

Creating a greener world for our children

PPAP has planted over 60,000 native species saplings which will contribute to sequestration of approximately 1364 tCO₂ per annum.

Last century of rapid industrialization has led to drastic climate change and global warming. Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. The effect of climate change is visible in Delhi where extreme summer started in March instead of May 2022. Summer temperature reached 49 degrees centigrade, winter temperature as low as 2 degrees centigrade.

PPAP was alarmed when the skies over New Delhi were dark for 11 days in a row around Diwali in 2016. While the government took numerous initiatives, the PPAP believed that the only way to restore "Only One Earth" was to protect its lungs, the trees. The restoration of natural resources through sustainable reforestation is urgently needed, as is the preservation of native species, rivers, lakes, soil, and other natural resources.

In 2019, PPAP commenced its journey of afforestation using self created SOP's at degraded forest around the 600-year-old Tughlaqabad Fort. With our 5 decades of industrial experience, we decided to make it a showcase model, which is sustainable, biodiverse, scientific, efficient and cost effective.

PPAP's not-for-profit trust Vinay and Ajay Jain Foundation (VAJF), conducting CSR activities in the field of Environment, Education and Health took the critical initiative to conduct sustainable afforestation with the plantation of native species trees. Afforestation requires huge land mass. For this, we tied up with Delhi Development Authority through CEMDE (Centre for Environmental Management of Degraded Ecosystems).





VAJF conducted its afforestation journey in six phases. Our first phase included the research & development during which we assessed our

potential for contribution by visiting Yamuna Biodiversity and TKM's Ecozone. We also met with representatives of CEMDE and DBF and numerous environmentalists to understand their learning and experience of afforestation. We also studied various models including the Miyawaki Model.



In the course of our second phase, we went to nurseries in the NCR, Jaipur, Jodhpur, Dehra Dun, and Saharanpur to procure native species trees. We decided to grow the native species trees ourselves since we were unable to purchase saplings of the native species (as these are not available in the market).

During our third phase, we decided to develop an inhouse nursery and studied the seed germination process at Mangar Bani Forest and Aravalli Biodiversity Park. We started procuring and sowing seeds in fortified manure comprising of cow dung, vermicompost, chicken & goat droppings, leaf mold, garden plant waste, rice / wheat husk, sand, etc. and focused on two-year-old saplings as it reduced mortality in the field and saved cost.











"Climate change is driven largely by GHG emissions. The only way to restore 'One Earth' is by preserving its lungs - 'trees'. The plantation drive in Delhi NCR is aimed at restoring the lost forests and rebuild healthy biodiversity for the region. Expansion of carbon sinks has been miniscule, but an increase in India's green cover could help the country meet its net zero target and also reduce toxic emissions in the atmosphere."

- Ajay Kumar Jain President, TKSA CMD, PPAP Automotive Ltd





During our fourth phase, we experimented by donating saplings to various organizations and participating in mass plantation drives.





We had tremendous learnings during our afforestation journey. Some of the key takeaways were preparation of standard operating procedures for plantation, significance of requirement of modern tools & equipment and how dedicated, committed and trained manpower is important for sustainable afforestation activity in hostile climatic conditions of New Delhi region.







With our continuous efforts, we were able to successfully transform the degraded land of Tughlaqabad Biodiversity Park into a lush green land.

Using 125 different native species, we were able to successfully conduct a plantation drive on 70 acres of land at Tughlaqabad Biodiversity Park as a result of our initiative. We had planted 90,000 saplings since July 2019. However, over the course of three years, 30,000 saplings perished due to a variety of factors, including disease, extreme weather, vandalism, etc., despite the presence of trained staff, daily watering, daily supervision, and daily PDCA.

We encountered many difficulties along the way to achieving sustainable afforestation, including challenges with staff productivity, vandalism by monkey and Indian antelope (Nilgai), digging pits for plants, and space constraints. We developed some innovative solutions while keeping the difficulties in mind.



The images show some of our inventive ideas, such as a modified portable water pump with four extension pipes for gathering water. This aided in water conservation. We identified plants that were not devoured by Nilgai and planted them, as well as protecting them with chicken mesh and bamboo sticks to avoid harm from monkeys or Nilgai. For pits, we utilized an 8-foot-long gauge to indicate equal distances and motorized earth augers to dig pits. We sprayed saplings with in-house formulated Jeevamrit (organic plant nutrient; an excellent source of NPK nutrients) on a quarterly basis to promote rapid growth. To prevent any mental or physical strain on the workforce, we built temporary huts at every 25 acres that were equipped with all necessary amenities, including fuel storage, portable pumps, contemporary tools, PPEs, drinking water, food, and rest areas.

Numerous advantages resulted from our afforestation activities, including but not limited to the sequestration of roughly 1364 tCO $_2$ per year, contribution to keeping the earth's average temperature below 1.5 degree celsius, and climate stabilization, bringing sufficient breathable oxygen to Delhi NCR to make it a liveable city while improving the water table and hydrological cycle.



Urban forests are bringing in a wide variety of native species trees and shrubs in Delhi NCR, creating employment (gender diversity - greater women involvement) in nursery and biodiversity park, creating awareness and engaging staff, volunteers, and associations for contribution towards SDGs. These urban forests are also attracting birds, bees, butterflies, and insects to maintain natural biodiversity and natural harmony.

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges such as poverty, inequality, climate change, environmental degradation, peace and justice, etc. With our sustainable afforestation drive, we have touched upon 7 out of the 17 SDGs









From an environment standpoint, we are able to touch upon on SDG 3: good health & well being, SDG 11: Sustainable cities & Communities, SDG 13: Climate Action, SDG 15: Life on Land.







From a social standpoint, we are able to touch upon the SDG 4: Quality Education, SDG 5: Gender Equality, SDG 17: Partnerships for the goals

PPAP is offering 50,000 saplings of various species to its TKSA supplier partners to join us on our afforestation journey.

We will be pleased to provide any assistance requested during this journey. For education, training, and learning, we may arrange a visit to our showcase site in Tughlaqabad and our showcase nursery, near Dera Mandi.



We can share our Booklet on plantation "Creating a greener world for our children", a handbook on sustainable reforestation, available in Hindi and English. The book entails all the necessary process to carry out afforestation.



The third-largest $\mathrm{CO_2}$ emitter in the world, India intends to increase its emissions by 2030. As a responsible supplier, PPAP would like to request all TKSA supplier partners to raise awareness of the value of reforestation for a "Greener future for our children," promote the automotive industry, engage in mass plantation activities wherever you can, and work with industrial associations, residential societies, private and public parks, roads, and dilapidated open spaces to significantly increase India's green cover of nation and support the Government of India in meeting its commitments. Let's work together to beautify India with involvement of employees and families.