Mangrove Restoration Project, Dahej
Achievements Quarter – I (April -June 2024)

Name of project: Mangrove Restoration, Paniyadra	**Project Code:1264**	
Start date: 1st June 2014	**End date**: 31st March 2025	
Thematic area: Environment	**Target beneficiaries**: NA	
CSR clause u/s 135 (if applicable): Clause nos. (ii) and (iv) of Schedule VII of the Companies Act 2013	**Location of the project (District, State/s), specify Tribal / Rural / Urban:** Rural Coastal Areas of Bharuch district, Gujarat.	

Type of Project: Habitat Restoration

Narrative description of the project:

Mangroves occupy less than 1 % of the world's surface (Saenger, 2002) and are found between the Tropic of Cancer and the Tropic of Capricorn on all continents covering an estimated 75 percent of the tropical coastline worldwide. Mangroves provide regulating services. Total 18 million ha of global mangroves are spread across 112 countries.

Biodiversity of Mangroves - 34 major and 20 minor mangrove species belonging to 20 genera, 11 families (Tomlinson, 1986) have been documented. 41.4% of global mangroves are found in South and Southeast Asia and are considered world's most extensive and diverse mangrove systems.

Indian mangroves make up 3.1% of global cover, with 4461 km (59%) along the 7,500 km long Indian coastline. West Bengal has the maximum cover (2,097 km2), Gujarat (1103 km2) and Andaman and Nicobar Islands (604 km2). And is the fourth largest mangrove area in the world (Naskar & Mandal, 1999). Indian mangroves are divided in three distinct zones:

- East coast of 2700 km, facing Bay of Bengal,
- West coast 3000 km, facing Arabian sea,
- Island territories 1816.6 km coastline

However, rampant human exploitation, urban development, and climate change impacts threaten their health. They are not only ecological powerhouses but also guardians of coastal resilience, protecting vulnerable communities from climate-induced sea-level rise and extreme weather events. The mudflats between Jageshwar-Paniyadra-Aladar situated in Dahej block in Bharuch district has a coastline of approximately 10-15km and almost 80% of the coastline is devoid of any vegetation especially the mangrove species, that have very high ecological value not only in terms of biodiversity but also as deterrents to extreme weather situations like storms and cyclones, besides these mangroves are also source for sustaining local community livelihoods by providing fodder during summers, food nutrient suppliers, and ocean dependent livelihoods. Restoration of mangrove wall will also help in reducing land degradation and erosion.

Carbon & Economic values

A single hectare of mangrove forest can store an average of 1,025 metric tons of carbon. These mangroves act as carbon-dense ecosystems, sequestering carbon in their biomass and underlying soils. If left undisturbed, mangrove forest soils serve as long-term carbon sinks. Researchers estimate that the monetary value of the ecosystem services provided by mangroves amounts to $194,000 per hectare annually.

1. **Project Goal**
   Securing the coastline and biodiversity by mangrove restoration through community participation in Dahej district, South Gujarat coast.

2. **Project Objectives**

1. Restore Mangrove cover in 50 acres at Jageshwar – Paniyadra - Aladar village coast.
2. Sensitize and engage local community in restoration and management of the mangrove area.
3. Document the impact by - change in biodiversity, and tangible and non-tangible benefits to the community, pre and post restoration.

Activities undertaken:

1a. Scoping survey for selecting 50 acres of mudflat between Jageshwar – Paniyadra - Aladar in Vagra

tehsil of district Bharuch.
Scoping survey for site selection was done between Paniyadra and Jageshwar coast near Dahej. Mudflats adjoining to Paniyadra village was found suitable for the plantation work.

1b. Consultation and consent from the nearby community to the restoration area
The Sarpanch's of both village Jageshwar and Paniyadra were met for their consent. The Sarpanch of Paniyadra village Mr. Rajesh bhai Gohil gave his written consent to the project, while Jageshwar Sarpanch decided not to go ahead at present.

1c. Nursery site feasibility study to develop more than 1.07 lakh saplings for 50-acre plantation.
Nursery location suitability assessment has been started at Paniyadra site along with documentation of high and low tide levels. Harit Horticulture Services has been selected and issued the work contract for the nursery and plantation work of the nursery.
Deepak Foundation Director- Dr. Jai Pawar visited the location of the mangrove in Paniyadra with the implementation team.

2. Stakeholder Engagements
2a. Meeting with the Social Forestry RFO- Vagra Mr. Vijay Gawit was done by the project lead in his office, he assured all support for the plantation. DFO Bharuch was Ms. Urvashi Prajapati was contacted, and she has connected us with the Territorial Division ACF, incharge for mangrove plantations under the Bharuch Division

Key results:

50 acres of mangrove restoration site Geo-tagged.

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