



**NUST**  
NATIONAL UNIVERSITY OF  
SCIENCES & TECHNOLOGY

# SUSTAINABILITY REPORT 2025

**Developed by**  
Office of Sustainability, NUST





## Sustainability Report

The Sustainability Report serves as a foreword to the dedicated efforts and initiatives of the Office of Sustainability at NUST, showcasing its commitment to driving meaningful climate action, inclusion, and innovation beyond the university's broader operations. Operating as a distinct entity, the Office has led impactful initiatives aligned with the UN Sustainable Development Goals (SDGs) and global standards of sustainability, contributing to national and global sustainability agendas. This report captures key achievements across the Office's five strategic pillars, offering insight into its role as a catalyst for transformative change within the university and beyond.

## The Office of Sustainability

Established in 2021, the Office of Sustainability at the National University of Sciences and Technology (NUST) serves as a cornerstone in advancing the university's commitment to sustainable development. A key objective of the Office is to achieve carbon neutrality by 2030, reflecting NUST's dedication to environmental stewardship and global responsibility.

Guided by its mission, the Office strives to lead and inspire the adoption of sustainable practices through innovative research, inclusive education, and impactful partnerships, driving transformative change that fosters a greener, more resilient, and equitable future. Its vision is of a world where decarbonization, circularity, and environmental sustainability are embedded into the fabric of society, empowering communities to thrive in harmony with the planet while ensuring a prosperous future for generations to come.

## The Sustainability Team



**Syed Asghar Ali**  
AM Sustainability



**Zia Ur Rehman**  
Head of Sustainability



**Menahel Hamid**  
AM Sustainability

### NUST's 2030 Strategy

NUST's 2030 Strategy, established in 2023, is a transformative plan launched to embed sustainability into the very fabric of the university's operations, research, education, and community outreach. Rooted in the UN Sustainable Development Goals (SDGs) and aligned with evolving Environmental, Social, and Governance (ESG) frameworks, the strategy envisions a campus that not only leads by example in environmental stewardship but also empowers its community to become change makers in sustainability—ensuring resilience and relevance even as global sustainability agendas evolve beyond 2030.



## Decarbonization NUST Integrated Climate Resilient Policy and Action-Plan

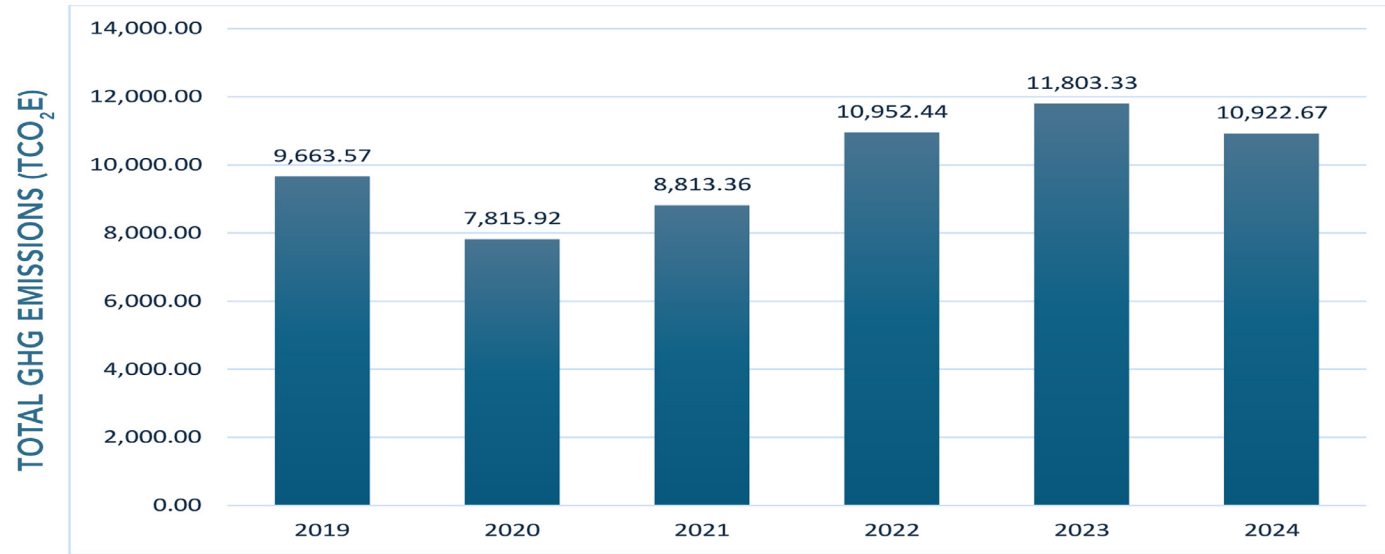
In line with its long-term sustainability strategy, NUST has launched an ambitious Integrated Climate Resilient Policy and Action Plan that commits to becoming the first net-zero higher education institution in Pakistan (H-12 Main Campus) by 2030, and achieving net-zero status across all campuses by 2050. The plan to achieve the target by doing the following:

- Systematic carbon tracking through short-term, mid-term, and long-term targets;
- Providing guidelines for net-zero campuses tailored for Pakistani universities;
- Integrating climate awareness, resilience, and action across all

university functions;

- Promoting cross-departmental coordination to align all sustainability initiatives;
- Increasing reliance on clean and alternative energy solutions;
- Establishing NUST as a hub for climate research, innovation, and policy thought leadership;
- Supporting Pakistan’s Nationally Determined Contributions (NDCs) and National Climate Change Policy (NCCP);
- Facilitating climate diplomacy and stakeholder engagement through national panels and partnerships

### TOTAL GHG EMISSIONS 2019-2024



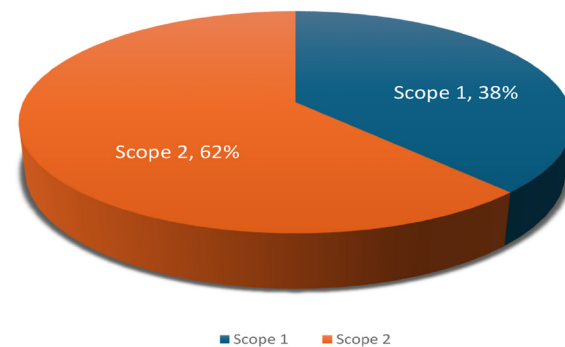
After years of gradual growth, NUST witnessed a noteworthy reduction in greenhouse gas (GHG) emissions in 2024, signaling tangible progress in its climate mitigation efforts. This marks the impact of early sustainability investments and a maturing institutional culture around climate responsibility.

**7.46% reduction in GHG emissions from 2023 to 2024**

#### Understanding Emissions Composition: Scope 1 & 2

A breakdown of NUST’s emissions shows that Scope 2 emissions, primarily from electricity consumption, account for 62% of total GHG emissions. Scope 1 emissions, including natural gas, rank second, while emissions from generators and campus fleet vehicles remain comparatively low—indicating effective management of direct emissions sources. This profile provides NUST a clear emissions map, allowing it to focus on high-impact interventions, especially in energy consumption and infrastructure.

#### GHG EMISSIONS



## Renewable Energy Transition through Solar Panels

To directly reduce Scope 2 emissions, NUST has undertaken a large-scale transition to solar energy. As of 2024, 2 MW of solar panels have been installed across campuses, with 1 MW more underway. These installations are integral to our goal of carbon neutrality and reflect our commitment to energy efficiency, circular economy practices, and sustainable campus operations.

## CIRCULARITY

### NUST Appointed as a member of UNAI Hub Chair

NUST was officially appointed a member of the United Nations Academic Impact (UNAI) Hub Chair for SDG-12: Responsible Consumption & Production for the 2025-2027 term. It is the only institution in Pakistan to receive this global recognition. As the Hub Chair, NUST will lead international collaborations, promote impactful research and drive policy development aligned with SDG-12. This achievement opens new doors for advancing sustainable practices globally. This global recognition acknowledges the efforts of the NUST Office of Sustainability in advancing the Sustainable Development Goals (SDGs).

**NUST is the only institution in Pakistan appointed as the UNAI Hub Chair for the 2025-27 cohort.**

### Zero Waste Alliance Pakistan - ZWAP

NUST is a founding member of the Zero Waste Alliance Pakistan, a coalition uniting academia, government, and environmental organizations to promote zero-waste solutions. ZWAP serves as a platform for collaborative innovation, research exchange, and joint action. NUST contributes leadership through its Office of Sustainability, embedding waste-conscious practices across campus, while supporting national dialogue on sustainable consumption and disposal.

### Sustainable Event Guide

Recognizing the footprint of over 200+ annual events, NUST launched its Sustainable Event Guide in 2024. This initiative ensures that all university-led activities—from student club festivals to high-level summits—are designed with sustainability at the core.

#### What it Covers?

- **Venues:** Guidelines for selecting energy-efficient, accessible spaces with sustainability features.
- **Transport:** Strategies to reduce travel-related emissions through public transit, shared mobility, and data tracking.
- **Merchandise:** Emphasis on eco-friendly, reusable materials and support for local sourcing.
- **Catering:** Recommendations for low-impact, locally sourced menus and waste-minimizing practices.
- **Promotion:** Shift toward digital-first outreach and reusable marketing materials.
- **Inclusivity:** Steps to ensure accessibility, representation, and equity in event design and delivery

The guide is supported by a Sustainability Event Checklist to support consistent implementation across all university-led events. The checklist is as follows:

1. Sustainable Venue Selection
2. Sustainable Catering & Food Services
3. Eco-Friendly Materials & Décor
4. Integrated Waste Management
5. Sustainable Transportation
6. Communication & Awareness Building
7. Event Sustainability Management & Continuous Improvement

## Inclusivity Technology Inclusion Summit (TIS)

The Office of Sustainability, in collaboration with Pak Everbright Development Organization (PEDO), hosted the inaugural Technology for Inclusion Summit (TIS), Pakistan’s first platform to convene stakeholders in assistive technologies for persons with disabilities. The summit showcased NUST-developed innovations including prosthetic limbs, recliner beds, and therapy devices, aiming to improve accessibility and affordability. A major outcome was its role in influencing the Higher Education Commission (HEC) to launch the Disability Redressal Policy for students with disabilities in higher education institutions nationwide.

PROGRAM	AFFILIATION	PURPOSE	KEY ACHIEVEMENTS
<b>SDG Student Hub</b>	SDSN Youth	Platform to engage students with SDGs through education, leadership, and project-based learning	<ul style="list-style-type: none"> <li>• Implemented 5 SDG-focused projects</li> <li>• Engaged 700+ students</li> <li>• Trained 50 student leaders</li> </ul>
<b>Millennium Fellowship</b>	United Nations Academic Impact (UNAI) & Millennium Campus Network (MCN)	Global leadership program supporting grassroots SDG projects led by students	<ul style="list-style-type: none"> <li>• Delivered 4 major projects impacting 400+ lives</li> <li>• Focus on education, environment, vocational skills</li> </ul>

## Pakistan’s first ever National Dialogue on SDGs

The Office of Sustainability organized a two-day National Dialogue on SDGs in collaboration with SDG Academy Pakistan, HSA and PTV News, bringing together leadership from over 100 companies and organizations as panelists and attendees. The dialogues focused on developing national scale policy recommendations and strategies to accelerate progress on Agenda 2030. The outcomes will be compiled into publications for widespread dissemination among relevant stakeholders to support implementation and adoption the proposed policy recommendations and strategies.

## NUST Summer School on Climate Change

Launched in 2023, the NUST Summer School on Climate Change

(NSSCC) has rapidly evolved into a national platform for climate education. Organized by the Office of Sustainability, the program supports NUST’s 2030 decarbonization strategy under its Climate Action Plan.

Across its first two editions – 2023 and 2024 – the program trained over 100 students from across Pakistan, including participants from Hunza, Mardan, Turbat, Bahawalpur, Mirpurkhas, and Daharki.

Through expert-led sessions, hands-on simulations, and thematic modules on climate finance, diplomacy, and resilience planning, NSSCC empowers students to lead change in their communities. Its third edition is set for summer 2025, continuing NUST’s commitment to inclusive and impactful climate leadership.

YEAR	KEY MILESTONE	OUTCOME SUMMARY
2023	Inaugural Edition	Foundation laid for national climate youth education
2024	Second Cohort	Reinforced NUST’s commitment through expanded outreach
2025	Upcoming Third Edition	Scheduled for this summer

## Gender, Intersectionality, and Climate Change - GICC

The Global Intersectional Climate Conference (GICC), organized by NUST’s Office of Sustainability in collaboration with GIZ, made a significant impact by promoting collaboration and policy discussions on gender and climate change. The conference brought together over 1,200 participants from academia, NGOs, government and international organizations that helped create a diverse platform for engagement.

A key outcome of GICC was its role in driving institutional commitments, with multiple organizations pledging to integrate gender-responsive climate strategies into their policies. The event also led to new

research collaborations and strengthened partnerships between key stakeholders. Additionally, GICC amplified awareness on climate justice, reaching a broad audience through pre-conference events, roundtables and international engagement efforts, solidifying NUST’s position as a leader in climate advocacy in Pakistan.

### By the Numbers

- 1,200+ participants from government, academia, NGOs & INGOs
- 18 peer-reviewed papers presented
- 100+ abstracts received
- 120+ photo entries, with 3 fully funded winners

## Community Service Learning

The Community Service-Learning course was introduced in 2013 for final year UG and PG students to develop civic sense, engagement, social conscience and leadership among students. The Office of Sustainability delivers a three-hour workshop to students covering all the Sustainable Development Goals SDGs, their understanding, why it is necessary to achieve those goals and involving environmental sustainability components in them.

## LCOY 2023

The Local Conference of Youth (LCOY) Pakistan 2023 was organized with the support of NUST's Office of Sustainability and endorsed by UNFCCC and YOUNGO. LCOY Pakistan 2023 brought together over

800 youth participants from across all provinces of Pakistan and served as a pivotal platform for young climate leaders to contribute to national and global climate discourse.

A key outcome of the conference was the drafting of a policy paper, reflecting youth-driven climate priorities, which was later presented in the Global South Youth Statement at COP28 UAE.

### NUST hosted Pakistan's first ever Local Conference of Youth

## ENVIRONMENTAL SUSTAINABILITY

### Eco Tourism Campaign- May 2024

The Office of Sustainability, in collaboration with Islamic Relief Pakistan (IRP) and Karakoram Area Development Organization (KADO), organized a week-long campaign in Gilgit-Baltistan. The campaign aimed to discover how sustainable travel cultivates nature and communities alike and also focused on adopting and advocating sustainable travel practices that benefit both the environment and local communities. In order to make a positive impact on the environment and the respected community of Gilgit-Hunza the campaign focused on three key areas:

- Waste Reduction & Management in Tourism
- Energy Management & Transition
- Biodiversity Conservation

Notably, Gilgit-Baltistan attracts over 1 million tourists annually, leading to significant waste management challenges. In 2023 alone, efforts in the region managed over 2,600 tons of plastic and paper packaging waste, highlighting the critical need for sustainable tourism practices.

### Stop Crop Residue Burning

In collaboration with the Department of Plant Biotechnology of ASAB - NUST, MNS University of Agriculture Multan and Doaba Foundation Muzaffargarh, The Office of Sustainability conducted awareness seminars and training sessions to address the issue of crop residue burning and promote sustainable alternatives for crop residue management. Funded by the Knowledge2Action program of Swissnex Switzerland these activities aimed to educate farmers about animal infections with zoonotic potential and translate research into action by training farmers at the field level to support the UN Sustainable Development Goals. A large number of farmers and members of the local farming community participated in the sessions held in Multan and Muzaffargarh where they shared their experiences as well as committed to adopting sustainable practices.

### COP 29

NUST was proudly represented at COP29 by Dr Salman Atif, Dr. Rabia, Dr. Majid, Dr. Rafia and the Sustainability team Zia ur Rehman and Syed

Asghar Ali. The representatives showcased the university's pioneering climate innovations at the Pakistan Pavilion. They actively participated in key discussions, including negotiations on Just Transition and the Loss & Damage Fund under the Paris Agreement.

NUST's showcase of green technologies earned praise from Mr Zulfiqar Younas, Additional Secretary at MoCC&EC, and also garnered interest from Oman Pavilion representatives for potential collaboration at Oman Climate Week. The delegation also spoke at a GAUC dialogue in Baku where they shared insights on youth-led climate action and institutional empowerment.

Additionally, NUST's sustainability leaders engaged with key stakeholders including ISO's Brady Allin to discuss ESG frameworks in Pakistan. They also explored collaboration with Prof. Dr. Edgar Stach from Thomas Jefferson University on urban heat mitigation and climate resilience which marks the beginning of a promising partnership soon to be formalized through an MoU strengthening efforts in sustainability and climate adaptor.

## Green Tech Hub

NUST in collaboration with the Ministry of Climate Change & Environment Coordination & Ignite launched the Green Tech Hub (GTH) at the SINES Building. This initiative represents a significant advancement in promoting innovation to impact communities globally that aim to address climate adaptation and sustainable agricultural

practices.

The Green Tech Hub will serve as a central platform to aid startups, support research and create partnerships aimed at creating scalable solutions. This signifies a new chapter in green entrepreneurship to address pressing environmental challenges and also highlights the collective resolve of academia, government and the industry. The Green Tech Hub is set to play a crucial role in shaping Pakistan's sustainable future while advancing global climate goals.

## NUST Sustainability Assessment Test (N-SAT)

The NUST Sustainability Assessment Test (N-SAT) is a pioneering initiative by the Office of Sustainability inspired by the global Sustainability Literacy Test (Sulitest). N-SAT is designed for university students and aims to assess and enhance students' understanding of sustainability concepts. The test covers topics such as the significance of sustainability, the Sustainable Development Goals, Environmental, Social, and Governance (ESG) frameworks, and key sustainability issues like climate action and resource efficiency.

By identifying knowledge gaps, N-SAT seeks to cultivate a culture of sustainability literacy among future leaders, ensuring they are equipped to make informed decisions that contribute to sustainable development. This initiative reflects NUST's commitment to integrating sustainability into education and promoting responsible citizenship.

# PARTNERSHIPS - WHAT'S NEXT?

## Assistive Technology & Inclusion Summit

The Assistive Technology & Inclusion Summit (ATIS) is a flagship initiative by NUST's Office of Sustainability, in collaboration with the Special Talent Exchange Program and Pak Ever Bright Development Organization, to advance access to assistive technologies in Pakistan. The summit will focus on promoting locally made, affordable devices, strengthening referral systems for persons with disabilities, and integrating assistive tech into sustainable business models. ATIS 2025

will serve as a launchpad for collaborative research between academia, government, and industry to support up to 20 pilot projects focused on assistive technology, with mobilization funding allocated post-event.

## NUST Disability Resource Centre (NDRC)

The NUST Disability Resource Centre (NDRC), set to launch in 2025 by NUST's Office of Sustainability, aims to enhance support for individuals with disabilities through comprehensive resources and services.

The center will focus on promoting disability inclusion, integrating assistive technologies, and developing inclusive policies within the university and broader community. In preparation, NUST collaborated with Pak Everbright Development Organization (PEDO) to host consultation sessions engaging experts, academics, and government representatives in meaningful discussions on disability inclusion and assistive technology.

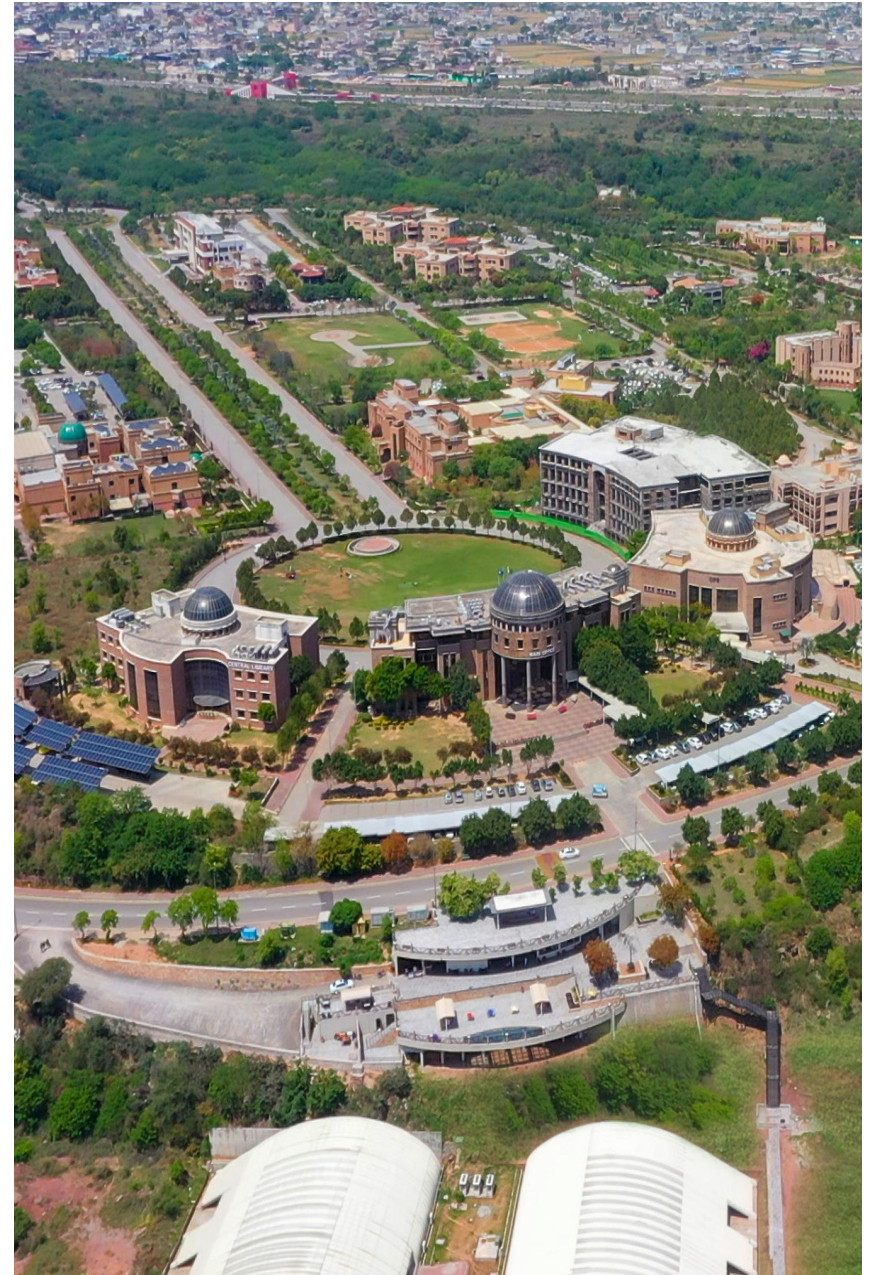
The services and programs of the DRC will be structured under the following five strategic pillars:

### Sustainability Audits

The Office of Sustainability is conducting comprehensive sustainability audits across campus buildings at NUST, addressing a wide spectrum of environmental and social priorities. The focus areas include waste management, energy efficiency and carbon reduction, greenhouse gas (GHG) emissions with a particular emphasis on Scope 3, accessibility, water conservation, sustainable mobility and infrastructure, gender safety and inclusion, and zero-pollution initiatives.

Audits on waste and energy are currently ongoing, while water audits are scheduled to begin soon. An accessibility audit has been completed for the Research, Innovation and Commercialization building, while the gender safety and inclusion audit is currently in the design phase. In addition, baseline surveys are being developed to assess air, water, and solid waste issues on campus, which will inform a comprehensive pollution mitigation plan. This plan will include measures such as waste segregation at source, air quality monitoring, and strategies to reduce single-use plastic consumption.

Together, these audits assess current practices and provide targeted recommendations that strengthen NUST's commitment to sustainability, inclusivity, and innovation, positioning the university as a model for climate-conscious and socially responsible higher education institutions.





National University of Sciences & Technology

UAN: 111-116-878 |      |  [nust.edu.pk](http://nust.edu.pk)

