

Project Impact:

Environmental Restoration

- **≈ 3,968,685 sq. ft. degraded/ barren land restored** (*Approx. 91.1 Acres*)
- Sustained **~89% plantation survival rate**
- Enhanced biodiversity across landscapes (Species & Pollinators 15-40% Increase)
- Improved long-term ecosystem drought resilience

Climate Change Mitigation

- Total CO₂ Sequestered (5 Years): **≈ 32,653.8 MT CO₂**
- Equivalent to removing **~71,000+ passenger cars from the road for one year** (*approx. conversion*)
- Establishes a long-term natural carbon sink

Water & Land System Improvement

- Enhanced soil productivity (Soil Health Organic Matter, Microbes 10-25%)
- Soil Moisture retention increased by 15-30%.
- Vegetation survival 10-20%
- Strengthened groundwater recharge zones:- 20-35%
- Reduced soil erosion across plantation sites:- 25-45%
- Improved watershed stability :- 25-40% & Micro-Climate regulation assets:- 10-20%



5-Year Cumulative Impact Projection



Agricultural
Development Trust
Baramati

Community & Social Reach

- 25,000+ citizens engaged over 5 years
- Community stewardship in plantation care & protection
- Environmental awareness among school students through outreach programs
- Local participation supporting green livelihoods

Sustainable Development Contribution

Aligned with 8 UN SDGs (2, 4, 6, 8, 11, 13, 15, 17)

- Food & ecological security
- Education & awareness generation
- Climate action & biodiversity protection
- Community partnerships & rural resilience

Partnership Strength

Corporate + NGO + Community + Schools Collaboration Model

→ Ensured scalability, ownership and sustainability of plantation



Climate Change Mitigation- Carbon Sequestration

Year	No. of Plants	Carbon Sequestration (Kg)						Total Carbon* (Kg)	Total Carbon (Tonnes)
		2022-23	2023-24	2024-25	2025-26	2026-27	2027-28		
2022-23	1,00,000	3,10,000	4,15,000	5,56,000	7,53,000	10,02,000	14,05,000	44,41,000	4,441
2023-24	1,00,000	-	1,73,875	2,32,992	3,15,148	4,30,180	5,92,378	17,44,573	1,744
2024-25	1,00,000	-	-	3,59,254	4,81,401	6,51,148	8,88,822	23,80,625	2,381
2025-26	1,35,365	-	-	--	4,42,000	5,92,000	7,93,000	18,27,000	1,827
Total	4,35,365	3,10,000	5,88,875	11,48,246	19,91,549	26,93,328	36,79,200	1,04,11,198	10,411

*Estimated Values calculating 10-12% Mortality and Species wise growth rate in each year.

Strategic Insights

Total Carbon Sequestered Till today (Up to 2025-26) Total = 40,38,670 kg (4,039 MT)

Projected Near-Term Impact (by 2027-28)- Annual sequestration reaches:~3,679 tons CO₂ per year Cumulative (2022-23 → 2027-28):~10,411 tons CO₂

Strong Compounding Effect - From 310 tons → 3,679 tons/year (Approx. 12× increase in 5 years)



Key Points

The plantation efforts from FY 2022–23 to FY 2025–26 have generated **1,992 tons of carbon stock (~7,311 tons CO₂e)**. This offsets **~2.81% of Scope 1 & 2 emissions** and **~0.94% of total emissions**. The results demonstrate the strong compounding effect of plantations, with significant future potential as trees mature, supporting long-term climate mitigation and net-zero goals.

Carbon Stock & Conversion

Total Carbon Stored: **1,992 tons (C)**, CO₂ Equivalent: **7,311 tons CO₂**, Carbon Offset (FY2025 Emissions)

Scope 1 + 2 Emissions: 259,720 tons CO₂, Offset = **2.81%**, Total Emissions (Scope 1 + 2 + 3): 777,710 tons CO₂ & Offset = **0.94%**

Growth Trend (Compounding Impact)

Year	2022–23	2023–24	2024–25	2025–26
Total	310 tons	589 tons	1,148 tons	1,992 tons

Future Projection

2027–28: **3,679 tons (C)**, CO₂ Equivalent: **~13,500 tons CO₂** & Potential Offset (future): **~5% (Scope 1 + 2)**, **~1.7% (Total emissions)**

Strategic ESG Value

Significant improvement from **0.17% → 2.81% (operational offset)**, Strong **nature-based carbon solution**

Supports: **SDG 13 (Climate Action)**, **Net Zero commitments** & **GRI 304 (Biodiversity)**

Insight

"With cumulative sequestration reaching ~7,311 tons CO₂, the initiative now offsets nearly 3% of operational emissions, demonstrating the growing impact of nature-based solutions in the company's carbon reduction strategy."

