SDG 15

LIFE ON LAND

INTRODUCTION

Protecting terrestrial ecosystems, biodiversity and sustainable land management on and around campus.

SDG 15 – Life on Land calls on institutions everywhere to protect, restore and promote the sustainable use of terrestrial ecosystems, to halt and reverse land degradation, and to slow the loss of biodiversity. For a growing university campus, this goal is lived out less through grand gestures than through a steady accumulation of everyday choices — the trees a campus plants, the ecosystems its researchers choose to study, and the communities its students and faculty step outside the classroom to work alongside.

SRM University–AP's contribution to SDG 15 takes shape across three connected strands of activity. Departments across the University run events, industrial visits and expert lectures that build environmental literacy and expose students to the realities of land use, pollution control and ecosystem management. Student-led outreach programmes — most visibly the tree-plantation and environmental-awareness drives carried out in partnership with civic organisations such as the Lions Club of Vijayawada Medica and Rotaract Club — take that learning directly into government and private schools in the Guntur and Vijayawada districts. And underpinning both is a substantial and growing body of peer-reviewed research: 65 Scopus-indexed publications from SRM University–AP researchers between 2025 and 2026 addressing forest ecology, biodiversity conservation, invasive-species management, wetland ecosystems, wildlife science and land restoration.

Taken together, these three strands — Events & Initiatives, Outreach & Community Engagement, and Research & Publications — tell a coherent story of how SRM University–AP engages with terrestrial ecosystems: through the awareness it builds on campus, the greenery and conservation habits it helps seed in neighbouring communities, and the scientific understanding it generates and shares with the wider world.

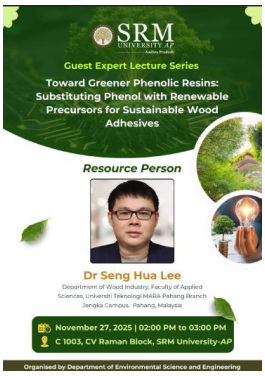
EVENTS AND INITIATIVES

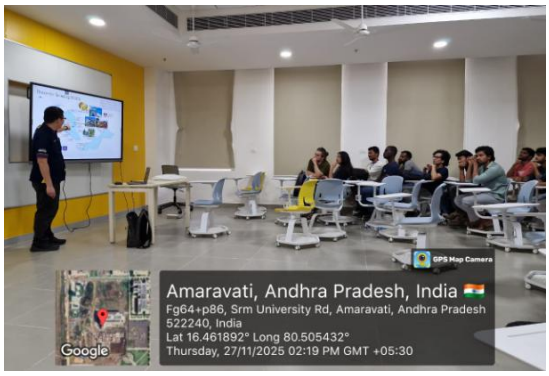
SRM University–AP's departments, schools and student-affairs offices organised a range of events during 2025–26 that engaged students with the environmental, ecological and land-management dimensions of SDG 15 — from expert lectures on sustainable materials to industrial visits examining pollution control and waste-to-energy systems, and campus outreach connecting students with underserved communities.

● Guest Expert Lecture Series — "Towards Greener Phenolic Resins"

Department of Environmental Science and Engineering · 27 November 2025 · 57 participants

As part of its ongoing Guest Expert Lecture Series, the Department of Environmental Science and Engineering hosted Dr Seng Hua Lee of the Department of Wood Industry, Universiti Teknologi MARA (Pahang Branch), Malaysia, for a session on substituting phenol with renewable precursors in sustainable wood adhesives. The talk gave fifteen PhD scholars, five faculty members and sixteen postgraduate students direct exposure to emerging green-chemistry approaches for reducing the environmental footprint of forestry and wood-based industries — connecting laboratory-level materials research to the land- and forest-resource questions at the heart of SDG 15. The session strengthened the department's international academic ties and opened a channel for future collaboration with the Malaysian institution.





● Industrial Exposure & Experiential Learning Visit — Jindal Urban Waste Management Ltd.

Department of Environmental Science and Engineering · 12 September 2025 · 132 participants · Kondaveedu Village, Guntur District

Students travelled to Jindal Urban Waste Management Ltd. (JUWM) in Kondaveedu village, Guntur district, for a hands-on look at integrated municipal solid-waste management and waste-to-energy systems. The visit walked participants through contaminant generation and remediation approaches, pollution-control and zero-discharge practices, and the regulatory standards that govern sustainable land and waste management — grounding classroom concepts of circular economy and leachate treatment in a working industrial facility, and reinforcing how responsible waste handling protects surrounding land and soil quality.





● VAC-507 Samaj Seva — Community Engagement for MBA 2025 Batch

Paari School of Business · January – April 2026 · 170 participants · Government schools, NGOs and local communities across Amaravathi, Guntur and Vijayawada

As part of the Value-Added Course "Samaj Seva," 170 MBA students engaged directly with government schools, NGOs and local communities across the Amaravathi–Guntur–Vijayawada belt. The programme was designed to nurture empathy, social responsibility and civic engagement through sustained, direct community involvement, with particular attention to underprivileged sections of society. Beyond its social-development goals, the initiative — which fed directly into student-led environmental projects such as the plantation drives described in the next section — strengthened students' understanding of the land and communities their University sits within, and their ability to translate that understanding into inclusive, sustainable action.

● Real-Time Exposure Visit — EIA Public Hearing, BPCL Ramayapatnam Port

Department of Environmental Science and Engineering · 5 December 2025 · 62 participants · SPSR Nellore District

Students attended a live public hearing conducted as a statutory component of an Environmental Impact Assessment (EIA) near the Ramayapatnam Port, Nellore district — a rare opportunity to see, first-hand, how baseline environmental and social assessment, mitigation planning and stakeholder consultation shape decisions about large-scale industrial land use. The visit reinforced students' understanding of the legal and regulatory frameworks that protect land and communities from unchecked industrial impact, and the critical role public participation plays in that process.

● Industrial Exposure Visit — APGENCO Thermal Power Station

Department of Environmental Science and Engineering · 10 December 2025 · 62 participants · Dr Narla Tatarao Thermal Power Station, Ibrahimpatnam

At Andhra Pradesh Power Generation Corporation's thermal power facility in Ibrahimpatnam, students examined large-scale energy generation alongside its environmental management: air, water and solid-waste pollution-control technologies, ash-utilisation practices, and the statutory frameworks governing emissions and environmental compliance. The visit gave engineering students a concrete picture of how industrial land use is regulated to minimise ecological impact.

● Co-Teaching Session (VAC 101) — Environmental Protection Act

Department of Environmental Science and Engineering · 6 April 2026 · 76 participants · Online

A co-teaching session introduced undergraduate students to the key clauses of India's Environmental Protection Act, building foundational legal literacy around land, ecosystem and pollution protection that underpins much of the department's later field-based teaching.

● Industrial Visit & Nature Exploration Programme

Directorate of Student Affairs · 76 participants · Jindal Urban Waste Management (Guntur) Ltd. and Kondapalli Artisan Street, Vijayawada

The Directorate of Student Affairs organised a combined educational and experiential-learning outing pairing a visit to a municipal waste-management facility with an exploration of the historic Kondapalli Artisan Street — connecting sustainable land and waste management with an appreciation of the natural and cultural landscape of the surrounding region.

OUTREACH & COMMUNITY ENGAGEMENT

Some of SRM University–AP's most tangible contributions to SDG 15 have come through student-led outreach that puts saplings in the ground alongside the children who will watch them grow. Two linked initiatives — conducted under the Samaj Seva (VAC 207) value-added course — carried environmental-awareness sessions and tree-plantation drives into government and private schools across the Vijayawada–Guntur region, working in partnership with civic service organisations.

Green Future Initiative — Environmental Awareness & Tree Plantation Drive

Paari School of Business (MBA – Samaj Seva, VAC 207) · March–April 2026 · Partner: Lions Club of Vijayawada Medica (District 3160)

A team of four MBA students — K. Bhargavi, Keerthi Tammina, Shanwanth Veerapaneni and Harsha Dayma, under faculty mentors Dr Nagalakshmi MVN and Dr Puviarasu M — designed and ran a dual-school Environmental Awareness and Tree Plantation Drive in partnership with the Lions Club of Vijayawada Medica. After visiting five prospective schools, the team conducted full plantation-and-awareness programmes at Nalanda Vidyaniketan, Vijayawada (11 March 2026) and at the government-run Neerukonda Primary School, Mangalagiri, where the Rotaract Club joined as an additional collaborator. Each session combined a demonstration of correct sapling-planting technique, hands-on planting by every participating student, an interactive awareness talk covering climate change, deforestation and the value of urban green cover, and a knowledge-reinforcing quiz.

Across the two schools, roughly 60 saplings — a mix of tree species and flowering plants — were planted by around 40 students at each site. A structured feedback check three weeks later found that all planted saplings were healthy and being actively watered and cared for by the students themselves, with the Neerukonda head-teacher rating the overall impact "Excellent" and noting a clear behavioural shift toward plant care and cleanliness. The initiative was formally recognised with Letters of Appreciation from the Government of Andhra Pradesh's Department of School Education, from Nalanda Vidyaniketan, and from the Lions Club of Vijayawada Medica, and it aligned explicitly with SDG 3, 4, 13, 15 and 17.











Plantation Drive for Environmental Sustainability — Government Primary School, Neerukonda

Paari School of Business · 15 March 2026 · 40+ participants · Partner: Rotaract Club of Vijayawada Elite League

In a related outreach activity, faculty coordinators M.V.N. Naga Lakshmi and M. Puviarasu led a plantation drive at Government Primary School, Neerukonda, in partnership with the Rotaract Club of Vijayawada Elite League. Thirty saplings were planted within the school premises, with students actively involved in the planting and taught the basics of environmental conservation and sustainability. The activity formed part of a broader "Shiksha & Swachhata" community-development effort at the same school addressing hygiene, sanitation and environmental awareness together, and was carried out at a total cost of ₹2,950. Post-activity recommendations emphasised regular watering and assigning student ownership of individual saplings to sustain the greenery the drive created.

RESEARCH & PUBLICATIONS

Research is where SRM University–AP's contribution to SDG 15 runs deepest. Scopus/SciVal data for 2025–2026 records 65 scholarly outputs from SRM University–AP researchers mapped to SDG 15 – Life on Land, with a Field-Weighted Citation Impact of 1.09 (above the global average of 1.0) and 33 publications — just over half — carried out through international collaboration. These publications have together been viewed 1,904 times and cited 205 times, and cluster around recurring keyphrases including protected areas, tropical forests, habitat fragmentation, invasive species such as Lantana camara, forest management, biochar and biological water treatment — evidence of a genuinely sustained, multi-disciplinary research effort rather than isolated papers.

65	1.09	33	205
SDG 15-mapped publications (2025–26)	*Field-Weighted Citation Impact*	*Internationally co-authored papers*	*Citations received*

Publications

The strongest and most directly relevant strands of this research are grouped below into four thematic areas that together span the core concerns of SDG 15 — forest ecosystems and carbon, invasive-species management, climate-driven biodiversity conservation, and wildlife, wetlands and monitoring technology.

Disturbance intensity drives structural, compositional and diversity attributes in tropical dry forests of Central India — Investigates how varying intensities of ecological disturbance shape the structure, species composition and diversity of tropical dry forests — evidence directly relevant to sustainable forest management and resilience planning. (2025, Article)

Does Protection Status Affect Tree Diversity, Regeneration, and Carbon Storage in India? Evidence from Sal (Shorea robusta) forests of Madhya Pradesh — Examines whether formally protected status measurably affects tree diversity, natural regeneration and carbon storage in India's Sal forests, informing how protected-area policy can be made more effective. (2026, Article)

Systematic evaluation of industrial greenbelts for quantifying carbon sequestration potential of afforestation activities — Develops a systematic approach to quantifying how much carbon industrial greenbelt afforestation can sequester, offering a practical evidence base for land-restoration and afforestation planning. (2025, Article)

Invasive shrub (Lantana camara L.) alters the tree diversity and ecosystem-level carbon pools in tropical forests of Central India — Studies how the spread of the invasive shrub Lantana camara affects native tree diversity and ecosystem-level carbon storage in Central India's tropical forests — a key concern for land degradation and restoration. (2025, Article)

Distribution pattern and habitat suitability modelling of an invasive plant species – Solanum viarum Dunal — Models the current distribution and habitat suitability of the invasive Solanum viarum, supporting early identification of at-risk terrestrial ecosystems. (2025, Article)

Assessing future invasion risk by Solanum viarum Dunal in Northwestern Himalaya to inform early detection and management — Projects future invasion risk of Solanum viarum across the Northwestern Himalaya to guide early-detection and management strategies that protect native ecosystems. (2026, Article)

Conservation deficits and climate-driven habitat shifts of threatened plants in South Asia — Assesses gaps between where threatened South Asian plant species occur and where conservation protection is actually in place, as climate change shifts suitable habitats. (2026, Article)

From protection to persistence: rethinking biodiversity conservation in India — Reflects on how India's biodiversity-conservation approach might evolve from simply designating protected areas toward ensuring the long-term persistence of species and ecosystems. (2026, Article)

Improving ecosystem vitality in India: overcoming barriers to meet National and International targets — A review examining the practical barriers India faces in meeting national and international ecosystem-vitality targets, and how they might be overcome. (2025, Review)

Unveiling a novel morphometric approach in claws and canines for species discrimination and age stratification in leopard (Panthera pardus fusca) — Develops a new morphometric method using claw and canine measurements to distinguish species and estimate age in the Indian leopard, supporting wildlife-forensic and conservation research. (2025, Article)

Trade-offs in ecosystem services of a Ramsar wetland due to conversion into aquaculture ponds in the coastal region of Indian peninsula — Examines the ecosystem-service trade-offs that occur when a Ramsar-listed coastal wetland is converted into aquaculture ponds — a direct contribution to understanding land-use change pressures on protected wetlands. (2025, Article)

DTFD: A Transformer Approach for High-Resolution Satellite Image Forest Change Detection — Applies a transformer-based deep-learning model to high-resolution satellite imagery to detect forest change, offering a scalable technology for monitoring deforestation and land-cover change. (2025, Article)

Beyond these highlighted studies, the broader SDG 15 publication portfolio extends into phytoremediation and reclamation of mining-contaminated soils, wetland and algal-bloom monitoring, treeline regeneration in the Himalaya, species-distribution modelling as a forest-management tool, and community-based conservation ethics — together demonstrating the breadth of SRM University–AP's intellectual contribution to understanding and protecting life on land.

CONCLUSION

The story SRM University–AP tells through SDG 15 is one of a continuous loop: awareness built in lecture halls and industrial visits feeds directly into hands-on conservation action in partner schools; that outreach, in turn, is shaped and informed by a substantial body of peer-reviewed research into forests, invasive species, wildlife and land restoration; and the greenery, habits and partnerships this work creates leave a visible, growing footprint in the communities around the University.

From a Guest Expert Lecture on sustainable wood adhesives to a leopard-conservation morphometric study, from an industrial visit to a waste-to-energy plant to sixty saplings taking root in two Vijayawada-region schools, SRM University–AP's engagement with SDG 15 spans the full arc from Biodiversity Awareness through Conservation, Greenery & Ecosystems, Community Engagement, Events, and Research & Innovation to genuine Sustainable Land Stewardship. As these events, partnerships and publications continue to grow year on year, SRM University–AP is building a lasting institutional habit of protecting, restoring and understanding life on land — one lecture, one plantation drive and one published study at a time.