

OTBL's CSR initiative 2021-22

"Developing Green corridor (Plantation) along highway and Greening of Schools for Environment Sustainability" in rural Schools of Ahmedabad region, Gujarat

---Greening in Schools for clean air

(An OTBL-TERI CSR Initiative towards Sustainable Development)

(Phase-II)

The project was focused on developing green covers in two Schools through the plantation of tree saplings in barren/degraded land in the vicinity of ONGC, Ahmedabad assets in Kheda district of Gujarat State for creation of sustainable environment for clean air. The project also encompasses environment education awareness sessions among students about the importance of growing trees for a sustainable environment and to acquaint them with the various new techniques of nurturing trees to let them understand how their decisions and actions affect the environment and the Planet.

Introduction:

Loss of vegetation is one of the inevitable consequences of urban infrastructure development. Consequently, Greenhouse gases (GHG) emissions are now significant concerns that need to be reduced to maintain the environment and change in climate temperature. Hence, recognizing the imminent threat of global warming and climate change, OTBL with the involvement of TERI has taken an initiative to green the Government rural Schools near ONGC Ahmedabad assets in Gujarat for developments of green covers for clean air in a sustainable manner. Our proposed green cover initiative has been substantiated with environment awareness programs engaging schools students, teachers, staff members, local community, Government and other stakeholders for environment awareness programme through this CSR initiative. Hence, through this CSR initiative, OTBL has proposed for green cover initiative to develop an eco-friendly environment in schools with the participation of school students, local communities, farmers, and government agencies.

Need for the Project:

To combat global warming and climate change effects due to GHG emission, our objective is to sequester the major component of GHG (CO₂) through green cover developments to protect the environment and to maintain the ecology and environmental balance with aesthetic enhancement of the area through plantation of native trees suitable for the local climatic conditions. Hence, under this CSR initiative, Government rural Schools in the vicinity of ONGC, Ahmedabad, have been selected through surveys, and plantation activities have been carried out in those schools. For plantation, plant saplings have been selected based on local climatic conditions and native plant species procured from the local forestry department nurseries. We have always been ensured that the planted saplings should be protected and nurtured till their maturity stage. Our ultimate aim is to promote sustainable environment among the farming community in rural schools and villages of Kheda district and a pollution-free environment to promote sustainable ways of living among school children that have a larger impact on society, environment, and ecosystems. There have also been outreach and awareness programs conducted in schools for younger minds to spread the message of environmental sustainability, climate change issues, environmental degradation, and health hygiene.

Planning for Green Cover development in Schools

Plantations works are highly site-specific activities and depend on various factors like choice of species, terrain, availability of land for plantations, soil type, climatic conditions, etc. Hence, for successful implementation of plantation activates in eco-friendly manner, we have followed the local forestry department's guidelines on tree plantation and maintenance in consultations with the Regional Forest Officers, Gujarat State, and the other nodal agency. For plantation, the school grounds have been prepared adequately, any convexities have been filled by good quality soils to ensure that the surface should have a sufficient layer of good quality soil (up to 45 CM) to promote better growth and survival of planted trees and shrubs. Grass lines have been used to provide a strong surface cover, and plantation in the soil is intended to create a strengthened surface that is resistant to erosion. It also ensure that the condition of the site is good enough for the successful establishment of plants. During these activities, we have regularly supervised all field operations like preparation of the surface, plantation of saplings, sowing of grasses and quality of samplings used etc.

The selection of species has been strictly done as per the said guidelines or as per the recommendation of the adjoining forestry department with site-specific native species and as per technical specifications. Indigenous varieties of trees and plants are raised and nurtured to about 6-8 feet height till they are self-sustaining. These plants are then distributed for re-plantation with a proven record of high survival rate after re-plantation. Trees provide clean air by absorbing carbon dioxide and other pollutant gases. In return, trees produce oxygen which is released into the atmosphere. It also controls temperature and prevents soil erosion and water pollution that helps maintain and balance the ecosystem. That means areas with more trees are more likely to keep cool and pleasant surroundings for healthy living.

S. No.	Selected Schools for plantation and outreach programme
1.	Shri H. & D. Parekh Higher Secondary School, Kheda Gujarat-387411
2.	Rang Avadhoot High School Vasna Margiya, Ta. Kheda, Gujarat-387120

Schools for taking up the plantation work have been surveyed and identified by TERI field officers in consultation with the Local authorities (Gram Panchayat/Zilla Panchayat), mainly in the Navagam/Vasna Ahmedabad region in the Kheda district of Gujarat state. Transect walk (for deciding the location, area of plantation and preparing a tentative sketch indicating plantation area and no plantation area) has been undertaken involving Gram Sarpanch/ Members of Gram Panchayat/ School Principals during transect walk, and all the details have been recorded without compromising any safety aspects of the area. On approval from Local authorities, TERI has filed an application before the designated officer responsible for protecting such Government sites to seek permission for plantation drive under this Project duly specifying: the areas for plantation, no. of the beneficiary, species proposed to be planted. All plantation activities have been carried out by TERI members in consultation with local forestry departments and School Principals. The tree saplings has been selected for each school as per land space available and existing set of trees/smaller plants planted. The selection comprised of fruit, herbal, and Ayurveda plants and trees. We have also provided list of saplings with technical specifications for Schools.

Plantation of trees at Rang Avadhoot High School, Vasna Margiya, Ta. Kheda, Gujarat-387120

Rang Avadhoot High School, Vasna Margiya, Ta. Kheda, Gujarat-387120





OTBL's Sign board installed at Vasna School



Students engage in plantation activities in school campu



Students and school principal with OTBL's sign board

Further, to aware and sensitize School students on environmental issues and infuse a sense of social responsibility by adopting sustainable lifestyle for environmental Sustainability, TERI has organised environment awareness sessions in collaboration with Schools to ensure its success and for protection and aftercare maintenance of plants. This initiative is a novel step for giving back to nature. In this session, we have also adopted the idea of "One Student One Tree" approach where students serve as the primary planters which allow them to take ownership of the Project and responsibility for the trees. The students also participated in pre-planting activities that connects them to the benefits of trees. Planting trees on a school campus will drastically improve the aesthetic appearance of the grounds making the campus more inviting to students, parents, faculty, and the surrounding community; provide shade to cool down hot recreation spaces and create outdoor classroom space that can be used as a teaching tool.

Beneficiaries of the programme

The program has adopted various methods to educate students, educators and youth to improve the environment at their school, at home, and in their community.

Target Group- Primary beneficiaries

- 2 government schools in the district of Kheda, Gujarat
- More than 3000 school students and 50 teachers
- Other staff members, parents and local communities

Environment Awareness sessions conducted in two Schools

Booklet distribution among students on topic importance of plants on environment and health (booklet topic- **Environment and climate change)**



Students Participating In Workshop With Otbl's Booklet In Each Students Hand



Speech competition among school students of standard 9th and 10th (Speech topic – Importance of plantation for Environment and Health)



Installation of two LED based street solar light systems in Rang Avdhoot HighSchool, Vasna Marigya, Gujarat- 387 120, sponsored by OTBL.



Figure: Installation of two solar street lights at two locations in school campus of rang Avdhhoot High School Vasna MArigya, Gujarat- 387120 (OTBL sign boards installed at solar light systems)



Installation of Roof top rain water harvesting system (capacity 20, 000 Liters) in a School at Kalambandhi Vidhyalay, Navagam, Gujarat-387 540 9inagurated by Mr. Amitava Bhattacharyya, Independent Director, ONGC.



Best plant maintenance awards given by Mr. Amitava Bhattacharyya to winning students for maintenance of tree planted in their school campuses



Best plant maintenance awards given by Dr. Banwari Lal to winning students for maintenance of tree planted in their school campuses

Conclusions

Trees help to combat global warming by absorbing carbon dioxide, storing carbon while releasing oxygen back into the air. They also reduce wind speeds and cool the air as they lose moisture and reflect heat upwards from their leaves. It's estimated that trees can reduce the temperature in a city by up to 7°C.

Trees help to improve air quality by intercepting and trapping dust and other pollutants from the air. The shade of trees also provides a useful barrier to harmful ultra-violet radiation from the sun. Trees protect biodiversity by providing food and habitat for birds and animals. Trees protect sources of drinking water by preventing soil erosion.

Therefore, we conclude that trees should be regularly planted to save the mankind and the animal world. Tree plantation and its after-care is a pleasing work too. We can get much pleasure in planting trees and in taking care of them. Students should plant trees in their school-compounds and in the front-yards, backyards and side-yards of their schools and near their own houses and in other places wherever possible. They should explain to their neighbours the goodness of tree-plantation and encourage them to plant and care new trees.

We can all contribute to a healthy natural environment by planting trees. However, before planting, it's important to research a variety of tree species, or talk to an expert, to find out which trees grow best in your part of the area. By planting more trees, it will contribute to global reforestation efforts, restoring lost forests, repairing damaged ecosystems and mitigating climate-change.