



Government of Maharashtra
Forest Department

DRAFT

TIGER CONSERVATION PLAN

2023-24 TO 2032-33

SECURITY PLAN, VOLUME I, PART : 4
SAHYADRI TIGER RESERVE
KOLHAPUR, MAHARASHTRA



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- OFFICE OF -
**CONSERVATOR OF FORESTS & FIELD
DIRECTOR**
SAHYADRI TIGER RESERVE, KOLHAPUR, MAHARASHTRA



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Scenic Shivsagar from Kathi hills
@Shishupal Pawar, MFS RFO Patan

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Acknowledgement

The importance of a tiger conservation plan cannot be overstated, as tigers are not just charismatic megafauna but also keystone species that play a crucial role in maintaining the health and balance of ecosystems. A tiger conservation plan is vital for safeguarding not just the iconic species itself but also the ecosystems they inhabit and the myriad benefits they provide to both wildlife and human communities. By implementing effective conservation strategies, we can ensure the survival of tigers and the health of the ecosystems they call home for generations to come.

The Wildlife (Protection) Act, 1972 was amended in 2006, and a separate Chapter (IVB) has been added on the 'National Tiger Conservation Authority', which has replaced Project Tiger. This Chapter, *inter alia*, has enabling provisions (Section 38V) for preparing a 'Tiger Conservation Plan' for the proper management of a tiger reserve, which will also include staff development and deployment plan. This Tiger Conservation Plan has been based on the experiences of earlier Tiger Conservation Plan and management plans of Koyna WLS and Chandoli NP as well as results of various management works done since inception of this tiger reserve.

While writing this plan, experiences and observations of field staffs and officers serving here have helped to a large extent. From the 3-4 stakeholders' workshops conducted in last 4 years, STR management have received valuable inputs and suggestions from all the stakeholders like HWLWs of four districts, members of EDC's, Eco-guides, Safari vehicles and boat drivers, resort owners, NGOs, retired officers, professors of colleges, teachers, field staff members, field officers of all wings of forest department. All these inputs were also considered while writing various chapters of this plan. Inputs given by several officers served in STR and all stakeholders who have contributed in the development of the tiger reserve in various meetings and workshops were also considered while writing prescriptions in the TCP.

It is notable to mention the significant role played by Shri. Uttam Sawant, DD (Koyna), STR, Karad, in the preparation of the TCP. Appointed as the Coordinating Officer, he spearheaded various activities including field surveys, data collection, and analysis. In this capacity, he executed his responsibilities with meticulous attention to detail, sincerity, and unwavering dedication.

I express gratitude to Shri. Uttam Sawant, DD (Koyna), STR, Karad, for his role in drafting the Plan for the core zone. Additionally, credit goes to Shri. Ravikant Dengare, ACF (Koyna), Shri. Shishupal Pawar, RFO, Patan, Shri. Dnyaneshwar Rakshe, RFO, Dhebewadi, Shri. Amrut Shinde, RFO, Amba Range, Sangram Godase, RFO, Mobile Squad, and Shri. Sandeep Jopale, RFO, Helwak, for their contributions to completing the draft plan for the Buffer zone. Shri. Uttam Sawant, DD (Koyna), STR, Karad, and Shri. Girish Panjabi, WCT, collaborated on finalizing the indicative plan for the corridor. Moreover, Shri. Shishupal Pawar, and Shri. Uttam Sawant, DD (Koyna), STR, Karad worked on the sub-plan of the Eco-tourism Plan. Finally, Shri. Uttam Sawant, DD (Koyna), STR, Karad, Shri. Dnyaneshwar Rakshe, RFO, Dhebewadi, and Sangram Godase, RFO, Mobile Squad, were instrumental in completing the sub-plan of the Security Plan.

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I want to express my gratitude to all field staff, including Forest Laborers (*Vanmajurs*), Forest Guards, and Foresters, for their invaluable assistance in collecting field data. Additionally, the inputs provided by the field staff of Sahyadri Tiger Reserve were thoroughly considered. Two range-wise meetings were conducted with all staff members, during which vital field information was gathered. Given their extensive experience at the grassroots level, these individuals possess a deep understanding of local challenges and often offer the most effective solutions. The significant contributions made by the field staff greatly facilitated the drafting of the TCP.

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Date- 25/10/2025

Place- Karad

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List of Abbreviations

ACF: Assistant Conservator of Forests.
Cm: Centimeter.
Cm3: Cubic centimeter.
CR: Conservation Reserve
Cum/m3: Cubic meter.
Comptt.N/ CN: Compartment Number
CTH: Critical Tiger Habitat
CNP : Chandoli National Park
CSS: Centrally Sponsored Scheme
CWW: Chief Wildlife Warden
DEM: Digital Elevation Model
DFO: Divisional Forest Officer.
DD: Deputy Director
Dn: Division
DyCF/ DCF: Deputy Conservator of Forests
EDC: Eco-Development Committee
FAO: United Nations Food and Agricultural Organization
FD: Field Director
FSI: Forest Survey of India
FRH: Forest Rest House.
GIS: Geographic Information System
GPS Global Positioning System
Ha: Hectare.
HWW: Honorary Wildlife Warden
HWC: Human- Wildlife Conflict
IGF: Inspector General of Forests
IIFM: Indian Institute of Forest Management
IUCN: International Union for Conservation of Nature
JFM: Joint Forest Management
Km: Kilometer
KTR: Kali Tiger Reserve
KWLS : Koyna Wildlife Sanctuary
LPG: Liquefied Petroleum Gas
LULC: Land Use Land Cover

MEETR: Management Effectiveness Evaluation of Tiger Reserve

Mt: Meter.

Mm: Millimeter.

MFP: Minor Forest Produce

MDF: Moderately Dense Forest

MoEFCC: Ministry of Environment, Forests and Climate Change

MSTripES: Monitoring System for Tigers- Intensive Protection & Ecological Status

MISC.: Miscellaneous

NGO: Non-Government Organization

STR: Sahyadri Tiger Reserve

NPV: Net Present Value

NP: National Park

NTFP: Non-Timber Forest Produce

NTCA: National Tiger Conservation Authority, New Delhi

OF: Open Forest

PA: Protected Area

PAP: Project Affected Person

PF: Protected Forests.

RF: Reserved Forests.

RFO: Range Forest Officer.

RRT: Rapid Response Team

Rs: Rupees.

PT: Project Tiger

PRT: Preliminary Response Team

STR: Sahyadri Tiger Reserve

STPF: Special Tiger Protection Force

Sq. Km.: Square Kilometer

KTR: Kali Tiger Reserve

TCF: Tiger Conservation Foundation

TCP: Tiger Conservation Plan

TR: Tiger Reserve

UF: Unclassed Forest

VDF: Very Dense Forest

WLS: Wildlife Sanctuary

WII: Wildlife Institute of India, Dehradun

WCCB: Wildlife Crime Control Bureau

WPA: Wildlife (Protection) Act, 1972

ZP: Zero Poaching

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SECURITY PLAN FOR SAHYADRI TIGER RESERVE, MAHARASHTRA

10.1 INTRODUCTION

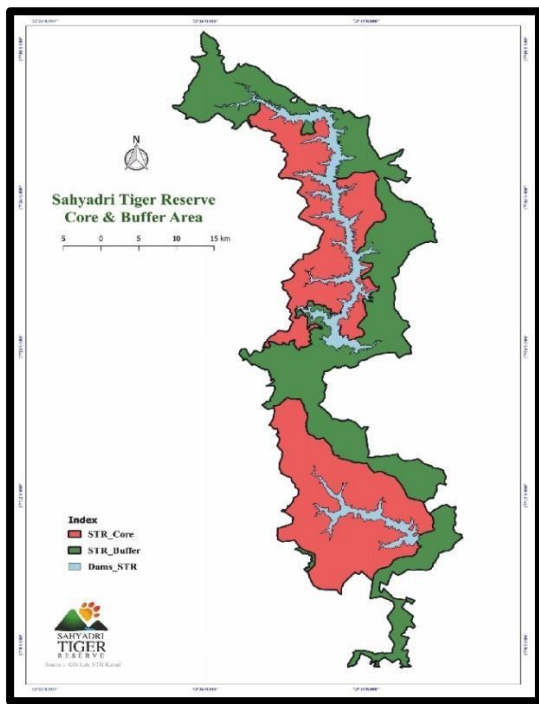
The Sahyadri Tiger Reserve stands as a landmark in Western Maharashtra, being the region's first Tiger Reserve and the fourth within the state. Encompassing a total area of 1165.57 sq. km., it spans across two protected areas: Koyana Wildlife Sanctuary and Chandoli National Park. Nestled within the Sahyadri Ranges of the Western Ghats in Maharashtra, it was established on January 5th, 2010, marking it as the northernmost tiger habitat in the Western Ghats to receive such protection.

Recognized as a UNESCO World Heritage Site within the Western Ghats, the Sahyadri Tiger Reserve holds profound significance in biodiversity conservation, boasting an unparalleled richness in flora and fauna, which contribute to its classification as a Biodiversity Hotspot. Notably, Koyana Wildlife Sanctuary has been designated an "Important Bird Area" by Birdlife International, while the forest area near Navja village is identified as a "Medicinal Plant Conservation Area" by FRLHT, Bangalore. The reserve encompasses a diverse range of habitats, including rich evergreen, semi-evergreen, and moist deciduous forests.

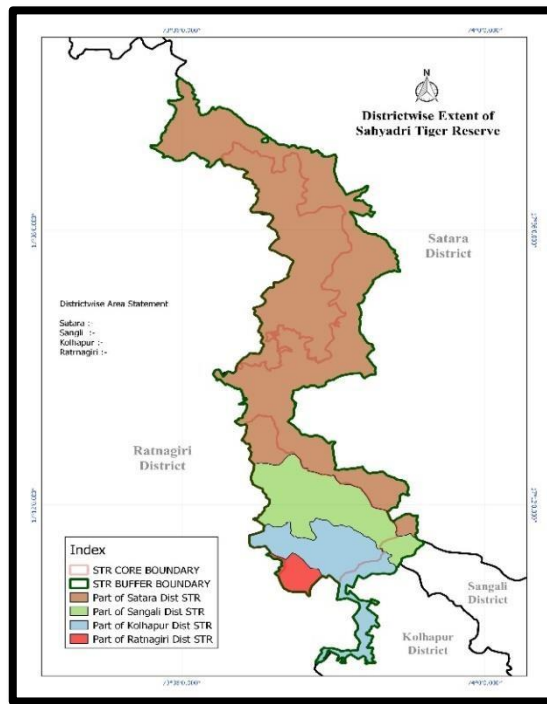
Geographically, it spans four districts: Satara (Mahabaleshwar, Medha, Satara & Patan tahasils), Sangli (Shairala tahasil), Kolhapur (Shahuvadi tahasil), and Ratnagiri (Sangameshwar, Khed tahasils).

Name of Protected Atea	Core Area (Sq.Km.)	Buffer Area (Sq.Km.)	Total Area (Sq.Km.)
Chandoli National Park	313.84	3.83	317.67
Koyana Wildlife Sanctuary	286.28	123.27	426.55
Area Outside PA	--	424.34	423.34
Total STR Area	600.12	565.45	1165.57

The Northern Western Ghats stretch from Dang in Gujarat to Dandeli in Karnataka. Despite its continuity, human habitation has caused fragmentation at various points, impeding the movement of tigers and other large mammals. Nevertheless, these fragmented areas still offer crucial habitat for existing species. Tigers have historically been known to roam this region, but concrete evidence within the Sahyadri Tiger Reserve only dates to 2011 and 2018 through camera trap records.



Map No.1: Map of Core and Buffer area



Map No.2 : Map of District wise Distribution of STR

10.1.1 SIGNIFICANCE of AREA:

THE HABITAT AND BIODIVERSITY OF STR:

- a. The Sahyadri Tiger Reserve lies within Biogeographic Zone 5B of the Western Ghats, characterized by its mountainous terrain. The reserve comprises steep precipitous slopes, deep valleys, and extensive lateritic plateaus throughout its entirety. At its core, the reserve features the "Shivsagar" reservoir of the Koyana River and the "Vasant Sagar" reservoir of the Warana River. The floristic diversity within the Sahyadri Tiger Reserve encompasses several forest types:

I. West Coast Semi-Evergreen Forests (2.A / C.2)

II. Western (Montane) Subtropical Hill Forests (8.A / C.2)

III. Southern Moist Mixed Deciduous Forests (3.B / C.2)

- b. Most of the area is covered by dense semi-evergreen forests, boasting an extensive array of flora and a diverse range of fauna. Within this protected area, prevalent floral species include Anjani (*Memecylon umbellatum*), Jambul (*Syzygium cumini*), and Pisa (*Actinodaphaone angustifolia*), among others. Additionally, the revenue wasteland and Malki lands incorporated into the Tiger Reserve feature scattered bushy tree growth interspersed between and along

nallah banks. Formerly cultivated areas in rehabilitated villages have transformed into grassy meadows and grasslands.

- c. The lateritic plateaus, situated at an elevation of 1200 meters above sea level, receive an annual rainfall ranging between 2000 to 2500 mm. These plateaus undergo a remarkable transformation during the monsoon season, typically spanning from June to October. Every 15-20 days, as the monsoon progresses, the plateau's colors evolve, showcasing a vibrant display. Initially, yellow hues of *Senecios* and *Smithias* dominate, followed by blue shades of *Utricularias*, pink rosy tones of *Impatiens*, white hues of *Eriocaulons* and *Habanerias*, and finally, purple hues of *Strobilanthes species*. These plateaus harbor a plethora of rare, endemic, and endangered plants such as *Ceropegias*, *Seshagiria*, *Arisaemas*, *Decaschistia*, *Trithuria*, and *Dipcadi*.
- d. These areas harbor a diverse array of endangered species, including top carnivores such as Tigers, Wild Dogs, and Leopards, as well as mega herbivores like Gaur, Sambar, Barking Deer, Four-Horned Antelope, Mouse Deer, Giant Squirrel, and Porcupines, among others. A total of 41 mammal species have been documented within the region. Furthermore, the Vasant Sagar reservoir provides a habitat for crocodiles, which are teetering on the brink of extinction. The area is also a haven for four species of Hornbills and numerous other endemic birds. Notably, Chandoli National Park and Koyana Wildlife Sanctuary serve as breeding grounds for the Indian River Tern, while crocodile breeding has also been observed recently within Chandoli National Park.
- e. Based on previous research, the Sahyadri Tiger Reserve boasts an impressive biodiversity, including 286 species of birds, 111 species of butterflies, 22 species of amphibians, 44 species of reptiles, 110 species of freshwater fishes, 1452 tree species, and 400 medicinal plants. Additionally, the landscape has been instrumental in the discovery of several new species, such as *Indotyphlus maharashtraenis*, *Cyrtodactylus deccanensis*, *Hemidactylus satarensis*, *Cnemaspis kolhapurensis*, *Indirana chiravasi*, *Cnemaspis girii*, and *Sarada darwini*.
- f. Within the Sahyadri Tiger Reserve, 39 species of flowering plants have earned a place in the RED DATA book out of a total of 624, constituting roughly 6% of the red data species. Orchids, lichens, ferns, and mosses serve as indicators of environmental purity. Notably, the genus *Ceropegia* boasts about 24 species in the region, with approximately 10 being endemic to the sanctuaries. Additionally, endemic to the protected area are species like *Vigna khandalensis*, *Atylosia lineata*, *A. scabrioides*, *Cucumis setosus*, and numerous other wild relatives of cultivated plants.

10.2. Strengths-Weaknesses-Opportunities-Limitations (SWOT) Analyses:

10.2.1 STRENGTH:

The Sahyadri Tiger Reserve exhibits several strengths that contribute to its effectiveness in conservation, management, and Protection:

1. **Limited Human Settlements:** The presence of only a few villages within the core area minimizes human-wildlife conflicts and facilitates the protection of critical tiger habitat.
2. **Effective Enforcement:** Strong enforcement measures, including prosecutions and publicity campaigns, deter illegal activities such as poaching and encroachment.
3. **Natural Geographic Barriers:** The presence of extensive water bodies, valleys, and the Konkan slope serves as natural barriers, restricting human encroachment and enhancing habitat protection. The interior parts of the STR are well-protected due to terrain complexity.
4. **Connectivity with Other Habitats:** The reserve is connected to other tiger habitats in the South, particularly Radhanagari Wildlife Sanctuary, promoting genetic diversity and facilitating tiger movement.
5. **Large Inviolate Areas:** Significant portions of the reserve remain undisturbed, providing ample space for breeding and maintaining healthy wildlife populations.
6. **Abundant Water Sources:** The presence of natural water sources within the reserve ensures the availability of water for wildlife, supporting diverse ecosystems.
7. **Adequate Protection Infrastructure:** The reserve is equipped with sufficient protection infrastructure, including ranger stations and patrol routes, enhancing monitoring and law enforcement capabilities.
8. **Protected Corridors:** Corridors are well-protected, with conservation reserves declared over most reserve forests, facilitating wildlife movement and genetic exchange
9. **Unified Control in Buffer Zone:** The buffer zone surrounding the reserve is under unified control, facilitating coordinated management efforts and minimizing conflicts.
10. **Rich Biodiversity:** The STR is part of the Western Ghats Tiger Landscape and a UNESCO World Heritage Site, boasting rich biodiversity, including rare and endemic species. The reserve boasts high biodiversity and is home to many endemic species, contributing to its ecological significance and conservation value.
11. **Community Engagement:** The presence of numerous Eco-Development Committees (EDCs) fosters community involvement in conservation initiatives, promoting sustainable practices and local support.

12. **Sufficient Protection Vehicles:** Adequate resources, including protection vehicles, enable efficient patrolling and response to threats within the tiger reserve.
13. **Well-Equipped Rapid Response Team:** The Rapid Response Team (RRT) is equipped and trained to swiftly address emergencies and mitigate risks to wildlife and habitat.
14. **No Forest Rights in Core Areas:** The absence of forest rights granted in core areas ensures the preservation of critical tiger habitat without encroachment or disturbance.
15. **Increasing Prey Base:** The prey base has been increasing steadily over the past few years, supporting predator populations and overall ecosystem health.
16. **Youth Outmigration:** Outmigration of youths can reduce human pressures on the reserve and minimize negative impacts on wildlife and habitats.
17. **Eco-Sensitive Area Notification:** Draft notification of the corridor area as an Eco-Sensitive Area provides additional protection, safeguarding vital wildlife habitats and corridors.

These strengths collectively contribute to the Sahyadri Tiger Reserve's effectiveness in protecting biodiversity and ensuring the long-term survival of its flagship species.

10.2.2 WEAKNESS:

The Sahyadri Tiger Reserve faces several weaknesses that pose challenges to its conservation, management, and protection:

1. **Inaccessible Terrain:** The rugged and inaccessible terrain lacks established tracks or routes, and there is a loss of local knowledge of the landscape, hindering effective patrolling and monitoring.
2. **Poor Visibility:** Dense woody areas with thick undergrowth limit visibility, making wildlife sightings challenging and impeding research and monitoring activities.
3. **Understaffing and Lack of Training:** The reserve suffers from a shortage of staff who are often ill-equipped and inadequately trained, compromising their ability to effectively carry out conservation duties.
4. **Lack of Infrastructure:** Inadequate infrastructure facilities such as roads, communication networks and research facilities hinder logistical support and communication within the reserve.
5. **Legal Representation:** The absence of a dedicated legal officer or special counsel to handle legal cases related to conservation issues in higher courts poses challenges in addressing legal complexities.
6. **Staff Awareness:** Frontline staff may not be adequately aware of the Outstanding Universal Values (OUVs) of Sahyadri's World Heritage Site status.

7. **Connectivity and Corridors:** Forested buffers and corridors connecting critical tiger habitats are at risk due to incompatible land use, such as highway expansion and mining activities.
8. **Administrative Complexity:** Multiple revenue administrative units and people's representative units within and around the reserve complicate coordination and decision-making processes.
9. **Fragmentation of Corridors:** Development activities lead to the fragmentation of corridors and buffer areas, disrupting wildlife movement and genetic exchange between populations.
10. **Human-Wildlife Conflict:** Presence of human habitation within the core area and buffer zone leads to conflicts between humans and wildlife, resulting in retaliatory killings and habitat degradation.
11. **Unstable Tiger Population:** The tiger population is not stable, with a skewed ratio of male to female tigers, raising concerns about genetic diversity and long-term viability.
12. **Low Prey Base:** Pilot studies indicate a low prey base for carnivores, which can adversely affect predator populations and disrupt the ecological balance.
13. **Tiger Population:** There are indications of tiger presence through genetic analysis and sporadic camera trap captures, but no resident tiger population is confirmed. The low prey base might be contributing to this.
14. **Absence of Wildlife Crime Cell:** The lack of a dedicated wildlife crime cell hampers efforts to combat illegal activities such as poaching and wildlife trafficking.
15. **High Unemployment:** High rates of unemployment in villages within the buffer zone led to increased anthropogenic pressures on natural resources and wildlife habitats.
16. **Shortage of STPF Staff:** Shortage of Special Tiger Protection Force (STPF) staff affects the effectiveness of anti-poaching efforts and wildlife protection measures.
17. **Geographical Division:** The presence of a huge water body divides the continuity of the area, creating logistical challenges in conservation management.
18. **Slow Rehabilitation Process:** The slow pace of rehabilitation efforts for displaced communities impedes the restoration of natural habitats and the consolidation of the reserve's boundaries.
19. **Accessibility and Infrastructure:** The terrain and water bodies make the reserve inaccessible, with few internal roads. Efforts are underway to improve access, but progress is slow.
20. **Plantation Practices:** Large-scale plantation of exotic species like Eucalyptus has occurred in edge habitats, potentially affecting biodiversity.
21. **Human Habitation and Commercial Development:** Human habitation within critical tiger habitat, commercial development in sensitive areas, and the presence of windmills on ecologically unique plateaus further threaten the reserve's integrity.

22. **Linear Shape and High Edge Ratio:** The reserve's linear shape and division of core zone/CTH into two parts with a high edge-to-area ratio increase vulnerability to external biotic pressures and habitat fragmentation.
23. **Human Habitation in CTH:** Human habitation within critical tiger habitat poses threats to wildlife and increases human-wildlife conflict.
24. **Unemployment in Buffer Zones:** high unemployment in buffer zones can lead to various socio-economic challenges, including increased engagement in illegal activities. When people lack viable livelihood options, they may resort to activities such as poaching, illegal logging, or encroachment on protected areas for resources. Moreover, unemployment can also reduce local support for conservation efforts. When communities feel economically marginalized and disconnected from conservation initiatives, they may not see the value in protecting wildlife and habitats. Instead, they may view conservation regulations as barriers to their economic well-being.
25. **Remoteness of Area:** Remoteness of area creates psychological boredom and lonely feeling among the staff, who reside inside for many days. Any basic requirements and essential material needed cannot be easily get it to them, if anything needs, he must to go out 30-40 km for nearest village. It therefore hampers their motivation and efficiency to work. Hence, most of the staff avoid transfer in wildlife area.

Addressing these weaknesses will be crucial for the Sahyadri Tiger Reserve to overcome challenges and effectively conserve its biodiversity and flagship species.

10.2.3. OPPORTUNITY:

In the Sahyadri Tiger Reserve (STR), situated within the Western Ghats and renowned for its rich habitat diversity, varied flora and fauna, and high levels of endemism, numerous opportunities exist for enhancing the management of both the tiger reserve and its surrounding landscape. Here are the opportunities, we should plan to enhance management effectiveness:

1. **Staff Training and Orientation:** Invest in comprehensive training programs to enhance the skills and knowledge of reserve staff, improving their effectiveness in conservation efforts.
2. **Human Resources Management:** Implement strategies for better management of human resources within the reserve, ensuring optimal deployment and utilization of staff.
3. **Strengthening Veterinary Services:** Improve veterinary facilities and expertise to provide better healthcare for wildlife, reducing disease outbreaks and mortality rates.

4. **Institutionalizing Stakeholder Participation:** Establish mechanisms for meaningful engagement of local communities and stakeholders in decision-making processes, fostering ownership and support for conservation initiatives.
5. **Regulating Traffic:** Implement measures to regulate and minimize traffic on roads passing through the reserve, reducing disturbances to wildlife, and enhancing safety.
6. **Reducing Dependency on Forest Resources:** Promote alternative livelihoods and sustainable practices to reduce the dependency of local communities on forest resources, alleviating pressure on natural habitats. Developing a comprehensive management plan focusing on reducing human impacts, enforcing strict anti-poaching measures, and exploring alternative livelihoods for local communities could lead to more sustainable conservation outcomes.
7. **Prey/Predator Augmentation:** Implement strategies to enhance prey populations and restore predator numbers, restoring ecological balance and supporting healthy predator populations.
8. **Utilizing New Technology:** Embrace technological advancements such as e-surveillance systems to improve monitoring and surveillance efforts, enhancing protection and security within the reserve. Also using remote sensing, GPS tracking, and camera traps can enhance monitoring and protection efforts, improving efficiency in conservation management.
9. **Facilitating Research and Monitoring:** Provide adequate facilities and support for survey, research, and monitoring activities, generating valuable data for informed decision-making and adaptive management.
10. **Reservoir Management:** Explore strategies to increase the reservoir life of Chandoli and Koyna Dams, ensuring sustained water availability for wildlife and ecosystem health.
11. **Completing Rehabilitation:** Accelerate efforts to complete rehabilitation programs, ensuring the inviolate status of the protected area and minimizing human-wildlife conflicts. Considering the positive outcomes observed from incentivized voluntary relocations, it may be advisable to continue such initiatives to further reduce human impact and enhance conservation efforts in the region. Voluntary relocation results in expansion of grassland area and continuity to habitat, ultimately it creates inviolate space for wildlife in core zone.
12. **Restoring Mined Areas:** Undertake restoration efforts in mined areas within wildlife corridors, restoring habitats and promoting connectivity between fragmented landscapes.
13. Emphasizing the importance of habitat preservation and connectivity with neighboring reserves could help maintain ecological integrity and facilitate wildlife movement across landscapes.

14. Prioritizing actions aimed at reducing human impacts, controlling poaching, and restoring a robust prey base before considering tiger augmentation measures could ensure a more holistic approach to conservation planning.
15. Implementing systematic management plans to address the invasion of various invasive species, with a focus on areas where invasion is at an early stage, could help prevent further spread and protect native habitats.
16. Prioritizing removal efforts in areas where invasion is potentially in the initial stage could be advisable to minimize the impact of invasive species on native ecosystems.
17. **Joint operations** Strengthening collaborations with forest departments of neighboring states, law enforcement agencies, and relevant authorities could enhance wildlife protection efforts through joint operations and knowledge sharing. Focusing on joint operations, anti-poaching measures, and overall wildlife safety could contribute to the effective protection of wildlife within the Tiger Reserve.
18. Addressing challenges related to inaccessible terrain, lack of tracks, and loss of local terrain knowledge through strategic planning and capacity building initiatives could improve conservation outcomes in challenging environments
19. Deploying additional staff, increasing their strength, and establishing a robust communication network could enhance surveillance and response capabilities within the Tiger Reserve, contributing to improved wildlife protection.
20. Providing incentives for staff, such as one-step higher pay and allowances, could recognize and reward their dedication and contribution to wildlife protection efforts, fostering morale and commitment.
21. **Payment for Ecosystem Services (PES):** Implementing PES schemes for forests like Malki Forest can incentivize conservation efforts by compensating communities for preserving ecosystem services such as carbon sequestration, water regulation, and biodiversity conservation

10.2.4. THREATS:

1. **Poaching:** Illegal hunting and trade of wildlife pose a significant threat to the survival of endangered species within the reserve.
2. **Electrocution:** Wildlife mortality due to electrocution from poorly maintained power lines and fences threatens the integrity of the ecosystem.
3. **Fire:** Uncontrolled fires, whether natural or man-made, can devastate habitats and wildlife populations, leading to long-term ecological damage.

4. **Encroachment:** Unauthorized occupation and settlement of land within the reserve's boundaries encroach upon critical wildlife habitats, disrupting ecological processes.
5. **Non-timber Forest Produce Collection:** Unsustainable harvesting of non-timber forest products for commercial or subsistence purposes depletes natural resources and disturbs forest ecosystems.
6. **Illegal Entry for Forest Produce:** Unauthorized entry into the tiger reserve for the collection of forest produce contributes to habitat degradation and disturbs wildlife.
7. **Illicit Cutting for Fuelwood:** Unauthorized harvesting of trees for fuelwood and other purposes leads to deforestation and habitat loss, threatening biodiversity.
8. **Illegal Grazing:** Unregulated grazing by livestock within the tiger reserve damages vegetation and disrupts ecological balance, affecting wildlife and their habitats.
9. **Shrinkage of Natural Tree Cover on Private Lands:** Decline in tree cover on private lands adjacent to the reserve reduces habitat connectivity and exacerbates fragmentation.
10. **Persistent Biotic Pressure:** Continuous pressure from human activities, such as agriculture, logging, and development, puts stress on ecosystems and threatens biodiversity.
11. **Unregulated Tourism in Buffer & Corridor:** Uncontrolled tourism activities in buffer and corridor areas can lead to habitat disturbance, wildlife disturbance, and ecosystem degradation.
12. **Existing Network of Wind Mills:** The presence of windmills within or near the reserve poses risks to avian species through collision and habitat disruption.
13. **Mining in Corridor and Adjacent Areas:** Mining activities in wildlife corridors and adjacent areas lead to habitat destruction, pollution, and disturbance to wildlife populations.
14. **Habitat Fragmentation and Degradation:** The fragmentation of habitat due to human activities such as agricultural expansion, dams, hydro-electric projects, highways, windmills infrastructure development, human settlement and mining disrupts the continuity of compact wildlife habitat and corridors, limiting the movement of tigers and other wildlife species. Deforestation in private area in buffer and corridor and habitat degradation further exacerbate this issue, reducing suitable habitats for tigers and prey species.
15. **Poaching and Illegal Wildlife Trade:** Illegal hunting activities such as trapping, snaring, and the use of licensed or unlicensed guns pose a significant threat to wildlife populations, particularly prey and endangered species. Poaching for local consumption and for illegal wildlife trade remain persistent threats to tiger populations in the Sahyadri Tiger Reserve. Lack of effective law enforcement and inadequate monitoring exacerbate the problem.

- 16. Illegal Resource Collection:** Gathering resources such as fuelwood and medicinal plants (e.g., Narkya, Hirda, Tamalpatra, Shikakai) without proper authorization can lead to habitat degradation and loss of biodiversity.
- 17. Unregulated tourism/tourism structures/pilgrimage tourism:** pose a significant threat to the wildlife habitat as they can lead to habitat destruction, disturbance of wildlife, and degradation of natural resources. Unplanned construction of tourism infrastructure such as resorts, lodges, and roads can fragment habitats, disrupt wildlife corridors, and degrade sensitive ecosystems. Unregulated tourism activities such as loud noise, bright lights, and excessive human presence can disturb wildlife, disrupt breeding and feeding patterns, and increase stress levels among animals. Uncontrolled tourism can lead to overuse of natural resources such as water, fuelwood, and wildlife products, resulting in habitat degradation and loss of biodiversity. Unregulated tourism can have negative effects on local communities, including cultural erosion, social conflict, and economic inequality. Unregulated tourism can inadvertently introduce invasive species through the transportation of goods, vehicles, and visitors from outside the reserve.
- 18. Threats to Unique Habitat like Sadas/Lateritic plateau:** Rocky plateaus in the northern Western Ghats are specialized habitats belonging to the general habitat category of lateritic plateau and rock outcrops. Ecological assessment of representative sites shows high species richness and diversity. Removal of boulders, filling of shallow ponds, or altering the drainage pattern can have severe impacts on biodiversity of lateritic plateau (Sada) which may be visible only after some years. Tourism, wind farms, infrastructure development and mining are serious threats to the rocky lateritic plateaus.
- 19. Proposed additional structures in and around Koyna dams i.e. Phase 5 & 6 project:** any proposed structures undergo rigorous ecological assessments is needed to minimize their impact on the tiger reserve and surrounding environment.
- 20. Livestock presence:** poses a significant threat to the Sahyadri Tiger Reserve, particularly in its buffer zones. During a recent camera trap survey, various types of livestock, including bulls, cows, buffalos, she buffalos, and goats, were observed. Out of the 395 grids sampled, 97 grids were found to have livestock presence, covering approximately 24.55% of the total sampled area. This widespread presence of livestock is illustrated in Map no . The settlement of 8 villages inside the core area and 84 villages within the buffer areas contributes to the proliferation of livestock in the reserve. Particularly in the northern region, high levels of livestock presence were recorded. In the southern region, livestock presence was observed

near villages such as Male, Kolane, and Patharpunj, both within the core area and in the vicinity of buffer villages. This influx of livestock poses a direct threat to the ecological integrity of the reserve, including competition for resources, habitat degradation, and increased human-wildlife conflict. Addressing the issue of livestock presence is essential for the long-term conservation of the Sahyadri Tiger Reserve and its resident tiger population.

21. Feral Cattle Presence: The presence of feral cattle poses a significant threat to the Sahyadri Tiger Reserve's ecosystem. During village relocations, certain communities left their livestock in the forest, including bulls, cows, buffaloes, and she buffaloes. Over time, these abandoned animals have transitioned to a feral state, exhibiting more wild behavior. Despite their wild nature, feral cattle are not protected under the Wildlife (Protection) Act 1972. A survey conducted across 395 grids revealed feral cattle presence in 94 grids, encompassing approximately 23.79% of the total sampled area, as depicted in Atlas. A comprehensive survey is required to ascertain the density and distribution of feral cattle within the reserve. Furthermore, the impact of feral cattle grazing and browsing on vegetation and wild ungulates like gaur and sambar needs thorough investigation. Understanding how feral cattle compete for food and space with native herbivores is crucial for assessing their impact on the Sahyadri Tiger Reserve's wildlife and habitats. This study's findings will inform management interventions necessary to address the threats posed by feral cattle in the reserve. Regular monitoring, facilitated by methods such as MSTrIPES, is essential to track feral cattle presence, occupancy, and population trends in the Sahyadri Tiger Reserve.

22. Human presence poses a significant threat to the Sahyadri Tiger Reserve, as villages are situated within both its core and buffer areas. Humans have been observed engaging in various activities within these areas, including commuting trails, livestock grazing, and collecting firewood. Notably, no hunting activities were recorded during the camera trap survey conducted in the survey area. The northern region of the Sahyadri Tiger Reserve experiences high levels of human presence due to the presence of villages such as Vele and Deur within both core and buffer areas. Similarly, in the southern region, human presence was documented near villages like Male, Kolane, and Patharpunj. In atlas illustrates the distribution of human presence in the Sahyadri Tiger Reserve. Understanding the extent and impact of human presence within the reserve is crucial for effective conservation management. Mitigation measures must be implemented to address human activities that threaten the integrity of the reserve's ecosystems and wildlife habitats. Regular monitoring, coupled with enforcement of regulations, is essential to mitigate the adverse effects of human presence on the Sahyadri Tiger Reserve.

23. Presence of domestic dogs: poses a significant threat to the Sahyadri Tiger Reserve, particularly in its northern region where settlements like Vele, Deur, Mhalunge, and Arav are situated within both core and buffer areas. In atlas illustrates the distribution of domestic dog presence in the Sahyadri Tiger Reserve. The high prevalence of domestic dogs in these areas increases the risk of disease transmission to wildlife, predation on native species, and disturbance to natural habitats. Effective management strategies are essential to mitigate the adverse impacts of domestic dog presence on the reserve's ecological integrity and biodiversity. Regular monitoring and community engagement efforts are vital components of addressing this threat and safeguarding the Sahyadri Tiger Reserve for future generations.

Addressing these threats requires a multifaceted approach, including habitat restoration, community-based conservation initiatives, strengthened law enforcement, and sustainable land-use planning. Collaboration between government agencies, local communities, NGOs and other stakeholders is crucial for the effective conservation of the Sahyadri Tiger Reserve and the protection of its biodiversity.

This Plan will attempt to present a road map to an organized and strategic response to threats arising. Many of the issues highlighted here can be used to respond to most other crisis and emergency situations also.

- **BASED ON THE SWOT ANALYSIS, FOLLOWING OBJECTIVES ARE SET:**
 - I. **Continuous Monitoring for Tiger Movement:** Implement a robust system for continuous monitoring of tiger movement within the reserve to track population dynamics and identify key habitats.
 - II. **Increase in Prey Base:** Develop and implement strategies to enhance the prey base within the reserve, ensuring an adequate food source to sustain the tiger population.
 - III. **Conviction and Rigorous Punishment for Poachers:** Ensure swift and effective prosecution of poachers through continuous follow-up of court cases, leading to strong convictions and stringent penalties.
 - IV. **Strengthen Monitoring Protocol with Advanced Methods:** Upgrade monitoring protocols by integrating advanced technologies such as MSTRIPES (Monitoring System for Tigers – Intensive Protection and Ecological Status), enabling more accurate and efficient data collection.
 - V. **Maintain Records of Offenders:** Establish a comprehensive database of offenders involved in wildlife crimes to facilitate targeted enforcement actions and deterrence.

- VI. **Active Wildlife Crime Cell:** Wildlife Crime Cell to coordinate enforcement efforts, gather intelligence, and facilitate inter-agency cooperation in combating wildlife crime.
- VII. **Creation of Strong Information Network:** Establish a robust information-sharing network among stakeholders, including law enforcement agencies, local communities, and conservation organizations, to enhance surveillance and response capabilities.
- VIII. **Minimize Bonafide Requirement for Forest Produce:** Work towards reducing the reliance of buffer villagers on forest resources by minimizing the Bonafede requirement, thereby reducing human-wildlife conflicts and pressure on the reserve.
- IX. **Restoration of Mined Areas in Corridors:** Implement restoration projects to rehabilitate mined areas within tiger corridors, ensuring the connectivity and integrity of critical habitats.
- X. **Massive Nature Education and Awareness Program:** Launch an extensive outreach campaign to educate local communities and visitors about the importance of tiger conservation, fostering a culture of coexistence and stewardship.
- XI. **Protection Measures for Tree Cover on Private Land:** Collaborate with landowners to implement measures for the protection and enhancement of tree cover on private land adjoining the reserve, thereby expanding habitat connectivity, and enhancing ecological resilience.
- XII. **Complete Rehabilitation to Make the Protected Area Inviolable:** Expedite efforts to relocate and rehabilitate human settlements within the reserve boundaries, ensuring the inviolable status of the protected area and minimizing anthropogenic pressures on tiger habitat.
- XIII. **To protect the unique habitat areas:**
 - 1. Established strict conservation zones within the reserve to safeguard key habitat features and biodiversity hotspots.
 - 2. Implement targeted habitat restoration projects to rehabilitate degraded areas and enhance ecological resilience.
 - 3. Engaging local communities in sustainable land management practices to reduce human-wildlife conflicts and preserve critical habitat corridors.
 - 4. Conducting regular ecological surveys and monitoring to assess habitat health and identify emerging threats.
 - 5. Collaborating with research institutions and conservation organizations to leverage scientific expertise and innovative conservation strategies.
 - 6. Enforcing stringent regulations to prevent illegal activities such as logging, encroachment, and poaching within sensitive habitat areas.

7. Promoting ecotourism initiatives that prioritize low-impact visitor experiences and contribute to the conservation of unique habitat ecosystems.
8. Establishing partnerships with neighboring protected areas and government agencies to ensure landscape-level connectivity and coordinated conservation efforts.
9. Empowering local communities through education and capacity-building programs to become stewards of their natural heritage and active participants in habitat protection efforts.
10. Continuously adapting management strategies based on evolving ecological knowledge and emerging conservation challenges to ensure the long-term viability of unique habitat areas within the Sahyadri Tiger Reserve.

10.3 SECURITY MAP:

Using data from 2010 to 2023, a comprehensive analysis of recorded offences has been conducted, leading to the creation of major offences and sensitivity maps for both the core and buffer areas (MAP No.1). These maps highlight instances of poaching, fires, grazing, illicit tree cutting, and other offences. Based on this evaluation of threats, the Sahyadri Tiger Reserve (STR) has been segmented into multiple regions, each represented by a distinct color on the map.

Of particular concern is the prevalence of fires, especially during the summer season.

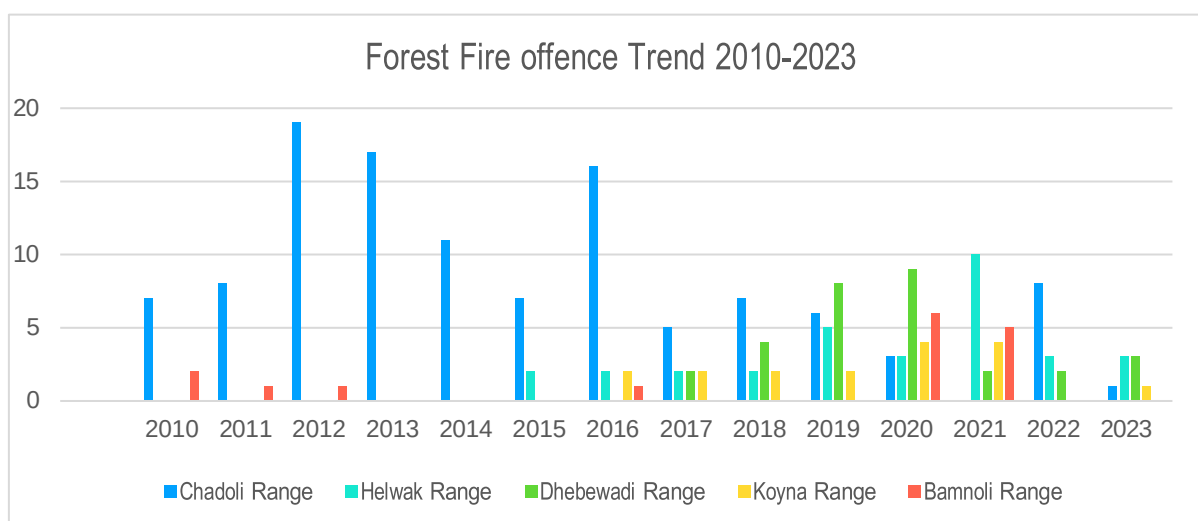
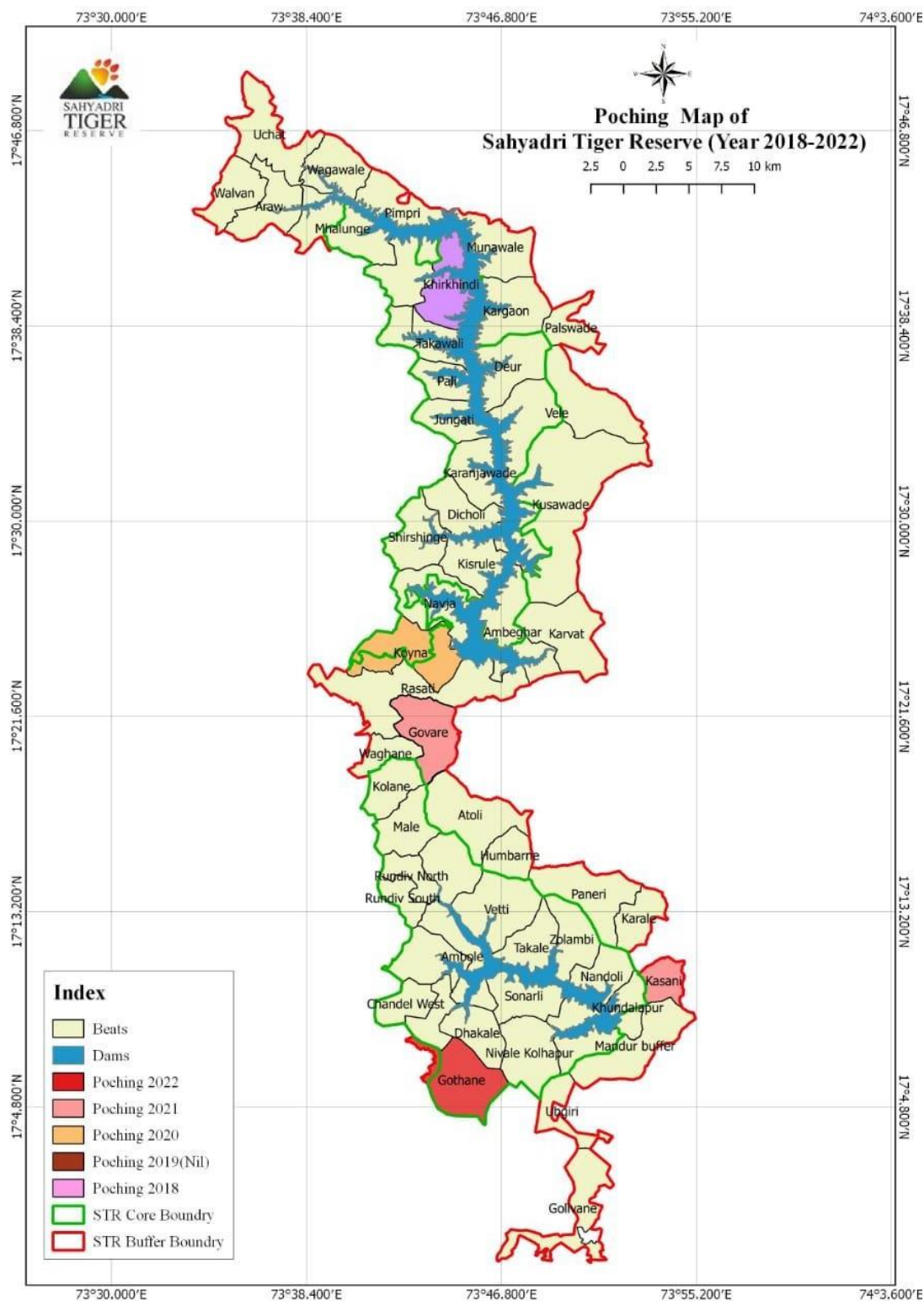


Fig No.1: Forest Fire Offence Trend from 2010 to 2023

The above graph illustrates the trend of fire incidences over the specified period, indicating the severity of this issue within the reserve. Efforts to mitigate the impact of fires and address other offences identified through the mapping process are essential for the conservation and protection of the Sahyadri Tiger Reserve's biodiversity and ecosystem integrity. Grazing is serious during monsoon as farm land is under cultivation. Buffer area of Chandoli , Dhebewadi and Bamnoli of STR are hypersensitive for grazing. The sensitivity to poaching remains consistently high throughout the year within the Sahyadri

Tiger Reserve (STR). Upon careful examination of the maps provided, it becomes evident that robust protection strategies are imperative.



Given the significance of the entire reserve due to its dense wild animal population, special attention must be directed towards areas such as CNP and KWLS. These areas, distinguished by

their private territories within corridors and buffer zones, present formidable challenges in mitigating human-animal conflicts, which in turn pose significant threats to wildlife.

Moreover, the accessibility of roads such as Karad to Chiplun, Amba ghat and Raghuvir ghat to the public underscores the need for regular Nakabandi (checkpoint operations) along these routes (refer to Annexure 10.3 & Atlas Map No.122) Consistent and vigilant monitoring of these thoroughfares is essential to deter illicit activities and safeguard the integrity of the Sahyadri Tiger Reserve.

10.4. STRATEGIES:

In the Sahyadri Tiger Reserve (STR), safeguarding the prey base from poaching stands as a paramount concern. Alongside this threat, encroachment, fires, and grazing activities further exacerbate habitat destruction. Moreover, there looms the risk of disease transmission from domestic cattle to the wildlife populace, potentially sparking epidemics. To counter these challenges, our strategy operates across three key pillars:

Pursue: Engaging with Communities

- By actively involving local communities, we aim to foster a sense of ownership and responsibility towards wildlife conservation.
- Through outreach programs and collaborative initiatives, we seek to educate and incentivize communities to participate in safeguarding the reserve's ecosystem.

Prevent: Mitigating Threats

- Vigilant measures are essential to curb fire outbreaks, poaching activities, and habitat degradation.
- Implementing stringent surveillance and enforcement protocols helps deter illegal activities and ensures the integrity of the reserve's boundaries.
- Proactive measures such as regular patrols and stakeholder engagement are crucial in maintaining a protective shield around the reserve.

Preparation: Readiness for Contingencies

- Anticipating unforeseen events, we prioritize preparedness in handling emergencies and undesirable incidents.

- Establishing response mechanisms and training personnel ensures swift and effective action in case of wildlife emergencies, disease outbreaks, or other crises.
- Collaborating with relevant authorities and organizations enables the mobilization of resources and expertise when needed, bolstering our ability to address contingencies comprehensively.

By adhering to these strategic imperatives of pursuit, prevention and preparation, we endeavor to fortify the defenses of the Sahyadri Tiger Reserve, safeguarding its rich biodiversity for generations to come.

10.4.1 PURSUE:

The pursuance strategy emerges as the linchpin for the long-term protection of the Sahyadri Tiger Reserve. It hinges on community engagement, recognizing that the collective efforts of residents hold the key to sustainable conservation outcomes. By rallying communities to join the conservation cause, the flora and fauna of STR can be safeguarded with minimal strain. The rationale is clear: individuals who are gainfully employed throughout the year are less inclined to engage in illegal activities within the forest.

Within the buffer area, comprising 84 villages as delineated in Atlas Map No.169, proactive steps have been taken to integrate local communities into conservation efforts. Notably, Village Eco-Development Committees (VEDCs) have been established across 74 villages (60 VEDC's in Sahyadri Tiger Reserve and 14 VEDC's handover to territorial divisions) under the Dr. Shyama Prasad Mukherji Jan Van Vikas Yojana by 2024 (Atlas Map.No.114). This initiative primarily aims to alleviate the dependence of villagers on forest resources by enhancing their livelihood options. Key activities under the program include:

1. Provision of LPG gas stoves, cylinders, and water heating equipment.
2. Distribution of high-yielding cattle breeds.
3. Promotion of alternative business ventures such as medicinal plant cultivation.
4. Development of cultural and adventure tourism opportunities.
5. Training locals in wildlife tourism, guiding, and hospitality.
6. Efforts to reduce the population of low-yielding cattle.
7. Promotion of eco-friendly agricultural practices.
8. Mitigation of human-wildlife conflicts.
9. Economic upliftment through skill training.
10. Improvement of healthcare access for villagers.
11. Enhancement of agriculture and allied businesses.

12. Creation of employment opportunities in protection and habitat development activities.

As community involvement in conservation gains momentum, there arises a pressing need to harness this collective energy. Volunteer protection groups should be established within VEDCs, empowering residents to actively patrol and safeguard the areas in and around their villages. Through such concerted efforts, the pursuance strategy promises to fortify the protective shield around the Sahyadri Tiger Reserve, ensuring its ecological integrity for generations to come.

Points to be consider for implementing Pursuance Strategy:

- i. **Community Engagement:** Actively involve local communities in conservation efforts to foster a sense of ownership and responsibility.
- ii. **Long-Term Sustainability:** Recognize that sustained conservation efforts require the active participation of residents who have a vested interest in the well-being of their environment.
- iii. **Reduction of Illegal Activities:** By providing alternative livelihood options, such as employment opportunities and alternative income sources, the strategy aims to reduce the incentive for locals to engage in illegal activities like poaching and habitat destruction.
- iv. **Establishment of Village Eco-Development Committees (VEDCs):** Establishment of remaining VEDCs to serve as platforms for community participation, decision-making, and implementation of conservation initiatives.
- v. **Livelihood Diversification:** Provide support for livelihood diversification activities such as agriculture, eco-tourism, and alternative business ventures to reduce dependency on forest resources.
- vi. **Capacity Building:** Offer training and skill development programs to equip residents with the necessary knowledge and skills for effective conservation practices, wildlife monitoring, and habitat management.
- vii. **Creation of Volunteer Protection Groups:** Empower local communities to form volunteer protection groups within VEDCs to actively patrol and monitor the reserve, serving as additional eyes and ears on the ground.
- viii. **Promotion of Sustainable Practices:** Encourage the adoption of sustainable agricultural practices, eco-friendly tourism initiatives, and responsible natural resource management to ensure the long-term health of the ecosystem.
- ix. **Education and Awareness:** Conduct awareness campaigns and educational programs to inform local communities about the importance of biodiversity conservation, wildlife protection, and the benefits of sustainable living practices.
- x. **Collaboration and Partnership:** Forge partnerships with local NGOs, government agencies, and other stakeholders to leverage resources, expertise, and support for conservation efforts.

- xi. **Incentive-Based Approaches:** Explore incentive-based approaches such as providing rewards or incentives for communities that actively participate in conservation activities or achieve conservation targets.
- xii. **Regular Monitoring and Evaluation:** Establish mechanisms for monitoring and evaluating the effectiveness of the pursuance strategy, with regular feedback loops to assess progress, identify challenges, and adapt strategies accordingly.

10.4.2 PREVENTION AND DETECTION:

To enhance preventive measures for protecting the Sahyadri Tiger Reserve, a strategic approach is imperative. Priority is given to areas with high offense sensitivity, as identified in Annexure 10.14.1 and Atlas Map No.127. During the fire season, deployment of fire watchers is adjusted according to fire incidence, ensuring timely response and mitigation efforts.

Proactive patrolling is emphasized, with personnel deployed to prevent offenses rather than merely reacting to incidents. Anti-poaching camps, central infrastructure within the forest, serve as headquarters for temporary labor. Forest guards patrol their designated beats daily and spend a minimum of three nights per week at these camps. Permission from the Range Forest Officer (RFO) is required for guards to engage temporary labor to support their daily tasks.

Given the remote location of anti-poaching camps, it is impractical for temporary labor to commute daily. Instead, they stay at the camps, facilitating consistent monitoring and reducing the need for constant supervision. Foot patrolling is conducted in sensitive areas, including zones with tiger presence, waterholes, areas with a history of poaching, and borders contiguous to villages.

To augment surveillance efforts, additional measures are implemented:

1. Utilization of Pressure Impression Pads (PIPs) in beat areas, strategically distributed to maximize coverage.
2. Deployment of trap cameras at strategic locations to monitor wildlife activity and detect illegal incursions.
3. Integration of technology such as PDAs and CCTV cameras at entry and exit points, with staff regularly trained in their usage.
4. Proposal for beat guards to be supported by two assistants in the future, enhancing efficiency in beat area surveillance.

By concentrating efforts on these key areas and supplementing them with technological and personnel reinforcements, the effectiveness of preventive measures is bolstered, ensuring the protection of the Sahyadri Tiger Reserve against poaching and other threat by considering below key points outlining preventive measures to consider for the protection of the tiger reserve area of the Sahyadri Tiger Reserve for implementation:

1. **Targeted Deployment:** Prioritize deployment of resources, including personnel and equipment, to high offense-sensitive areas identified through comprehensive assessments and mapping exercises.
2. **Dynamic Fire Management:** Develop flexible fire management plans that adapt to seasonal variations in fire incidence, ensuring timely deployment of fire watchers and other firefighting resources to minimize damage to the ecosystem.
3. **Proactive Patrolling:** Emphasize proactive patrolling strategies, with personnel deployed strategically to deter offenses and prevent illegal activities before they occur.
4. **Utilization of Anti-Poaching Camps:** Establish and maintain anti-poaching camps strategically located within the reserve, serving as bases for patrolling teams and facilitating effective monitoring of sensitive areas.
5. **Regular Patrols and Overnight Stays:** It is Mandatory to Forest guards to conduct daily patrols of their designated beats and spend a minimum number 5 days of nights per week at anti-poaching camps to enhance surveillance and response capabilities.
6. **Engagement of Temporary Labor:** Provide Forest guards with the option to engage temporary labor, subject to proper authorization, to support their daily tasks and ensure efficient coverage of patrol areas.
7. **Foot Patrolling in Sensitive Zones:** Conduct foot patrols in areas identified as sensitive, including those with tiger presence, waterholes, historical poaching sites, and borders adjacent to human settlements.
8. **Technological Solutions:** Incorporate technology such as Pressure Impression Pads (PIPs), trap cameras, PDAs, and CCTV cameras at entry and exit points to augment surveillance efforts and enhance detection capabilities.

10.4.3 Deployment of Special Tiger Protection Force (STPF)

The establishment of a Special Tiger Protection Force (STPF) emerges as a crucial strategy for safeguarding the Sahyadri Tiger Reserve (STR). Currently, the reserve lacks a dedicated STPF unit, prompting the submission of a proposal to the government for its approval and sanction.

Once established, the STPF will play a pivotal role in protecting the reserve, particularly focusing on the core area boundary and the buffer zone. The force will function primarily as a Strike Force, conducting regular patrols to deter illegal activities such as poaching. To ensure optimal readiness, Strike Teams will engage in frequent mock drills to assess their preparedness and response times. Moreover, the presence of the STPF will serve as a powerful deterrent, sending a clear message to potential poachers and encroachers. Special attention will be given to patrolling areas surrounding lakes and other sensitive zones, including markets within the buffer area.

Key points outlining considerations for the Special Tiger Protection Force (STPF) to enhance protection of the tiger reserve area in the Sahyadri Tiger Reserve:

1. **Establishment and Sanction:** Initiate the process of establishing an STPF unit by submitting a proposal to the government for approval and sanction.
2. **Strategic Deployment:** Deploy STPF units strategically, focusing on patrolling the core area boundary and buffer zones where illegal activities, such as poaching, are prevalent.
3. **Strike Force Functionality:** Utilize the STPF primarily as a Strike Force, tasked with conducting regular patrols, surveillance, and enforcement actions to deter and apprehend poachers and encroachers.
4. **Mock Drills:** Conduct regular mock drills for STPF Strike Teams to assess their level of preparedness, tactical capabilities, and response times in various scenarios.
5. **Psychological Deterrence:** Leverage the presence of the STPF as a psychological deterrent against poaching and other illegal activities, sending a strong message to potential offenders.
6. **Focus on Sensitive Areas:** Prioritize patrols around lakes, water sources, and other sensitive areas within the buffer zone, where wildlife is particularly vulnerable to threats.
7. **Protocol Development:** Develop a detailed operational protocol at the Sahyadri Tiger Reserve level for the effective utilization of the STPF, outlining roles, responsibilities, and standard operating procedures.
8. **Collaboration with Local Authorities:** Foster collaboration between the STPF and local law enforcement agencies to coordinate efforts, share intelligence, and strengthen enforcement actions against wildlife crime.
9. **Training and Capacity Building:** Provide specialized training to STPF personnel in wildlife conservation, law enforcement techniques, use of firearms, and conflict resolution to enhance their effectiveness in protecting the reserve.

10. **Integration with Rapid Rescue Teams:** Coordinate with Rapid Rescue Teams stationed at strategic locations within the reserve to ensure swift response to wildlife emergencies, including rescue operations and conflict mitigation.
11. **Regular Monitoring and Evaluation:** Implement mechanisms for regular monitoring and evaluation of STPF operations, performance metrics, and effectiveness in achieving conservation goals.
12. **Community Engagement:** Foster positive relationships with local communities by involving them in conservation efforts, raising awareness about the importance of wildlife protection, and encouraging reporting of suspicious activities to the STPF.

By considering these points and implementing robust strategies, the STPF can significantly contribute to the protection and preservation of the Sahyadri Tiger Reserve and its diverse ecosystem.

10.4.4. Planning a Patrol:

The cornerstone of wildlife protection in the Sahyadri Tiger Reserve lies in the implementation of a robust and comprehensive patrolling plan. Foot patrols are identified as the most effective method for establishing control over designated areas, forming the bedrock of effective surveillance and enforcement efforts.

To ensure the efficacy and efficiency of patrolling operations, various factors must be taken into consideration. These include seasonal variations such as monsoon and summer, day/night cycles, lunar phases, and festive occasions such as Pola, Diwali, Dasara, Shivratri, and Holi. Separate patrol plans tailored to different seasons are essential, with specific emphasis placed on the summer and monsoon periods.

During the monsoon season, when certain roads may become impassable, patrolling efforts should focus on alternative routes, waterways, and other accessible areas to comprehensively cover the reserve. This approach aids in controlling illicit activities such as cutting, encroachment and poaching, while also monitoring for signs of insect infestations and pathological issues. With 50 anti-poaching camps and 09 check-posts strategically positioned across the reserve, patrolling teams can effectively monitor and respond to threats.

In contrast, the summer season demands heightened vigilance against the risk of forest fires. Specialized fire watcher squads are deployed to watch towers located at 26 designated sites within the reserve, as indicated in Annexure 10.6 and Atlas Map Map No.126. Each Range Forest Officer (RFO) is responsible for

formulating a comprehensive fire protection plan tailored to their respective jurisdiction, ensuring prompt response to fire incidents. Essential fire extinguishing equipment, including blower machines, is strategically positioned at convenient locations with sufficient stock to combat emergencies effectively.

Daily patrolling and monitoring of each beat are imperative to curb illegal activities comprehensively. Forest guards and round officers are required to spend nights at anti-poaching camps, located strategically near their designated areas, as directed by senior officers. Patrolling operations are intensified during peak animal activity periods, including mornings, evenings, and nights, to maximize surveillance effectiveness and deter potential offenders.

Key points for a patrolling plan preparation protect the tiger reserve area:

1. **Strategic Coverage:** Ensure comprehensive coverage of the tiger reserve area through strategic placement of patrolling routes and checkpoints.
2. **Regular Patrols:** Conduct regular patrols throughout the reserve, focusing on high-risk areas prone to illegal activities such as poaching, logging, and encroachment.
3. **Foot Patrols:** Implement foot patrols as they allow for silent movement and better surveillance, enabling detection of illegal activities with minimal disturbance to wildlife.
4. **Seasonal Adaptation:** Tailor patrol schedules and routes according to seasonal variations in wildlife behavior and human activities, such as breeding seasons, migration patterns, and tourist influx.
5. **Night Patrols:** Conduct night patrols to deter nocturnal illegal activities and monitor wildlife behavior during these hours.
6. **Collaboration with Local Communities:** Engage local communities in patrolling efforts through community-based patrols or by providing information on suspicious activities.
7. **Use of Technology:** Employ technological tools such as GPS devices, camera traps, and drones to enhance surveillance capabilities and gather evidence of illegal activities.
8. **Training and Capacity Building:** Provide regular training to patrol teams in wildlife monitoring, law enforcement, navigation, first aid, and conflict resolution skills.
9. **Coordination with Law Enforcement Agencies:** Collaborate with local law enforcement agencies to coordinate efforts, share intelligence, and respond effectively to incidents requiring legal action.
10. **Data Collection and Reporting:** Establish a systematic data collection and reporting mechanism to document patrol observations, wildlife sightings, and incidents of illegal activities for analysis and action.

11. **Response Protocol:** Develop a clear protocol for responding to emergencies and incidents encountered during patrols, including protocols for wildlife rescue, conflict resolution, and law enforcement actions.
12. **Evaluation and Adaptation:** Regularly evaluate the effectiveness of patrol activities through monitoring and feedback mechanisms, and adapt patrol strategies accordingly to address emerging threats and challenges.

By implementing these key points, the patrolling plan can effectively contribute to the protection of the tiger reserve and its wildlife inhabitants.

10.4.4.1 General instructions for Patrolling:

Patrolling plays a pivotal role in safeguarding the tiger reserve, ensuring the preservation of its rich biodiversity. To optimize patrolling effectiveness, the following key strategies are essential:

1. **Strategic Timing:** Conduct foot patrols during the morning and evening to capitalize on fresh evidence collection opportunities.
2. **Comprehensive Coverage:** Ensure that foot patrols encompass all crucial areas within the reserve, focusing on key zones susceptible to illegal activities.
3. **Evidence Identification:** Train patrolling teams to identify various evidences such as carnivore pugmarks, human footprints, wired traps, iron trap placements, stone chulhas, and hides.
4. **Essential Equipment:** Equip patrolling parties with essential tools and equipment, including litmus paper, cameras, GPS devices, walkie-talkies, knives, water bottles, tape, trace paper, sketch pens, PIP registers, POR books, beat hammers, memory cards, batteries, diaries, torches, and metal detectors.
5. **PIP Monitoring:** Regularly check Pressure Impression Pads (PIPs) during patrols, recording observations in PIP registers and resetting pads for new entries as needed.
6. **Prompt Reporting:** Immediately report any evidence suggestive of poaching or intrusion to the Ranger, mobilizing group patrols for thorough investigation. Collaboration with adjoining range staff may be necessary for large-scale patrolling efforts.
7. **Anti-Poaching Camp Interaction:** Ensure that patrolling parties register their presence at nearby Anti-poaching Camps, regardless of jurisdiction, with detailed entries including patrol date, time, animal sightings, and corresponding GPS readings.
8. **Silent Group Patrolling:** Emphasize silent group patrolling to minimize disturbance to wildlife and enhance surveillance effectiveness.

9. **Village Interaction:** Conduct vehicle patrols, particularly at night, in village areas along the reserve boundary. Engage with villagers to gather intelligence and inquire about suspicious activities, fostering community awareness and cooperation.

During festival seasons like Holi and Diwali, traditionally known as poaching seasons, it is imperative to intensify surveillance efforts. A group patrol, comprising 5 to 8 members, should thoroughly monitor sensitive areas such as STR Udgiri, Atoli (Pandhrepaani), Nava, Malunge, and Khirkhindi. Specific patrols should be allocated for these areas to ensure targeted monitoring. Establishing an adequate number of Anti-poaching Camps in buffer areas is crucial, considering the higher vulnerability of forest areas adjacent to villages due to the greater presence of villagers. Additionally, the adjoining tiger project staff should extend their patrols to these buffer areas, despite being outside the core area, to enhance protection measures.

Patrol planning should consider the availability of field staff, incorporating both foot and vehicle patrols to maximize coverage. Maintaining an element of surprise is essential in patrol plans to deter poachers effectively. Foot patrols are deemed the most effective method for establishing control over an area and should be conducted regularly. Each patrol should have a clear objective communicated by the designated leader before commencement, and debriefing sessions post-patrol should facilitate the recording of observations.

It's imperative for each Range to have a comprehensive Patrolling Plan covering the entire area at least once every fortnight, ensuring patrols avoid predictable patterns or routes. Utilizing past offense data for analysis aids in devising effective protection strategies and implementing them on the ground.

An ideal Patrolling Party should consist of a minimum of 4 persons with at least two wireless handsets. Incorporating a mix of short (one day) and long-range patrols (2-3 days) fosters bonding and integration among staff drawn from different ranges. Since the initiation of MSTRIPES in 2016, forest guards have been tasked with a weekly foot patrolling target of 40 Km.

Additionally, Range Forest Officers (R.F. O's) should periodically join foot patrols and other patrolling activities, including night vehicle patrols alongside frontline staff, to gain firsthand experience of their designated areas and boost the morale of frontline defense. Regular beat inspections also play a crucial role in augmenting patrolling measures.

The festival seasons like *Holi* and *Diwali* are traditionally poaching seasons. A group patrol consisting of 5 to 8 members should patrol the areas thoroughly. In STR Udgiri, Atoli (Pandhrepaaani), Nava, Malunge, Khirkhindi etc. are sensitive places. So intended specific patrols should be done.

Enough Anti-poaching Camps should be established in buffer areas. As a greater number of villagers are there in the buffer, forest are adjacent to village is more vulnerable to poaching. Therefore, the adjoining tiger project staff of such areas should patrol in these areas too (though it is located outside core area).

Based on the availability of field staff, planning for Patrol on foot as well as vehicle Patrol will be carried out. The element of surprise is always very important in the patrol plans.

Foot Patrols are the best and most effective way of establishing command over an area. Foot Patrols must be regularly carried out. Each patrol should have a clear objective, which should be made clear to all staffs by the designated leader of the patrolling party before the beginning of the patrol. Patrolling party should be debriefed, so that at the end of the patrol, they can record what was observed during the patrol. Each Range must have Patrolling Plan which should try to cover the entire area of the Range at least once every fortnight. Care should be taken to ensure that patrols should not fall cover only the most convenient routes on a routine manner and they should not follow a predetermined pattern or route. From analysis of previous offence data as mentioned in below map, we should plan best protections strategies and implement the same in the ground.

A Patrolling Party should ideally consist of at least 4 persons with a minimum of two wireless handsets. Patrolling in an area should generally be a mix of short (one day) and long-range patrols (2-3 days). Long range patrolling party should comprise of groups of staffs drawn from different ranges of the TR which brings about bonding and integration amongst the staffs in the TR.

MSTriPES has been started in STR from 2016. A weekly target of 40 Km. foot patrolling has been given to all forest guards.

R.F.O should also join foot patrols and other patrolling periodically and should plan and do vehicle patrolling at night along with frontline staff. This will give them a first-hand experience of the area under their charge and give a high degree of motivation to their first line of defense.

Along with above patrolling measures, regular beat inspection is also important.

10.4.5 What to look for (Areas of consideration in patrol):

The Patrolling Party's primary objective is to detect any unauthorized human presence within the forest, employing stealth and vigilance throughout their operation. They must master the art of moving quietly and cautiously, refraining from activities that may reveal their whereabouts, such as smoking cigarettes or bidis or traversing hill crests where their silhouettes could be visible against the sky. Their inspection should encompass areas around waterholes, salt licks, forest trails, and deserted camp sites, utilizing Litmus paper to detect water contamination by urea. The team should also scan for elevated machans and ground hides near water sources, scrutinizing them for any signs of recent activity such as empty cartridges or percussion caps.

Moreover, any discovered machans or hides should be thoroughly investigated, with careful tracing of any trails or signs suggesting recent intrusion. In the event of encountering a group of poachers beyond their capability to handle alone, the patrolling party must swiftly summon additional assistance via wireless communication while maintaining visual surveillance of the offenders. Surprise and rapid response are paramount in addressing such incidents effectively.

During the three days preceding and following a full moon, which are typically favored by poachers, heightened vigilance is essential, particularly around water holes and other water bodies. The personnel manning the Anti-poaching Camps and watch towers must remain vigilant and promptly report any signs of activity, including even the faintest light or unusual tiger calls heard at night.

Intensive patrolling is crucial during the full moon phase, extending from 5 days before to 5 days after the full moon. During this period, the patrolling party should be vigilant for signs such as animal tracks obstructed by twigs or branches, or distractions like cloth or flags hung on branches. Upon encountering such signs, thorough searches of the area should be conducted.

Thorough searches should be conducted if a series of twin pits, one with a diameter of 20+ cm and the other less than 10 cm but 2-3 feet deep, are found along bridle paths, suggesting the presence of set up and removed spring traps. Additionally, the patrolling party must closely monitor cattle kills made by carnivores.

Field staff conducting regular patrols in forest areas should be knowledgeable about the presence and movement patterns of major species such as tigers and leopards. They should actively

search for both direct and indirect evidence of these species' presence on a consistent basis. Any discrepancies should be promptly investigated.

Water bodies need thorough examination for signs of poisoning or attempts at snaring or trapping in the vicinity. Fishes are sometimes killed using chemical additives, which can be detected by observing small fish floating dead on the surface. Additionally, signs of poison such as Sulphur, urea, and other chemicals ground on rocks near the water indicate potential criminal activity.

The flight distance of animals and birds, along with their behavior in the presence of humans, serves as an indicator of disturbance. In regions where hunting is prevalent, animals tend to be cautious, maintaining a considerable distance from humans. This holds true for areas subjected to human disturbance, which must also be considered. Therefore, animals in the relatively undisturbed "Core Zone" of a Protected Area typically exhibit a larger flight distance compared to those in the "Tourism Zone." It is essential to ensure comprehensive coverage of an entire Forest Range by such patrols at least once a month.

A comprehensive Patrolling Plan will outline key areas for patrols, designated routes, responsible patrol leaders and debriefing personnel, patrol frequency, and other pertinent patrol-related details. Each Range HQ will possess a copy and the Range Officer will ensure random deployment of patrols within their jurisdiction to ensure effective coverage. Periodic organization of Trans Range Patrols is also essential.

Observing evidence of cattle kills is crucial, as aggrieved villagers may resort to poisoning kills, leading to the poaching of wild animals. Professional poachers also monitor cattle kills to assess carnivore presence. Prompt disbursement of ex-gratia payments, where applicable, is vital in preventing retaliatory killings. When a tiger or leopard is discovered at a kill, it should be left undisturbed to feed, as disturbing it may prompt the carnivore to seek another kill nearby, escalating conflict.

Certain areas are prone to specific poaching methods such as snares, traps, hunting dogs, poisoning of kills and water holes, electrocution, and shooting, as observed in crime/poaching history. Patrolling parties should be familiar with these local variations in poaching techniques and remain vigilant for such indicators during patrols.

10.4.6 Checks and documentation

Poachers typically lead nomadic lifestyles, moving from one area to another and often encamping around Tiger reserve areas to carry out poaching activities. They often set up temporary shelters in

tents and deras. Therefore, it's imperative to closely monitor such deras in and around the tiger reserve. These deras are commonly found in the following locations:

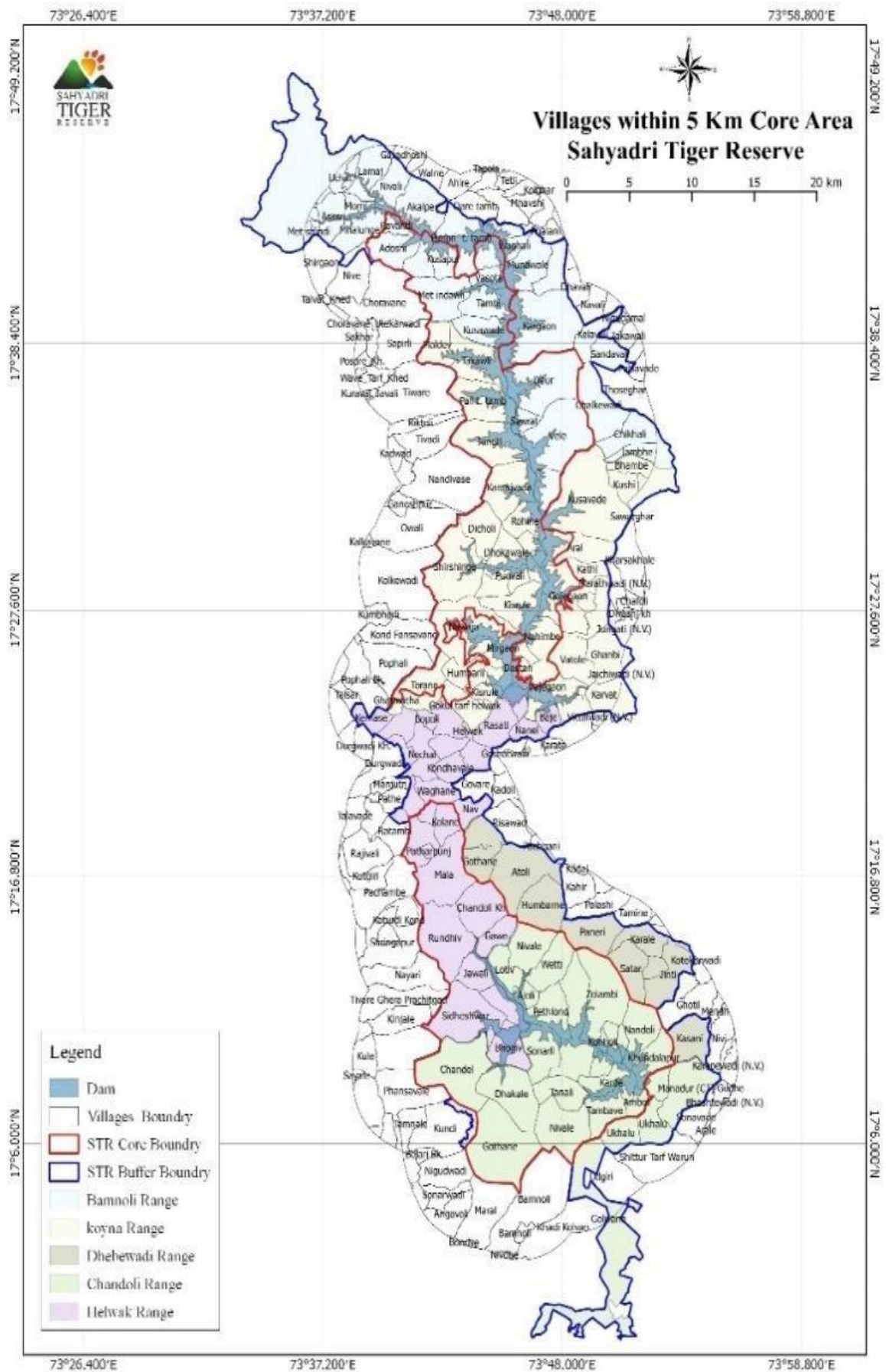
1. Along national highways
2. Near railway stations
3. In buffer villages

Actions to be taken regarding such deras include:

1. Conducting thorough search operations, which should be photographed/video graphed and documented at the Deputy Director (DD) office.
2. Copying and storing the IDs of individuals associated with these deras at the DD office and Range office.
3. Monitoring these deras by stationing a watcher.
4. Requiring these deras to report their arrival and departure to respective range offices.
5. Authorizing raids and inspections of suspected deras in collaboration with the police.
6. Entrusting the responsibility of monitoring these deras to a mobile squad.

In the buffer zone villages of STR, the respective round officer should personally inspect the Musafir registers monthly. He should duplicate the records for future reference. If there are any suspicions regarding individuals, the matter may be referred to the range office for further investigation.

Licensed gun owners and individuals possessing other arms (as listed in the Annexure) should be placed under surveillance. Weekly markets (as listed in Annexure 10.18) and restaurants also require monitoring (as listed in Annexure 10.19). Visiting these locations exerts psychological pressure, potentially reducing the likelihood of offenses.



Map No.4 : Map of Villages Within the 5 Km Boundry

10.4.7 Monitoring of tiger and keeping record

Records of tiger presence will be meticulously maintained through the following registers:

1. PIP register : Pugmark impressions of tigers will be documented in a data-wise format.
2. Camera trap register: Photographic evidence will be recorded in both hardcopy and softcopy formats.
3. Tiger ID files will be upheld by every beat guard. These files will include measurements of pugmarks and photographs displaying distinctive stripe patterns, allowing for the identification, and naming of individual tigers. These tigers will be tracked, and if one does not appear in PIP or camera traps for over a month, the surrounding area will be searched for the missing tiger. If deemed necessary, a thorough investigation will be conducted with the assistance of WCCB.
4. Patrol register : Every detail of patrols, including animal sightings and illegal activities, will be meticulously recorded in this register.

To protect the unique habitat areas:

1. Established strict conservation zones within the reserve to safeguard key habitat features and biodiversity hotspots.
2. Implement targeted habitat restoration projects to rehabilitate degraded areas and enhance ecological resilience.
3. Engaging local communities in sustainable land management practices to reduce human-wildlife conflicts and preserve critical habitat corridors.
4. Conducting regular ecological surveys and monitoring to assess habitat health and identify emerging threats.
5. Collaborating with research institutions and conservation organizations to leverage scientific expertise and innovative conservation strategies.
6. Enforcing stringent regulations to prevent illegal activities such as logging, encroachment, and poaching within sensitive habitat areas.
7. Promoting ecotourism initiatives that prioritize low-impact visitor experiences and contribute to the conservation of unique habitat ecosystems.
8. Establishing partnerships with neighboring protected areas and government agencies to ensure landscape-level connectivity and coordinated conservation efforts.
9. Empowering local communities through education and capacity-building programs to become stewards of their natural heritage and active participants in habitat protection efforts.

10. Continuously adapting management strategies based on evolving ecological knowledge and emerging conservation challenges to ensure the long-term viability of unique habitat areas within the Sahyadri Tiger Reserve.

10.4.8 Intelligence Gathering

Effective intelligence networking is essential both for preventing and responding to crime incidents. Prior intelligence gathering enables proactive measures for crime prevention. The gathered information undergoes thorough evaluation, analysis, and utilization in decision-making processes. Advance intelligence is pivotal for successful crime prevention efforts, serving as a cornerstone for proactive measures.

10.4.8.1 Communication with sources:

- Establishing an effective communication system with informers is paramount. Direct contact with informers is the primary approach, prioritizing secrecy and anonymity. If direct contact is not feasible, phone communication can be utilized to maintain contact.
- During direct contact, secrecy and anonymity must be emphasized. Informers could meet officers at their residences under the cover of darkness or in secluded areas. Payment to informers should be made directly.
- A system should be developed to meet informers during emergency situations. Informers should be appropriately briefed and debriefed with a questionnaire prepared for each session.
- Maintaining a separate file for each informer is essential for periodic review. Handing over and taking over of informers should be systematized, with proper introductions facilitated only if the informer desires.

10.4.8.2 Running an Informer Network:

The demeanor of individuals providing intelligence information varies, necessitating tailored treatment. Typically, such individuals prefer to contact a specific officer to share intelligence, posing a challenge given officers' tenure at a station lasts only two to three years. Some informants choose to remain anonymous, initiating contact sporadically. Anonymous tip-offs often prove invaluable. Additionally, individuals with a poaching history can be incentivized to become informants.

To ensure the receipt of reliable information, the following measures must be implemented:

- Widely publicize and regularly monitor the address/telephone contact numbers for information provision. Senior officers should conduct random checks to verify this.

- Screen and promptly act upon all received information without delay.
- Conceal the identity of informers at all costs to ensure their safety.
- Ensure readily available resources to reward informers promptly.
- Maintain covert surveillance on known poachers and their key accomplices. Raise an alarm if they are found missing from their usual residence.
- Regularly monitor liquor vendors in the vicinity and outlets for pesticide sales.
- Generally, discourage the disbursement of advances for undercover operations, as it could potentially encourage poaching in certain situations.
- Encourage individuals and NGOs conducting undercover operations in and around a Tiger Reserve to keep at least one link in the official enforcement hierarchy informed of their activities.

Ultimately, the value of intelligence lies in its ability to inform appropriate decisions. Therefore, information from intelligence sources must undergo regular checks, cross-checks, and, most importantly, be acted upon within a reasonable timeframe to have a meaningful impact.

10.4.9 Establishing a Criminal Profile Directory

In Sahyadri Tiger Reserve, maintaining and regularly updating records of individuals with a history of poaching and/or wildlife trade in their locality is essential. These records should include details such as physical appearance, identification marks/signs, employment, family, key associates, criminal history, convictions, and pending cases. Any sudden or prolonged absence of such individuals from their usual residence must be investigated, as well as any sudden acquisition of movable or immovable assets for potential sources of such transactions.

Photographic dossiers containing information about active poachers in the area should be compiled. Regular analysis should be conducted to establish links between past crimes and new offenders, as well as old offenders and new crimes.

10.4.10 Tiger Cell:

A "Tiger Cell" has been established at the state level with a hierarchical structure, chaired by the Additional Director General of Police (HQ), with the Principal Chief Conservator of Forests (Wildlife) as Co-Chairman and the Chief Conservator of Forests (Wildlife), Nagpur as the Member Secretary, as per G.R. No. WLP-10-2000/C.N.10/F-1, Mumbai, dated 7th November 2000.

The Tiger Cell operates at three levels: state, regional, and district. At the regional level, it is chaired by a special IG, with the Chief Conservator of Forests (Kolhapur) as its Member Secretary. Members include officials from Kolhapur and Sahyadri Tiger Reserve.

At the district level, the Tiger Cell is led by the Superintendent of Police and the Deputy Conservator of Forests/Divisional Forest Officer, Vigilance, acts as the member secretary. The Concerned Divisional Forest Officer, Wildlife and Deputy Director of Sahyadri Tiger Reserve are also members.

Regular meetings of the Tiger Cell are imperative as it facilitates coordination across various levels, enabling the exchange of sensitive wildlife crime-related information for intelligence-based patrolling and effective prosecution/conviction. Collaboration with police and other departments is crucial to minimize offenses and human-animal conflicts.

Farmers resorting to illegal use of electric current to protect their agricultural crops from wild animals pose a significant challenge. Coordination with the electricity board and police is essential to address such issues effectively.

10.4.11 Fire arms:

Currently, there is no provision for secure storage of firearms akin to those in the police department. ACFs/RFOs are issued pistols and should periodically discharge cartridges to ensure the pistol's functionality. All firearms in the field must be regularly cleaned and oiled. Field staff should undergo firing practice at least once a year at established firing ranges, with support from local police or army units.

Additionally, all firearms should undergo test firing at least once or twice a year. Official firearms (see Annexure 10.17) must be issued to recognized entities, ensuring accountability for each weapon and its user. Cartridges issued must be accurately recorded, and spent cartridges returned to storage.

Firearms should never be carried singly in the field as they may attract unwanted attention. It's best to carry guns in pairs for safety. When walking, firearms should be carried with the barrel pointing upwards or downwards, never at chest level facing forward or backward. In humid environments, it's advisable to plug the barrel with cotton or cloth.

10.4.12 Wireless communication:

A comprehensive list of wireless stations (Annexure 10.5 & Atlas Map No.128) with access to dedicated power supply operating 24/7 must be maintained. Additionally, a list of other wireless stations

and their respective working hours should be documented. Call signs, preferably in code, should be assigned to key officials of the Tiger Reserve (TR).

All wireless stations are required to convey reports, preferably twice daily at predetermined intervals, to a designated Control Room. These reports should include:

- Details of patrols conducted and areas covered on the given date.
- Any signs of presence or movement of suspected poachers etc.
- Sightings or signs of wildlife, such as tigers etc.

Even in the absence of significant events, stations should still contact the Control Room with a "Nothing to Report" (NTR) message. If a station fails to respond for an extended period, the concerned officer should visit the site to ascertain the reasons for the communication breakdown.

Exploration of modern gadgets like mobile phones for communication purposes is encouraged. However, it is crucial that all such communications are formally recorded and logged.

10.4.13 Response:

Intelligence Gathering	Effective Communication	Enforcement based on Intelligence
1.Tiger/Leopard/Wild animal presence 2.Gathering information from local work force 3.Cattle depredation 4.Local market survey 5.ID of carnivore causing depredation (camera trap) 6.Wild life mortality/poaching 7.Caracas (wildlife/cattle) 8.Fire (especially during antler shedding period) 9.Unauthorized vehicular entries leading to core habitat 10.Pesticide sale and use 11.Random/Sudden checking ant rail heads /flag stations/bus stops/roadway	1.Use of wireless and its housekeeping (solar charges in places without electric supply) with a round the clock control station linking core /buffer /adjoining forest divisions 2.Use of electronic surveillance along sensitive periphery (between core and buffer) 3.Use of camera trap/mobile phone interface in sensitive areas (only for frontline staff) 4.Ensuring vehicular mobility for transporting patrolling parties 5.Creating temporary patrolling camps equipped	1.Information scrutiny on a day-to-day basis and sharing with patrolling teams 2.Day today patrolling chart based on information and duty allocation 3.Supervisory checks for patrolling intensity 4.Feedback and rapid action 5.Ongoing capacity building of frontline staff and fitness test. 6.Equipping patrolling parties with arms, ammunition/accessory equipment's 7.Evolving site-specific patrolling protocols (summer/monsoon/winter) 8.Deploying group patrols (if necessary)

Intelligence Gathering	Effective Communication	Enforcement based on Intelligence
12.Reconnaissance of water points	with wireless	

In the field of wildlife conservation, despite our best efforts, there are occasions when the mortality of significant species occurs. While some of these instances may result from natural causes, others are driven by factors such as poaching or human-wildlife conflict. Standard Operating Procedures (SOP) provided by the National Tiger Conservation Authority (NTCA) dictate the proper protocol for handling situations like disposal of Tiger/Leopard carcasses, managing tiger deaths and caring for orphaned cubs. It is imperative that these procedures are strictly followed. To ensure prompt response and effective management, it is essential that each range is equipped with functional communication devices and vehicles, as outlined in Annexure 10.16. This readiness enables quick action without unnecessary delays.

10.4.13.1 Flow chart for Action when a Wildlife Crime/Mortality is detected

- Inform the concerned senior officer immediately.
- Officer should reach the spot at the earliest possible time with basic tools & forensic Kit.
- Cordon off the area with the help of rope or tape.
- To facilitate collection of evidence, divide the crime area in to grids or radial circles.
- Note down every bit of information on the spot in a notebook or in a recording device. Please note that the weakest ink is still stronger than the best of memories, which can fade with time.
- Do not disturb/touch/ manipulate the evidences unless photographs have been taken and sketches prepared. Take photographs from different angles. Try to make a video recording of the crime scene.
- Record foot prints of animals, human beings, and tire/ wheel marks of vehicle if any. Plaster casts may also be prepared of these.
- Search and collect all possible evidences carefully in original condition with preservatives if needed. Search must be carried out at the eye level, ground, and above eye level also. Properly pack and label the physical evidences.
- Make a note of names, addresses of witnesses, and record their statements.
- Details of the crime scene like location, time, date, weather condition etc. may be recorded.

- Collect evidences from scene of crime, carcass of animals, body parts, and suspects on the spot.
- Surrounding area of the spot must be thoroughly searched.
- Route/escape followed by the suspect(s) must be checked for evidence.
- After recording evidences from carcass for wounds, bullet injuries, symptoms of poisoning, seizure and labelling, the body should be sent for post-mortem.

The implementation of the security plan must be meticulous, adhering closely to its guidelines. Senior officials should conduct regular security audits and organize mock drills to assess the readiness of field staff. These measures ensure that in times of emergency, the system functions seamlessly, akin to a well-oiled machine. Echoing a common sentiment in the military, the emphasis is on diligent preparation during times of peace to minimize vulnerabilities during times of crisis.

10.4.14 Monitoring and Supervision

Monitoring is an important issue and should be addressed responsibly:

RFO level:

1. Should check every Anti-poaching Camp in 15 days.
2. Should stay at least for 4 days/month on Anti-poaching Camps
3. Should do foot patrolling at least once in a week
4. Should maintain his own PIP register, Tiger ID file, and waterhole check, register, patrolling register, supervision, and monitoring register.

ACF level:

1. Should check every Anti-poaching Camp once in three months.
2. Should stay at least for 2 days/month on Anti-poaching Camps
3. Should do foot patrolling at least once in a week
4. Should maintain his Tiger ID file.

DCF level:

1. Should check every Anti-poaching Camp once in six months.
2. Should do foot patrolling at least once in two weeks
3. Should stay at least two day/month on Anti-poaching Camps
4. Should check all supervision files of RFO and ACF once in a month.
5. Should maintain his own Tiger ID file

CF level:

1. Should check Anti-poaching Camps while on a tour.

2. Should stay at least one day/month on Anti-poaching Camps
3. Should do foot patrolling at least once in two weeks
4. Should check Tiger ID file of every DCF once in a month
5. Should maintain his own Tiger ID file

As per as possible, norms given by the Government of Maharashtra for night halt should be followed.

10.4.14.1 Hi-tech supervision

Utilizing modern technology is paramount for effectively monitoring tiger movements. Satellite imagery plays a crucial role in this endeavor, providing valuable data for analysis. GPS data is integrated into digitized maps to identify high and low-risk areas.

To enhance surveillance efforts, STR is urged to implement an e-surveillance project. This initiative involves deploying camera-equipped drones (Unmanned Aerial Vehicles) and fixed cameras on towers throughout the forest. These measures aim to safeguard against encroachment, trespassing, fires, grazing, and poaching. Additionally, e-surveillance facilitates monitoring vehicle movements within the forest.

Furthermore, installing high-capacity telescopes at elevated locations can significantly expand surveillance coverage, ensuring comprehensive monitoring of the forested area.

M-STRIPES (Monitoring System for Tigers Intensive Protection and Ecological Status):

Introduced in tiger reserves, M-STRIPES is a software monitoring system designed to enhance tiger monitoring and mitigate the risk of poaching. Its primary objective is to fortify the protection of wild animals. This system empowers field managers to oversee the intensity and spatial coverage of patrols within their designated areas.

Implemented in STR since 2016, M-STRIPES mandates a minimum target of 40 kilometers of foot patrolling per week. To ensure effective implementation, regular reviews of patrolling efforts by field staff are conducted fortnightly, overseen by the Range Forest Officer (RFO). These reviews inform the development of comprehensive patrolling strategies aimed at covering the entire area and ensuring heightened protection.

10.4.15 Prosecution:

Deterrence plays a pivotal role in instilling fear among potential offenders, thus serving as a crucial component in conservation efforts. Prosecution, with a guarantee of conviction, serves as a significant deterrent. While the focus on prosecution may not directly contribute to conservation efforts, it effectively creates a sense of fear among potential poachers.

Investigation stands as the cornerstone upon which court cases hinge. During investigations, the following procedures should be meticulously followed:

1. Prompt registration of a First Information Report (FIR) upon receiving information about the offense.
2. Thorough inquiry and subsequent arrest of offenders.
3. Conducting Panchanamas in accordance with Section 27 of the Indian Evidence Act, 1872.
4. Completing spot Panchanamas with comprehensive details of the surroundings.

Additionally, maintaining a detailed database of offenders is essential. Legal proceedings should be closely monitored, with opposition to bails in tiger poaching cases supported by references from previous judgments. Given that many poachers are nomadic, their release on bail could lead to their disappearance without a trace.

Effective media management is crucial following poaching incidents, as heavy criticism of the forest department often ensues. Involving Honorary Wildlife Wardens and NGO personnel in investigations as Panchas, where feasible, not only helps mitigate criticism but also addresses any potential allegations.

10.4.16 Mitigation of other incidences

Issues like tiger/leopard depredation on livestock, injured tigress/leopard, straying of tigers/leopards should be handled as per Standard Operating Procedure (SOP) given by National Tiger Conservation Authority (NTCA).

To respond at once to every incidence without delay, the basic rescue equipment's such as vehicle, gun, medicines, etc. (Annexure No.10.17) should be in working and proper condition. Also, all basic equipment's at range level should be maintained and keep in good working condition by RFOs.

Management of Man-Animal conflict:

Man-animal conflict is a major concern in STR. There are several incidences of Leopard attacks, Cattle kill, Crop damage, Sloth bear attacks (Very rare) and Gaur attacks on human takes place in TR landscape.

Things to be done in case of human attack:

1. Immediate medical help should be provided by the tiger project staff
2. Inform police and revenue
3. Mob control should be done very efficiently to avoid any retaliatory attack on wild animal
4. Only as last option the animal should be immobilized

SOP to be followed in such kind of situation in case of cattle kill:

1. Make a panchanama of kill
2. Place cameras around kill
3. Keep a watch over the kill for two weeks
4. Provide the compensation to the owner of cattle as soon as possible.

Fire, encroachment, grazing and illicit cutting leads to destruction of tiger habitat. However, there are high anthropogenic pressures. The people in STR are dependent on forest for firewood and fodder. Unless they get alternative employment opportunity, the dependence will continue irrespective of forest department's efforts.

10.4.17 Capacity building of staff:

The staff can be trained for various skills and technologies as follows:

- A. Wildlife monitoring technique workshops: Pugmark impression studies and identification, Camera trap use, identification of individual tigers by differentiating pugmark impressions and stripes.
- B. Patrolling capacity enhancement workshops: method to increase the efficiency of patrol
- C. Prosecution/legal workshops: to make prosecution better and stronger
- D. Weapon handling and firing training
- E. Physical training
- F. Modus operandi/Police training.
- G. Training on handling Instruments: Blowers, Cutters, Mobile Software, GPS, Night Vision Binocular, Metal Detector.
- H. SOP training
- I. Intelligence gathering

10.1 List of Anti Poaching Camp In STR

Sr. No .	Round	Beat	C.N.	Name/Place of APC	Constructi on Year	Storey	Status	Condition	Rooms	Remarks	Latitude			Longitude		
											D	M	S	D	M	S
Chandoli National Park- Chandoli Range																
1	Mandur	Khundlapur	24	APC-Khundlapur	2014	1	Permanent	Good	2		17	8	17.5	73	52	48.6
2		Nandoli	22	APC-Nandoli	2010	1	Permanent	Good	3		17	10	39.4	73	52	25.4
3		Zolambi	20	APC-Zolambi	2015	1	Permanent	Good	2		17	12	8.2	73	50	14.5
4		Takale	18	APC-Takale	2016	1	Permanent	Good	2		17	21	35	73	8.1	14.6
5		Vetti	14	APC-Vetti	2010	1	Permanent	Good	2		17	14.6	2	73	46	23.69
6		Mandur	17	APC-Mandur												
7		Tambave		APC-Tambave												
8	Nivale Kop.	Nivale Kop.	30	APC-Nivale Kop.	2015	1	Permanent	Good	3		17	5	52.6	73	48	33.1
9		Sonarli	28	APC-Sonarli	2016	1	Permanent	Good	3		17	8	0.9	73	48	3.12
10		Dhakale	33	APC-Dhakale	2016	1	Permanent	Good	3		17	6	9.47	73	46	3.8
11		Gothane	37	APC-Gothane	2021	1	Permanent	Good	4		17	5	59.1	73	46	11.7
12		Chandel W	35	APC-Chandel W	2010	1	Permanent	Good	3							
13		Chandel E	36	APC-Chandel E	2016	1	Permanent	Good	2		17	8	39.2	73	43	32.4
14		Udgiri	980	APC-Udgiri	2016	1	Permanent	Good	3		17	11	9	73	85	7.98
15		Golivane	9	APC-Golivane	2021	1	Permanent	Good	4		17	3	9.08	73	8.5	8.02
Chandoli National Park- Helwak Range																
16	Kolane	Kolane		APC-Kolane	2009	1	Temporary	Need Repering	1		17	18	29.7	73	42	45.3
17		Chandoli Khurdh		APC-Chandoli khurdh	2009	1	Temporary	Need Repering	1		17	15	59.4	73	45	21.4
18		Chandoli Khurdh		APC-Chandoli khurdh	2018	1	Permanent	Good	2		17	16	0.4	73	45	21.4
19		Rasati		APC-Rasati	2018	1	Permanent	Good	4		17	22	24	73	40	44

20		Kolane		APC-Kolane	2019	2	Permanent	Good	2		17	18	30	73	42	46
21	Rundiv	Kolane		APC- Roatki Naka	2013	1	Permanent	Good	2		17	19	44.3	73	43	17.6
22		Rundiv south		APC-Rundiv South	2009	1	Temporary	Need Repering	1		17	13	49	73	43	24.7
23		Sidheshvar		APC-Sidheshvar	2009	1	Temporary	Need Repering	1		17	10	49	73	42	11.9
Chandoli National Park- Dhebewadi Range																
24	Sanbur	Atoli	521	APC- Atoli	2017-18	Single	Existing	Good	4		17°	17"	45.5'	73°	45"	3.5'
25		Humbarne	530	APC-Humbarne	2017-18	Single	Existing	Good	4		17°	16"	29.1'	73°	47"	6'
26		Paneri	578	APC- Paneri	2017-18	Single	Existing	Good	4		17°	14"	52'	73°	48"	5'
27		Karale	572	APC-Karale	2017-18	Single	Existing	Good	4		17°	14"	31.2'	73°	50"	34.1'
28		Kasani	620	APC-Kasani	2017-18	Single	Existing	Good	4		17°	10"	5.6'	73°	53"	48.6'
List of Anti-Poaching Camp																
Sr. No .	Round	Beat	C.N.	Name/Place of APC	Constructi on Year	Storey	Status	Condition	Rooms	Remarks	Longitude			Latitude		
											D	M	S	D	M	S
29	Koyana	Koyana	33	Koyana	2018	1	Permanent	Good	3	Inspection Hut	17°	24"	34'	73°	44"	30'
30		Navaja	419	navaja	2018	1	Permanent			Proction Hut	17°	24"	34'	70°	42"	1'
31	Shirshinge	shirshinge	406	shirshinge	2019	1	prefabrticted	Good	4	Proction Hut	N17°	29"	7'	E73°	41"	48'
32		Kisurale	Punavali Gauthan	Kisurale		1	Permanent	Good	2	Old School	N17°	28"	52'	E73°	46"	16'
33		Dicholi	Dicholi Gauthan	Dicholi		1	Permanent	Good	4	Old School	N17°	30"	8'	E73°	44"	47'
34	Takawali	Kanjawade	396	Rohine	2019	1	prefabrticted	Good	4	Proction Hut	N17°	31"	49'	E73°	46"	31'
35		Junkathi	391	Junkathi	2019	1	prefabrticted	Good	4	Proction Hut	N17°	34"	24'	E73°	43"	57'
36		Pali	376	Pali	2019	1	prefabrticted	Good	4	Proction	N17°	36"	19'	E73°	45"	23'

										Hut						
37		Maldev	368	Maldev	2019	1	Permanent	Good	4	Proction Hut	N17°	37"	54'	E73°	42"	34'
38		Takawali	369	Takawali	2019	1	prefabricted	Good	4		N17°	37"	41'	E73°	44"	57'
39		Kusawade	429	Avsari	2005	1	Permanent	Good	2	Inspection Hut	N17°	29"	14.2'	E73°	47"	15.7'
40	Kusawade	Ambhegar	Nahimbe Gauthan	Nhaimbe		1	Permanent		2	Old School	N17°	26"	10.0'	E73°	46"	49.1'
41		Karvat		Karvat	2015	1	Cantenar Kuti	Good		Cantenar Kuti	N17°	24"	13'	E73°	50"	59'
Koyna Wildlife Sanctuary- Bamnoli Range																
42	Vele	Vele	383	APC-Vele	2015	Single	Existing	Good	2		17	73	20	73	49	5
43		Dewoor	372	APC-Dewoor	2019-20	Single	Existing	Good	2		17	36	10	73	47	40
44	Waghavale	Waghavale	357	APC-nivali	2018-19	Single	Existing	Good	2		17	43	56	73	40	28
45	Valvan	Mhalunge	339	APC-Adoshi	2019-20	Single	Existing	Good	2		17	42	48	73	41	13
46		Kusapur	330	APC-Tambi	2018-19	Single	Existing	Good	2		17	39	56	73	45	20
47	Met Indoli	Kusapur	335	APC-Met Indoli	1996-97	Single	Existing	Good	2		17	40	18	73	43	3
48		Khirkhindi	304	APC-Khirkhindi	1996-97	Single	Existing	Good	2		17	42	53	73	59	16
49	Waghavale	Uchat	367	APC-Kandat	2020-21	Single	Existing	Good	2		17	46	34	73	36	28
50	Valvan	Valvan	346	APC-Raghuveer Ghat	2015-16	Single	Existing	Good	2	Need Maintenan ce	17	42	29	73	36	24

10.2.1 List of Man Barrier Gates in STR

List Of Proposed Man Barrier Gates Required	
Sr.no	Location Name
Range: Dhebewdi	
1	Jinti Satar Road
2	Karle Ruvala Phta Walmik Road
3	Paneri Road
4	Kasni Village Road Mahskar wadi
5	Humbarne Road at APC
Range: Helwak	
6	Atoli Nagwantek Border
7	Dhankal-kemase Hadd
8	Kondhavale waterfall Road
9	Bahiravgad Jaungl Safari Road
Range: Bamnoli	
10	Munawle Phata
Range: Patan	
11	Cahlkewadi
12	Karwat
13	Ambhegar,Baje

10.2.2 List of Proposed Unmanned Barrier Gates in STR

List Of Proposed Unman Barrier Gates Proposed	
Sr.no	Location Name
Range: Chandoli	
1	Rundive Hadd
2	sonarli to dhakale Road
3	Dahakale to Cahndel Gavthan Road
4	Shindewadi Forest to Shindewadi Road
5	Tanaliwadi to Kokanewadi Road
6	kotharwadi phata to kothakhadi keliche paani Road
7	Dhakale te Kokanewadi Road
Range: Amba	
8	Udgiri Gothne Road
9	Koakan Darshn Road
10	Kokan Darsahn Nature Trail
11	Golivne Road
12	Khinoba Road
13	Gothane road
14	Dhok sada Road
15	Changbhala Naka Road
16	Niwale Hole
17	Shiricha Maal ambabaiwad
18	tambe road ambaiwad
19	shittur Hadd Ambaiwad
20	near Nivle Kolhpur APC camp
21	Salindar Board goathne Road
22	Tanali Tikatne Dhakale Road
23	Hawali Odhha Tanali Road
24	Marleshwar sada Road
25	Gothane Udgiri Road
26	wakada Oddha Tikatne
27	At APC golivane
28	Nivale ohal
29	Talwade
30	At Amba Ghat kaman
Range: Dhebewadi	
31	Shewtai Phata Main Road

32	Nawaiwadi Road
33	Mandur Dhangar Wada Road
34	Ninaiwadi Kasni APC
35	Kasni shewtai Road
36	Kasni Shewtai Phata Kansi Road
37	Shewati main road Vantale
38	Mandur Watch Tower Road
39	Jaondhal nala patha Nandoli
40	Maingadewadi Hadd Nandoli
41	Janacha amba Pahata
42	Payrmal Back water road
43	Karmbal nala road
44	Zolambi APC Road
45	Vithalli Mandir Patha
46	Main Road Zolambi Amba Pahata
47	Takle APC Road
48	Takle Sada road
49	Pethlond Road
50	Takle watch tower road
51	Veeti APC road
52	Vetti Back water Road
53	Nivale APC Road
54	Nivale Khind Phata
55	Humabre Nivale Khind Border
56	Humbarne Nivale Khind Road
57	Lotive Back Water Road
58	Gave Tower Road
59	Zolambi Satar khind Road
60	Satar Khind
61	Karle Road Karle
62	Satar Village Forest border
63	Karle Tamhine Border
64	Karle Watch Tower Road
65	Walmik Mandir Back side Road
66	Palshi Forest Border
67	Walmik satar Road
68	Humbarne Morda Phata
69	Pandhrepani Humbarne border
70	Pandhrepani walmik road wind mill point

Range -Helwak	
71	Gothane Male Hadd
72	Gadgada Goware Waghne Hadd
73	Kandhar Doha Phata
74	Male Road Phata
75	Candoli Khurd -vetti Hadd
76	Near Jaradi Reiver
77	Terebhatti
78	Prachitigad Phata
79	Near Prachitigad Fort
80	Rundive sada Tikatne
81	Rundive Sidheshwar hadd
82	Chandoli Kkhurdh Pandhare pani Boredr
83	Atoli bhakarmali Hadd
Range: Bamnoli	
84	katrewadi
Range: Kandat	
85	Lamaj
Range: Koyna	
86	Navaja safari road
87	Malwadi Navaja to zuongti maldev Road
Range: Patan	
88	Vele core zone border
89	Deur core zone Border
90	karwat to baje Road
91	Gojegoan Core zone Border
92	sandawali Buffer Road
93	Kelavli Buffer Road
94	APC Vele Road
95	APC Deur Road

10.3 List of Check Post in STR

Sr No	Round	Beat	Comp No	Name/ Place	Type	Storey	Estimated cost	Condition	Remarks	Latitude			Longitude		
										D	M	S	D	M	S
Chandoli Range															
1	Mandur	Khundlapur	24	Jadhwadi	Parmant	Singale		Good		17	8	17.5	73	52	48.6
2		Mandur	17	Shevtai Mandir	Fabricated	Singale		Good		17	15	23.24	73	90	19.5
3	Nivale Kop	Nandoli	22	Nandoli	Parmant	Singale		Good		17	10	40.5	73	52	26.7
4		Nivale Kop	30	Changbhala Naka	Parmant	Singale		Good		17	5	52.6	73	48	33.1
Helwak Range															
5	Kolane	Kolane		Rutaki Naka	Parmant	Singale			Need Repairing	17	19	15	73	43	15
Dhebewadi Range															
6	Sanbur	Paneri	578	Paneri (walmik Wada)		Singale		Good	Pre- Fabricated	17	14	52	73	48	5
Koyna Range															
7	Koyana	Navaja		Navaja Colony				Good	Irrigation Dep room	17	26	38.54	73	43	6.2
Bamnoli Range															
8	Valvan	Valvan		Raghuveer Ghat Naka	2015-16	Singale		Good	Need Maintnace	17	42	29	73	36	24
9	Met Indoli	Kusapur		Met Indoli	1996-97	Singale		Good		17	42	29	73	36	24

10.4 List of Protection Road In STR

Sr.no	Name Of Road		Important things on road eg. Protection Hut, Water Hole Machan etc)
Range: Chandoli			
1	Ambole to Udgiri	14 km	
2	Udgiri To Dhakale	4 km	
3	Udgiri To Chandel	14 Km	
4	Chandel To Rundiv	14 km	
5	Gothane to Dhakale	4 km	
	Total Km	82.00	
Range: Amba			
6	Udagiri Camp to Nivale Hadd	2.7	
7	Nivale Hadd to Gothane hadd	2.1	
8	Gothane hadd to Gothane Camp	2.7	
9	Udagiri Camp - Changhbhal Naka	2.5	
10	Changhbhal Naka-Dhok Sada to Gothane Rd	1.7	
11	Udagiri Camp - NivalHole	3.98	
12	Gothane Rd to Khainoba Valley	0.8	
13	Udagiri Ubha Dev- Kalammadevi Temple to Kokan Darshan	2.1	
14	Ambai Wada- Shittur Hadd	4.5	
15	Nivale Hole to Transect Line Golivane	3	
16	Parale Ninai to Swayambhu Maruti Mandir	2	
17	Gavali Resort to Amba Plateau	1.5	
18	Gavali Resort to Parale Ninai	14	
19	Salindar Board to Gothane Camp	4.5	
20	Changbhal Naka- Nivale Camp	4.5	
21	Changbhal Naka- Tamabave Hadd	1	
22	Salindar Board to Gothane Hadd	3	
23	Gothane Hadd to Gothane Camp	1.5	
24	Gothane APC to Wakada odhaa	4.8	
25	Gothane APC to Gangotari	2.5	
26	Gothane APC to Chandel	7	
27	Gothane APC To Dhakale Hadd	3	
28	Salindar Board to Dhakale Hadd	4.5	
29	Tanali Tikatne to Tanali Hadd	2.5	
30	Nagacha Bord to Nivale APC	1.5	
	Total Km	83.88	
Range: Kandat			
31	Shindi to Kusapur	30 Km	Adoshi Protection Hut
32	shindi to Mhalunge	15 Km	
33	Vatole to Vele	30 Km	
34	Raghuvir Ghat to Morni	16 km	
	Total Km	72.00	
Range: Koyana			
35	Koyana to Navaja	10 km	Navaja watch tower
36	Navaja to Dicholi	8 km	

37	Dicholi to Shirshinge	8 km	
38	Shirshinge to Karanjavade	8 km	Navaja Protection Hut. Ghodvanche pani, nechemali, Anand Panvatha, dicholi pabal nala pani, dicholi gavthan pani
	Total Km	62.00	
Range: Patan			
39	Vele Dain to Kargoan Hadd	15.7	
40	karwat Mandir to Maile Sada	3	
41	Karwat kuti to Ravand (Vitthhal wadi Sada)	3.9	
42	khudple wadi to ambeghar kuti	1.5	
	Total Km	24.1	
Range: Dhebewadi			
43	APC-Karale to Satar Village	2	APC Karale
44	Paneri Check Post To Walmik Mandir	1.5	APC -PANERI, CHECK POST-PANERI, WALMIKI TEMPLE
45	Morda to APC-Humbarne	2	
46	Morda to Pandhrepaani (Atoli)	12	
47	APC-Humbarne to Humbarne Village	0.965	
48	APC-Kasani to Shwatai Phata	3	
49	Motha nala to Shwatai Mandir	2	
50	Walmik Paneri to Bhairi mandir	12	
51	Khundlapur Naka to Nandoli Naka	8	Janaiwadi Watch Tower
52	Ring Road to Ghodemal	3	Dam Back Water
53	Nandoli Naka to Janicha Amba	4.5	Janicha Amba, Watch Tower
54	Janicha Amba to Ghodemal	7	Watch Tower
55	Zolambi to Gave	20	
56	Janicha Amba to Zolambi	4	
57	Main road to Lotiv back Water Road	3.5	
58	Main road to Vetti Back Water Road	3	
59	Main road Takle Gavthan to Walmik Sada	4	
60	Humbarne Thadga to Nivale Main Road	3	
61	Nandoli Jondhal Nala to Maingde wadi	1	
62	Main Road to petlond mala	1.5	
63	Main Road to Vetti Gavthan	1	
64	Vithlai Mandir to Main Road Zolambi	1	
65	Main Road to Satar Khind	2.5	
66	Mandur Dhangar wada to Shewtai Mandir	1.5	
67	Shewtai Naka to Main Road	3	
	Total Km	113.65	
Range: Helwak			
68	Nav- Bhiravgad Road	15 km	APC-Kolane, APC- Rotaki Naka
69	Kolane to Male	2 km	
71	Kolane to Patharpunj	6km	
72	Pandharpani to Kandhar Doh	4 km	
73	Male To Chandoli Khurd	10 km	
74	Bhakarmali to Pandhrepaani (Atoli)	6km	Waghjai Mandir
75	Atoli to Bhakarmali (Atoli)	0.360 M	
	Total Km	142.4	
	Total Road Length in STR Km	631.03	

10.5 List of Wireless base Station and Control Room in STR

Sr.no	Range	Round	Beat	C N	Place/Name	Type	Construction Year	Condition	Remark	Latitude			Longitude		
										D	M	S	D	M	S
1	Dhebewadi Range	Sanbur	Atoli	521	APC-Atoli	Base Station	2021-22	Good	Working	17°	17"	45.5'	73°	45"	3.5'
2			Humbarne	530	APC-Humbarne	Base Station	2021-23	Good	Working	17°	16"	29.1'	73°	47"	6'
3			Paneri	578	APC-Paneri	Base Station	2021-24	Good	Working	17°	14"	52'	73°	48"	5'
4			Karle	572	APC-Karle	Base Station	2021-25	Good	Working	17°	14"	31.2'	73°	50"	34.1'
5			Kasani	620	APC-Kasani	Base Station	2021-26	Good	Working	17°	10"	5.6'	73°	53"	48.6'
6			Range office Control Room			Base Station	2022-23	Good	Working	17°	14"	15.8'	73°	57"	18.3'
7	Bamnoli Range	Vele	Vele	383	APC-Vele	Base station & Reapeter	2009-10		Not Working	17.5	57	80.72	73	82	15.83
8		Met Indoli			APC-Met Indoli	Base station	2017-18	Good	Working	17	40	18	73	43	3
9		Valvan	Mhaunge		APC-Mhaunge	Base station	2017-18		Not Working	17	42	48	73	41	13
10			Valvan		APC-Raghuveer Ghat	Base station	2017-18		Not Working	17	42	29	73	36	24
11					Wilson Point	Base station & Reapeter	2009-10	Good	Working	17	55	18	73	40	32
12			Range Office Bamnoli			Base station	2009-10	Good	Working	17	43	52	73	45	33
13	Koyana Range	Koyana	Koyana		APC-Nanel	Reapeter	2020-21	Good	Working						
14					Koyana Range office	Base station	2007-08	Good	Working						
15			Navaja	419	APC-Navaja	Base station	2020-21	Good	Working	17	45	77.3	73	70	42
16		Shirshinge	Kisurale		APC-Kisurale	Base station	2020-21	Good	Working	17	28	52	73	46	16
17			Dicholi		APC_Dicholi	Base station	2020-21	Good	Working	17	3	8	73	44	47
18		Takawali	Karnjawade		APC-Karnjawade	Base station	2020-21	Good	Working	17	31	49	73	46	31
19			Junkathi		APC-Junkathi	Base station	2020-21	Good	Working	17	34	24	73	43	57
20			Pali		APC-Pali	Base station	2020-21	Good	Working	17	36	19	73	45	23
21			Maldev		APC-Maldev	Base station	2020-21	Good	Working	17	37	54	73	42	34
22			Takawali		APC-Takawali	Base station	2020-21	Good	Working	17	37	41	73	44	57

23		Kusawade	Kusawade		APC-Kusawade	Base station	2020-21	Good	Working	17	14.2	14.2	73	47	15.7
24			Karvat		APC-Karvat	Base station	2021-22	Good	Working	17	24	13	73	50	59
25	Chandoli Range	Mandur	Range office Control Room			Base Satation		Good	Working	17	70	0	73	53	10
26			Khundlapur		APC-Khundlapur	Base Satation		Good	Working	17	8	17.5	73	52	48.6
27			Nandoli		APC-Nandoli	Base station & Reapeter		Good	Working	17	10	39.4	73	52	25.4
28			Zolambi		APC-Zolambi	Base Satation		Good	Working	17	12	8.2	73	50	14.5
29			Takale		APC-Taale	Base Satation		Good	Working	17	21	35	73	8.1	14.6
30			Vetti		APC-Vetti	Base Satation		Good	Working	17	14.6	2	73	46	23.69
31			Mandur		APC-Mandur	Base Satation		Good	Working	17	9	7	73	54	7
32		Nivale Kop	Nivale Kop.		APC-Nivale	Base station & Reapeter		Good	Working	17	5	52.6	73	48	33.1
33			Sonarli		APC-Sonarli	Base Satation		Good	Working	17	8	0.9	73	48	3.12
34			Dhakale		APC- Dhakale	Base Satation		Good	Working	17	6	9.47	73	46	3.8
35			Gothane		APC- Gothane	Base Satation		Good	Working	17	5	59.1	73	46	11.7
36			Chandel W		APC- Chandel W	Base Satation		Good	Working	17	8	39.2	73	43	32.4
37			Udgiri		APC-Udgiri	Base Satation		Good	Working	17	11	9	73	85	7.98
38	Helwak Range	Kolane	Kolane		Kolane Check post	Base Satation		Good	Working	17	18	29.7	73	42	45.3
39			Chandoli khurd		APC- Chandoli khurd	Base Satation		Good	Working	17	15	59.4	73	45	21.4
40			Rundiv		APC-Rundiv	Base Satation		Good	Working	17	13	49	73	43	24.7
41			Rotki Naka		Rotki Check post	Base Satation			Not Working	17	19	44.03	73	43	17.6
42			Sidheshvar		APC- Sidheshvar	Base Satation			Not Working	17	10	49	73	42	11.9
43			Range office Control Room			Base Satation			Not Working	17	22	38	73	43	47

10.6 List of Fire Watch Tower in STR

Sr.no	Beat	C N	Type	Place Name	Status	Condition	Remark	Latitude			Longitude		
								D	M	S	D	M	S
Range: Chandoli													
1	Khundlapur		Iron	Janayivaadi	Existing	Good		17	8	31.3	73	52	22.4
2	Nandoli		Iron	Nandoli	Existing	Good		17	10	46.6	73	50	37.9
3	Mandur(Buffer)		Iron	Mandur(Buffer)	Existing	Good		17	8	43	73	53	58.5
4	Takale		Iron	Takale	Existing	Good		17	21	7.2	73	81	52.2
5	Tambve		Iron	Tambve	Existing	Good		17	7	18.6	73	49	55.8
6	Gothne		Iron	Gothne	Existing	Good		17	7	7.4	73	44	27.34
7	Sonarli		Iron	Sonarli	Existing	Good		17	9	18.24	73	47	10.51
8	Chandoli West		Iron	Chandoli West	Existing	Good		17	9	51.3	73	42	50.3
Range: Helwak													
9	Chandoli Khurda		Iron	Chandoli Khurda	Existing	Good		17	15	27	73	44	16.3
10	Amboli		Iron	Amaboli	Existing	Good		17	12	27.5	73	45	54
Range: Dhebewadi													
11	Atoli	520	Iron	Atoli	Existing	Good		17°	17"	20.4'	73°	45"	22.7'

Range: Amba													
12	Nivale		Fabricate	Nivale	Existing	Good							

Range: Koyana													
13	Navaja		RCC	Navaja	Existing	Good		17	27	8	73	42	49
14	Pali		Iron	Pali	Existing	Good		17	36	16	73	43	56
15	Shirshinge		Iron	Shirshinge	Existing	Good		17	29	15.87	73	44	3.85
16	Jungati		Iron	junkathi	Existing	Good		17	34	26.22	73	44	36.96
17	Maldev		Iron	Maldev	Existing	Good		17	37	36.92	73	42	57.67

Range : Patan													
18	Ambheghar		Iron	Ambheghar	Existing	Good		17	27	18	73	47	25
19	Kusavade		Iron	Iron	Existing	Good		17	29	21	73	47	35

Range: Bamnoli													
20	Deur	370	Iron	Deur	Existing	Good		17	34	45	73	46	10
21	Vele	400	Iron	Jambhrukh	Existing	Good		17	31	29	73	47	20
22	Kusapur	330	Iron	Kusavde	Existing	Good		17	38	48	73	44	32
23	Kusapur	336A	Iron	Metindoli	Existing	Good		17	40	36	73	43	40
24	Kargaon		Iron	Katrewadi	Existing	Good		17	39	54	73	48	27
25	Vele		Iron	Vele	Existing	Good		17	35	59	73	48	26
26	Khirkhindi		Iron	Khirkhindi	Existing	Good		17	42	26	73	44	48
Range : Kadat													

10.7 Offences : Poaching (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyna Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	0	0	0	0	0	0	0	1	0	0
2011	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	1	1	1
2013	0	0	0	0	0	0	0	1	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	1	0	0	0	0	0	0	1	0
2017	0	1	0	0	0	0	0	0	2	2
2018	0	0	0	0	0	0	3	0	2	1
2019	0	0	0	0	0	0	0	1	2	0
2020	0	0	0	0	0	0	3	2	5	15
2021	0	0	0	1	0	0	2	0	3	0
2022	1	0	1	0	0	0	0	0	2	0
2023	0	0	1	0	0	0	1	0	0	0
Total	1	2	2	1	0	0	9	6	18	19

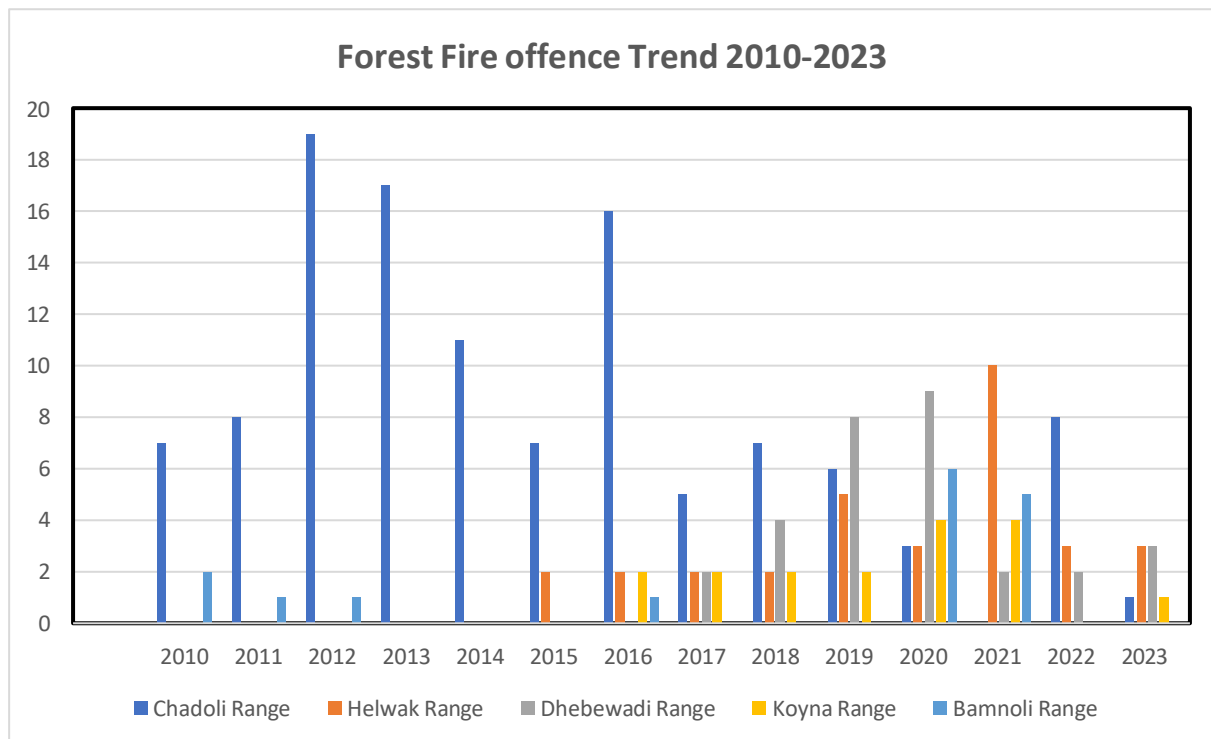
10.8.1 Offence – Fire (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyna Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	7	0	0	0	0	0	0	0	2	0
2011	8	0	0	0	0	0	0	0	1	0
2012	19	0	0	0	0	0	0	0	1	0
2013	17	0	0	0	0	0	0	0	0	0
2014	11	0	0	0	0	0	0	0	0	0
2015	7	0	2	0	0	0	0	0	0	0
2016	16	0	2	0	0	0	2	0	1	0
2017	5	0	2	0	2	0	2	0	0	0
2018	7	0	2	0	4	0	2	0	0	0
2019	6	0	5	0	8	0	2	0	0	0
2020	3	0	3	0	9	0	4	0	6	0
2021	0	0	10	0	2	0	4	0	5	0
2022	8	0	3	0	2	0	0	0	0	0
2023	1	0	3	0	3	0	1	0	0	0
Total	115	0	32	0	30	0	17	0	16	0

10.08.2. Forest Fire offence Trend 2010-2023

Year	Chadoli Range	Helwak Range	Dhebewadi Range	Koyna Range	Bamnoli Range
	1	2	3	4	5
2010	7	0	0	0	2
2011	8	0	0	0	1
2012	19	0	0	0	1
2013	17	0	0	0	0
2014	11	0	0	0	0
2015	7	2	0	0	0
2016	16	2	0	2	1
2017	5	2	2	2	0
2018	7	2	4	2	0
2019	6	5	8	2	0
2020	3	3	9	4	6
2021	0	10	2	4	5
2022	8	3	2	0	0
2023	1	3	3	1	0

Bar Graph



10.9. Offences: Illicit Cutting (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyna Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	0	0	0	0	0	0	0	0	2	2
2011	0	0	0	0	0	0	0	0	1	1
2012	0	7	0	0	0	0	1	0	0	0
2013	0	1	0	0	0	0	2	0	1	0
2014	0	0	0	0	0	0	0	0	1	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	2	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	1	0	0	0	0	0
2020	0	0	0	0	1	1	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	2	0	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0	0	0
Total	2	10	0	0	2	1	3	0	5	3

10.10. Offences : Illegal Grazing (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyna Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	2	0	0	0	0	0	0	0	2	5
2011	0	7	0	0	0	0	0	0	0	0
2012	0	3	0	0	0	0	0	0	1	1
2013	0	1	0	0	0	0	0	0	0	0
2014	0	4	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	1	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0	0	0
Total	2	15	0	0	0	1	0	0	3	6

10.11. Offences : Illegal Transportation (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyna Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

10.12. Offences : Other (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyna Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	0	0	0	0	0	0	0	15	9	63
2011	0	0	0	0	0	0	0	0	5	50
2012	1	2	0	0	0	0	0	0	1	7
2013	0	12	0	0	0	0	0	0	0	0
2014	0	2	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	3	0	0
2016	0	2	0	0	0	0	0	2	0	0
2017	0	0	0	0	0	0	3	0	1	3
2018	0	0	0	0	0	0	1	1	2	7
2019	0	0	0	0	0	0	0	0	2	1
2020	0	0	0	0	0	0	3	0	1	0
2021	0	0	0	0	1	0	0	0	1	4
2022	0	0	0	0	0	0	0	0	0	0
2023	0	0	1	0	1	0	0	0	0	1
Total	1	18	1	0	2	0	7	21	22	136

10.13. Summary of All Offences in STR (2010 – 2023)

Year	Chadoli Range		Helwak Range		Dhebewadi Range		Koyana Range		Bamnoli Range	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
2010	9	0	0	0	0	0	0	16	15	70
2011	8	7	0	0	0	0	0	0	7	51
2012	20	12	0	0	0	0	1	1	4	9
2013	17	14	0	0	0	0	2	1	1	5
2014	11	6	0	0	0	0	0	0	1	0
2015	7	0	2	0	0	0	0	3	0	0
2016	16	5	2	0	0	0	2	2	2	0
2017	5	1	2	0	2	0	5	0	3	0
2018	7	0	2	0	4	0	6	1	4	5
2019	6	0	5	0	9	0	2	1	4	8
2020	3	0	3	0	10	2	10	2	6	1
2021	0	0	10	1	2	1	6	0	4	21
2022	10	0	3	0	2	0	0	0	2	9
2023	1	0	4	1	4	0	2	0	0	0
Total	120	45	33	2	33	3	36	27	53	179

10.14.1 Summary of All Offences (Range Wise) in STR

Range	Poaching		Illegal Cutting		Forest Fire		Illegal Grazing		Illegal Transport		Other Offences		Total Offences	
	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders	No. of Offence without offenders	No. of Offence with offenders
Chandoli	1	2	2	10	114	0	2	15	0	0	1	18	120	45
Helwak	1	1	0	0	29	0	0	0	0	0	0	0	30	1
Dhebewadi	0	0	2	1	27	0	0	1	0	0	1	0	30	2
Koyana	8	6	3	0	16	0	0	0	0	0	7	21	34	27
Bamnoli	18	19	5	3	16	0	3	6	0	0	22	135	64	163
Total	28	28	12	14	202	0	5	22	0	0	31	174	278	238

10.14.2 Offence Type

Range	Round	Beat	Type of Offence	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Dhebewadi	Sanbur (Buffer)	Atoli	Forest Fire	0	0	0	0	0	0	0	0	2	3	3	1	1		10
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Illegal cutting	0	0	0	0	0	0	0	0	0	1	1	0	0		2
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Other Offences	0	0	0	0	0	0	0	0	0	0	1	0	0		1
		Humbarne	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	1		1
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	1	0	0		1
			Illegal cutting	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Other Offences	0	0	0	0	0	0	0	0	0	1	0	0	0		1
		Paneri	Forest Fire	0	0	0	0	0	0	0	0	1	3	2	0	0		6
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Illegal cutting	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0		0
		Karle	Forest Fire	0	0	0	0	0	0	0	1	0	0	0	0	0		1
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Illegal cutting	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0	0		0
			Other Offences	0	0	0	0	0	0	0	0	0	0	1	0	0		1
		Kasani	Forest Fire	0	0	0	0	0	0	0	1	0	0	0	0	0		1
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	1	0	0		1
			Illegal cutting	0	0	0	0	0	0	0	0	0	0	0	0	0		0

			Poaching	0	0	0	0	0	0	0	0	0	0	0	0	1	0		1
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0

Offence Type (2010-2022) Chandoli Range

Range	Round	Beat	Type of Offence	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Chandoli	Mandur	Khundlapur	Forest Fire	0	0	2	3	1	0	2	2	1	1	0	0		2	14
			Illegal Grazing	0	0	0		0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	1	0	0	0	0	1	0	0	0		0	2
			Poching	0	0	0	0	0	0	0	1	0	0	0	0		0	1
			Other Offences	0	0	1	1	0	0	2	0	0	0	0	0		0	4
		Nandoli	Forest Fire	1	2	4	2	3	3	3	0	2	1	0	0		1	22
			Illegal Grazing	2	3	0	0	0	0	0	0	0	0	0	0		0	5
			Illegal Cutting	0	2	1	0	0	0	0	0	0	0	0	0		0	3
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences		0	0	0	0	0	0	0	0	0	0	0		0	0
		Zolambi	Forest Fire	3	1	3	2	1	1	1	0	1	0	0	0		0	13
			Illegal Grazing	0	1	1	0	2	0	0	0	0	0	0	0		0	4
			Illegal Cutting	0	0	1	0	0	0	0	0	0	0	0	0		0	1
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0		1	0	1	0	0	0	0	0	0	0		0	2
		Takale	Forest Fire	0	1	3	2	0	0	3	0	0	0	0	0		0	9
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Veeti	Forest Fire	0	0	0	0	0	0	3	0	1	0	1	0		0	5

			Illegal Grazing	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Forest Fire	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
		Mandur	Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Forest Fire	1	1	2	2	2	1	0	0	0	1	0	0	1	1	11
		Tambave	Illegal Grazing	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Forest Fire	0	1	4	3	2	0	1	2	1	0	0	1	2	2	17
	Nivale Kop	Nivale Kop	Illegal Grazing		2	2	1	1	0	0	0	0	0	0	0	0	0	6
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Other Offences	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
			Forest Fire	0	0	1	0	1	0	0	1	0	1	0	0	0	0	4
		Sonarli	Illegal Grazing	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Other Offences	0	0	0	11	0	0	0	0	0	0	0	0	0	0	11
		Dhakale	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0		0	0	
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0		0	0	
			Poching	0	0	0	0	0	0	0	0	0	0	0		0	0	
			Other Offences	0	0	0	0	0	0	0	0	0	0	0		0	0	
		Gothane	Forest Fire	0	0	0	0	0	0	0	0	1	0	1	0		1	3
			Illegal Grazing	0	0	1	0	0	0	0	0	0	0	0	0		0	1
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		1	1
		Udgiri	Forest Fire	0	0	0	0	0	0	0	0	0	1	0	0		0	1
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Golivne	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Chandel	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poching	0	0	0	0	0	0	1	0	0	0	0	0		0	1
			Other Offences	0	0	0	0	1	0	0	0	0	0	0	0		0	1
		Male	Forest Fire		0	2	1	1	0	0	0	0	0	0	0		0	4

			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	1	0	0	0	0	0	0	0	0	0	0		0	1
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Kolne	Forest Fire	0	0	0	1	0	0	0	0	0	0	0	0		0	1
			Illegal Grazing	0	1	3	0	0	0	0	0	0	0	0	0		0	4
			Illegal Cutting	0	1	0	0	0	0	0	0	0	0	0	0		0	1
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Chandoli	Forest Fire	2	0	0	0	0	0	0	0	0	0	0	0		0	2
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0

Offence Type (2010-2022) Koyana Range

Range	Round	Beat	Type of Offence	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Koyana	Koyana	Koyana	Forest Fire	0	0	0	0	0	0	0	0	2	0	0	1		0	3
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	4	0	0	0	0	0	0	0	0	0	0	0		0	4
			poaching	1	0	0	0	0	0	0	0	2	0	3	2		0	8
			other Offences	6	0	0	0	0	3	1	0	0	0	1	0		0	11
		Navaja	Forest Fire	0	0	0	0	0	0	0	2	0	0	0	1		0	3
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	4	0	0	0	0	0	0	0	0	0	0	0		0	4
			poaching	0	0	0	0	0	0	0	0	1	0	1	1		0	3

			other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		shirshinge	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			other Offences	0	0	0	0	0	1	0	0	1	0	1	0	0	0	3
		Dicholi	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Kisrule	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Takavali	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Maldev	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Pali	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			other Offences	0	0	0	0	0	0	1	0	1	0	1	0	0	0	3
			Jungati	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Illegal Grazing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Illegal Cutting		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		poaching		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		other Offences		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Karnjawade		Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			other Offences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Kusawade	Forest Fire	0	0	0	0	0	0	0	0	0	1	0	1	0	0
		Illegal Grazing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Illegal Cutting		0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
		poaching		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		other Offences		9	0	7	0	0	0	0	3	0	0	1	0	0	0	20
		Ambeghar		Forest Fire	0	0	0	0	0	0	2	0	0	0	2	0	0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Illegal Cutting	2	4	0	0	0	0	0	0	0	0	0	0	0	0	6
			poaching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Karvat	Forest Fire	0	0	0	0	0	0	0	0	0	1	2	1		0	4
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			poaching	0	0	0	0	0	0	0	0	0	1	0	0		0	1
			other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0

Offence Type (2010-2022) Bamnoli Range

Range	Round	Beat	Type of Offence	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Bamnoli	Met Indoli	Munawle	Forest Fire	0	0	0	0	0	0	0	0	0	0	2	1		0	3
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	1	0	0	0		0	1
		kargaon	Forest Fire	0	0	0	0	0	0	0	0	0	1	1	0		0	2
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	1		0	1
		Kusapur	Forest Fire	2	0	1	0	0	0	0	0	0	0	0	0		0	3
			Illegal Grazing	2	0	0	0	0	0	0	0	0	0	0	0		0	2
			Illegal Cutting	1	0	0	0	0	0	0	0	0	0	0	0		0	1
			Poaching	0	0	0	0	0	0	1	0	1	0	0	0		0	2
			Other Offences	7	0	0	0	0	0	0	0	0	0	1	0		0	8
		Khirkhandi	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0

			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	0	0	0	0	0	1	0	1	1	1		0	4
			Other Offences	0	0	0	0	0	0	0	0	0	0	1	0		0	1
	Vele	Vele	Forest Fire	0	0	0	0	0	0	0	0	0	0	1	1		0	2
			Illegal Grazing	0	0	0	1	0	0	0	0	0	0	0	0		0	1
			Illegal Cutting	1	0	0	1	1	0	0	0	0	0	0	0		0	3
			Poaching	0	0	0	0	0	0	0	1	0	0	0	0		0	1
			Other Offences	1	0	0	0	0	0	0	0	0	0	0	0		0	1
		Deur	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	1	0	0	0	0	0	0	0	0	0	0		0	1
			Poaching	0	0	0	0	0	0	0	0	0	0	1	0		0	1
			Other Offences	1	0	0	0	0	0	0	0	0	1	0	0		0	2
		Palsawde	Forest Fire	0	0	0	0	0	0	1	0	0	0	0	0		0	1
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	0	0	0	0	0	0	0	0	1	0		0	1
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
	Valvan	Valvan	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	0	0	0	0	0	0	0	1	1	1		0	3
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Mhalunge	Forest Fire	0	1	0	0	0	0	0	0	0	0	0	0		0	1
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0

			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	1	0	0	0	0	0	0	0	1	0		1	3
			Other Offences	0	0	0	1	0	0	0	0	2	0	0	1		0	4
		Aarv	Forest Fire	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0	0		0	0
			Poaching	0	0	0	0	0	0	0	0	0	0	0	0		1	1
			Other Offences	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		Waghawle	Waghawle	Forest Fire	0	0	0	0	0	0	0	0	0	1	2		0	3
				Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0		0	0
				Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0		0	0
				Poaching	0	0	0	0	0	0	0	0	0	0	0		0	0
				Other Offences	0	0	0	0	0	0	0	0	0	0	1		0	1
			Uchat	Forest Fire	0	0	0	0	0	0	0	0	0	1	0		0	1
				Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0		0	0
				Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0		0	0
				Poaching	0	0	0	0	0	0	0	0	0	0	0		0	0
				Other Offences	0	0	0	0	0	0	0	0	0	0	0		0	0
			Pimpari	Forest Fire	0	0	0	0	0	0	1	0	0	0	1		0	2
				Illegal Grazing	0	0	0	0	0	0	0	0	0	0	0		0	0
				Illegal Cutting	0	0	0	0	0	0	0	0	0	0	0		0	0
				Poaching	0	0	0	0	0	0	0	0	0	0	1		0	1
				Other Offences	0	0	0	0	0	0	0	0	0	0	0		0	0

10.15. Office Contact Number.

Sr.no	Office	Hedquarter	Address	Contact No.	E-mail id
1	Conservator of Forest & Field Director Sahyadri Tiger Reserve	Kolhapur	2 Floor, Vanvardhn Bulding, Tarabai park-Kolhapur Pin-416003	0231-2542766	ccfwkolhapur@mahaforest.gov.in
2	Dy. Director (Koyana) Sahyadri Tiger Reserve	Karad	Sahydri Bhavan, Trimurti Colony Po-Agashivnagar, Malkapur, Tal-Karad, Dist-Satara, Pin- 415539	02164-241711	ddstrkarad@mahaforest.gov.in
3	Dy. Director (Chandoli) Sahyadri Tiger Reserve	Karad	Type-3 Bulding, Trimurti Colony Po-Agashivnagar, Malkapur, Tal-Karad, Dist-Satara, Pin- 415539	02164-298129	dfochandoli@gmail.com
4	ACF Koyana WLS	Karad	Sahydri Bhavan, Trimurti Colony Po-Agashivnagar, Malkapur, Tal-Karad, Dist-Satara, Pin- 415539	02164-241711	acfwlkoyana@gmail.com
5	ACF Koyana WLS Islampur (Bamnoli)	Karad	Sahydri Bhavan, Trimurti Colony Po-Agashivnagar, Malkapur, Tal-Karad, Dist-Satara, Pin- 415539	02164-298129	acfwlkoyana@gmail.com
6	ACF CNP (1)	Karad	Type-3 Bulding, Trimurti Colony Po-Agashivnagar, Malkapur, Tal-Karad, Dist-Satara, Pin- 415539	02164-298129	acfchandoli@gmail.com
7	ACF CNP (2)	Karad	Type-3 Bulding, Trimurti Colony Po-Agashivnagar, Malkapur, Tal-Karad, Dist-Satara, Pin- 415539	02164-298129	acfchandoli@gmail.com
8	Range Forest office -Chandoli Sahyadri Tiger Reserve	Mandur	Ap-Chandoli (warnawati), Tal- Shirala Dist- Sangali, Pin-415415	02345-226318	rfowlschandoli@gmail.com
9	Range Forest office Dhebewadi Sahyadri Tiger Reserve	Dhebewadi	A/p- Dhebewadi , Tal- Patan, Dist- Satara, Pin- 415112	02372-258308	rfowldhebewadi@gmail.com

10	Range Forest office -Helwak Sahyadri Tiger Reserve	Helwak	A/P-Helwak Tal-Patan Dist-Satara, Pin-415206	0 2372-284200	rfowlhelwak@gamil.com
11	Range Forest office -Amba Sahyadri Tiger Reserve	Amba	A/P-Amba Tal-Shauwadu Dist-kolhapur, Pin-415101		rfostramba@gmail.com
12	Range Forest office -Koyana Sahyadri Tiger Reserve	Koyana	At. Post koyana Tal Patan, Dist Satara	02372-284492	rfowildlifekoyana@gmail.com
13	Range Forest office -Bamnoli Sahyadri Tiger Reserve	Bamnoli	At/Post- Bamnoli Kasabe Tal- Javali Dist- Satara	02168-202020	rfobamnoli@gmail.com
14	Range Forest office -Patan Sahyadri Tiger Reserve	Patan	At/Post- Patan Tal- Patan Dist- Satara		rfopatanstr@gamil.com
15	Range Forest office -Kandat Sahyadri Tiger Reserve	Kandat	At/Post- Kandat Tal- Javali Dist- Satara		

10.16. Vehicle List

Sr.no	Office	Vehicle	Type	Designation	Name Of Driver	Contact no.
1	Conservator of Forest & Field Director Kolhapur	MH 50 L5161	Scarpio	CF & FD	H.M	
2	Dy. Director Sahyadri Tiger Reserve Karad	MH 50 C 9111	Scarpio	DD STR	H.M	
3		MH 04 HX 5727	Scarpio		H.M	
4		MH 09 AG 559	Sumo	ACF Bamnoli	H.M	
5		MH 09 AG 388	Sumo	ACF Koyana	H.M	
6		MH 09 47 E 1190	TATA XENON	RFO Mobile squade	H.M	
7		MH 50 N1659	LPT truck	DD STR	H.M	
8		MH 09 AG 0640	Honda unicorn		H.M	
9		MH 50 Q 4654	Honda Shine		H.M	
10	DFO Chandoli National Park Kard	MH-09 AG 0558	Bolero Jeep	ACF	H.M	
11		MH 50 N1497	Rescuq Tempo	DFO	H.M	
12	Range Forest Office(Wildlife) Dhebewadi	MH 09 EK 4235	Bolero Jeep	RFO	H.M	
13		MH09 AG 619	TATA XENON			
14	Range Forest office -Chandoli	MH 09 EM7833	Bolero Campar	RFO	H.M	
15		MH 47 E 1433	BUS			
16		MH 50 N1411	TATA XENON			
17	Range Forest office -Chandoli North (wildlife) Helwak	MH-09 EM6564	Bolero Jeep	RFO	H.M	
18		MH-09 AG0562	Bolero Campar			
19	Range Forest office (Wildlife) Bamnoli	MH 47 E 1189	TATA XENON	RFO	H.M	
20		MH 09 AG 0422	Bolero Jeep			
21		MH 50 E 0492	SML BUS			
22		MH 09 P 7732	Royal Enfiled Bullet			
23		Vanlaxmi	Lounch		S.D.Salunkhe	9423826999
24		Mahasheer				
25		SaiKrupa	Petrol Boat			

26		Shiv Krupa				
27		Petrol Boat - 90 HP				
28	Range Forest office (Wildlife) Koyana	MH 09 EK 3877	Bolero Jeep	RFO	H.M	
29		MH 47 E 1619				
30		MH 09 AG 637	TATA XENON		Santosh babaji Chalke	9420629233
31		MH 09 AG 638	TATA XENON			
32		MH 50 N 620			Anand Babaji Chalke	9322611696
33		MH 09 EM 6564				
34		Exclavator Machine				
35		150 HP Speed Boat	Petrol Boat		Ramesh Dinkar Zendekar	8888726788
36		9.9 Two strok				
37		9.9 Four Strok				
38	40 HP Petrol Boat					

10.17 List Of Important Equipment's used in Field

Sr. No.	Range	Name of Equipment	Quantity	Details (Model No., Year of Purches
1	Bamnoli	Night Vision Binocular	0	
		Binocular	16	
		Camera (Simple)	7	Sony Nikon 2021
		Camera with Geo Tag	0	
		Pistol & Bullets	1	
		Air Gun	15	
		GPS	13	Garmin gtx 10 2020
		PH meter	0	
		Torch	16	
2	Koyana	Night Vision Binocular	0	
		Binocular	19	Nill
		Camera (Simple)	7	sony 6 & nikon 1
		Camera with Geo Tag		
		Pistol & Bullets		Air Gun -14 Power Globus AIR Pistol (5.5 mm)
		GPS	24	garmin
		PH meter		
		Torch	23	Shiny Vel-Power solar
3	Chandoli	Night Vision Binocular	0	
		Binocular	4	
		Camera (Simple)	5	
		Camera With Geoo Tag	0	
		GPS	16	Garmin
		Pistol & Bullets	1	
		PH Meter	0	
		Torch	1	
4	Dhebewadi	Night Vision Binocular	0	
		Binocular	1	
		Camera (Simple)	3	Sony
		Camera With Geoo Tag	0	
		GPS	6	Garmin
		Pistol & Bullets	0	
		PH Meter	0	
		Torch	6	
5	Helwak	Night Vision Binocular	0	
		Binocular	3	

		Camera (Simple)	5	
		Camera With Geoo Tag	0	
		GPS	15	Garmin
		Pistol & Bullets	1	
		PH Meter	0	
		Torch	5	

10.18. List of Weekly Markets in and around STR.

Sr. No.	Weekly Market Place	Weekly Market day
1	Dhebewadi	Tuesday
2	Sanbur	Friday
3	Morgiri	Thursday
4	Kalgoan	Saturday
5	Talmavale	Thursday
6	Patan	Monday
7	Koynangar	Sunday
8	Satara	Sunday
9	Medha	Monday
10	Arala	Saturday
11	Amab	Sunday
12	Malkapur	Friday

10.19. List of Home Stay / Resorts in and around STR.

Sr. No.	Govt/Private	Name of stay facility	Place
1	Govt (PWD)	Holiday homes	Koynanagar, Teh-Patan, Dist -Satara
		Holiday homes Dormitory	
2	Govt (MTDC)	Koyna Lake Resort	Koynanagar
3	Private homestay	Ekvira	
4		Holiday homes	Kamargaon
5		Vasant Shelar	Navja
6		Mahesh Shelar	Navja Colony
7		Hotel Shivshambho	Manainagar
8		Visava Homestay	Humbarali
9	Private Resorts	Presidency Resort	Humbarali
10		Presidency Resort - Dormitory	
11		Gagan Vihar	Humbarali
12		Wind salet Resort	Humbarali
13		Vaji Resort	Humbarali
14		Gursale Resort	Humbarali
15		Nisarg Paryatan	Humbarali
16		Shrushti Resort	Humbarali
17		Red stone villa	Kathi (Avasari)
18		Kathi hills	Kathi (Avasari)
19		Manas Nature tourism centre	Kathi (Avasari)
20		Nature Nest Agro Tourism Centre	Kathi (Avasari)
21		Backwater cabins Agro Tourism Centre	Kathi (Avasari)
22		Windy hills Agro Tourism Centre	Kathi (Avasari)
23		Van Visawa	Amba
24		Hill view	Amba
25		Mango Resort	Amba
26		Vanashree Resort	Amba
27		Sawai Mansingh Resort	Amba
28		Shangrilla Resort	Amba
29		Hornbill Resort	Amba
30		Konkan Palace	Amba
31		Sunrise Resort	Amba
32		Aditya Residency	Amba
33		Shivsai Resort	Amba
34		Devrai Resort	Amba
35		Nisarg Ninad Resort	Amba
36		Jungle Resort	Amba
37		Green Villa Resort	Amba
38		Garwa Resort	Amba

39		Parivar Resort	Amba
40		Mauli Resort	Amba
41		Amba Resort	Amba
42		Blue Mormon Resort	Amba
43		Gokul Resort	Amba
44		Digvijay Resort	Amba
45		Nisarg Resort	Amba
46		Barekar Resort	Amba
47		Vrundawan Resort	Amba

10.20. Police Station & Control Room.

Sr. No.	Police Station Name	STD code	Telephone No.
1	Superintendent of Police Satara	0 2162	232225
2	Addn. Superintendent of Police Satara	0 2162	234776
3	DY. Superintendent of Police Patan	0 2372	282336
4	Police Station Dhebewadi	0 2372	258633
5	Police Station Patan	0 2372	283033
6	Police Station Koynanagar	0 2372	284533
7	Police Station Malharpeth	0 2372	299233
8	Police Station Medha	0 2178	285233
9	Police Station Kokrud sangli	0 2345	224133
10	Police Station Shirala	0 2345	272133
11	Police Station Shahuwadi	0 2329	224133
12	Police Sattion Dewrukh	0 2354	260033

10.21 VET Hospitals

Sr. No.	Veterinary Hospital Name	Address	Telephone No.
1.	Veterinary Hospital- Grade 1 Dhebewadi	Dhebewadi Tal-Patan Dist-Satara	9404938840
2.	Veterinary Hospital- Grade 2 Sanbur	Sanbur Tal-Patan Dist-Satara	9823946247
3.	Veterinary Hospital- Grade 2 Umankanchan	Umankanchan Tal-Patan Dist- Satara	7798301043
4.	Veterinary Hospital- Grade 2 Dhamani	Dhamani Tal-Patan Dist-Satara	9673181266
5.	Veterinary Hospital- Grade 2 kumbhargoan	kumbhargoan Tal-Patan Dist-Satara	9850166016
6.	Veterinary Hospital- Grade 2 Morgiri	Morgiri Tal-Patan Dist-Satara	9881601427
7.	Veterinary Hospital- Grade 1 Aarala	Aarala Tal-Sirala Dist-Sangali	
8.	Veterinary Hospital- Garde 1 Shauwadi	Sahuwadi Tal-Sahuwadi Dist- Kolhapur	
9.	Veterinary Hospital- Garde 2 Shitur	shitur Tal-Sahuwadi Dist-Kolhapur	
10.	Veterinary Hospital- Garde 2 Paraleninayi	paraleninayi Tal-Sahuwadi Dist- Kolhapur	
11.	Veterinary Hospital- Garde 2 Amba	Amba Tal-Sahuwadi Dist-Kolhapur	
12.	Veterinary Hospital- Garde 2 Nile	Nile al-Sahuwadi Dist-Kolhapur	

10.22 List of Officers Contact Numbers.

Sr No	Officers Name	Designation	Mobile No.
1.	Shri.R.M.Ramanujam	Conservator and Field Director, Sahydari Tiger Reserve, Kolhapur	7038283444
2.	Shri U.S. Sawant	Deputy Director Koyna , Sahydari Tiger Reserve, Karad	9766201177
3.	Smt.S. D . Patil	Deputy Director Chadoli, Sahydari Tiger Reserve, Karad	9763537674
4.	Shri. R.S.Dengre	Assistant Conservator Of Forest	9420689359
5.	Shri S.G. Pawar	Range Forest Officer Patan	8149255890
6.	Shri S.P. Godase	Range Forest Officer mobile Squad Karad	8788221789
7.	Shri A.A.Shinde	Range Forest Officer Koyana	9941182111
8.	Shri B.D. Hasbnis	Range Forest Officer Kandat	7588088815
9.	Shri.V.D.Bathe	Range Forest Officer Bamnoli	7038695264
10.	Shri N.G. Nalawade	Range Forest Officer Chandoli	8459098886
11.	Shri S.A. Jhopale	Range Forest Officer Helwak	9673097309
12.	Shri N. J.Rakshe	Range Forest Officer Dhebewadi	9404935832
13.	Shri A. P .Shinde	Range Forest Officer Amba	9545977877

10.23. List of Waterholes.

Sr. No.	Range	Round	Beat	Compart. No.	Name of the Water Hole	GPS Reading		Type of Waterhole
						Latitude (N)	Longitude (E)	
1	Bamnoli	Valvan	Arav	346	Gadgyache Pani	17°42'33"N	73°35'49"E	Seasonal
2	Bamnoli	Valvan	Arav	344	Jambhul Pani ,Janani Mura	17°42'15"N	73°37'53"E	Seasonal
3	Bamnoli	Valvan	Arav	346	Humbarache Pani	17°42'46"N	73° 35' 6"E	Seasonal
4	Bamnoli	Valvan	Arav	345	—	17°42'35"N	73° 36' 27"	Seasonal
5	Bamnoli	Valvan	Arav	346	—	17°42'33"N	73° 35' 49"	Seasonal
6	Bamnoli	Valvan	Valvan	351	—	17°45'55"N	73° 35' 18"	Seasonal
7	Bamnoli	Valvan	Valvan	352	—	17°44'36"N	73° 36' 42"	Seasonal
8	Bamnoli	Valvan	Valvan	348	—	17°45'19"N	73° 38' 2"	Seasonal
9	Bamnoli	Valvan	Mhalunge	339	—	17°42'20"N	73° 40' 28"E	Seasonal
10	Bamnoli	Valvan	Mhalunge	339	—	17°43'17"N	73° 40' 10"E	Seasonal
11	Bamnoli	Valvan	Mhalunge	341	—	17°43'13"N	73° 40' 10"E	Seasonal
12	Bamnoli	Valvan	Mhalunge	341	—	17°42'39"N	73° 41' 19"E	Seasonal
13	Bamnoli	Valvan	Mhalunge	342	—	17°42'32"N	73° 39' 6"E	Seasonal
14	Bamnoli	Valvan	Mhalunge	302	—	17°42'8"N	73° 41' 46"E	Seasonal
15	Bamnoli	Valvan	Mhalunge	357	—	17°43'5"N	73° 39' 39"E	Seasonal
16	Bamnoli	Valvan	Mhalunge	—	—	17°42'35"N	73° 36'27"E	Seasonal
17	Bamnoli	Waghavale	Uchat	367	—	17°45'59"N	73°36'48"E	Seasonal
18	Bamnoli	Waghavale	Uchat	351	—	17°45'55"N	73°35' 18"E	Seasonal
19	Bamnoli	Waghavale	Pimpari	299	Nala	17° 43' 39"N	73° 43' 14"E	Seasonal
20	Bamnoli	Waghavale	Pimpari	299	Nala Pimpari	17° 43'25"N	73° 42' 56"E	Seasonal
21	Bamnoli	Waghavale	Pimpari	301	Nala Pimpari	17° 43'27"N	73° 43' 27"E	Seasonal
22	Bamnoli	Waghavale	Pimpari	301	Nala Akalpe	17° 43' 36"N	73° 42' 20"E	Seasonal
23	Bamnoli	Waghavale	Pimpari	301	Nala Akalpe	17° 43' 54"N	73° 42' 9"E	Seasonal
24	Bamnoli	Waghavale	Pimpari	301	Nala Akalpe	17° 44' 29"N	73° 41' 43"E	Seasonal
25	Bamnoli	Waghavale	Pimpari	355	Nala Akalpe	17° 44' 27"N	73° 41' 34"E	Seasonal
26	Bamnoli	Waghavale	Pimpari	355	Nala Akalpe	17° 44' 28"N	73° 41' 17"E	Seasonal
27	Bamnoli	Waghavale	Pimpari	299	Pangharaniche Pani	17° 43' 25"N	73° 42' 58"E	Seasonal
28	Bamnoli	Waghavale	Pimpari	355	Khadkaliche Pani	17° 44' 10"N	73° 42' 5"E	Seasonal
29	Bamnoli	Met indoli	Kusapur	336	—	17°41'58"N	73°42'4"E	Seasonal
30	Bamnoli	Vele	Deur	372	Pandhare Pani	17°35'52.99 "N	73°48'9"E	Seasonal
31	Bamnoli	Vele	Deur	372	Krutrim Panavtha	17°37'15"N	73°48'24"E	Seasonal
32	Bamnoli	Vele	Vele	386	Makaluche Pani	17° 31' 46"N	73° 47' 7"E	Seasonal
33	Bamnoli	Vele	Vele	384	Mayniche Tale	17° 35' 32"N	73° 48' 27"E	Seasonal

34	Bamnoli	Vele	Vele	386	Gadyache Pani	17° 33' 14"N	73° 47' 48"E	Seasonal
35	Koyna	Takavali	Maldev	368	Pavtyache Pani	17°38'40.55 "N	73°42'36.37" E	Seasonal
36	Koyna	Takavali	Maldev	369	Pisacha Panvtha	17°38'36"N	73°43'34"E	Seasonal
37	Koyna	Takwali	Pali	377	umbrache Pani	17°37'14.56 "N	73°43'15.85" E	Seasonal
38	Koyna	Takwali	Pali	375	—	17°36'29"N	73°43'35"E	Seasonal
39	Koyna	Takwali	Pali	376	—	17°36'18"N	73°45'23"E	Seasonal
40	Koyna	Takwali	Jungti	390	Dindyache Pani	17° 34' 27"N	73° 43' 8"E	Seasonal
41	Koyna	Takwali	Jungti	388	Bhelyache Pani	17° 34' 47"N	73° 43' 53"E	Seasonal
42	Koyna	Takwali	Jungti	389	kokan kada Panvatha	17° 34' 39"N	73° 42' 52"E	Seasonal
43	Koyna	Takavali	Karanjawade	392	anjniche Pani	17° 33' 21"N	73° 45' 26"E	Seasonal
44	Koyna	Takavali	Karanjawade	394	Gadyache Pani	17° 32' 47"N	73° 45' 30"E	Seasonal
45	Koyna	Takavali	Karanjawade	393	kalamura Pani	17° 33' 20"N	73° 45' 23"E	Seasonal
46	Koyna	Shirshinge	Shirshinge	409	Nech maliche Pani	17° 28' 8"N	73° 42' 20"E	Seasonal
47	Koyna	Koyna	Koyna	424	Torane Doniche Pani	17°25'7.57" N	73°41'14.5"E	Seasonal
48	Koyna	Kusavade	Karvat	458	Marag Vagal	17°24'3.20" N	73°50'59.49"E	Seasonal
49	Koyna	Kusavade	Karvat	458	Upal Mali	17°24'22.02 "N	73°50'56.93"E	Seasonal
50	Koyna	Kusavade	Karvat	461	Shendemadi	17°24'7.5" N	73°49'23.8"E	Seasonal
51	Koyna	Kusavade	Karvat	436	Kesavane	17°26'11.5" N	73°48'47.1"E	Seasonal
52	Koyna	Kusavade	Karvat	459	Takenavada	17°24'32.7" N	73°50'6.78"E	Seasonal
53	Chandoli	Nivale Ko.	Dhakale	33	Kokanewadi avthan Panavatha	17°7'42.6" N	73°46'22"E	Seasonal
54	Chandoli	Nivale Ko.	Dhakale	33	Sambhartek Panvatha	17°6'50.2" N	73°46'46"E	Seasonal
55	Chandoli	Nivale Ko.	Dhakale	—	—	17°6'57.1" N	73°46'11.5"E	Seasonal
56	Chandoli	Nivale Ko.	Dhakale	—	—	17°6'54"N	73°46'25.1"E	Seasonal
57	Chandoli	Nivle Ko.	Gothane	37	Nadi che Pani	17°5'54.5" N	73°46'57.7"E	Seasonal
58	Chandoli	Nivle Ko.	Gothane	39	Kkara Odha	17°6'50.09" N	73°45'26.9"E	Seasonal
59	Chandoli	Nivale Ko.	Nivle ko.	31	Nivle ko.Pani	17°7'43.7" N	73° 48'49.9"E	Seasonal
60	Chandoli	Mandur	Mandur	17	Savat Kada	17°8'25"N	73°52'49.4"E	Seasonal
61	Chandoli	Mandur	Mandur	17	Ericha Odha	17°8'6.22" N	73°53'12.6"E	Seasonal
62	Chandoli	Mandur	Mandur	17	Kasani cha Odha	17°9'8.5"N	73°54'00.5"E	Seasonal
63	Chandoli	Mandur	Nandoli	23	Main road cement Bandhara	17°10'45.9" N	73°52'17.3"E	Seasonal
64	Chandoli	Nivale	Udgiri	984	—	17°6'39N	73°48'39"E	Seasonal
65	Chandoli	Nivale	Udgiri	984	—	17°3'56"N	73°48'15"E	Seasonal
66	Chandoli	Nivale	Golivane	—	—	16°59'18"N	73°50'6"E	Seasonal
67	Chandoli	Nivale	Golivane	—	—	17°00'04"N	73°00'4"E	Seasonal
68	Chandoli	Nivale	Golivane	—	—	17°1'34"N	73°50'44"E	Seasonal
69	Chandoli	Nivale	Golivane	—	—	17°00'30"N	73°50'26"E	Seasonal

70	Chandoli	Nivale	Golivane	—	—	17°2'11"N	73°50'12"E	Seasonal
71	Chandoli	Nivale	Golivane	—	—	17°1'55"N	73°50'16"E	Seasonal
72	Chandoli	Nivale	Golivane	—	—	17°00'06"N	73°50'19"E	Seasonal
73	Chandoli	Nivale	Golivane	—	—	16°59'7"N	73°50'57"E	Seasonal
74	Dhebewadi	Dhebewadi	Humbarne	532	Dakshi Tali	17°15'14"N	73°47'50"E	Seasonal
75	Dhebewadi	Dhebewadi	Humbarne	531	Aintas	17°15'09"N	73°47'05"E	Seasonal
76	Bamnoli	Valvan	Valvan	350	—	17°45'56"N	73° 35' 16"	Perennial
77	Bamnoli	Valvan	Mhalunge	339	—	17°42'12"N	73° 40' 13"	Perennial
78	Bamnoli	Valvan	Mhalunge	339	—	17°42'13"N	73° 40' 24"	Perennial
79	Bamnoli	Valvan	Mhalunge	340	—	17°43'14"N	73° 40' 24"E	Perennial
80	Bamnoli	Valvan	Mhalunge	340	—	17°43'30"N	73° 40' 23"E	Perennial
81	Bamnoli	Waghavale	Uchat	347	—	17°42'36"N	73° 35' 7"E	Perennial
82	Bamnoli	Waghavale	Pimpri	355	—	17°44'10"N	73° 42' 5"E	Perennial
83	Bamnoli	Met indoli	Kusapur	333	Angthyache Pani Met indoli	17°40'11"N	73°41'44"E	Perennial
84	Bamnoli	Met indoli	Kusapur	331	Mhakaliche Pani	17°39'51"N	73°43'14"E	Perennial
85	Bamnoli	Met indoli	Kusapur	331	Ambyache Pani	17°39'37"N	73°43'19"E	Perennial
86	Bamnoli	Met indoli	Kusapur	331	khadakache Pani tambi	17°39'47"N	73°44'32"E	Perennial
87	Bamnoli	Met indoli	Kusapur	333	Vasotha kundh met indoli	17°39'47"N	73°41'52"E	Perennial
88	Bamnoli	Met indoli	Kusapur	334	Nageshwar kundh	17°39'51.18"N	73°41'50.21" E	Perennial
89	Kandat	Met indoli	Kusapur	302	—	17°41'56"N	73°42'25"E	Perennial
90	Bamnoli	Met indoli	Khirkhindi	304	Necha Pani	17°41'17.1" N	73°43'55.8"E	Perennial
91	Bamnoli	Met indoli	Khirkhindi	305	Kumbha Pani	17°41'1.3" N	73°45'05.4"E	Perennial
92	Bamnoli	Met indoli	Khirkhindi	302	Anjaniche Pani	17°41'58.5" N	73°42'46"E	Perennial
93	Bamnoli	Met indoli	Munavale	307	Menkecha Vhal Munavale	17°42'12.2" N	73°47'05.3"E	Perennial
94	Bamnoli	Vele	Deur	382	Injaiche Pani	17°36'52"N	73°48'19"E	Perennial
95	Bamnoli	Vele	Deur	370	Didyache Pani	17°37'59"N	73°47'8"E	Perennial
96	Bamnoli	Vele	Deur	380	Anjaniche Pani	17°34'20"N	73°48'59"E	Perennial
97	Bamnoli	Vele	Deur	380	Sonyache Pani	17°34'20"N	73°48'59"E	Perennial
98	Bamnoli	Vele	Deur	372	Kadyache Pani	17°32'8.33"N	73°48'30"E	Perennial
99	Bamnoli	Vele	Deur	372	Chipache Pani	17°37'23"N	73°48'59"E	Perennial
100	Bamnoli	Vele	Deur	382	Dhebevasti panvtha	17°36'39"N	73°48'18"E	Perennial
101	Bamnoli	Vele	Deur	380	Gundiche Pani	17°35'52.99 "N	73°48'9"E	Perennial
102	Bamnoli	Vele	Vele	386	Madvnyache Pani	17° 34' 53"N	73° 48' 49"E	Perennial
103	Bamnoli	Vele	Vele	386	Dhavdkhaniche Pani	17° 34' 54"N	73° 48' 19"E	Perennial
104	Bamnoli	Vele	Vele	386	Yekant Tale	17° 34' 30"N	73° 48' 27"E	Perennial
105	Bamnoli	Vele	Vele	383	Dahacha Odha	17° 35' 54"N	73° 48' 9"E	Perennial
106	Bamnoli	Vele	Vele	383	Khadkaliche Pani	17° 34' 20"N	73° 48' 59"E	Perennial
107	Bamnoli	Vele	Vele	383	Talobache Pani	17° 35' 6"N	73° 46' 44"E	Perennial

108	Bamnoli	Vele	Vele	386	Nagobache Pani	17° 34' 25"N	73° 48' 24"E	Perennial
109	Bamnoli	Vele	Palsavade	250	Bhutnali cha Panvtha	17°37'56.33 "N	73°50'47.14" E	Perennial
110	Koyna	Takavali	Maldev	—	Maldevkund Pani	17°38'7.92" N	73°42'24.36" E	Perennial
111	Koyna	Takavali	Maldev	—	Murdacha Panvtha	17°37'47"N	73°43'44"E	Perennial
112	Koyna	Takavali	Takwali	—	Pavtyache Pani	17°38'16.9" N	73°42'57.7"E	Perennial
113	Koyna	Takavali	Karanjawade	394	thosirache Pani	17° 33' 1"N	73° 44' 40.02"E	Perennial
114	Koyna	Takavali	Karanjawade	394	Aambyache Pani	17° 32' 36"N	73° 44' 55"E	Perennial
115	Koyna	Takavali	Karanjawade	934	Dindyache Pani	17° 32' 35"N	73° 44' 31"E	Perennial
116	Koyna	Takavali	Karanjawade	396	injalyache Pani	17° 30' 34"N	73° 45' 56"E	Perennial
117	Koyna	Shirshinge	Dicholi	—	Ozarache Pani	17° 31' 26"N	73° 44' 9"E	Perennial
118	Koyna	Shirshinge	Dicholi	—	Keliche Pani	17° 30' 15"N	73° 44' 44"E	Perennial
119	Koyna	Shirshinge	Dicholi	—	Humbarache Pani	17° 31' 26"N	73° 44' 48.12"E	Perennial
120	Koyna	Shirshinge	Dicholi	—	—	17°29'58"N	73°44'50.0"E	Perennial
121	Koyna	Shirshinge	Shirshinge	411	Waghdoh Panvatha	17°28'58"N	73°43'30"E	Perennial
122	Koyna	Shirshinge	Shirshinge	411	Ambyache Pani	17°28'54"N	73°43'60"E	Perennial
123	Koyna	Shirshinge	Shirshinge	406	Dhupache Pani	17° 29' 22"N	73° 43' 5"E	Perennial
124	Koyna	Shirshinge	Shirshinge	405	Vharadnyache Pani	17° 30' 36"N	73° 42' 33"E	Perennial
125	Koyna	Shirshinge	Shirshinge	405	Aanand Pani	17° 29' 51"N	73° 42' 20"E	Perennial
126	Koyna	Shirshinge	Shirshinge	406	Maldiv Pani	17° 29' 30"N	73° 43' 9"E	Perennial
127	Koyna	Shirshinge	Kisarule	412	Ambyache Pani	17° 28' 38"N	73° 46' 35"E	Perennial
128	Koyna	Shirshinge	Kisarule	412	Muryache Pani	17° 28' 60"N	73° 46' 33"E	Perennial
129	Koyna	Shirshinge	Kisarule	412	Jambhliche Pani	17° 28' 57"N	73° 46' 33"E	Perennial
130	Koyna	Shirshinge	Kisarule	411	Zhadoliche Pani	17° 28' 20"N	73° 45' 20"E	Perennial
131	Koyna	Shirshinge	Kisarule	411	Aambegharche Pani	17° 28' 39"N	73° 44' 41"E	Perennial
132	Koyna	Shirshinge	Kisarule	411	Zhadoliche Pani	17° 28' 41"N	73° 45' 32"E	Perennial
133	Koyna	Shirshinge	Kisarule	412	Pablache Pani	17° 27' 56"N	73° 45' 15"E	Perennial
134	Koyna	Koyna	Navja	419	Umag Ketakiche Pani	17°27'59.9" N	73°42'24"E	Perennial
135	Koyna	Koyna	Navja	418	Ghodvnyache Pani	17°27'17.9" N	73°42'35.2"E	Perennial
136	Koyna	Koyna	Navja	421	Navja Taki	17°26'9"N	73°43'25.9"E	Perennial
137	Koyna	Koyna	Navja	421	Havaliche Pani	17°26'8"N	73°43'34.3"E	Perennial
138	Koyna	Koyna	Koyna	432	Sonivariche Pani	17° 24' 60"N	73° 43' 4"E	Perennial
139	Koyna	Koyna	Koyna	426	Jambaliche Pani	17°24'27.57 "N	73°40'35.9"E	Perennial
140	Koyna	Koyna	Koyna	430	Humbarali Brubache Pani	17°25'31.53 "N	73°42'21.22" E	Perennial

141	Koyna	Koyna	Koyna	430	Ugam Torane	17°24'11.58 "N	73°42'32.9"E	Perennial
142	Koyna	Kusavade	Karvat	458	Vaghirane	17°23'51.04 "N	73°50'46.83" E	Perennial
143	Koyna	Kusavade	Karvat	461	Pavnai Bavi	17°24'3.57" N	73°49'59.07" E	Perennial
144	Koyna	Kusavade	Karvat	461	Shendemadi	17°24'6.18" N	73°49'19.92"E	Perennial
145	Koyna	Kusavade	Karvat	461	Shendemadi	17°24'7.5" N	73°49'23.8"E	Perennial
146	Koyna	Kusavade	Karvat	436	Kesavane	17°26'11.7" N	73°48'46.9"E	Perennial
147	Koyna	Kusavade	Karvat	459	Takenavada	17°24'33.6" N	73°50'7.8"E	Perennial
148	Koyna	Kusavade	Ambeghar	428	Chandyacha Odha	17°26'20"N	73°46'54"E	Perennial
149	Koyna	Kusavade	Ambeghar	428	Jakhnichia Odha	17°26'6"N	73°47'4"E	Perennial
150	Koyna	Kusavade	Ambeghar	436	Dastan Pani	17°25'20"N	73°46'55"E	Perennial
151	Koyna	Kusavade	Ambeghar	428	JambhulnicheE Pani	17°25'52"N	73°46'50"E	Perennial
152	Koyna	Kusavade	Ambeghar	436	Ghodebarache Pani	17°25'58"N	73°47'41"E	Perennial
153	Koyna	Kusavade	Ambeghar	428 P	Palashi Pani	17°25'58"N	73°46'50"E	Perennial
154	Koyna	Kusavade	Ambeghar	436 p	Bibvyache Pani	17°26'15"N	73°47'10"E	Perennial
155	Helwak	Helwak	Waghane	480	Gaothan Pani	17°19'59.1" N	73°41'37.6"E	Perennial
156	Helwak	Helwak	Waghane	490	Tikhatnyache Pani	17°19'56.8" N	73°42'17.5"E	Perennial
157	Helwak	Helwak	Waghane	481	Muradache Pani	17°20'38"N	73°41'37.5"E	Perennial
158	Helwak	Helwak	Waghane	480	Jalavanyache Pani	17°20'18"N	73°42'38"E	Perennial
159	Helwak	Helwak	Waghane	480	Bharanwadche Pani	17°20'15.1" N	73°42'13.5"E	Perennial
160	Helwak	Helwak	Waghane	492	Ranichi Tale	17°19'32"N	73°41'35.1"E	Perennial
161	Helwak	Helwak	Waghane	482	Dhokyache Pani	17°20'21"N	73°42'24.5"E	Perennial
162	Helwak	Helwak	Rasati	428	Ladiche Pani	17°22'27.1" N	73°40'30.3"E	Perennial
163	Helwak	Helwak	Rasati	427	Kutiche Pani	17°22'15.1" N	73°40'36.6"E	Perennial
164	Helwak	Helwak	Rasati	478	Houdache Pani	17°21'15.1" N	73°41'37.1"E	Perennial
165	Helwak	Helwak	Rasati	478	Nevhalache Pani	17°21'3.6" N	73°41'32.7"E	Perennial
166	Helwak	Helwak	Rasati	427	Ambyacha Dabara	17°22'15.1" N	73°40'36.9"E	Perennial
167	Helwak	Helwak	Rasati	478	Gaymukh Pani	17°21'23.1" N	73°41'24.5"E	Perennial
168	Helwak	Helwak	Rasati	427	Vajrache Pani -1	17°21'58.4" N	73°41'12.6"E	Perennial
169	Helwak	Helwak	Rasati	427	Vajrache Pani -2	17°21'56.3" N	73°41'34.8"E	Perennial
170	Helwak	Helwak	Rasati	478	Murdache Pani	17°20'44.1" N	73°42'34.3"E	Perennial
171	Helwak	Helwak	Rasati	433	Ketakiche Pani	17°23'1"N	73°42'34.3"E	Perennial
172	Helwak	Helwak	Rasati	427	Shatracha Panvatha	17°23'37.4" N	73°40'27.7"E	Perennial
173	Helwak	Helwak	Govare	497	Rutakiche Pani	17°19'26"N	73°43'12"E	Perennial

174	Helwak	Helwak	Govare	497	Piprniche Pani	17°19'33"N	73°43'35"E	Perennial
175	Helwak	Helwak	Govare	497	Nilgiriche Pani	17°19'38"N	73°43'24"E	Perennial
176	Helwak	Helwak	Govare	497	Tavshya Babar Pani	17°20'0"N	73°44'25"E	Perennial
177	Helwak	Helwak	Govare	497	Govariche Pani	17°19'52"N	73°43'31"E	Perennial
178	Helwak	Helwak	Govare	476	Gadgyache Pani	17°19'31"N	73°43'1"E	Perennial
179	Helwak	Helwak	Govare	477	Kaliche Pani	17°21'46"N	73°42'35"E	Perennial
180	Helwak	Helwak	Govare	475	Baviche Pani	17°21'24"N	73°43'38"E	Perennial
181	Helwak	Helwak	Govare	497	Bhairvnath Pani	17°19'21"N	73°43'56"E	Perennial
182	Helwak	Kolane	Kolane	1	Ketkiche Pani	17°18'14"N	73°42'30"E	Perennial
183	Helwak	Kolane	Kolane	1	Bondgyache Pani	17°18'2"N	73°42'42"E	Perennial
184	Helwak	Kolane	Kolane	2	Rashiche Pani	17°17'55"N	73°42'4"E	Perennial
185	Helwak	Kolane	Kolane	2	Jakhaniche Pani	17°18'8.7" N	73°42'18"E	Perennial
186	Helwak	Kolane	Kolane	1	Gavhardhavache Pani	17°18'40"N	73°42'6.8"E	Perennial
187	Helwak	Kolane	Kolane	1	Havaliche Pani	17°18'22"N	73°42'58"E	Perennial
188	Helwak	Kolane	Kolane		Gavhaniche Pani	17°18'37"N	73°42'30"E	Perennial
189	Helwak	Kolane	Male	3,4	Sakvaricha Odha	17°18'35.3" N	73°43'9.5"E	Perennial
190	Helwak	Kolane	Male	3,5	Dagadicha Odha	17°18'10.6" N	73°43'19.7"E	Perennial
191	Helwak	Kolane	Chandoli kh	12	Gaymukh	17°14'37.4" N	73°44'33"E	Perennial
192	Helwak	Kolane	Chandoli kh	12	vitthalai	17°14'50.7" N	73°44'36.6"E	Perennial
193	Helwak	Kolane	Chandoli kh	12	Umbaracha Panvtha	17°14'39.8" N	73°43'57.3"E	Perennial
194	Helwak	Rundiv	Rundiv Nort h	5	Teribatti	17°14'51"N	73°41'33"E	Perennial
195	Helwak	Rundiv	Rundiv North	5	Rundiv Gavthan	17°13'52.92 "N	73°43'33.02" E	Perennial
196	Helwak	Kolane	Rundiv North	5	Tiriche Pani	17°14'51"N	73°41'50"E	Perennial
197	Helwak	Rundiv	Rundiv south	6	Kutiche Pani	17°13'42"N	73°43'44"E	Perennial
198	Helwak	Rundiv	Rundiv south	6	Aodyache Pani	17°13'43"N	73°42'44"E	Perennial
199	Helwak	Kolane	Rundiv south	6	Kutiche Pani	17°13'24"N	73°43'24"E	Perennial
200	Helwak	Kolane	Rundiv south	6	Odhyache Pani	17°13'24"N	73°43'14"E	Perennial
201	Helwak	Rundiv	Siddheshwar	7	Kadyache Pani	17°10'44"N	73°42'9"E	Perennial
202	Helwak	Rundiv	Siddheshwar	7	Bailpani Panvatha	17°11'28"N	73°42'53"E	Perennial
203	Helwak	Rundiv	Siddheshwar	7	Anjanicha Motha Dhoh	17°11'37"N	73°42'54"E	Perennial
204	Helwak	Rundiv	Ambole	10	Jawali Gaothan	17°12'5"N	73°44'4"E	Perennial
205	Helwak	Rundiv	Ambole	10	Gavadyache pahi	17°10'58"N	73°45'29"E	Perennial
206	Helwak	Rundiv	Ambole	11	Nageche pahi	17°11'35"N	73°44'39"E	Perennial
207	Helwak	Kolane	Chandoli Kh	12	Umbarache Pani	17° 14' 59"N	73°43' 57"E	Perennial
208	Helwak	Kolane	Chandoli Kh	12	Kandar Doh	17° 14' 37"N	73°43' 57"E	Perennial
209	Chandoli	Nivale Ko.	Chandel East	35	kelache Pani	17°10'0.04" N	73°44'32.9"E	Perennial
210	Chandoli	Nivale Ko.	Chandel East	35	Shindewadi	17°8'23.8" N	73°43'42"E	Perennial
211	Chandoli	Nivale Ko.	Chandel East	35	Kundiche Pani	17°7'40.9" N	73°43'21.4"E	Perennial
212	Chandoli	Nivale Ko.	Chandel East	35	Chandel Odha	17°8'6.93" N	73°43'46.6"E	Perennial
213	Chandoli	Nivale Ko.	Chandel East	36	Ramnadi	17°9'52.6" N	73°42'49.8"E	Perennial
214	Chandoli	Nivale Ko.	Dhakale	33	Gavathan Pani	17°6'56.3" N	73°46'10.6"E	Perennial
215	Chandoli	Nivale Ko.	Dhakale	33	Kelache Pani	17°7' 17.9"N	73°46'4.7"E	Perennial
216	Chandoli	Nivle Ko.	Gothane	37	Gaothan Pani	17°5'54.5" N	73°46'15.1"E	Perennial
217	Chandoli	Nivle Ko.	Gothane	37	Mandavkar Pani	17°5'59.3" N	73°45'55.3"E	Perennial
218	Chandoli	Nivle Ko.	Gothane	39	Vakada aodha	17°6'55"N	73°44'36.8"E	Perennial
219	Chandoli	Nivle Ko.	Gothane	39	Bendache Pani	17° 6'0.4"N	73°44'44.5"E	Perennial
220	Chandoli	Nivle Ko.	Gothane	38	Gangotri	17°5'10.3" N	73°45'19.1"E	Perennial
221	Chandoli	Nivale Ko.	Nivle ko.	31	Muluk Pani	17°7'0.3"N	73°48'38"E	Perennial
222	Chandoli	Nivale Ko.	Nivle ko.	30	Khadkali Pani	17°6'42.5" N	73°47'41.8"E	Perennial
223	Chandoli	Nivale Ko.	Nivle ko.	31	Injole Pani	17°5'32"N	73°47'58.2"E	Perennial
224	Chandoli	Nivale Ko.	Nivle ko.	31	Ketaki Pani	17°6'53.2" N	73°48'20.3"E	Perennial
225	Chandoli	Nivale Ko.	Sonarli	28	Kasav Nala	17°8'37.1" N	73°48'25.6"E	Perennial
226	Chandoli	Nivale Ko.	Sonarli	28	Kaldhoh	17°8'6.63" N	73°48'28.5"E	Perennial
227	Chandoli	Nivale Ko.	Sonarli	29	Ketaki chain Pani	17°9'29.5" N	73°46'55.2"E	Perennial
228	Chandoli	Nivale Ko.	Sonarli	29	Dhanagar Pani	17°9'26.4" N	73°47'36.8"E	Perennial
229	Chandoli	Nivale Ko.	Sonarli	28	Durgewadin Odha	17°9'13.6" N	73°48'7.7"E	Perennial
230	Chandoli	Nivale Ko.	Sonarli	28	Vakate Odha	17°9'27.9" N	73°47'54.8"E	Perennial
231	Chandoli	Nivale Ko.	Sonarli	28	Transect Line Varil Pani	17°9'16.1" N	73°49'12.6"E	Perennial

232	Chandoli	Mandur	Tambave	27	Chapewadi Panvatha	17°7'36.9" N	73°51'35"E	Perennial
233	Chandoli	Mandur	Tambave	27	Mharakacha Panvatha	17°7'35.8" N	73°51'12.1"E	Perennial
234	Chandoli	Mandur	Tambave	27	Kolage Panvatha	17°7'36.36"N	73°50'44.3"E	Perennial
235	Chandoli	Mandur	Tambave	27	Watch Tower Panvatha	17°7'19.6" N	73°49'48.1"E	Perennial
236	Chandoli	Mandur	Mandur	17	Machan Shejari	17°9'16"N	73°53'54"E	Perennial
237	Chandoli	Mandur	Mandur	17	Hela Pani	17°8'8.78" N	73°53'1"E	Perennial
238	Chandoli	Mandur	Nandoli	23	Jondhal Odha Panvatha	17°11'9.2" N	73°51'36.2"E	Perennial
239	Chandoli	Mandur	Nandoli	23	Chandgewadi Panvatha	17°10'17.3" N	73°52'3.2"E	Perennial
240	Chandoli	Mandur	Nandoli	23	Domblich Panvatha	17°11'11"N	73°52'14.1"E	Perennial
241	Chandoli	Mandur	Nandoli	23	Gavalanwadiche Pani	17°10'49"N	73°51'5.4"E	Perennial
242	Chandoli	Mandur	Nandoli	22	Patilwadi Pani	17°10'30.6" N	73°50'41"E	Perennial
243	Chandoli	Mandur	Nandoli	23	Jambhaliche Pani	17°10'68"N	73°51'10"E	Perennial
244	Chandoli	Mandur	Khundlapur	24	Shendyache wadi	17°8'51"N	73°52'29"E	Perennial
245	Chandoli	Mandur	Khundlapur	24	Janai wadi	17°9'24"N	73°52'48"E	Perennial
246	Chandoli	Mandur	Zolambi	21	Hanmantache Pani	17°12'7.4" N	73°50'17.3"E	Perennial
247	Chandoli	Mandur	Zolambi	21	Vithalai Panvatha	17°12'22.3" N	73°49'49.5"E	Perennial
248	Chandoli	Mandur	Zolambi	21	Lapan Grah Pani	17°11'11.79 "N	73°50'23.80" E	Perennial
249	Chandoli	Nivale	Udgiri	982	—	17°5'2"N	73°48'58"E	Perennial
250	Chandoli	Nivale	Udgiri	984	—	17°4'11"N	73°48'54"E	Perennial
251	Chandoli	Nivale	Udgiri	987	—	17°3'6"N	73°50'36"E	Perennial
252	Chandoli	Nivale	Udgiri	982	—	17°5'32"N	73°47'58"E	Perennial
253	Chandoli	Nivale	Udgiri	982	—	17°4'48"N	73°48'22"E	Perennial
254	Chandoli	Nivale	Ukhalu	994	—	17°6'19"N	73°52'10"E	Perennial
255	Chandoli	Nivale	Ukhalu	994	—	17°6'21"N	73°52'35"E	Perennial
256	Chandoli	Nivale	Ukhalu	991	—	17°6'49"N	73°50'22"E	Perennial
257	Chandoli	Nivale	Ukhalu	993	—	17° 6'33.12"N	73°50'52.80" E	Perennial
258	Dhebewadi	Dhebewadi	Atoli	495	Gothan Odha	17°17'47"N	73°43'40"E	Perennial
259	Dhebewadi	Dhebewadi	Atoli	496	Khrvaticha Odha	17°19'7"N	73°44'25"E	Perennial
260	Dhebewadi	Dhebewadi	Atoli	496	Parytakicha Odha	17°18'3"N	73°44'36"E	Perennial
261	Dhebewadi	Dhebewadi	Atoli	496	Takyacha odha	17°19'2"N	73°44'22"E	Perennial
262	Dhebewadi	Dhebewadi	Atoli	494	Kektyacha Odha	17°17'58"N	73°43'39"E	Perennial
263	Dhebewadi	Dhebewadi	Atoli	494	Bambaracha Odha	17°17'46"N	73°43'50"E	Perennial
264	Dhebewadi	Dhebewadi	Atoli	520	Watch Tower Paulvat	17°17'12.6"N	73°45'7.1"E	Perennial
265	Dhebewadi	Dhebewadi	Atoli	521	Vaghajai Mandir Javal	17°17'35.9"N	73°45'36.3"E	Perennial
266	Dhebewadi	Dhebewadi	Atoli	520	Maharukh odha	17°17'42.4"N	73°45'9.3"E	Perennial
267	Dhebewadi	Dhebewadi	Atoli	519	Kavathyachepani	17°16'21.1"N	73°45'26.8"E	Perennial
268	Dhebewadi	Dhebewadi	Atoli	527	navpani	17°15'51.5"N	73°45'53.9"E	Perennial
269	Dhebewadi	Dhebewadi	Atoli	527	Jilpani	17°15'54.8"N	73°45'55"E	Perennial
270	Dhebewadi	Dhebewadi	Atoli	524	Jakhaniche pani	17°16'34.9"N	73°46'23.9"E	Perennial
271	Dhebewadi	Dhebewadi	Humbarne	531	Chorane Pani	17°14'57"N	73°46'39"E	Perennial
272	Dhebewadi	Dhebewadi	Humbarne	529	Gimane Pani	17°15'26"N	73°46'13"E	Perennial
273	Dhebewadi	Dhebewadi	Humbarne	531	Baglacha Thada	17°15'3"N	73°47'43"E	Perennial
274	Dhebewadi	Dhebewadi	Humbarne	530	Aintas Pani-2	17°15'7"N	73°47'4"E	Perennial
275	Dhebewadi	Dhebewadi	Humbarne	532	Dukkar Tali	17°15'48"N	73°47'55"E	Perennial
276	Dhebewadi	Dhebewadi	Paneri	578	Natural Waterhole ashitale Panavatha Paneri	17°14'13"N	73°48'41"E	Perennial
277	Dhebewadi	Dhebewadi	Paneri	578	Natural Waterhole choravane Satar	17°12'0.07" N	73°51'10.5"E	Perennial
278	Dhebewadi	Dhebewadi	Paneri	570	Natural Waterhole Botarbav Satar	17°15'6.67" N	73°48'41.54" E	Perennial
279	Dhebewadi	Dhebewadi	Karale	571	Doni Gothavde	17°14'31.15 "N	73°51'5.41"E	Perennial

"There is still so much in the world worth fighting for.
So much that is beautiful, so many wonderful people
working to reverse the harm, to help alleviate the suffering.
And so many young people are dedicated to making this a
better world. All conspiring to inspire us and to give us hope
that it is not too late to turn things around,
if we all do our part."

- Dr. Jane Goodall, 2018



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