

Cultivating Hope: Practicing Sustainability on IITH Campus in a Time of Ecological Crisis



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Writing as the Faculty-in-Charge of the Green Office at IIT Hyderabad, and as someone who teaches Environment and Society and Biodiversity and Conservation to undergraduate, master's, and doctoral students, my understanding of sustainability is shaped as much by the accelerating crises unfolding beyond the campus as by the possibilities within it. At a time when the world is witnessing unprecedented rates of species extinctions, intensifying climate extremes, growing water scarcity, and multiple forms of environmental pollution, sustainability can no longer be approached as an abstract ideal or a distant policy objective. Instead, it demands grounded, place-based responses that acknowledge both the scale of global challenges and the responsibility of institutions of higher education to act meaningfully within their own spaces.

Within this broader context, initiatives at IIT Hyderabad, ranging from commitments towards net-zero goals and water management to biodiversity-sensitive landscape and waste practices, represent attempts to translate global sustainability concerns into everyday institutional action. While another contribution in this issue reflects on the steps being taken towards making IIT Hyderabad a net-zero campus by 2030, the motivations for envisioning IITH as a sustainable green campus extend well beyond carbon metrics alone. These efforts are rooted in commitments to ecological regeneration through thoughtful plantation practices, in building meaningful and responsible waste management practices, in actively engaging and motivating students to participate in greening initiatives and in fostering a culture of biodiversity coexistence.

It is from this position of cautious hope that this article reflects on how sustainability is imagined, approached, and practiced on the campus.

In this article, sustainability is understood not as a singular goal or a set of isolated green interventions, but as a multi-dimensional and evolving practice embedded within the everyday functioning of the campus.

Ecological Regeneration through Thoughtful Plantations

First, at IITH, sustainability is approached through the lens of ecological regeneration, emphasising long-term processes of restoring and nurturing ecological systems rather than short-term aesthetic greening.

Spread across nearly 600 acres amidst the rapidly transforming landscape of Telangana, and home to close to 5,000 students who encounter some of their earliest life lessons on campus, IIT Hyderabad has consciously nurtured a culture that encourages students to remain attentive to nature. Monthly tree plantations done by the team of Green office has gradually become both a practice and a tradition, marking the beginning of international conferences, academic gatherings, and even cultural festivals. These are not symbolic gestures alone, but carefully planned efforts, where trees are thoughtfully selected either for their contribution to the campus landscape or for their ecological significance in strengthening local biodiversity.

The SPIC MACAY National Convention 2025 stands as a notable example, during which over 2,000 trees were planted across the campus. This initiative with the Green office Horticulture expert, Vamshi Mashetti created a mosaic of small ecological patches, including fruit gardens with trees like Mango, Java plum, Sapogilla, Cherry, Guava, a dedicated Ficus spp. island, and flowering trails lined with Butea monosperma Golden shower tree (Amaltas) and Cassia fistula, Flame of forest tree (Palash).

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These plantations are envisioned to soften the campus landscape over time, offering seasonal colour along walking paths and shaded stretches beneath the closed canopy of Indian Rosewood, Shisham trees. Alongside such large-scale efforts, it has also become a quiet ritual to mark the visit of distinguished guests by planting a tree, embedding ecological care into moments of institutional significance.

These practices have, in turn, begun to shape student sensibilities. During the inauguration of ELAN, the annual cultural festival, students themselves approached the Green Office with a request to include tree plantation as part of the inauguration. The first sapling was planted by the Director, Prof. Murty, an act that symbolically reflected how sustainability practices on campus are increasingly being embraced not just as administrative initiatives, but as shared values within the student community.

Monthly plantation drives using endemic species, the creation of habitat patches, and the careful design of landscape elements reflect an attempt to allow ecological processes, such as soil regeneration, species interactions, and seasonal cycles, to re-establish themselves within a rapidly transforming institutional landscape.



Team of Green Office at IITH

Waste, Responsibility, and Institutional Care

Second, sustainability is conceptualised as the creation of responsible waste and resource flows, where attention is paid not only to infrastructure and technology but also to everyday practices and behavioural change.

At IITH, waste management is integral to promoting a clean, healthy, and sustainable campus environment. In guidance of Dr. Debraj Bhattacharyya, our efforts focus on reducing waste, promoting recycling, and generating renewable energy. Daily garbage collection is handled by Hand in Hand Management, where waste is carefully segregated, with reusable materials sent for recycling and inert waste incinerated at 1000°C, with the resulting ash repurposed as soil fertilizer. Organic waste is processed through composting and vermi-composting to produce nutrient-rich fertilizers used across campus gardens. Additionally, food waste from the mess is converted into renewable biogas to fuel campus kitchens, reducing reliance on conventional fuels.

Waste management initiatives on campus foreground segregation at source, recycling, and reduced disposal,

while also drawing attention to the often-invisible labour of housekeeping staff and the institutional arrangements that enable or constrain such practices. These practices on a day-to-day basis are supervised by Golla Vamsi with thoughtful planning, coordination, and execution on the ground. To help manage the plastic bottle waste in an effective manner, IITH also signed a bond with Bisleri International Pvt Ltd, with their 'Bottle for change' Program, which ensures adequate training of the housekeeping staff, and assures that all used plastic gets collected by Bisleri approved recycling partners for recycling. Waste is treated not merely as an end-product to be managed, but as a social and organisational challenge that requires continuous learning, coordination, and participation.

Living with Biodiversity: Shared Habitats on Campus

Third, sustainability is framed as biodiversity coexistence, recognising the campus as a shared space for humans and non-human life, and an opportunity to help thrive the great diversity of flora and fauna, creating an oasis for biodiversity to thrive.

On an ordinary day, the campus is animated by a quiet symphony of birdsong.

Trees and pathways echo with the calls and movements of a remarkable diversity of avian life, purple sunbirds flitting between flowering branches, magpie robins calling from shaded perches, koels announcing the season, and bee-eaters rolling and hopping from tree to tree.

The wagging tails of wagtails animate open spaces, while kingfishers glide swiftly across the landscape, their calls cutting through the air. During certain seasons, migratory birds join the resident species, gathering around small water bodies alongside permanent inhabitants such as the magnificent painted storks.



A sunbird pausing to sip nectar from sunlit blossoms

Beyond its rich birdlife, the campus also supports a diverse assemblage of non-avian species, including snakes, frogs, and reptiles such as chameleons, as well as occasional sightings of mongooses and Indian hares. Recognising the presence of these non-human residents, sustained efforts have been made to gradually create a healthier and more resilient ecosystem. Central to this has been the preservation and restoration of natural grasslands, habitats that are essential for many bird species, reptiles, and amphibians, along with the careful creation of new ecological niches that support conservation within the campus landscape.

These efforts are closely linked to teaching and learning. As part of my academic engagement, I take students on birdwatching walks and invite specialists to help cultivate curiosity and attentiveness toward the living world around them. IIT Hyderabad also actively participated in the global Campus Bird Count 2025, during which over 80 bird species were documented on campus over two days with student participation. Among the more recent initiatives is the development of a butterfly garden, designed through the careful selection of host plants, shrubs, herbs, and nectar species that support different stages of the butterfly life cycle. This space not only contributes to conservation efforts but also encourages students to pause, observe, and learn through sustained engagement with nature.

Together, these initiatives have enabled the campus to function as a mosaic of smaller ecosystems - interwoven grasslands, tree cover, water bodies, and open gardens, supporting biodiversity while also meeting the everyday needs of the campus community. In doing so, IIT Hyderabad demonstrates how institutional landscapes can nurture coexistence between human activity and diverse forms of life. This perspective aligns with broader sustainability debates that stress coexistence, care, and the protection of everyday biodiversity beyond formally protected areas.

Finally, sustainability at IITH is understood as an everyday institutional practice, embedded in routine decision-making around plantations, waste management, maintenance work, teaching, and student engagement. Rather than being confined to policy documents or flagship projects, sustainability unfolds through mundane yet critical actions, how waste is segregated, how landscapes are maintained, how students are involved in observation and documentation, and how environmental responsibility is cultivated as part of campus culture. Seen this way, the IITH campus emerges not merely as a site of sustainability outcomes, but as a living laboratory where sustainability is continuously negotiated, practiced, and redefined beyond carbon credits metrics, to learning from nature, living closely with it, and nurturing a culture of conservation and coexistence.



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A Mosaic of Ecosystems: Planted Trails, Built Environments, and Natural Grasslands (PC: Ajay Gonji)

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