



ODISHA PARYAVARAN
SANRAKSHAN ABHIYAN TRUST
— SINCE 2014 —

ANNUAL REPORT

Community-Led Conservation, Climate Resilience &
Sustainable Futures



2024-25

Our Objectives

The year 2024–25 has been one of transformation for Odisha Paryavaran Sanrakshan Abhiyan Trust (OPSA). Our initiatives, rooted in grassroots action, have empowered marginalized communities—particularly women and fisherfolk—to take charge of conserving the ecosystems they depend on. From mangrove restoration and palm plantations to coastal dune vegetation and Olive Ridley turtle conservation, OPSA has demonstrated that community stewardship not only restores biodiversity but also strengthens climate resilience and livelihoods.

Mangroves, Sea Turtle Conservation, palm Plantation and conservation, and coastal dune ecosystems are not only vital for Odisha but also recognized as nature-based solutions to global climate change, aligned with the UN Sustainable Development Goals (SDGs 13, 14, and 15).

Highlights of the Year

1. Women for Mangroves:

Leadership from the Margins

2. Community-Led Plantation

Drives: Building Green Shields

3. Coastal Dune Vegetation

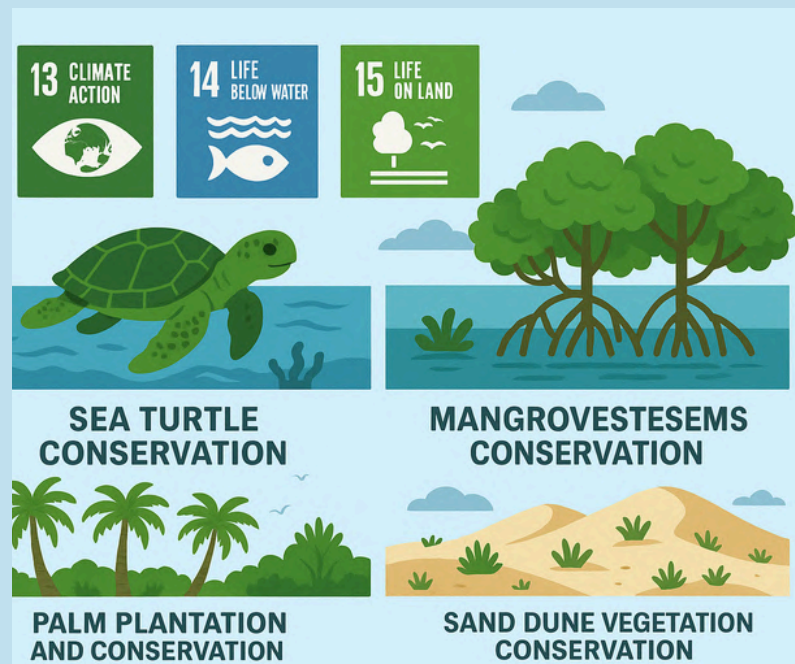
Restoration: A First in India

4. Olive Ridley Sea Turtle and

Marine Habitat Conservation

5. Community Nurseries and

Routine Maintenance



Women for Mangroves: Leadership from the Margins



OPSA facilitated the formation of women's groups that established and managed nurseries, raising over 50,000 mangrove saplings this year. Training was provided on seed collection, plantation methods, and monitoring. Social mobilization and mentorship enabled women to lead community decision-making in conservation.

Once dependent on mangroves for their daily sustenance, women in coastal Odisha have now become the most powerful defenders of these ecosystems. The Women for Mangroves initiative is not only about planting trees but about planting dignity, leadership, and hope.

The aim of this initiative was to transform women from resource users into ecosystem stewards, build their leadership capacities, and strengthen community resilience against climate risks such as cyclones and floods



The women planted more than 22,000 saplings at the Devi River Mouth in 2024–25. Over 230 women emerged as recognized conservation leaders, inspiring others across villages. This shift in roles—from collecting crabs and wood to leading Odisha’s most visible women-led conservation movement—was hailed as a model of grassroots climate justice.

Community-Led Plantation Drives: Building Green Shields:

Plantation drives in Odisha have always been about more than greenery—they are acts of survival, resilience, and shared responsibility. The communities living by rivers and estuaries know that plantations form natural shields against floods and soil erosion.



The goal was to restore degraded landscapes through large-scale plantations, strengthen riverbanks and coastlines, and simultaneously provide supplementary livelihoods for poor households.

During Van Mahotsav 2024, OPSA coordinated mass mangrove plantation at the Devi River Mouth. In parallel, a unique palm plantation program was carried out in collaboration with Gobind Tripathi Smruti Parisad, where seeds collected in Astaranga were transplanted to Baliput, creating a three-kilometer protective belt along the Dhanua River. Local families were engaged in seed collection and transplantation, which generated short-term income.



More than 6,000 palm seeds were planted, giving rise to a three-kilometer-long palm belt. The initiative not only strengthened riverbank protection but also enhanced soil fertility and provided dignified income to vulnerable families. These community-led plantation drives have evolved into festivals of collective action and shared ownership of natural resources.



**Coastal Dune Vegetation Restoration:
A First voluntary initiative in India:**



Odisha's coastlines face the constant challenge of beach erosion, threatening both livelihoods and biodiversity.

In 2024, OPSA initiated a first-of-its-kind project in India—restoring coastal dune vegetation—led by grassroots marine conservationist Bichi Bhai, Biju Patnaik State Wildlife Conservation Award Holder.

The primary objective was to stabilize sandy coastlines, combat erosion, and establish nature-based barriers to protect villages and ecosystems from storm surges.

Dune vegetation nurseries were created at the Devi River Mouth using native plant species that thrive in sandy soil. With Bichi Bhai's guidance, plants from these nurseries were relocated to erosion-prone beaches in Jagatsinghpur, Puri, and Ganjam. The approach merged indigenous wisdom with ecological restoration science.

Three dune nurseries were established, and over 2,500 dune plants were successfully relocated. This initiative placed Odisha on the global map, aligning local conservation with international strategies promoted by UNEP and IPCC. It demonstrated how community-led action can pioneer solutions of global significance.



Sand dunes are vital natural defenses against beach erosion, especially in coastal regions like Odisha. They act as a natural barrier, absorbing wave energy and preventing sand from being washed away, thus protecting inland areas from storm surges and flooding.

Olive Ridley Sea Turtle and Marine Habitat Conservation

The nesting of Olive Ridley sea turtles is a natural wonder along Odisha's coast, but their survival is increasingly at risk from pollution, ghost nets, and habitat destruction. OPSA's marine conservation initiatives brought fisher communities into the heart of protecting these fragile ecosystems.



The objective was to secure turtle nesting sites, reduce marine hazards such as ghost nets, and create community ownership of marine biodiversity conservation. OPSA organized a ghost net removal drive spanning 13 kilometers, safely transporting discarded nets away from nesting islands. Alongside this, fisher families were engaged in conservation dialogues, linking marine health to their livelihoods. Two key nesting islands were secured for Olive Ridley turtles, reducing the threat from ghost nets. Community awareness ensured long-term commitments to conservation. The initiative strengthened both ecological health and fisher communities' as custodians of marine ecosystems.



During National Bird Day 2024, communities took oaths against bird hunting and pledged to safeguard avian biodiversity.





Community Nurseries and Routine Maintenance

The survival of plantations depends on long-term care, not just planting. Recognizing this, OPSA invested in community nurseries and routine maintenance efforts that created a cycle of continuous restoration.

The initiative aimed to provide sustainable sapling supply chains, improve plantation survival rates, and ensure biodiversity through multiple mangrove species.

Three nurseries were managed by women and youth, raising seedlings with indigenous practices such as mother-bed methods and tidal-based planting. Fisherfolk volunteers conducted daily patrols, monitoring growth, protecting against grazing, and ensuring adequate water supply.



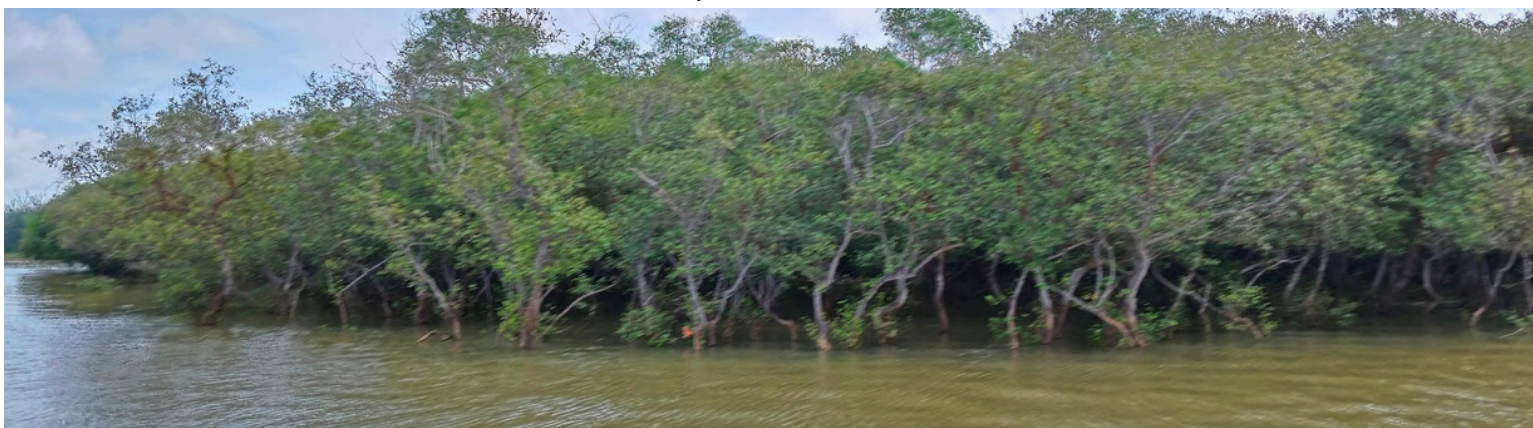
Global Partnerships and Innovation

Local action is most powerful when it connects to global networks. In 2025, OPSA opened new pathways for collaboration, technology integration, and global recognition. The purpose was to link Odisha's grassroots conservation to global discussions on climate action and to harness modern technology for monitoring and scaling up ecosystem protection.



OPSA welcomed Shri Anjan Kumar Panda, a US-based Odia AI scientist, who launched the “AI for Mangrove Conservation” initiative during #PBD2025. This innovation uses data-driven methods to monitor sapling survival and coastline vulnerability. OPSA also engaged with international forums under the UN Decade on Ecosystem Restoration, presenting its community-led model as a replicable approach.

Odisha's coastal restoration efforts is going to take position on the global stage as a model for India's 65 coastal districts. AI integration began as a pilot at the Devi River Mouth, combining modern technology with indigenous stewardship. This fusion of tradition and innovation highlighted OPSA as a leader in climate-smart community conservation.



Impact in Numbers (2024–25)

75,000+

Saplings planted and nurtured across Odisha's coast.

230+

Women leaders empowered under #WomenForMangroves.

16+

Wetland restored with multiple mangrove species.

2

nesting islands secured for Olive Ridley turtles.

2,500+

dune plants relocated to erosion-prone beaches.

35+

Villagers inspired to take action on Conserving Mangroves in their village

Future Goals (2025–26)

Building on these achievements, OPSA will scale up mangrove plantations to 100,000 saplings, expand the Women for Mangroves initiative across all coastal districts, and launch youth-led coastal clubs. A “Mangrove Data Observatory” will integrate AI with community monitoring to ensure scientific precision and local stewardship.

From the estuarine mangroves of Devi to the sandy dunes of Puri, OPSA’s work this year proves that communities are the most effective custodians of ecosystems. By weaving together objectives, approaches, and measurable impact, our initiatives are not only securing Odisha’s coast but also contributing to global climate goals. The journey ahead is long, but with every seed planted and every woman empowered, we are sowing the roots of a resilient future.

Gratitude:

I sincerely thank all our principal donors and other organisations for their generous support. Their support significantly enriched our endeavours, fostering community led last mile action and enabling us to progress and create work in our thematic areas. We thank our all mentors and members for all support and guidance towards the next dynamic phase of development and growth. Thanks to the entire team at OPSA Trust for their dedicated commitment towards environmental conservation and sustainability.

Soumya Ranjan Biswal

*Managing Trustee,
soukya Ranjan Biswal*



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