

ZIAUDDIN UNIVERSITY



SUSTAINABILITY REPORT 2025-2026

Transforming Education, Healthcare, Research
and Innovation for a Sustainable Future

Reporting Period: July 2025 - June 2026

Prepared by the Quality Enhancement Cell (QEC)

Ziauddin University, Karachi, Pakistan

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Ziauddin University, Karachi, Pakistan

In Collaboration With

- Office of Research, Innovation and Commercialization (ORIC)
- Registrar Office
- Human Resources Department
- Finance Department
- Campus Administration
- Teaching Hospitals
- Academic Departments
- Student Affairs
- Sustainability and Green Campus Committees

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Vision, Mission & Core Values

VISION

To be a globally recognized university distinguished by excellence in education, research, healthcare, innovation, and sustainable development, creating lasting value for society through knowledge, compassion, and responsible leadership.

MISSION

Ziauddin University is committed to delivering quality education, advancing healthcare, fostering research and innovation, promoting ethical leadership, and contributing to sustainable national and global development through excellence in teaching, community engagement, and institutional governance.

CORE VALUES

Excellence	Integrity
Accountability	Compassion
Innovation	Inclusivity
Collaboration	Sustainability
Social Responsibility	Continuous Improvement

About Ziauddin University

Established with a commitment to excellence in higher education and healthcare, Ziauddin University has grown into one of Pakistan's leading private universities. Named after the renowned educationist Dr. Ziauddin Ahmed, the University has developed a multidisciplinary academic environment encompassing medicine, dentistry, pharmacy, nursing, allied health sciences, engineering, business, law, media sciences, liberal arts, and emerging technologies.

The University integrates education, research, healthcare services, and community engagement to address national and global challenges. Its teaching hospitals, research centres, and outreach programmes provide practical learning opportunities while improving healthcare access and contributing to social development.

Through continuous quality enhancement, strategic planning, and collaboration with national and international partners, Ziauddin University remains committed to academic excellence and sustainable institutional growth.

Message from the Chancellor

Dr. Asim Hussain

Chancellor, Ziauddin University

It is with great pleasure that I present the Ziauddin University Sustainability Report 2025–2026. This report reflects our unwavering commitment to integrating sustainability into every aspect of our academic, clinical, research, and administrative functions.

At Ziauddin University, sustainability is more than environmental stewardship. It encompasses responsible governance, quality education, equitable healthcare, impactful research, community engagement, and ethical leadership. Guided by the United Nations Sustainable Development Goals, we continue to strengthen our role as a university that creates positive and lasting value for society.

Our achievements are the result of the dedication of our faculty, researchers, healthcare professionals, students, alumni, and staff. Together, we are building an institution that not only prepares future leaders but also contributes to national development and global sustainability.

As we look ahead, we remain committed to innovation, collaboration, and continuous improvement. We recognize that sustainable development is an ongoing journey, and we are confident that our collective efforts will continue to strengthen Ziauddin University's impact on education, healthcare, research, and community well-being.

I extend my sincere appreciation to everyone who contributed to this report and to the broader sustainability agenda of the University.

Message from the Vice Chancellor

Dr. Muhammad Ali Shaikh

Vice Chancellor, Ziauddin University

The Sustainability Report 2025–2026 demonstrates Ziauddin University's strategic commitment to responsible growth and institutional excellence. Sustainability has become an integral component of our academic planning, healthcare delivery, research activities, and operational management.

Our University continues to strengthen interdisciplinary education, expand impactful research, enhance healthcare services, and cultivate partnerships that address the evolving needs of society. Through these efforts, we contribute directly to the Sustainable Development Goals while maintaining the highest standards of quality assurance and governance.

The report highlights measurable progress across environmental management, social responsibility, education for sustainable development, research and innovation, governance, and institutional partnerships. These achievements are supported by robust quality assurance mechanisms and a culture of evidence-based decision-making.

I congratulate the Quality Enhancement Cell and all departments that contributed to this report. Their commitment reflects our shared vision of positioning Ziauddin University as a leading institution recognized for sustainability, innovation, and societal impact.

Message from the Director, Quality Enhancement Cell

Muhammad Adnan Fuzail

Director, Quality Enhancement Cell (QEC), Ziauddin University

The preparation of the Sustainability Report 2025–2026 represents a significant milestone in Ziauddin University's quality assurance and institutional development journey. The report has been developed to provide a transparent, evidence-based account of the University's contributions to sustainable development across education, research, healthcare, governance, and community engagement.

The Quality Enhancement Cell has coordinated this report in collaboration with academic and administrative units to ensure alignment with institutional priorities and international sustainability frameworks. The report is informed by the United Nations Sustainable Development Goals, Higher Education Commission Pakistan guidelines, and global ranking methodologies, including THE Impact Rankings, QS Sustainability Rankings, and UI GreenMetric.

This publication is not merely a record of achievements. It serves as a strategic management tool that supports continuous improvement, institutional benchmarking, and informed decision-making. It also reflects our commitment to strengthening data-driven governance and fostering a culture of sustainability throughout the University.

On behalf of the Quality Enhancement Cell, I extend my gratitude to all colleagues, departments, and stakeholders whose contributions made this report possible. We remain committed to advancing sustainability as a core institutional value and to supporting Ziauddin University's continued progress toward national and international excellence.

Acknowledgements

The University gratefully acknowledges the invaluable contributions of faculty members, researchers, clinicians, administrative staff, students, alumni, and external partners who supported the preparation of this Sustainability Report.

Special appreciation is extended to:

- Office of the Chancellor
- Office of the Vice Chancellor
- Quality Enhancement Cell (QEC)
- Office of Research, Innovation and Commercialization (ORIC)
- Registrar Office
- Finance Department
- Human Resources Department
- Campus Administration
- Teaching Hospitals
- Academic Departments
- Student Affairs
- Sustainability and Green Campus Committees

Their collaboration and commitment have enabled the University to document its sustainability journey and establish a strong foundation for future reporting.

Executive Summary

The Ziauddin University Sustainability Report 2025–2026 presents the University's commitment to integrating sustainability into education, healthcare, research, governance, and community engagement. Guided by the United Nations Sustainable Development Goals (SDGs), the report demonstrates how sustainability principles are embedded within institutional strategy and operations.

Key highlights of the reporting period include continued progress in environmental management, expansion of sustainability-focused education, strengthening of research and innovation, enhancement of community healthcare services, promotion of diversity and inclusion, and improved governance and quality assurance practices.

The report is structured around fourteen thematic chapters that collectively describe the University's sustainability journey, achievements, challenges, and strategic priorities. It also establishes a roadmap for the period 2026–2030, outlining measurable objectives that will guide future institutional development.

By publishing this report, Ziauddin University reaffirms its commitment to transparency, accountability, and continuous improvement while strengthening its contribution to national development and global sustainability.

REPORT AT A GLANCE

910 Sustainability-Related Courses	2,007 Total Courses Offered	USD 302,449 2024 Sustainability Research Funding
3,717.67 MT CO₂e Baseline Carbon Footprint	18.68% Reduction in Inorganic Waste	17 SDGs Actively Addressed

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REPORTING FRAMEWORK

Purpose of the Report

The Ziauddin University Sustainability Report 2025–2026 has been prepared to communicate the University's commitment to sustainable development and to provide stakeholders with a comprehensive overview of sustainability-related policies, initiatives, achievements, and future commitments.

The report serves several important purposes:

- Demonstrating institutional accountability and transparency.
- Monitoring sustainability performance.
- Supporting strategic planning and evidence-based decision-making.
- Documenting contributions to the United Nations Sustainable Development Goals (SDGs).
- Strengthening institutional readiness for international sustainability rankings and benchmarking exercises.

This report reflects the University's integrated approach to sustainability, recognizing that education, research, healthcare, governance, environmental stewardship, and community engagement are mutually reinforcing dimensions of institutional excellence.

Reporting Scope

The report encompasses activities undertaken across all academic and administrative units of Ziauddin University during the reporting period from July 2025 to June 2026.

The scope includes:

- Academic programmes
- Research and innovation
- Teaching hospitals
- Healthcare outreach
- Environmental management
- Human resource development
- Student services
- Community engagement
- Governance and quality assurance
- Partnerships and international collaboration

Where quantitative data are available, comparative performance trends are presented to demonstrate progress over time.

Reporting Principles

The preparation of this report has been guided by internationally recognized sustainability reporting principles, including:

Accuracy

Information has been compiled from institutional records and departmental submissions to provide an accurate representation of sustainability performance.

Transparency

Achievements, challenges, and future priorities are communicated openly to strengthen stakeholder confidence.

Materiality

The report focuses on sustainability issues that are most relevant to the University's mission, stakeholders, and long-term institutional development.

Completeness

The report addresses environmental, social, economic, academic, research, healthcare, and governance dimensions of sustainability.

Comparability

Where appropriate, historical performance indicators are included to facilitate comparison and trend analysis.

Continuous Improvement

The report establishes a baseline for future sustainability reporting and supports ongoing enhancement of institutional performance.

Alignment with International Frameworks

The Sustainability Report has been developed with reference to internationally recognized sustainability frameworks, including:

- United Nations Sustainable Development Goals (SDGs)
- Higher Education Commission (HEC) Pakistan quality assurance and institutional performance guidelines
- Times Higher Education (THE) Impact Rankings methodology
- QS Sustainability Rankings methodology
- UI GreenMetric World University Rankings indicators

This alignment ensures that the report supports both institutional improvement and international benchmarking.

Materiality Assessment

Introduction

Materiality assessment is a structured process used to identify the sustainability issues that are most significant to the University and its stakeholders. These issues influence institutional priorities, strategic planning, and sustainability reporting.

For the reporting period, Ziauddin University conducted a qualitative assessment of sustainability themes based on stakeholder expectations, institutional objectives, regulatory requirements, and international sustainability frameworks.

Materiality Assessment Process

The assessment consisted of five stages:

- Identification of sustainability topics.
- Review of institutional policies and strategic plans.
- Stakeholder consultation and feedback.
- Prioritization of material issues.
- Validation by University leadership.

This process ensured that the report reflects issues of greatest relevance to the University's mission and long-term sustainability objectives.

High-Priority Material Topics

The following themes were identified as having the highest strategic importance:

Material Topic	Priority
Quality Education	High
Healthcare Services	High
Research and Innovation	High
Student Well-being	High
Community Engagement	High
Environmental Sustainability	High
Governance and Ethics	High
Diversity and Inclusion	High
Climate Action	High
Partnerships	High

These topics form the foundation of the University's sustainability strategy and are reflected throughout this report.

Stakeholder Engagement

Stakeholder-Centred Sustainability

The University recognizes that meaningful engagement with stakeholders is essential for effective sustainability governance. Stakeholder perspectives help shape institutional priorities, improve decision-making, and strengthen accountability.

Key Stakeholder Groups

Stakeholder Group	Primary Interests
Students	High-quality education, student support, employability, wellbeing
Faculty	Teaching excellence, research support, professional development
Administrative Staff	Workplace wellbeing, capacity building, governance
Alumni	Lifelong engagement, professional networking
Patients	Quality healthcare, patient safety, accessible services
Government and Regulatory Bodies	Compliance, quality assurance, institutional performance
Industry Partners	Research collaboration, innovation, skilled graduates
Community	Healthcare outreach, social development, education
International Partners	Research collaboration, academic exchange, global engagement

Methods of Engagement

The University employs a variety of mechanisms to engage stakeholders, including:

- Student feedback surveys
- Faculty consultations
- Departmental meetings
- Academic Council deliberations
- Board of Governors oversight
- Research seminars and conferences
- Community outreach programmes
- Alumni engagement activities
- Industry consultations
- Strategic planning workshops

Stakeholder feedback informs policy development, quality enhancement, curriculum review, research priorities, and sustainability initiatives.

Sustainability Governance Framework

Sustainability governance at Ziauddin University is integrated into the University's overall governance structure. Leadership responsibility is shared across statutory bodies, executive management, academic leadership, and operational departments.

The governance framework is designed to ensure:

- Strategic oversight
- Institutional accountability
- Policy implementation
- Cross-functional collaboration
- Continuous monitoring and evaluation
- Stakeholder participation

The Quality Enhancement Cell (QEC), Office of Research, Innovation and Commercialization (ORIC), Campus Administration, Academic Departments, and Teaching Hospitals each contribute to the implementation and monitoring of sustainability initiatives within their respective areas.

PART I

Sustainability Framework

CHAPTER 1

Institutional Sustainability Framework



1.1 Introduction

Sustainability has become a defining principle for modern higher education institutions. Universities are expected not only to educate future leaders but also to generate knowledge, foster innovation, improve public health, protect the environment, and contribute to inclusive economic and social development.

Recognizing these responsibilities, Ziauddin University has adopted sustainability as a strategic institutional priority. Sustainability is embedded across academic programmes, research activities, healthcare services, operational management, governance systems, and community engagement initiatives.

The University's sustainability framework provides a coordinated approach for integrating environmental stewardship, social responsibility, economic resilience, and ethical governance into institutional planning and decision-making.

Rather than treating sustainability as a standalone initiative, Ziauddin University embraces it as a comprehensive institutional philosophy that informs teaching, learning, research, healthcare delivery, and administrative practices.

1.2 Institutional Commitment to Sustainability

Ziauddin University's commitment to sustainability is guided by the belief that higher education institutions have a responsibility to contribute to solutions for contemporary global challenges, including climate change, health inequities, resource management, social inclusion, and responsible governance.

The University seeks to:

- Integrate sustainability into education and curriculum.
- Promote interdisciplinary research addressing societal challenges.
- Improve environmental performance across campuses.
- Enhance healthcare services and community wellbeing.
- Foster ethical leadership and accountable governance.
- Strengthen national and international partnerships.
- Build institutional resilience through innovation and continuous improvement.

This commitment aligns with the University's mission of advancing education, healthcare, and research while contributing to the achievement of the United Nations Sustainable Development Goals.

CHAPTER 1 (Continued)

Institutional Sustainability Framework

1.3 Sustainability Vision

Ziauddin University envisions becoming a nationally and internationally recognized institution where sustainability is embedded within every dimension of university life. The University seeks to cultivate an institutional culture that integrates academic excellence, healthcare leadership, environmental stewardship, social responsibility, ethical governance, and innovation to create long-term value for society.

The sustainability vision extends beyond compliance with regulatory requirements. It emphasizes the University's responsibility to educate socially responsible graduates, produce impactful research, improve community health, and manage institutional resources responsibly. By embedding sustainability into its strategic direction, Ziauddin University aims to become a model institution that contributes meaningfully to Pakistan's development priorities and the global sustainability agenda.

1.4 Strategic Sustainability Objectives

The University has established the following strategic objectives to guide sustainability implementation:

Academic Excellence

- Integrate sustainability principles across academic programmes.
- Promote interdisciplinary learning.
- Strengthen Education for Sustainable Development (ESD).
- Enhance graduate competencies related to sustainability.

Research and Innovation

- Increase SDG-focused research projects.
- Strengthen interdisciplinary research.
- Expand research commercialization.
- Promote innovation addressing societal challenges.

Healthcare Leadership

- Improve community healthcare services.
- Expand preventive healthcare programmes.
- Strengthen public health research.
- Enhance patient-centred healthcare practices.

Environmental Stewardship

- Reduce institutional carbon emissions.
- Improve energy efficiency.
- Enhance water conservation.

- Promote responsible waste management.
- Develop green campus infrastructure.

Social Responsibility

- Expand scholarships and financial assistance.
- Promote diversity and inclusion.
- Enhance student wellbeing.
- Strengthen community outreach initiatives.

Governance

- Improve institutional transparency.
- Strengthen sustainability governance.
- Enhance data-driven decision-making.
- Foster ethical leadership and accountability.

1.5 Sustainability Governance Model

The implementation of sustainability at Ziauddin University is supported through an integrated governance structure involving academic leadership, administrative departments, research offices, healthcare institutions, and quality assurance mechanisms.

Board of Governors

Provides strategic oversight and approves institutional sustainability policies, long-term objectives, and governance frameworks.

Chancellor

Provides strategic guidance for institutional development and supports the integration of sustainability into the University's long-term vision.

Vice Chancellor

Leads the implementation of sustainability initiatives across academic, administrative, and healthcare functions while ensuring alignment with institutional priorities.

Quality Enhancement Cell (QEC)

The QEC coordinates sustainability reporting, quality assurance processes, institutional performance monitoring, and continuous improvement initiatives.

Office of Research, Innovation and Commercialization (ORIC)

ORIC promotes sustainability-focused research, innovation, commercialization, research collaborations, and knowledge transfer activities.

Campus Administration

Responsible for environmental management, infrastructure maintenance, energy efficiency, waste management, water conservation, and green campus initiatives.

Academic Departments

Integrate sustainability into teaching, curriculum development, research, and student engagement.

Teaching Hospitals

Support sustainable healthcare delivery, clinical education, patient safety, and community health outreach.

1.6 Institutional Sustainability Pillars

The University's sustainability strategy is structured around six interconnected pillars.

Pillar 1 – Environmental Sustainability

Focuses on:

- Climate action
- Carbon reduction
- Energy efficiency
- Renewable energy
- Water stewardship
- Waste minimization
- Biodiversity
- Sustainable infrastructure

Pillar 2 – Education

Promotes:

- Education for Sustainable Development
- Curriculum integration
- Student engagement
- Lifelong learning
- Experiential education
- Sustainability competencies

Pillar 3 – Research and Innovation

Supports:

- SDG-aligned research
- Innovation
- Commercialization
- Technology transfer
- Entrepreneurship
- Research collaboration

Pillar 4 – Healthcare and Community Impact

Strengthens:

- Community healthcare
- Preventive medicine
- Public health

- Clinical excellence
- Health awareness
- Medical outreach

Pillar 5 – Governance and Quality

Includes:

- Ethical leadership
- Institutional effectiveness
- Quality assurance
- Transparency
- Risk management
- Compliance

Pillar 6 – Partnerships

Promotes:

- National collaboration
- International engagement
- Industry partnerships
- Healthcare partnerships
- Community partnerships
- Global knowledge exchange

1.7 Integration with the United Nations Sustainable Development Goals

Ziauddin University aligns its sustainability strategy with all 17 Sustainable Development Goals (SDGs) adopted by the United Nations in 2015.

Rather than focusing on isolated goals, the University adopts an integrated approach in which education, healthcare, research, governance, and environmental management collectively contribute to sustainable development.

Key areas of institutional contribution include:

SDG	Primary Institutional Contribution
SDG 1	Scholarships and financial assistance
SDG 2	Nutrition education and community programmes
SDG 3	Healthcare services, hospitals, medical education
SDG 4	Quality education and lifelong learning
SDG 5	Gender equality and women's empowerment
SDG 6	Water conservation and sanitation
SDG 7	Energy efficiency initiatives
SDG 8	Employment, entrepreneurship and workforce development
SDG 9	Research, innovation and commercialization
SDG 10	Inclusion and accessibility

SDG 11	Community development
SDG 12	Waste management and circular economy
SDG 13	Climate action
SDG 14	Environmental awareness
SDG 15	Green campus and biodiversity
SDG 16	Governance, ethics and institutional integrity
SDG 17	National and international partnerships

1.8 Sustainability Risk and Opportunity Assessment

Effective sustainability management requires the identification of both institutional risks and opportunities.

Key Risks

- Climate-related operational disruptions.
- Increasing resource consumption.
- Environmental compliance requirements.
- Changes in higher education regulations.
- Healthcare sector challenges.
- Financial constraints.
- Technological transformation.
- Global public health emergencies.

Strategic Opportunities

- Expansion of sustainability-focused research.
- Growth in international collaborations.
- Enhanced institutional reputation.
- Increased competitiveness in global rankings.
- Green campus innovation.
- Healthcare technology development.
- Digital transformation.
- Community impact through outreach programmes.

The University continuously reviews these risks and opportunities through strategic planning and institutional performance monitoring.

1.9 Sustainability Performance Monitoring

To ensure continuous improvement, Ziauddin University monitors sustainability performance using Key Performance Indicators (KPIs).

Major KPI categories include:

Environmental

- Carbon emissions

- Energy consumption
- Renewable energy
- Water consumption
- Waste generation
- Recycling rate

Academic

- Sustainability-related courses
- Student participation
- Faculty development
- Community-based learning

Research

- SDG-focused research projects
- Publications
- Research funding
- Innovation activities
- Commercialization outputs

Healthcare

- Outreach programmes
- Public health campaigns
- Clinical training
- Patient safety indicators

Governance

- Policy implementation
- Quality assurance
- Accreditation
- Stakeholder engagement
- Institutional reporting

Performance data are reviewed annually and used to inform strategic planning and continuous improvement initiatives.

1.10 Looking Ahead

The Sustainability Framework provides the foundation for Ziauddin University's long-term commitment to responsible institutional development. Over the next five years, the University will continue strengthening sustainability governance, expanding research and innovation, improving environmental performance, enhancing healthcare impact, and fostering partnerships that contribute to national and global sustainable development.

1.11 Conclusion

Sustainability at Ziauddin University is not confined to a single department or initiative; it is embedded across education, research, healthcare, operations, governance, and community engagement. Through a comprehensive institutional framework, the University is creating an environment in which academic excellence and social responsibility reinforce one another.

By aligning its activities with the United Nations Sustainable Development Goals and international best practices, Ziauddin University is strengthening its contribution to sustainable development while positioning itself as a leading higher education institution committed to innovation, quality, and societal impact.

CHAPTER 2

Institutional Profile and Sustainability Context



2.1 Introduction

Ziauddin University is one of Pakistan's leading private higher education institutions, recognized for its commitment to academic excellence, healthcare services, research, innovation, and community engagement. Since its establishment, the University has evolved into a multidisciplinary institution offering programmes across medicine, dentistry, pharmacy, nursing, allied health sciences, engineering, business, law, media sciences, liberal arts, and emerging technologies.

The University's growth reflects its dedication to preparing graduates who possess the knowledge, skills, ethical values, and professional competencies required to contribute effectively to national development and global society.

At the same time, Ziauddin University recognizes that universities have responsibilities extending beyond teaching and research. As an institution deeply connected with healthcare and community wellbeing, it seeks to create positive environmental, social, and economic impacts through responsible governance, sustainable operations, and meaningful stakeholder engagement.

2.2 History and Institutional Development

Ziauddin University was established with the vision of providing high-quality education and healthcare while contributing to Pakistan's socio-economic development through knowledge generation and professional excellence. Named after the distinguished educationist Dr. Ziauddin Ahmad, the University has grown from a specialized medical institution into a comprehensive multidisciplinary university.

Over the years, the University has expanded its academic portfolio, strengthened its research capacity, enhanced clinical training facilities, and developed partnerships with national and international organizations. The establishment of teaching hospitals, specialized research centres, and modern learning environments has enabled the University to integrate education, research, and healthcare into a unified institutional model.

The University's continued investment in infrastructure, faculty development, digital transformation, and quality assurance reflects its commitment to continuous improvement and institutional sustainability.

2.3 Institutional Identity

Ziauddin University distinguishes itself through the integration of:

- Academic excellence.
- Healthcare leadership.
- Clinical education.
- Research and innovation.
- Community engagement.
- Ethical governance.
- Sustainable institutional development.

As one of Pakistan's leading healthcare-focused universities, the institution combines professional education with practical learning experiences through its teaching hospitals and community outreach programmes. This integrated model enables students to develop professional competence while contributing to improvements in healthcare delivery and community wellbeing.

2.4 Academic Structure

The University comprises multiple academic faculties, colleges, and schools offering undergraduate, postgraduate, and doctoral programmes across a broad range of disciplines.

Academic areas include:

- Medicine
- Dentistry
- Pharmacy
- Nursing
- Allied Health Sciences
- Medical Laboratory Technology
- Biomedical Engineering
- Rehabilitation Sciences
- Business Administration
- Law
- Liberal Arts and Human Sciences
- Media Sciences
- Information Technology and Emerging Technologies

The University continuously reviews and updates its academic programmes to ensure alignment with national priorities, industry needs, accreditation requirements, and emerging global trends.

2.5 Campuses and Learning Environment

Ziauddin University operates across multiple campuses, each providing specialized academic and healthcare facilities that support teaching, research, and community engagement.

The campuses are designed to provide:

- Modern classrooms and lecture halls.
- Clinical skills laboratories.
- Advanced research laboratories.
- Libraries and digital learning resources.
- Student support facilities.
- Recreational and collaborative learning spaces.
- Teaching hospitals and clinical training sites.

The University continues to invest in infrastructure that enhances accessibility, sustainability, safety, and the overall student learning experience.

2.6 Healthcare Ecosystem

Healthcare is a defining characteristic of Ziauddin University. The University's teaching hospitals and affiliated healthcare facilities provide integrated platforms for:

- Patient care.
- Clinical education.
- Medical research.
- Public health programmes.
- Professional training.
- Community healthcare services.

The close integration of healthcare delivery and education enables students to gain practical experience while contributing to improvements in patient care and community health outcomes.

Healthcare services are supported by multidisciplinary teams of clinicians, researchers, educators, and healthcare professionals committed to excellence in patient care and evidence-based practice.

2.7 Sustainability Context

The global higher education landscape is increasingly shaped by sustainability challenges, including climate change, public health, technological transformation, social inequality, and responsible resource management. Universities are expected to respond proactively by integrating sustainability into institutional planning and operations.

For Ziauddin University, sustainability extends beyond environmental considerations. It encompasses:

- Responsible governance.
- Quality education.
- Healthcare access and equity.
- Research addressing societal challenges.
- Community engagement.
- Ethical leadership.
- Financial and institutional resilience.

This holistic understanding of sustainability informs the University's strategic planning and guides its contribution to the United Nations Sustainable Development Goals.

2.8 Strategic Planning Framework

The University's strategic planning process ensures that sustainability objectives are incorporated into institutional decision-making. Planning is guided by the following principles:

- Alignment with institutional mission and vision.
- Evidence-based decision-making.
- Stakeholder participation.
- Continuous quality improvement.
- Risk management.

- Innovation and adaptability.
- Accountability and transparency.

Strategic priorities are translated into measurable objectives, monitored through key performance indicators, and reviewed regularly to ensure institutional effectiveness.

2.9 Institutional Achievements

During the reporting period, Ziauddin University continued to strengthen its contribution to sustainable development through achievements across multiple domains.

Education

- Expansion of sustainability-related curriculum.
- Strengthening of student-centred learning approaches.
- Enhancement of digital learning capabilities.
- Continuous curriculum review and quality assurance.

Research and Innovation

- Increased focus on interdisciplinary research.
- Growth in sustainability-oriented research initiatives.
- Expansion of collaborative research partnerships.
- Continued support for innovation and commercialization.

Healthcare

- Delivery of quality healthcare services through teaching hospitals.
- Community health outreach programmes.
- Public health awareness campaigns.
- Clinical education and professional development.

Environmental Management

- Ongoing waste reduction initiatives.
- Water conservation measures.
- Energy efficiency improvements.
- Green campus development.

Governance

- Strengthening of institutional quality assurance.
- Enhanced sustainability reporting.
- Promotion of ethical leadership and transparency.
- Continuous policy review and improvement.

2.10 SWOT Analysis

A strategic assessment of institutional strengths, weaknesses, opportunities, and threats supports long-term sustainability planning.

Strengths	Weaknesses
Strong healthcare ecosystem	Resource constraints for large-scale sustainability investments
Multidisciplinary academic programmes	Need for further sustainability data integration
Established teaching hospitals	Variable sustainability awareness across units
Active research environment	Continued need for infrastructure modernization
Robust quality assurance systems	Limited renewable energy deployment

Opportunities	Threats
International sustainability rankings	Climate-related operational risks
Research funding opportunities	Increasing regulatory requirements
Digital transformation	Rising operational costs
Strategic partnerships	Global economic uncertainty
Green campus innovation	Rapid technological change

This analysis informs institutional planning and helps prioritize sustainability initiatives that maximize strengths while addressing emerging risks.

2.11 Sustainability Challenges

Like many higher education institutions, Ziauddin University faces challenges in advancing sustainability, including:

- Balancing institutional growth with environmental responsibility.
- Securing sustainable financing for large-scale infrastructure projects.
- Strengthening institutional data management for sustainability reporting.
- Enhancing stakeholder awareness and participation.
- Responding to evolving regulatory and accreditation requirements.
- Adapting to technological and societal changes.

The University addresses these challenges through strategic planning, collaboration, innovation, and continuous improvement.

2.12 Opportunities for Future Growth

The University's sustainability journey presents significant opportunities to:

- Expand sustainability-focused research and innovation.
- Increase interdisciplinary academic collaboration.
- Strengthen healthcare impact through preventive and community health programmes.
- Enhance green campus initiatives.
- Improve international visibility through sustainability rankings.
- Develop stronger partnerships with industry, government, and international institutions.
- Foster a culture of sustainability across all campuses.

These opportunities will guide institutional development over the coming years.

2.13 Conclusion

Ziauddin University's institutional profile reflects a dynamic and evolving higher education institution committed to excellence in education, healthcare, research, and community service. Sustainability provides the overarching framework through which these activities are integrated and aligned with national priorities and global development goals.

By embedding sustainability into its academic programmes, research agenda, healthcare services, governance systems, and operational practices, the University is strengthening its contribution to society while positioning itself for long-term institutional resilience and international recognition.

The following chapters present a detailed account of the University's sustainability performance across environmental, social, academic, research, healthcare, governance, and partnership dimensions.

PART II

Environmental Sustainability

CHAPTER 3

Environmental Sustainability Strategy and Green Campus Management

3.1 Introduction

Environmental sustainability has become a strategic imperative for higher education institutions worldwide. Universities play a critical role in addressing climate change, promoting responsible resource management, conserving biodiversity, and educating future leaders capable of advancing sustainable development.

As a healthcare-focused university, Ziauddin University recognizes that environmental quality directly influences human health, community wellbeing, and institutional resilience. Consequently, environmental sustainability is integrated into institutional planning, campus operations, academic programmes, research, and community engagement.

The University's Environmental Sustainability Strategy seeks to reduce environmental impacts while creating healthier, safer, and more resource-efficient campuses for students, faculty, staff, patients, and visitors.

3.2 Environmental Sustainability Vision

Ziauddin University envisions developing environmentally responsible campuses that integrate sustainable infrastructure, efficient resource utilization, responsible waste management, climate resilience, and environmental awareness into everyday operations.

The University is committed to progressively reducing its environmental footprint while supporting national environmental priorities and the United Nations Sustainable Development Goals.

3.3 Environmental Sustainability Objectives

The University's environmental objectives are to:

- Improve environmental performance across all campuses.
- Reduce greenhouse gas emissions.
- Enhance energy efficiency.
- Promote renewable energy adoption where feasible.

- Conserve water resources.
- Reduce waste generation.
- Increase recycling and resource recovery.
- Protect biodiversity and green spaces.
- Promote environmental awareness among students and staff.
- Strengthen institutional environmental governance.

3.4 Environmental Governance Framework

Environmental sustainability is supported through a collaborative governance structure involving senior leadership, administrative departments, academic units, and operational teams.

Governance Responsibilities

Unit	Key Responsibilities
Vice Chancellor	Strategic oversight of environmental sustainability
Quality Enhancement Cell (QEC)	Monitoring, reporting, sustainability performance
Campus Administration	Infrastructure, utilities, environmental operations
Procurement Department	Sustainable purchasing practices
Academic Departments	Environmental education and research
ORIC	Environmental research and innovation
Student Affairs	Student engagement and awareness campaigns
Teaching Hospitals	Healthcare waste management and environmental compliance

Regular monitoring and reporting ensure that environmental initiatives remain aligned with institutional objectives and applicable regulatory requirements.

3.5 Green Campus Strategy

The Green Campus Strategy provides an integrated framework for improving environmental performance through sustainable infrastructure, efficient operations, and responsible resource management.

The strategy focuses on:

- Sustainable campus planning.
- Energy-efficient buildings.
- Waste minimization.
- Water conservation.
- Green landscaping.
- Sustainable transportation.
- Environmental education.
- Digital transformation to reduce paper consumption.

Green campus initiatives contribute not only to environmental protection but also to improved health, operational efficiency, and institutional reputation.

3.6 Sustainable Infrastructure

Infrastructure development incorporates sustainability considerations wherever practicable.

Key principles include:

- Efficient use of natural lighting.
- Energy-efficient lighting systems.
- Water-saving fixtures.
- Environmentally responsible construction practices.
- Preventive maintenance to improve operational efficiency.
- Accessibility and inclusive design.
- Climate resilience considerations.

Future infrastructure projects will continue to integrate sustainability principles to reduce lifecycle environmental impacts.

3.7 Biodiversity and Green Spaces

Green spaces contribute to environmental quality, biodiversity conservation, thermal comfort, and campus wellbeing.

The University seeks to:

- Maintain landscaped areas across campuses.
- Increase native vegetation where appropriate.
- Preserve existing trees.
- Promote biodiversity awareness.
- Enhance outdoor learning and recreational spaces.

Green spaces provide opportunities for environmental education while improving the campus environment for students, staff, patients, and visitors.

3.7.1 Departmental Spotlight: Plantation Drive at Education City

CASE STUDY — VERIFIED SOURCE: DCE Sustainability Report 2025

On 8 August 2025, the Department of Civil Engineering (DCE) organised a Plantation Drive at the Education City Site, Karachi, engaging approximately 50 B.E. Civil Engineering students under faculty mentorship. The activity combined hands-on tree planting with interactive discussion on afforestation, urban green planning, and the role of engineers in climate mitigation, and was targeted to SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action), SDG 15 (Life on Land) and SDG 17 (Partnerships for the Goals).



Plantation Drive, Department of Civil Engineering, Education City (8 August 2025)

This department-level activity illustrates how Ziauddin University's green-campus commitments are operationalised through student-facing, curriculum-linked action at the college level, complementing university-wide environmental initiatives.

3.8 Environmental Awareness and Culture

Creating a sustainable campus requires active participation from the University community.

Environmental awareness initiatives include:

- Student orientation programmes.
- Sustainability campaigns.
- Tree plantation activities.
- Waste segregation awareness.
- Energy conservation campaigns.
- Water conservation awareness.
- Community outreach programmes.
- Environmental seminars and workshops.

The University encourages students and employees to adopt environmentally responsible behaviours in both academic and personal settings.

3.9 Sustainable Procurement

Procurement practices influence institutional environmental performance.

The University encourages procurement decisions that consider:

- Product quality.
- Environmental impacts.
- Energy efficiency.
- Durability.
- Waste reduction.
- Supplier responsibility.
- Cost effectiveness over the product life cycle.

Where feasible, environmentally preferable products and services are prioritized.

3.10 Digital Transformation and Resource Efficiency

Digital technologies contribute significantly to sustainability by reducing resource consumption and improving operational efficiency.

Key initiatives include:

- Electronic document management.
- Digital learning platforms.
- Online meetings and collaboration.
- Electronic approvals and workflows.
- Digital student services.
- Electronic quality assurance processes.

These initiatives reduce paper usage, improve administrative efficiency, and support environmentally responsible operations.

3.11 Environmental Risk Management

The University identifies and manages environmental risks through proactive planning and continuous monitoring.

Major environmental risks include:

- Climate-related events.
- Utility disruptions.
- Water scarcity.
- Waste management challenges.
- Environmental compliance requirements.
- Public health emergencies.

Risk mitigation measures include emergency preparedness, infrastructure maintenance, environmental monitoring, and regular policy reviews.

3.12 Alignment with the Sustainable Development Goals

Environmental initiatives contribute directly to several SDGs.

SDG	Contribution
SDG 6 – Clean Water and Sanitation	Water conservation, efficient water management
SDG 7 – Affordable and Clean Energy	Energy efficiency initiatives
SDG 11 – Sustainable Cities and Communities	Sustainable campus development
SDG 12 – Responsible Consumption and Production	Waste reduction, recycling, sustainable procurement
SDG 13 – Climate Action	Carbon footprint monitoring and climate resilience
SDG 15 – Life on Land	Green spaces and biodiversity initiatives

This alignment demonstrates the University's commitment to integrating global sustainability priorities into institutional operations.

3.13 Environmental Key Performance Indicators

To monitor progress, the University tracks a range of environmental KPIs.

Energy

- Electricity consumption
- Energy efficiency improvements
- Renewable energy utilization

Water

- Total water consumption
- Water conservation measures
- Water efficiency projects

Waste

- Total waste generated
- Waste diverted from landfill
- Recycling rate
- Hazardous waste compliance

Green Campus

- Green space coverage
- Tree plantation activities
- Biodiversity enhancement

Climate

- Carbon footprint
- Climate mitigation initiatives
- Environmental awareness programmes

Annual monitoring of these indicators supports evidence-based decision-making and continuous improvement.

3.14 Future Environmental Priorities (2026–2030)

The University has identified the following priorities for the next strategic period:

- Expand energy efficiency initiatives.
- Evaluate opportunities for renewable energy adoption.
- Improve water conservation and reuse.
- Increase recycling and circular economy practices.
- Enhance biodiversity through additional green spaces.
- Strengthen environmental data collection and reporting.

- Integrate sustainability into infrastructure planning.
- Promote environmental research and innovation.
- Foster a culture of environmental responsibility across the University community.

3.15 Conclusion

Environmental sustainability is an integral component of Ziauddin University's institutional strategy. Through responsible governance, sustainable campus management, resource efficiency, and environmental education, the University continues to reduce its environmental impact while supporting healthier learning and healthcare environments.

The initiatives described in this chapter establish a strong foundation for continued progress and align with national priorities, international sustainability frameworks, and the University's long-term commitment to responsible institutional development.

CHAPTER 4

Energy Management, Climate Action and Carbon Performance



4.1 Introduction

Energy management and climate action are central to sustainable campus operations and institutional resilience. Universities are expected to reduce greenhouse gas (GHG) emissions, improve energy efficiency, and transition toward cleaner sources of energy while maintaining high standards of education, research, and healthcare delivery.

For Ziauddin University, energy management is particularly significant because of the operational requirements of teaching hospitals, laboratories, research facilities, libraries, and multiple campuses. These facilities require continuous and reliable energy supplies to support academic activities, patient care, and institutional services.

Recognizing the global urgency of climate change, the University is committed to improving energy performance, monitoring carbon emissions, and integrating climate considerations into strategic planning.

4.2 Energy Management Policy

The University's energy management approach is based on the principles of:

- Energy efficiency
- Resource conservation
- Operational reliability
- Continuous monitoring
- Preventive maintenance
- Responsible procurement
- Awareness and behavioural change

The policy encourages every academic and administrative unit to contribute to reducing unnecessary energy consumption while maintaining operational effectiveness.

4.3 Energy Governance

Energy management responsibilities are distributed across institutional units to ensure effective planning, implementation, and monitoring.

Unit	Responsibility
Vice Chancellor	Strategic oversight
Campus Administration	Utility management and infrastructure
Engineering & Maintenance	Energy systems maintenance
Finance Department	Budgeting for energy initiatives
Quality Enhancement Cell	Sustainability monitoring and reporting
Academic Departments	Awareness and educational initiatives

4.4 Energy Consumption Profile

The University's energy demand arises from:

- Academic buildings
- Teaching hospitals
- Clinical laboratories
- Research laboratories
- Libraries
- Administrative offices
- Student facilities
- Information technology infrastructure
- Campus lighting and utilities

Regular monitoring enables the University to identify opportunities for improving energy efficiency and reducing operational costs.

4.5 Energy Efficiency Initiatives

During the reporting period, the University continued implementing measures aimed at improving energy performance, including:

- Gradual replacement of conventional lighting with LED technology.
- Preventive maintenance of electrical systems.
- Optimization of heating, ventilation, and air-conditioning (HVAC) operations where applicable.
- Promotion of energy-conscious behaviour among students and staff.
- Increased use of digital systems to reduce resource consumption.

Future initiatives will evaluate additional technologies that support lower energy consumption and reduced environmental impact.

4.6 Renewable Energy

The University recognizes the importance of renewable energy in reducing greenhouse gas emissions and strengthening long-term energy resilience.

Future opportunities include:

- Solar photovoltaic installations.
- Solar water heating systems.
- Renewable energy feasibility studies.
- Hybrid energy solutions.
- Battery storage systems where appropriate.

Renewable energy projects will be assessed based on technical feasibility, financial sustainability, and institutional priorities.

4.7 Climate Action Strategy

The University's Climate Action Strategy is aligned with SDG 13: Climate Action and aims to:

- Reduce institutional greenhouse gas emissions.
- Improve climate resilience.
- Promote environmental awareness.
- Support climate-related research.
- Encourage sustainable transportation practices.
- Integrate climate considerations into infrastructure planning.

Climate action is recognized as a shared institutional responsibility involving leadership, faculty, staff, students, and external partners.

4.8 Greenhouse Gas Emissions

The University monitors greenhouse gas emissions to better understand its environmental footprint and identify opportunities for improvement.

Emission sources include:

Scope 1 (Direct Emissions)

- Institutional vehicles
- Fuel combustion
- Backup generators
- Medical and laboratory equipment using fuel

Scope 2 (Indirect Energy Emissions)

- Purchased electricity
- Grid-supplied energy

Scope 3 (Other Indirect Emissions)

- Staff and student commuting

- Business travel
- Waste disposal
- Water consumption
- Procurement activities

The gradual expansion of emissions monitoring supports more informed climate planning and reporting.

4.9 Carbon Footprint Assessment

Based on institutional data available during the reporting period, the University's baseline carbon footprint is:

Indicator	Value
Total Carbon Footprint (Baseline)	3,717.67 metric tonnes CO ₂ e

This baseline provides an important reference point for measuring future reductions and evaluating the effectiveness of climate action initiatives.

The University intends to strengthen its carbon accounting methodology over time by improving data collection, expanding emissions coverage, and aligning with internationally recognized reporting standards.

4.10 Climate Risk Assessment

Climate change presents several risks that may affect higher education institutions, including:

- Rising temperatures.
- Extreme weather events.
- Increased energy demand.
- Water scarcity.
- Infrastructure vulnerability.
- Public health impacts.
- Supply chain disruptions.

The University incorporates climate considerations into institutional planning to improve resilience and preparedness.

4.11 Climate Adaptation Measures

Adaptation measures include:

- Preventive maintenance of campus infrastructure.
- Emergency preparedness planning.
- Efficient water management.
- Tree plantation and landscaping.
- Sustainable building maintenance.
- Improved environmental monitoring.

These initiatives help reduce institutional vulnerability to climate-related risks while supporting safer learning and healthcare environments.

4.12 Awareness and Capacity Building

The University promotes climate awareness through:

- Student engagement activities.
- Faculty seminars.
- Sustainability campaigns.
- Environmental workshops.
- Community awareness programmes.
- Integration of climate topics into relevant academic programmes.

These initiatives encourage behavioural change and foster a culture of environmental responsibility.

4.13 Energy and Climate Key Performance Indicators

The following KPIs are monitored to evaluate progress:

Indicator	Monitoring Frequency
Electricity consumption	Annual
Fuel consumption	Annual
Energy efficiency initiatives	Annual
Carbon footprint	Annual
Renewable energy generation	Annual (where applicable)
Climate awareness activities	Annual

4.14 Future Targets (2026–2030)

The University aims to:

- Improve overall energy efficiency across campuses.
- Assess the feasibility of renewable energy expansion.
- Strengthen greenhouse gas inventory systems.
- Reduce carbon emissions through operational improvements.
- Enhance climate resilience planning.
- Promote low-carbon practices among the University community.
- Integrate climate considerations into infrastructure development.

Progress toward these targets will be reviewed annually through the Sustainability Performance Dashboard.

4.15 Alignment with International Frameworks

The University's energy and climate initiatives support:

SDG 7 – Affordable and Clean Energy

SDG 13 – Climate Action

THE Impact Rankings

QS Sustainability Rankings

UI GreenMetric – Energy and Climate Change Category

By aligning institutional practices with these frameworks, Ziauddin University strengthens its contribution to global sustainability objectives and enhances its readiness for international benchmarking.

4.16 Conclusion

Energy management and climate action are essential components of Ziauddin University's sustainability strategy. Through continuous monitoring, efficient resource management, climate risk assessment, and stakeholder engagement, the University is building a resilient foundation for long-term environmental performance.

The carbon footprint baseline established during this reporting period provides an important benchmark for future reductions and demonstrates the University's commitment to measurable climate action.

CHAPTER 5

Water Stewardship, Waste Management, Circular Economy and Green Infrastructure



5.1 Introduction

Water, waste, and natural resources are fundamental components of sustainable campus operations. As a university with multiple campuses, teaching hospitals, research laboratories, and healthcare facilities, Ziauddin University recognizes its responsibility to manage these resources efficiently while minimizing environmental impacts.

The University adopts an integrated approach to water stewardship, waste management, and circular economy practices by emphasizing resource conservation, operational efficiency, regulatory compliance, and environmental awareness. These initiatives contribute to healthier campuses, reduced environmental footprints, and improved institutional resilience.

The strategies described in this chapter support the University's commitment to SDG 6 (Clean Water and Sanitation), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 15 (Life on Land).

5.2 Water Stewardship Strategy

Water is a critical resource for academic activities, research laboratories, healthcare services, landscaping, sanitation, and campus operations. The University promotes responsible water use through monitoring, conservation measures, and awareness programmes.

The objectives of the Water Stewardship Strategy are to:

- Improve water-use efficiency.
- Reduce avoidable water losses.
- Promote responsible consumption.
- Ensure safe water supply for academic and healthcare facilities.
- Encourage water conservation awareness among students and staff.
- Integrate sustainable water management into campus planning.

Water conservation supports both environmental sustainability and operational resilience, particularly in regions facing increasing water stress.

5.3 Water Management Practices

Water management at Ziauddin University includes:

- Routine inspection and maintenance of water distribution systems.
- Prompt repair of leaks and infrastructure defects.
- Installation of water-efficient fixtures where feasible.

- Monitoring of water consumption trends.
- Responsible irrigation of landscaped areas.
- Promotion of water-saving practices through awareness campaigns.

These measures contribute to reducing unnecessary water consumption while maintaining the high standards required for educational and healthcare facilities.

5.4 Waste Management Framework

The University follows a structured waste management framework based on the principles of Reduce, Reuse, Recycle, Recover, and Responsible Disposal.

Waste management objectives include:

- Minimizing waste generation at source.
- Promoting segregation of waste.
- Increasing recycling and reuse.
- Ensuring safe management of healthcare and laboratory waste.
- Reducing environmental impacts associated with waste disposal.
- Encouraging behavioural change through education and awareness.

Waste streams generated by the University include:

- Paper and cardboard.
- Plastics.
- Food waste.
- Green waste.
- Healthcare waste.
- Laboratory waste.
- Electronic waste.
- General municipal waste.

Each waste category is managed in accordance with applicable regulations and institutional procedures.

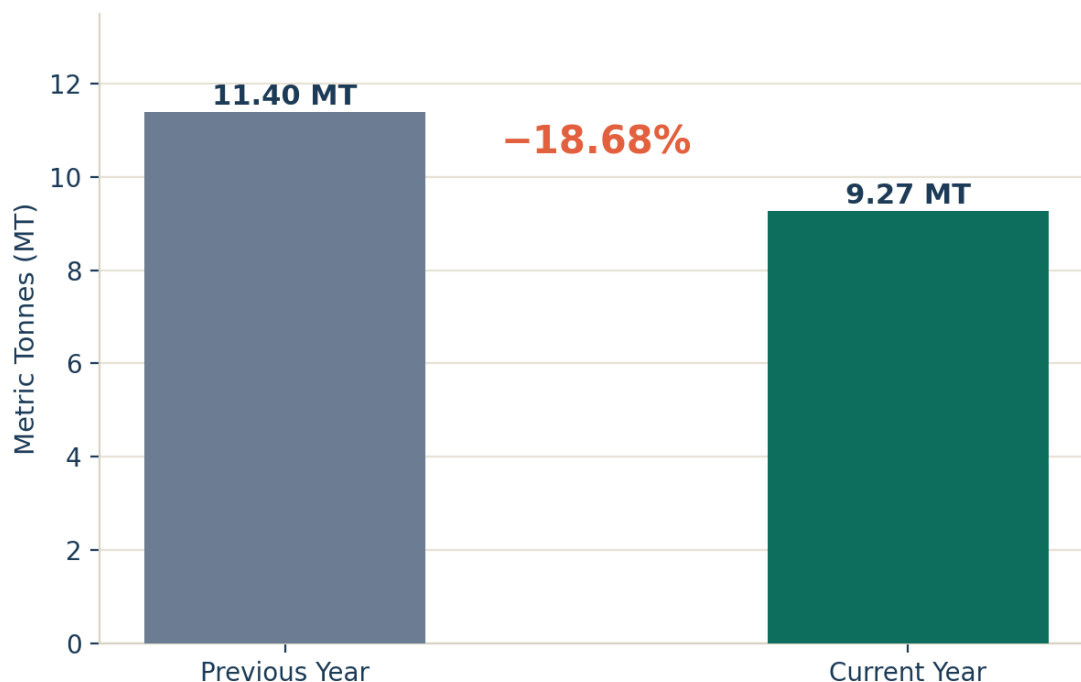
5.5 Inorganic Waste Performance

During the reporting period, the University continued to improve the management of non-hazardous inorganic waste through segregation, recycling initiatives, and awareness programmes.

Table 5.1 Inorganic Non-Toxic Waste Generation

Indicator	Previous Year (MT)	Current Year (MT)	Change
Total Inorganic Non-Toxic Waste	11.40	9.27	–2.13 MT

Total Inorganic Non-Toxic Waste



Total inorganic non-toxic waste generation: previous vs. current year

Performance Analysis

The reduction of 2.13 metric tonnes represents an 18.68% decrease in inorganic non-toxic waste generation compared with the previous reporting period.

This improvement reflects:

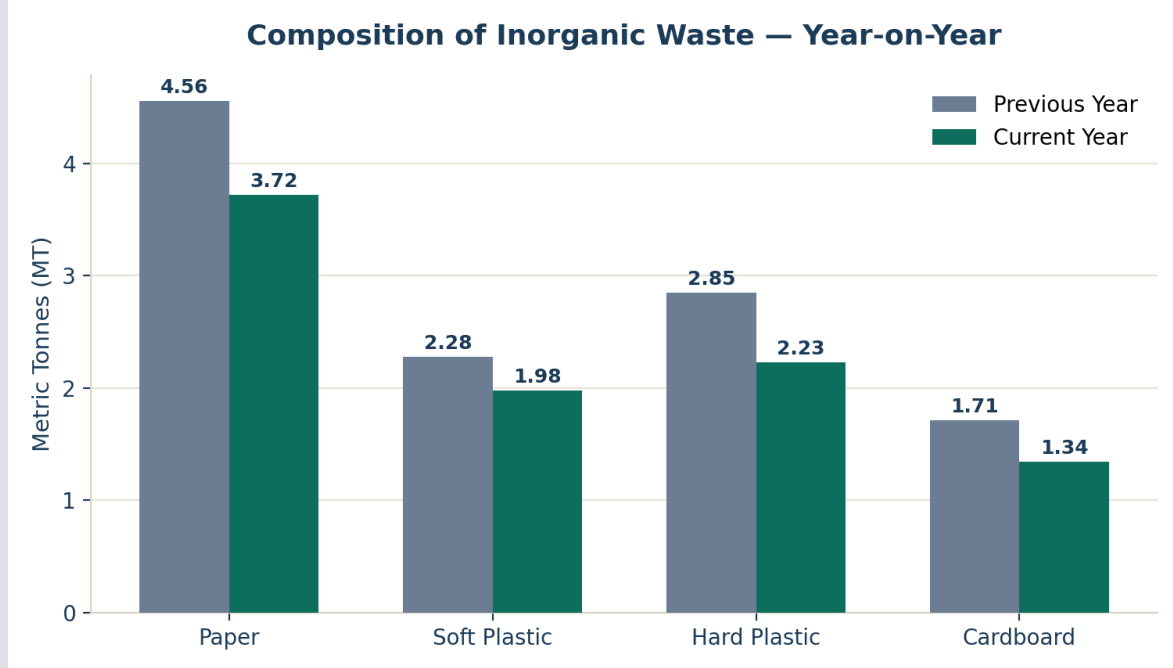
- Enhanced waste segregation practices.
- Increased awareness among students and staff.
- Reduction in unnecessary material consumption.
- Improved recycling and reuse initiatives.
- Better monitoring of waste generation across campuses.

The observed reduction demonstrates measurable progress toward responsible consumption and production.

5.6 Composition of Inorganic Waste

The University's principal inorganic waste streams include:

Waste Type	Previous Year (MT)	Current Year (MT)
Paper	4.56	3.72
Soft Plastic	2.28	1.98
Hard Plastic	2.85	2.23
Cardboard	1.71	1.34
Total	11.40	9.27



Composition of inorganic waste by category, year-on-year

The reduction across all categories demonstrates continuous improvement in material efficiency and waste minimization.

Paper remains the largest recyclable waste stream, highlighting opportunities for further digitalization and paperless administrative processes.

5.7 Organic Waste Management

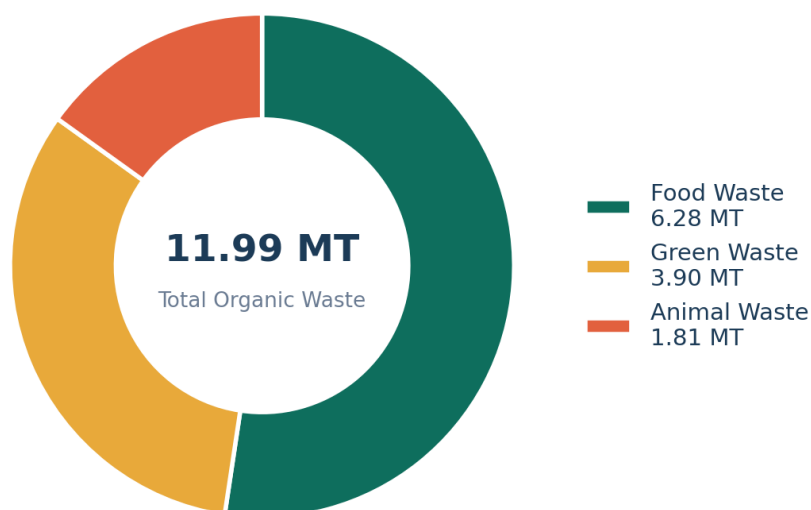
Organic waste generated by the University primarily originates from:

- Food services.
- Campus landscaping.
- Teaching hospitals.
- Green maintenance activities.

Organic Waste Profile

Organic Waste Category	Current Year (MT)
Food Waste	6.28
Green Waste	3.90
Animal Waste	1.81
Total Organic Waste	11.99

Organic Waste Profile — Current Year



Organic waste profile for the current reporting year

The University continues to improve the collection, segregation, and treatment of biodegradable waste through environmentally responsible practices.

5.8 Circular Economy Initiatives

Ziauddin University supports the transition toward a circular economy by promoting the efficient use of materials and extending the useful life of resources.

Current initiatives include:

- Recycling of paper, plastics, and cardboard.
- Reuse of office materials where appropriate.
- Responsible procurement practices.
- Reduction of single-use materials.
- Digital documentation to reduce paper consumption.
- Awareness campaigns on waste reduction.

Future initiatives will focus on increasing resource recovery, expanding recycling partnerships, and promoting circular economy principles throughout the University.

5.9 Healthcare and Laboratory Waste

As a healthcare-focused institution, Ziauddin University places particular emphasis on the safe management of clinical and laboratory waste.

The University follows established procedures for:

- Segregation of healthcare waste.
- Safe storage.

- Collection and transportation.
- Treatment and disposal.
- Staff training.
- Regulatory compliance.
- Occupational health and safety.

These measures help protect patients, healthcare workers, students, the community, and the environment.

5.10 Green Infrastructure

Green infrastructure contributes to environmental sustainability by improving biodiversity, reducing urban heat effects, enhancing campus aesthetics, and supporting community wellbeing.

The University continues to:

- Maintain landscaped areas.
- Preserve mature trees.
- Improve green spaces.
- Integrate sustainability considerations into campus planning.
- Promote environmentally responsible infrastructure development.

Green infrastructure also provides opportunities for environmental education and outdoor learning.

5.11 Awareness and Community Participation

Sustainable waste management depends on active participation by the University community.

Awareness initiatives include:

- Waste segregation campaigns.
- Recycling awareness programmes.
- Student sustainability activities.
- Environmental seminars.
- Green campus events.
- Community outreach initiatives.

These programmes encourage responsible behaviour and strengthen the University's sustainability culture.

5.12 Key Performance Indicators

KPI	Reporting Frequency
Total Waste Generated	Annual
Waste Recycled	Annual
Organic Waste Treated	Annual
Water Consumption	Annual
Water Conservation Projects	Annual
Circular Economy Initiatives	Annual

5.13 Future Priorities (2026–2030)

The University aims to:

- Reduce total waste generation further.
- Increase recycling and resource recovery rates.
- Strengthen water conservation measures.
- Expand digitalization to reduce paper use.
- Improve waste data collection and reporting.
- Explore composting opportunities for organic waste.
- Enhance green infrastructure across campuses.

5.14 SDG Alignment

This chapter contributes directly to:

SDG 6 – Clean Water and Sanitation

SDG 11 – Sustainable Cities and Communities

SDG 12 – Responsible Consumption and Production

SDG 13 – Climate Action

SDG 15 – Life on Land

The initiatives outlined support both institutional sustainability objectives and international sustainability reporting frameworks.

5.15 Conclusion

Ziauddin University's integrated approach to water stewardship, waste management, circular economy, and green infrastructure demonstrates its commitment to responsible environmental management. The measurable reduction in inorganic waste, together with ongoing initiatives to improve water efficiency, recycling, and sustainable campus development, reflects meaningful progress toward long-term sustainability goals.

PART III

Social Sustainability

CHAPTER 6

Social Sustainability, Health, Well-being and Community Impact



6.1 Introduction

Social sustainability is fundamental to Ziauddin University's mission of advancing education, healthcare, research, and community service. The University recognizes that sustainable development extends beyond environmental stewardship to encompass equitable access to education, quality healthcare, inclusive workplaces, community empowerment, and respect for human rights.

As a comprehensive university with teaching hospitals and extensive community engagement, Ziauddin University contributes to national development by preparing competent graduates, improving healthcare access, supporting vulnerable communities, and fostering a culture of inclusion and social responsibility.

The University's social sustainability strategy is aligned with SDGs 1, 2, 3, 4, 5, 8, 10, 11, and 16, reflecting its commitment to improving quality of life through education, healthcare, and responsible institutional practices.

6.2 Social Sustainability Framework

The University's social sustainability framework is built upon six strategic pillars:

- Quality Education – Providing accessible, student-centred education and lifelong learning opportunities.
- Healthcare and Well-being – Delivering quality clinical services and promoting preventive healthcare.
- Student Development – Supporting academic success, mental health, leadership, and employability.
- Employee Well-being – Fostering a safe, healthy, and inclusive workplace.
- Community Engagement – Strengthening partnerships and outreach programmes that benefit society.
- Equity and Inclusion – Promoting equal opportunity, gender equality, accessibility, and respect for diversity.

These pillars guide institutional planning and resource allocation to maximize positive social impact.

6.3 Student Welfare and Success

Students are the University's primary stakeholders. Ziauddin University is committed to creating an environment in which students can thrive academically, professionally, and personally.

Key areas of support include:

- Academic advising and mentoring.
- Student counselling and psychological support.
- Career guidance and employability services.
- Leadership development opportunities.
- Extracurricular and co-curricular activities.
- Access to digital learning resources.
- Student representation in governance where appropriate.

The University continuously reviews student support services to enhance learning outcomes and student satisfaction.

6.4 Scholarships and Financial Assistance

To promote equitable access to higher education, Ziauddin University offers a range of scholarships, financial assistance schemes, and merit-based awards. These initiatives help reduce financial barriers and encourage academic excellence.

The University's scholarship framework supports:

- Merit-based scholarships.
- Need-based financial assistance.
- Special scholarship programmes.
- Student fee facilitation mechanisms.
- Recognition of outstanding academic and extracurricular achievements.

These initiatives contribute directly to SDG 1 (No Poverty) and SDG 4 (Quality Education) by expanding educational opportunities for deserving students.

6.5 Health, Safety and Well-being

The health and well-being of students, employees, patients, and visitors are institutional priorities.

The University promotes well-being through:

- Safe learning and working environments.
- Occupational health and safety practices.
- Clinical safety protocols.
- Infection prevention and control measures.
- Health awareness campaigns.
- Counselling and wellness services.
- Recreational and sports activities.

As a healthcare-focused institution, Ziauddin University integrates health promotion into both academic and community activities.

6.6 Employee Development and Well-being

Faculty and staff are essential to achieving institutional sustainability. The University invests in professional development and employee well-being through:

- Continuing professional development programmes.
- Faculty training workshops.
- Leadership development.
- Performance evaluation and feedback.
- Safe workplace practices.
- Employee recognition initiatives.
- Equal opportunity employment policies.

These initiatives support institutional effectiveness while fostering a positive organizational culture.

6.7 Community Engagement

Community engagement is a defining feature of Ziauddin University's institutional mission.

The University collaborates with communities through:

- Healthcare outreach programmes.
- Health screening camps.
- Public health awareness campaigns.
- Educational workshops.
- Community service initiatives.
- Volunteer programmes.
- Partnerships with public and private organizations.

These activities strengthen relationships with local communities while addressing societal needs and promoting sustainable development.

6.8 Healthcare Outreach

Through its teaching hospitals and affiliated healthcare facilities, Ziauddin University provides healthcare services that extend beyond campus boundaries.

Outreach initiatives include:

- Preventive healthcare campaigns.
- Medical consultations and screening services.
- Maternal and child health awareness.
- Vaccination and disease prevention programmes.
- Health education seminars.
- Community-based clinical services.

These programmes contribute significantly to SDG 3 (Good Health and Well-being) and reinforce the University's role as a socially responsible healthcare institution.

6.9 Diversity, Equity and Inclusion

Ziauddin University is committed to fostering an inclusive environment where all members of the University community are treated with dignity and respect.

Institutional efforts focus on:

- Equal opportunity in education and employment.
- Gender equity.
- Accessibility for persons with disabilities.
- Prevention of discrimination and harassment.
- Inclusive participation in academic and administrative activities.

The University recognizes diversity as a source of strength that enriches teaching, research, and community engagement.

6.10 Gender Equality

Gender equality is promoted through institutional policies, equitable recruitment practices, leadership opportunities, and student support initiatives.

The University encourages:

- Equal participation of women and men in academic and administrative leadership.
- Safe and respectful learning and working environments.
- Professional development opportunities for women.
- Awareness programmes addressing gender-related issues.

These initiatives contribute directly to SDG 5 (Gender Equality).

6.11 Volunteerism and Civic Responsibility

Students, faculty, and staff are encouraged to participate in volunteer activities that support community development and social responsibility.

Examples include:

- Health awareness campaigns.
- Blood donation drives.
- Environmental clean-up activities.
- Educational outreach.
- Disaster relief support (where applicable).
- Student-led community service projects.

Volunteerism strengthens civic engagement and provides practical learning experiences aligned with the University's educational mission.

6.12 Social Sustainability KPIs

To evaluate progress, the University monitors indicators such as:

Indicator	Reporting Frequency
Scholarships awarded	Annual
Student support programmes	Annual
Community outreach activities	Annual
Healthcare outreach initiatives	Annual
Faculty development programmes	Annual
Employee training sessions	Annual
Diversity and inclusion initiatives	Annual
Volunteer activities	Annual

These indicators support evidence-based decision-making and continuous improvement.

6.13 Future Priorities (2026–2030)

The University aims to:

- Expand scholarship opportunities.
- Strengthen student mental health and counselling services.
- Enhance employee professional development.
- Increase community healthcare outreach.
- Improve accessibility and inclusion across campuses.
- Foster greater student participation in community service.
- Strengthen partnerships that address social challenges.

6.14 SDG Alignment

The University's social sustainability initiatives contribute directly to:

SDG 1 – No Poverty

- SDG 2 – Zero Hunger (through nutrition education and health promotion)

SDG 3 – Good Health and Well-being

SDG 4 – Quality Education

SDG 5 – Gender Equality

SDG 8 – Decent Work and Economic Growth

SDG 10 – Reduced Inequalities

SDG 11 – Sustainable Cities and Communities

SDG 16 – Peace, Justice and Strong Institutions

6.15 Conclusion

Social sustainability is central to Ziauddin University's identity as an institution dedicated to education, healthcare, and community service. Through comprehensive student support, employee development, healthcare outreach, community engagement, and inclusive policies, the University contributes meaningfully to societal well-being and sustainable development.

By integrating social responsibility into its academic and operational activities, Ziauddin University continues to strengthen its positive impact on students, employees, patients, and the wider community while advancing the Sustainable Development Goals.

CHAPTER 7

Education for Sustainable Development (ESD), Curriculum Integration and Student Engagement



7.1 Introduction

Education is the foundation of sustainable development. Universities play a pivotal role in preparing graduates with the knowledge, skills, values, and competencies necessary to address complex environmental, social, economic, and technological challenges. Through education, research, innovation, and community engagement, higher education institutions cultivate future leaders capable of advancing sustainable societies.

Ziauddin University recognizes that sustainability must be embedded throughout the educational experience rather than confined to a single programme or discipline. The University therefore integrates sustainability principles into curriculum design, teaching and learning, research, clinical education, student development, and community engagement.

This chapter outlines the University's approach to Education for Sustainable Development (ESD) and demonstrates its alignment with SDG 4 – Quality Education and the broader United Nations Sustainable Development Goals.

7.2 Institutional Commitment to Education for Sustainable Development

Education for Sustainable Development is embedded within the University's academic philosophy. The University seeks to equip graduates with interdisciplinary knowledge, ethical awareness, critical thinking skills, and professional competencies that enable them to contribute to sustainable development in their respective fields.

Institutional commitments include:

- Embedding sustainability concepts within academic programmes.
- Encouraging interdisciplinary teaching and learning.
- Integrating ethics and social responsibility into curricula.
- Promoting experiential and community-based learning.
- Supporting lifelong learning opportunities.
- Encouraging innovation and problem-solving through research and practice.

These commitments ensure that sustainability becomes a shared responsibility across all academic disciplines.

7.3 Curriculum Integration

Sustainability concepts are incorporated into undergraduate, postgraduate, and doctoral programmes through curriculum review and programme development processes.

Curriculum integration includes:

- Sustainable healthcare and public health.

- Environmental health.
- Medical ethics and professional responsibility.
- Community-based learning.
- Health systems strengthening.
- Disaster preparedness and emergency response.
- Sustainable business and entrepreneurship.
- Engineering for sustainable development.
- Media and communication for social impact.

Curriculum review committees periodically assess programme learning outcomes to ensure continued relevance to emerging sustainability priorities.

7.4 Sustainability-Related Courses

The University continues to expand the number of courses that address sustainability themes either as dedicated subjects or through integrated learning outcomes.

Table 7.1 Sustainability-Related Courses

Indicator	Value
Total Courses Offered	2,007
Sustainability-Related Courses	910
Sustainability Integration	45.3%

This level of curriculum integration reflects the University's commitment to mainstreaming sustainability across diverse academic disciplines.

7.5 Teaching and Learning Approaches

The University employs a variety of student-centred teaching methods that promote active learning and sustainability competencies.

Approaches include:

- Problem-based learning.
- Case-based learning.
- Clinical simulations.
- Laboratory-based instruction.
- Community placements.
- Field visits.
- Team-based projects.
- Digital and blended learning.
- Research-led teaching.

These approaches encourage students to apply theoretical knowledge to real-world sustainability challenges.

7.6 Clinical and Experiential Learning

Experiential learning is a defining feature of Ziauddin University's educational model, particularly in the health sciences.

Students gain practical experience through:

- Clinical rotations.
- Teaching hospitals.
- Community health programmes.
- Laboratory training.
- Industry placements (where applicable).
- Community service initiatives.
- Research projects.

These experiences strengthen professional competence while reinforcing the University's commitment to social responsibility and sustainable healthcare.

7.7 Student Engagement in Sustainability

Students play an active role in advancing sustainability through participation in academic, extracurricular, and community-based initiatives.

Examples include:

- Environmental awareness campaigns.
- Tree plantation activities.
- Health education programmes.
- Volunteer services.
- Student research projects.
- Sustainability seminars and workshops.
- Community outreach initiatives.
- Student societies promoting social and environmental responsibility.

Student engagement enhances leadership skills, civic responsibility, and awareness of sustainable development challenges.

7.7.1 Departmental Spotlight: SDG-Aligned Activity, Department of Civil Engineering

CASE STUDY — VERIFIED SOURCE: DCE Sustainability Report 2025

The Department of Civil Engineering (DCE) maintains its own annual sustainability report mapping departmental workshops, field visits, seminars, competitions and MoUs to specific SDGs. Across the 2024–2025 reporting year, DCE activities were most strongly aligned with SDG 9 (Industry, Innovation and Infrastructure, 16.9% of tagged activities), SDG 11 (Sustainable Cities and Communities, 14.5%) and SDG 4 (Quality Education, 14.5%), followed by SDG 17, SDG 13 and SDG 12.

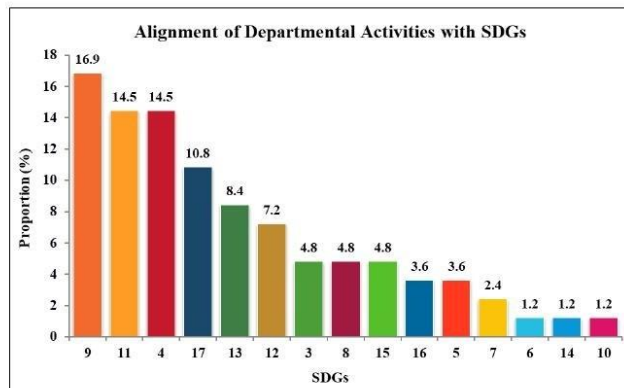


Figure 1: Alignment of Departmental Activities with the Relevant SDGs

The analysis reveals that the DCE's initiatives are most strongly aligned with SDG 9 (Industry, Innovation, and Infrastructure), SDG 11 (Sustainable Cities and Communities), and SDG 4 (Quality Education), reflecting the department's emphasis on sustainable infrastructure development, urban resilience, and academic excellence. Other significant contributions include SDG 17 (Partnerships for the Goals), SDG 13 (Climate Action), and SDG 12 (Responsible Consumption and Production), highlighting collaborative, environmental, and ethical dimensions of departmental projects. The overall trend demonstrates a balanced integration of social, environmental, and economic sustainability principles across academic, industrial, and community engagement activities.



Alignment of DCE departmental activities with the SDGs, 2024–2025 (source: DCE Sustainability Report 2025)

Representative activities documented in the department's report include:

- **Survey Camp 2025 (November 2025):** field training in land surveying and instrumentation for ~50 students.
- **Sexual Harassment Awareness Session (9 May 2025):** delivered by Dr Qudsia Hassan, Chairperson of the Anti-Sexual Harassment Committee, to ~120 students and faculty (SDG 4, 5, 10, 16).
- **IEEE WIE Inauguration and Panel Discussion (25 September 2025):** launch of the IEEE Women in Engineering ZU Student Branch, promoting gender equality in STEM (SDG 4, 5, 9, 17).
- **SSUET Concrete Fest and ACI Frisbee/Bridge Building Competitions (2024–2025):** inter-university student competitions in sustainable construction materials (SDG 9, 11, 12, 13, 17).
- **Industrial visits:** Dynamic Ready-Mix Concrete Batch Plant and Jhimpir Wind Energy Farm, exposing students to quality control and renewable energy systems (SDG 7, 9, 11, 12, 13, 15).

This department-level reporting model — quantifying the proportion of activities mapped to each SDG — offers a template that other colleges and departments across the University could adopt to strengthen bottom-up, verifiable SDG reporting.

7.8 Digital Learning and Educational Innovation

Digital transformation supports both educational quality and environmental sustainability.

The University continues to strengthen digital education through:

- Learning Management Systems (LMS).
- Online learning resources.
- Virtual classrooms.
- Digital assessments.
- Electronic academic records.
- Hybrid teaching models.
- Faculty training in educational technologies.

These initiatives improve learning flexibility while reducing reliance on printed materials and supporting operational efficiency.

7.9 Faculty Development

Faculty members are central to the successful implementation of Education for Sustainable Development.

The University supports faculty through:

- Professional development workshops.
- Curriculum design training.
- Research methodology programmes.
- Teaching and assessment enhancement.
- Digital pedagogy training.
- Interdisciplinary collaboration.

Faculty development initiatives strengthen teaching quality and encourage the integration of sustainability principles into academic practice.

7.10 Lifelong Learning

Recognizing the importance of continuous learning, the University promotes lifelong learning through:

- Continuing professional education.
- Short courses and certificate programmes.
- Professional development workshops.
- Conferences and seminars.
- Public lectures.
- Online learning opportunities.

These initiatives contribute to workforce development and the dissemination of knowledge beyond traditional degree programmes.

7.11 Quality Assurance in Education

Academic quality is maintained through comprehensive quality assurance processes coordinated by the Quality Enhancement Cell (QEC).

Key mechanisms include:

- Programme review.

- Curriculum review.
- Student feedback.
- Faculty evaluation.
- Learning outcome assessment.
- External accreditation.
- Continuous improvement planning.

These processes ensure that sustainability remains integrated into educational quality and institutional effectiveness.

7.12 Key Performance Indicators

Indicator	Reporting Frequency
Total academic programmes	Annual
Sustainability-related courses	Annual
Student enrolment	Annual
Graduation rates	Annual
Faculty development programmes	Annual
Student engagement activities	Annual
Community-based learning initiatives	Annual
Digital learning implementation	Annual

7.13 Future Priorities (2026–2030)

The University will continue to:

- Expand sustainability-related curriculum content.
- Increase interdisciplinary academic programmes.
- Strengthen Education for Sustainable Development across all faculties.
- Enhance experiential learning opportunities.
- Improve digital learning infrastructure.
- Support faculty capacity building.
- Promote student leadership in sustainability initiatives.
- Strengthen community-engaged learning.

7.14 SDG Alignment

Education initiatives contribute directly to:

SDG 4 – Quality Education

SDG 3 – Good Health and Well-being

SDG 5 – Gender Equality

SDG 8 – Decent Work and Economic Growth**SDG 9 – Industry, Innovation and Infrastructure****SDG 10 – Reduced Inequalities****SDG 17 – Partnerships for the Goals****7.15 Conclusion**

Education for Sustainable Development is a cornerstone of Ziauddin University's institutional mission. By integrating sustainability across curricula, promoting innovative teaching methods, strengthening experiential learning, and engaging students as active contributors to sustainable development, the University prepares graduates to address contemporary global challenges with competence, integrity, and social responsibility.

The University's continued investment in curriculum development, faculty excellence, and student engagement reinforces its commitment to delivering high-quality education that contributes to sustainable national and global development.

CHAPTER 8

Research, Innovation, Commercialization and Knowledge Transfer for Sustainable Development



8.1 Introduction

Research and innovation are fundamental drivers of sustainable development. Universities play a pivotal role in generating new knowledge, developing evidence-based solutions, advancing technology, and addressing complex societal challenges through interdisciplinary collaboration. At Ziauddin University, research is closely integrated with education, healthcare, and community engagement, ensuring that scholarly work contributes directly to national priorities and the United Nations Sustainable Development Goals (SDGs).

The Office of Research, Innovation and Commercialization (ORIC) provides strategic leadership for research development, supports faculty and students in securing competitive funding, promotes interdisciplinary collaboration, and facilitates the translation of research into practical solutions that benefit society.

8.2 Research Vision

The University's research vision is to become a nationally and internationally recognized centre of excellence for research, innovation, and knowledge transfer, generating impactful solutions that improve healthcare, education, technology, and sustainable development.

Research activities are guided by the principles of:

- Academic integrity.
- Scientific excellence.
- Ethical conduct.
- Innovation.
- Collaboration.
- Societal relevance.
- Sustainability.

8.3 Research Governance

Research governance is designed to ensure quality, transparency, ethical compliance, and strategic alignment.

Governance Structure

Unit	Primary Responsibility
Vice Chancellor	Strategic oversight of research
Office of Research, Innovation and Commercialization (ORIC)	Research management and commercialization
Research Advisory Committee	Research planning and institutional priorities
Institutional Review Boards / Ethics Committees	Ethical review of research
Academic Departments	Research implementation and supervision

Quality Enhancement Cell	Monitoring research performance indicators
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The governance framework ensures that research activities meet national regulations, institutional policies, and international ethical standards.

8.4 Strategic Research Priorities

Research priorities are aligned with institutional strengths and national development needs. Priority themes include:

- Public health and preventive medicine.
- Clinical and translational research.
- Pharmaceutical sciences.
- Biomedical engineering.
- Artificial intelligence in healthcare.
- Medical education.
- Environmental health.
- Sustainable healthcare systems.
- Business innovation and entrepreneurship.
- Law, governance, and public policy.
- Media and communication for social impact.

These themes encourage interdisciplinary collaboration and maximize societal impact.

8.5 Sustainability-Focused Research

The University actively promotes research that addresses sustainability challenges across environmental, social, economic, and healthcare dimensions.

Examples of sustainability research include:

- Climate change and public health.
- Water quality and sanitation.
- Environmental pollution and health outcomes.
- Sustainable healthcare practices.
- Renewable energy applications in healthcare.
- Community nutrition and food security.
- Maternal and child health.
- Digital health and telemedicine.
- Sustainable urban development.
- Responsible business practices.

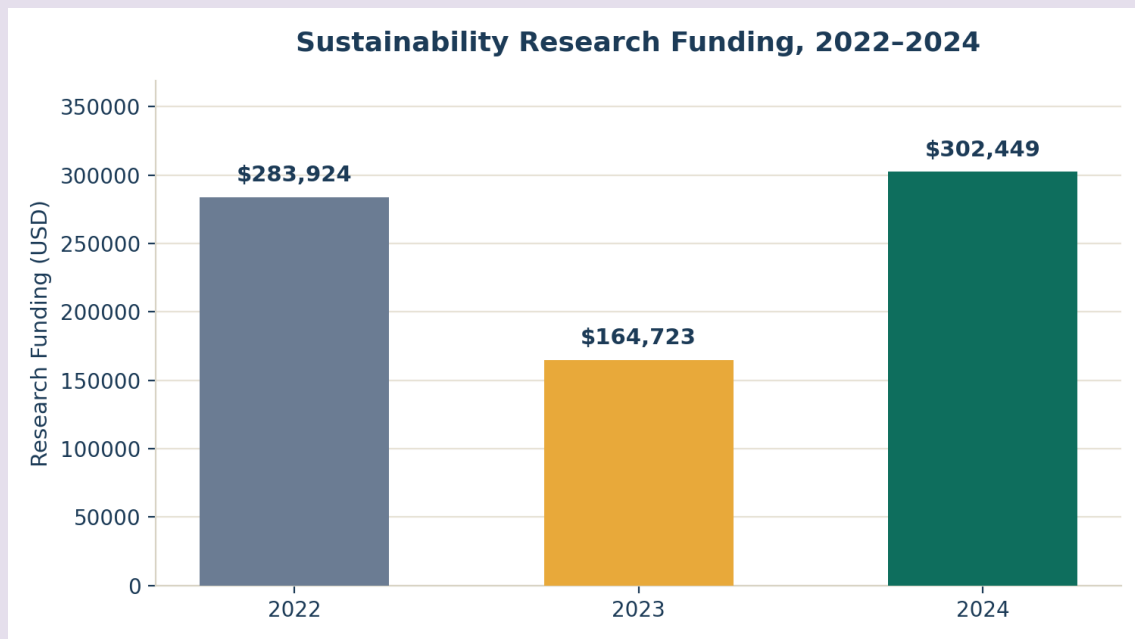
These projects contribute directly to multiple Sustainable Development Goals and support evidence-based policymaking.

8.6 Research Funding

Research funding is essential for advancing innovation and generating high-impact outcomes. Ziauddin University continues to secure funding from national and international agencies, industry partners, and collaborative research programmes.

Table 8.1 Sustainability Research Funding

Year	Research Funding (USD)
2022	283,924
2023	164,723
2024	302,449



Sustainability research funding trend, 2022–2024

The variation in annual funding reflects the competitive nature of research grants and the timing of externally funded projects. The increase recorded in 2024 demonstrates renewed momentum in sustainability-focused research and highlights the University's growing capacity to attract competitive funding.

The University remains committed to expanding its research portfolio through strategic partnerships, multidisciplinary collaborations, and increased participation in national and international funding opportunities.

8.7 Research Funding Analysis

Analysis of funding trends indicates:

- Continued institutional commitment to sustainability research.
- Growth in interdisciplinary research proposals.
- Increased collaboration with external funding agencies.
- Greater emphasis on healthcare and SDG-related research.
- Strengthened research support through ORIC.

Future priorities include diversifying funding sources, enhancing grant-writing capacity, and increasing participation in international research consortia.

8.6.1 ORIC-Verified Research Funding, 2024–2025

VERIFIED SOURCE: ORIC Annual Report 2024–2025

The Office of Research, Innovation and Commercialization (ORIC) Annual Report 2024–2025 provides the University's most recently verified research funding breakdown, summarised below.

Funding Category	Amount (PKR)
International	26,364,336
National	5,564,143
Clinical Trial Unit (CTU)	348,364,452
Total Research Funding	590,562,960



Projects Won

National

NIH (Health Research Institute, National Institutes of Health Islamabad)

-Dr. Amna Aamir Khan, Associate Professor at the College of Physical Therapy, has been awarded the NIH Pakistan Grant for her project titled “Empowering Children with CP: A Goal-Oriented GMFM-based Program on Enhancing Gross Motor Function, Balance, and Quality of Life,” securing a total funding of PKR 3,16,910. This project aims to implement a goal-oriented, GMFM-based program designed to improve gross motor function, balance, and overall quality of life for children with cerebral palsy. This initiative will contribute significantly to advancing pediatric rehabilitation and enhancing the well-being of children with CP in Pakistan.

Mr. Shahzad Bashir, Associate Professor at the Faculty of Nursing and Midwifery (ZUFONAM), has been awarded the prestigious NIH Pakistan Grant of PKR 3,000,000 for his groundbreaking project titled “Mobile Health Intervention for Heart Failure Patients in Pakistan.” This initiative aims to implement innovative mobile health solutions to enhance self-care capabilities, improve the quality of life for heart failure patients, and significantly advance healthcare delivery while reducing hospital readmissions. This achievement highlights the transformative potential of innovative interventions in addressing critical healthcare challenges in Pakistan and beyond.

International

Clinical Research During Outbreaks Funded by the University of Oxford

Prof. Dr. Madiha Hashmi, Chair of the Department of Critical Care Medicine, has been awarded a prestigious grant of £112,633 for her project titled “Clinical Research During Outbreaks (CREDO)”, funded by the University of Oxford. The initiative focuses on enhancing clinical research capacity during outbreaks through targeted training, aiming to improve healthcare delivery and research outcomes in resource-limited settings. This funding will support the development and delivery of the CREDO training program. This achievement highlights the significant role of international collaboration in advancing clinical research and healthcare preparedness, particularly in the context of emerging infectious diseases.

ORIC Research and Innovation — Projects Won, 2024–2025 (source: ORIC Annual Report 2024–2025)

Data transparency note: the International, National and Clinical Trial Unit figures above are reproduced exactly as published in the ORIC Annual Report 2024–2025. Their sum does not reconcile with the reported Total Research Funding figure, and a number of internationally funded projects (denominated in GBP, USD, AUD and SGD; listed below) are reported separately in the source document. This inconsistency is flagged here for verification with ORIC rather than estimated or reconciled.

8.6.2 Major Externally Funded Projects, 2024–2025

Selected grants awarded to Ziauddin University researchers during 2024–2025, as reported by ORIC:

- **NIH Pakistan Grant:** Dr Amna Aamir Khan (College of Physical Therapy) — “Empowering Children with CP: A Goal-Oriented GMFM-based Program” — PKR 316,910
- **NIH Pakistan Grant:** Mr Shahzad Bashir (ZUFONAM) — “Mobile Health Intervention for Heart Failure Patients in Pakistan” — PKR 3,000,000
- **University of Oxford:** Prof. Dr Madiha Hashmi — “Clinical Research During Outbreaks (CREDO)” — £112,633
- **University of Oxford:** Prof. Dr Madiha Hashmi — “ISARIC Project Management” — £142,319
- **FCDO / University of Oxford:** Prof. Dr Madiha Hashmi — “Maturity Metrics” — £19,553
- **WHO / University of Oxford:** Prof. Dr Madiha Hashmi — “Technical Development and Country Pilot (TMF)” — £7,792
- **University of Oxford:** Prof. Dr Madiha Hashmi — “WHO Maturity Framework APW for Clinical Trials Units” — £3,564
- **Bill & Melinda Gates Foundation / Oxford:** Prof. Dr Madiha Hashmi — Acute Respiratory Infection Consortium — \$153,124
- **Monash University (ANZIC-RC):** Prof. Dr Madiha Hashmi — “REMAP-CAP Acquired Pneumonia” — AUD 11,675
- **National University of Singapore:** Prof. Dr Osama Rehman Khalid — “ACORN-HAI Variation” — SGD 7,315
- **University of Edinburgh:** Prof. Dr Madiha Hashmi — “GENOMICC Variation” — £43,297.50

Contract Research: a further agreement between Management and Development Centre (Pvt.) Ltd (MDC) and the College of Education (PKR 420,000) supports capacity building for the Sindh Teacher Education Development Authority (STEDA) and the Provincial Institute of Teacher Education (PITE).

Ongoing institutional research projects reported by ORIC for 2024–2025 include: NRPU-5, NIH-6, PSF-ZU-Med-554, TMF, Maturity Matrix, WHO APW 2, CREDO, ISARIC PM, ACORN HAI Variation, MegaRox, REMAP CAP AP, GATES-ACUTE, Financial Literacy, GENOMICC Extension, PPIE Wellcome, PPIE FCDO, BioMed 5.0, and ISARIC IPOP.

8.8 Innovation and Commercialization

Innovation is encouraged through the translation of research findings into products, services, technologies, and policies that benefit society.

The University's commercialization strategy focuses on:

- Intellectual property development.
- Technology transfer.
- Industry partnerships.
- Research commercialization.

- Entrepreneurship support.
- Innovation capacity building.

ORIC provides guidance to researchers on intellectual property protection, commercialization pathways, and collaboration with industry.

8.9 Intellectual Property Management

The University supports the protection and responsible management of intellectual property generated through research and innovation.

Institutional mechanisms include:

- Identification of potentially patentable innovations.
- Intellectual property awareness programmes.
- Support for patent filing and licensing.
- Confidentiality and disclosure procedures.
- Collaboration agreements with industry and research partners.

Effective intellectual property management encourages innovation while safeguarding the interests of researchers and the institution.

8.9.1 Patents Filed by Ziauddin University, 2024–2025

VERIFIED SOURCE: ORIC Annual Report 2024–2025

Two patent applications were filed by Ziauddin University researchers during the reporting period:

Category	Patent Application 1	Patent Application 2
Patent Title	Mobile Health Application	Glipad ACRO
Applicant(s)	Shahzad Bashir, Prof. Dr Yasmin Amarsi, Prof. Dr Saad Jawaid Khan, Danyal Talpur	Muhammad Ather Hashmi, Muhammad Abid Khan
Filed Date	5 November 2024	12 November 2024
Purpose	Improve self-care ability and quality of life for heart failure patients	Reduce pain during acromioclavicular joint mobilization therapy
Technology Used	Mobile app, Bluetooth wristband for vital-sign monitoring, BioBERT-based chatbot	EVA foam, ergonomic design for therapy comfort
Patent Application No.	227/2025	226/2025



Patents filed by ZU, 2024–2025 (source: ORIC Annual Report 2024–2025)

8.10 Research Collaboration

Collaboration strengthens research quality, expands expertise, and increases the societal impact of research outcomes.

The University collaborates with:

- National universities.
- International higher education institutions.
- Healthcare organizations.
- Government agencies.
- Industry partners.
- Professional associations.
- Non-governmental organizations.

Collaborative research promotes interdisciplinary knowledge exchange and supports global engagement.

8.11 Student Research

Student participation in research is encouraged at undergraduate, postgraduate, and doctoral levels.

Opportunities include:

- Research projects.
- Thesis and dissertation work.
- Clinical research.
- Laboratory investigations.
- Community-based research.
- Scientific conferences.
- Research publications.

These experiences develop critical thinking, analytical skills, and professional competencies while fostering a culture of inquiry and innovation.

8.12 Knowledge Transfer and Community Impact

Research outcomes are disseminated through multiple channels to maximize societal benefit.

Knowledge transfer mechanisms include:

- Scientific publications.
- Conferences and seminars.
- Community education programmes.
- Clinical practice improvements.
- Policy recommendations.
- Industry partnerships.
- Professional training programmes.

The University seeks to ensure that research findings inform practice, influence policy, and improve community well-being.

8.13 Research Performance Indicators

To monitor progress, the University tracks:

Indicator	Reporting Frequency
Research publications	Annual
Research grants awarded	Annual
Sustainability research funding	Annual
Active research projects	Annual
Research collaborations	Annual
Student research participation	Annual
Innovation and commercialization initiatives	Annual
Intellectual property outputs	Annual

8.14 Future Priorities (2026–2030)

The University aims to:

- Increase externally funded research projects.
- Expand sustainability-focused research programmes.
- Strengthen interdisciplinary collaboration.
- Enhance innovation and commercialization capacity.
- Increase research publications in high-impact journals.
- Foster international research partnerships.
- Support early-career researchers and graduate students.
- Improve research data management and reporting systems.

8.15 SDG Alignment

Research and innovation contribute directly to:

SDG 3 – Good Health and Well-being

SDG 4 – Quality Education

SDG 6 – Clean Water and Sanitation

SDG 7 – Affordable and Clean Energy

SDG 9 – Industry, Innovation and Infrastructure

SDG 11 – Sustainable Cities and Communities

SDG 13 – Climate Action

SDG 17 – Partnerships for the Goals

8.16 Conclusion

Research, innovation, commercialization, and knowledge transfer are integral to Ziauddin University's contribution to sustainable development. Through a robust governance framework, strategic investment in research capacity, and a commitment to interdisciplinary collaboration, the University generates knowledge that addresses critical societal challenges and supports evidence-based decision-making.

By strengthening research funding, fostering innovation, and expanding national and international collaborations, Ziauddin University continues to enhance its impact on healthcare, education, industry, and community development while advancing the Sustainable Development Goals.

CHAPTER 9

Governance, Ethics, Quality Assurance and Institutional Integrity



9.1 Introduction

Effective governance is the foundation upon which sustainable universities are built. Strong governance systems ensure that institutional decisions are transparent, accountable, ethical, inclusive, and aligned with long-term strategic objectives.

For Ziauddin University, governance extends beyond statutory compliance. It encompasses ethical leadership, evidence-based decision-making, quality assurance, stakeholder engagement, institutional accountability, and continuous improvement. Through well-defined governance structures and quality management systems, the University seeks to strengthen public trust while enhancing academic excellence, healthcare quality, research performance, and operational sustainability.

This chapter outlines the University's governance framework, ethical principles, quality assurance mechanisms, and institutional practices that support sustainable development and responsible management.

9.2 Governance Framework

Ziauddin University operates through a governance framework that clearly defines responsibilities, authority, and accountability at all levels of the institution.

The governance structure supports:

- Strategic leadership.
- Academic excellence.
- Financial stewardship.
- Institutional transparency.
- Risk management.
- Regulatory compliance.
- Sustainable decision-making.

The University's governance framework enables effective coordination between academic leadership, administrative departments, teaching hospitals, research offices, and statutory bodies.

9.3 Institutional Leadership

Strategic leadership is provided through a structured system that ensures institutional stability and long-term development.

Board of Governors

The Board of Governors provides strategic oversight, approves institutional policies, monitors performance, and ensures that the University's activities remain aligned with its mission, vision, and legal obligations.

Chancellor

The Chancellor provides overall institutional leadership, supports strategic growth, and promotes the University's commitment to education, healthcare, research, and sustainable development.

Vice Chancellor

The Vice Chancellor serves as the University's chief executive officer, providing academic and administrative leadership, implementing strategic priorities, and fostering a culture of excellence, innovation, and accountability.

Senior Management

Senior management oversees the implementation of institutional strategies, resource allocation, operational effectiveness, and performance monitoring across academic and administrative units.

9.4 Institutional Governance Principles

The University's governance system is guided by the following principles:

- Integrity.
- Transparency.
- Accountability.
- Participation.
- Fairness.
- Academic freedom.
- Evidence-based decision-making.
- Respect for diversity.
- Continuous improvement.

These principles support responsible institutional management and contribute to stakeholder confidence.

9.5 Ethical Governance

Ethical conduct is fundamental to all institutional activities.

The University promotes ethics through:

- Codes of conduct for employees and students.
- Research ethics policies.
- Professional ethics in healthcare.
- Academic integrity.
- Responsible use of institutional resources.
- Confidentiality and data protection.
- Conflict of interest management.

Ethical governance strengthens institutional credibility while supporting responsible teaching, research, and healthcare delivery.

9.6 Quality Assurance Framework

Quality assurance is embedded throughout the University's academic and administrative processes.

The Quality Enhancement Cell (QEC) coordinates institutional quality assurance activities in accordance with national regulatory requirements and international best practices.

Major functions include:

- Programme evaluation.
- Self-assessment reporting.
- Institutional performance monitoring.
- Academic review.
- Continuous quality improvement.
- Accreditation support.
- Student feedback analysis.
- Institutional benchmarking.

Quality assurance ensures that academic programmes, research, healthcare services, and administrative functions maintain high standards of performance.

9.7 Continuous Quality Improvement

Continuous improvement is achieved through systematic monitoring, evaluation, and feedback.

Improvement mechanisms include:

- Annual performance reviews.
- Programme self-assessment.
- Internal quality audits.
- External accreditation reviews.
- Student evaluations.
- Graduate feedback.
- Employer feedback.
- Strategic planning reviews.

The results of these processes inform policy revisions, curriculum enhancement, and institutional planning.

9.8 Risk Management

Risk management supports institutional sustainability by identifying, assessing, and mitigating risks that may affect academic, operational, financial, healthcare, or research activities.

Key risk categories include:

- Strategic risks.
- Academic risks.
- Clinical risks.
- Financial risks.

- Information security risks.
- Environmental risks.
- Legal and regulatory risks.
- Reputational risks.

Risk assessments are incorporated into planning processes to strengthen institutional resilience.

9.9 Regulatory Compliance

The University is committed to compliance with applicable national laws, higher education regulations, accreditation standards, and professional requirements.

Compliance activities include:

- Academic programme accreditation.
- Quality assurance reporting.
- Financial governance.
- Healthcare regulations.
- Occupational health and safety.
- Research ethics approval.
- Data protection requirements.

Compliance supports institutional accountability and public confidence.

9.10 Transparency and Accountability

Transparency is promoted through:

- Published institutional policies.
- Annual reports.
- Financial oversight.
- Performance monitoring.
- Stakeholder consultation.
- Internal reporting mechanisms.
- External audits.

Accountability is reinforced through clearly defined responsibilities, documented procedures, and regular institutional review.

9.11 Stakeholder Participation

Effective governance requires active engagement with stakeholders.

The University encourages participation from:

- Students.
- Faculty members.
- Administrative staff.
- Alumni.

- Healthcare professionals.
- Industry partners.
- Government agencies.
- Professional councils.
- Community representatives.

Stakeholder input informs strategic planning, curriculum development, quality assurance, and sustainability initiatives.

9.12 Digital Governance

Digital technologies enhance institutional governance through improved efficiency, transparency, and data management.

Key initiatives include:

- Electronic document management.
- Online approval systems.
- Learning management platforms.
- Digital quality assurance processes.
- Electronic meeting management.
- Institutional performance dashboards.
- Data analytics for decision-making.

Digital governance supports operational excellence while reducing paper consumption and administrative delays.

9.13 Quality Assurance Achievements

During the reporting period, the University continued to strengthen its quality assurance systems through:

- Programme reviews and curriculum enhancement.
- Faculty development initiatives.
- Institutional performance monitoring.
- Continuous improvement planning.
- Preparation for accreditation and ranking exercises.
- Enhanced sustainability reporting.

These achievements demonstrate the University's commitment to maintaining high academic and institutional standards.

9.14 Governance Performance Indicators

The University monitors governance performance through indicators such as:

Indicator	Reporting Frequency
Institutional policy reviews	Annual
Programme evaluations completed	Annual

Accreditation activities	Annual
Quality improvement initiatives	Annual
Risk assessments conducted	Annual
Stakeholder engagement activities	Annual
Governance committee meetings	Annual
Sustainability reporting progress	Annual

These indicators enable continuous monitoring and informed decision-making.

9.15 Future Priorities (2026–2030)

To further strengthen governance and institutional integrity, the University aims to:

- Enhance integrated governance across academic, clinical, and administrative units.
- Expand digital governance systems and institutional dashboards.
- Strengthen enterprise risk management and business continuity planning.
- Increase stakeholder participation in policy development and institutional review.
- Advance ethics training for faculty, staff, researchers, and students.
- Improve sustainability data governance and assurance processes.
- Align institutional policies with evolving HEC guidelines and international quality standards.
- Strengthen internal audit and performance evaluation mechanisms.

9.16 Alignment with Sustainable Development Goals

The University's governance framework contributes directly to:

SDG 4 – Quality Education

SDG 8 – Decent Work and Economic Growth

SDG 9 – Industry, Innovation and Infrastructure

SDG 10 – Reduced Inequalities

SDG 16 – Peace, Justice and Strong Institutions

SDG 17 – Partnerships for the Goals

Through ethical leadership, transparency, accountability, and quality assurance, the University reinforces institutional resilience and public trust.

9.17 Conclusion

Strong governance is essential for achieving sustainable institutional growth. Ziauddin University's governance framework integrates ethical leadership, quality assurance, risk management, stakeholder engagement, and continuous improvement into every aspect of its operations.

By maintaining high standards of accountability and institutional integrity, the University ensures that its academic, research, healthcare, and administrative functions remain responsive to stakeholder expectations and

aligned with national and international best practices. These governance systems provide the foundation for long-term sustainability, organizational resilience, and excellence.

CHAPTER 10

Partnerships, Internationalization and Global Engagement



10.1 Introduction

Sustainable development requires collaboration across institutions, disciplines, sectors, and national boundaries. Universities cannot achieve meaningful societal impact in isolation; rather, they must work in partnership with governments, industry, healthcare organizations, civil society, international agencies, alumni, and local communities.

Ziauddin University recognizes partnerships as a strategic enabler of academic excellence, healthcare innovation, research productivity, institutional capacity building, and sustainable development. Through collaborative initiatives, the University expands educational opportunities, strengthens research, improves healthcare delivery, and contributes to national and global development priorities.

This chapter demonstrates how partnerships support SDG 17 – Partnerships for the Goals, while also reinforcing the University's mission of creating knowledge that benefits society.

10.2 Strategic Importance of Partnerships

Institutional partnerships contribute to sustainable development by:

- Enhancing educational quality.
- Expanding research opportunities.
- Facilitating knowledge exchange.
- Strengthening healthcare services.
- Promoting innovation and entrepreneurship.
- Supporting faculty and student mobility.
- Increasing international visibility.
- Improving institutional capacity.

Partnerships also strengthen resilience by enabling the University to share expertise, infrastructure, and resources with national and international collaborators.

10.3 Institutional Partnership Framework

The University's partnership framework is guided by principles of:

- Mutual benefit.
- Academic excellence.
- Transparency.
- Ethical collaboration.
- Shared responsibility.

- Innovation.
- Long-term sustainability.
- Respect for cultural diversity.

All strategic collaborations are evaluated to ensure alignment with the University's mission, strategic plan, and sustainability objectives.

10.4 National Partnerships

Ziauddin University collaborates extensively with organizations across Pakistan to support education, healthcare, research, and community development.

Key areas of collaboration include:

- Higher education institutions.
- Government ministries and departments.
- Professional councils.
- Healthcare organizations.
- Teaching hospitals.
- Research institutes.
- Public health agencies.
- Industry partners.
- Professional associations.

These collaborations support curriculum enhancement, faculty development, clinical education, applied research, and policy engagement.

10.4.1 Verified Institutional Linkages (ORIC International and Sustainability Offices)

VERIFIED SOURCE: ORIC Annual Report 2024–2025

ORIC's International Office and Linkages & Outreach team report 11 active international collaborations, including Francisk Skorina Gomel State University, Karabük University, IQVIA, ATEA Pharmaceutical, Yisheng Biopharma, Huahui Health Limited, Biocad, DRK Pharma, ORCI Trials, Matrix, and Vanar. A further 14 national collaborations are reported, including the Archives of Management and Social Sciences, the Disability Welfare Association, Greenstar Social Marketing, the Pakistan Occupational Therapy Association, and the Department of Empowerment of Persons with Disability, among others.

Grant writing session

A focused grant writing session was conducted in the Public Health Department to enhance research proposal development skills. Faculty members actively participated, learning strategies to craft competitive grant applications. The session aimed to boost research funding opportunities and collaborative initiatives.



Extract from ORIC's national collaborations register (source: ORIC Annual Report 2024–2025)

10.9.1 Departmental Spotlight: Industry MoUs, Department of Civil Engineering

CASE STUDY — VERIFIED SOURCE: DCE Sustainability Report 2025

At the college level, the Department of Civil Engineering signed Memoranda of Understanding with Grow Safe (Private) Limited (GSPL) on 9 January 2025, and with Osmani & Company (Pvt.) Ltd. on 22 July 2024. Both partnerships focus on Health, Safety and Environment (HSE) practice, internship and placement pathways, and joint research and training, and are targeted to SDG 4, 8, 9, 11, 13 and 17.



MoU signing ceremony, Department of Civil Engineering and Grow Safe (Pvt.) Ltd., 9 January 2025

10.5 Internationalization Strategy

Internationalization is an important component of the University's long-term vision. Through global engagement, Ziauddin University seeks to enhance educational quality, expand research collaborations, and prepare graduates for an increasingly interconnected world.

Strategic objectives include:

- Expanding international academic partnerships.
- Promoting student and faculty exchange.
- Increasing collaborative research.
- Enhancing international visibility.
- Encouraging intercultural learning.
- Strengthening global healthcare partnerships.

Internationalization enriches the academic environment while promoting innovation and cross-cultural understanding.

10.6 Academic Exchange and Mobility

Academic mobility provides opportunities for students and faculty to engage with diverse educational systems and research environments.

The University encourages:

- Student exchange programmes.
- Faculty exchange initiatives.
- Visiting scholars.
- Joint academic activities.
- International conferences.
- Collaborative teaching.
- Virtual academic exchange.

These initiatives strengthen institutional capacity and contribute to the internationalization of higher education.

10.7 Research Collaboration

Research partnerships enhance scientific quality and facilitate interdisciplinary approaches to complex challenges.

Collaborative research activities include:

- Joint research projects.
- Multi-institutional studies.
- Shared laboratory resources.
- Collaborative grant applications.
- Scientific publications.
- International research networks.
- Capacity-building initiatives.

These collaborations contribute to the University's research impact while supporting evidence-based solutions to national and global challenges.

10.8 Healthcare Partnerships

As a healthcare-focused institution, Ziauddin University maintains strategic partnerships that improve clinical education, healthcare delivery, and public health outcomes.

Collaborative activities include:

- Clinical training.
- Specialized healthcare services.
- Public health campaigns.
- Continuing medical education.
- Healthcare quality improvement.
- Disease prevention initiatives.
- Community health programmes.

These partnerships strengthen patient care while enhancing practical learning opportunities for students.

10.9 Industry Collaboration

Industry partnerships bridge the gap between academia and professional practice.

Key areas of collaboration include:

- Internship programmes.
- Graduate employment.
- Curriculum development.
- Applied research.
- Innovation projects.
- Technology transfer.
- Entrepreneurship initiatives.

These collaborations help ensure that graduates possess the competencies required by evolving labour markets.

10.10 Community Partnerships

Community engagement remains central to the University's mission.

The University collaborates with:

- Community organizations.
- Schools.
- Non-governmental organizations.
- Public health agencies.
- Local authorities.
- Community leaders.
- Charitable organizations.

Partnerships support:

- Health education.
- Medical outreach.
- Community-based research.
- Volunteer services.
- Educational programmes.
- Social development initiatives.

These collaborations strengthen community resilience and improve public well-being.

10.11 Alumni Engagement

The University's alumni represent an important network of professionals contributing to healthcare, education, research, business, public service, and community development.

The University promotes alumni engagement through:

- Professional networking.
- Mentorship programmes.
- Continuing education.
- Alumni events.
- Career development activities.
- Philanthropic initiatives.
- Student mentoring.

Active alumni participation strengthens institutional development and enhances graduate success.

10.12 Global Citizenship

The University seeks to develop graduates who understand global challenges and contribute responsibly to society.

Educational initiatives promote:

- Ethical leadership.
- Cultural competence.
- Human rights awareness.
- Environmental responsibility.
- Social responsibility.
- Sustainable healthcare.
- International perspectives.

These competencies prepare graduates to work effectively in multicultural and international environments.

10.13 Partnership Performance Indicators

To monitor progress, the University tracks:

Indicator	Reporting Frequency
Active institutional partnerships	Annual
National collaborations	Annual
International collaborations	Annual
Joint research projects	Annual
Student exchange activities	Annual
Faculty mobility initiatives	Annual
Community partnership programmes	Annual
Industry engagement activities	Annual

10.14 Future Priorities (2026–2030)

The University aims to:

- Expand strategic international partnerships.
- Increase participation in global research networks.
- Strengthen industry collaboration and innovation ecosystems.
- Develop additional dual-degree and joint academic initiatives.
- Increase student and faculty mobility opportunities.
- Enhance digital internationalization through virtual exchange programmes.
- Strengthen partnerships supporting the Sustainable Development Goals.
- Increase collaborative funding opportunities with national and international agencies.

10.15 Alignment with the Sustainable Development Goals

The University's partnership strategy contributes directly to:

SDG 3 – Good Health and Well-being

SDG 4 – Quality Education

SDG 8 – Decent Work and Economic Growth**SDG 9 – Industry, Innovation and Infrastructure****SDG 10 – Reduced Inequalities****SDG 11 – Sustainable Cities and Communities****SDG 16 – Peace, Justice and Strong Institutions****SDG 17 – Partnerships for the Goals**

By strengthening collaborative networks across academia, healthcare, government, industry, and civil society, the University enhances its capacity to deliver meaningful and lasting contributions to sustainable development.

10.16 Conclusion

Partnerships are essential to achieving Ziauddin University's strategic objectives and maximizing its societal impact. Through strong national and international collaborations, the University enhances education, research, healthcare, innovation, and community engagement while advancing the Sustainable Development Goals.

As global challenges become increasingly interconnected, the University remains committed to fostering partnerships that generate shared knowledge, build institutional capacity, and create sustainable solutions for future generations.

CHAPTER 11

Sustainable Healthcare, Clinical Excellence and Public Health Impact



11.1 Introduction

Healthcare is central to Ziauddin University's identity and mission. As one of Pakistan's leading health sciences universities, the institution combines education, research, clinical practice, and community engagement to improve health outcomes and contribute to national development. Through its teaching hospitals, specialized clinics, diagnostic services, and public health initiatives, the University serves thousands of patients annually while preparing the next generation of healthcare professionals.

Sustainable healthcare extends beyond the delivery of medical services. It encompasses equitable access to care, patient safety, preventive medicine, responsible use of resources, workforce development, digital health, research, and community partnerships. Ziauddin University adopts a holistic approach that integrates these elements into a comprehensive healthcare ecosystem.

This chapter demonstrates the University's contribution to SDG 3 – Good Health and Well-being while highlighting its broader impact on education, research, innovation, and community welfare.

11.2 Sustainable Healthcare Framework

The University's healthcare strategy is guided by five interconnected principles:

- Patient-Centred Care – Delivering safe, high-quality, compassionate healthcare services.
- Clinical Excellence – Promoting evidence-based practice, continuous quality improvement, and professional competence.
- Education and Workforce Development – Preparing skilled healthcare professionals through integrated clinical education.
- Research and Innovation – Advancing medical knowledge and translating research into improved healthcare.
- Community Health – Extending healthcare services beyond the campus through outreach, awareness, and preventive programmes.

This framework aligns healthcare delivery with sustainable development and national health priorities.

11.3 Teaching Hospitals and Clinical Learning

The University's teaching hospitals are integral to its academic mission, providing a dynamic environment where education, patient care, and research intersect.

These facilities support:

- Undergraduate and postgraduate clinical education.
- Residency and specialist training.
- Clinical research.

- Interprofessional learning.
- Continuing professional development.
- Community healthcare services.

Students gain supervised clinical experience in diverse healthcare settings, enabling them to develop the competencies required for professional practice.

11.4 Patient-Centred Care

Patient-centred care is a core value of the University's healthcare system. Clinical services are designed to respect the dignity, preferences, and rights of every patient while promoting safe, effective, and compassionate care.

Key elements include:

- Respect for patient autonomy.
- Informed consent.
- Confidentiality and privacy.
- Effective communication.
- Multidisciplinary care.
- Evidence-based treatment.
- Continuous monitoring of service quality.

The University continually seeks to improve patient experiences through feedback mechanisms, staff development, and quality improvement initiatives.

11.5 Quality and Patient Safety

Ensuring patient safety is fundamental to sustainable healthcare. The University promotes a culture of safety through standardized clinical protocols, professional accountability, and continuous monitoring.

Key initiatives include:

- Infection prevention and control.
- Medication safety.
- Clinical risk management.
- Incident reporting and learning systems.
- Patient identification protocols.
- Safe surgical practices.
- Continuous quality audits.

These measures contribute to improved clinical outcomes and institutional learning.

11.6 Preventive Healthcare and Public Health

Recognizing that prevention is essential to sustainable health systems, the University actively promotes public health through education, awareness, and outreach.

Preventive initiatives include:

- Health screening programmes.
- Immunization awareness.
- Maternal and child health education.
- Nutrition and lifestyle counselling.
- Non-communicable disease awareness.
- Mental health promotion.
- Community health campaigns.

These programmes support healthier communities and reduce the long-term burden of preventable diseases.

11.7 Community Healthcare Outreach

Community outreach is a defining feature of the University's social responsibility.

Outreach activities may include:

- Medical camps.
- Free or subsidized health consultations.
- Health education seminars.
- School health programmes.
- Rural and underserved community initiatives.
- Women's health awareness campaigns.
- Oral health promotion.
- Vision and hearing screening.

These initiatives improve healthcare accessibility while providing valuable experiential learning opportunities for students.

11.8 Healthcare Workforce Development

Developing a competent healthcare workforce is essential for sustainable health systems.

The University contributes through:

- Undergraduate education.
- Postgraduate specialization.
- Continuing medical education (CME).
- Continuing professional development (CPD).
- Clinical simulation training.
- Interprofessional education.
- Faculty development.
- Leadership training.

These programmes ensure that graduates possess the knowledge, skills, and ethical values required to meet evolving healthcare needs.

11.9 Digital Health and Healthcare Innovation

Digital technologies are transforming healthcare delivery and education. Ziauddin University supports the adoption of digital health solutions to improve efficiency, accessibility, and quality of care.

Key areas include:

- Electronic health records.
- Telemedicine services.
- Digital diagnostic systems.
- Health information management.
- Clinical decision support tools.
- Online continuing medical education.
- Digital patient education resources.

The University will continue to evaluate emerging technologies that enhance patient care and support sustainable healthcare delivery.

11.10 Clinical Research and Innovation

Clinical research is essential for improving healthcare practice and advancing medical knowledge.

Research priorities include:

- Disease prevention and control.
- Clinical trials.
- Medical education research.
- Public health.
- Healthcare quality improvement.
- Biomedical innovation.
- Precision medicine.
- Digital health technologies.

Research findings contribute to evidence-based clinical practice, health policy, and innovation within the healthcare sector.

11.10.1 Clinical Trial Unit and Patient & Public Involvement

VERIFIED SOURCE: ORIC Annual Report 2024–2025

The Ziauddin University Clinical Trial Unit (CTU), established in 2022 and recognised by the Drug Regulatory Authority of Pakistan (DRAP), reports rapid participant recruitment across active trials, including 160 participants enrolled within one month for the Bouquet Speculum Trial and 303 patients recruited in under a month for the Rabies Trial, alongside the fastest national recruitment reported for a Hepatitis D trial. The CTU also established Pakistan's first Patient & Public Involvement and Engagement (PPIE) group and hosted the country's first PPIE Summit, bringing together patients, caregivers, researchers and healthcare professionals to embed co-creation and community voice in clinical research.



Pakistan's First Patient & Public Involvement and Engagement (PPIE) Summit, hosted by the Ziauddin University Clinical Trial Unit

11.11 Healthcare Sustainability

Healthcare institutions have a responsibility to minimize their environmental impact while maintaining high standards of patient care.

The University promotes sustainable healthcare through:

- Responsible waste management.
- Energy-efficient healthcare facilities.
- Water conservation.
- Sustainable procurement.
- Digital documentation.
- Environmental awareness among healthcare professionals.

These initiatives support both operational efficiency and environmental stewardship.

11.12 Healthcare Performance Indicators

The University monitors healthcare performance using indicators such as:

Indicator	Reporting Frequency
Clinical education programmes	Annual
Community outreach initiatives	Annual
Public health campaigns	Annual
Patient safety activities	Annual
Healthcare workforce development programmes	Annual
Clinical research projects	Annual
Quality improvement initiatives	Annual
Healthcare sustainability initiatives	Annual

These indicators enable continuous monitoring and support evidence-based improvement.

11.13 Future Priorities (2026–2030)

The University aims to:

- Expand community healthcare services in underserved areas.
- Strengthen preventive medicine and health promotion programmes.
- Enhance digital health infrastructure and telemedicine capabilities.
- Increase interdisciplinary clinical research.
- Advance patient safety and quality improvement initiatives.
- Integrate sustainability principles into healthcare operations.
- Develop future healthcare leaders through advanced clinical education and professional development.

11.14 Alignment with the Sustainable Development Goals

The University's healthcare activities contribute directly to:

SDG 3 – Good Health and Well-being

SDG 4 – Quality Education

SDG 5 – Gender Equality

SDG 6 – Clean Water and Sanitation

SDG 9 – Industry, Innovation and Infrastructure

SDG 10 – Reduced Inequalities

SDG 11 – Sustainable Cities and Communities

SDG 17 – Partnerships for the Goals

Healthcare services also indirectly support poverty reduction, improved productivity, and stronger community resilience.

11.15 Case Study: Integrating Education, Research and Patient Care

One of Ziauddin University's distinguishing characteristics is the integration of education, research, and healthcare delivery. Students participate in supervised clinical learning within teaching hospitals, faculty members conduct research that informs clinical practice, and patients benefit from evidence-based care delivered by multidisciplinary teams.

This integrated model strengthens graduate competencies, accelerates knowledge translation, and enhances healthcare outcomes while reinforcing the University's commitment to sustainable development.

11.16 Conclusion

Sustainable healthcare is a defining pillar of Ziauddin University's institutional strategy. By combining high-quality clinical services, professional education, innovative research, and meaningful community engagement, the University contributes significantly to improving health outcomes in Pakistan.

Its integrated healthcare ecosystem not only prepares competent healthcare professionals but also advances public health, supports evidence-based practice, and strengthens community well-being. As the University continues to invest in clinical excellence, digital health, and sustainable healthcare operations, it remains well positioned to contribute to national health priorities and the global Sustainable Development Goals.

PART IV

Strategic Performance

CHAPTER 12

Sustainability Performance, SDG Impact Assessment and Institutional Dashboard



12.1 Introduction

Performance measurement is fundamental to institutional sustainability. While policies and initiatives provide direction, measurable outcomes demonstrate progress, accountability, and continuous improvement.

Ziauddin University has established an integrated sustainability performance framework that evaluates institutional achievements across academic excellence, healthcare, research, environmental stewardship, governance, community engagement, and operational management. This framework supports strategic planning, evidence-based decision-making, and transparent reporting to internal and external stakeholders.

This chapter presents the University's performance through the lens of the 17 United Nations Sustainable Development Goals (SDGs), supported by institutional Key Performance Indicators (KPIs), governance mechanisms, and strategic priorities.

12.2 Institutional Sustainability Performance Framework

The University's Sustainability Performance Framework is built upon five interconnected dimensions:

1. Academic Sustainability

- Quality education
- Curriculum integration
- Student success
- Lifelong learning

2. Research and Innovation

- SDG-focused research
- Research funding
- Innovation and commercialization
- Knowledge transfer

3. Environmental Sustainability

- Energy management
- Carbon reduction
- Water stewardship
- Waste management
- Green infrastructure

4. Social Sustainability

- Healthcare
- Community engagement
- Employee well-being
- Diversity and inclusion
- Student welfare

5. Governance and Leadership

- Institutional governance
- Ethics
- Quality assurance
- Risk management
- Partnerships

These dimensions collectively reflect the University's holistic approach to sustainability.

12.3 SDG Impact Assessment

SDG 1 – No Poverty

Institutional Contributions

Ziauddin University contributes to poverty reduction by expanding access to higher education through scholarships, financial assistance, fee facilitation, and community development initiatives.

Key Activities

- Merit-based scholarships
- Need-based financial assistance
- Student support programmes
- Community empowerment initiatives
- Graduate employability

Impact Level: High

SDG 2 – Zero Hunger

The University supports nutrition education and public health initiatives that promote healthy lifestyles and food security awareness.

Key contributions include:

- Community nutrition education
- Maternal and child health programmes
- Clinical nutrition education
- Public awareness campaigns

Impact Level: Moderate

SDG 3 – Good Health and Well-being

Healthcare is one of the University's strongest sustainability pillars.

Major contributions include:

- Teaching hospitals
- Clinical education
- Community healthcare outreach
- Public health campaigns
- Preventive healthcare
- Medical research
- Healthcare workforce development

Impact Level: Very High

SDG 4 – Quality Education

Education remains the University's core mission.

Highlights include:

- Multidisciplinary academic programmes
- Approximately 910 sustainability-related courses
- Digital learning
- Curriculum modernization
- Faculty development
- Student-centred learning

Impact Level: Very High

SDG 5 – Gender Equality

Institutional policies promote:

- Equal opportunity
- Women's leadership
- Gender-inclusive education
- Safe campus environment
- Anti-harassment mechanisms

Impact Level: High

SDG 6 – Clean Water and Sanitation

Key initiatives include:

- Water conservation
- Responsible water management
- Sanitation infrastructure
- Water awareness campaigns

Impact Level: Moderate

SDG 7 – Affordable and Clean Energy

Progress includes:

- Energy efficiency initiatives
- LED lighting
- Preventive maintenance
- Renewable energy planning

Impact Level: Moderate

SDG 8 – Decent Work and Economic Growth

The University contributes through:

- Graduate employability
- Professional education
- Staff development
- Entrepreneurship
- Industry partnerships

Impact Level: High

SDG 9 – Industry, Innovation and Infrastructure

Institutional strengths include:

- Research commercialization
- ORIC initiatives
- Innovation support
- Industry collaboration
- Applied research

Impact Level: High

SDG 10 – Reduced Inequalities

Major initiatives include:

- Scholarships
- Inclusive education

- Accessibility
- Community outreach
- Student support services

Impact Level: High

SDG 11 – Sustainable Cities and Communities

The University contributes through:

- Community healthcare
- Public health education
- Green campus initiatives
- Urban health research

Impact Level: High

SDG 12 – Responsible Consumption and Production

Institutional achievements include:

- Waste segregation
- Recycling
- Paper reduction
- Digital transformation
- Sustainable procurement

Performance Highlight

Indicator	Previous	Current
Inorganic Waste (MT)	11.40	9.27

Reduction: 18.68%

Impact Level: High

SDG 13 – Climate Action

Climate initiatives include:

- Carbon footprint monitoring
- Energy efficiency
- Climate awareness
- Environmental education
- Green campus planning

Baseline Carbon Footprint

3,717.67 Metric Tonnes CO₂e

Impact Level: High

SDG 14 – Life Below Water

The University contributes indirectly through:

- Pollution awareness
- Environmental education
- Responsible waste management
- Public awareness activities

Impact Level: Emerging

SDG 15 – Life on Land

Key initiatives include:

- Tree plantation
- Campus landscaping
- Biodiversity awareness
- Green infrastructure

Impact Level: Moderate

SDG 16 – Peace, Justice and Strong Institutions

Supported through:

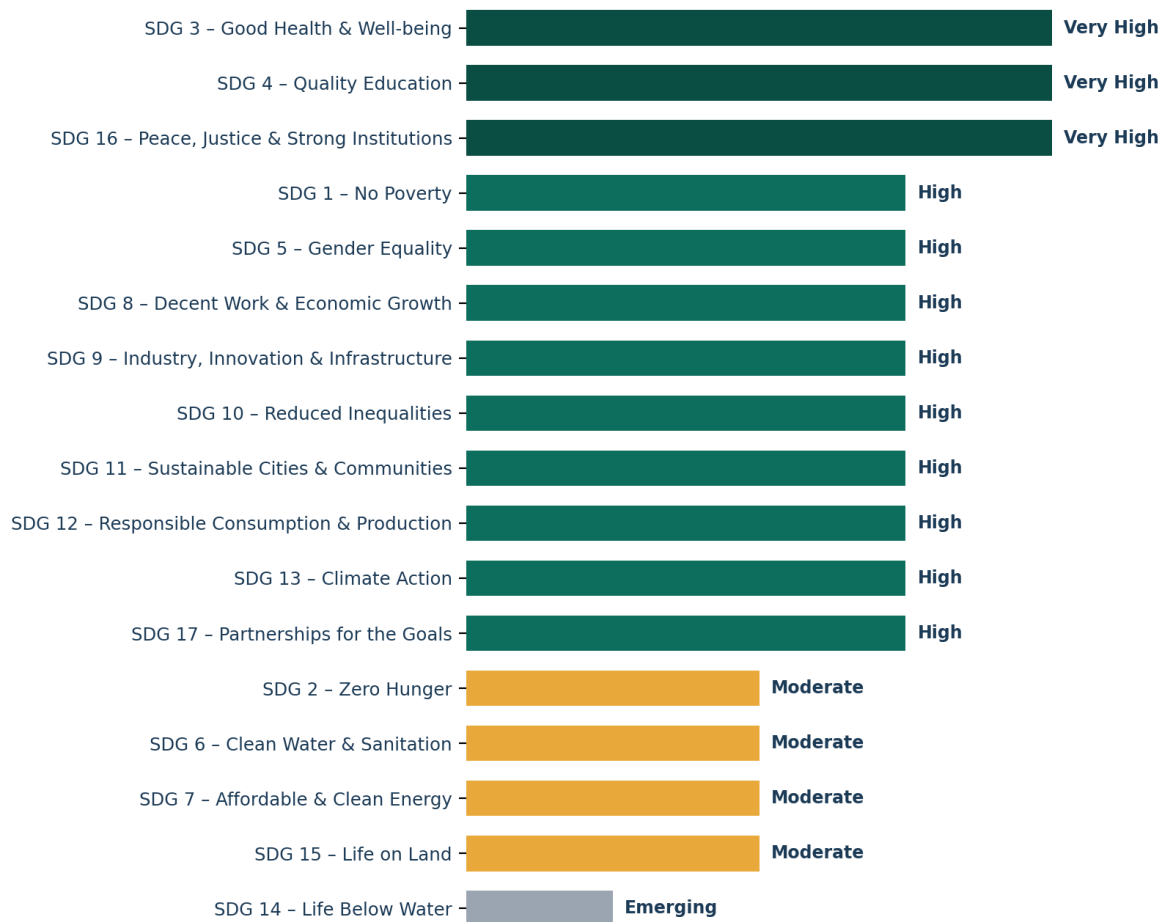
- Good governance
- Ethics
- Quality assurance
- Institutional transparency
- Academic integrity

Impact Level: Very High

SDG 17 – Partnerships for the Goals

Institutional collaboration includes:

- Academic partnerships
- Healthcare partnerships
- Research collaboration
- Industry engagement
- Community partnerships

Impact Level: High**SDG Impact Assessment — Institutional Contribution**

Institutional contribution level across the 17 Sustainable Development Goals

12.4 Sustainability Performance Dashboard

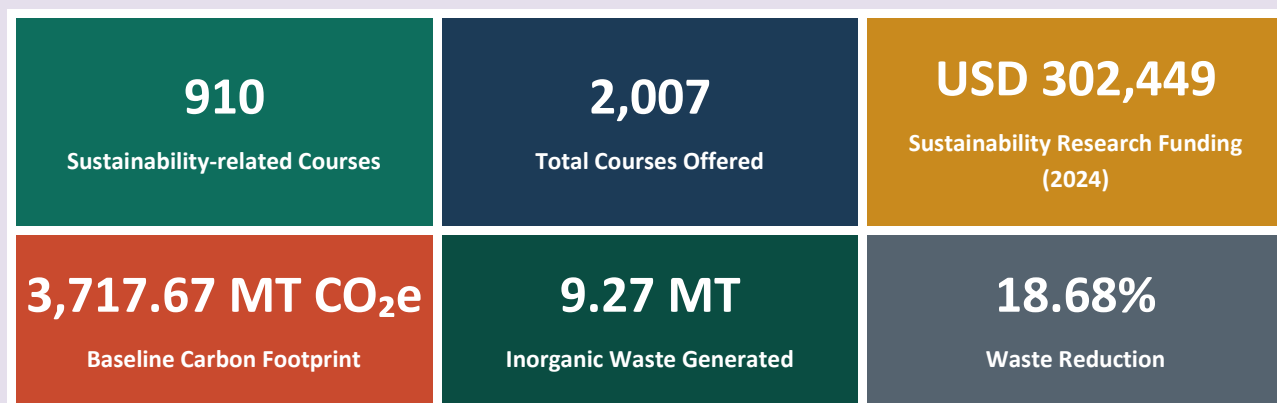
Performance Area	Status
Academic Sustainability	Excellent
Healthcare Sustainability	Excellent
Research and Innovation	Strong
Environmental Sustainability	Strong
Governance	Excellent
Community Engagement	Excellent
SDG Integration	Strong
Partnerships	Strong

Sustainability Performance Dashboard



Sustainability Performance Dashboard by focus area

12.5 Key Sustainability Indicators



These indicators provide a baseline for future monitoring and continuous improvement.

12.6 Institutional Strengths

The assessment highlights several institutional strengths:

- Integrated education, research, and healthcare model.
- Strong governance and quality assurance systems.
- Commitment to community engagement and public health.
- Expanding sustainability-focused curriculum.
- Growing research capacity.
- Comprehensive sustainability governance.
- Strategic alignment with the Sustainable Development Goals.

These strengths position the University favourably for national recognition and international benchmarking.

12.7 Areas for Further Development

To build on existing achievements, the University may focus on:

- Expanding renewable energy adoption.
- Strengthening sustainability data management.
- Enhancing greenhouse gas accounting.
- Increasing externally funded sustainability research.
- Improving biodiversity monitoring.
- Developing additional sustainability metrics.
- Expanding international sustainability partnerships.

These priorities will support continued institutional growth and strengthen future sustainability reporting.

12.8 Benchmarking Against International Frameworks

The University's sustainability framework demonstrates strong alignment with leading international assessment methodologies.

Framework	Alignment
United Nations SDGs	Comprehensive
HEC Pakistan Sustainability Initiatives	Strong
THE Impact Rankings	Strong
QS Sustainability Rankings	Strong
UI GreenMetric	Strong

Continued investment in data quality, evidence documentation, and performance monitoring will further enhance the University's competitiveness in these frameworks.

12.9 Strategic Recommendations

Based on the 2025–2026 assessment, the following strategic recommendations are proposed:

- Develop a university-wide Sustainability Office to coordinate implementation and reporting.
- Expand renewable energy and energy-efficiency projects across all campuses.
- Increase externally funded, interdisciplinary SDG-focused research.
- Implement an integrated digital sustainability data management system.
- Strengthen sustainability competencies across all academic programmes.
- Increase student participation in sustainability leadership initiatives.
- Enhance partnerships with industry, government, healthcare organizations, and international institutions.
- Publish an annual sustainability report with independently verified performance data where feasible.

12.10 Conclusion

The Sustainability Performance Assessment demonstrates that Ziauddin University has established a strong foundation for integrating sustainability into education, research, healthcare, governance, and community engagement. The University exhibits particular strengths in quality education, healthcare delivery, governance, and social responsibility while continuing to improve environmental performance and sustainability reporting.

Through sustained leadership commitment, stakeholder engagement, and evidence-based planning, the University is well positioned to enhance its national and international reputation as a leading institution contributing to the achievement of the Sustainable Development Goals.

CHAPTER 13

Sustainability Roadmap 2026–2030, Conclusions and Future Outlook



13.1 Introduction

Sustainability is an evolving journey requiring visionary leadership, continuous improvement, stakeholder collaboration, and evidence-based decision-making. The progress presented throughout this report demonstrates Ziauddin University's commitment to integrating sustainability into education, research, healthcare, governance, campus operations, and community engagement.

While significant achievements have been realized during the 2025–2026 reporting period, the University recognizes that sustainability is a long-term institutional commitment. The next phase will focus on strengthening governance, expanding measurable impact, improving environmental performance, accelerating digital transformation, and positioning Ziauddin University as a leading sustainable university in Pakistan and the region.

13.2 Sustainability Vision 2030

Vision Statement

"To be a nationally and internationally recognized university that advances sustainable development through excellence in education, healthcare, research, innovation, governance, environmental stewardship, and community engagement, creating lasting positive impacts for society and future generations."

This vision reinforces the University's commitment to responsible leadership and aligns institutional growth with the Sustainable Development Goals.

13.3 Strategic Sustainability Objectives (2026–2030)

The University will pursue the following strategic objectives over the next five years:

Objective 1: Excellence in Education

- Expand Education for Sustainable Development (ESD) across all programmes.
- Strengthen interdisciplinary learning.
- Enhance digital and blended education.
- Improve graduate employability and lifelong learning.

Objective 2: Research and Innovation

- Increase sustainability-focused research.
- Expand external research funding.
- Strengthen commercialization and innovation.
- Enhance interdisciplinary collaboration.

- Improve international research visibility.

Objective 3: Sustainable Healthcare

- Expand community healthcare outreach.
- Improve preventive healthcare initiatives.
- Enhance patient safety and quality systems.
- Strengthen digital health capabilities.
- Integrate sustainability into healthcare operations.

Objective 4: Environmental Stewardship

- Reduce greenhouse gas emissions.
- Improve energy efficiency.
- Expand renewable energy use.
- Strengthen water conservation.
- Increase waste recycling and circular economy initiatives.
- Enhance biodiversity across campuses.

Objective 5: Governance and Leadership

- Strengthen institutional sustainability governance.
- Improve sustainability reporting.
- Enhance stakeholder engagement.
- Expand sustainability performance monitoring.
- Strengthen institutional resilience.

13.4 Five-Year Sustainability Roadmap (2026–2030)

Strategic Area	2026	2027	2028	2029	2030
Sustainability Governance	•	•	•	•	•
SDG Curriculum Integration	•	•	•	•	•
Research Capacity	•	•	•	•	•
Renewable Energy Expansion	•	•	•	•	•
Water Conservation	•	•	•	•	•
Waste Reduction	•	•	•	•	•
Carbon Reduction	•	•	•	•	•
Healthcare Sustainability	•	•	•	•	•
Digital Transformation	•	•	•	•	•
International Partnerships	•	•	•	•	•

Legend: ● = Planned implementation and continuous enhancement.

13.5 Sustainability Action Plan

Strategic Priority	Key Actions	Expected Outcome
Governance	Strengthen sustainability governance structures and reporting	Improved accountability
Education	Increase sustainability integration in curricula	Graduates with enhanced sustainability competencies
Research	Expand SDG-focused research funding	Increased research impact
Environment	Implement energy and water conservation projects	Reduced environmental footprint
Healthcare	Enhance community outreach and preventive health programmes	Improved community well-being
Community	Expand partnerships and volunteer programmes	Stronger social impact
Operations	Improve sustainability data systems	Better monitoring and decision-making

13.6 Risk and Opportunity Matrix

Area	Key Risks	Opportunities
Climate Change	Increased operational costs	Energy efficiency and renewable energy
Research	Limited external funding	International collaborative grants
Education	Rapid technological change	Digital learning innovation
Healthcare	Increasing demand for services	Expansion of community healthcare
Governance	Evolving regulatory requirements	Enhanced institutional resilience
Partnerships	Global competition	International collaboration and funding

Managing these risks proactively will strengthen institutional resilience and support sustainable growth.

13.7 Sustainability Performance Targets (Illustrative)

To support continuous improvement, the University will work toward measurable long-term targets:

Indicator	Baseline (2025–2026)	2030 Direction
Sustainability-related courses	910	Increase through curriculum review
Sustainability research funding	USD 302,449 (2024)	Increase through competitive grants
Inorganic waste generated	9.27 MT	Progressive reduction
Carbon footprint	3,717.67 MT CO ₂ e	Progressive reduction
Renewable energy contribution	Baseline established	Increase where feasible
Community outreach initiatives	Annual reporting	Expand reach and impact

Progress will be monitored annually through institutional performance reviews.

13.8 Institutional Commitments

Ziauddin University commits to:

- Embedding sustainability in institutional planning.
- Strengthening sustainability governance.
- Expanding research addressing national and global challenges.
- Enhancing environmental stewardship across campuses.
- Promoting social inclusion and community engagement.
- Supporting transparency, accountability, and ethical leadership.
- Advancing quality education and sustainable healthcare.
- Contributing actively to the achievement of the Sustainable Development Goals.

13.9 Closing Statement

The Sustainability Report 2025–2026 reflects Ziauddin University's commitment to creating lasting value through education, research, healthcare, innovation, environmental stewardship, and responsible governance. It demonstrates that sustainability is not a standalone initiative but a guiding principle integrated into the University's strategic direction and daily operations.

As the institution moves forward, it will continue to build partnerships, embrace innovation, and strengthen evidence-based decision-making to enhance its contribution to society. Through collaborative efforts and continuous improvement, Ziauddin University is well positioned to support national priorities, contribute to global sustainability, and prepare future generations to address emerging challenges with knowledge, integrity, and compassion.

13.10 Acknowledgements

The preparation of this Sustainability Report reflects the collective efforts of academic leaders, faculty members, researchers, healthcare professionals, administrative staff, students, and external stakeholders who contributed information, expertise, and institutional support.

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- Compiled and Coordinated by: Muhammad Adnan Fuzail, Director, Quality Enhancement Cell (QEC)

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13.11 References

This report has been prepared with reference to:

- United Nations Sustainable Development Goals (SDGs)

- Higher Education Commission (HEC) Pakistan Quality Assurance Framework
- HEC Pakistan Sustainability and Institutional Performance Guidelines
- Times Higher Education (THE) Impact Rankings Methodology
- QS Sustainability Rankings Methodology
- UI GreenMetric World University Rankings Framework
- Ziauddin University Strategic Plan
- Ziauddin University Annual Reports
- Office of Research, Innovation and Commercialization (ORIC) Annual Reports
- Quality Enhancement Cell (QEC) institutional documentation
- Institutional policies, regulations, and verified operational records

13.12 Glossary (Selected Terms)

Term	Definition
ESG	Environmental, Social and Governance
ESD	Education for Sustainable Development
GRI	Global Reporting Initiative
HEC	Higher Education Commission of Pakistan
KPI	Key Performance Indicator
ORIC	Office of Research, Innovation and Commercialization
QEC	Quality Enhancement Cell
SDGs	Sustainable Development Goals
THE	Times Higher Education
UI GreenMetric	University sustainability ranking framework

13.13 Report Conclusion

The Ziauddin University Sustainability Report 2025–2026 presents a comprehensive account of the University's contributions to sustainable development across education, healthcare, research, environmental stewardship, governance, and community engagement.

The report demonstrates measurable progress in embedding sustainability into institutional policies and practices while identifying opportunities for further advancement. Through strategic planning, stakeholder collaboration, and a commitment to continuous improvement, Ziauddin University is strengthening its position as a leading institution dedicated to sustainable and inclusive development.

END OF REPORT

Overall Report Summary

The completed report comprises:

- Executive Summary
- Institutional Profile
- Sustainability Governance Framework
- 17 SDG Chapters
- Campus and Environmental Sustainability
- Energy and Carbon Management
- Water Stewardship
- Waste and Circular Economy
- Social Sustainability
- Education for Sustainable Development
- Research, Innovation, and ORIC
- Governance and Quality Assurance
- Partnerships and Internationalization
- Sustainable Healthcare
- Sustainability Performance Dashboard
- Five-Year Roadmap (2026–2030)
- References, Glossary, and Acknowledgements