



Wildlife Odisha-2015



WILDLIFE ORGANISATION

Forest and Environment Department

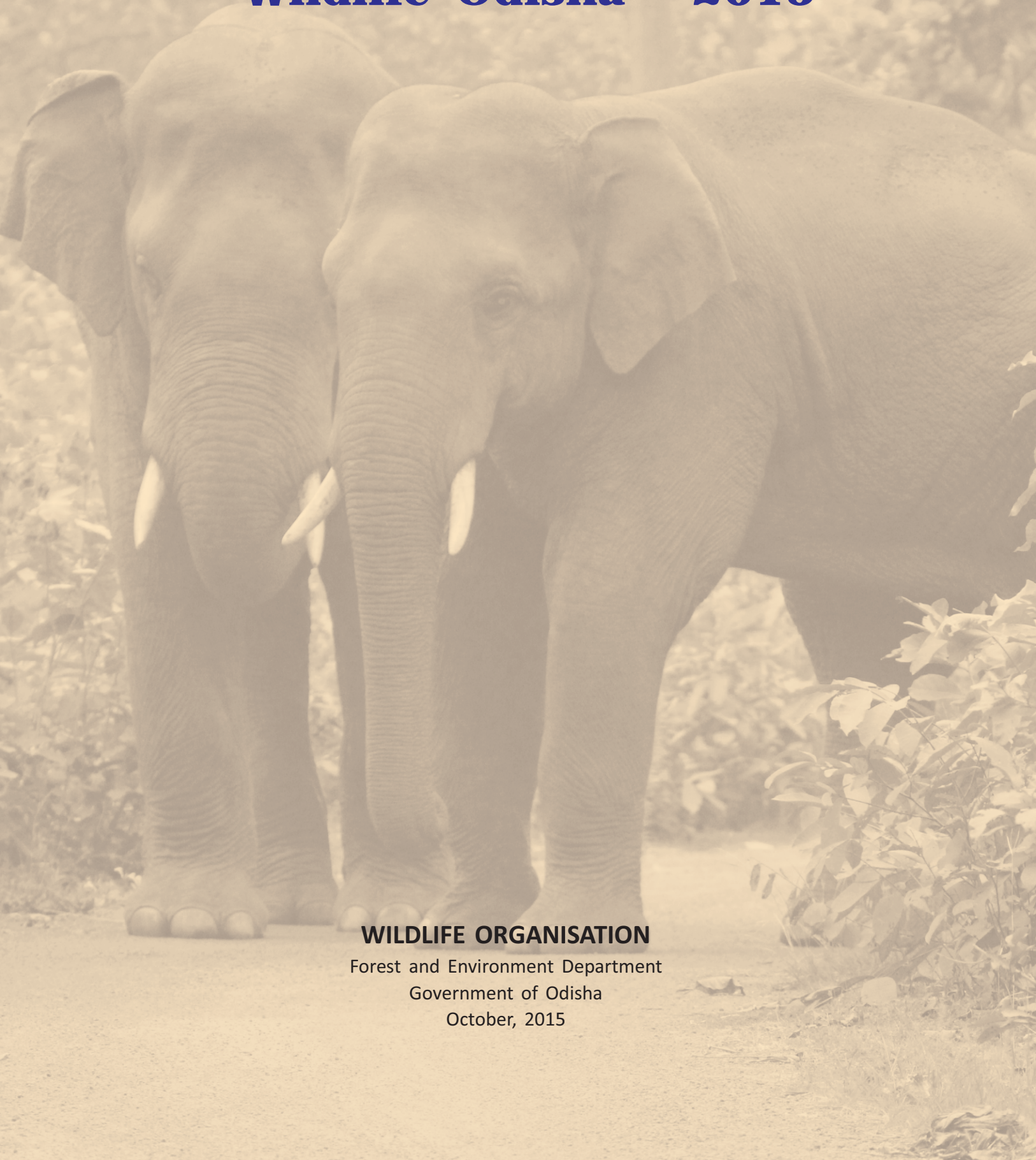
Government of Odisha

October, 2015



**Mass nesting of Olive Ridley Sea turtles
in Rusikulya river mouth, Ganjam**

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୬୧ତମ ବନ୍ୟପ୍ରାଣୀ ସପ୍ତାହ, ୨୦୧୫ ପାଳନ ଉପଲକ୍ଷେ ମାନ୍ୟବର ମୁଖ୍ୟମନ୍ତ୍ରୀଙ୍କ ବାର୍ତ୍ତା

ଜାତିର ଜନକ ମହାତ୍ମା ଗାନ୍ଧୀଙ୍କର ଜନ୍ମତିଥି ଅକ୍ଟୋବର ଦୁଇ ତାରିଖରୁ ପ୍ରତିବର୍ଷ ବନ୍ୟପ୍ରାଣୀ ସପ୍ତାହର ଶୁଭାରମ୍ଭ ହୋଇଥାଏ । ବନ୍ୟପ୍ରାଣୀଙ୍କର ସୁରକ୍ଷା ଓ ସେମାନଙ୍କ ଆବାସସ୍ଥଳୀର ସଂରକ୍ଷଣ ଦିଗରେ ସଚେତନତା ସୃଷ୍ଟି କରିବା ଏହି ସପ୍ତାହ ପାଳନର ମୁଖ୍ୟ ଉଦ୍ଦେଶ୍ୟ ।

ଆମ ରାଜ୍ୟରେ ପ୍ରାୟ ୫ ଶତାଂଶ ଅଞ୍ଚଳକୁ ନେଇ ଦୁଇଗୋଟି ଜାତୀୟ ଉଦ୍ୟାନ ସମେତ ୧୯ଟି ଅଭୟାରଣ୍ୟ ସୃଷ୍ଟି କରାଯାଇଛି । ଆମ ରାଜ୍ୟର ଜାତୀୟ ଉଦ୍ୟାନ ଏବଂ ଅଭୟାରଣ୍ୟଗୁଡ଼ିକ ବଣଜଙ୍ଗଲ, ନଦୀ ଏବଂ ଜୈବ ବିବିଧତାର ଗନ୍ତାଘର । ଅଭୟାରଣ୍ୟ ବାହାରେ ମଧ୍ୟ ଅନେକ ବନ୍ୟପ୍ରାଣୀ ବସବାସ କରନ୍ତି । ବନ୍ୟପ୍ରାଣୀ ଯେଉଁଠାରେ ଥାଆନ୍ତୁ ନା କାହିଁକି, ସେମାନଙ୍କର ସୁରକ୍ଷା ଏବଂ ସେମାନଙ୍କ ପ୍ରତି ଅଂହିଷା ଆଚରଣ ପ୍ରଦର୍ଶନ କରିବା ଆମର କର୍ତ୍ତବ୍ୟ ।

ଏହି ଅବସରରେ ବନ୍ୟପ୍ରାଣୀ ଓ ସେମାନଙ୍କ ଆବାସସ୍ଥଳୀର ସୁରକ୍ଷା ଉଦ୍ଦେଶ୍ୟରେ ଗ୍ରହଣ କରାଯାଉଥିବା ସରକାରୀ ଉଦ୍ୟମକୁ ଅଧିକ ବଳିଷ୍ଠ ଓ ଫଳପ୍ରସ୍ତ କରିବା ପାଇଁ ମୁଁ ରାଜ୍ୟର ଜନସାଧାରଣଙ୍କ ସକ୍ରିୟ ସହଯୋଗ କାମନା କରୁଛି ।

ନବୀନ ପଟ୍ଟନାୟକ
(ନବୀନ ପଟ୍ଟନାୟକ)



ବିକ୍ରମ କେଶରୀ ଆରୁଖ

ମନ୍ତ୍ରୀ

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ଓଡ଼ିଶା

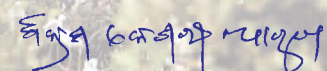
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ମାନ୍ୟବର ଜଙ୍ଗଲ ମନ୍ତ୍ରୀଙ୍କ ବାର୍ତ୍ତା

ଜୀବଜଗତର ବ୍ୟାପ୍ତି ଓ ବିବିଧତା ଲୋପ ପାଇଲେ ମନୁଷ୍ୟର ସ୍ଥିତି ଅସମ୍ଭବ । ସେ ଦୃଷ୍ଟିରୁ ବନ୍ୟପ୍ରାଣୀ ଓ ସେମାନଙ୍କ ଆବାସସ୍ଥଳୀର ସୁରକ୍ଷା ପ୍ରକାରାନ୍ତରେ ପୃଥିବୀରେ ମନୁଷ୍ୟର ସ୍ଥାୟୀତ୍ବ ଓ ସମୃଦ୍ଧିର ରକ୍ଷାକର୍ତ୍ତ ସଦୃଶ । ପରସ୍ପର ନିର୍ଭରଶୀଳତା ଓ ସହାବସ୍ଥାନ ହିଁ ପ୍ରକୃତିର ମୂଳମନ୍ତ୍ର । ଏଥିପାଇଁ ‘ଜୀବେଦୟା’ ଆମ ସଂସ୍କୃତିର ଏକ ମହାନ ପରମ୍ପରା । ଜାତିର ଜନକ ତଥା ଅଂହିସାର ଉପାସକ ମହାତ୍ମା ଗାନ୍ଧୀଙ୍କର ଜନ୍ମତିଥି ଅକ୍ଟୋବର ଦୁଇ ତାରିଖରୁ ପ୍ରତିବର୍ଷ ବନ୍ୟପ୍ରାଣୀଙ୍କ ସୁରକ୍ଷା ଓ ଆବାସସ୍ଥଳୀକୁ ରକ୍ଷା କରିବା ପାଇଁ ବନ୍ୟପ୍ରାଣୀ ସପ୍ତାହ ପାଳନ କରାଯାଇଥାଏ ।

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ବନ୍ୟପ୍ରାଣୀ ସପ୍ତାହ ପାଳନ ଅବସରରେ ବନ୍ୟପ୍ରାଣୀ ଓ ସେମାନଙ୍କ ଆବାସସ୍ଥଳୀର ସଂରକ୍ଷଣ ପାଇଁ ମୁଁ ସମସ୍ତ ରାଜ୍ୟବାସୀଙ୍କର ସକ୍ରିୟ ସହଯୋଗ କାମନା କରୁଛି ।


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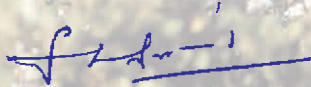
FOREWORD

Wildlife conservation relates to the protection and conservation of flora and fauna within and outside their habitats. The growing human population and increased developmental activities are affecting the wildlife habitat which are no longer disturbance free and are also facing fragmentation leading to wild animal depredation. Thus to manage the wildlife with disturbed surroundings is a big challenge for the wildlife managers.

For protection and conservation of wildlife and their habitats, the wildlife organization has been implementing various in- situ and ex- situ conservation measures. Incidences of wild animal depredation, rescue of wild animals, apprehending offenders in wildlife offence cases, monitoring the status of wildlife, protecting the wild animals and their habitats, creating awareness among the people and promoting eco- tourism for providing alternate sources of livelihood near protected areas, are some of the major activities.

The 'Wildlife Odisha - 2015' is a compilation of most of the wildlife conservation interventions and statistics of the said interventions undertaken during previous years. It also highlights the contributions of some people in the field of wildlife conservation over the past few years in the state which have been recognized by the Wildlife Organization in the form of a state level Biju Patnaik Wildlife Conservation Award and several Sub- Divisional Level awards.

I hope the information available in 'The Wildlife Odisha- 2015' will be of immense use to guide the field staff, provide valuable inputs to wildlife researchers, administrators, and nature lovers for conservation of wildlife.


S.S. Srivastava



I

CHAPTER

INTRODUCTION TO THE STATE OF ODISHA

The State of Odisha has a geographical area of 1,55,707 sq. km. The recorded forest area is 58,136 sq.km as per the State of Forest Report (SFR-2013) of Forest Survey of India. The State is quite rich in wildlife. The important wildlife found in state are Elephants, Tigers, Leopards, Hyena, Jungle cats, Sambar, Spotted deer, Wild boar, Giant squirrels, Pea fowl, Hill myna, Marsh Crocodile, Gharial, Salt water Crocodile, King Cobra, Sea turtles and Monitor lizard etc. To provide protection to wildlife and their habitat, a network of protected areas have been constituted. Special programmes have been initiated for special care of endangered and threatened species.

The State has 19 Sanctuaries including Gahirmatha Marine Wildlife Sanctuary, one National Park (Bhitarkanika), one proposed National Park (Similipal) which have been notified under the provisions of Indian Wildlife (Protection) Act, 1972 for in-situ conservation. These Protected Areas constitute 10.37% of the total forest area and 5.36% of the total geographical area of the State. One large Zoological Park (Nandankanan), two Small Zoos and 8 Mini Zoos have been notified for ex-situ conservation and management of wildlife out side protected areas. The State has the singular distinction of having three stretches of mass nesting beaches of endangered Olive Ridley Sea turtles including the world's largest nesting ground of Olive Ridley Sea turtle, *Lepidochelys olivacea* at Gahirmatha. It has many natural wetlands including the largest wetland of Asia (Chilika) and Bhitarkanika which are declared as "Ramsar Sites".

The Wildlife Diversity of Odisha

A total of 20 species of amphibians, 110 species of reptiles including three crocodilian species, 479 species of birds and 86 species of mammals have so far been recorded in the State which include 54 species of threatened animals (17 species of reptiles, 15 species of birds and 22 species mammals) as per the definition of IUCN Red Data Book. The state is blessed with an extremely rich and unique assemblage of wildlife, inhabiting their respective habitats spread over three different bio-geographic zones.

For captive and rescued animals provision of ex-situ conservation has been made. Various developmental projects and mining operations etc. are creating disturbances for wildlife and their habitat leading to man-animal conflicts. Hence habitat fragmentation and the ensuing man-animal conflicts are some of the major challenges before the Wildlife Organization.

Odisha Forest at a Glance:

| FOREST TYPES | AREA |
|----------------------------------------------------|---------------------|
| Reserve Forest | 26,329 sq km |
| Protected Forest | 15,525 sq km |
| Unclassed Forest | 16,282 sq km |
| Total Recorded Forest Area | 58,136 sq.km |
| Percentage of recorded forest to geographical area | 37.34% |
| Of India's Forest Area | 07.53% |

| FOREST COVER WITH GREEN WASH | |
|------------------------------|---------------------|
| Very dense forest cover | 6,780 sq.km |
| Moderately dense | 19,646 sq.km |
| Open forest | 17,555 Sq.km |
| Total | 43,981 sq km |

| FOREST COVER OUTSIDE GREEN WASH | |
|---------------------------------|--------------------|
| Very dense forest | 262 sq km |
| Moderately Dense Forest | 1,652 sq km |
| Open Forest | 4,452 sq km |
| Total | 6,366 sq km |

| MANGROVE COVERS | |
|---------------------------|------------------|
| Very dense mangrove | 82 sq.km |
| Moderately dense mangrove | 88 sq.km |
| Open mangrove | 43 Sq.km |
| Total | 213 sq km |

*FSI Report 2013

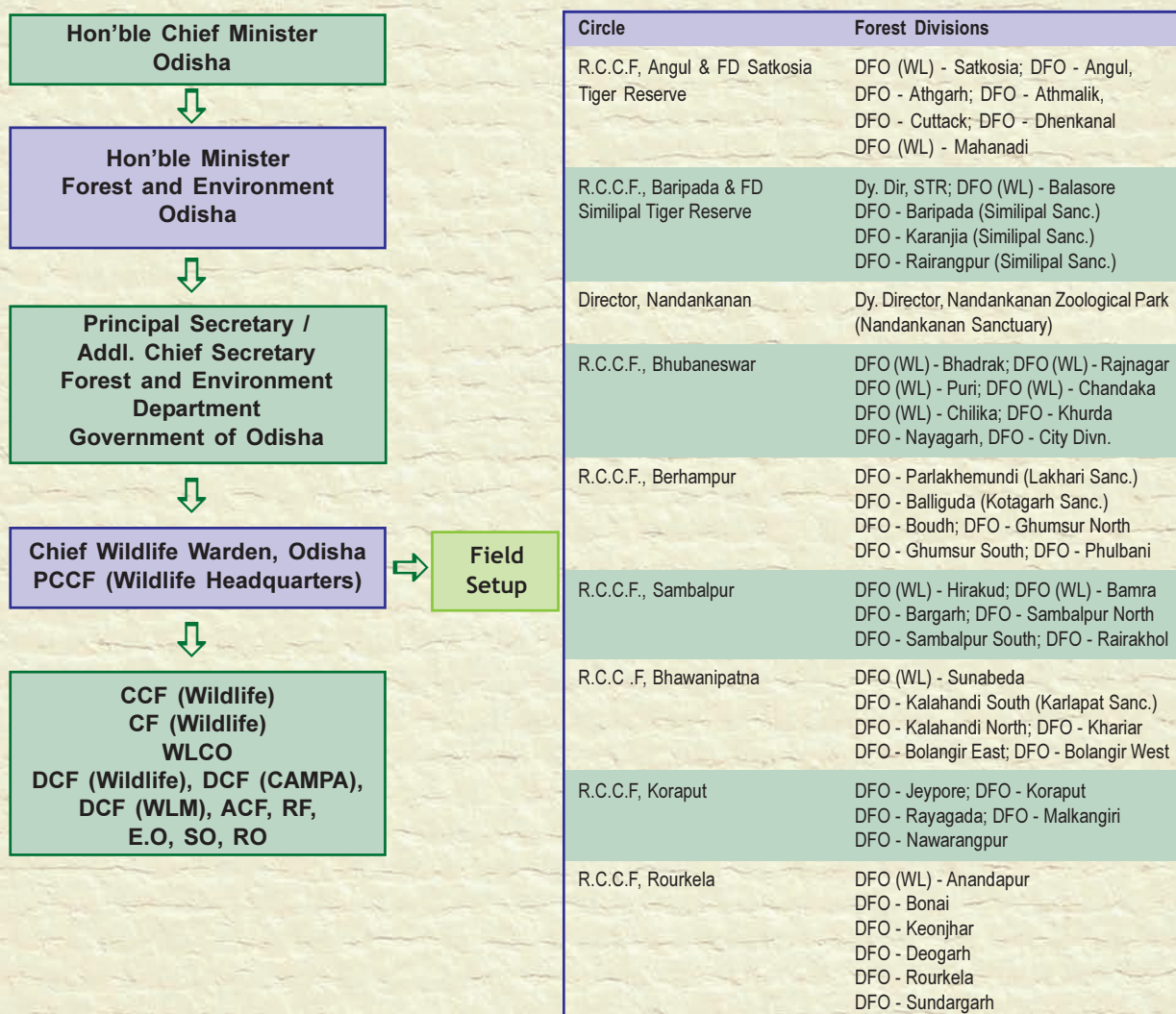
Biodiversity Comparison:

| | NUMBER OF SPECIES | | | |
|------------|-------------------|-------|--------|-------------------------------|
| TAXA | WORLD | INDIA | ODISHA | PERCENTAGE OF ODISHA TO INDIA |
| Mammals | 4629 | 397 | 86 | 22% |
| Birds | 9026 | 1232 | 479 | 38% |
| Reptiles | 5817 | 460 | 110 | 24% |
| Amphibians | 5150 | 240 | 20 | 09% |
| Fish | 21723 | 2546 | 288 | 11% |

About Wildlife Organisation

The State Wildlife Organisation was formed on 14th August 1974, a sequel to adoption of the Wildlife (Protection) Act, 1972; and promulgation of the Wildlife (Protection) (Odisha) Rules, 1974. The Conservator of Forests, Development Circle was designated as the Ex-Officio Chief Wildlife Warden, Odisha. In the year 1976, a separate Wildlife Organisation was constituted with the Chief Wildlife Warden posted in the rank of Conservator of Forests, to begin with.

The present Wildlife Organisation is headed by Principal Chief Conservator Forest (Wildlife) and is assisted by Chief Conservator of Forests (Wildlife) and Wildlife Conservation Officer, and three Deputy Conservator of Forests in the headquarters and the Field Director, Similipal Tiger Reserve, Director, Nandankanan Biological Park, and fourteen Divisional Forest Officer/Deputy Conservators of Forests in different divisions in the field. All the RCCFs in charge of circles and all the DCFs in charge of 37 territorial divisions and 13 Wildlife Divisions function as Wildlife Wardens under Wildlife (Protection) Act, 1972.



A quick glance on wildlife status of Odisha....

| | |
|-------------------------------------------------------------------|------------------------------------------|
| National Park | : 1 (Bhitarkanika) |
| Proposed National Park | : 1 (Similipal) |
| Sanctuary | : 19 |
| Total area of Sanctuaries and National Parks (Protected area) | : 8352.30 sq.km |
| Percentage of Protected area to geographical area of the state | : 5.36% |
| Percentage of protected area to forest area | : 10.37% |
| Tiger Reserve (a) Notified | : 2 (Similipal and Satkosia) |
| Elephant Reserves | : 3 (Mayurbhanj, Sambalpur and Mahanadi) |
| Biosphere Reserve | : 1 (Similipal) |
| Ramsar sites | : 2 (Chilika and Bhitarkanika) |

Crocodilian Research & Conservation Centres:

- (1) Tikarpada/Satkosia - Gharial
 - (2) Dangmal/Bhitarkanika - Saltwater crocodile
 - (3) Ramatirtha/Similipal - Mugger crocodile
 - (4) Nandankanan - Captive Breeding programme for all the three Indian crocodilian species
- Mass Nesting beaches of Olive - 3 (Gahirmatha, Rushikulya river mouth, Devi river mouth)
Ridley Sea turtles
- Community Reserve (Proposed) - Balipadar-Bhetnoi Blackbuck habitats in Ganjam District.

The State Icons...

- | | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| State Tree | - Kadamba (<i>Neolamarckia cadamba</i>) |
| State Flower | - Ashoka (<i>Saraca asoca</i>) |
| State Animal | - Sambar (<i>Rusa unicolor</i>) |
| State Bird | - Indian Roller or Blue Jay (<i>Coracias benghalensis</i>) |
| National Heritage Animal | - In October, 2010, Indian Government declared the Elephant a National Heritage Animal. |
| National Animal Tiger | - The Tiger was accorded the status of National Animal in 1973 with the initiation of Project Tiger, a National Tiger protection programme. Before this, the National Animal was Lion. |
| National Aquatic Animal | - Ganges River Dolphin declared the national aquatic animal in October 2010 to save it from extinction. |



Flamingo in Chilika Wildlife Division

II CHAPTER

WILDLIFE CONSERVATION IN THE STATE

Wildlife conservation is a practice of protecting the wildlife including plants and animals in their habitat. It has become an increasingly important practice in order to mitigate the negative impact of human activity on their habitat. The major objectives of wildlife conservation are

1. Maintenance of essential ecological processes and life support systems.
2. Preservation of genetic Diversity that is flora and fauna.
3. Sustainable utilization of species and ecosystem.

The strategies of Wildlife Conservation include in-situ and ex-situ conservation.

In-situ conservation

In-Situ conservation is on-site conservation or the conservation of genetic resources in natural population of plants or animal species in a habitat as well as to ensure the ongoing process of evolution and adaptation with in their environment.

In-situ conservation areas

In the State of Odisha, the in-situ conservation is achieved in the following forms:

- a) Through the legal entities or protected areas like National Parks and Sanctuaries.
- b) Through other Protected landscapes like Tiger Reserves, Elephant Reserves and Biosphere Reserves



a) Protected Area (PAs) Network in Odisha comprises of:

There are 2 National Parks (1 proposed), 19 Wildlife Sanctuaries, 2 Tiger Reserves, 1 Biosphere Reserve and 3 Elephant Reserves in Odisha. These constitute 5.36 % of geographical area and 10.37 % of forest area in the state. These lie in two Biogeographic zones and three provinces as given below:-

Bio-geographic Zones / Province / Sub-Division and Location of Sanctuaries in Odisha

| Zone | Province | Sub-Division | Sanctuary located in this region |
|------------------|----------------------|--------------------------|----------------------------------------------------------------------|
| Deccan Peninsula | Eastern Plateau | Eastern-ghat | Baisipalli, Chandaka, Karlapat, Kotagarh, Lakhari, Nandankanan |
| | | Chhatisgarh-Dandakaranya | Debrigarh, Sunabeda |
| | Chhota-nagpur | Garhjat Hills | Badrama, Hadgarh, Khalasuni, Kuldiha, Satkoshia, Similipal, Kapilash |
| Gangetic Plain | Lower Gangetic plain | | |
| Coasts | Eastern Coast | | Balukhand, Bhitarkanika, Gahirmatha, Nalabana |

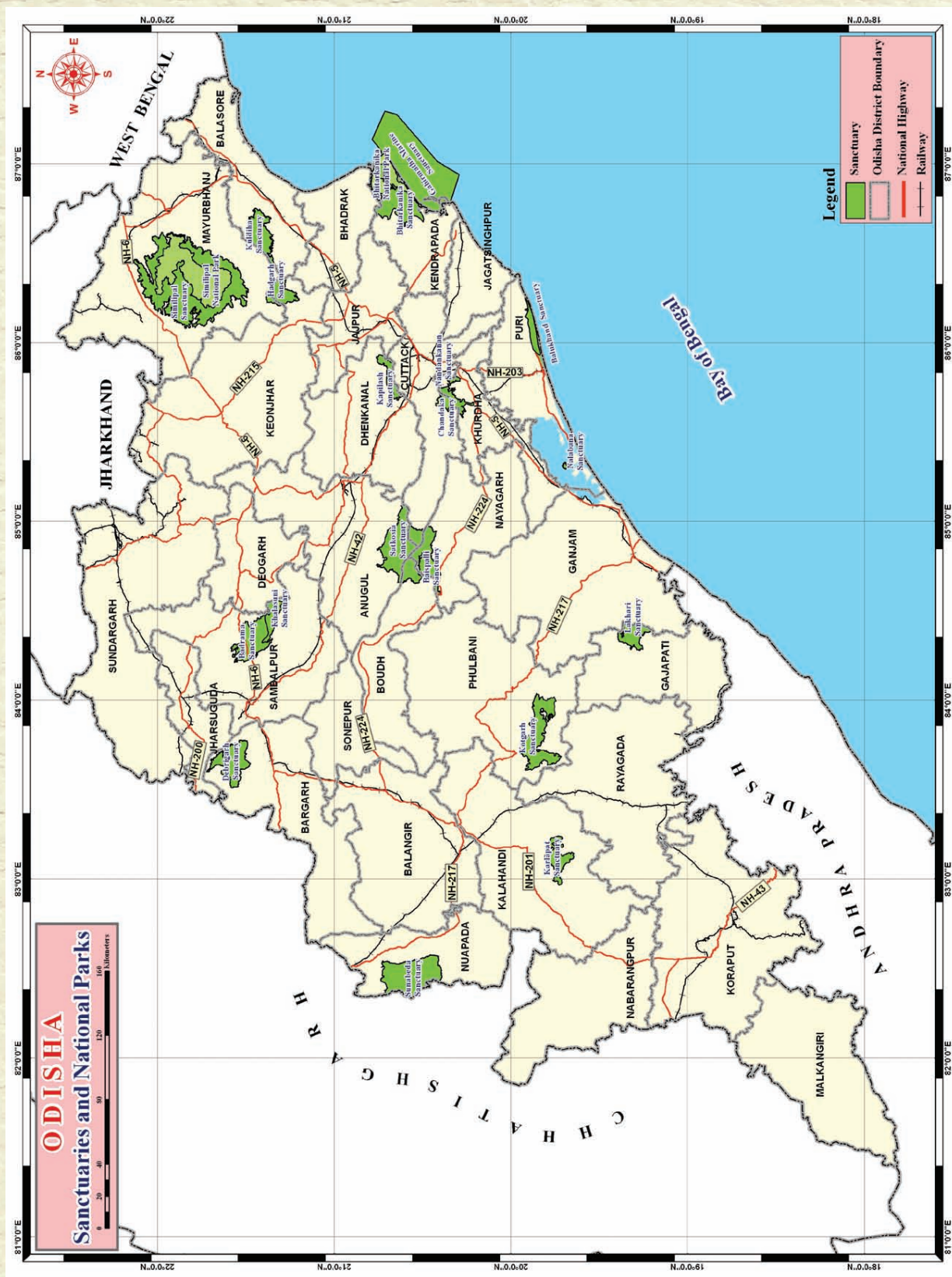
A. List of National Parks and Sanctuaries of Odisha**National Parks**

| Sl. No. | Protected Area | Area in Sq.km | Notification No. and Date | Administrative control (Division / Circle) | District |
|---------|------------------------------------|---------------|---------------------------------------------------|-------------------------------------------------------------------------|---------------------|
| 1 | Bhitarkanika (National Park) | 145.00 | 22904 / Dt.30.10.1988 19686 / Dt.16.9.1998(Final) | DFO, Mangrove Forest Division (WL), Rajnagar / RCCF, Bhubaneswar Circle | Kendrapara, Bhadrak |
| 2 | Similipal National Park (Proposed) | 845.70 | 18703 Dt.6.8.1980 & 19525 Dt.11.6.1986 | Field Director, STR, Baripada | Mayurbhanj |

Wildlife Sanctuaries

| | | | | | |
|---|------------------|-------|---------------------------------------|-------------------------------------------------------------------------|------------|
| 1 | Bhitarkanika | 672 | 6958 Dt.22.4.1975 | DFO, Mangrove Forest Division (WL), Rajnagar / RCCF, Bhubaneswar Circle | Kendrapara |
| 2 | Balukhand-Konark | 71.72 | 9013 Dt.23.4.1984 & 15216 Dt.1.9.1987 | DFO, Puri, Khurda / RCCF, Bhubaneswar Circle | Puri |

| | | | | | | |
|----|---------------------|---------|----------------|-------------------------------|-----------------------------------------------------------------------|--------------------|
| 3 | Baisipalli | 168.35 | 25335 | Dt.06.05.1981 | DFO, Mahanadi WL Division, Nayagarh / RCCF, Angul circle | Nayagarh |
| 4 | Badrama | 304.03 | 23393 | Dt.17.12.1987 | DFO, Bamra(WL), Sambalpur / RCCF, Sambalpur circle | Sambalpur |
| 5 | Chilika (Nalban) | 15.53 | 23403 | dt.17.12.1987 | DFO, Chilika WL Division, Balugaon / RCCF, Bhubaneswar Circle | Puri |
| 6 | Chandka-Damapara | 193.39 | 35500 13482 | dt.21.12.1982 dt.10.6.1988 | DFO, Chandka Wildlife Division, Bhubaneswar/ RCCF, Bhubaneswar Circle | Khurda, Cuttack |
| 7 | Debrigarh | 346.90 | 2409 | dt.8.2.1985 | DFO, Hirakd WL Division, Sambalpur / RCCF, Sambalpur circle | Sambalpur |
| 8 | Gahirmatha (Marine) | 1435.00 | 18805 | dt.27.9.1997 | DFO, Mangrove Forest Divn (WL), Rajnagar / RCCF, Bhubaneswar Circle | Kendrapara Bhadrak |
| 9 | Hadgarh | 191.06 | 34113 | dt.6.12.1978 | DFO, Keonjhar (Wildlife) / RCCF, Rourkela Circle | Keonjhar |
| 10 | Khalasuni | 116.00 | 584 | dt.7.1.1982 | DFO, Bamara (WL) / RCCF, Sambalpur circle | Sambalpur |
| 11 | Kuldiha | 272.75 | 243 | dt.4.1.1984 | DFO, Balesore (WL) / RCCF, Baripada Circle | Balasore |
| 12 | Nandankanan | 4.37 | 20682 | dt.3.8.1979 | Deputy Director, Nandankanan /Director, Nandankanan, Bhubaneswar | Khurda |
| 13 | Similipal | 2306.61 | 6484 | dt.23.04.2008 | DFO, Baripada/Karanjia /Rairangpur RCCF, Baripada Circle | Mayurbhanj |
| 14 | Satkosia Gorge | 795.52 | 12727 | Dt.19.5.1976 | DFO, Satkosia Wildlife Division, Angul / RCCF, Angul Circle | Angul |
| 15 | Sunabeda | 600.00 | 10772 | dt.10.5.1988 | DFO, Sunabeda Wildlife Division, Nuapada / RCCF, Bhawanipatna Circle | Nuapada |
| 16 | Karlapat | 147.66 | 24498 | Dt.15.10.1992 | DFO, Kalahandi (South) / RCCF, Bhawanipatna Circle | Kalahandi |
| 17 | Lakheri-valley | 185.87 | 2333 | Dt.8.2.1985 | DFO, Parlakhemundi / RCCF, Berhampur Circle | Ganjam (Gajapati) |
| 18 | Kotgarh | 399.05 | 30253 | Dt.3.12.1981 | DFO, Baliguda / RCCF, Berhampur Circle | Phulbani |
| 19 | Kapilash | 125.5 | 5937 | Dt.2.4.2011 | DFO, Dhenkanal /RCCF, Angul Circle | Dhenkanal |



b) Other Protected landscapes of Odisha are:

Tiger Reserve

| Sl. No. | Protected Area | Area in Sq.Km. | Notification No. and Date | District |
|---------|-------------------------|----------------|----------------------------------------------------------------------------------|------------------------------------|
| 1 | Similipal Tiger Reserve | 2750.00 sq.km | Notification No.8F(T)-9/2007/20801/F&E Dated 31.12.2007 | Mayurbhanj |
| 2 | Satkosia Tiger Reserve | 963.87 sq.km | Notification No.8F(S)-32/2006/20807/F&E, Dated 31 st December 2007 | Angul, Cuttack, Nayagarh and Boudh |

Elephant Reserve

| | | | | |
|---|-----------------------------|----------------|---------------------------------------------------------|------------------------------------------------|
| 1 | Mayurbhanj Elephant Reserve | 7043.74 Sq.Km. | Notification No.8F(W)-42/2001/15806 Dated 29.09.2001 | Mayurbhanj, Balasore, Bhadrak, Keonjhar |
| 2 | Mahanadi Elephant Reserve | 1038.30 Sq.km | Notification No.8F(W)-17/2002/10162 Dated 19.06.2002 | Angul, Cuttack, Dhenkanal, Nayagarh, Kandhamal |
| 3 | Sambalpur Elephant Reserve | 426.91 Sq.Km | Notification No.8F(W)-10/2002/5840 Dated 27.03.2002 | Sambalpur, Sundargarh, Jharsuguda, Sonepur |

Biosphere Reserve

| | | | | |
|---|-----------------------------|------------|------------------------------------------------|---------------------|
| 1 | Similipal Biosphere Reserve | 5569 sq.km | Notification No.8/96/11319 / Dated 20.05.1996. | Mayurbhanj District |
|---|-----------------------------|------------|------------------------------------------------|---------------------|



A. TIGER RESERVE

Tiger Reserves are visualized as breeding nuclei from which surplus tiger would migrate to adjacent forests. Conceived under the Project Tiger launched in 1973, these areas aim to conserve the habitat for ensuring a viable population of Royal Bengal Tigers along with their prey base in their habitat.

SIMILIPAL TIGER RESERVE:

Mayurbhanj district holds about most of the of tiger population of the state. Less than thirty tigers were surviving here in the year 1975. Sustained protection measures and management initiatives have resurrected the dwindling population of tigers to around 95 in the 1990s and thereafter the population has remained stable at around 100 as per pug mark census 2004. Most of the tigers from North Similipal are moving to south Similipal that remains a better habitat, and the leopards, more adaptable than the tiger, are appearing in most of the habitats vacated by the tiger. These observations suggest that Similipal habitat may be reaching the maximum of its carrying capacity for tiger. The future seems dependent on adjoining forests of Hadgarh and Kuldiha that are better known as elephant habitats.

Tiger is only an indicator species but the project in Similipal has provided incidental conservation to the entire biota contained in these forests. The giant squirrel (*Ratufa indica*) of the upper tree canopy, the mugger crocodile (*Crocodylus palustris*) in the rivers of Similipal, and the 94-species of orchid flora are only a few that 'indicate' the positive impact of Project Tiger on the health of the ecosystem, and the prevailing microclimate of Similipal.

Major threats to Similipal centre round four lakh people living in the periphery and ten thousand people living inside it. Most of them 'use' Similipal to make a living, and the population continues to rise at a rate of 20% for each decennial period. Similipal presents an accurate reflection of the declining status of a habitat in the face of growth of human population.

SATKOSIA TIGER RESERVE:

Encompassing the Satkosia Gorge Sanctuary constituted in May 1976 and the Baisipalli Sanctuary constituted in November 1981. The Tiger Reserve is rich in tigers and its prey along with wetland fauna (Gharial, Mugger, Freshwater Turtles, Freshwater Shark etc.) in the Mahanadi and rich biodiversity in the terrestrial ecosystem. Pugmark tracking conducted in January 2004 revealed the presence of 18 tigers and 36 leopards in the twin-sanctuaries constituting the Tiger Reserve.

The Tiger Reserve is located in the Central Zone of Odisha and spreads over Angul, Cuttack, Nayagarh and Boudh districts covering an area of 963.87sq.kms and comprises of Moist Deciduous Forests, Dry Mixed Deciduous Forest, Bamboo Brakes, Dry Tropical Riparian Forest and Teak Plantations.

Satkosia Gorge is the home of the most endangered Gharial (*Gavialis gangeticus*), the Mugger crocodiles (*Crocodylus palustris*) and a variety of freshwater turtles. Other faunal elements include Leopard, Wild dog, Gaur, Nilgai, Sambar, Spotted Deer, Barking Deer, Bear,

Ratel, Jackal, Porcupine, Indian Hare, and Giant Squirrel etc. A viable but stabilized population of about 155 elephants thrives in this region which forms a part of the Mahanadi Elephant Reserve.

Both the resident as well as migratory birds are found in this sanctuary. The resident birds include the Hornbills, Peafowl, Kingfishers, Egrets, Cormorants, River Tern, Owls, Pigeons, Myna, Parakeets, Drongo, Doves, Woodpecker, Gulls, Golden Oriole, Vultures, Babblers, Barbets, Minivets, Sun Bird, Eagle, Crow Pheasants etc. The migratory birds include Brahminy Ducks, Bar Headed Geese etc.

B. ELEPHANT RESERVE (ER) NETWORK

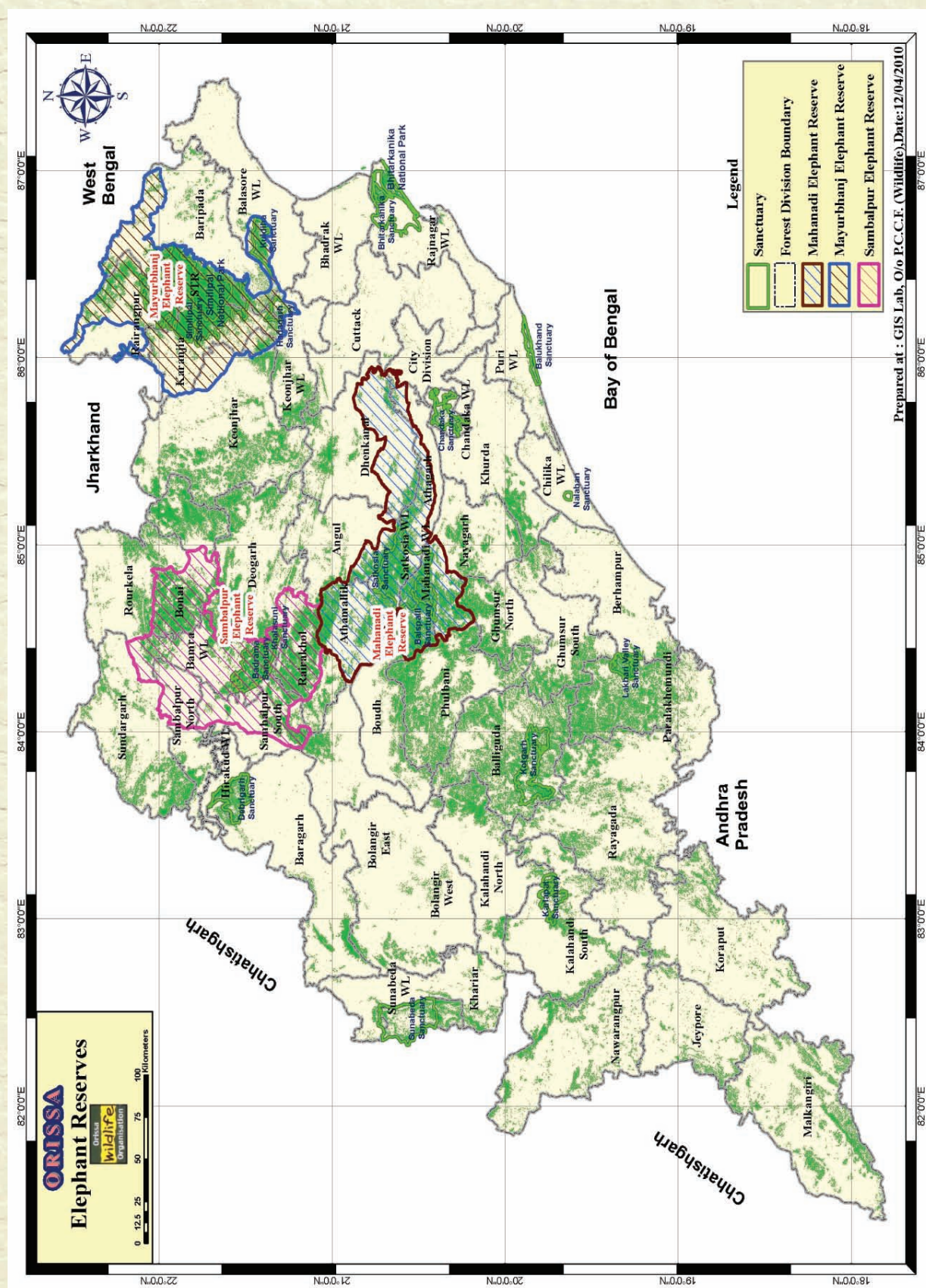
“Because the elephant requires much larger home range than any other terrestrial animal, it is usually one of the first species to suffer the consequences of habitat fragmentation and destruction.” Elephant Reserves offer hope to rejuvenate some of the fragmented habitats.

In the state of Odisha, where many forest habitat are shared by the tiger and elephant, the establishments of ERs have raised the hope to unify fragmented tiger habitats as well.

Three Elephant Reserves (ERs) namely- Mayurbhanj ER notified in the year 2001, Mahanadi ER and Sambalpur ER were notified in the State in the year 2002 to define the prime elephant habitats and to launch various management interventions for conservation of elephant. The extent of notified and proposed forest blocks in these three reserves is 4129 sq. km and the geographical area covered by these three reserves is 8509 sq. km. In order to (a) include most of the remaining important elephant habitats within ERs, (b) redress the problem of rising number of cases of elephant depredation and (c) reverse the trend of habitat fragmentation and degradation, it is proposed (i) to expand the area of Mahanadi and Sambalpur ERs, and (ii) to constitute two new ERs called the Brahmani-Baitarani ER and the South Odisha ER. After declaration, the forest area comprised within ERs will be about 25% of the total forest area of the state; and about 90% of the elephants will be within the Reserves.



Elephant (*Elephas maximus*) in Athgarh Forest Division



Mayurbhanj Elephant Reserve

(Constituted: September 2001)

Location

| | |
|------------------|-------------------------------------------------------------------------------------|
| Districts | : Portions of Mayurbhanj, Balasore, Bhadrak and Keonjhar |
| Forest Divisions | : Similipal Tiger Reserve, Karanjia, Baripada, Rairangpur, Balasore WL, Keonjhar WL |
| Latitude North | : 21° 10' to 22° 35' |
| Longitude East | : 85° 45' to 87° 05' |
| Area | : 7043.74 sq. km |

Mahanadi Elephant Reserve

(Constituted: June, 2002)

Location

| | |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Districts | : Angul, Cuttack, Nayagarh, Kandhamal, Dhenkanal |
| Forest Divisions | : Portions of Angul, Athgarh, Cuttack, Nayagarh, Boudh and Dhenkanal, and entire Satkosia Wildlife Division, Mahanadi Wildlife Division and Athmallik Forest Division. |
| Latitude | : North 20° 10' to 21° 5' |
| Longitude East | : 84° 15' to 85° 58' |
| Area | : 1038.30 sq km |

Sambalpur Elephant Reserve

(Constituted: March 2002)

Location:

| | |
|------------------|---------------------------------------------------------------------------------------|
| Districts | : Sambalpur, Sundargarh, Jharsuguda, Sonepur |
| Forest Divisions | : (Parts) of : Bamra (Wildlife), Bonai, Sambalpur, Jharsuguda, Rairakhol & Subarnapur |
| Latitude North | : 20° 5'N and 22° 12' |
| Longitude East | : 83° 13'E and 84° 58' |
| Area | : 426.91 sq km |

C. BIOSPHERE RESERVE

Biosphere Reserve is intended to preserve genetic diversity in representative ecosystems and provide opportunities for research on ecosystem processes in nature. Criteria for selection of Biospheres include representativeness, naturalness, biological diversity and potential as effective conservation unit.

Similipal Biosphere Reserve

Similipal and adjoining area comprising of 5569 sq.km. was declared as a Biosphere Reserve by Government of India on the 22nd June, 1994 with the objectives for

- (a) Conservation for the area as a representative ecosystem of the “Mahanadian Bio-geographic Region”.
- (b) Provision of long term in-situ conservation of genetic diversity
- (c) Promotion of basic and applied research and monitoring; and
- (d) Dissemination of experience for education and training.

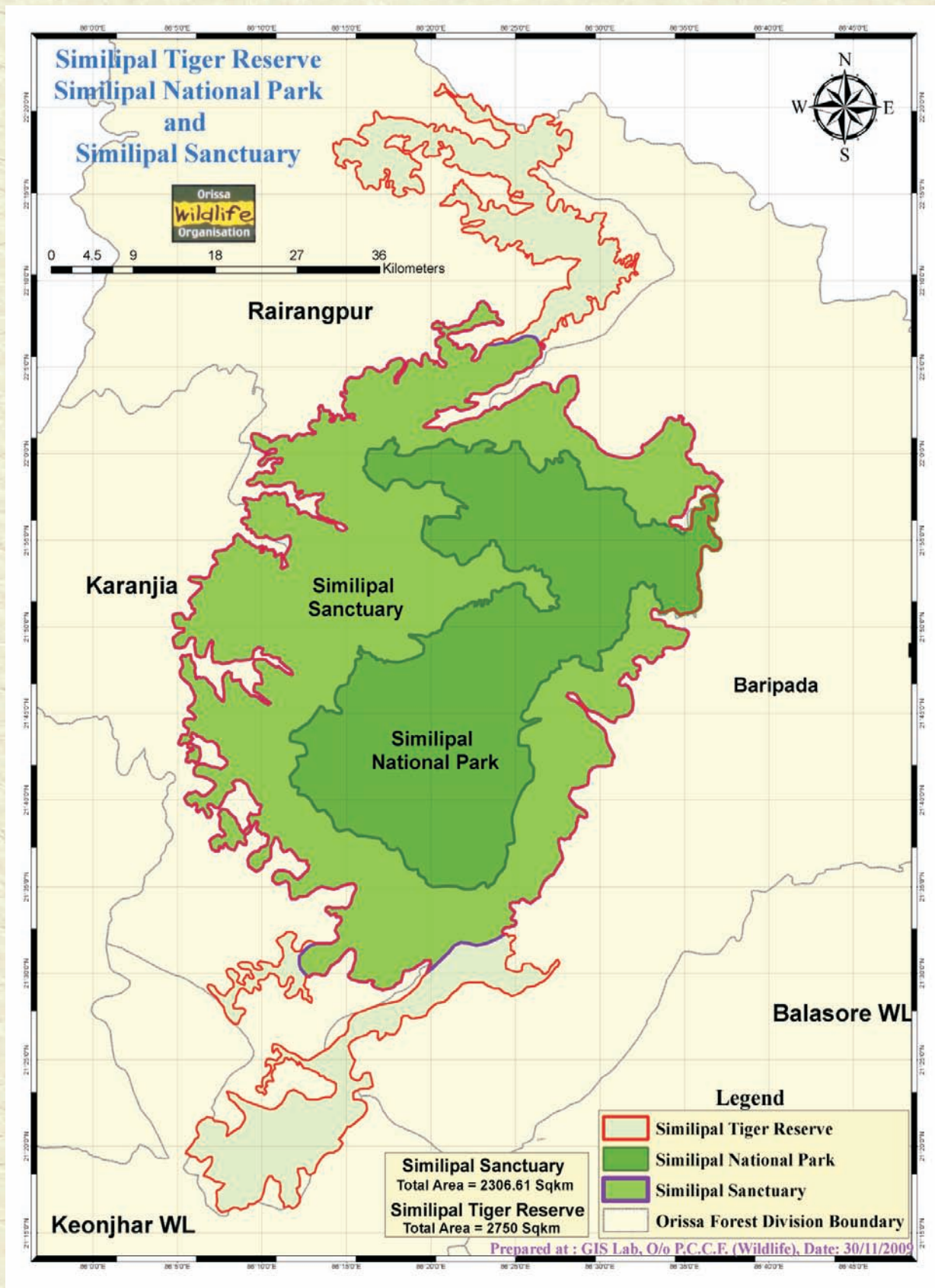
Similipal Biosphere Reserve is intended to fulfill three basic objectives:

- Conservation of biodiversity (genetic, species and ecosystem diversity) and landscapes.
- Eco-development of villages and human habitations within the biosphere; (improvement of livelihood and income opportunities for these villagers in the immediate vicinity of Similipal, while reducing or eliminating adverse impact on the ecosystem resources of Similipal.
- Provide the base and benchmark for long term ecological studies, environmental education and research into local, national and global issues of conservation and sustainable development.

These functions / objectives find expression in the Zonation of the Biosphere into core, buffer and transition areas.

Statistics about Similipal Biosphere Reserve

| | | |
|----------|---------------------------------------------------------------------------------|-------------------|
| A | Area of Biosphere Reserve | 5569 sq.km |
| B | Zonation | |
| | (i) Core area | 845 sq.km |
| | (ii) Buffer area | 2129 sq.km |
| | (iii) Transition area | 2595 sq.km |
| C | Villages | |
| | (i) No. of Villages in the Core area | 2 |
| | (ii) No. of villages in the Buffer area | 61 |
| | (iii) No. of villages in the Transition area | 1200 |
| D | Population | 3.5 lakh |
| | (i) Tribal population | 73.44% |
| | (ii) SC population | 5.21% |
| | (iii) Other population | 21.35 |
| E | Common Tribes: Bhunjia, Bathudi, Kolha, Ganda, Santhal, Khadia, Mankadia | |



D. ELEPHANT CORRIDORS IN ODISHA

Elephants are big migratory animals and move a long distance in search of food and require substantial areas to support the ecological need. But habitat loss, expansion of human habitation and fragmentation of traditional elephant corridors has forced the elephants to split into a number of meta- populations or herds and move to new areas in search of food and shelter. As a result the interface of elephant and man has increased manifold. This results in conflicts with humans due to elephants raiding or destroying their crops. And as retaliation by villagers, there is killing of elephants, either by electrocution or poisoning.

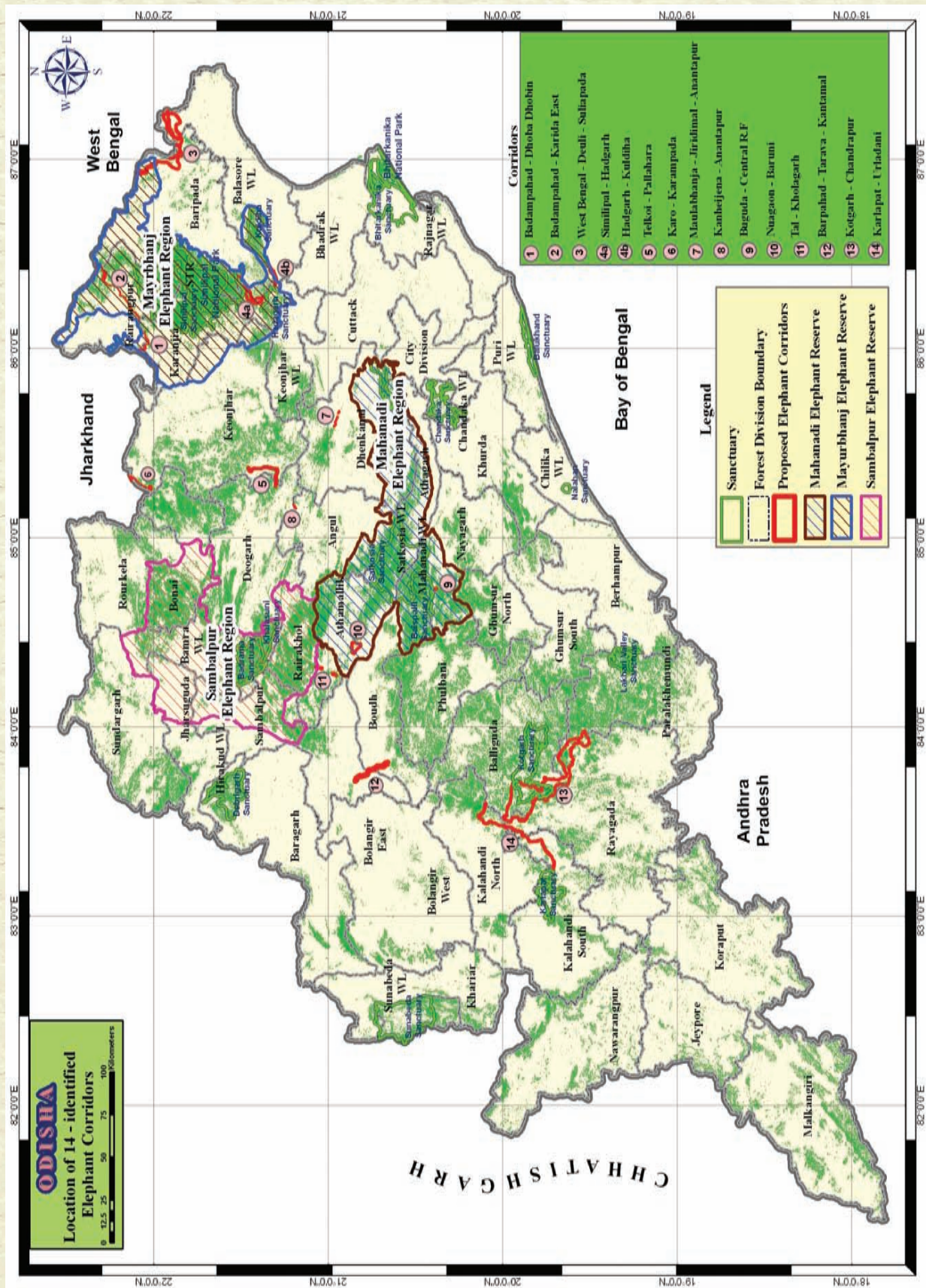
In order to protect the animals and its habitat there is a need to connect these fragmented patches of forest, which is called a corridor. This corridor will not only help the animals move without any disturbances, but also increase the chance of genetic interchange. As the risk of inbreeding within the localized patch of forest is reduced there will be a healthy population.

Traditionally fourteen corridors have been identified in the State which were to be used by elephants during course of their migration. These corridors need to be protected. All round development like human settlements, roads, railway line, electric lines, canal and mining etc is the main cause of corridor fragmentation.

For preparation of Corridor Management Plan, survey of each of the fourteen corridors has been done by the DFOs in the field. First task in this regard has been to know the extent of width of corridors. Generally the areas around the old corridor up to which elephants have reached during recent past has been tentatively taken as width of the corridor with due rationalisation to see the extent of problem which has to be faced while securing the corridor. Then in this width, broad land use survey has been done using Satellite imageries and ground truthing. Demographic survey has also been done to know the no. of villages and house holds, village population along with other administrative units like Name of district, Thana and Tehsil covering the area. House hold survey has not been taken up at this stage.

Due to fragmentation of traditional Corridors and degradation of habitat these elephants are in search of new habitat and corridors. Presence of elephants has been noticed in places where elephants have never been found before. It is noticed that few elephants are using new corridors. To assess these new corridors, Government has engaged an expert Shri Kishor Choudhary to identify new corridors. He has identified 9 new corridors. Its detailed survey is being conducted and these 9 new corridors are not part of this Management Plan. The Plan covers only 14 traditional corridors:

| Sl. No. | Name of the Corridor | Extends over District | Name of the Division | Length of the corridor km | Width of corridor km | Total area Sq km |
|-------------|------------------------------------------------------------|-------------------------------------|--------------------------------------|---------------------------|----------------------|------------------|
| 1 | Badampahar (Mayurbhanj)-Dhobadhobin (Jharkhand) INTERSTATE | Mayurbhanj | Karanjia | 16 | 0.5-1.5 | 24.3 |
| 2 | Badampahar (Mayurbhanj)-Karida (Jharkhand) INTERSTATE | Mayurbhanj | Rairangapur | 43 | 0.2-2.6 | 26.09 |
| 3 | W.Bengal-Deuli-Suliapada INTERSTATE | Mayurbhanj, Balasore; (West Bengal) | Baripada | 72 | 0.1-0.7 | 39.5 |
| 4 | Similipal-Hadagarh-Kuldiha INTER-DISTRICT | Mayurbhanj; Balasore | Baripada, Balasore WL | 41.7 | 0.7-3.5 | 91.39 |
| 5 | Telkoi-Pallahara INTER-DISTRICT | Keonjhar | Keonjhar | 30.4 | 0.2-0.6 | 13.24 |
| 6 | Karo (Keonjhar)-Karampada (Saranda, Jharkhand) INTERSTATE | Keonjhar; (Jharkhand) | Keonjhar | 15 | 0.3-2.3 | 17.3 |
| 7 | Maulabhanja - Jiridamali-Anantapur INTER-DISTRICT | Dhenkanal | Dhenkanal | 6.5 | 0.25-0.28 | 1.55 |
| 8 | Kahneijena-Anantapur INTER-DISTRICT | Angul | Angul | 6.6 | 0.4-1.1 | 5.22 |
| 9 | Buguda-Central RF of Nayagarh Divn INTER-DISTRICT | Nayagarh | Nayagarh | 2.6 | 0.8-0.6 | 0.76 |
| 10 | Nuagaon-Baruni INTER-DISTRICT | Angul | Athmallik | 4.5 | 0.4-4.6 | 20.7 |
| 11 | Tal-Kholgarh INTER-DISTRICT | Sambalpur | Rairakhol | 6.3 | 0.5-0.08 | 4.56 |
| 12 | Barpahad-Tarava-Kantamal INTER-DISTRICT | Sonepur; Boudh | Subarnapur | 24.2 | 0.38-1.5 | 21.7 |
| 13 | Kotagarh-Chandrapur INTER-DISTRICT | Kandhamal; Rayagada | Balliguda, Rayagada | 77 | 2.0-22.4 | 575.4 |
| 14 | Karlapat-Urladani INTER-DISTRICT | Kalahandi; Rayagada | Kalahandi(S), Kalahandi(N), Rayagada | 75 | 0.2-0.5 | 28.9 |
| 14 corridor | | | 15 Divisions | 421 | | 870.6 |



III CHAPTER

EX-SITU CONSERVATION AREAS

Indian mythology, history and literature are replete with accounts of wild animals patronized by kings, emperors and nobles for work, warfare and entertainment. Scriptures also record the existence of a Deer Park where Lord Buddha gave his first discourse. In India, the zoo movement received an impetus after independence.

“Zoos” or “Zoological Gardens/Parks” possess and manage a collection primarily of wild (non-domesticated) animals. In the arena of wildlife conservation, zoos play a significant role. The zoos provide environmental education, eco-system awareness and nature interpretation. They facilitate research on wild animals maintained in captivity and help in maintaining the gene pool of the critically endangered species often double up as rescue centre for straying wild animals rescued from near the human habitation.

Presently, there are one large Zoo, two small Zoos and eight Mini Zoos in the state. Nandankanan is a large Zoo. Two mini zoos have been upgraded to the status of small zoos are Wild Animal Conservation Centre (WAAC) at Motijharan in Sambalpur District, and Rourkela in Sundargarh District. The other Mini Zoos which are managed by Forest Department are Kuanria in Nayagarh District, Taptapani in Ganjam District, Papadahandi in Nawarangpur District, Harishankar in Bolangir District, Gharial Research and Conservation Unit at Tikarpada in Angul District and Kapilash in Dhenkanal District.

The rest four Deer Park / Mini Zoos in the state are owned by other agencies- Rourkela Small Zoo in Sundargarh District managed by SAIL, a Govt. of India PSU. Deer Park/ Mini Zoo at Bhanja Vihar, Berhampur University in Ganjam District, Mini Zoo, Sunabeda in Koraput District managed by Hindustan Aeronautics Limited (HAL) a Govt. of India PSU and Municipal Corporation Mini Zoo, Cuttack in Cuttack District.

Zoos in India are regulated by Central Zoo Authority, Govt. of India under the provisions of Section-38H of the Wildlife (Protection) Act, 1972 (amended up to 2006) and are guided by the National Zoo Policy, 1998. The Government of India have formulated Recognition of Zoo Rules, 2009 and fixed standards and norms for management of Zoos in the country. Central Zoo Authority (CZA), which is a statutory body under the Ministry of Environment & Forests, Govt. of India oversees the functioning of Zoos in the country and provides technical guidance and assistance as assigned under Section 38C of the Wildlife (Protection) Act, 1972. The CZA also regulates minimum standards and norms for upkeep and health care of animals in Indian Zoos and controls mushrooming of unplanned and ill-conceived Zoos which used to crop up in the country as adjuncts to public parks, industrial complexes and waysides.

Standards and norms for animal maintenance, housing and health care need to be given due priority for ensuring quality life to zoo animals. For this purpose regulatory as well as monitoring mechanisms have been prescribed. State Wildlife Organization with financial and technical support from the Central Zoo Authority endeavors to maintain standards and quality of the Zoo Small and Mini Zoos of the state, so that the very purpose of operating Zoos is achieved.

NANDANKANAN ZOOLOGICAL PARK

Nandankanan Zoological Park is one of the premier large Zoos of India located amidst a beautiful natural setting. Unlike conventional Zoos, it spreads over a vast 3.62 sq.km area of undulating topography with natural moist deciduous forest, water bodies and enchanting landscape that provides the Zoo inhabitants an appropriate ambience to live in harmony with the nature. The Zoological park is new a part of Nandankanan Wildlife Sanctuary

It was dedicated to the public on 29th December, 1960.

MISSION

To achieve the distinction of an outstanding Zoo through World Class Conservation, Education, Research and enriching visitor experiences by connecting people to wildlife and ex-situ conservation.

NANDANKANAN IS KNOWN FOR

- Birth of white tiger from normal coloured parents in the year 1980. and Melanistic Tiger cubs in 2014
- White Tiger Safari established in 1991.
- First captive breeding programme for Gharial in 1980.
- First Indian Zoo to become a member of WAZA and to breed Rattle and Pariah Kite.
- Puri-New Delhi Superfast Express has been named as Nandankanan Express. Nandankanan is the first Zoo in the country after which an express train has been named.
- Second largest heronry of the State for Open-billed Storks (more than 12,000).
- Has a captive fodder farm (over 33 Acres) and a Slaughter house to cater to dietary needs of carnivorous Zoo animals.
- Has the largest pool for housing Gharials and Hippopotamus.
- Prioritizing awareness, education and training programmes on wildlife conservation and research.
- Nandankanan is not only a Zoo but also an ideal centre for research, education and ecotourism.

A list of various Ex-situ Conservation Sites in the State of Odisha

| Sl. No. | Name of the Zoo/ Mini Zoo | Location (Revenue district) | Present status / Notification No. and Date | CZA's approval valid up to: | Managed by |
|---------|---------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------|
| 1 | Nandankanan Zoological Park | Khurda | Large Zoo/Notification letter No. F NO. 19- 64/ 92- CZA (212) (Vol. VII) (M) /3537 dated 11.9.13 | 30.09.2017 | Director, Nandankanan Biological Park |
| 2 | Kapilash Deer Park /Mini ZOO | Dhenkanal | Mini Zoo/Notification letter No-F.No.-19-106/92- CZA (211) (M)/4100 dt 7.1.2014 | 31.01.2016 | DFO, Dhenkanal Division |
| 3 | Motijharan Deer Park (renamed as "Wild Animal Conservation Centre") | Sambalpur | Small Zoo/Notification letter No F.No. 19-3/93- CZA (201) (M)/463 dt. 15.3.2012. | 31.03.2016 | DFO, Hirakud Wildlife Division |
| 4 | Harishankar Deer Park | Bolangir | Mini Zoo/Notification letter No. F. NO. 19-1/93-CZA (194) (M)/3516 dt.10.9.2013 | 30.09.2015 | DFO, Bolangir Forest Division |
| 5 | Taptapani Deer Park | Ganjam | Mini Zoo/Notification letter No.-F. NO.19-107/92-CZA (196) (M)/3075 dt.25.06.2013 | 30.09.2014 | DFO, Paralakhemundi Division |
| 6 | Kuanria Deer Park | Nayagarh | Mini Zoo/Notification letter No. F. No. 19-105/92- CZA (195) (M)/3518 dt.10.09.2013 | 30.09.2015 | DFO, Mahanadi Wildlife Division |
| 7 | Papadahandi Deer Park | Nabarangpur | (Mini Zoo)- Notification letter No.. F.No.19-112/ 92- CZA (197) (M)/801 dt. 17.10.2011 | 31.10.2014 | DFO, Nabarangpur Division |
| 8 | Gharial Research and Conservation Unit (GRACU), Tikarpada | Angul | Notification letter No.- F. No. 19-46/93 -CZA (200) (NS)/ 6988 dt. 17.04.2015. | 30.4.2017 | DFO, Satkosia Wildlife Division |
| 9 | Deer Park, Berhampur University | Ganjam | letter No F. No. 19-103/ 93 CZA (198) (NA)/2376/ dated.12.03.2013. Cancellation of Recognition communicated by CZA | 31.03.2010 | Berhampur University |
| 10 | HAL, Sunabeda Deer Park | Koraput | (Mini Category Zoo) - Notification letter No -F. No. 19-42/93- CZA (209) (M)/ 3063 dt. 24.6.2013 | 30.09.2014 | HAL, Sunabeda |
| 11 | Indira Gandhi Park Zoo and Deer Park, Rourkela. | Sundargarh | (Small Category Zoo) Notification letter No -19-155/93 -CZA (199) (Vol. III) (M) / 4096 dt. 7.1.2014. | 31.01.2017 | SAIL, Rourkela |
| 12 | Municipality Deer Park, Cuttack | Cuttack | Notification letter No F. No. 19-206/93- CZA (204) (NS)/6970 dt. 17.4.2015 | 30.4.2017 | Municipal Corporation, Cuttack |

Policy Initiatives on Wildlife Conservation

Wildlife Organization is taking many initiatives strategies to tackle various field related issues. Few of the important policy initiatives during the last year are as follows:

Research Advisory Committee: A Research Advisory Committee has been constituted in the Office of the Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden, Odisha to monitor and review the wildlife research activities, identify priority areas for wildlife research works, scrutinize and recommend the research proposals in the wildlife sector. The committee sits every three month to take up the wildlife research issues in the State. The Committee has been constituted vide Office Order No.4623 dated 4.6.2015. Principal Chief Conservator of Forests (Wildlife) is the Chairman of this Committee.

Committee for Shooting/Photography: A Committee has been constituted in the Office of the Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden, Odisha for scrutinizing the proposal and to recommend for necessary permission for the Educational/ commercial photography/photography shooting of films or documentaries in and around Protected Area of the State. The Committee has been constituted vide Office Order No.4888 dated 10.6.2015. Principal Chief Conservator of Forests (Wildlife) is the Chairman of this Committee.

Coordination with Other Departments

Railways: Regular meetings with Railways department are being held to prevent death of elephant due to rail accidents.

Electrocution: Elephant squads engaged in Forest/wildlife divisions are continuously monitoring the sagging of electric transmission lines and these information are being despatched to the concerned Electricity Department officials by the Divisional Forest Officers. Guidelines have been issued by Government of India from time to time vide letter no CEI-1/28(Wildlife)/2005-1262 dt 27.04.2005 and letter no-CEI-1/28/2002 dt 15.03.2002 of Central Electricity Authority as well as by DO No 8/6/2002-thermal-3 dt 27.03.2002 of Government of India, Ministry of Power to Chairman of all State Electricity Boards for proper up keep and maintenance of electrical lines of poles to protect the wild animals from electrocution. Regular coordination meetings with electricity department are being held to prevent the death of elephants due to electrocution.

Research: MoU has been signed on 22nd February 2014 with Asian Nature Conservation Foundation(ANCF), c/o Innovation Centre, Indian Institute of Science(IISc), Bengaluru for the “Study to asses the carrying capacity for Elephants in Odisha” with a budget Rs 49,51,320.00 lakhs. The study is in progress.

Interstate Meeting: Interstate Coordination Meeting to address Human-Elephant Conflict issues was held at Baripada on 24th June, 2015 under the Chairmanship of Principal CCF (Wildlife) & Chief Wildlife Warden, Odisha. Inspector General Forests (Project Elephant), Government of India, Ministry of Environment, Forests and Climate Change and forest officers from Jharkhand,

West Bengal, Chhattisgarh, Andhra Pradesh and Odisha attended the meeting. PCCF (WL) Odisha highlighted the importance of region with rich natural sal forests bearing rich mineral resource of country. He also explained the importance of cooperation and coordination among the Forest departments of bordering States to address the issues relating to man-elephant conflicts arising due to trans-boundary migration of elephants. It was decided that no state will obstruct the natural course of migration of elephants.



Flamingos in Nalabana Wildlife Sanctuary

Flock of Painted storks in Bhitarkanika National Park



ACHIEVERS IN THE FIELD OF WILDLIFE CONSERVATION

THE BIJU PATNAIK WILDLIFE CONSERVATION AWARD

STATE LEVEL

The State Government have instituted the Biju Patnaik Award for Wildlife Conservation to be presented each year in the month of October at a State Level Function to recognize the contribution of individuals/institutions towards conservation of wildlife. Presently, the award carries a citation and cash award of Rupees Two Lakhs among other honours. Biju Patnaik Wildlife Conservation Award is one of the most prestigious awards in the field of wildlife conservation.

THE AWARDEES OF PREVIOUS YEARS STATE LEVEL ARE AS FOLLOW:

- 2014:** Prof. Priyambada Mohanty Hejmadi for her life time sustained contribution towards Conservation of Wildlife, especially Olive Ridley Sea turtles & Estuarine Crocodile in the State.
- 2013:** Dr Lala Aswini Kumar Singh and Swaraj Kumar Kanhar for their life time contribution for wildlife conservation in Odisha
- 2012:** Shri Shyama Om Prasad Mishra for his sustained contribution for conservation of House Sparrows with own initiatives at local level to build up its dwindling population in the State.
- 2011:** Dr. Lakshmi Narayan Acharjyo and Sri Prasanna Kumar Behera for their life time contribution for wildlife conservation and protection in Odisha.
- 2010:** Sri Amarendra Lal Bose for sustained campaigning in the print media over last forty years for conservation of wildlife, emphasising flora and fauna of Similipal.
Sri Saroj Kumar Patnaik who made a mark nationally as a wildlife expert and a professional in the field of ex-situ management.
- 2009:** Dr Udaya Narayan Dev for his sustained lifetime contributions in wildlife, particularly the birds of Odisha.
Dr Sundara Narayana Patro for sustained life-time contributions and campaigner for the cause of conservation of wildlife and biodiversity of Orissa.
- 2008:** Prof. Basanta Kumar Behura for sustained work for over sixty years on all faculties of wildlife science, i.e. Education, Research and Conservation.
- 2007:** Sri Mahabir Pakshi Surakshya Samiti of Mangalajodi in taking a bearching role in bird conservation in and around Chilika lagoon.

- 2006:** The Peacock Protection Committee, Ganjam for collective effort of villagers that have made the peafowl very visible and local entity in the Pakidi hill area.
- 2005:** Blackbuck Management Committee, Ganjam for outstanding contribution to the cause of protection of blackbucks and for the larger cause of spreading the wildlife conservation ethos.



Biju Patnaik Award 2009



Biju Patnaik Award 2010



Biju Patnaik Award 2011



Biju Patnaik Award 2011



Biju Patnaik Award 2012



Biju Patnaik Award 2013



Biju Patnaik Award 2013



Biju Patnaik Award 2014

SUB-DIVISIONAL LEVEL

As per Resolution in the Odisha Gazette Notification No. 14585-1-Affn -6/2012- F&E dated 03.08.2012, the State Government have taken initiatives for conservation of Wildlife in the State for the promotion of awareness on the issues involved for nurturing Wildlife Conservation. In order to encourage vital contribution in this regard, the Biju Patnaik Award for Wildlife Conservation is constituted at Sub-Divisional Level from the year 2013-14 with a cash award of Rs.5000/- during the Wildlife Week Celebration in the 1st Week of October.

V CHAPTER

HUMAN-ANIMAL CONFLICT

Man-Animal Interface Management

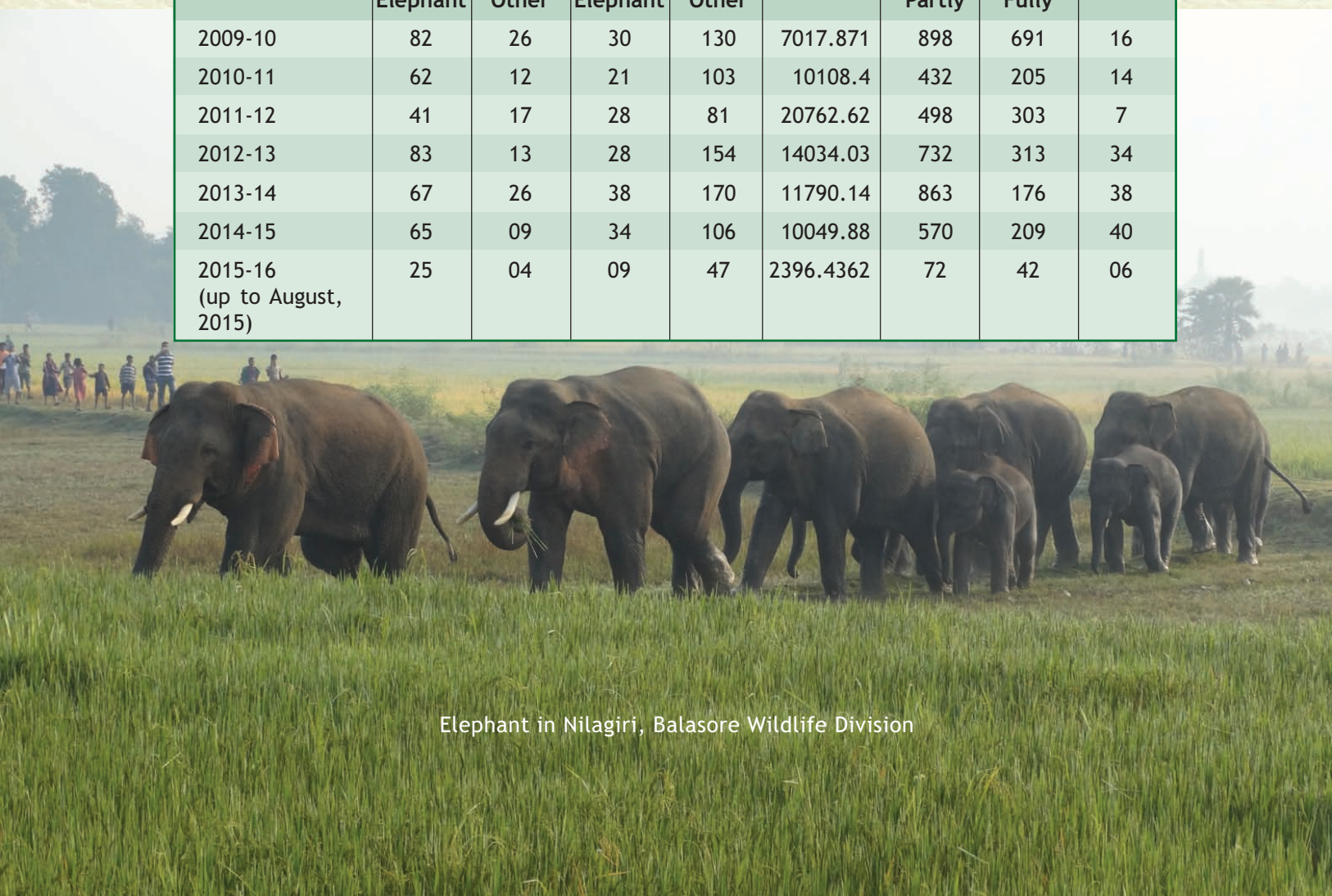
In a state like Odisha, where rural hinterlands and even outskirts of towns are well-forested, it is but natural that human-wildlife interface is extensive. However, instances where man and animals have come into conflict have been constantly rising over a period of time and during last year, the trend showed a decline.

Depredation trend over years

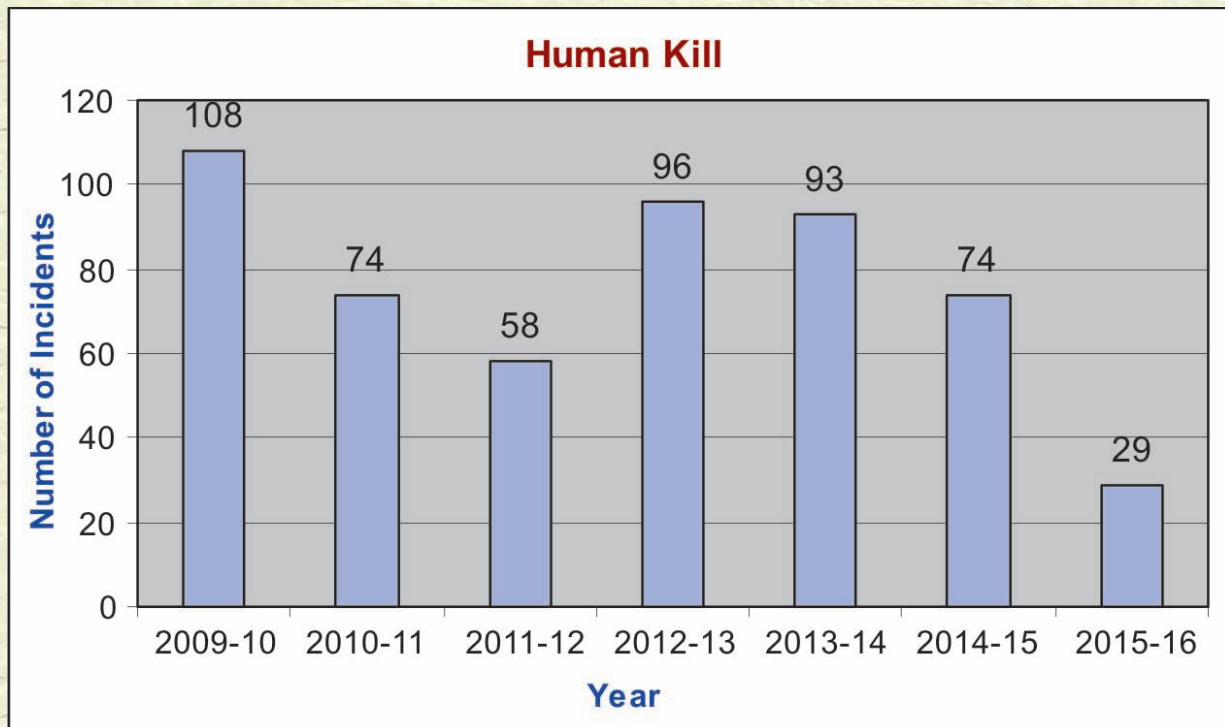
Man-animal conflicts, involving Elephant, Saltwater crocodile, Sloth Bear, Wild Boar and Leopard have been recorded in our State.

(Table showing depredation trend over during the period 2009-10 to 2015-16)

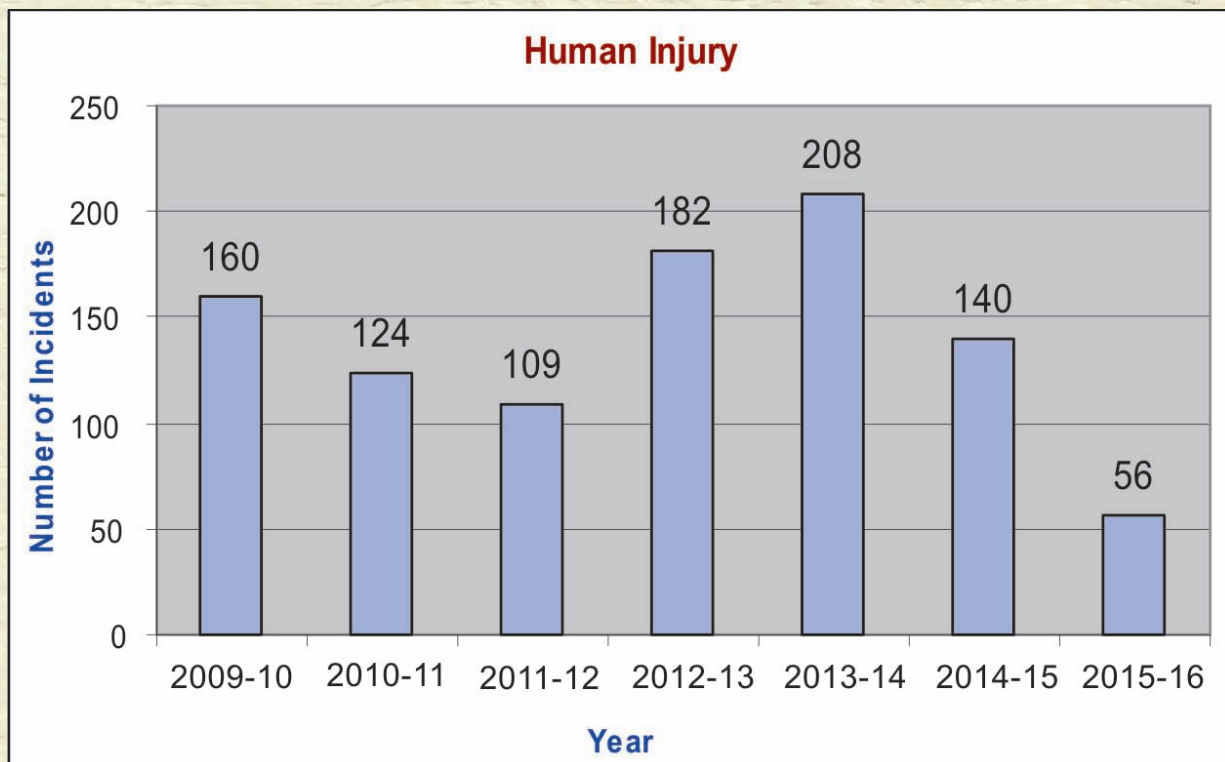
| Year | Human kill by | | Human Injury by | | Crop Damage in Acres | House Damage | | Cattle Kill |
|---------------------------------|---------------|-------|-----------------|-------|----------------------|--------------|-------|-------------|
| | Elephant | Other | Elephant | Other | | Partly | Fully | |
| 2009-10 | 82 | 26 | 30 | 130 | 7017.871 | 898 | 691 | 16 |
| 2010-11 | 62 | 12 | 21 | 103 | 10108.4 | 432 | 205 | 14 |
| 2011-12 | 41 | 17 | 28 | 81 | 20762.62 | 498 | 303 | 7 |
| 2012-13 | 83 | 13 | 28 | 154 | 14034.03 | 732 | 313 | 34 |
| 2013-14 | 67 | 26 | 38 | 170 | 11790.14 | 863 | 176 | 38 |
| 2014-15 | 65 | 09 | 34 | 106 | 10049.88 | 570 | 209 | 40 |
| 2015-16 (up to August, 2015) | 25 | 04 | 09 | 47 | 2396.4362 | 72 | 42 | 06 |



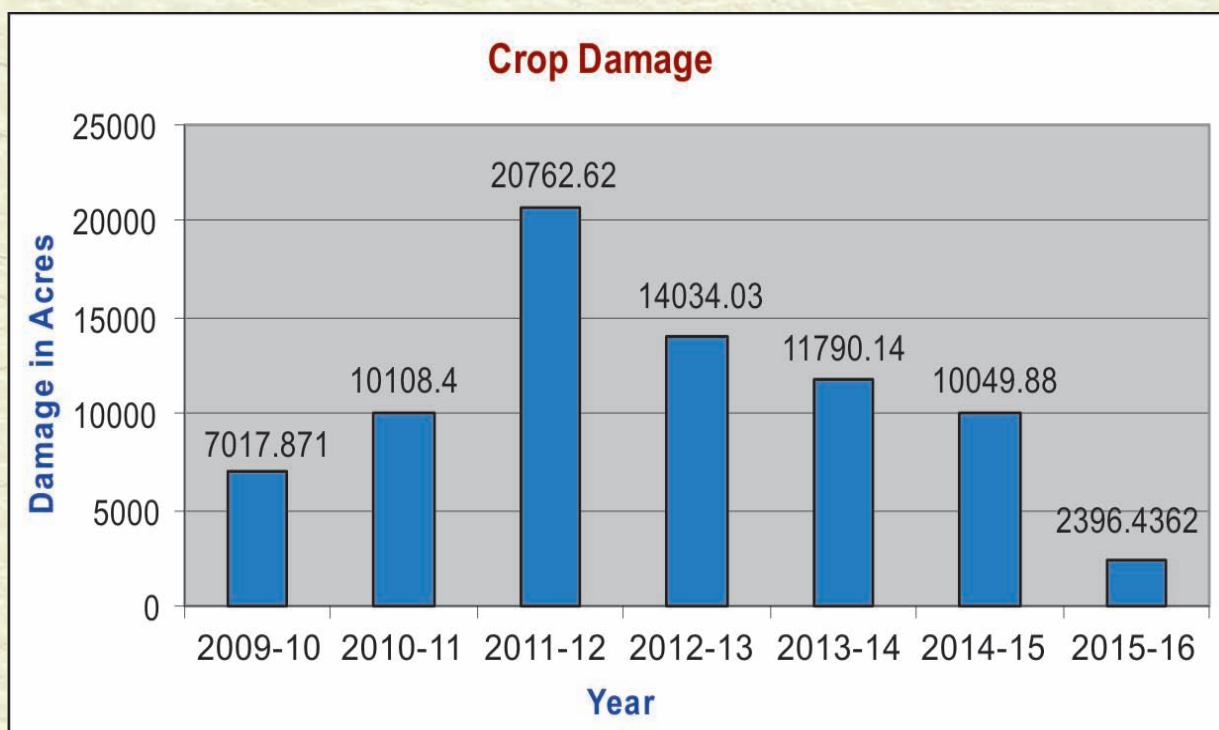
Elephant in Nilagiri, Balasore Wildlife Division



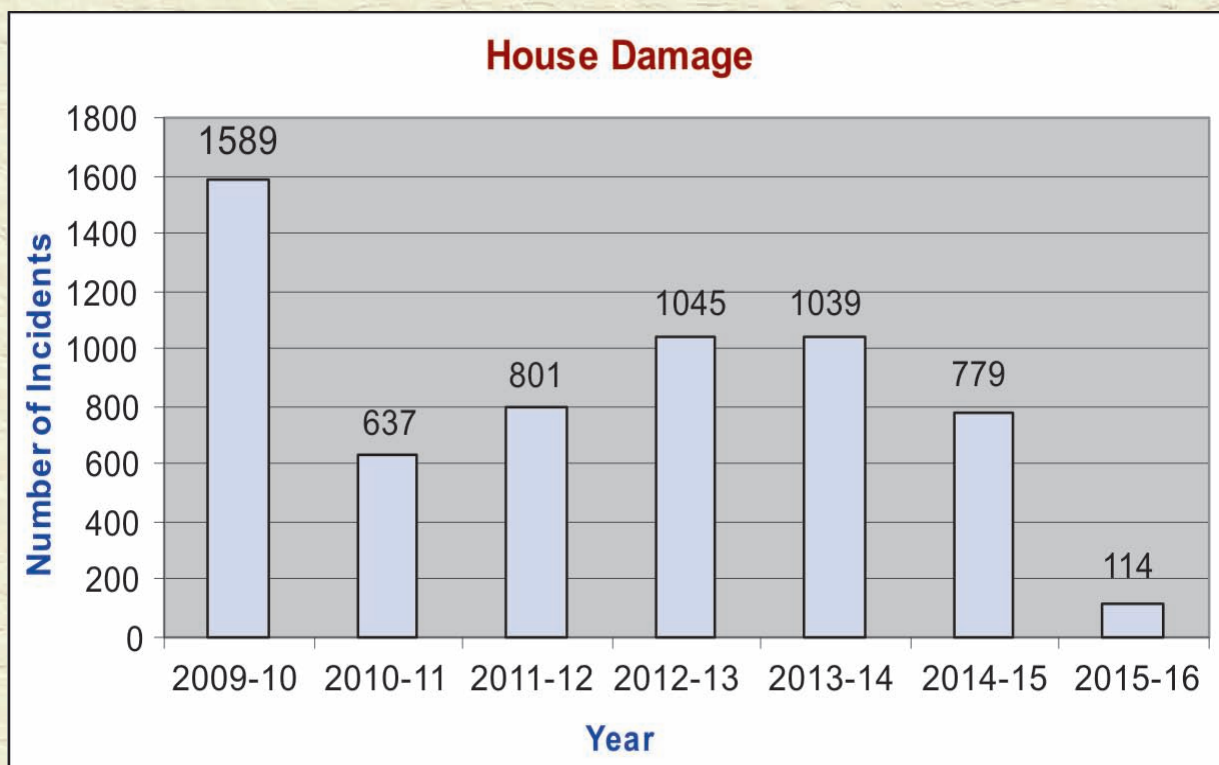
Human kill by wild animal during the period 2009-10 to 2015-16 (up to Aug, 2015) in Odisha.



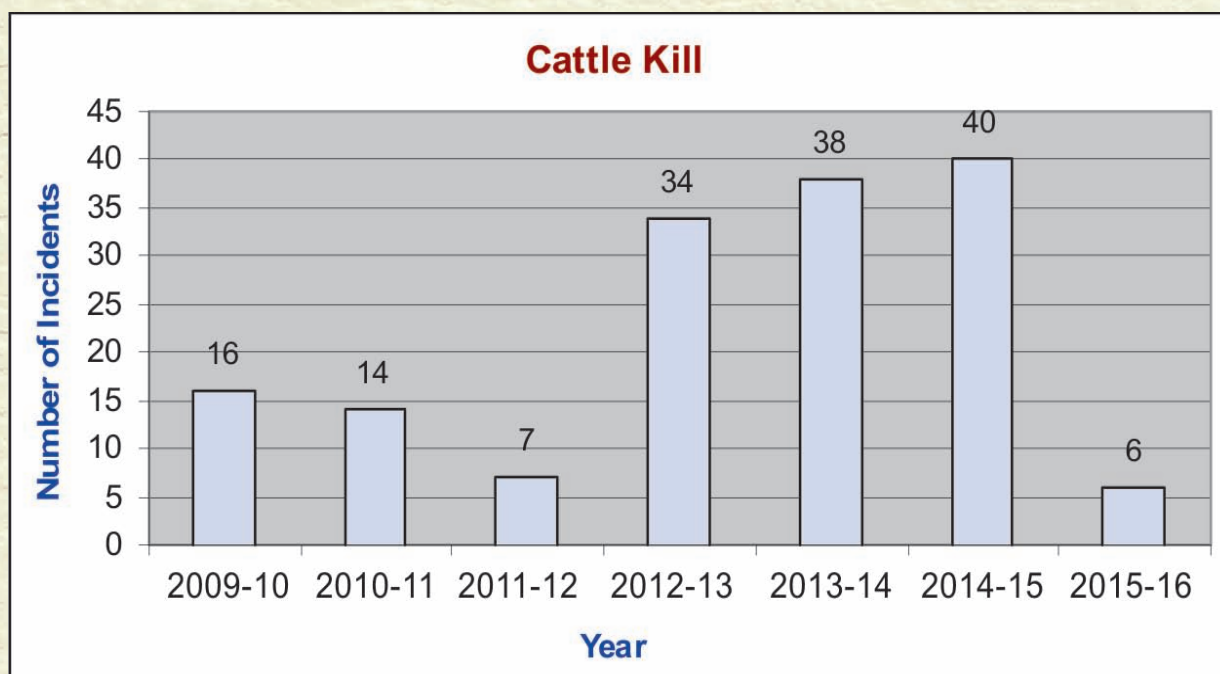
Human Injury wild animal during the period 2009-10 to 2015-16 (up to Aug, 2015) in Odisha



Crop damage by wild animal during the period 2009-10 to 2015-16 (up to Aug, 2015) in Odisha.



House damage by wild animal during the period 2009-10 to 2015-16(up to Aug, 2015) in Odisha.



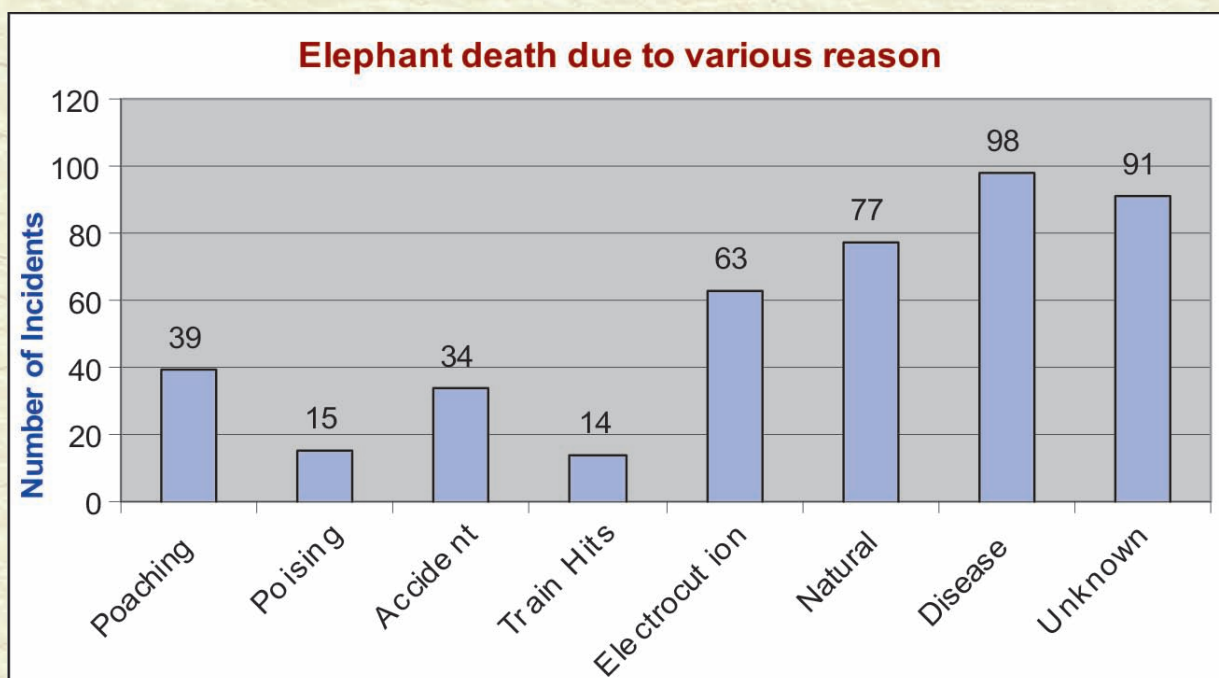
Cattle kill by wild animal during the period 2009-10 to 2015-16(up to Aug, 2015) in Odisha.

Animal Casualty Scenario

Human-wildlife conflict refers to the interaction between wild animals and people and the resultant negative impact on people and their property, or wild animals and their habitat. It occurs when growing human populations overlap with established wildlife territory, creating damage of property or life to some people and/or wild animals. In Odisha, several wildlife die due to different reasons. Elephant being a mega species is always in focus.

Table showing Elephant death due to various reasons in Odisha during the period 2009-10 to 2015-16

| Year | Poaching | Poisoning | Accident | Train Hits | Electrocution | | Natural | Disease | Unknown | Total |
|-------------------------------|----------|-----------|----------|------------|-----------------|-----------------|---------|---------|---------|-------|
| | | | | | Accid- ental | Delibe- rate | | | | |
| 2009-10 | 5 | 0 | 2 | 0 | 9 | 0 | 12 | 13 | 10 | 51 |
| 2010-11 | 9 | 9 | 3 | 0 | 5 | 13 | 6 | 20 | 18 | 83 |
| 2011-12 | 4 | 4 | 5 | 2 | 5 | 8 | 15 | 10 | 15 | 68 |
| 2012-13 | 5 | 3 | 4 | 11 | 6 | 7 | 10 | 20 | 15 | 81 |
| 2013-14 | 10 | 1 | 7 | 1 | 1 | 5 | 17 | 11 | 17 | 70 |
| 2014-15 | 4 | 1 | 12 | 0 | 2 | 2 | 9 | 15 | 9 | 54 |
| 2015-16 up to Aug, 2015 | 2 | 0 | 4 | 0 | 0 | 0 | 4 | 9 | 3 | 22 |



Elephant death due to various reasons in Odisha during the period 2009-10 to 2015-16 (up to Aug, 2015) in Odisha



Elephant death due during the period 2009-10 to 2015-16 (up to Aug, 2015) in Odisha

Species wise mortality trend during 2011-12 to 2015-16 up to 31.08.2015

| Sl.No. | Name of the wildlife species | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|--------|------------------------------|------------|------------|------------|------------|------------|
| 1 | Barking Deer | 15 | 37 | 34 | 52 | 11 |
| 2 | Bison | 1 | 2 | 0 | 1 | 1 |
| 3 | Blackbuck | 4 | 10 | 18 | 16 | 7 |
| 4 | Chousingha | 0 | 2 | 0 | 1 | 0 |
| 5 | Common Langur | 1 | 8 | 12 | 5 | 2 |
| 6 | Crocodile | 2 | 2 | 7 | 9 | 2 |
| 7 | Dolphin | 14 | 16 | 2 | 7 | 1 |
| 8 | Mouse Deer | 2 | 0 | 0 | 0 | 0 |
| 9 | Hyena | 14 | 8 | 10 | 4 | 1 |
| 10 | Jackal | 0 | 1 | 1 | 0 | 0 |
| 11 | Leopard | 1 | 4 | 4 | 5 | 5 |
| 12 | Monitor Lizard | 1 | 1 | 16 | 0 | 0 |
| 13 | Nilgai | 1 | 1 | 0 | 1 | 1 |
| 14 | Pangolin | 1 | 2 | 0 | 1 | 2 |
| 15 | Porcupine | 1 | 2 | 1 | 4 | 0 |
| 16 | Buffalo | 0 | 3 | 0 | 0 | 0 |
| 17 | Rabbit | 1 | 0 | 0 | 6 | 0 |
| 18 | Ratel | 2 | 5 | 1 | 1 | 0 |
| 19 | Sambar | 6 | 14 | 9 | 18 | 6 |
| 20 | Sloth Bear | 12 | 25 | 50 | 32 | 14 |
| 21 | Spotted Deer | 40 | 33 | 42 | 42 | 19 |
| 22 | Wild Boar | 22 | 36 | 37 | 49 | 9 |
| 23 | Jungle Cat | 2 | 0 | 0 | 0 | 0 |
| 24 | Peacock | 0 | 0 | 1 | 2 | 0 |
| 25 | Wolf | 0 | 0 | 1 | 2 | 0 |
| 26 | Fishing cat | 0 | 4 | 0 | 0 | 1 |
| 27 | Royal Bengal Tiger | 0 | 3 | 0 | 1 | 0 |
| 28 | Civet cat | 0 | 4 | 2 | 0 | 0 |
| 29 | Python | 1 | 0 | 2 | 1 | 0 |
| 60 | Bird | 113 | 71 | 169 | 72 | 10 |
| 31 | Giant squirrel | 0 | 0 | 1 | 1 | 0 |
| 32 | Whale | 0 | 0 | 0 | 2 | 0 |
| 33 | Elephant | 68 | 82 | 70 | 54 | 22 |
| 34 | King Cobra | 1 | 0 | 0 | 0 | 0 |
| | Total | 327 | 375 | 472 | 390 | 115 |

VI CHAPTER

MITIGATION OF HUMAN-ANIMAL CONFLICT

The instances of man animal interface have grown in the recent years in Odisha, particularly with respect to wild elephants and bears.

Steps to Mitigate the Issues

In order to mitigate human-animal conflict issue, a three-pronged strategy is being adopted. On one hand, preventive measure like site specific management plan are used and on the other hand, conflicts are redressed through deployment of squads and prompt payment compassionate grant.

A. Site specific Management Plan

Odisha, being rich in wildlife wealth has excellent mineral resources also. It is very likely that during the process of mining and other developmental activities the wildlife and their habitats are affected adversely. So, a site specific wildlife conservation plan has been made mandatory for any clearance of mining or industrial projects. The Plan takes care of protection & conservation of wildlife and improvement of their habitat.

Site specific Wildlife Management Plan for Mining

| Sl. No | Division | No. of Projects | Total Project Area (Ha) | Forest Area (Ha) | Total Amount (in lakhs) for Wildlife Conservation |
|--------|---------------|-----------------|-------------------------|------------------|---------------------------------------------------|
| 1 | Keonjhar | 51 | 13075.4678 | 7585.8478 | 11217.69384 |
| 2 | Bonai | 37 | 8277.560 | 6222.145 | 11599.7081 |
| 3 | Angul | 16 | 1279317 | 2779.87 | 8743.73 |
| 4 | Cuttack | 9 | 2718.3616 | 1684.39 | 1460.18 |
| 5 | Dhenkanal | 4 | 1195.92 | 193.61 | 833.22 |
| 6 | Sundargarh | 7 | 4524.21 | 897.02 | 3060.85 |
| 7 | Rourkela | 3 | 1099.303 | 0 | 594.83694 |
| 8 | Jharsuguda | 11 | 10488.025 | 3098.082 | 6089.87 |
| 9 | Sambalpur | 2 | 752.215 | 243.628 | 495.00 |
| 10 | Bargarh | 1 | 502.21 | 73.32 | 238.00 |
| 11 | Rairangpur | 4 | 1370.835 | 1085.16 | 324.40 |
| 12 | Kalahandi (S) | 2 | 1442.54 | 1321.498 | 5223.00 |
| 13 | Khariar | 1 | 5100.00 | 230.13 | 250.00 |

| Sl. No | Division | No. of Projects | Total Project Area (Ha) | Forest Area (Ha) | Total Amount (in lakhs) for Wildlife Conservation |
|--------|-----------------------------------------------|-----------------|-------------------------|-------------------|---------------------------------------------------|
| 14 | Berhampur | 1 | 2464.05 | 2464.05 | 46.00 |
| 15 | Rayagada | 3 | 520.67 | 447.25 | 637.58 |
| 16 | Koraput | 3 | 2703.615 | 1699.625 | 3908.840 |
| 17 | Chandaka | 2 | 00.55 | 0.55 | 309.00 |
| 18 | Deogarh | 1 | 0 | 0 | 83.85 |
| 19 | Mangrove Forest Division (Wildlife), Rajnagar | 2 | 36.350 | 38.70 | 2004.00 |
| | Total | 160 | 1335588.882 | 30064.8758 | 57119.75888 |

B. Preventive measures

The interventions include erection of trenches, elephant-proof barriers, solar fencing, deploying anti depredation squads etc.

Table showing elephant anti-depredation squads of Odisha

| Name of the Circle | 2010-11 | | 2011-12 | | 2012-13 | | 2013-14 | | 2014-15 | |
|--------------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|
| | No of Squad | No of Tracker | No of Squad | No of Tracker | No of Squad | No of Tracker | No of Squad | No of Tracker | No of Squad | No of Tracker |
| Angul | 11 | 18 | 10 | 2 | 15 | 4 | 15 | 0 | 15 | 0 |
| Baripada | 8 | 16 | 8 | 4 | 11 | 3 | 11 | 0 | 9 | 0 |
| Berhampur | 9 | 14 | 8 | 3 | 9 | 4 | 9 | 0 | 7 | 0 |
| Bhawanipatna | 4 | 8 | 5 | 1 | 5 | 0 | 5 | 0 | 4 | 0 |
| Bhubaneswar | 6 | 12 | 7 | 0 | 6 | 1 | 6 | 0 | 5 | 0 |
| Koraput | 3 | 6 | 3 | 0 | 1 | 1 | 1 | 0 | 3 | 0 |
| Rourkela | 9 | 18 | 9 | 2 | 7 | 2 | 7 | 0 | 9 | 0 |
| Sambalpur | 8 | 14 | 10 | 2 | 6 | 0 | 6 | 0 | 8 | 0 |
| Total | 58 | 106 | 60 | 14 | 60 | 15 | 60 | 0 | 60 | 0 |

(* Elephant trackers have been merged with squads) Besides, for better prevention of wildlife depredation, bird protection squads, river protection squads and marine protection squads are being deployed for specific period.)

List of EDC involved in Wildlife Conservation in and around Protected areas

| Sl.No | Name of the Division | Name of the District | No of EDC |
|--------------|----------------------|----------------------|------------|
| 1 | Satkosia WL | Angul | 37 |
| 2 | Mahanadi WL | Nayagarh | 15 |
| 3 | Balasore WL | Balasore | 11 |
| 4 | STR | Mayurbhanj | 164 |
| 5 | Puri WL | Puri | 29 |
| 6 | Chandaka WL | Khurda | 27 |
| 7 | Rajnagar WL | Kendrapara | 48 |
| 8 | Bhadrak WL | Bhadrak | 0 |
| 9 | Kalahandi south | Kalahandi | 14 |
| 10 | Sunabeda WL | Nuapara | 04 |
| 11 | Keonjhar WL | Keonjhar | 05 |
| 12 | Baamra WL | Sambalpur | 25 |
| 13 | Hirakud WL | Sambalpur | 23 |
| 14 | Balliguda | Kandhamal | 80 |
| 15 | Parlakhemundi | Gajapati | 04 |
| 16 | Dhenkanal | Dhenkanal | 26 |
| Total | | | 512 |



Olive Ridley Sea Turtle Mating Pair in Rusikulya River Mouth, Ganjam

Payment of Compassionate Grant

Compassionate payment is one of the most important mitigation measures in the field of animal depredation. In the current year, the amounts for compassionate payment have been revised.

Table showing Rates for Compassionate payments

| Sl. No | Type of Depredation (Section) | Amount in Rs |
|--------|--------------------------------------------------------------------------|---------------------------------------------|
| 1 | Human Kill (45-AA) | 3 lakhs |
| 2 | Permanent injury (45-BB) | 1 lakh |
| 3 | Temporary injury (45-BB) (Including free treatment in govt. hospital) | 5,000 + free treatment in Govt. Hospital |
| 4 | Cattle Kill (Adult) (45-CC) | 5,000 |
| 5 | Cattle Kill (Calf) (45-CC) | 2,500 |
| 6 | Crop Damage (Paddy + Cereals) (45- EE) | 10,000/ Ha |
| 7 | Crop Damage (Cash Crop) (45- EE) | 12,000/ Ha |
| 8 | House Damage (Partial) (45- FF) | 2,000 |
| 9 | House Damage (Full) (45- FF) | 10,000 |



Bison (*Bos gaurus*) in Debrigarh Wildlife Sanctuary, Sambalpur

Trend of Compassionate Grant Payment in Odisha:

Compassionate amount paid in Lakhs in Odisha for Depredation by Elephant

| Year | Human Kill | | Human Injury | | Cattle Kill | | House Damage | | Crop Damage | | Total Amount paid in Lakhs |
|-------------------------------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|---------------|---------|----------------------------|
| | No. of Victims | Amount | No. of Victims | Amount | No. of Victims | Amount | No. of Victims | Amount | Crop in Acres | Amount | |
| 2007-08 | 62 | 61.10 | 16 | 0.63 | 6 | 0.12 | 850 | 20.88 | 9713.45 | 97.13 | 179.87 |
| 2008-09 | 46 | 45.80 | 13 | 2.68 | 0 | 0 | 756 | 17.14 | 8802.90 | 88.02 | 153.65 |
| 2009-10 | 69 | 68.90 | 26 | 5.51 | 7 | 0.12 | 1066 | 27.29 | 10219.00 | 102.18 | 204.01 |
| 2010-11 | 62 | 60.42 | 11 | 2.08 | 7 | 0.14 | 1139 | 25.15 | 15656.40 | 156.56 | 244.36 |
| 2011-12 | 61 | 70.13 | 28 | 2.89 | 7 | 0.26 | 1149 | 46.41 | 110920 | 267.44 | 387.14 |
| 2012-13 | 80 | 147.93 | 35 | 9.65 | 6 | 0.31 | 1075 | 38.66 | 18456.26 | 800.53 | 997.08 |
| 2013-14 | 67 | 98.4 | 23 | 7.09 | 9 | 0.375 | 563 | 20.01 | 10130.8 | 911.87 | 1037.76 |
| 2014-15 | 99 | 196.56 | 27 | 8.32 | 7 | 0.35 | 1196 | 46.46 | 14788.34 | 1346.04 | 1597.75 |
| 2015-16 Up to 31.8.2015 | 10 | 26.0 | 14 | 4.0 | 0 | 0 | 151 | 5.9 | 207.45 | 91.67 | 175.19 |

Compassionate amount paid (in Lakhs) in Odisha for Depredation by Wild Animals other than Elephant

| Year | Human kill | | Human Injury | | Cattle Kill | | Total amount Paid in Lakhs |
|---------------------------------|----------------|--------|----------------|--------|----------------|--------|----------------------------|
| | No. of Victims | Amount | No. of Victims | Amount | No. of Victims | Amount | |
| 2007-08 | 10 | 9.51 | 122 | 16.03 | 7 | 0.10 | 25.64 |
| 2008-09 | 27 | 26.10 | 137 | 21.75 | 11 | 0.17 | 48.02 |
| 2009-10 | 15 | 14.98 | 107 | 15.86 | 6 | 0.07 | 30.91 |
| 2010-11 | 23 | 23.00 | 93 | 16.60 | 6 | 0.09 | 39.69 |
| 2011-12 | 23 | 33.00 | 118 | 20.17 | 7 | 0.26 | 53.43 |
| 2012-13 | 21 | 36.77 | 195 | 35.09 | 25 | 1.15 | 73.01 |
| 2013-14 | 17 | 32.90 | 159 | 28.59 | 20 | 1.0 | 62.49 |
| 2014-15 | 29 | 64.59 | 189 | 42.06 | 28 | 1.2 | 107.85 |
| 2015-16 (up to August, 2015) | 02 | 5.0 | 19 | 4.45 | 03 | 0.12 | 16.67 |

WILDLIFE CENSUS

Wildlife research and documentation is a recognized mandate of the Wildlife Wing. The conservation projects of crocodiles, sea turtles, Dolphin, tiger, elephant and blackbuck, along with the captive-breeding programme at Nandankanan, and eco-development need and approaches are some of the few areas generating lot of data which are used in planning and execution of wildlife conservation programmes.

Population estimation of various wildlife species are being done regularly for better understanding of wildlife and their habitat which form a vital input for better management.

As a practice, regular census of Elephant, Tiger and Blackbuck in the terrestrial (forest) habitat; the Gharial, Mugger and waterfowl in the freshwater habitat; the Estuarine Crocodile, the Waterfowl, Whale, Dolphins in brackish water and the nesting Turtles in the sea coast habitat are being conducted.



Estuarine Crocodile (*Crocodylus Porosus*) in Bhitarkanika National Park

WILDLIFE CENSUS RESULTS

| Sl. No. | Species | Census area / site | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---------|-------------------------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Salt water crocodile | Bhitarkanika | 1516 | 1596 | 1627 | 1670 | 1659 | 1661 | 1655 | 1678 |
| 2 | Mugger crocodile | (i) Satkosia / Mahanadi River | 78 | 87 | 79 | 91 | 81 | 76 | 84 | 86 |
| | | (ii) River systems of Similipal Tiger Reserve | 89 | - | 78 | 85 | 82 | 80 | 79 | 81 |
| | | (iii) Ghodahada Reservoir, Digapahandi, Ganjam | 29 | 41 | 40 | - | 48 | 48 | 46 | 49 |
| 3 | Gharial | Mahanadi River system | 03 | 03 | 03 | 03 | 02 | 02 | 02 | 01 |
| 4 | Olive Ridley sea turtle | Gahirmatha | - | 1.67 | 3.57 | 4.72 lakhs | 1.68 lakhs | 4.06 lakhs | 00 | 4.13 lakhs |
| | | Rushikulya River mouth | 1.80 lakhs | 2.61 | 1.56 | 2.52 lakhs | 4.01 lakhs | 2.88 lakhs | 0.60 lakhs | 3.09 lakhs |
| | | Total | 1.80 lakh | 4.28 lakhs | 5.13 lakhs | 7.24 lakhs | 5.69 lakhs | 6.94 lakhs | 0.60 lakhs | 7.22 lakhs |
| 5 | Irrawaddy Dolphin | Chilika lagoon | 138 | 146 | 158 | 156 | 145 | 152 | 158 | 144 |
| | Dolphins (7 species) | Entire Coastal Odisha including Chilika lagoon | -- | -- | -- | -- | -- | -- | -- | 450 (Irrawaddy-206 Bottle-Nose-52 Humpback (Sousa- chinensis)-125 Pantropical spotted-15 Humpback (Sousa plumbea)-50 Finless- 1 Ganges River- 1) |

| | | | | | | | | | | |
|----|-----------------|-------------------------------------------|-------------------------------------------------|---------------------------|-----------------------|-------------------------------------------------|---------------------------|---------------------------|---------------------------|-------------------------------------------------|
| 6 | Blackbuck | Balukhand-Konark Wildlife Sanctuary | - | 22 | 29 | 34 | 13 | 22 | 04 | 0 |
| | | Balipadar-Bhetnoi area in Ganjam District | 1672 | - | - | 2181 | - | - | - | 3806 |
| 7 | Elephant | Entire State | 1862 | - | - | 1886 | - | 1930 | - | 1954 |
| 8 | Tiger* | Entire State | 45 (as per Camera Trap Method by WII, Dehradun) | - | - | 32 (as per Camera Trap Method by WII, Dehradun) | - | - | - | 28 (as per Camera Trap Method by WII, Dehradun) |
| 9 | Leopard | Entire State | - | - | - | - | - | - | - | - |
| 10 | Migratory Birds | (i) Chilika lagoon | 8.92 lakhs of 111 species | 8.91 lakhs of 101 species | 9.04 lakh 114 species | 7.92 lakhs of 103 species | 8.68 lakhs of 106 species | 8.62 lakhs of 112 species | 7.07 lakhs of 99 species | 7.46 lakhs of 102 species |
| | | (ii) Bhitarkanika Mangrove Wetland | 1.25 lakhs of 97 species | 1.01 lakhs of 79 species | 1.05 lakh 74 species | 0.53 lakhs of 107 species | 0.53 lakhs of 118 species | 0.82 lakhs of 111 species | 0.67 lakhs of 142 species | 1.13 lakhs of 145 species |
| | | (iii) Hirakud Reservoir | 0.22 lakhs of 25 species | - | 0.49 lakh 26 species | 0.11 lakh 34 species | 0.47 lakhs of 52 species | 0.79 lakhs of 59 species | 0.64 lakhs of 54 species | 0.58 lakhs of 64 species |

* A new method of monitoring using camera traps in samples has been introduced. In this study during Jan 2006 to July 2008, the scientists of WII estimated the presence of 45 (37-53) Tigers.

* The monitoring was also conducted during 2010. In this study the scientists of WII estimated presence of 32 (20-44) Tigers.

* Camera Trap method was used during the current year in Similipal and Satkosia tiger Reserve By NTCA for estimation of tiger population in the whole State.

A. Elephant Census

The census of Elephants was conducted in all divisions having Elephant during the months of April-May 2015. The census dates are decided in consultation with the states of Jharkhand, Chhatisgarh and West Bengal, all of which share the Eastern Range Elephant Habitat with Odisha state. Odisha holds about 70% of the Elephants in the region. The Wildlife Headquarters of Odisha Government organizes the training at the regional level. The technique involved is actual count method.

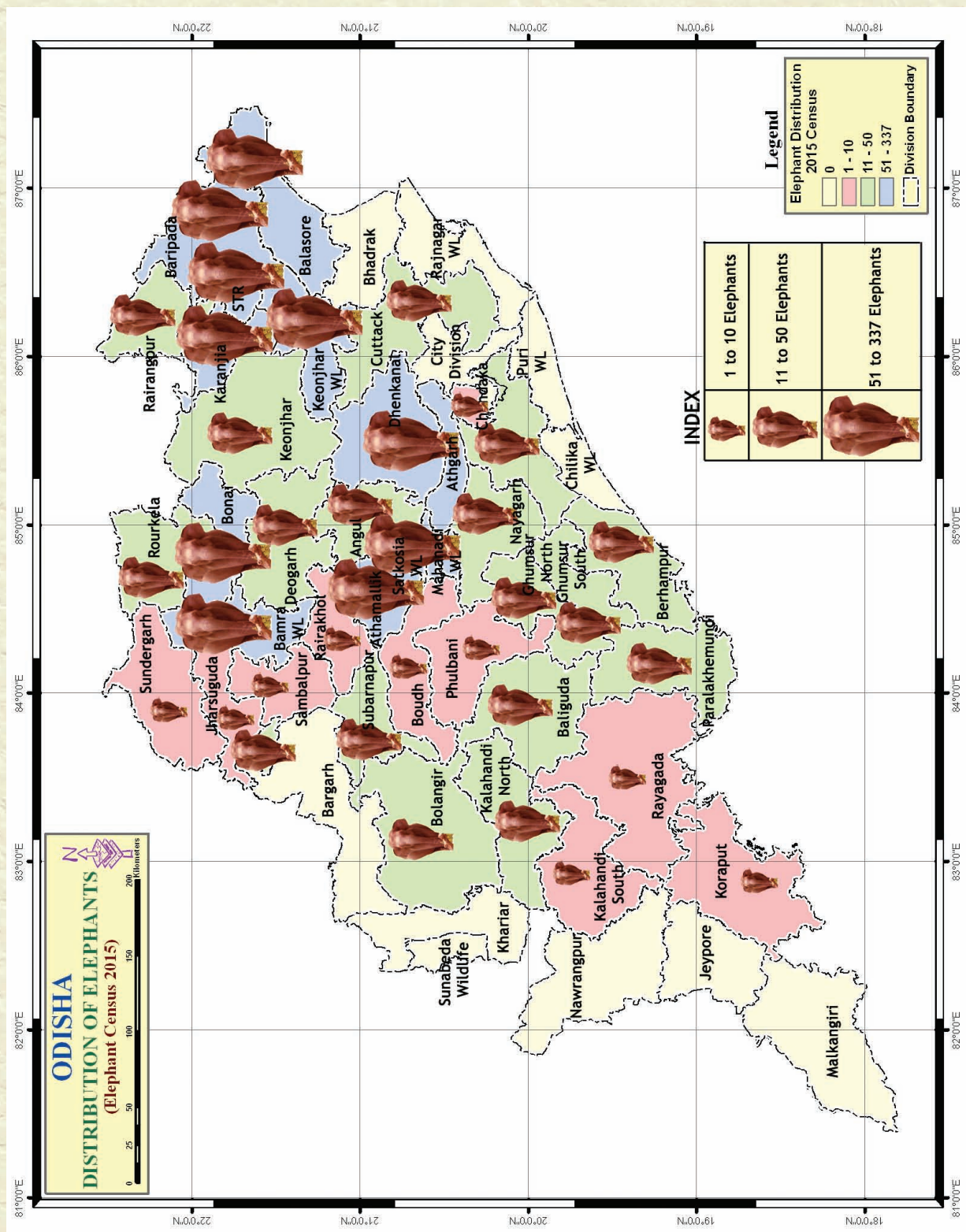
The Census of elephants in Odisha were conducted in the years 1979, 1999 and 2002, 2007, 2010, 2012 and 2015. The technique for census of Elephant has been developed and refined with every successive census operation. The traditional method involves fixed point counts from salt-licks, watch towers, etc. combined with perambulations during the day time.

ODISHA: ELEPHANT CENSUS RESULT 2015

| Name of the Division | Male | Female | Unknown Sex | Young | Total |
|-------------------------------|------------|------------|-------------|------------|------------|
| Angul | 8 | 22 | 0 | 10 | 40 |
| Athmalik | 7 | 33 | 2 | 14 | 56 |
| Dhenkanal | 35 | 90 | 5 | 34 | 164 |
| Athgarh | 21 | 60 | 0 | 33 | 114 |
| Cuttack | 12 | 13 | 1 | 9 | 35 |
| Satkosia WL | 22 | 83 | 0 | 41 | 146 |
| Mahanadi WL | 12 | 51 | 0 | 25 | 88 |
| Total Angul Circle | 117 | 352 | 8 | 166 | 643 |
| Balasore WL | 18 | 50 | 0 | 21 | 89 |
| Rairangpur | 8 | 21 | 0 | 19 | 48 |
| Karanjia | 13 | 28 | 0 | 15 | 56 |
| Baripada | 14 | 40 | 0 | 14 | 68 |
| Similipal TR Core | 39 | 206 | 1 | 91 | 337 |
| Total Baripada Circle | 92 | 345 | 1 | 160 | 598 |
| Berhampur | 2 | 11 | 1 | 6 | 20 |
| Ghumsur North | 6 | 11 | 0 | 4 | 21 |
| Ghumsur South | 6 | 21 | 0 | 15 | 42 |
| Parlakhemundi | 3 | 15 | 0 | 3 | 21 |
| Balliguda | 4 | 23 | 4 | 15 | 46 |
| Boudh | 2 | 2 | 2 | 2 | 8 |
| Phulbani | 1 | 4 | 0 | 3 | 8 |
| Total Berhampur Circle | 24 | 87 | 7 | 48 | 166 |
| Kalahandi North | 7 | 9 | 0 | 3 | 19 |

| Name of the Division | Male | Female | Unknown Sex | Young | Total |
|----------------------------------|------------|-------------|-------------|------------|-------------|
| Kalahandi South | 1 | 3 | 0 | 3 | 7 |
| Subarnapur | 1 | 29 | 0 | 7 | 37 |
| Bolangir | 2 | 22 | 0 | 4 | 28 |
| Khariar | 0 | 0 | 0 | 0 | 0 |
| Total Bhawanipatna Circle | 11 | 63 | 0 | 17 | 91 |
| Chandaka WL | 3 | 3 | 0 | 2 | 8 |
| Chilika WL | 0 | 0 | 0 | 0 | 0 |
| City Forest | 0 | 0 | 0 | 0 | 0 |
| Khurda | 8 | 16 | 0 | 7 | 31 |
| Nayagarh | 2 | 11 | 1 | 3 | 17 |
| Bhadrak WL | 0 | 0 | 0 | 0 | 0 |
| Total Bhubaneswar Circle | 13 | 30 | 1 | 12 | 56 |
| Rayagada | 2 | 5 | 0 | 2 | 9 |
| Koraput | 0 | 0 | 0 | 0 | 0 |
| Total Koraput Circle | 2 | 5 | 0 | 2 | 9 |
| Bonai | 11 | 43 | 0 | 11 | 65 |
| Deogarh | 7 | 19 | 6 | 10 | 42 |
| Keonjhar | 12 | 24 | 1 | 10 | 47 |
| Keonjhar WL | 13 | 27 | 1 | 10 | 51 |
| Rourkela | 7 | 21 | 0 | 11 | 39 |
| Sundargarh | 4 | 3 | 2 | 1 | 10 |
| Total Rourkela Circle | 54 | 137 | 10 | 53 | 254 |
| Sambalpur | 3 | 1 | 0 | 1 | 5 |
| Jharsuguda | 0 | 1 | 0 | 0 | 1 |
| Rairakhol | 4 | 3 | 0 | 2 | 9 |
| Bamra WL | 19 | 60 | 0 | 23 | 102 |
| Hirakud WL | 2 | 12 | 0 | 6 | 20 |
| Bargarh | 0 | 0 | 0 | 0 | 0 |
| Total Sambalpur Circle | 28 | 77 | 0 | 32 | 137 |
| ODISHA GRAND TOTAL | 341 | 1096 | 27 | 490 | 1954 |

The male, female ratio of 1:3 is one of the best in the Country.



Elephant Population Trend in Odisha from 1979 to 2015

| Sl. No. | Name of Divisions | May-79 | May-99 | May-02 | May-07 | Apr-10 | Jun-12 | May-15 |
|---------|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Angul | 173 | 162 | 24 | 76 | 40 | 56 | 40 |
| 2 | Athmallik | 0 | 29 | 37 | 23 | 15 | 28 | 56 |
| 3 | Athgarh | 75 | 154 | 156 | 139 | 133 | 131 | 114 |
| 4 | Balasore WL | 0 | 41 | 56 | 67 | 81 | 93 | 89 |
| 5 | Balliguda | 54 | 17 | 32 | 35 | 41 | 36 | 46 |
| 6 | Bamra WL | 179 | 183 | 201 | 194 | 152 | 176 | 102 |
| 7 | Bargarh | 0 | 0 | 0 | 0 | 0 | 15 | 0 |
| 8 | Baripada | 0 | 0 | 0 | 48 | 48 | 52 | 68 |
| 9 | Berhampur | 0 | 0 | 0 | 9 | 37 | 35 | 20 |
| 10 | Bhadrak WL | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 11 | Bolangir | 0 | 0 | 0 | 0 | 10 | 22 | 28 |
| 12 | Bonai | 25 | 53 | 82 | 69 | 45 | 42 | 65 |
| 13 | Boudh | 0 | 15 | 0 | 16 | 8 | 4 | 08 |
| 14 | Chandaka WL | 0 | 83 | 62 | 67 | 23 | 24 | 08 |
| 15 | Chilika WL | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | City Forest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | Cuttack | 0 | 0 | 0 | 8 | 14 | 22 | 35 |
| 18 | Deogarh | 7 | 21 | 9 | 27 | 58 | 49 | 42 |
| 19 | Dhenkanal | 92 | 94 | 81 | 132 | 157 | 162 | 164 |
| 20 | Ghumsur (N) | 5 | 24 | 9 | 17 | 13 | 17 | 21 |
| 21 | Ghumsur (S) | 8 | 5 | 6 | 0 | 0 | 32 | 42 |
| 22 | Hirakud WL | 0 | 0 | 0 | 0 | 0 | 16 | 20 |
| 23 | Jeypore | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | Kalahandi (N) | 0 | 0 | 0 | 26 | 34 | 34 | 19 |
| 25 | Kalahandi (S) | 60 | 24 | 61 | 27 | 30 | 0 | 7 |
| 26 | Karanjia | 0 | 28 | 44 | 40 | 32 | 23 | 56 |
| 27 | Keonjhar | 90 | 75 | 112 | 33 | 41 | 73 | 47 |
| 28 | Keonjhar WL | 0 | 0 | 0 | 27 | 35 | 40 | 51 |
| 29 | Khariar | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | Khurdha | 57 | 0 | 0 | 8 | 6 | 14 | 31 |
| 31 | Koraput | 0 | 0 | 0 | 0 | 14 | 8 | 0 |
| 32 | Mahanadi WL | 0 | 0 | 25 | 1 | 7 | 5 | 88 |
| 33 | Malkangiri | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | Mangrove WL | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | Nabarangpur | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | Nayagarh | 51 | 0 | 0 | 6 | 12 | 5 | 17 |
| 37 | Parlakhemundi | 217 | 86 | 42 | 44 | 21 | 19 | 21 |
| 38 | Phulbani | 121 | 3 | 6 | 14 | 1 | 6 | 8 |
| 39 | Puri WL | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | Rairakhol | 51 | 170 | 165 | 11 | 16 | 6 | 9 |
| 41 | Rairangapur | 0 | 0 | 0 | 48 | 48 | 47 | 48 |
| 42 | Rayagada | 102 | 10 | 0 | 24 | 12 | 4 | 9 |
| 43 | Rourkela | 0 | 0 | 0 | 0 | 11 | 11 | 39 |
| 44 | Jharsuguda | 0 | 0 | 0 | 1 | 4 | 0 | 1 |
| 45 | Sambalpur | 7 | 54 | 64 | 91 | 77 | 16 | 5 |
| 46 | Satkosia WL | 0 | 0 | 155 | 194 | 224 | 229 | 146 |
| 47 | STR Core | 670 | 496 | 412 | 298 | 331 | 334 | 337 |
| 48 | Subarnapur | 0 | 0 | 0 | 23 | 30 | 31 | 37 |
| 49 | Sunabeda WL | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | Sundargarh | 0 | 0 | 0 | 17 | 25 | 13 | 10 |
| | GRAND TOTAL | 2044 | 1827 | 1841 | 1862 | 1886 | 1930 | 1954 |

B. Tiger / Leopard Census

‘Pugmark Tracking’ involves collection of pugmark tracings and plaster casts from the field and analysis of these separately for individual male, female and cub of tiger and leopard, and their diagnostic track dimensions and spatial distribution.

The final result indicates the (a) total numbers of male, female and cub of tiger and leopard, (b) their pugmark dimensions with stride where available, (c) the names of locations where the pugmarks of each tiger have been traced to show the gross movement areas (d) interrelationship among different tigers by linking each male to female and the latter to cubs tracked in the movement area and finally (e) spatial distribution map.

192 tigers were estimated to be found in the State during the year 2004 (Table-1) by pug-mark technique.

In the year 2004-05, the Project Tiger authorities and the Wildlife Institute of India together devised a monitoring method. In this method, there were two approaches to collect field data. First, information on habitat conditions and different signs of Tiger evidences were to be collected, and second, by using camera traps Tiger photographs were to be obtained from all Tiger areas.

This process involves following phases namely:

Phase-I: involves field data collection at the beat level using a eight-day standardized protocol after due training to field personnel in states. The eight day protocol consists of field data collection of evidence pertaining to carnivore (tiger, leopard), signs, ungulate abundance, human disturbance and status of habitat. Formats for the eight-day beat level data collection were made available in local vernacular language to help field staff.(done at the forest Department, Odisha).

Phase-II: involves computation of human disturbance indices, habitat indices and landscape indices from remotely sensed data (done at the Wildlife Institute of India).

Phase-III: involves computation of tiger density using camera traps in a mark recapture statistical framework through research biologists deployed by the Wildlife Institute of India, besides computation of ungulate density using distance sampling. The result of camera trap method are given as below:

Table Showing All India Tiger Estimation by Camera Trap Methods*

| Sl. No | Name of the Tiger Reserve | Year 2006 | Year 2010 | Year 2014 |
|--------|---------------------------|------------------|------------------|-------------|
| 1 | Similipal Tiger Reserve | 20(17-23) | 23(12-34) | |
| 2 | Satkosia Tiger Reserve | 6 | 8(7-9) | |
| 3 | Sunabeda Tiger Reserve | 9 | Census not done | Whole State |
| 4 | Sporadic Occurrence | 6 | | |
| | ODISHA TOTAL | 45(37-53) | 32(20-44) | 28 |

* This is only CAMERA TRAP estimation, which is different from earlier process of sampling through pugmark survey. Hence, they are not comparable.

Tiger/Leopard Census 2004

All Odisha Tiger/Leopard Census 2004

| date:08 March 2004 | TIGER | | | | LEOPARD | | | |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|
| | Male | Female | Cub | Total | Male | Female | Cub | Total |
| Bhawanipatna Circle: | | | | | | | | |
| Sunabeda | 11 | 10 | 11 | 32 | 14 | 17 | 5 | 36 |
| Khariar | 1 | 2 | 1 | 4 | 1 | 2 | 0 | 3 |
| Kalahandi(N) | 0 | 0 | 0 | 0 | 2 | 5 | 1 | 8 |
| Kalahandi (S) | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 5 |
| Balangir (E) | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 |
| Balangir(W) | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 6 |
| Sub-Total | 12 | 13 | 12 | 37 | 19 | 34 | 8 | 61 |
| Koraput Circle | | | | | | | | |
| Jeypore (incl tigers of Malkangiri) | 1 | 1 | 0 | 2 | 9 | 7 | 1 | 17 |
| Rayagada | 2 | 1 | 0 | 3 | 5 | 5 | 1 | 11 |
| Malkanagiri (Tigers with Jeypore) | 0 | 0 | 0 | 0 | 5 | 4 | 1 | 10 |
| Nawarangpur | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 |
| Koraput | 1 | 1 | 0 | 2 | 4 | 6 | 1 | 11 |
| Sub-Total | 4 | 3 | 0 | 7 | 24 | 24 | 4 | 52 |
| Angul Circle | | | | | | | | |
| Satkosia(WL) | 4 | 6 | 1 | 11 | 9 | 9 | 1 | 19 |
| Angul | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 |
| Dhenkanal | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Athagarh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Athmalik | 0 | 0 | 0 | 0 | 6 | 8 | 2 | 16 |
| Cuttack | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Sub-Total | 4 | 6 | 1 | 11 | 19 | 20 | 3 | 42 |
| Sambalpur Circle | | | | | | | | |
| Sambalpur(S) | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| Sambalpur(N) | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Rairakhole | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Bamra WL | 1 | 1 | 0 | 2 | 7 | 8 | 1 | 16 |
| Hirakud WL | 2 | 3 | 0 | 5 | 10 | 11 | 0 | 21 |
| Bargarh | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Sub-Total | 3 | 4 | 0 | 7 | 21 | 21 | 2 | 44 |
| Bhubaneswar Circle | | | | | | | | |
| Nayagarh | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Mahanadi WL | 3 | 2 | 2 | 7 | 7 | 8 | 0 | 15 |

| date:08 March 2004 | TIGER | | | | LEOPARD | | | |
|-------------------------|-------|--------|-----|-------|---------|--------|-----|-------|
| | Male | Female | Cub | Total | Male | Female | Cub | Total |
| Chandka | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 8 |
| Khurda | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 8 |
| Sub-Total | 3 | 2 | 2 | 7 | 17 | 16 | 0 | 33 |
| Berhampur Circle | | | | | | | | |
| Berhampur | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Ghumsur(S) | 0 | 1 | 1 | 2 | 4 | 4 | 0 | 8 |
| Ghumsur(N) | 0 | 2 | 6 | 8 | 25 | 21 | 3 | 49 |
| Phulbani | 0 | 0 | 2 | 2 | 4 | 11 | 2 | 17 |
| Boudh | 0 | 1 | 2 | 3 | 6 | 6 | 0 | 12 |
| Parlakhemundi | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Balliguda | 3 | 1 | 2 | 6 | 4 | 5 | 0 | 9 |
| Sub-Total | 3 | 5 | 13 | 21 | 46 | 47 | 5 | 98 |
| Rourkela Circle | | | | | | | | |
| Anandpur(WL) | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 |
| Sundargarh | 0 | 0 | 0 | 0 | 3 | 6 | 1 | 10 |
| Bonai | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 8 |
| Raurkela | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Deogarh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Keonjhar | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Sub-Total | 0 | 0 | 0 | 0 | 5 | 18 | 2 | 25 |
| STR Circle | | | | | | | | |
| Similipal | 27 | 39 | 28 | 94 | 32 | 50 | 18 | 100 |
| Baripada | 0 | 0 | 2 | 2 | 4 | 9 | 0 | 13 |
| Karanjia | 1 | 1 | 0 | 2 | 4 | 3 | 1 | 8 |
| Rairangpur | 0 | 1 | 2 | 3 | 4 | 2 | 0 | 6 |
| Bhadrak WL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Balasore WL | 0 | 1 | 0 | 1 | 1 | 4 | 0 | 5 |
| Sub-Total | 28 | 42 | 32 | 102 | 45 | 68 | 19 | 132 |
| SUMMARY | | | | | | | | |
| Bhawanipatna Circle | 12 | 13 | 12 | 37 | 19 | 34 | 8 | 61 |
| Koraput Circle | 4 | 3 | 0 | 7 | 24 | 24 | 4 | 52 |
| Angul Circle | 4 | 6 | 1 | 11 | 19 | 20 | 3 | 42 |
| Sambalpur Circle | 3 | 4 | 0 | 7 | 21 | 21 | 2 | 44 |
| Berhampur Circle | 3 | 5 | 13 | 21 | 46 | 47 | 5 | 98 |
| Rourkela Circle | 0 | 0 | 0 | 0 | 5 | 18 | 2 | 25 |
| Bhubaneswar Circle | 3 | 2 | 2 | 7 | 17 | 16 | 0 | 33 |
| STR Circle | 28 | 42 | 32 | 102 | 45 | 68 | 19 | 132 |
| Odisha Total | 57 | 75 | 60 | 192 | 196 | 248 | 43 | 487 |

WILDLIFE OFFENCE CASES

Protection is one of the prime mandate of wildlife organization. Several field forest staff, special squads and many communities devote their prime time in protection of wildlife. The details of the wild life offence cases booked and accused arrested are as follows:

**Wildlife Offence cases booked and accused arrested
2007-08 to to 2015-16 (up to August 2015).**

| Year | Animal | No of O R cases booked | No of accused Forwarded |
|-------------------------------|--------------|------------------------|-------------------------|
| 2007-08 | Elephant | 7 | 12 |
| | Other Animal | 75 | 166 |
| | Total | 82 | 178 |
| 2008-09 | Elephant | 11 | 11 |
| | Other Animal | 63 | 86 |
| | Total | 74 | 97 |
| 2009-10 | Elephant | 51 | 12 |
| | Other animal | 59 | 198 |
| | Total | 110 | 210 |
| 2010-11 | Elephant | 49 | 18 |
| | Other animal | 54 | 81 |
| | Total | 103 | 99 |
| 2011-12 | Elephant | 37 | 22 |
| | Other animal | 49 | 104 |
| | Total | 86 | 126 |
| 2012-13 | Elephant | 11 | 17 |
| | Other animal | 94 | 192 |
| | Total | 105 | 209 |
| 2013-14 | Elephant | 15 | 33 |
| | Other animal | 158 | 318 |
| | Total | 173 | 351 |
| 2014-15 | Elephant | 07 | 29 |
| | Other animal | 180 | 361 |
| | Total | 187 | 390 |
| 2015-16 (up to 31.08.2015) | Elephant | 02 | 14 |
| | Other animal | 37 | 127 |
| | Total | 39 | 141 |

IX CHAPTER

BUDGET

Projects and Schemes

Wildlife organization has different schemes for wildlife management which are funded under Non-Plan, State Plan & Central Plan. The details of financial target and achievement position under Non-Plan, State Plan & Central Plan during 2014-15 in respect of Wildlife Organization (Rs. in lakhs) are as follows:

| Sl. No. | Name of the scheme | Budget provision in Lakhs | Amount released by Govt. of India (including revali-dated amount) | Amount sanctioned by State Govt. in Lakhs | Expenditure incurred in Lakhs |
|---------|-------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------|-------------------------------------------|-------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Non-Plan (Including 13 th F.C grant for preservation of forest Wealth) | 5546.06 | Not applicable | 5546.06 | 5379.52 |
| 2 | State Plan | | | | |
| | a) One time ACA-Promotion of Eco-Tourism in Wildlife Sanctuary & Forest Resorts | 200.00 | -do- | 200.00 | 193.99 |
| | b) Wildlife Protection & Conservation measures including those for black buck and fresh water turtles | 1200.00 | -do- | 1200.00 | 1190.98 |
| | c) Protection & Conservation of Olive Ridley turtle | 70.00 | -do- | 70.00 | 70.00 |
| | d) Integrated development of wildlife habitats (State share + Central share under CSP) | 455.00 | 31.887 | 52.51 | 52.51 |
| | e) Elephant Management Project | 400.00 | -do- | 400.00 | 399.48 |
| | f) Management and Development of Elephant Corridor | 500.00 | - | 500.00 | 495.75 |
| | g) Strengthening of transmission line in elephant corridor | 0.01 | - | 0 | 0 |
| | h) 111-Zoological Park - Nature Conservation. Maintenance of wildlife | 60.00 | - | - | - |

| 1 | 2 | 3 | 4 | 5 | 6 |
|----------|----------------------------------------------------------------------------------|----------------|---------------|---------------|---------------|
| | i) Devt. & Beautification of Nandankanan | 0.01 | - | 0 | 0 |
| | j) Satkosia Tiger Reserve (Central Share+State Share) | 397.58 | 197.56 | 315.278 | 315.27 |
| | k) 796-Tribal Area Sub-Plan-Similipal Tiger Reserve(State share + Central Share) | 906.87 | 515.30 | 687.35 | 664.29 |
| | m) 4406- Capital Outlay Construction of Prakruti Bhawan | 0.01 | - | 0 | 0 |
| | n) TOTAL STATE PLAN | 4189.48 | 744.74 | 3425.14 | 3382.29 |
| 3 | Central Plan | | | | |
| | a) Integrated development of wildlife habitats | 600.00 | 340.72 | 340.66 | 334.37 |
| | b) Elephant Management Project | 300 | 170.08 | 170.08 | 169.05 |
| | c) Relocation of villages from sanctuaries & National Parks | 0.01 | 0 | 0 | 0 |
| | d) Similipal Biosphere Reserve | 400.00 | 0 | 0 | 0 |
| | e) Conservation & Management of Mangroves | 200.00 | 101.68 | 101.68 | 97.98 |
| | TOTAL CENTRAL PLAN | 1500.01 | 612.48 | 612.43 | 601.40 |



WILDLIFE PROTECTION, CONSERVATION AND MANAGEMENT UNDER CAMPA

Activities proposed in the APO (2014-15) for management of wildlife inside and outside the protected area network under CAMPA are as follows:

Protection of wildlife and their habitat, anti-depredation activities, strengthening the communication network, infrastructure development in the field, habitat improvement activities, eco-development programmes, Capacity building, Training programme, Engagement of Research Fellows, Site specific Wildlife Management Plan.

Table showing the details of Wildlife Protection and Management in the action plan for 2014-15 under CAMPA

| Sl.No. | Item of work | Odisha State Grand total (Rs. in lakhs) |
|--------------|--------------------------------------------------------------------------------|-----------------------------------------|
| 1 | Protection Activities | 796.00 |
| 2 | Anti-depredation activities | 2355.00 |
| 3 | Communication | 398.00 |
| 4 | Infrastructure Development | 245.00 |
| 5 | Habitat Improvement | 1552.00 |
| 6 | Management of Protected Areas and Zoos | 175.00 |
| 7 | Research activities | 35.00 |
| 8 | Implementation of site specific wildlife conservation plans | 750.00 |
| 9 | Strengthening of Wild crime cell, Elephant cell etc at WLHQ | 10.00 |
| 10 | Additional amount for rehabilitation with in Similipal Tiger Reserve, Baripada | 350.00 |
| Total | | 6736.00 |



Spotted deer in Dangamal of Bhitarkanika National Park

HIGHLIGHTS DURING 2014-15



Circle level elephant census training programme in the conference hall of RCCF, Baripada



Daily foot patrolling by antipoaching squad in Similipal Tiger Reserve.



Awareness programme among the school children field visit of friends of Similipal Tigers



Archery competition organized on the eve of Maha Vishuba Sankranti among tribals in sensitive buffer ranges



Fire protection squad, Similipal Tiger Reserve



Bamboo Cottage at village Kumari, Gurguria, Karanjia Forest Division



Lac cultivation by VSS, Karanjia Forest Division



Road surface causeway at Namti, Similipal Tiger Reserve



Meadow development work in UBK range using grass cutter, Similipal Tiger Reserve



Dry stone bund at Bhajam nala, Similipal Tiger Reserve



Smokeless Chulla, Karanjia Forest Division



Dry stone bunding around Namti Camp, Similipal Tiger Reserve



Camera Trap Photo : Tiger in Similipal Tiger Reserve



A herd of Tusker in paddy field, Nilagiri,
Balasore WL Division



A herd of Bison in the salt lick, Kuldiha Wildlife
Sanctuary



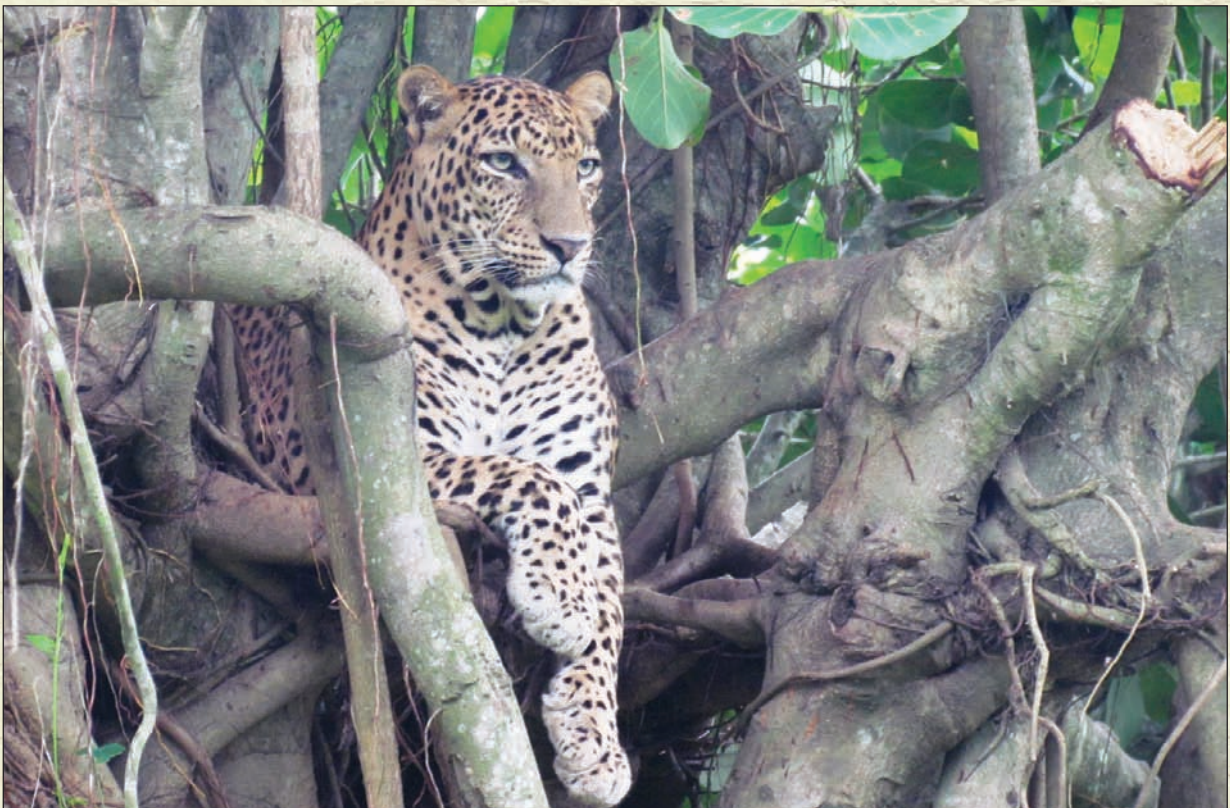
Resque of python in Balasore WL Division



Giant squirrel at Kuldiha FRH, Kuldiha WL
Sanctuary



Camera Trap Photo : Melanistic Tiger in Similipal Tiger Reserve



Open top Leopard enclosure in Nandankanan



Birth of Gaur calf in Nandankanan



Birth of Lion cub in Nandankanan



Gharial hatchlings in Nandankanan



Butterfly Park in Nandankanan



Tranquilization training programme at Nandankanan



Walk through aviary at Nandankanan



Elephant day celebration on date 12.08.2015 at Nandankanan



Tiger with cubs in Nandankanan Zoological Park



White tiger in Nandankanan Zoological Park



Biodiversity Conservation Nature Camp at outskirts of Baghamunda, Satkosia Tiger Reserve



Biodiversity Conservation Nature Camp at Baghamunda, Satkosia Tiger Reserve



Anti-poaching Mobile Barrack at Takarsingha in Satkosia Tiger Reserve



Camera Trap Photo: Tiger (*Panthera tigris*) in Satkosia Tiger Reserve



Camera Trap Photo: Porcupine (*Hystrix indica*) in Satkosia Tiger Reserve



Watch Tower at Krushnachandrapur, Rasgovindapur Range, Baripada Forest Division for monitoring of Migratory elephant from West Bengal



Camera Trap Photo : Leopard (*Panthera pardus*) in Mahanadi Wildlife Division



Elephant Proof Barrier Solar fence in Mahanadi WL Division



Camera Trap Photo : Leopard (*Panthera Pardus*), Athgarh Forest Division



Camera Trap Photo : Rattle (*Mellivora capensis*), Athgarh Forest Division



Elephant in Nuagarh, Narasinghpur East Range, Athgarh Forest Division



Elephant in Khuntuni, Athgarh Forest Division



Training on Wildlife Crime Control, Intelligence Gathering, Detection Investigation and Prosecution in the Conference Hall XIMB Campus, 12th - 13th March, 2015, Bhubaneswar organised by the Wildlife Wing.



Training on Wildlife Crime Control, Intelligence Gathering, Detection Investigation and Prosecution in the Conference Hall XIMB Campus, 12th-13th March, 2015, Bhubaneswar organised by the Wildlife Wing.



Interstate co-ordination meeting to address human-elephant conflict issues in the conference hall of DFO, Baripada Division



Interstate co-ordination meeting to address human elephant conflict issues in the conference hall of DFO, Baripada Division.



Female Blackbucks (*Antilope cervicapra*) in Ghumsur South Forest Division



Male Blackbuck (*Antilope cervicapra*) in Ghumsur North Division



Elephant Proof Barrier in Chandaka WL Division



Permanent Nursery in Chandaka WL Division



Pheasants near Jhalara in Chandaka WL Division



Nuakua WHS, Chandaka WL Division



Khiragadia, Chandaka WL Division



Elephant Proof Barrier Laterite Lining, Chandaka WL Division



Water Passage on Elephant Proof barrier near Panas Jhara, Chandaka WL Division



Mangrove Pitta (*Pitta megarhyncha*)



Black-capped kingfisher (*Halcyon pileata*)



Stork billed Kingfisher (*Pelargopsis capensis*)



White-bellied sea eagle (*Haliaeetus leucogaster*)



Asian Openbill-Stork (*Anastomus oscitans*), Bagagahan



Nest guarding by Estuarine Crocodile in Bhitarkanika National Park



Estuarine Crocodile basking on the mudflats of Bhitarkanika National Park



Spikes on electric pole to check elephant rubbing with poles in Bonai Forest Division



Plantation of Banyan tree in Kuldiha Wildlife Sanctuary





Wildlife Organisation
Forest and Environment Department
Government of Odisha
Email : odishawildlife@gmail.com
Web : www.odishawildlife.org