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Current Data Analysis and Temporal Intensity of Tiger Mortality in India- Role of NTCA, Tiger Conservation, State wise Mortality Analysis

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Abstract

India imparts more than 80% population of wild tiger around the world. Regular increasement of population is a god sign of management in one hand but on the other hand the alarming side and consequences are the dark side of achievements. Gradual increasing of tiger population affects the carrying capacity of the tiger habitat and other ecological needs which indirectly affects other physical attributes, movement pattern, inter or intra-specific struggles and more the conflict cases. Populations dynamics of current scenario depicts challenges in managerial skills, researches and extra-efforts and works on strategic plans in dynamics world of conservation. National Tiger Conservation Authority of India, NTCA playing a pivotal role as key agency for monitoring tiger population, mortality, natality, poaching etc. Current study imparts the data analysis of tiger mortality cases, records, causes, locations across the Indian scenario.

Key words : Tiger, intensity, Mortality, Conservation

Introduction

The refined All Indian tiger assessment in 2006 and 2010 have shown that through the tiger has suffered due to direct poaching, loss of quality habitat, and loss of its prey, there is still much scope to strengthen the conservation of this endangered species. The 2010 assessment has highlighted a country wide increase of 20% in tiger numbers in 2010 with an estimated number of 1706 (1520-1909). There is also a decline of 12.6 % in tiger occupancy from connecting habitats. This has happened in peripheral and dispersal areas having low densities outside tiger reserves and tiger population. To ensure the long-term survival of tigers in India it is imperative to offer strict protection to established source populations and manage areas with restoratives inputs by involving local communities in buffer and corridor areas, while providing them with a direct stake in conservation. Now in current dynamics of increasing big cat population, there is an urgent need to factor in the concerns of tiger in sector of development where tiger conservation is not the goal. Apex body like NTCA publishing the data on its official website for public domain of mortality as state wise, range wise, reserve wise etc along with location but a lot of cases found with unknown sex, age or no any data in the given list or interpretation. Present data analysis is secondary data-based study.

Materials and Methods

Current data were collected from the official domain of National Tiger Conservation Authority of India in term of location of tiger loss, reserve and state wise analysis and graphically presented along with appropriate statistical input.

Result and Discussion

Table 1 Tiger Mortality Causes 2012 to 2024 (up to September 2024)

YEAR	N	UN-NP	US	POACHING	SEIZURE	TOTAL
2012	42	0	0	23	16	81
2013	32	0	0	29	4	65
2014	44	0	0	13	13	70
2015	54	0	0	12	10	76
2016	66	0	0	25	22	113
2017	62	0	0	33	17	112
2018	53	0	0	34	10	97
2019	45	3	27	4	4	83
2020	33	3	53	17	4	110
2021	35	18	73	4	1	131
2022	20	15	72	12	2	121
2023	60	9	96	12	4	181
2024	13	0	85	1	0	99
TOTAL	559	48	406	219	107	**1339**

N-natural, UN-NP- Unnatural-Not poaching, US-under scrutiny

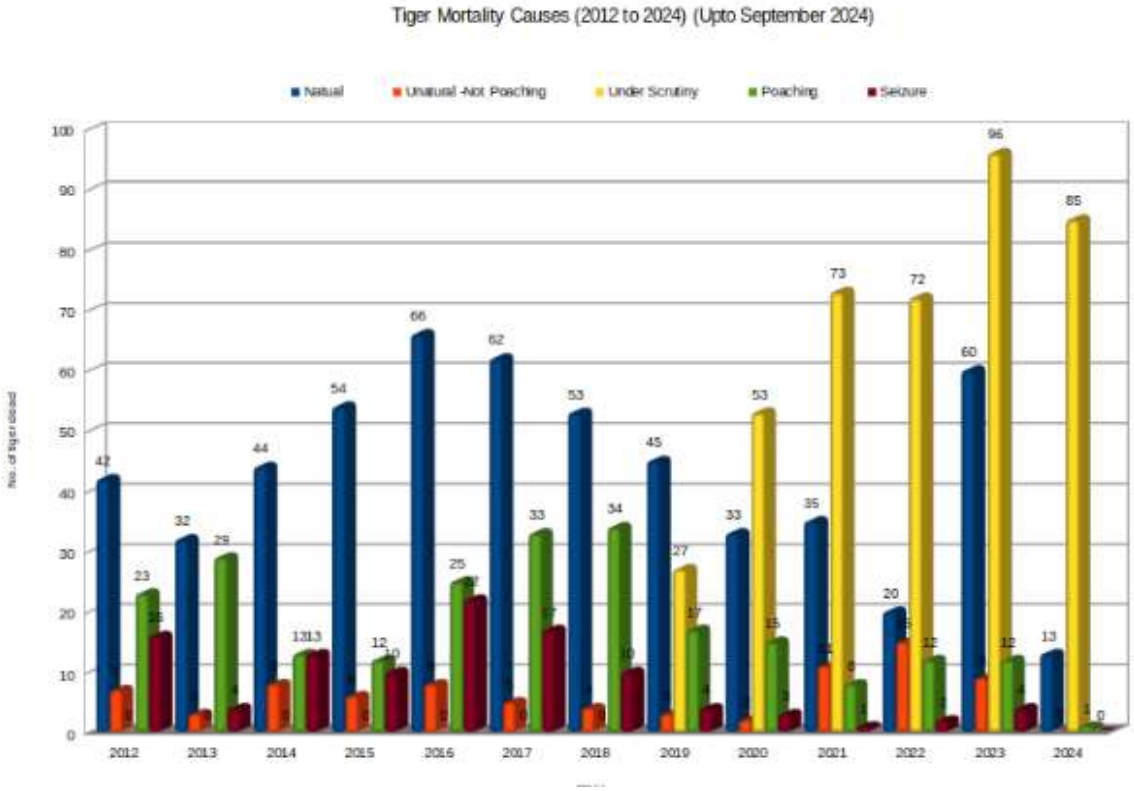

Fig 1: Tiger Mortality Causes from 2012 to September 2024

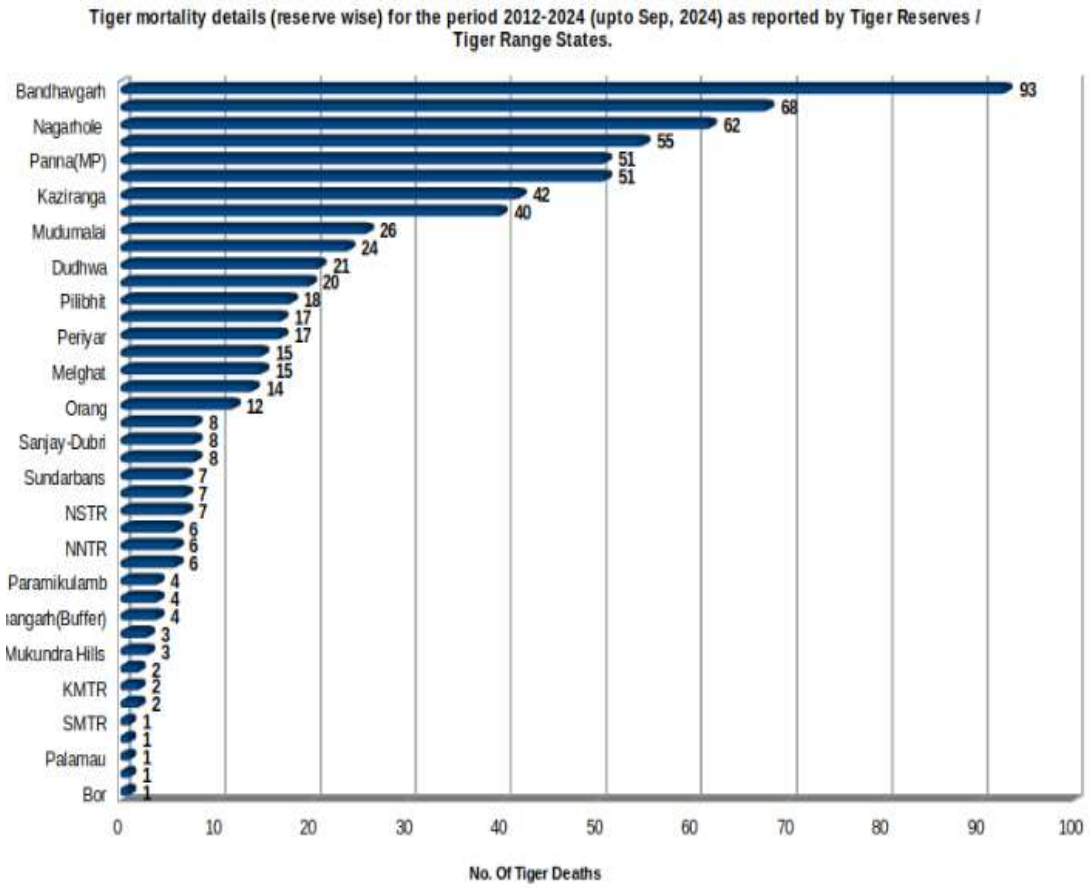

Fig 2: Tiger reserve wise mortality data representation

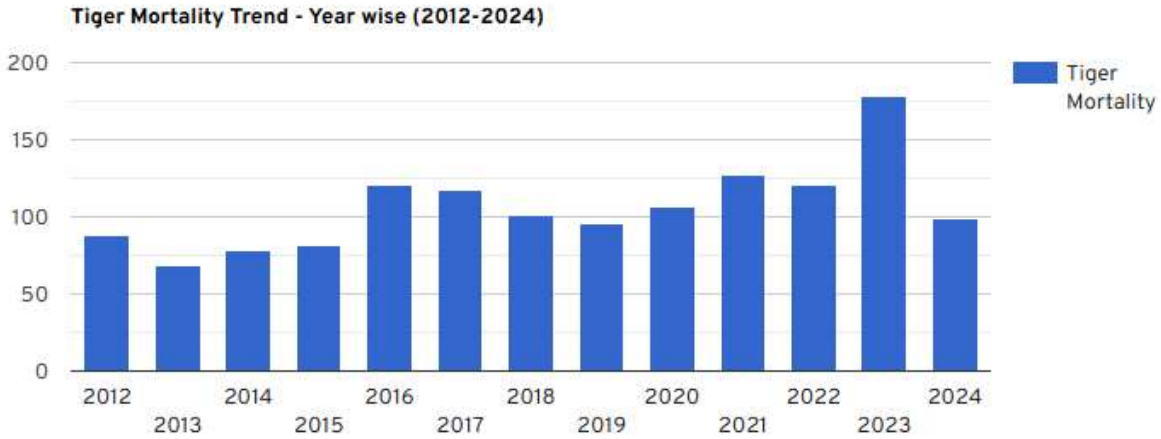

Fig 3: Tiger Mortality Trend -year wise

In current scenario of 2024 total 118 tiger mortality cases were registered in the official web site of NTCA. Out of 118 58 cases were recorded inside the reserves while 60 cases were defined the out-side area of tiger reserves in India. Age wise tiger mortality in 2024 up to September total 47 adult, 16 sub adult,15 cubs and 3 unknowns along with 37 cases have no any detail[1,2,3,4].

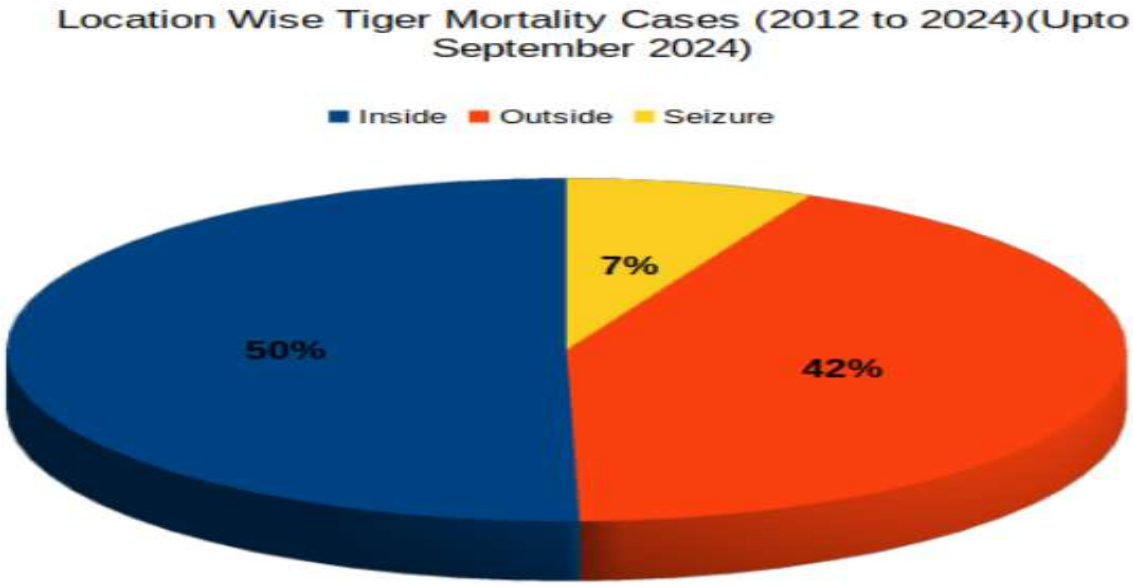

Fig 4: Location wise tiger mortality cases, statistical representation.

Conclusion

In 2024 up to September total 118 cases were recorded while from 2012 to September 2024 total 1339 cases were shown by NTCA in which 559 cases depict the natural death ,406 cases are shown in the category of under scrutiny while 219 cases of poaching were recorded. Over all 1339 cases of mortality are the big loss, on the other hand natural causes of mortality were also a alarming data to rethink about ecological cum sociological need of research and other managerial skills. Corridors and other viable connectivity are a healthy sign of meta population and dispersal or gene flow. Many parts of Indian counterpart are nor up to mark to full fill the ecological needs of wild tiger. On the other hand, population dynamics of any reserve area should be managed and recorded, the data shows without detail and information. Approximately 40 Tiger's sex data not mentioned on site under the category of sex wise mortality detail as among 118 cases 48 male, 27 female were recorded, although 3 unknown and 40 were nil.

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