Independent CSR Impact Assessment Report
Mahindra CSR Project: 2022-2023

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Submitted By

BlueSky
SUSTAINABLE
BUSINESS
For Impact Assessment

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Impact Assessment Summary

Mahindra & Mahindra CSR Impact Assessment Report FY 2022-23

This is an Impact Assessment Summary of the Independent CSR Impact Assessment Report of Mahindra & Mahindra (M&M) supported CSR Project – Project Hariyali for FY 2022-23.

CSR Impact Assessment is a process which is individual to the company and depends on factors such as the size of the company and its maturity in addressing the expectations of the community it operates in.

The purpose of the CSR Impact Assessment Report is for Mahindra & Mahindra to meet its CSR Compliance, assess the impact of the CSR initiatives, and to identify areas for improvement and further engagement with the community.

This CSR Impact Assessment report builds on the guidance available in

- The Companies Act 2013 Schedule VII, Sec 135 and its amendments thereof
- Bureau of Indian Standards (BIS) IS/ISO 26000:2010 Guidance on Social Responsibility
- UN Sustainable Development Goals

Compliance with The Companies Act-2013

Project Hariyali contributes to the following sections of The Companies Act 2013, Schedule VII, Sec 135

(ii) Promoting employment enhancing vocation skills and livelihood enhancement projects.

iv) Ensuring **environmental sustainability**, **ecological balance**, **protection of flora and fauna**, animal welfare, **agroforestry**, conservation of natural resources and maintaining quality of soil.

Alignment to UN Sustainable Development Goals

| **Goal 1:** End poverty in all its forms everywhere | **Goal 2:** End hunger, achieve food security and improved nutrition and promote sustainable agriculture | **Goal 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all | **Goal 13:** Take urgent action to combat climate change and its impacts | **Goal 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss |

Project Hariyali

Initiated in 2007 and extended to Araku region in 2010, Project Hariyali is an ongoing afforestation initiative supported by Mahindra & Mahindra in Araku Valley. Since 2010, Project Hariyali is operational across five Mandals in ITDA Paderu (Integrated Tribal Development Agency) of the new district of Allu Seetharam Raju in Andhra Pradesh. The five mandals of Project Hariyali are Ananthagiri, Hukumpeta, Munchingput, Pedabayulu, and Paderu.

Project Hariyali is an afforestation project with the focus on planting a wide variety of trees in the Araku region.

13,12,425 Saplings were planted

Ananthagiri

Hukumpeta

Till date from 2010

A total of
1,47,22,108 Saplings have been planted

91,17,485 Fruit, Forest & Shade (FFS)

56,05,223 Coffee

Project Hariyali's agroforestry systems in Araku region include three tiers of vegetation - Coffee combined with a variety of shade trees of fruit, legume and forest species. Coffee is a commercial crop with an annual harvest. The diversified Fruit, Forest & Shades tree portfolio helps to augment the Coffee income with an additional income from the fruit bearing and timber trees. The different tree species also contribute to the biodiversity of the region.

Project Hariyali involves active community participation – with the plants being planted on land belonging to tribal farmers and community volunteers trained by Naandi supporting them with technical and other agriculture help. The ownership of plants has significantly contributed to the high Survival Rate of the plants.

This Impact Assessment Summary provides insights into the short-term outcomes and long-term impacts of the Project Hariyali as well as the valuable feedback received from stakeholders.

Project Hariyali FY 2022-23 Activities

Coffee Sapling

6,94,225 Coffee Saplings were planted in FY 2022-23

as a gap filling and new plantation measure to ensure farm density, particularly in cases where farmers have experienced crop loss due to pests such as stem-borer, leaf rust, and other diseases.

Fruit, Forest and Shade Trees

6,18,200 Saplings of nine species of Fruit, Forest and Shade trees were planted in 2022-23

to provide shade for Coffee plants, contributing to the creation of a diverse, functional forest that improves soil health.

Impact of the project

Short-term Activities

Need Assessment: Naandi team identifies suitable saplings for planting based on the farmer requirements and on survival feasibility of each variety. Coffee saplings are planted in the main farm, either as gap planting and new planting, while FFS trees are mainly planted in the main farm or along the edges as a property fence.

Land Identification for Planting: Planting areas have a hilly terrain, and the Project Hariyali team and volunteers support new farmers in land preparation to suit the lay of the land and terroir.

Farmers Training:

- Farmer training is integral to the Project Hariyali, with volunteers, agriculture experts, and technical staff consistently upgrading farming skills.

- Natural methods of pest control and soil fertility, including smearing cow dung on sapling stems and leaf mulching, are taught to avoid chemical fertilizers and pesticides.

- Micro-nurseries developed by Coffee farmers is one of the key initiatives under Farmers Training program. Farmers are trained to grow Coffee seedlings which are then bought back from the Farmers Association by Naandi Foundation. This creates an entrepreneurial opportunity for farmers during non-farm season wherein they could make extra income by selling Coffee seedlings.

- Best agricultural practices in plant pruning and maintenance are identified for better flora and fauna, and training is encouraged at the mandal level, supported by village volunteers and cluster trainers.

Logistics – Planting Plan:

- Saplings provided to farmers are sourced from multiple sources – the central plant nurseries and Coffee micro-nurseries developed at the farmer level.
- Saplings are at least 2 years old, ensuring better Survival Rates.
- Damaged saplings during transportation are replaced, and planting occurs during the monsoon to ensure water availability and better Survival Rates.

Survival Rate: The average Survival Rate of saplings planted in 2022-23 has been calculated at 95.56%, attributed to the use of native species, good quality saplings, soil conservation measures, and involvement of village volunteers to ensure long-term survival and success of the planted trees.

Stakeholder Feedback for Short-term Outcomes

Need Assessment: While Coffee saplings are planted in the main farm either as a gap planting and new planting, FFS trees are mainly planted in the main farm but many farmers also prefer to plant it along the edges of their farm so that they act as a fence for their properties.

Land identification for planting: The 2 mandals where planting happened in 2022-23 have a hilly terrain. Project Hariyali team and volunteers support new farmers to prepare the land keeping in mind the lay of the land and terrain.

Farmers training:

• Farmer training is an integral part of the Project Hariyali. Volunteers, agriculture experts and other technical staff work closely and consistently to upgrade the farming skills of workers. Farmer training is also encouraged at the mandal level.

• To avoid use of chemical fertilizers and pesticide, farmers are taught natural methods of pest control like smearing cow dung on stems of saplings, mulching of leaves to increase soil fertility.

• Coffee farmers trained to develop micro-nurseries for growing Coffee seedlings is intended to create entrepreneurial opportunities for farmers in the region. These Coffee seedlings are procured by Naandi Foundation which is an additional income for the farmers. The farmers find it useful as during non-farm season they do not have enough engagement. Skilling and engaging farmers to grow Coffee seedlings during the lean season enables them improved engagement and income source.

• The Coffee is then bought back from the Farmers Association by Naandi Foundation. This creates an entrepreneurial opportunity for farmers during non-farm season wherein they could make extra income by selling Coffee seedlings.

• Village volunteers are a very strong support group for the farmers. There is a cluster trainer for every 5-10 villages who visits the villages every month in a consistent manner.

Logistics – Planting plan

● Saplings provided to the farmers are sourced from central plant nurseries and Coffee micro-nurseries developed at the farmer level.

● The saplings are at least 2 years old in the nurseries – thus ensuring better Survival Rates.

● Saplings which are damaged during transportation are replaced with new saplings.

● Planting of saplings is efficiently planned for Rainy season as it the only source of irrigation for the crops in Araku. This efficient plantation ensures the availability of rainwater for irrigation thus ensuring better Survival Rates.

Survival Rate

● The success of Project Hariyali, an afforestation initiative, can be measured by the Survival Rates of the plantations. The average Survival Rate of saplings planted in 2022-23 has been calculated at **95.56%**.

● The high Survival Rate can be attributed to continuous hard work put in by the farmer families along with Project Hariyali's use of native species, ensuring good quality saplings, soil conservation measures, and involvement of village volunteers to ensure the long-term survival and success of the planted trees.

Potential Carbon Sequestering:

• For Project Hariyali activity in 2022-23, a sample of 900 trees planted in 2022-23 was studied to estimate the potential carbon sequestering.

🌱 FFS Trees

No. of Total FFS Trees	6,18,200		
Current Survival Rate	94%		
CO_2 Sequestered for 2024	CO_2 Sequestration for 2025	CO_2 Sequestration for 2026	CO_2 Sequestration for 2027
14,94,350.763 lbs	50,95,342.421 lbs	1,06,52,653.21 lbs	1,80,23,31,052 lbs

Coffee Trees

No. of Total Coffee Trees	6,94,225		
Current Survival Rate	97%		
CO_2 Sequestered for 2024	CO_2 Sequestration for 2025	CO_2 Sequestration for 2026	CO_2 Sequestration for 2027
8,51,066.4541 lbs	14,68,427.889 lbs	20,98,077.176 lbs	26,42,692.964 lbs

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Key Findings - Long-term Impacts

Regenerative Agriculture Practices: Regenerative Agriculture Practices propagated in Project Hariyali - such as application of high-quality carbon-rich compost, soil biodiversity restoration and organic matter rebuilding by planting of FFS trees as shade trees for Coffee plantation have contributed to long-term impact of soil regeneration, improved biodiversity and economic development.

Biodiversity Metrics: The project has increased environmental resilience and economic value through the wise selection of Fruit, Forest and Shade trees.

Environmental Resilience: The project has transformed degraded, dry, thorny terrain into areas with increased tree cover, reducing temperature around the homestead and prevent soil runoff.
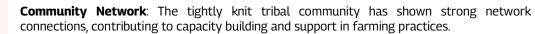
Popular Tree Choices: Trees like Jackfruit, Lemon, Mausambi, Guava, and Mangoes are popular choices, providing for personal consumption of farmers thereby supplementing their nutritional needs and income opportunities through weekly markets.

Farm Ecology Understanding: Improved understanding of farm ecology is evidenced in Survival Rates, best practices for pest control, and soil fertility enhancement.

Project Popularity: The project has gained popularity through word of mouth, with new potential farmers expressing interest in joining.

Community Network: The tightly knit tribal community has shown strong network connections, contributing to capacity building and support in farming practices.

Established Farmers: Farmers with more than 5 years in the program have established a stable income source from the plantation.

Tree Species Selection: The project has identified suitable tree species, with a preference for species with high Survival Rates and good nutritional and economic value.

Native Species Recognition: Agricultural experts identified the unsuitability of non-native silver oak trees provided by government nurseries, leading to their replacement.

Stakeholder Feedback for Long-term Impact

Soil Health Improvement Regular soil testing and provision of soil health cards have shown improvement in soil parameters.

Temperature Reduction Increased tree cover has reduced temperatures and soil erosion.

Farming Practices Farmers have adopted chemical-free agricultural practices, reducing dependence on chemical fertilizers and increasing climate change resilience.

Community Engagement Regular training and awareness sessions have contributed to capacity building and support for tribal farmers.

Economic Impact Farmers are earning good prices for their Coffee, encouraging better plantation maintenance.

Popular Tree Choices Various fruit tree species have been popular choices for personal consumption and income generation.

Network Expansion The project's popularity has led to new potential farmers expressing interest in joining.

Established Farmers Farmers with more than 5 years in the program have established a stable income source from the plantation.

Tree Species Selection The project has identified suitable tree species, based on their high Survival Rates and good nutritional and economic value.

Native Species Recognition Non-native silver oak trees provided by government nurseries have been replaced based on their unsuitability.

Rating of CSR project

Based on the proprietary scoring algorithm, Bluesky has assessed the Mahindra CSR program- Project Hariyali for FY 2022-23 with a Platinum category of performance of CSR Activity.

The Platinum Category of the CSR Project performance demonstrates:

- Sustainability Commitment
- Leadership Visionary on Social Responsibility
- Stakeholder Partnership and Multi – organizational Alliances

Signed By

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