KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES

KITS/CCMSP/2025/01

Climate Change Mitigation and Sustainability Policy

KITS/CCMSP/2025/01

Climate Change Mitigation and Sustainability Policy

PREAMBLE

Karunya Institute of Technology and Sciences (KITS) recognizes climate change as a critical global challenge with profound implications for ecosystems, public health, economic stability, and social equity. As a value-driven higher education institution, KITS commits itself to climate change mitigation and sustainability through responsible governance, academic leadership, research innovation and environmentally conscious campus operations.

KITS commits to attaining Net Zero Carbon emissions for Scope 1 and Scope 2 by 2035 and Scope 3 by 2040, in alignment with India's national climate commitments and global sustainability frameworks. The Institute views this transition as essential to safeguarding future generations, supporting national development priorities, and contributing to global climate action.

KITS upholds its responsibility to advance the United Nations Sustainable Development Goals (SDGs) by embedding sustainability principles into academic curricula, research programs, ecosystem conservation initiatives, and responsible operational practices, while fostering active participation and empowerment of surrounding communities.

The Institute places strategic emphasis on four thrust areas — food, water, healthcare, and sustainable energy, recognizing their direct relevance to climate change mitigation, sustainable development, and societal well-being, and reinforcing their integration into teaching, research, innovation and outreach.

RATIONALE

The Climate Change Mitigation and Sustainability Policy is established to:

- Address the increasing climate risks affecting higher education institutions
- Support India's Nationally Determined Contributions (NDCs) under the Paris Agreement
- Align institutional actions with UN Sustainable Development Goals (SDGs)
- Strengthen institutional performance in global sustainability rankings such as:
    - THE Impact Rankings
    - QS Sustainability Rankings
    - UI GreenMetric World University Rankings

- Ensure compliance with UGC, AICTE, NAAC/NBA, ISO and international best practices
- Promote accountability, transparency, and continuous improvement in climate governance

EXECUTIVE SUMMARY

This policy establishes a structured framework for climate change mitigation and sustainability at KITS by:

1. Defining measurable emission-reduction pathways
2. Integrating sustainability into academics, research, governance, and operations
3. Strengthening climate resilience and adaptive capacity
4. Enhancing institutional performance in national and global sustainability benchmarks
5. Ensuring transparent monitoring, reporting, and stakeholder engagement

PURPOSE AND SCOPE

The purpose of this policy is to:

- Reduce greenhouse gas emissions across all institutional activities
- Promote sustainable use of energy, water, materials, and land
- Embed sustainability into teaching, research, innovation, and outreach
- Strengthen climate resilience and disaster preparedness
- Contribute to national and global climate goals

This policy applies to:

- All students, faculty, staff, and administrators of KITS
- All campus facilities including academic buildings, hostels, laboratories, and utilities
- All contractors, vendors, collaborators, and service providers

DOCUMENT CONTROL & REVISION HISTORY

Policy Title	Climate Change Mitigation and Sustainability Policy
Reference Number	KITS/CCMSP/2025/01
Version	1.0
Issue	02
Policy Created on	July 2022
Revision History	Revised on 29th August 2025 (28th IQAC Meeting).
Responsible Executives	Vice-Chancellor, Registrar and Chief Engineer
Responsible Office	Registrar's office & Internal Quality Assurance Cell (IQAC)
Policy Review Frequency	Policy shall be reviewed every three years, or earlier if required by UGC, AICTE or other regulatory authorities.

The policy is described in the following articles

ARTICLE 1

STATEMENT OF POLICY

KITS commits to integrating climate change mitigation and sustainability across all institutional functions. Climate action shall be proactive, science based, inclusive, and continuously improved.

Key commitments include:

- Progressive reduction of greenhouse gas emissions
- Integration of sustainability into institutional governance
- Transparent disclosure of climate performance
- Adequate financial allocation for sustainability initiatives
- Active stakeholder participation

ARTICLE 2

PROJECTED ROUTE TO CARBON NEUTRALITY

In alignment with institutional commitments and national climate goals, KITS adopts a phased and measurable route to carbon neutrality.

- By 2027: Reduce institutional carbon footprint by 30% through installation of 1 MW solar power to meet major daytime academic energy demand.
- By 2035: Achieve Net Zero Carbon for Scope 1 and Scope 2 emissions, focusing on reduction of diesel usage, grid electricity dependence, purchased electricity, and institutional vehicle fleet emissions.
- By 2040: Achieve Net Zero Carbon for Scope 3 emissions, addressing emissions from business travel, commuting, waste management, water and wastewater, procurement of goods and services, capital goods, and fuel-energy supply chains.

KITS shall:

- Conduct annual energy and carbon footprint audits to assess performance and guide corrective actions.
- Earmark dedicated financial resources annually to support renewable energy expansion and carbon mitigation initiatives.

ARTICLE 3

CLIMATE ACTION FRAMEWORK

KITS shall undertake the following major initiatives to attain carbon neutrality, climate resilience, and long-term sustainability:

3.1 Engaging and Empowering the Community

- Establishment of a Centre for Sustainable Development
- Formation of sustainability clubs and student-led initiatives
- Climate literacy and awareness programmes

- Afforestation, biodiversity conservation, and organic farming
- Promotion of sustainable food systems
- Flexible work practices and digital learning to reduce commuting emissions

3.2 Promoting Efficiency

- Smart campus initiatives using Industry 4.0 technologies
- Energy-efficient lighting, HVAC, and sensors
- Sustainable laboratory and data-center management
- Green building design (GRIHA/IGBC/LEED/ECBC)

3.3 Governance and Policy Integration

- Periodic review by sustainability committees
- Climate-sensitive procurement and travel policies
- Low-carbon mobility and pedestrian-friendly campus planning
- Carbon offset and sequestration strategies
- Alignment with local self-governments and community initiatives

3.4 Continuous Improvement

- Waste reduction and circular economy practices
- Phase-out of single-use plastics by 2027
- Electric vehicle infrastructure
- Water conservation and reuse systems

3.5 Building Climate Resilience

- Climate Change Adaptation Plan implementation
- Disaster preparedness and risk assessment
- Knowledge sharing and regional climate partnerships

ARTICLE 4

ROLES & RESPONSIBILITIES

- Vice-Chancellor: Strategic leadership and policy oversight
- Registrar: Compliance and documentation
- IQAC: Monitoring, audits, reporting, and benchmarking
- Chief Engineer: Sustainable infrastructure implementation
- Finance Officer: Budget allocation and financial sustainability
- Faculty & Students: Curriculum integration, research, and innovation
- Vendors & Contractors: Compliance with sustainability requirements

ARTICLE 5

MONITORING, REPORTING AND REVIEW

- Annual Climate & Sustainability Report
- Carbon footprint and resource use dashboards
- Corrective and preventive action tracking

- Benchmarking against:
    - THE Impact Rankings
    - QS Sustainability Rankings
    - UI GreenMetric
- PDCA based continuous improvement

ARTICLE 6

GRIEVANCE REDRESSAL AND APPEALS

Stakeholders may submit climate-related grievances or appeals to the Registrar. All appeals shall be resolved within defined timelines with non-retaliation assured.

ARTICLE 7

VIOLATIONS AND ENFORCEMENT

Non-compliance shall attract proportionate corrective actions for students, staff, and contractors. Repeated or serious violations may lead to disciplinary or contractual action.

References

1. United Nations Framework Convention on Climate Change (UNFCCC) – Paris Agreement (2015).
2. India's Updated Nationally Determined Contributions (2022), Ministry of Environment, Forest and Climate Change, Government of India.
3. National Action Plan on Climate Change (NAPCC), Government of India.
4. United Nations Sustainable Development Goals (SDGs), Agenda 2030.
5. ISO 14001:2015 – Environmental Management Systems.
6. ISO 50001:2018 – Energy Management Systems.
7. UGC Green Campus Guidelines, University Grants Commission, India.
8. AICTE Sustainability and Environmental Protection Guidelines.
9. THE Impact Rankings – Methodology for Sustainable Development Goals.

Definitions

- Climate Change Mitigation: Actions to reduce GHG emissions
- Sustainability: Meeting present needs without compromising future generations
- Carbon Neutrality: Net zero greenhouse gas emissions
- Scope 1, 2, 3: Categories of GHG emissions as per GHG Protocol

ANNEXURE I - Policy Alignment with National, International & Ranking Frameworks

Framework / Ranking	Policy Alignment
Paris Agreement	Emission reduction, Net Zero targets, climate mitigation actions
India's NDCs (2022)	Renewable energy adoption, emission intensity reduction
National Action Plan on Climate Change (NAPCC)	Energy efficiency, sustainable habitat, water, waste management
UN SDGs	SDGs 6, 7, 11, 12, 13 & 17 addressed through academics and operations

ISO 14001	Environmental management, monitoring, audits
ISO 50001	Energy efficiency, renewable integration
UGC Green Campus	Green infrastructure, waste, water, energy initiatives
AICTE Sustainability	Environmental protection, climate awareness
THE Impact Rankings	SDG-linked governance, operations, outreach
QS Sustainability Rankings	Environmental impact, governance, social responsibility
UI GreenMetric	Energy, climate change, water, waste, education

ANNEXURE II – Key Measurable Climate & Sustainability Indicators

Area	Indicative Metrics
Energy	% renewable energy, energy consumption per capita
Carbon	Scope 1, 2, 3 emissions; annual reduction trend
Water	Water consumption, reuse, rainwater harvesting
Waste	Waste segregation rate, plastic reduction
Green Cover	Tree count, biodiversity initiatives
Academics	SDG-integrated courses, climate-related research
Outreach	Community programmes, partnerships

ANNEXURE III –Scope 1, Scope 2, and Scope 3 Emissions (as per the GHG Protocol)

Scope	Type of Emissions
Scope 1	Direct emissions from sources owned or controlled by the institution
Scope 2	Indirect emissions from purchased electricity, steam, heating or cooling
Scope 3	All other indirect emissions occurring in the institution's value chain

ANNEXURE IV – Mapping of KITS Policy Actions to India's Updated Nationally Determined Contributions (NDCs, 2022)

To demonstrate national alignment and institutional accountability, KITS maps its Climate Change Mitigation and Sustainability Policy to India's updated Nationally Determined Contributions submitted to the UNFCCC in 2022

KITS Policy Action	Corresponding India's NDC Goal (2022 Update)	Institutional Commitment (KITS)
Adoption of renewable energy (solar PV, wind, bio-energy)	Achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030	KITS shall progressively expand renewable energy generation capacity on campus through phased solar installation: 1 MW by 2027, additional 1 MW by 2035; working towards 80% renewable contribution by 2035 and 100% renewable-based campus energy by 2040, subject to technical feasibility.

Reduction of campus energy intensity through audits, smart meters, energy-efficient infrastructure	Reduce emissions intensity of GDP by 45% by 2030, from 2005 level	While emissions-intensity is a national metric, KITS contributes institutionally by reducing energy use per student, per research output, and per built-space through annual audits, digital energy monitoring, optimization, and green infrastructure development.
Large-scale tree plantation & biodiversity enhancement programs	Create an additional carbon sink of 2.5–3 billion tonnes of CO_2e through forest & tree cover by 2030	KITS will increase tree cover and campus sequestration through planned annual afforestation drives, landscape greening, biodiversity zones, and orchard-based sequestration programs—supporting national carbon sink expansion.
Awareness, training, green literacy & student-led sustainability clubs	Promote sustainable lifestyles, climate justice & environmental awareness via Mission LiFE	KITS integrates climate and sustainability into curriculum, MOOCs, NSS/NCC activities, student clubs, public lectures and community outreach to develop long-term behavioral change aligned with Mission LiFE & climate education goals.
Net Zero target for KITS campus by 2040	India to achieve Net Zero by 2070	KITS commits to Net Zero emissions by 2040, 30 years ahead of national target, making the campus a lead climate-action model for higher education institutions and demonstrating accelerated decarbonization pathways.

ACRONYMS AND ABBREVIATIONS

Acronym	Full Form
ABET	Accreditation Board for Engineering and Technology
AI	Artificial Intelligence
AICTE	All India Council for Technical Education
CO_2-eq	Carbon Dioxide Equivalent
CSR	Corporate Social Responsibility
EV	Electric Vehicle
GHG	Greenhouse Gas
GHG Protocol	Greenhouse Gas Protocol (International Accounting Standard)
GIS	Geographic Information System

GRIHA	Green Rating for Integrated Habitat Assessment
HVAC	Heating, Ventilation and Air Conditioning
ICT	Information and Communication Technology
IGBC	Indian Green Building Council
IoT	Internet of Things
IQAC	Internal Quality Assurance Cell
ISO	International Organization for Standardization
KPI	Key Performance Indicator
KITS	Karunya Institute of Technology and Sciences
LEED	Leadership in Energy and Environmental Design
LiFE	Lifestyle for Environment (Mission LiFE – Govt. of India)
ML	Machine Learning
MoEFCC	Ministry of Environment, Forest and Climate Change
MW	Megawatt
MWh	Megawatt Hour
NAPCC	National Action Plan on Climate Change
NDC	Nationally Determined Contribution
NEP	National Education Policy
NGO	Non-Governmental Organization
PV	Photovoltaic
PDCA	Plan–Do–Check–Act
QS	Quacquarelli Symonds
R&D	Research and Development
RWH	Rainwater Harvesting
SDG	Sustainable Development Goal
SLR	Sea Level Rise
STEM	Science, Technology, Engineering & Mathematics
THE	Times Higher Education
UGC	University Grants Commission
UI	Universitas Indonesia
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization
WWF	World Wide Fund for Nature

Prepared by

Director (QAA)

Karunya Institute of Technology and Sciences

Approved by

Vice-Chancellor

Karunya Institute of Technology and Sciences