

ECOLOGICAL AND SOCIO-ECONOMIC IMPLICATIONS OF TIGER AUGMENTATION IN SAHYADRI TIGER RESERVE

¹Ms. Kharat Rajani Jagannath, ²Dr. A.V. Pore

¹Research Scholar, Department of Geography, Karmaveer Bhaurao Patil University, Satara.

²Assistant Professor, Satara, Department of Geography, Chhatrapati Shivaji College, Satara.

Article Info	ABSTRACT
Article History: Received: 15th Dec 2025 Accepted: 19th Dec 2025 Published: 20th Dec 2025	Tigers have an important place in the chain of nature. Seeing the decreasing number of tigers, under the guidance of Wildlife Institute of India, eight tigers are being relocated from Tadoba Tiger Reserve and Pench Tiger Reserve to Sahyadri Tiger Reserve Area. Five of these will be male tigers and three will be female tigers. The process has been named Operation Tara. Operation Tara stands for Tiger Augmentation and Rehabilitation Action. Under this, two tigresses have been safely translocated from Tadoba Tiger Reserve to Sahyadri Tiger Reserve. The tiger holds an important place in the chain of nature. Recognizing the decreasing number of tigers in the region, the Wildlife Institute of India is guiding the relocation of eight tigers from Tadoba Tiger Reserve and Pench Tiger Reserve to the Sahyadri Tiger Reserve (STR) Area. This process is named Operation Tara (Tiger Augmentation and Rehabilitation Action). The original plan called for five male tigers and three female tigers, although the allowed count was later specified as three male and five female tigers. Under this operation, two tigresses have been safely translocated from Tadoba Tiger Reserve to Sahyadri Tiger Reserve. This augmentation is expected to result in significant positive ecological and socio-economic consequences, such as maintaining the natural balance of the ecosystem, controlling increasing herbivore populations (like the Indian Bison), and boosting tourism, which will provide employment to local people. Conversely, lessons from other tiger relocations highlight potential negative effects, including increased human-animal conflict and opposition from local communities if domestic animals are attacked. Ultimately, the long-term success of the augmentation, as evidenced by Sariska and Panna, requires robust protection against poaching, a healthy wild prey base, and a plan to swiftly address and compensate for conflicts.
Keywords: SOCIO-ECONOMIC, SAHYADRI,	

Plagiarism Check Report:

Tool Used: Turnitin

Date of Report: Dec 18, 2025

Similarity Index: 6%

Remarks: No significant matching text. All citations and matches are properly referenced. The manuscript is considered original.

Copyright © 2025 The Author(s). This is an open access article distributed under the Creative Commons Attribution License, (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

How to Cite: Kharat, R. J., & Pore, A. V. (2025). Ecological and socio-economic implications of tiger augmentation in Sahyadri Tiger Reserve. IIP: International Multidisciplinary Research Journal (IIPMRJ), 2(IV), pp. 1022–1030.

INTRODUCTION

The Sahyadri Tiger Reserve (STR) was established in Maharashtra by the Indian Government in 2008, encompassing parts of the Satara, Sangli, Kolhapur, and Ratnagiri districts. Recognizing the tiger's important place in the chain of nature and the need to address its decreasing numbers, STR was set up under the provisions of the Wildlife Protection Act, 1972. To fulfill the primary objective of increasing the tiger population in the STR, which currently has a low count, a project named "Operation Tara" (Tiger Augmentation and Rehabilitation Action) is underway, guided by the Wildlife Institute of India. This operation involves translocating a total of eight tigers, comprising three male and five female tigers, from the Tadoba Tiger Reserve and Pench Tiger Reserve. The successful migration of two female tigresses, including "Chanda," who was renamed "Tara" upon arrival, has been completed.

The augmentation is expected to yield significant positive ecological and socio-economic consequences, such as maintaining the natural balance of the ecosystem, controlling the increasing numbers of herbivores like the Indian Bison, and reducing deforestation. Furthermore, the increase in tiger numbers is projected to boost tourism, providing employment to local people. However, lessons from national and international tiger relocations highlight potential negative effects, including an atmosphere of fear among humans and increased incidents of human-animal conflict, which can lead to economic losses and opposition from local people if domestic animals are attacked. Successful long-term augmentation, as seen in Sariska and Panna, requires a plan to swiftly address conflicts, compensate villagers, and ensure strong protection against poaching and a healthy wild prey base.

STUDY AREA

The area selected for this paper is the Chandoli National Park and the Koyna Wildlife Sanctuary. This part comes under the Sahyadri Tiger Reserve Area. Its expansion 17° 32' 56"N to 73°45' 11" E. The area of Koyna Sanctuary is 423.55 sq. km. Chandoli National Park is in Shirala taluka of Sangali district. It is expanding 73° E to 74° E Longitude and 15°30" N to 20° 30" N Latitude. Chandoli National Park area is 317.67 sq.km. The STR experiences a mean annual rainfall of 5000 mm from June to September (Joglekar et al., 2015). The tiger reserve represents a heterogeneous landscape covering dense forest, open forest, scrubland, barren land, agricultural land, water body, and reservoir bed (Jelil et al., 2020). The tiger reserve supports some of the few remaining

undisturbed tall evergreen forests in the northern Western Ghats. It hosts large mammal species such as the common leopard *Panthera pardus fusca*, dhole *Cuon alpinus*, sloth bear *Melursus ursinus*, Indian gaur *Bos gaurus*, and sambar *Rusa unicolor* (Joglekar et al., 2015; Jelil et al., 2021).

Table 1
SANCTUARY COMING UNDER SAHYADRI TIGER RESERVE

SANCTUARY NAME	AREA (Sq. Km)
Chandoli National Park	317.67
Koyna Wildlife Sanctuary	423.55
Total area of Tiger Reserve	741.22

Source: Notification of Sahyadri Tiger Reserve Revenue and Forest Department, Date-5th January, 2010. Web-<https://www.mahaforest.gov.in>

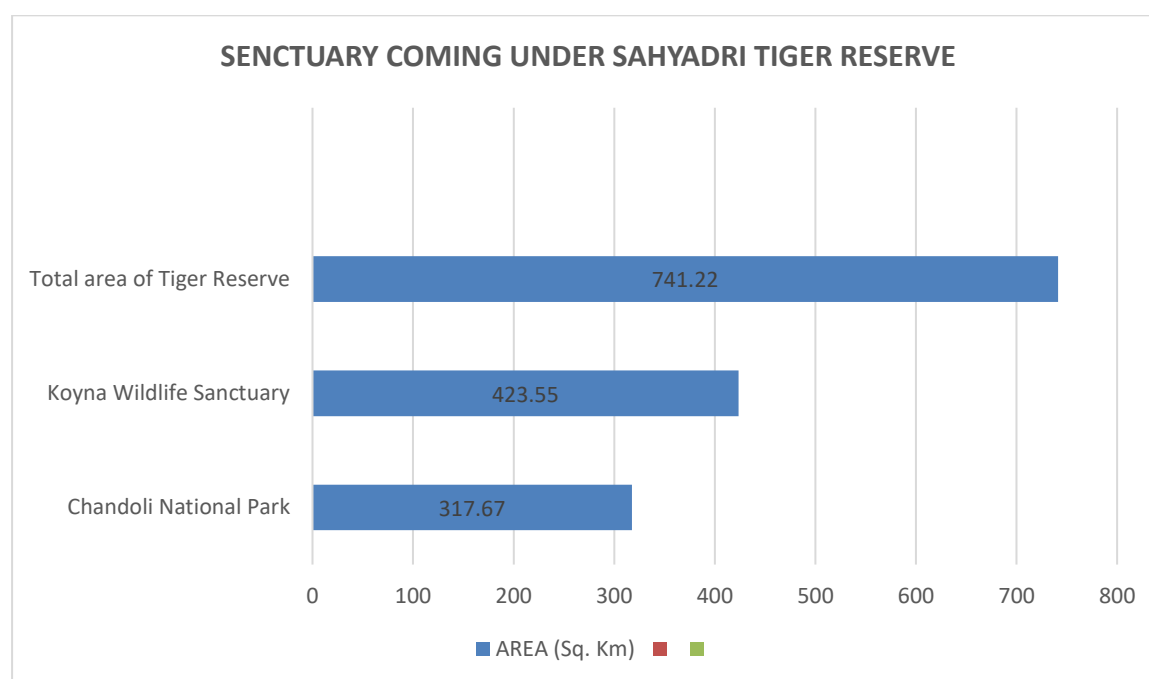


Fig. 1

DATABASE AND METHODOLOGY

A. Secondary Data Collection

Secondary data was gathered from authoritative and public sources to establish the background, context, and existing information on the project:

- **Official Reports and Documents:** Information regarding the establishment of the STR, its legal framework (Wildlife Protection Act 1972, Section 38 V), and

guidelines from the National Tiger Conservation Authority (NTCA) and the Wildlife Institute of India (WII) were collected. This also included the Management Effectiveness Evaluation of Tiger Reserves in India (Fifth Cycle).

- **Government Websites:** Data on the STR's total area, Core Zone area and Buffer Zone area were sourced from the Maharashtra Forest Department (mahaforest.gov.in). Area details for the two main sanctuaries under STR—Chandoli National Park and Koyna Wildlife Sanctuary—were also confirmed.
- **News Media and Conservation Portals:** Information on "Operation Tara" (Tiger Augmentation and Rehabilitation Action), the details of the translocated tigers (Chanda/Tara, T7S2), and recorded tiger movements (STR-T1, STR-T2, STR-T3) was compiled from local newspapers (e.g., Mahasatta, Sakal), national newspapers (*Times of India*), and various conservation websites.
- **Conservation Literature:** Specific environmental data, such as the mean annual rainfall, landscape characteristics, and associated mammal species, was incorporated from academic sources (Joglekar et al., 2015; Jelil et al., 2020; Jelil et al., 2021).

REVIEW OF OTHER STUDIES ON TIGER RELOCATION

Lessons From India (National Level)

India has done this kind of tiger relocation before. The first big success stories were at Sariska and Panna Tiger Reserves.

- **Sariska:** When tigers were first moved to Sariska, they soon started eating farm animals (livestock). This taught managers that you must have a plan to stop conflict and pay villagers quickly if their animals are killed (Sankar et al., 2010).
- **Panna:** This reserve became successful largely because the government offered a good plan for moving local villages out of the core forest. This created a large, safe, quiet area that was perfect for the tigers to breed and grow their numbers (Lasgorceix & Kothari, 2009).
- **Genetic Health:** A very recent project in Similipal Tiger Reserve moved a tigress from Tadoba for one main reason: to make the Similipal tiger population

genetically healthier. This supports your own project, showing that Tadoba tigers are valuable for improving the genes of other populations (Drishti IAS, 2024).

Lessons From Around the World (International Level)

Looking at other countries shows the long-term challenges of tiger growth.

- **Conflict Management:** In places like Bardiya National Park in Nepal, as tiger numbers rise, conflict with people increases. Experts found that the best way to keep peace is to make sure local people get a fair share of the benefits (like jobs or tourism money) from conservation. If they benefit, they are more likely to support the tigers (Sharma et al., 2024).
- **Protection is Key:** Studies on Amur (Siberian) Tigers in Russia showed that moving a "problem tiger" away can help solve a conflict right now. But the research is clear: moving tigers will fail in the long run if you do not have strong protection against poaching and a healthy base of wild prey (Goodrich et al., 2010).

AHYADRI TIGER RESERVE: INFORMATION ABOUT RESIDENT TIGERS

1.SENAPATI (STR - T 1)

Its code number was STR - T 1 and it was named Senapati. This was recorded in the project on December 17, 2023. This is the first tiger settled in the Sahyadri Tiger Reserve.

2. SUBHEDAR (STR -T2)

Its code number is STR - T2 and it has been named as Subhedar. This tiger from Kolhapur's Radhanagari Wildlife Sanctuary has traveled 100 km to settle at Chandoli National Park in Sahyadri Tiger Reserve. It was reported to the Tiger Reserve on 28 October, 2024.

3. BAJI (STR -T3)

Its code number is STR - T3 and it has been named as Baji. It was captured on 2023 in Kadgaon forest area of Kolhapur. This male tiger entered Sahyadri in 2025. This tiger is now mainly seen in the Koyna Wildlife Sanctuary area.

Boost Public Affinity and Tourism

These tigers have been named as Sardar Subhedar and Baji after the Swarajya titles of Chhatrapati Shivaji Maharaj. These names have been given to tigers by local people and nature lovers. These names will increase public participation and affinity

towards tigers and instead of code numbers, these names will increase the attraction of tiger tourism to tourists.

REASONS FOR BRINGING TIGERS FROM OTHER TIGER RESERVES TO SAHYADRI TIGER RESERVE

1. Tigers are being introduced to increase the tiger population naturally.
2. To increase the number of breeding tigers in the Sahyadri Tiger Reserve.
3. Rejuvenation by increasing the number of tigers.
4. Tigers are being introduced to improve the genetic diversity of tigers.

RULES FOR INTRODUCTION OF TIGERS IN SAHYADRI TIGER RESERVE

1. Transmigration of tigers is a part of wildlife conservation as per the Wildlife Protection Act 1972 and the provisions made thereunder.
2. The approval for this migration is mainly given as per the guidelines of the National Tiger Conservation Authority.
3. The chief wildlife conservancy of Maharashtra is allowed to capture and relocate tigers.
4. Wildlife Institute of India takes guidance to complete this process.

CONSEQUENCES OF BRINGING A TIGER

A. POSITIVE EFFECTS

1. It will help to maintain the natural balance of the ecosystem.
2. Increasing number of herbivores like Indian Bison, Deer, will be controlled.
3. Deforestation will reduce.
4. Tourism will develop and increase.
5. Tree conservation will help rain.
6. Increase in tourism will provide employment to local people.

B. NEGATIVE EFFECTS

1. There will be an atmosphere of fear among humans.
2. Incidents of human-animal conflict will occur.
3. If a tiger comes close to a human settlement or attacks domestic animals, there may be opposition among local people
4. Human animal conflict can cause huge economic losses if animals or humans die.
5. The amount of tiger poaching will increase.

Table no-2
TIGERS POACHING IN INDIA (2020-2024)

YEAR	TIGER POACHING NUMBERS
2020	31
2021	56
2022	39
2023	56
2024	26

Source: WPSI Legal Programme - <https://www.wpsi-india.org>

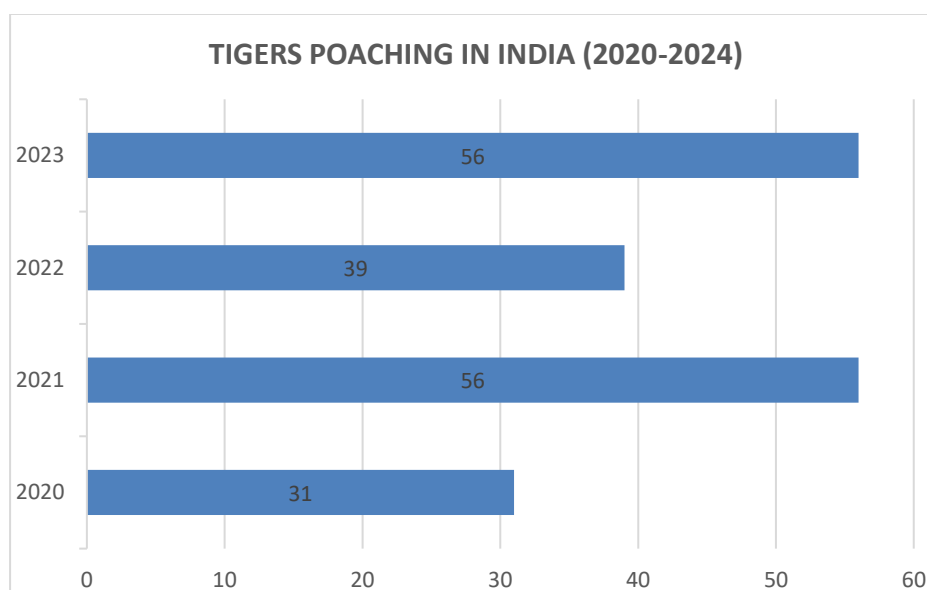


Fig. 2

First Translocated Tigress: Chanda/Tara

CHANDA

This tiger's name is Chanda. Chanda the tigress has been brought to the Sahyadri Tiger Reserve from Khadsangi Buffer Forest in Tadoba Tiger Reserve. She is about three years old. She is being brought in to increase the number of tigers in the Sahyadri Tiger Reserve. She was selected as per the guidelines of Wildlife Institute of India. On 14 November 2025, she was transported to Chandoli Sanctuary in the Sahyadri tiger reserve.

After traveling about 850 to 900 km i.e. about 27 to 40 hours, she has been brought to the Sahyadri Tiger Reserve. The trip was conducted under the guidance of Dr. R.S. Khobragade Wildlife Veterinary Officer following safety norms.

After bringing Chanda to Sahyadri, the name was changed to Tara i.e. Chanda in

Tadoba will be known as Sahyadri Tara.

Second Translocated Tigress: T7S2

This tigress was brought from Tadoba Tiger Reserve to Sahyadri Tiger Reserve on December 9, 2025. She was called T7S2 in Tadoba Tiger Reserve. She is about two years old. Its code number is STR- T5. He was caught from Pandhpouri area in Tadoba. She has been released at Sonarli in Chandoli National Park.

TIGER SELECTION CRITERIA FOR MIGRATION

1. The age of a tiger should be around three years.
2. Tigers should be able to reproduce.
3. Tigers are highly preferred for preying on animals such as the Indian bison and the sambar.
4. The selected tiger or tigress should be completely healthy.

CONCLUSION

The tiger is affirmed as a key element in the nature chain, underscoring its important place in the ecosystem. Considering the declining number of tigers in the Sahyadri Tiger Reserve (STR), an augmentation program, Operation Tara (Tiger Augmentation and Rehabilitation Action), was initiated under the guidance of the Wildlife Institute of India. Tigers are being brought primarily from the Tadoba Tiger Reserve and Pench Tiger Reserve to STR. The project initially planned for five male and three female tigers, although the allowed count was later specified as three male and five female tigers. The migration of two female tigers, "Chanda" (renamed Tara) and "T7S2," has been successfully completed.

The success of this translocation is vital for increasing the tiger population naturally, enhancing genetic diversity, and rejuvenating the STR ecosystem. The program is expected to yield positive outcomes like regulating herbivore populations, developing tourism, and creating employment for local people. However, lessons learned from past projects, such as those in Sariska and Panna, emphasize the critical need to mitigate negative effects, particularly human-animal conflict and poaching. Therefore, the long-term success of Operation Tara in the Sahyadri Tiger Reserve hinges on implementing robust conflict management strategies, ensuring a healthy wild prey base, and securing community support through benefit-sharing.

REFERENCES

1. Drishti IAS. (2024). Tiger Translocation for Genetic Diversity. *Daily Updates*.
2. Goodrich, J. M., et al. (2010). Conflicts between Amur (Siberian) tigers and humans in the Russian Far East. *Conservation Biology*, 24(1), 160-169.
3. Jelil, S. N., Gaykar, A. V. I. N. A. S. H., Girkar, N. A. T. A. S. H. A., Vyas, V. I. N. I. T. A., Ben, V. C., & Ramesh, K. (2020). Recent record of tiger from Sahaydri Tiger Reserve, India. *CATnews*, 71, 16-17.
4. Jelil, S. N., et al. (2021). The tiger reserve supports some of the few remaining undisturbed tall evergreen forests....
5. Joglekar et al. (2015). The STR experiences a mean annual rainfall of 5000 mm from June to September..
6. Lasgorceix, A., & Kothari, A. (2009). Impact of voluntary relocation of villages from Tiger Reserves. *Economic and Political Weekly*, 44(49), 37-47.
7. Sankar, K., et al. (2010). Monitoring of reintroduced tigers in Sariska Tiger Reserve... *Tropical Conservation Science*, 3(3), 301-318.
8. Sharma, B., et al. (2024). Dimensions of human–tiger conflict and solutions for coexistence... *Oryx*, 59(1), 1-10.
9. <https://hindustantimes.com>
10. <https://ntca.gov.in>
11. <https://penchsafari.com>
12. <https://timesofindia.com>
13. <https://www.etvbharat.com>
14. <https://www.mahaforest.gov.in>
15. <https://www.sahyadritigers.org>
16. <https://www.thehitavada.com>
17. <https://www.wpsi-india.org> (WPSI Legal Programme - for Poaching Data)
18. <https://ajmatiasacademy.in>
19. <https://bigcatsindia.com>
20. www.usthadian.com