

# Eco Development in Protected Areas

Presented By :

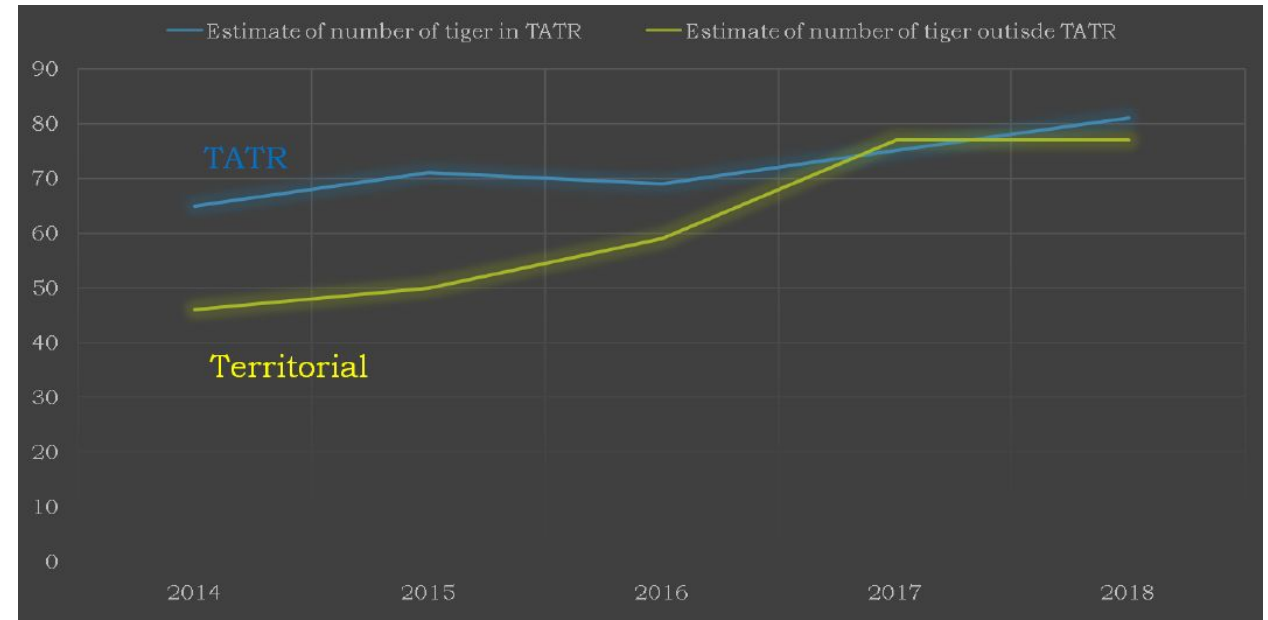
Gajendra Prakash Narwane

# Eco-Development Background

- Article 48 – The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.
- Article 51-A – It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers, and wildlife and to have compassion for living creatures.
- However, the onus of conservation falls squarely on the shoulders of people living in and around the forests.
- It is not only about responsibility but the adverse effects of conservation have to be borne by the people.
- Who reaps benefit of conservation?

# Eco Development Background

Year	Tigers in Tadoba TR	Tigers in Territorial Areas	Total
2014	65	46	111
2015	71	50	121
2016	69	59	128
2017	75	77	152
2018	81	77	158
2019	88	115	203



# Eco-Development Background

Year	Human Deaths due to Tiger	Human Deaths due to Other wild animals	Total
2014	5	4	9
2015	3	3	6
2016	6	5	11
2017	9	6	15
2018	10	9	19
2019	16	7	23
2020	26	7	33
2021 (Till 19.05.2021)	15	3	18

# Eco-Development Background

## **National Aims / Needs**

- Conserve forests
- Increase population of wildlife and tiger
- Promote well being of locals

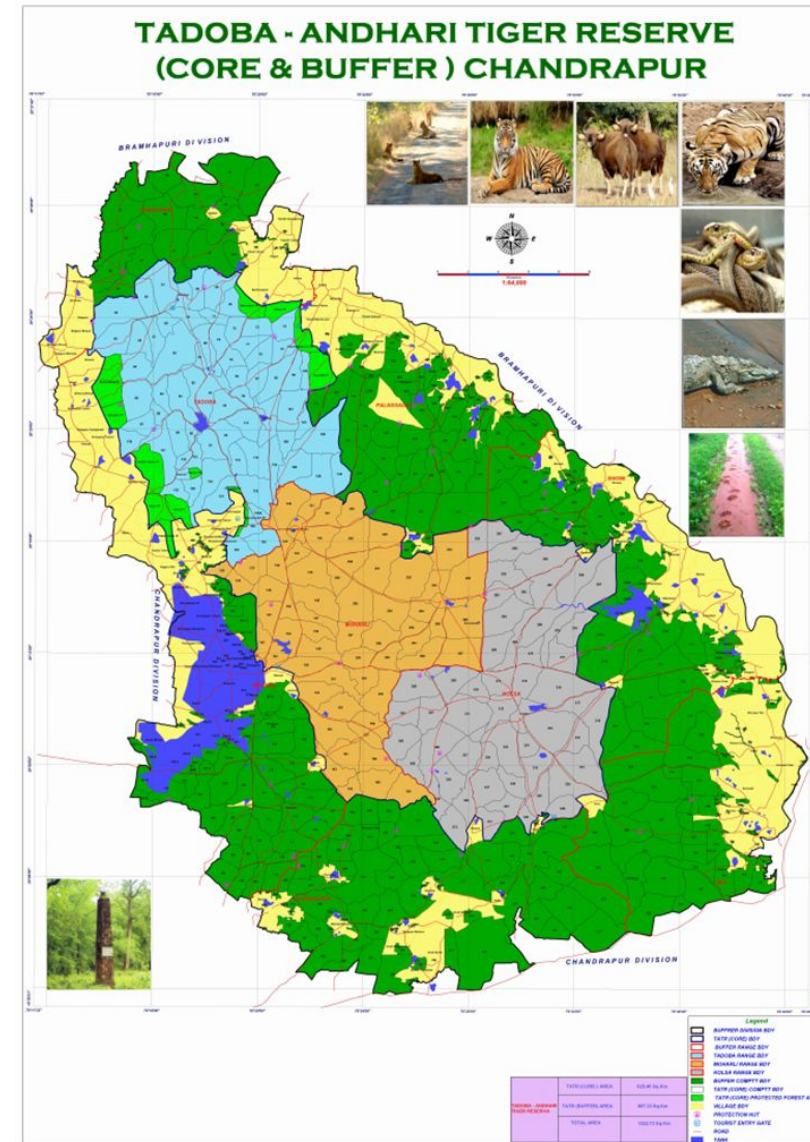
## **Peoples Aims / Need**

- Protect lives
- Secure livelihood
- Secure energy needs
- Protect crops
- Improve standard of living

**The crux of Eco-Development lies in aligning the National Goals and the Peoples Goals**

# Eco-Development in Tadoba Andhari Tiger Reserve

- Home to 80 species of Mammals, Aves 280 species, Reptiles 54 species, Amphibians 11 species and Pisces 84 species and 667 species of Flora.
- Important source population of tigers with connectivity to Indravati Tiger Reserve in Chattisgarh in south, Kanha Tiger Reserve to the North Eastern side through Navegaon Nagzira protected area.
- Important water shed to the rivers Irai and Human
- Home to about 24000 families residing in 93 villages and a source of their livelihood.



# Eco- Development – Effective use of EDC's

- 93 EDC's were formed.
- Individual questionnaire were given to the villagers.
- These surveys were conducted by the youths trained for this purpose.
- Based on the answers given in the individual questionnaire micro plan for each and every village was made.
- The microplans were approved by the Committee headed by the Field Director.
- Meeting of the EDC's were conducted every month to review the progress of works.
- If required changes were made in the microplans.

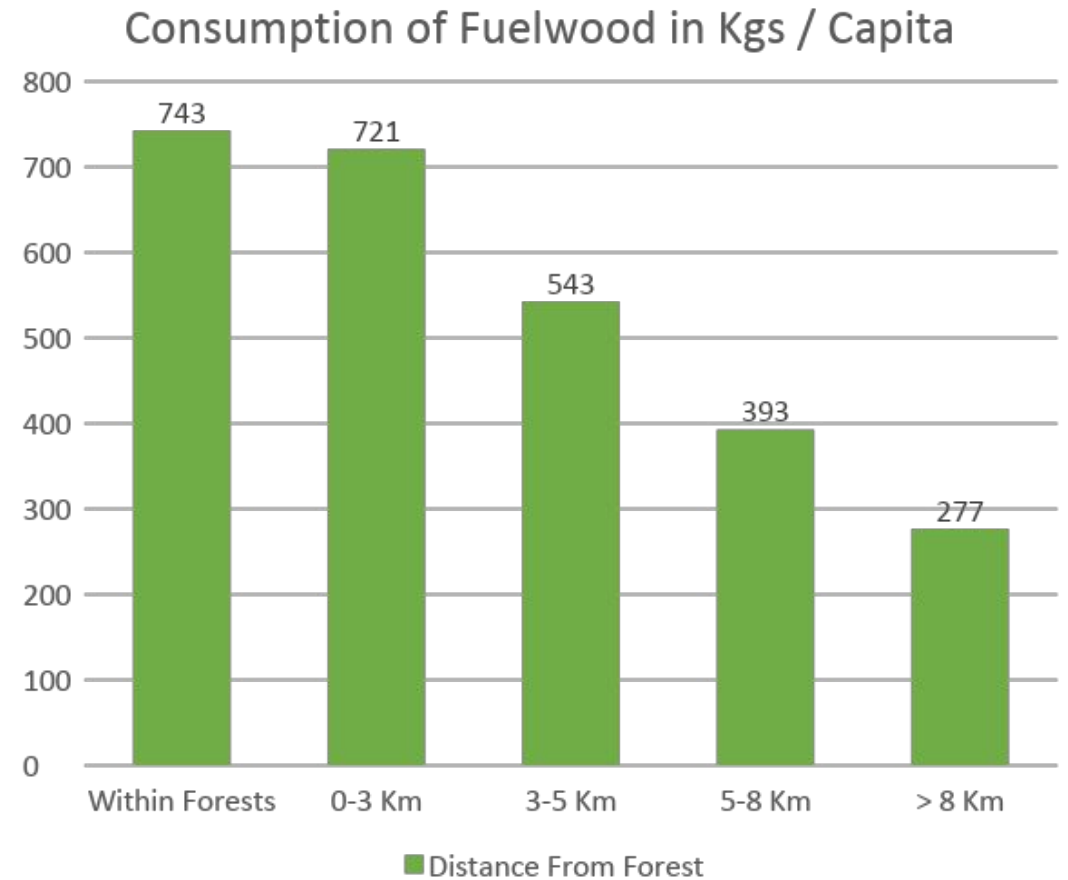
# Major focus areas as determined by the microplans

- Reducing dependency on fuelwood.
- Reducing man-animal conflict.
- Reduction in crop depredation by wildlife.
- Improving habitat for wildlife.
- Development of eco-tourism.
- Provision of alternative – livelihood opportunities.
- Access to clean drinking water and toilets.



# Reducing dependency on Fuelwood

- 7-8 days / month were spent in collecting fuelwood.
- Opportunity cost.
- Adverse effects on health.
- Loss of lives due to attack by wild-animals.
- Most people preferred LPG connection.

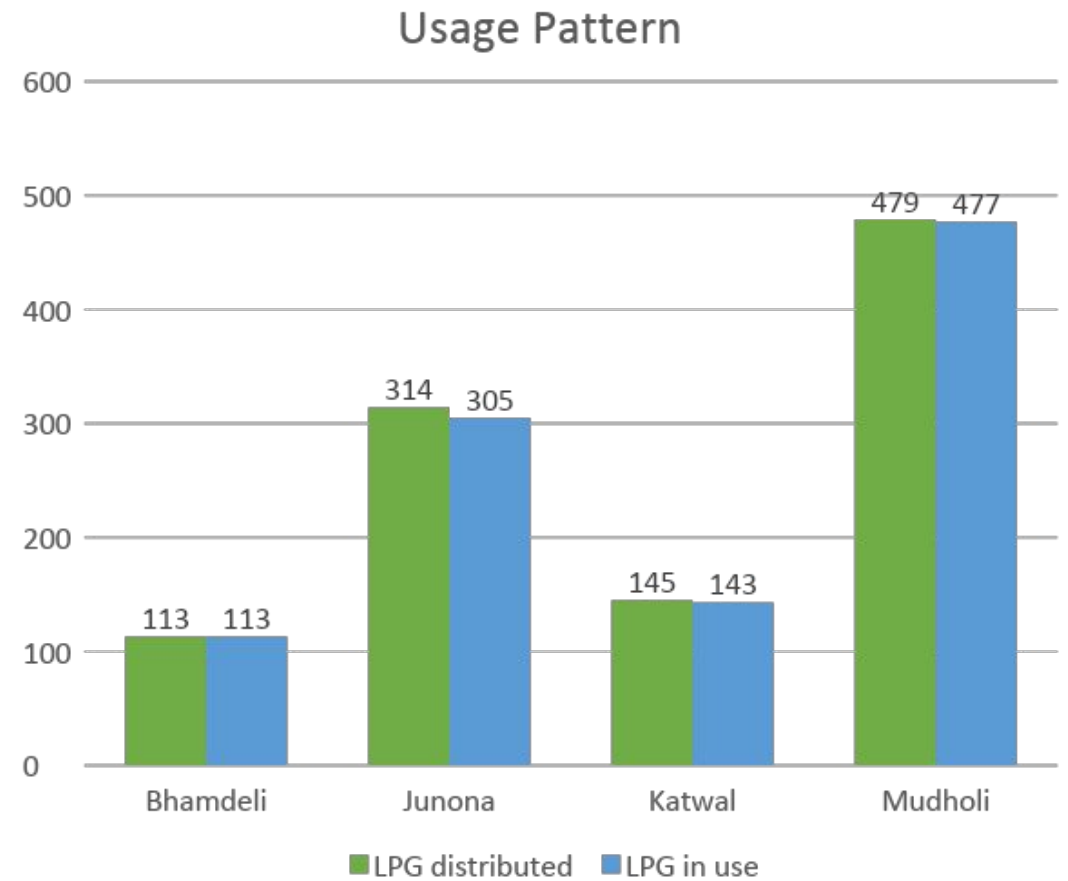
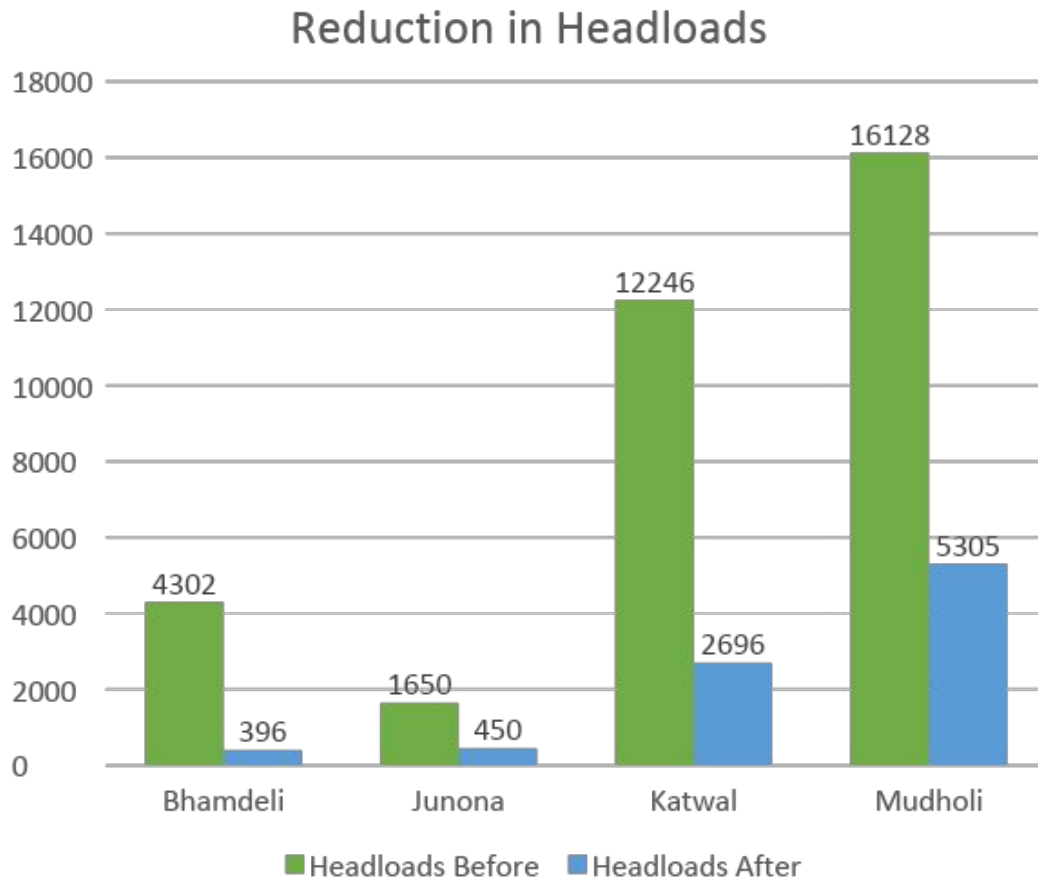


# Reducing dependency on Fuelwood

- 75% subsidy on LPG Connection.
- 75% subsidy on refilling (12 refills in 1<sup>st</sup> year; 8 in 2<sup>nd</sup> ; 6 in 3<sup>rd</sup> and 4 in 4<sup>th</sup> .
- Amount paid by EDC to the dealer after receiving 25% contribution from beneficiaries.
- Co-ordination with revenue department.
- 21,169 connections provided.
- 181268 refills provided.
- 7075 cement platforms provided.



# Results



# Reducing man animal conflict

- Adequate and timely compensation.
- Reduce crop depredation cases.
- Replace local cattle with milch breeds.
- Provision of toilets.
- Closure of open wells.
- Provision of solar lights.
- Improve the habitat of the wild animals.

# Adequate Compensation & Timely Compensation

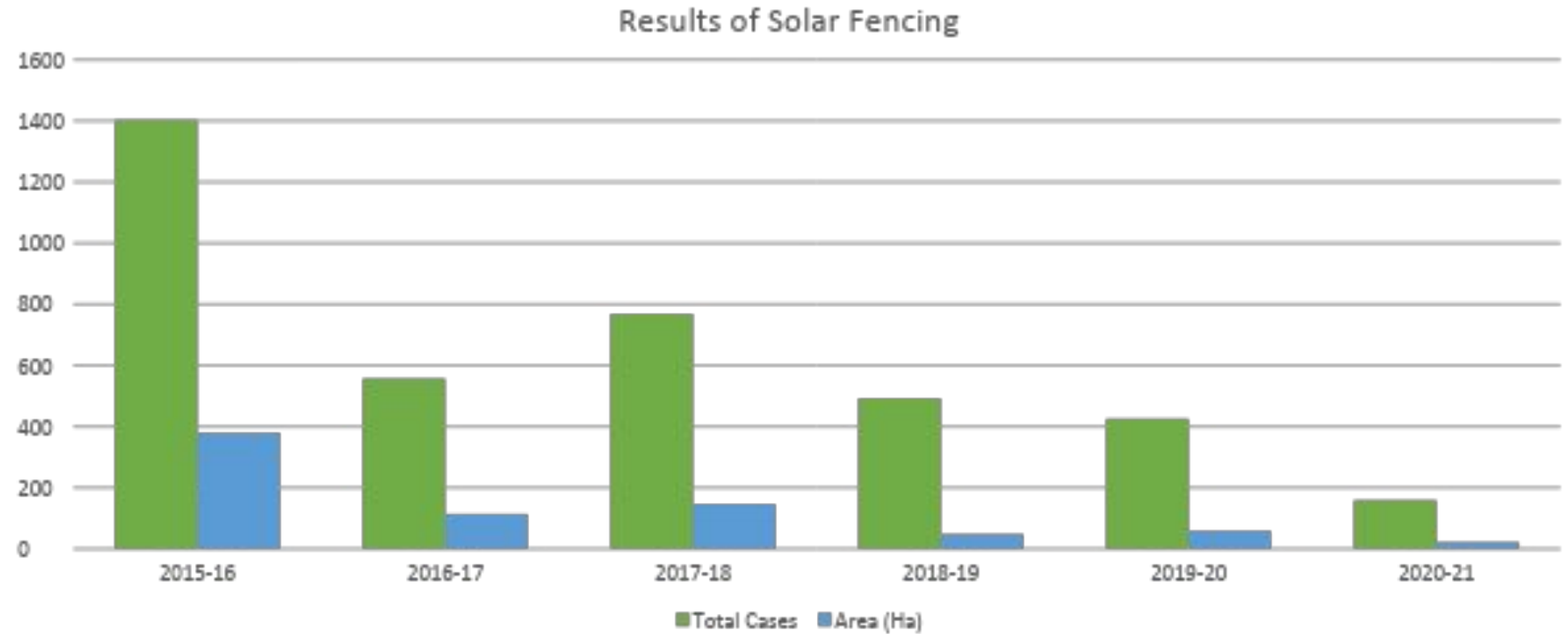
- Crop damage – up to 25000/-
- Cattle damage – up to Rs. 60000/- (for cow, buffalo and bullock) and (up to Rs. 10000/- for sheep, goat and other animals)
- Cattle injury – 25% of market cost ( up to 4000)
- Human death / injury
  - Death - Rs 15 lakh
  - Permanent disability – 5 lakh
  - Grievous injury – 1.25 lakh
  - Minor injury – Cost of medicines (Govt Hosp); up to Rs. 20000/- (Private Hospital)
- Negative BDS Payment.
- Right to Service Act – 30 days time period.
- Online platform for processing of cases.
- Issues
  - Poor response from other committee members.
  - Over work for some frontline staff.

# Reducing crop depredation cases

- Important issues
  - Use of direct electric current for crop protection – very high risk of electrocution.
  - Prevents farmers from taking second crop despite availability of water.
  - Farmers solution for this problem was solar fencing.
  - 3382 solar fencing were provided at 75% subsidy.



# Results



# Replacement unproductive cattle with milch breed.

- Rs. 20000/- share of the EDC and Rs. 20000/- is the share of the beneficiary.
- Major aim is to promote stall feeding and reduce grazing in the forests.
- Scheme was successful only in one village which depended on milk production.
- In other places the response was very poor & mal-practice was observed.
- Only 231 milch cattle were brought under this scheme.



# Provision of toilets

- Lack of toilets – major cause of human death & injury due to wild animals.
- Affected tourism.
- Done in convergence with Zilla Parishad.
- People which didn't fit in the Zilla Parishad scheme were accommodated.
- Rs. 12000/- was provided per beneficiary for toilet construction. Excess amount to be paid by the beneficiary.
- Grants for 3260 toilets were provided.
- Result – It has helped 40 villages to become open defecation free and avoided incidents of human injury and deaths by wild animals.

# Closure of open wells & provision of solar street lights

**Solar Street Light - 1451**

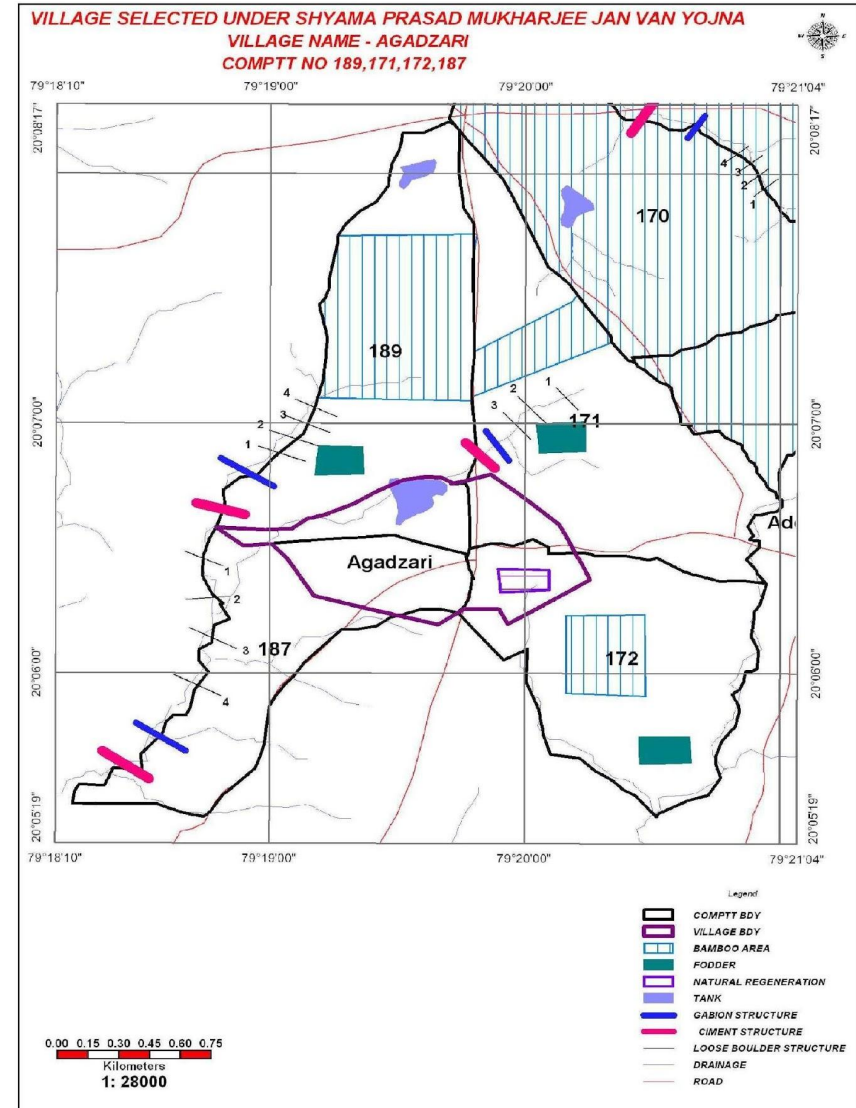


**Parapet walls - 429**



# Improving habitat for wildlife

- 140 water bodies inside the forests were rejuvenated.
- 1589 loose boulder structures and gabion structures were constructed.
- Solar pumps installed on 40 tanks.
- Development of meadows – 176 Ha.
- Management of bamboo resources in 16 villages.



# Tank Desiltation



# Effective use of solar pumps



# Development of eco-tourism

- Eco-tourism if done within the carrying capacity is a sustainable way of generating livelihood.
- Eco-tourism generated direct as well as indirect employment opportunities.
- Strategy
  - Identify the existing routes best suited for eco-tourism.
  - Identify youth willing to develop the routes on voluntary basis.
  - Training the youth as guides.
  - Providing soft loans for procurement of gypsy.
  - Developing competence amongst the youth to run the tourism by themselves.
  - Final revenue sharing 40 (Foundation) : 60 (EDC)

# Development of eco-tourism

- First route started in the year 2012.
- Seeing the success of the first route 13 more routes have been opened in the span on 8 years.
- Result
  - 175 guides are engaged in eco-tourism.
  - 157 gypsy owners / drivers get employment.



# Guides





# Guide Training



# Result - Gates to Prosperity

Year (Buffer Gates)	Total Tourist	Income Generated (in Cr)
2017-18	62378	0.88
2018-19	99940	2.14
2019-20	122104	5.04

Year (Core Gates)	Total Tourist	Income Generated (in Cr)
2017-18	104405	7.95
2018-19	81527	9.93
2019-20	100828	9.23

### GATES TO PROSPERITY

- > The 5 new gates proposed in buffer zone include Ramdegi, Mami, Doni, Pahami, and Pangdi
- > Two gates – Mami and Ramdegi – likely to start soon
- > The existing gates include Agarzari, Adegaoon-Dewada, Madnapur, Navegaon, Junona and Alizanjha
- > There are 45-50 tigers in Tadoba core and 25-30 tigers in the buffer zone
- > Tadoba buffer has advantage as it is contiguous with core area
- > Closed boating facility at Irai Lake to restart
- > Directions to restart cycling facility in Dewada-Adegaoon and Junona

Tadoba core and buffer have 80 tigers. It is the tigers that attract tourists in the park. The same is not true with buffer areas where tiger sightings are on the lower side. The buffer is preferred over core only when getting entry is seemingly difficult.

Though ecotourism in new areas will be forest-friendly and will put tabs on illicit felling of bamboo, the plan should be such that natural water bodies in these areas and tiger habitat should not be disturbed.

**HIMANSHU BAGDE** | NATURALIST | **UDAY PATEL** | GADCHIROLI HONORARY WILDLIFE WARDEN

# Other tourism initiatives



**tatr**  
Enhancing Tadoba

**Tadoba Eco Tourism**  
Community Tourism Initiative

Walk our Jungles

Cycle our Jungles

Meet our Butterflies

Enjoy Kayak Boating

Stay in a log-hut or on a Machan

Watch Birds from stilted hides

Go boating

Explore Tadoba on Night Safari

**Tourism Office**  
Moharli  
**Ph. 9730853324**  
[www.mytadoba.org](http://www.mytadoba.org)

PLEASE BOOK ACTIVITIES WITH YOUR HOMESTAY / RESORT RECEPTION.  
PLAN A VISIT TO BUTTERFLY GARDEN, DIORAMA & ADVENTURE ACTIVITIES



**BW3** Butterfly World

**BW3** Butterfly World

Happy Birthday to you 🎂

The power of Eco-Tourism  
The Butterfly Park at Agarzari,  
Tadoba is celebrating its 3rd  
Birthday today.  
Till date, over 23,00,000 people  
have visited this unique park and  
enjoyed the sight of fluttering  
beauties.  
This park, souvenir shop and the  
restaurant support a number of  
youth from the neighbouring  
Agarzari village.

@racheljustice10

# Other tourism initiatives



# Issues with eco-tourism

- Necessary to stick to the carrying capacity.
- Majority of eco-tourism benefits do not reach to the locals.
- Outsiders reaping benefits as locals.
- Blocking of corridors due to excess constructions.
- Over a very long time frame there is a possibility that villagers will be replaced by the outsiders.
- Not possible to provide benefits to the entire village population.

# Alternate livelihood options

- 6 Agarbatti units.
  - 2 Bamboo processing units.
  - Charkha unit.
  - Bamboo handicraft sale shop.
  - 2 Canteens.
  - Currently 2 Agarbatti units, 1 bamboo processing unit, canteen and bamboo handicraft sale shop is functional.
- Issues
    - Require professional person to operate the units with experience in the sector.
    - First market survey and linkages – then initiation of the unit.
    - Better to help people in their existing professions.

# Development of human resource

- Provision of drinking water facility.
- Household water filters – 24203
- E-learning facility – 108
- Smart Anganwadis – 16



# Training to the youth

- Aagarzari Camping site.
- In collaboration with BNHS.
- 1000 kids are trained every year.
- Sensitized in
  - Wildlife conservation aspects
  - Forest conservation
  - Role of forest department and people in conserving forest and wildlife
  - Role of individuals





# Training to the youth



# Effect of Eco-Development on Tiger Population

**Table 3.3:** Comparison of density of tigers across the years 2010 – 2019 for Tadoba-Andhari Tiger Reserve, Maharashtra, India.

Details	2013	2014	2015	2016	2017	2018	2019
<b>Tigers (Exclusively Core)</b>	50	51	51	48	50	39	44
<b>Tigers (Exclusively Buffer)</b>	NA	10	14	17	19	22	23
<b>Tigers (Core and Buffer)</b>	NA	04	06	04	06	20	21

Status of Tigers, Co-Predators and Prey in Tadoba Andhari Tiger Reserve (TATR)

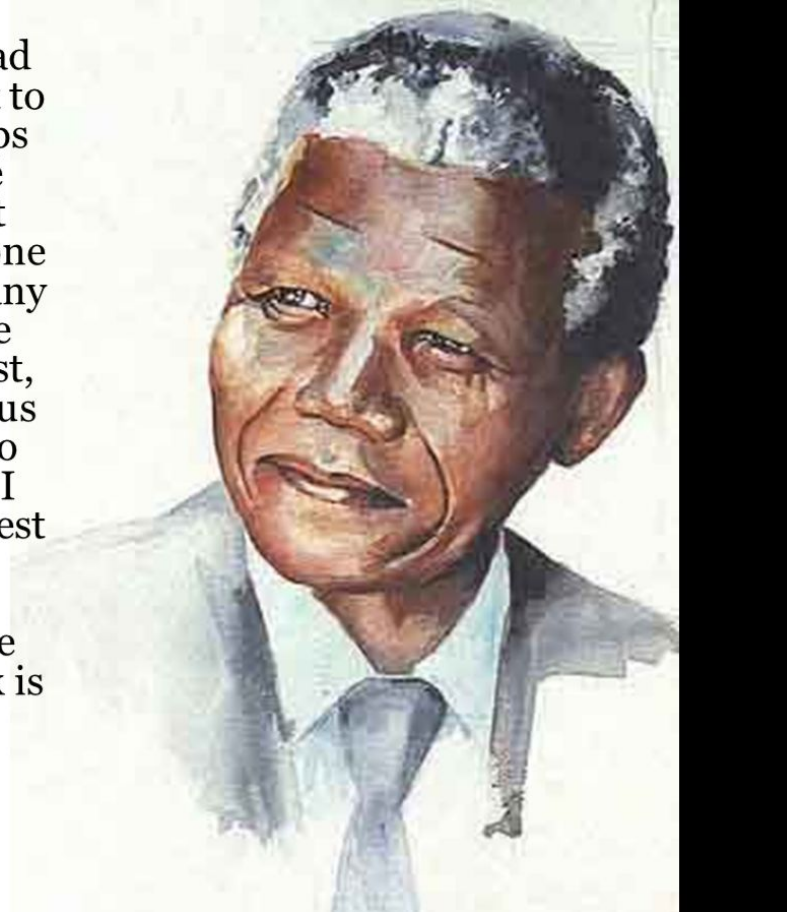
# Conclusion

- Consultation and empowerment of people in prioritizing their problems and finding solutions is crucial.
- EDC or JFM is the most un-used tool in forest and wildlife conservation. Highest priority needs to be given to strengthen them.
- In events of crisis association with people gives time for the department to act.
- Role of DCF is very crucial in motivating the staff and people.
- Essential to have belief in staff and their capabilities.
- Wildlife / Forest Conservation goals can be aligned with the goals and aspirations of the people.

# Conclusion

I have walked that long road to freedom. I have tried not to falter; I have made missteps along the way. But I have discovered the secret that after climbing a great hill, one only finds that there are many more hills to climb. I have taken a moment here to rest, to steal a view of the glorious vista that surrounds me, to look back on the distance I have come. But I can only rest for a moment, for with freedom comes responsibilities, and I dare not linger, for my long walk is not ended.

**Nelson Mandela**



Thank You

