13 CLIMATE ACTION

masters' union university

MASTERS' UNION | ANNUAL IMPACT REPORT 2025

climate *action*

Take urgent action to combat climate change and its impacts.



SDG 13 IMPACT REPORT

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01 Introduction

1.1 Understanding SDG 13 Climate Action

Sustainable Development Goal 13 calls for urgent action to address climate change and its effects. For higher-education institutions, this responsibility includes reducing operational impact, strengthening climate literacy, developing research and applied knowledge, and helping students understand how organisations can respond to mitigation, adaptation and transition risk.

For a business school, climate action is closely connected to management decisions. Energy, supply chains, investment, technology, regulation, land use and product design all shape emissions and resilience. Students therefore need to understand not only the science and policy context, but also the operational choices through which organisations measure, manage and reduce climate impact.

1.2 Masters' Union's Contribution to SDG 13

We contribute to SDG 13 through climate-aligned research, climate-responsive infrastructure in our host-campus setting, public climate dialogue and applied teaching. The strongest evidence is in our sustainability curriculum, field immersion in renewable energy and regenerative land use, direct engagement with climate practitioners, and student ventures working on decarbonisation and electric mobility.

This report separates our own academic and engagement activity from infrastructure owned and operated by DLF Cyber Park. It limits its scope to direct climate relevance, so that health, general education, employment outcomes and broad partnership activity stay within our separate reports for SDGs 3, 4, 8 and 17.

1.3 Contribution at a Glance

AREA	DOCUMENTED CONTRIBUTION
Research	A Harvard Business Publishing case on solar-electric boatbuilding and the supply-chain choices needed to scale a lower-emission product, faculty research on agricultural-technology adoption, ESG investment, climate education and energy policy, and conference papers on renewable-energy storage and precision agriculture.
Stewardship	Masters' Union operates within DLF Cyber Park, whose documented building systems include energy-efficiency measures, on-site solar generation, resource-efficient materials and waste-management infrastructure.
Outreach	A PwC India session on AI, emissions and climate solutions; the NCR Climate Party, which convened 250+ participants; and 66 hours of pro bono sustainability teaching at four public colleges.
Teaching	Twelve of the 40 courses in the PG Programme in Sustainability and Business Management are mapped to SDG 13, covering sustainability, environmental systems, carbon markets, climate finance, renewable energy, supply chains and agritech.
Applied learning	PGP Immersions connect students with renewable-energy infrastructure, industrial transition, regenerative land use and environmental management.
Climate ventures	Fitsol addresses corporate decarbonisation; Smarto Cabs applies electric mobility to urban transport services.

02 Research

Research contributes to SDG 13 when it explains climate risk, tests transition choices or develops evidence that supports lower-emission systems. Our directly climate-aligned case is Navalt, on scaling solar-electric boatbuilding through supply-chain strategy. Faculty research also covers agricultural-technology adoption, ESG performance and investment, climate education and household energy use, energy and transport policy, and renewable-energy storage.

2.1 Climate-Aligned Research Contribution

The Navalt case examines how a lower-emission marine technology can move from product innovation to wider adoption. Its climate relevance lies in the interaction between clean propulsion, manufacturing capacity, supply-chain design and commercial scale.

The case helps students and practitioners examine the operating conditions a climate solution needs in order to grow beyond a pilot or niche market.

PUBLICATION	AUTHOR	CLIMATE-ACTION RELEVANCE
Navalt Scaling Solar Electric Boatbuilding Through Supply Chain Strategy	Prof. Shiril Saju	Scaling a solar-electric mobility solution through manufacturing and supply-chain decisions.
Evaluating the Ecosystem Facilitating Agriculture Technology Adoption in Emerging Economies (2026)	Prof. Shiril Saju and Dr Nishant Kumar Verma	How farmers, technology providers, financial institutions, policy and supply-chain actors affect the adoption of technology that supports productivity and more efficient use of agricultural resources.
Impact of ESG on foreign institutional investments in India (2024)	Dr Garima Chaklader, with B. Chaklader and S. K. Shrivastav	Uses machine-learning methods to study how sustainability performance can influence investment decisions and the allocation of capital.

PUBLICATION	AUTHOR	CLIMATE-ACTION RELEVANCE
Energy Saving Through Climate Education: Climate Sensitization in School for Mindful Consumption at Home (2026)	Dr Satyajit Roy	How climate education in schools can lead households to use energy more mindfully. Published in IIMB Management Review.
Charting a Sustainable Future: Transformative Policies for India's Energy, Agriculture, and Transport Sectors (2024)	Dr Satyajit Roy	Policy options across the energy, agriculture and transport sectors that shape India's emissions and resilience. Published in IIMB Management Review.

Prof. Saju also wrote about the same technology for a wider audience in Solar boats: opportunities and challenges towards achieving sustainable water transport, published in Manufacturing Today on 8 June 2024.

2.2 Conference Papers

Dr Ashish Singh Bhandari's papers examine how a renewable energy generator can use battery storage to match supply with demand, and what storage means for non-renewable sources. They were presented at the Production and Operations Management Society (POMS) conferences in Istanbul in 2024 and Atlanta in 2025, and the second was accepted at the 2024 INFORMS MSOM Conference in Minneapolis.

Prof. Shiril Saju's papers study the policies, ecosystem and field evidence behind precision agriculture and sustainable practices in agriculture supply chains in emerging economies. They were presented at EurOMA, POMS, INFORMS MSOM and Behavioral Operations conferences in 2024 and 2025.

FACULTY	PAPER	WHERE IT WAS PRESENTED
Dr Ashish Singh Bhandari	Energy storage by renewable energy source: A triple whammy for non-renewable energy source	POMS International Conference, Istanbul, 25-27 June 2024
Dr Ashish Singh Bhandari	Matching supply with demand for a renewable energy generator using a battery energy storage system	INFORMS MSOM Conference, Minneapolis, 1 July 2024 (accepted and presented by a co-author); 35th POMS Annual Conference, Atlanta, 8-12 May 2025

FACULTY	PAPER	WHERE IT WAS PRESENTED
Prof. Shiril Saju	Analysis of policies for promoting precision agriculture in emerging economies	EurOMA Sustainability Forum, KLU Hamburg, 4-5 March 2024; POMS Annual Conference, Minneapolis, 25-29 April 2024
Prof. Shiril Saju	Policies for promoting sustained adoption of sustainable practices in agriculture supply chains	EurOMA Sustainability Forum (virtual), 24-27 March 2025
Prof. Shiril Saju	Performance of ecosystem facilitating precision agriculture in emerging economies	EurOMA Annual Conference, Politecnico di Milano, 13-18 June 2025; INFORMS MSOM Annual Conference, London Business School, 28-29 June 2025
Prof. Shiril Saju	Technology intervention to improve precision agriculture awareness among farmers: a field experiment	Annual Behavioral Operations Conference, KLU Hamburg, 23-25 June 2025

03 Stewardship

Stewardship under SDG 13 concerns the infrastructure and operating systems that shape our environmental footprint. We operate within DLF Cyber Park; the underlying building systems and certifications belong to the host campus and are not presented as achievements awarded directly to Masters' Union.

3.1 Reporting Boundary and Accountability

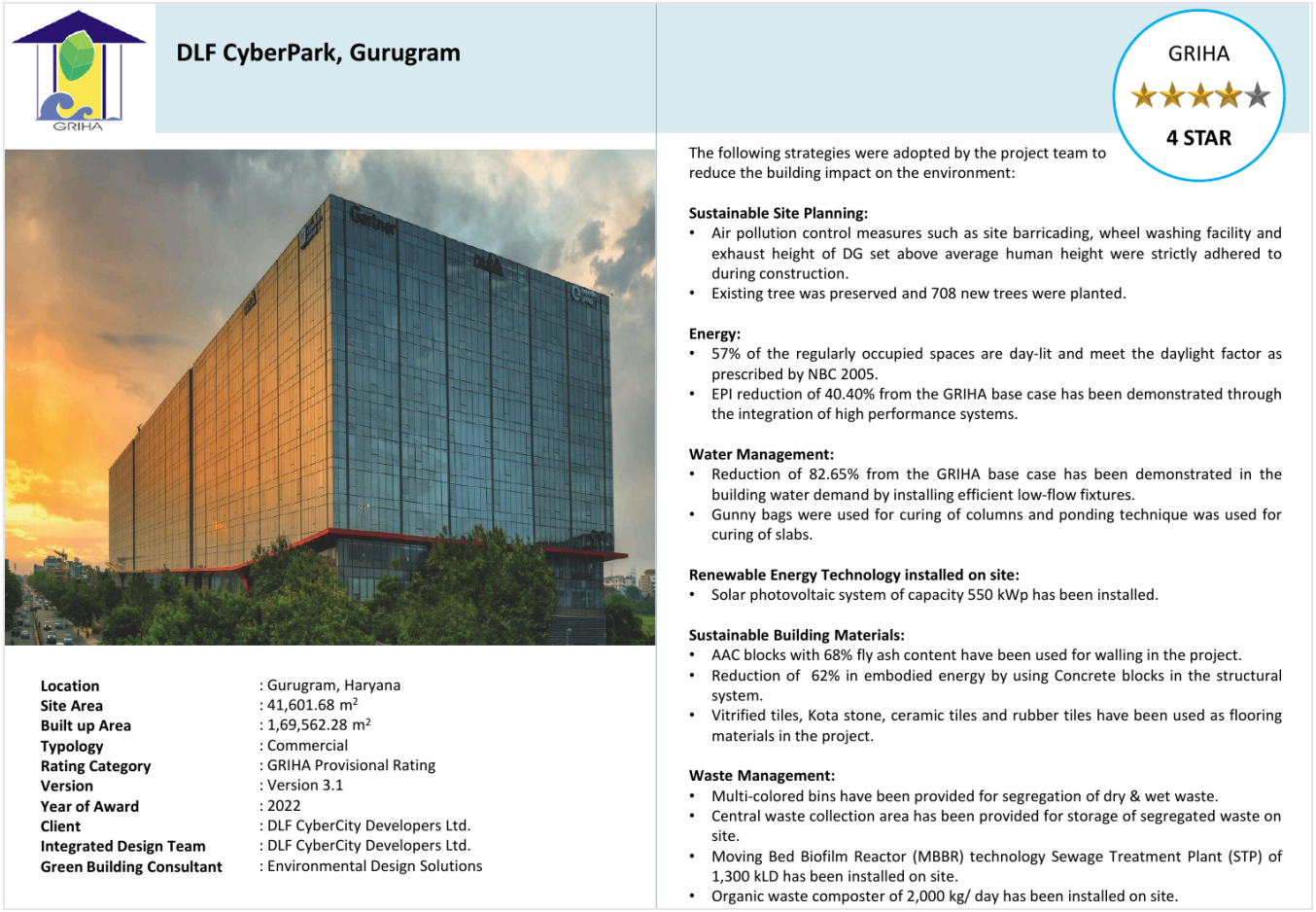
The distinction between our own activity and host-campus performance is central to credible reporting. We can influence behaviour, space use, teaching and evidence collection, while DLF Cyber Park controls the principal building systems.

3.2 Climate-Responsive Host-Campus Infrastructure

DLF Cyber Park's GRIHA case documentation records a four-star provisional rating and a series of measures designed to reduce building impact. These include high-performance systems, daylight access, on-site solar generation, lower-embodied-energy materials, tree planting, efficient water use, waste segregation and central treatment infrastructure.

DOCUMENTED HOST-CAMPUS MEASURE	REPORTED PERFORMANCE
Operational energy	40.40% reduction in Energy Performance Index against the GRIHA base case.
Renewable energy	550 kWp solar photovoltaic capacity installed on site.
Daylight	57% of regularly occupied spaces reported as meeting the prescribed daylight factor.
Landscape	One existing tree preserved and 708 new trees planted during development.

DOCUMENTED HOST-CAMPUS MEASURE	REPORTED PERFORMANCE
Lower-impact materials	AAC blocks with 68% fly ash and concrete blocks used to reduce embodied energy.
Waste and treatment	Dry and wet waste segregation, a 1,300 kLD sewage-treatment plant and a 2,000 kg/day organic-waste composter.



DLF CyberPark, Gurugram

GRIHA ★★★★★ 4 STAR

Location	: Gurugram, Haryana
Site Area	: 41,601.68 m²
Built up Area	: 1,69,562.28 m²
Typology	: Commercial
Rating Category	: GRIHA Provisional Rating
Version	: Version 3.1
Year of Award	: 2022
Client	: DLF CyberCity Developers Ltd.
Integrated Design Team	: DLF CyberCity Developers Ltd.
Green Building Consultant	: Environmental Design Solutions

The following strategies were adopted by the project team to reduce the building impact on the environment:

Sustainable Site Planning:
- Air pollution control measures such as site barricading, wheel washing facility and exhaust height of DG set above average human height were strictly adhered to during construction.
- Existing tree was preserved and 708 new trees were planted.

Energy:
- 57% of the regularly occupied spaces are day-lit and meet the daylight factor as prescribed by NBC 2005.
- EPI reduction of 40.40% from the GRIHA base case has been demonstrated through the integration of high performance systems.

Water Management:
- Reduction of 82.65% from the GRIHA base case has been demonstrated in the building water demand by installing efficient low-flow fixtures.
- Gunny bags were used for curing of columns and ponding technique was used for curing of slabs.

Renewable Energy Technology installed on site:
- Solar photovoltaic system of capacity 550 kWp has been installed.

Sustainable Building Materials:
- AAC blocks with 68% fly ash content have been used for walling in the project.
- Reduction of 62% in embodied energy by using Concrete blocks in the structural system.
- Vitrified tiles, Kota stone, ceramic tiles and rubber tiles have been used as flooring materials in the project.

Waste Management:
- Multi-colored bins have been provided for segregation of dry & wet waste.
- Central waste collection area has been provided for storage of segregated waste on site.
- Moving Bed Biofilm Reactor (MBBR) technology Sewage Treatment Plant (STP) of 1,300 kLD has been installed on site.
- Organic waste composter of 2,000 kg/ day has been installed on site.

DLF Cyber Park GRIHA case-study card documenting host-campus environmental measures

These are building-level outcomes delivered by DLF Cyber Park, but they form part of the infrastructure our students and employees use every day. Facility improvements in Masters' Union spaces have included upgrades to energy-efficient lighting.

CDS Corporate Tower earned 18 of 33 points under Energy and Atmosphere, and the electric-vehicle credit, in its LEED v4.1 Core and Shell assessment, awarded Gold in July 2024. Together, these credits point to a building designed to use energy more efficiently and to support lower-emission commuting.

3.3 Resource Efficiency and Renewable Energy

The host-campus evidence gives useful operating context for climate learning. DLF Cyber Park combines energy efficiency with water conservation, wastewater treatment, waste segregation and organic-waste processing, and water-efficient fixtures reduce demand for freshwater.

We are consolidating the data we can directly influence or obtain, including occupied-space energy use, shared transport, waste segregation, event-related resource use and climate-related procurement choices.

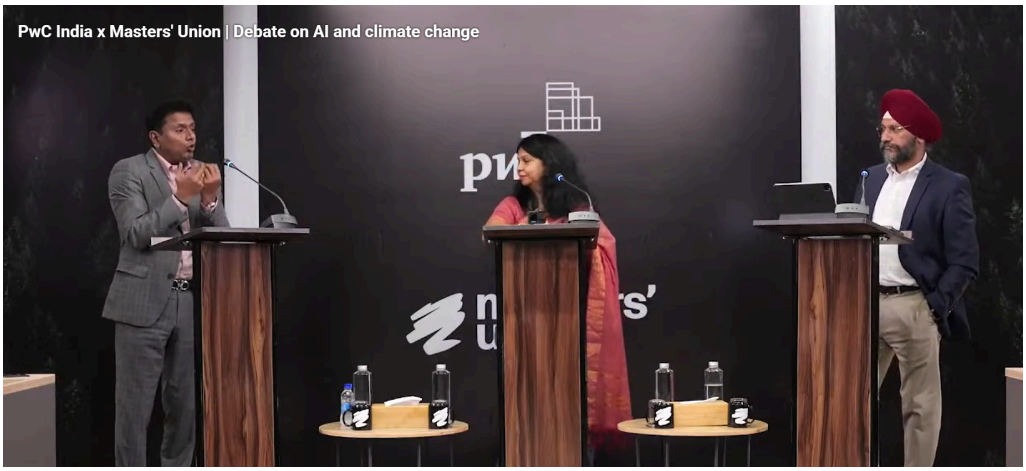
04 Outreach

Outreach under SDG 13 focuses on public and practitioner-facing activity that improves understanding of climate risk, mitigation and transition choices.

4.1 AI and Climate Change

On 25 April 2025, we hosted a session with PwC India on the relationship between artificial intelligence and climate change. Manpreet Singh Ahuja and Sambitosh Mohapatra discussed the potential for AI to support climate solutions alongside the environmental footprint of its use.

The session connected technology choices with emissions measurement, mitigation, net-zero strategy and climate-and-energy management. A LinkedIn post and a recording on YouTube are available.



PwC India and Masters' Union session on AI and climate change

4.2 NCR Climate Party

We hosted the seventh NCR Climate Party on 24 September 2024. More than 250 participants, including founders, investors, policymakers, researchers, academics, students and sustainability professionals, took part in dialogue on climate challenges, climate entrepreneurship and potential solutions. The event widened access to climate discussion and brought technical, policy and entrepreneurial perspectives into the same forum.

4.3 Joining India's Climate and Sustainability Conversations

We take part in external forums where businesses, investors, policymakers and sustainability practitioners discuss the transition to a lower-carbon economy. At the Net Zero Hour Summit in New Delhi, discussions covered India's net-zero journey, climate commitments and business transformation.

At the fifth Mint Sustainability Impact Summit in Mumbai, which we sponsored, conversations focused on climate finance, green investment and sustainability leadership. Through our collaboration with SusMafia, we have also hosted three sessions on climate innovation, green entrepreneurship, ESG and the changing skills needed in sustainability roles.

4.4 Climate Education at Public Colleges

Our faculty take climate and sustainability education beyond Masters' Union through pro bono programmes with public colleges. Across five engagements at four colleges, they delivered 66 hours of pro bono sustainability teaching.

COLLEGE	PROGRAMME FOCUS
Hansraj College	A 13-hour programme on climate action, carbon accounting, ESG, sustainable business and sustainability problem-solving.
Miranda House	A 12-hour programme on climate communication, circular economy, sustainable supply chains and climate technology.
Sri Guru Gobind Singh College of Commerce	Sessions connecting ESG and responsible business with environmental decision-making.
Shaheed Bhagat Singh College	Two programmes on impact measurement, ESG reporting, climate entrepreneurship and sustainable business.

4.5 Climate Problem-Solving with Other Universities

We also develop sustainability problem statements for students at other institutions. Students at Ashoka University, Miranda House, Hansraj College and Shaheed Bhagat Singh College have worked on challenges covering climate adaptation, circular economy, sustainable business and environmental problem-solving.

These projects let students work on environmental questions through practical business and management problems.

05 Teaching

Teaching is our most substantial direct contribution to SDG 13. The curriculum combines climate concepts with markets, finance, technology, energy systems, supply chains and agriculture. Field immersion then places these questions within operating businesses, infrastructure projects and land-use systems.

5.1 Climate and Sustainability Curriculum

The PG Programme in Sustainability and Business Management maps each of its 40 courses to the goals it serves, and 12 are mapped to SDG 13. The 16-month programme gives students a dedicated route into climate and sustainability careers. More than 70% of sessions are delivered by practitioners, and over 100 masterclasses, workshops and mentorship sessions are built into the programme.

COURSE	CLIMATE-ACTION LEARNING
Introduction to Sustainability	Climate context, systems thinking and organisational responsibility.
Environmental Systems	Pollution pathways, natural systems and environmental impact.
Carbon Markets and Trading	Carbon accounting, market mechanisms, verification and integrity.
Introduction to Climate Finance	Financing instruments, risk and low-carbon project appraisal.
Climate Tech Ecosystem	Technology pathways across energy, mobility, industry and adaptation.
Renewable Energy Markets	Market design, regulation and commercial models for clean energy.
Renewable Business Models	Distributed energy, customer models and scaling.
Renewable Energy Technologies	Technical foundations of clean-energy systems.
Sustainable Supply Chains	Scope 3 emissions, traceability, resilience and logistics.
Agritech Innovation	Technology for resource-efficient and resilient agricultural systems.
Agritech and Global Practices	Comparative practices in agricultural technology and sustainability.

Carbon accounting gives students a practical way to see where organisational emissions come from. They learn to examine direct and indirect emissions, work with emissions data and tell operational emissions from those across wider value chains. Practitioner sessions with Onlygood connect Scope 3 emissions management with AI and IoT in sustainability measurement, and engagement with Mynzo Carbon connects renewable energy and carbon-footprint measurement with business and policy decisions.

Students also examine how changing weather patterns, resource availability, policy and the energy transition can affect assets, supply chains, industries and investment. A practitioner session with Green Marble VC introduced climate technology and climate investing, and how capital can help climate-focused businesses move from early ideas towards wider adoption.

5.2 PGP Immersions in Climate Systems

PGP Immersions give students direct exposure to the systems through which climate action is implemented. They are applied learning, and do not represent sites that Masters' Union owns or operates.

IMMERSION	CLIMATE-LEARNING FOCUS
Khavda Renewable Energy Park, Kutch	Utility-scale renewable energy, transition infrastructure, land use and climate investment.
Godrej, Mumbai	Manufacturing, responsible sourcing, circularity and organisational transition choices.
ITC	Agricultural value chains, consumer goods, land use, resilience and lower-carbon operations.
TIEEDI, Darjeeling	Permaculture, ecological restoration, natural farming and regenerative land use.
Adani Ports, Mundra	Port logistics, coastal operations, energy use and environmental management.



PGP Immersion at Khavda and the renewable-energy landscape of Kutch





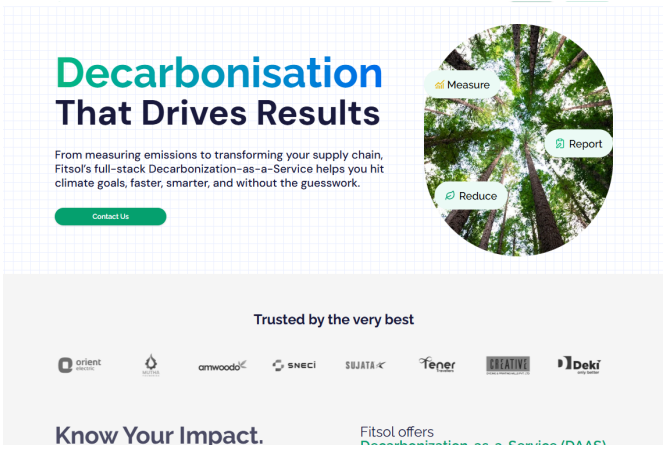
PGP Immersion in regenerative land use, renewable energy and port-linked infrastructure

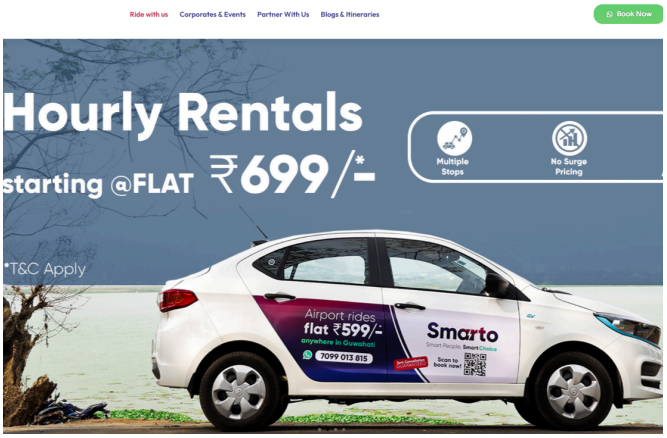
At Khavda, students examine the economics of renewable power, grid integration, land requirements, supply chains and the investment needed to build energy infrastructure at scale. The visit connects the energy transition with the finance, infrastructure and operating decisions required to make it work.

5.3 Student Climate Ventures

Two student ventures address clearly defined climate problems. They are included for their solution models rather than for general entrepreneurship outcomes, which are reported separately under SDG 8.

VENTURE	CLIMATE SOLUTION
Fitsol	Software and advisory support for manufacturing companies measuring and managing decarbonisation.
Smarto Cabs	Electric-vehicle transport services intended to reduce dependence on conventional-fuel urban mobility.





Student ventures addressing corporate decarbonisation and electric mobility

Student venture SS Techfarming India applies technology to farming, adding another link between innovation, agriculture and more resource-efficient production.

Masters' Union alumni also work across renewable energy, energy storage, electric mobility and solar infrastructure in organisations including Param Renewable Energy, Hitachi Energy, Amara Raja Energy & Mobility, Ola Electric and Infinia Solar.

Global Immersion Programmes

In Japan, the Global Immersion Programme took students to Daikin's R&D Centre in Osaka for climate-tech research, material innovation and HVAC engineering.

Subjects in the PGP-TBM Curriculum

The course plan includes Sustainable Business Strategy, which asks how to balance environmental goals with economic success, ESG Investing & Reporting, and Green and Sustainable Operations, which asks how operations and supply chains can create business value while reducing environmental impact.

06 Institutional Direction

We already teach climate and sustainability through a dedicated programme, take students to renewable-energy and land-use systems, and bring climate practitioners and investors to campus. Our ambition is for every manager we graduate to be ready to run a business in a warming world.

6.1 Climate Learning for Every Manager

We want climate and sustainability to be part of every postgraduate programme we teach. We aim to extend climate and sustainability learning across postgraduate education by 2030, building on our PG Programme in Sustainability and Business Management and our PGP Immersions.

6.2 Research on Climate Solutions

We want to build a body of research and cases on decarbonisation, renewable energy, climate technology and resilient supply chains, starting from the Navalt case and our work on agricultural technology and ESG investing.

6.3 A Campus and Community Acting on Climate

We want our campus to be a place where the wider community meets on climate, building on events such as the NCR Climate Party and the PwC India session, and to make climate-aware choices as we grow.



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