indicative growth rates and demographic trajectory.</p>	<p>Within 2 Years</p> <p>Updation and analysis at regular intervals</p>	<p>Divisions / Circle / WLHQ</p>

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✓ Part I - Writ petition & annexures.
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Part II - Pg 585 to Pg 910.

Part III - Aff. by Chairman, JTF filed
on dt. 18/4/2023 flagged "10"

Part IV - Vnama & IAs.

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