



ENHANCING ECOLOGICAL RESILIENCE IN AN URBAN NATIONAL PARK

IMPACT ASSESSMENT REPORT OF THE CSR PROJECT



Deeksha Centre for Learning and Action
HYDERABAD | TELANGANA



Divi's Laboratories Ltd.

IMPACT ASSESSMENT REPORT

**DEVELOPMENT INITIATIVES AT MAHAVIR HARINA
VANASTHALI NATIONAL PARK, HYDERABAD**

A CSR INITIATIVE OF DIVI'S

2025

Report Prepared by
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INTRODUCTION

The concept of national parks emerged in the United States during the nineteenth century, as part of a growing conservation movement aimed at protecting natural landscapes and wildlife for future generations. National parks serve as important sanctuaries for wildlife and plant species, safeguarding them from habitat destruction, poaching, and human encroachment. By preserving natural habitats, they help maintain complex food webs and ecological balance, supporting essential processes such as pollination, seed dispersal, and wildlife migration. In addition, national parks function as living laboratories, providing baseline ecosystems that enable scientific research and ecological monitoring.

Despite their ecological significance, national parks have long been associated with a certain degree of ambivalence. While they are celebrated as spaces dedicated to the protection of biodiversity, their historical establishment has often been rooted in exclusion. Many early protected areas were created through the fortress conservation model, which displaced Indigenous peoples and separated communities from lands they had stewarded for generations. In recent decades, however, a new approach to conservation has begun to emerge. Across the world, several protected areas are increasingly being designed with the participation and inclusion of local communities rather than in opposition to them. This evolving perspective recognizes that the ecological sustainability of national parks is closely intertwined with the knowledge, memories, and stewardship of the communities that live in and around them.

CONTEXT

National parks are protected areas established to conserve natural landscapes and biodiversity while also providing opportunities for recreation and environmental education. India hosts a remarkable diversity of flora and fauna, supporting approximately 7.6% of the world's mammals, 6.2% of reptiles, 12.6% of birds, and around 6% of flowering plant species within the Indomalayan ecozone. To protect this biodiversity, the country has designated 99 national parks across varied ecological regions.

One such protected area is Mahavir Harina Vanasthali National Park, located in Vanasthalipuram, Hyderabad. Established in 1975, the park was once a hunting ground of the Nizam rulers before being converted into a protected area to conserve wildlife, particularly the endangered Blackbuck

Antelope. Spread across approximately 3,605 acres (14.59 km²), the park represents one of the largest green lung spaces within the urban landscape of the city.

Despite its ecological importance, the park faces emerging challenges, including pressures from proposed land development and pollution from nearby industrial activities. The Telangana Forest Department continues to undertake efforts to protect the park from encroachment and maintain its ecological balance. Recognising the ecological significance of the park and the need to strengthen conservation efforts, Divi's Laboratories extended support for initiatives aimed at improving the density of forest cover within the park and enhancing habitat conditions for wildlife.

DIVI'S INTERVENTION

Divi's Laboratories remains committed to advancing environmental sustainability alongside human well-being through a range of Corporate Social Responsibility (CSR) initiatives. As part of its environmental conservation efforts, the company has undertaken extensive greenbelt development programmes, planting more than 10.40 lakh trees and saplings across different locations. Building on this commitment, Divi's Laboratories collaborated with Igniting Minds Organisation to undertake development activities at Mahavir Harina Vanasthali National Park under its CSR programme. This initiative focused on strengthening the ecological environment of the park through activities aimed at improving vegetation cover and supporting wildlife habitats.

IMPACT ASSESSMENT

In accordance with the CSR guidelines of the Government of India, Divi's initiated an impact assessment study of the development initiative undertaken at Mahavir Harina Vanasthali National Park, Hyderabad. To conduct this study and prepare the assessment report, Divi's engaged Deeksha – Centre for Learning and Action, a non-profit organization working in the areas of child rights, health, environmental concerns, and gender issues.

SCOPE OF THE STUDY

The impact assessment study evaluates the outcomes of the development activities undertaken at Mahavir Harina Vanasthali National Park in collaboration with Igniting Minds Organisation. It examines the current status of the intervention and analyses its impact on the flora and fauna of the national park.

SPECIFIC OBJECTIVE

The primary objective of the study is to assess the utilization and impact of the CSR funds allocated to the project by Divi's Laboratories.

METHODOLOGY

The study is designed to understand the impact of the intervention using a qualitative approach. Data for the assessment was gathered through three primary methods: physical observation of the site, interactions with the staff at the National Park, and semi-structured interviews with relevant officials.

FINANCIAL OUTLAY

Divi's Laboratories has disbursed an amount of ₹2,00,00,000 under its CSR component towards the development activities at Mahavir Harina Vanasthali National Park, Hyderabad.

MAJOR OBSERVATIONS

The assessment team from Deeksha has visited the National Park to see the initiatives taken up and the major findings are presented in the following pages.

- * Mahavir Harina Vanasthali National Park, established in 1975, serves as a protected habitat for diverse wildlife, particularly the endangered Blackbuck.
- * The park extends over approximately 3,605 acres (14.59 km²) and constitutes one of the largest natural green spaces within Hyderabad, contributing significantly to the city's ecological balance and environmental health.
- * The landscape is characterized by dry deciduous forest, scrub vegetation, and grassland patches, supporting tree species such as neem, acacia, palas, rosewood, and banyan, which collectively sustain the park's ecological diversity.
- * The park supports a rich variety of fauna, including mammals such as blackbuck, spotted deer, wild boar, porcupine, civet, and monkeys, in addition to more than 120 recorded bird species, including partridges, quails, kingfishers, egrets, cormorants, and several migratory birds.
- * Field interactions with park authorities indicate that while the park continues to play a crucial ecological role within the urban landscape, it also faces emerging environmental pressures, particularly from nearby industrial activity and developmental expansion.
- * One such concern related to contaminated and untreated chemical wastewater from the nearby industrial area and the adjacent municipal dump yard, which used to flow into the low-lying area of the park. The stagnation of this polluted water in large pools posed a serious threat to the surrounding flora and fauna.

- * In response to these challenges, the Telangana Forest Department has been undertaking conservation and management measures to safeguard the park's ecological integrity and prevent encroachment.

Ecological and Environmental Improvements

- * A major infrastructure intervention undertaken as part of the initiative involved the construction of a reinforced box drain measuring approximately 220 metres in length, about 3 metres in width, and 1.2 metres in depth, with strong side walls nearly two feet thick to ensure structural stability and protect the drainage channel during periods of heavy water flow.
- * The 220-metre box drain was provided with manhole openings at 10-metre intervals, covered with removable slabs to facilitate periodic cleaning and removal of debris, silt, and other material obstructing water flow.
- * The drain was designed to channelise untreated and chemically contaminated wastewater that previously flowed through sections of the park. Prior to the intervention, the polluted water posed a serious threat to wildlife, with park authorities reporting instances of animals falling sick or dying after consuming the contaminated water.
- * The intervention also addresses pollution originating from a nearby municipal dump yard that historically served as a disposal site for dead animals and cattle, which often generated foul odours and contaminated runoff entering the park area.
- * The drain water was routed to the neighbouring campus of the Central Research Institute of Dryland Agriculture (CRIDA), which was once part of the park land, through large outlet pipes connected to the tail end of the box drain. This arrangement was designed to prevent any backflow of water into the park. The plan was reviewed and finalised in consultation with CRIDA officials to ensure that the outflowing water from the park would not pose any hazard to the campus.
- * The drainage system now channels wastewater from the dump yard through the park and directs it towards the neighbouring campus of the Central Research Institute for Dryland Agriculture (CRIDA), where it undergoes natural treatment and recycling before being used for growing trees.
- * The newly constructed drainage system has effectively diverted the contaminated water, preventing it from flowing openly through the park and thereby reducing the risk of wildlife exposure to hazardous pollutants.

- * The previously unregulated flow of chemically contaminated industrial wastewater has now been effectively channelised. This intervention has significantly reduced the direct exposure of soil, vegetation, and wildlife to polluted water.
- * The polluted wastewater had earlier caused environmental damage along its route, including the drying of trees and the absence of grass growing in certain patches. Following the diversion of polluted water through the drainage system, vegetation in the surrounding areas has begun to recover.
- * The restoration of soil conditions has enabled renewed grass growth in previously affected areas, which is gradually improving the natural grazing environment within the park.
- * The improved vegetation cover has strengthened habitat conditions by providing shade, food sources, and shelter for wildlife species inhabiting the park.
- * By reducing pollution exposure, supporting vegetation recovery, and creating additional water availability, the intervention has contributed to improving ecological conditions within the park.
- * As one of the largest green spaces in Hyderabad, these improvements further enhance the park's role as an important urban ecological buffer and green lung, contributing to environmental balance in a rapidly urbanising landscape.

Wildlife Habitat and Conservation Support

- * By preventing the spread of contaminated water within the park, the intervention has reduced health risks to wildlife, including the endangered Blackbuck and other herbivorous species that rely on grasslands for grazing.
- * The revival of grass cover has supported safer grazing conditions and improved wildlife movement, particularly for herbivores such as blackbucks and spotted deer that depend on open grassland ecosystems.
- * Seasonal accumulation of rainwater in shallow locations near the drainage channel has created temporary water pools during the rainy season, which serve as seasonal short-term water sources for birds and animals.
- * These improvements complement the conservation and habitat management efforts of the Telangana Forest Department, strengthening ongoing measures aimed at maintaining ecological balance within the park.

Improvements in Park Management and Infrastructure

- * The drainage canal system constructed alongside the compound wall now channels wastewater and rainwater efficiently into the box drain, reducing waterlogging in several low-lying sections of the park.
- * Earlier, waterlogging along the boundary areas created operational challenges for vehicles transporting harvested grass from designated grass-growing patches to feeding points within the park. These vehicles generally ply three times a day to collect and distribute fodder.
- * Due to waterlogging at certain location, vehicles were often required to take longer alternate routes through the CRIDA campus, which increased travel time and logistical difficulty.
- * With the construction of the box drain and associated drainage channels, vehicle movement along the boundary has become smoother and more efficient, enabling easier transport of fodder without disturbing wildlife habitats and breeding zones within the park.
- * The iron grill filtration system installed at the base of the compound wall helps prevent solid waste and debris from entering the drainage channel while allowing wastewater to flow through, thereby improving the durability and functionality of the system.
- * According to the Forest Range Officer, the construction of box drain has been one of the most significant developments, enabled the department to permanently address the problem of stagnation of contaminated and hazardous water within the park premises, which earlier posed a serious threat to wildlife.
- * He mentioned that *“earlier there used to be deaths of eight to ten protected animals every year, along with many birds and insects, in those patches. After the construction of the drain, we have not witnessed even a single death due to the consumption of contaminated water inside the park. This has been the most important development works towards the conservation of flora and fauna here. We sincerely thank Divi’s for the generous support and Igniting Minds for facilitating the initiative at the right time”*.

Uprootal of Lantana Weeds

- * Lantana grows rapidly and forms dense thickets that outcompete native plants for sunlight, water, and nutrients. Over time, this suppresses indigenous grasses, shrubs, and tree seedlings that are essential for maintaining natural forest structure.
- * Once established, lantana spreads quickly through seeds and vegetative growth, making removal and long-term control difficult and resource-intensive for park authorities.

- * This invasive shrub had spread extensively across Mahavir Harina Vanasthali National Park, covering nearly 400 hectares and creating dense thickets that restricted wildlife movement and suppressed the growth of natural grasses and other vegetation.
- * The dense spread of lantana also reduced visibility within the forest patches and limited the regeneration of native plant species, thereby affecting the overall habitat quality within the park.
- * Dried lantana thickets are highly flammable, and during dry seasons they can intensify forest fires, which can damage habitats and threat wildlife.
- * To address this issue, the park authorities initiated a lantana removal programme as a first-phase intervention covering approximately 120 hectares of the most affected areas within the park.
- * The removal activity was carried out by engaging hired labour and was implemented in three priority patches measuring approximately 52 hectares, 48 hectares, and 19 hectares, where the weed growth was particularly dense and problematic.
- * As part of the removal process, the lantana plants were completely uprooted and placed head-down with their roots exposed to sunlight, a method adopted to ensure that the plants dry out and do not regenerate.
- * According to park officials, complete eradication of lantana in a particular location requires sustained follow-up for nearly three years, as new shoots often emerge and need to be removed periodically to prevent re-establishment.
- * However, the available support for the activity covered only one year of intervention, and the park authorities are currently exploring additional support to continue the work and sustain the progress already achieved.
- * Field observations indicate a visible difference between the treated areas and the sections where lantana has not yet been removed, with improved openness and visibility in the cleared patches.
- * In the areas where the weed has been removed, movement of wildlife such as peacocks (Indian peafowl), chital, and wild boar has been observed more frequently, indicating improved accessibility of the habitat.
- * The cleared patches have also begun to show regeneration of grasses and other native vegetation, which contributes to improving grazing availability for herbivores and restoring the ecological condition of the park landscape.

LONG-TERM SUSTAINABILITY CONSIDERATIONS

- * While the intervention has significantly improved ecological and operational conditions within the park, continued monitoring, maintenance of the drainage system, and protection from external pollution sources remain essential for sustaining the long-term environmental benefits of the initiative.
- * The presence of invasive species such as Lantana in certain areas of the park poses challenges to natural regeneration and plantation efforts, as the dense shrub suppresses grass growth and competes with native vegetation. Periodic removal of Lantana remains important to support habitat restoration and maintain healthy grazing grounds for wildlife.
- * In view of the increasing animal population, expansion of grass-growing patches within the park assumes important for strengthening natural grazing resources and ensuring adequate fodder availability for herbivores such as blackbuck, chital and other wildlife.

KEY OUTCOMES

- * Contaminated wastewater flowing through the park has been effectively channelised through the construction of a reinforced box drain, reducing pollution exposure for wildlife and vegetation.
- * Vegetation in previously affected areas has begun to recover, with renewed grass growth improving grazing conditions for herbivorous wildlife.
- * Removal of invasive *Lantana camara* across approximately 120 hectares has improved habitat accessibility and supported the regeneration of native vegetation.
- * Wildlife movement has improved in cleared patches, with species such as peafowl, chital, and wild boar frequently observed in restored areas.
- * The drainage system has reduced waterlogging and improved operational access for park management activities.
- * The initiative complements the conservation efforts of the Telangana Forest Department and strengthens the ecological sustainability of the park.

CONCLUSION

The impact assessment of the initiatives undertaken at Mahavir Harina Vanasthali National Park indicates that the CSR-supported interventions have contributed to improving ecological conditions within the park. As one of the important green lung spaces in Hyderabad, the park

provides habitat for diverse wildlife, including the endangered Blackbuck and plays a critical role in maintaining ecological balance within the urban landscape.

The initiatives supported by Divi's Laboratories, facilitated by Igniting Minds Organisation, have addressed key environmental challenges affecting the park. The construction of the reinforced box drain has effectively channelised contaminated wastewater that previously flowed through sections of the park, thereby reducing pollution exposure for wildlife, vegetation and soil. In addition, the removal of the invasive weed *Lantana camara* in selected areas has facilitated the regeneration of grasses and native vegetation, improved habitat quality and enabled better wildlife movement within the park.

These initiatives complement the ongoing conservation management efforts of the Telangana Forest Department and contribute to enhancing the ecological resilience of the park. Continued monitoring, maintenance of the drainage infrastructure, and sustained support for habitat restoration activities will be important to ensure that the environmental benefits achieved through the intervention are preserved and strengthened in the long term.

Overall, the initiative demonstrates how targeted CSR support and collaborative partnerships can play a meaningful role in supporting urban ecological conservation and strengthening the sustainability of protected natural spaces.

PHOTO GALLERY



Pic 1 – Compound wall separating the municipal dump yard from the National Park



Pic 2 – The newly constructed 22- meter-long box drain



Pic 3 – Terminal end of the box drain from where an underground pipeline channels the wastewater to the CRIDA campus



Pic 4 – The iron grill mesh at the base of the compound wall to prevent large waste materials from entering the drain



Pic 5 – Inlet of the box drain through which wastewater from the adjacent municipal dump yard enters the drainage system



Pic 6 – The municipal dump yard located adjacent to the national part boundary



Pic 7 – Trees affected by chemical contamination from nearby industrial effluents



Pic 8 & 9 – Drainage canal constructed along the compound wall inside to channelise rainwater runoff into the box drain



Pic 10 – A view of the compound wall, drainage canal and kuchcha road inside the park



Pic 11 – Box drain with centrally located manholes at regular intervals for maintenance and cleaning



Pic 12 – Kachcha road used for transporting fodder and for park maintenance activities



Pic 13 & 14 – Uprooted Lantana plants placed head-down for sun drying to prevent regrowth



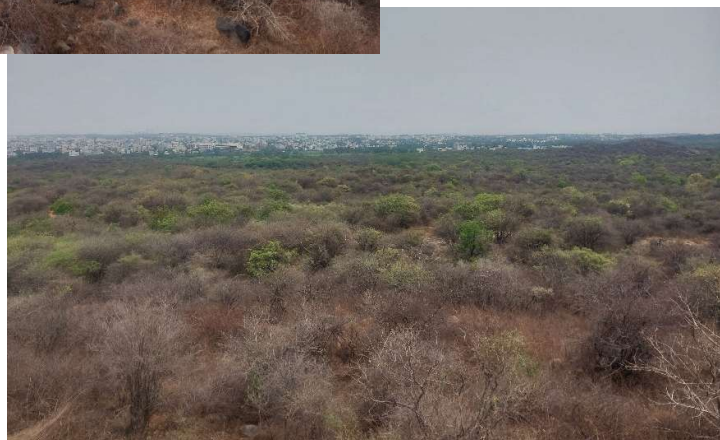
Pic 15 – Area cleared of lantana weed showing improved visibility and free movement of spotted deer



Pic 16 – Area with dense lantana weed showing restricted visibility and vegetation suppression



Pic 17 & 18 – Panoramic view of the dense forest landscape from the watch tower inside the national park





Pic 19 – Forest Range Officer and park staff briefing the study team on the development works undertaken in the park

Look Deep into the nature and you will understand everything better

– *Albert Einstein*

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