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THE MALDIVES NATIONAL
UNIVERSITY

The Maldives National University Climate and Environment Research Framework 2025-2030

Advancing Research for a Resilient Maldives



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Executive Summary

Grounded in a strong academic tradition and supported by an active community of researchers and scholars, The Maldives National University (MNU) plays a leading role in advancing high-quality, impactful research that supports national and regional priorities.

As the leading institution for higher education and research in the country, MNU is uniquely positioned to generate knowledge and solutions that directly address the complex and urgent challenges facing the Maldives and other Small Island Developing States. This *Climate and Environment Research Framework* reflects MNU's growing leadership and outlines a structured approach to guide impactful, ethical, and inclusive research from 2025 to 2030.

The development of this framework involved an extensive planning and consultation process. It is aligned with MNU's [*Strategic Action Plan 2020-2025: Priorities for Excellence*](#), key national climate and environment policy and frameworks, and other relevant national and international commitments. Input was gathered through collaborative discussions with faculty, government partners, and international experts. The result is a forward-thinking and actionable framework rooted in national priorities and global best practices.

As reflected in this framework, MNU is committed to advancing climate and environmental research that is multidisciplinary, interdisciplinary, and transdisciplinary. This includes creating opportunities for collaboration across fields, drawing on both scientific and traditional knowledge, and engaging local and global stakeholders. It defines research priority areas that emerged through the consultative process, and it focuses on enhancing research quality, accessibility, innovation, and long-term impact.

The *Climate and Environment Research Framework* is structured around guiding principles, strategic goals, and clear implementation pathways. It provides a roadmap for how MNU will strengthen research capacity, build partnerships, support future researchers, and ensure that its work informs meaningful action. With a strong vision for the future, this framework positions MNU to lead in shaping sustainable, resilient futures for the Maldives and beyond.

Introduction

As the country's premier public university and an academic leader in the South Asian region, The Maldives National University (MNU) has built a strong reputation as a pioneering institution in research and scholarship. In recent years, MNU has undertaken a strategic shift toward becoming a research-focused university, grounded in academic excellence and collaborative impact.

During this time MNU has demonstrated leadership through diverse research outputs, successful collaborations with national government agencies—such as the Ministry of Tourism and Environment—and strategic partnerships with international academic institutions. MNU's expanding research portfolio, continued engagement with national partners, and strong linkages with global academic institutions underscore its capacity to address the pressing challenges of our time.

These strengths include the deep expertise of its faculty, the strategic leadership of the Research Development Office, delivery of successful climate and environment research initiatives, and a range of flagship events and publications—including the *Theveli International Conference* and the *Maldives National Journal of Research (MNJR)*—that together drive forward meaningful, solutions-oriented climate and environmental research.

Building on this foundation, the inaugural *Climate and Environmental Research Framework (2025)* provides strategic direction and operational tools to align MNU's research efforts with the University's mission and the broader objectives of its Strategic Action Plan (2020–2025). It acknowledges the scale, complexity, and urgency of the climate and environmental crises confronting the Maldives and the region—issues that demand an integrated, cross-disciplinary response.

The framework reinforces the University's commitment to high-quality, impactful research, while also fostering researcher development and cultivating a vibrant, inclusive research culture. It aligns with the Government of Maldives' climate and environmental targets outlined in the Third Nationally Determined Contribution (2025) and complements key national frameworks such as the Maldives National Gender Equality Action Plan (2022–2026).

Its goal is to accelerate and amplify the societal impact of research undertaken by MNU and its national and international partners, while ensuring continuity and integrity. To this end, the framework outlines clear goals, strategic objectives, and priority areas to support research that informs policy, empowers communities, and advances sustainable, resilient futures.

Ultimately, the framework reflects MNU's unwavering dedication to advancing research-driven solutions that address national priorities while also contributing to broader regional and global imperatives. Going forward MNU will continue to translate rigorous inquiry into real-world impact—shaping policies, empowering communities, and championing sustainable development across the Maldives and other island nations.

Planning Process

The development of the *Climate and Environment Research Framework* was a collaborative, university-wide initiative led by The Maldives National University's Research Development Office (RDO).

Rooted in MNU's Strategic Action Plan—which commits the University to fostering an institutional culture which recognizes and supports excellence in research and innovation, particularly in areas relevant to the Maldives—this framework responds to a growing need to strengthen institutional research systems and clarify strategic priorities. It also aims to enhance cross-faculty collaboration for climate and environmental sustainability research.

This first edition was co-developed by MNU and the Ministry of Tourism and Environment between September 2024 and June 2025, through an extensive process emphasizing alignment with national policy documents and MNU's strategic vision.

Beginning in October 2024, over 50 individuals participated in consultative interviews and focus groups. This included over 30 participants engaging in collaborative workshops and meetings in February 2025 focused on defining research priorities and principles. From March to May 2025, the draft framework was iteratively refined through validation sessions and internal reviews. Contributions came from a range of MNU faculties and offices—including senior management, academic, administrative, and research staff—as well as relevant departments within the Ministry. A final version of the framework was developed in June 2025.

MNU's Research Infrastructure

The Maldives National University's organizational structure for Research and Enterprise is designed to foster a collaborative environment that advances research excellence aligned with national development priorities. The RDO serves as the central unit responsible for supporting research activities across faculties and departments, facilitating proposal development and funding, and ensuring compliance with ethical and procedural standards.

The RDO plays a pivotal role in enhancing research capacity, encouraging innovation, and building meaningful partnerships with industry and communities. The Office's mandate is to cultivate an institutional culture of research excellence and innovation, particularly in areas relevant to the Maldives, such as climate change and environmental sustainability. It is committed to strengthening research capacity by improving infrastructure, systems, and skills, while promoting cross-faculty collaboration to formalize research priorities aligned with national development goals.

Guided by its mandate, the RDO, along with faculty and staff researchers from across the university, conduct research on critical social issues to inform evidence-based public policies. The RDO facilitates contract research initiatives to generate revenue, supports the development of research proposals, undertakes research administration activities, and ensures effective grant management and oversight of research ethics for major projects. Additionally, the Office also actively promotes and disseminates research outputs while providing support to postgraduate students. Overall, the RDO aims to elevate MNU's research profile, foster sustainable innovation, and position the university as a leader in addressing national and regional challenges through research and enterprise activities.

The *Climate and Environment Research Framework* integrates principles of equity, diversity, and inclusion to promote inclusive, equitable research practices in line with the Gender Equality Act (Law No. 18/2016). It also upholds MNU's Policy on the Ethical Conduct of Research, reinforcing integrity, accountability, and respect throughout the research process. By fostering interdisciplinary and transdisciplinary collaboration, the framework supports climate and environmental research across MNU's faculties and institutes. Through clear priorities and strategic guidance, it strengthens MNU's capacity to lead impactful, responsible, and ethical research that informs policy and addresses pressing societal challenges.

Guiding Principles

This framework establishes the guiding principles that underpin climate and environmental research at MNU. Rooted in MNU's core values, these principles ensure research is inclusive, collaborative, transparent, and evidence based. They align research practices with ethical standards, local relevance, and the pursuit of innovative, impactful solutions.



Accessibility

Reflecting MNU's commitment to inclusivity and equity, we ensure research outputs are accessible to all. By translating complex findings into clear, plain language, MNU makes research understandable and usable for diverse stakeholders, including youth, local communities, and vulnerable people.



Collaboration

Collaboration entails the collective effort of researchers, organizations, and local communities to share knowledge, resources, and expertise. MNU's research fosters interdisciplinary and multidisciplinary partnerships that drive innovative solutions and impactful actions for climate resilience and sustainability.



Evidence-based

Climate and environment research is grounded in the latest climate data, national reports, and scientific findings to ensure informed and reliable outcomes.



Inclusivity

Respecting and valuing diverse perspectives, research is guided by values of proportionality, openness, equitable participation, and cooperative engagement. This approach recognizes the importance of local and traditional knowledge systems and strives to ensure equity across diverse communities.



Innovation

Aligned with MNU's commitment to interdisciplinary and transdisciplinary approaches, innovation is fostered through the integration of diverse perspectives and methodologies. This enables novel, evidence-based solutions adaptable to varied community needs and challenges.



Responsibility

Building on MNU core values of self-discipline, personal responsibility, and respect for the law, research is conducted with accountability and a commitment to addressing climate change and environmental challenges ethically and responsibly. This aligns with MNU's broader commitment to social and ecological justice.



Transparency

Guided by MNU's commitment to honor, honesty, and integrity, climate change and environmental research is conducted ethically, transparently, and firmly rooted in scientific rigor. This commitment ensures that all research upholds the highest standards of integrity, with clear and open communication of methodologies and results.

Climate and Environmental Research

Vision and Mission

As the national institution of higher learning, MNU plays a pivotal role in advancing climate and environment research. Grounded in national priorities and global relevance, the vision and mission statements for climate and environment articulate MNU’s commitment to generating impactful knowledge, fostering collaboration, and driving sustainable solutions for the Maldives and other Small Island Developing States.

Vision Statement

The Maldives National University is globally recognized as a leading research institution dedicated to collaborative and interdisciplinary research that champions climate change resilience, environmental sustainability, and climate adaptation for Small Island Developing States.

Mission Statement

Our mission is to lead transformative climate and environmental research that strengthens the long-term resilience of the Maldives and other Small Island Developing States. We foster inclusive, interdisciplinary collaboration, drawing on Maldivian expertise—both within the university and across the nation—and partnering with international experts. By combining local, traditional, and scientific knowledge with accessible data practices, The Maldives National University drives innovative, evidence-based solutions to pressing environmental challenges. Our climate and environmental research is designed to empower communities, cultivate future generations of researchers, and advance decision-making to safeguard vulnerable island ecosystems.

Strategic Pillars, Goals, and Actions

The Strategic Pillars, Goals, and Actions form the foundation of the Climate and Environment Research Framework. Each Strategic Pillar is supported by specific Goals and Actions that collectively shape the direction of MNU’s climate and environment research.

Designed to be non-hierarchical, the Pillars operate synergistically and holistically to advance MNU’s institutional research priorities and its commitment to addressing climate and environmental challenges. They are also closely aligned with the guiding principles outlined earlier in this Framework.

Table 1: Climate and Environment Research Pillars and Goals

Pillar 1: Empower and Enable People

- **Goal 1.1:** Ensure MNU faculty and staff receive the **training and support** needed to lead climate and environment research that generates tangible benefits for the Maldives.
- **Goal 1.2:** Enhance training and support for **faculty supervising** student-led climate and environment research.
- **Goal 1.3:** Promote **gender equity and social inclusion** within climate and environment research.

Pillar 2: Strengthen Climate and Environment Research Capacity

- **Goal 2.1:** Expand **national and international funding** secured to advance MNU’s climate and environment research priorities.
- **Goal 2.2:** Maximize the impact of **internal grants and awards** aligned with climate and environment research priorities.
- **Goal 2.3:** Strengthen **data management systems** and **protocols** to improve the quality and accessibility of climate and environment research outputs.
- **Goal 2.4:** Enhance **coordination and integration** of climate and environment research activities across the university.
- **Goal 2.5:** Expand and enhance student and faculty access to **research facilities, materials and technology** that advance climate and environment research.

Pillar 3: Amplify Knowledge Sharing and Outreach

- **Goal 3.1: Disseminate climate and environment research outputs**—including events, opportunities, and resources—locally and nationally to island communities, partners, and key stakeholders.
- **Goal 3.2: Elevate MNU’s profile and visibility as a leader** in climate and environment research by celebrating and showcasing its outputs and impact at national and international levels.
- **Goal 3.3: Enhance knowledge mobilization and communication systems** to ensure research outputs effectively **inform policy and practical** climate adaptation and mitigation strategies.

Pillar 4: Expand and Cultivate Partnerships

- **Goal 4.1: Promote and facilitate interdisciplinary collaborations** university-wide in support of MNU’s climate and environment research priorities.
- **Goal 4.2: Support external and transdisciplinary research collaborations** that advance both MNU’s and the Government of Maldives’ climate and environment research priorities and commitments.
- **Goal 4.3: Support local islands** in fostering international collaborations through MNU.

Pillar 5: Foster Future Research Leaders

- **Goal 5.1: Attract, retain, and prepare** the next generation of researchers—particularly graduate students—for successful careers in climate and environmental research.
- **Goal 5.2: Expand opportunities for undergraduate students** to participate in faculty-led climate and environment research activities.
- **Goal 5.3: Enhance support for graduate and postdoctoral** research in climate and environment fields.

Pillar 1: Empower and Enable People

Goal 1.1: Ensure MNU faculty and staff receive the **training and support** needed to lead climate and environment research that generates tangible benefits for the Maldives.

- **Actions:**

- Host workshops with external experts on climate and environment topics.
- Facilitate internal grant-writing workshops featuring experienced faculty who present successful proposals and offer critical reflections on the factors contributing to their funding success.
- Provide opportunities for researchers to inspire sectoral stakeholders by arranging external events for knowledge mobilization.

Goal 1.2: Enhance training and support for **faculty supervising** student-led climate and environment research.

- **Actions:**

- Deliver regular training sessions to enhance faculty skills in supervising student research.
- Pursue co-supervision opportunities with external experts to enrich mentorship and expertise.

Goal 1.3: Promote **gender equity and social inclusion** within climate and environment research.

- **Actions:**

- Integrate equity and inclusion principles into the research framework and institutional goals.
- Increase participation in, and leadership opportunities for, underrepresented groups in climate and environmental research.
- Prioritize grants for research focused on gender equity and social inclusion.

Pillar 2: Strengthen Climate and Environment Research Capacity

Goal 2.1: Expand **national and international funding** secured to advance MNU's climate and environment research priorities.

- **Actions:**
 - Develop a climate and environment funding strategy.
 - Invest in fostering relationships with funding agencies that focus on topics outlined in the climate and environment framework.
 - Explore and identify relevant trends in funding to anticipate where donors are most likely to focus their investments.
 - Maintain communication with funders, especially government and large NGO partners, to align MNU's priorities with potential contract research opportunities.
 - Establish a designated MNU fund for climate and environmental sustainability research.

Goal 2.2: Maximize the impact of **internal grants and awards** aligned with climate and environment research priorities.

- **Actions:**
 - Feature projects in conferences and publications.
 - Feature climate and environment research communication in social media platforms and other media.
 - Align internal grant calls with specific priority areas in climate and environmental research.
 - Focus on awarding grants that scale and extend prior research in climate change and environmental sustainability.

Goal 2.3: Strengthen **data management systems** and **protocols** to improve the quality and accessibility of climate and environment research outputs.

- **Actions:**
 - Develop a data management policy.
 - Establish and implement standard operating procedures to ensure effective data management in line with the policy.

- o Develop a strategy to maintain accessibility of MNU-affiliated Maldivian-generated data within the Maldives.
- o Work jointly with stakeholders to establish data storage and access protocols.
- o Establish mechanisms to acquire data for a MNU data repository.

Goal 2.4: Enhance **coordination and integration** of climate and environment research activities across the university.

- **Actions:**

- o Convene researchers from all faculties, centres, and MNU campuses annually to foster collaboration and integration.
- o Standardize research-related documentation and forms university-wide.
- o Establish consistent data conventions across the university to ensure interoperability and coherence.

Goal 2.5: Expand and enhance student and faculty access to **research facilities, materials and technology** that advance climate and environment research.

- **Actions:**

- o Streamline supply procurement processes by offering targeted training and ongoing support.
- o Explore opportunities to develop innovative research hubs and collaborative spaces with private sector and international partners.

Pillar 3: Amplify Knowledge Sharing and Outreach

Goal 3.1: Disseminate climate and environment research outputs—including events, opportunities, and resources—locally and nationally to island communities, partners, and key stakeholders.

- **Actions:**
 - Develop a series of community-centered events and communication strategies—such as webinars, newsletters, and workshops—that showcase research findings and invite community input on research priorities.
 - Explore the establishment of a community committee representing local islands to meet (bi)annually to guide research direction and review outputs.
 - Organize biannual national stakeholder sessions to disseminate research findings.
 - Maintain active sharing of research updates via the MNU website and social media.

Goal 3.2: Elevate MNU's profile and visibility as a leader in climate and environment research by celebrating and showcasing its outputs and impact at national and international levels.

- **Actions:**
 - Implement targeted initiatives to enhance visibility with donors and key funding partners.
 - Increase faculty, staff, and student participation in international conferences to expand MNU's global presence.
 - Explore hosting a TEDx-style event featuring brief, pre-recorded presentations by faculty, staff, and students on climate and environment research.
 - Investigate the creation of a publicly accessible data repository with user-based access fees to broaden research dissemination and sustainability.
 - Actively participate in national conferences and events to strengthen local engagement and recognition.

Goal 3.3: Enhance knowledge mobilization and communication systems to ensure research outputs effectively **inform policy and practical** climate adaptation and mitigation strategies.

- **Actions:**
 - Organize workshops convening policymakers and researchers to discuss how research outputs can best meet policy needs in terms of format, length, and relevance.

Pillar 4: Expand and Cultivate Partnerships

Goal 4.1: Promote and facilitate **interdisciplinary collaborations** university-wide in support of MNU's climate and environment research priorities.

- **Actions:**

- Develop and promote systems that facilitate cross-faculty and cross-campus collaboration.
- Support the establishment or strengthening of research groups, dedicated hub, center, or institute focused on climate and environment research.
- Integrate an interdisciplinary stream or theme within the *Theveli International Conference* and *MNJR* and explore editorial policies that encourage interdisciplinary submissions.
- Align MNU research grants to prioritize areas identified in this framework.

Goal 4.2: Support **external** and **transdisciplinary research** collaborations that advance both MNU's and the Government of Maldives' climate and environment research priorities and commitments.

- **Actions:**

- Develop policies and systems to facilitate collaboration and data sharing with government entities, private sector partners, and the tourism sector on joint research projects.
- Strengthen MNU's participation in national and international climate and environment research networks, including exploring discounts for conference participation.
- Engage in or establish Communities of Practice focused on key research themes, inviting national and international researchers to collaborate.
- Explore web-based platforms for profiling researchers, research outputs, and publications (e.g. the Esploro research portal used by the Stockholm School of Economics).
- Build and expand relationships through international climate and environment research collaborations and participation in relevant conferences.

Goal 4.3: Support **local islands** in fostering international collaborations through MNU.

- **Actions:**

- Build partnerships with active island councils and CSOs to support collaborative research and prioritize these islands when designing locally focused studies.

Pillar 5: Foster Future Research Leaders

Goal 5.1: Attract, retain, and prepare the next generation of researchers—particularly graduate students—for successful careers in climate and environmental research.

- **Actions:**

- Offer graduate programs in climate and environmental studies that explicitly connect academic training to practical career pathways.
- Collaborate with communications and marketing teams to promote these programs and support student recruitment by:
 - Showcasing research stories through social media channels.
 - Creating “pocket classes” — brief (1-minute) video lectures highlighting specific topics presented by faculty or staff engaged in environmental research.
- Host international research exchanges, with a focus on marine and climate sciences, to broaden student experience and exposure.
- Enhance research accessibility and public engagement by producing short, digestible lectures and clips shared via social media, bridging the gap between academia and the broader community.

Goal 5.2: Expand opportunities for undergraduate students to participate in faculty-led climate and environment research activities.

- **Actions:**

- Encourage MNU researchers to deliver guest lectures in undergraduate research and related courses.
- Allocate internal grant funding to enhance researchers’ capacity to hire undergraduate research assistants.
- Host an annual short course or workshop to train interested undergraduate students in research skills, preparing them to serve as research assistants.
- Facilitate paid positions or course fee waivers for undergraduates pursuing research or degrees aligned with priority areas in the MNU research framework.

Goal 5.3: Enhance support for **graduate** and **postdoctoral** research in climate and environment fields.

- **Actions:**

- o Promote and profile ongoing research activities to raise awareness among prospective graduate students.
- o Identify and pursue funding opportunities and fellowships specifically designed to support graduate and postdoctoral researchers.
- o Establish a dedicated student stream at the *Theveli International Conference* featuring student research presentations and mentorship workshops that connect early-career researchers with senior faculty.
- o Introduce awards and recognition programs for emerging researchers contributing to priority areas, fostering ongoing engagement and excellence.

Priority Areas for Climate and Environment Research Excellence

Introduction

The **Priority Areas** outlined in this framework reflect the MNU’s commitment to conducting research that directly addresses the country’s most pressing climate, environmental, and societal challenges. Aligned with MNU’s strategic goal of contributing to climate resilience, environmental conservation, sustainable development, and the overall well-being of Maldivian communities, these Priority Areas offer clear direction for impactful research. They also align with national climate and environment priorities outlined in key government strategies, including the Nationally Determined Contribution (2025) and Maldives 2019-2023 National Strategic Action Plan.¹ Priority Areas are described below.

To foster interdisciplinary collaboration and coherence, the Priority Areas are organized into broad **Thematic Categories** that encompass both emerging and established areas of expertise across the University. These are also described below.

Additionally, the priority and sub-priority research areas align with many of the United Nations Sustainable Development Goals (SDGs). Alignment of MNU’s climate and environmental research priorities to one or more SDGs can also be found below.

Leveraging MNU’s Previous and Current Climate and Environment Research

MNU has an established and expanding portfolio of research directly addressing climate change, environmental sustainability, and resilience. Various projects undertaken by the University showcase its capacity to lead and contribute to impactful work in areas including climate adaptation, ecosystem restoration, marine biodiversity, and sustainable livelihoods². These initiatives have engaged multiple faculties and centres, each contributing specialized expertise and applied research capacity to tackle pressing environmental challenges in the Maldives.

Building on this foundation, there are significant opportunities to deepen and broaden MNU’s research efforts through enhanced cross-faculty collaboration, stronger engagement with government and community stakeholders, and the integration of emerging technologies and innovative research methods.

Leveraging MNU’s institutional strengths—including its interdisciplinary faculty base, growing research infrastructure, and established partnerships—positions the University to play a leading

¹ The national 2025–2030 Strategic Action Plan is forthcoming, and its anticipated direction was considered in drafting the framework.

² This includes Resilience to Climate Vulnerability and Environmental Risk (RECOVER); Prevention of Marine Litter in the Lakshadweep Sea (PROMISE); and the South Asian Nitrogen Hub (SANH).

role in generating locally grounded, globally relevant knowledge that supports sustainable and resilient futures for the Maldives and other SIDS.

Thematic Categories and Priority Areas

Thematic Categories and Priority Areas development was informed by a thorough review of key national policy documents, institutional strategies, and global trends, as well as the stakeholder consultations with Ministry representatives and University faculty and staff.

In addition, they reflect MNU's broader research agenda as articulated in the University's Strategic Action Plan and are informed by the University's growing institutional capacity in climate- and environment-relevant disciplines, such as the establishment of the College of Fisheries and Ocean Sciences.

Emerging international trends and donor priorities were also reviewed to ensure MNU's focus areas are forward-looking, responsive, and positioned for global collaboration and impact.

Thematic Categories

Four Thematic Categories that reflect priorities for addressing the Maldives' unique environmental challenges and advancing sustainable, community-centered solutions were identified:

- I. **Building Island Resilience to Climate Change:** Focuses on strengthening the resilience of Maldivian island communities to anticipate, respond to, and recover from climate-related hazards such as sea-level rise, extreme weather, and public health threats.
- II. **Strengthening Sustainable Resource and Waste Management Systems:** Addresses the sustainable management of essential resources—particularly freshwater, energy, and waste systems—critical to the survival and well-being of dispersed island populations in a warming climate.
- III. **Advancing Sustainable, Self-Sufficient and Circular Economies:** Supports strategies to shift the Maldives toward low-carbon, self-sufficient economic systems through innovations in renewable energy, climate-smart agriculture, sustainable infrastructure, and reduced reliance on imports.
- IV. **Conserving Ecosystems and Strengthening Nature-Based Livelihoods:** Aims to conserve the Maldives' marine and coastal ecosystems while enhancing community-level resilience through sustainable fisheries, ecotourism and other nature-based livelihoods that depend directly on healthy ecosystems.

Priority Areas

In addition eight **Priority Areas** were identified:



Climate-Resilient Disaster Risk Management



Climate-Responsive Public Health and Wellbeing



Integrated Water Resource Management and Security



Pollution Control and Waste Management



Renewable and Reliable Energy Security



Sustainable Agriculture, Fisheries, and Food Security



Safeguarding Marine & Coastal Biodiversity & Coral Reef Ecosystems



Sustainable and Resilient Tourism

Cross-Cutting Elements

Priority Areas are supported by a set of cross-cutting elements that embody MNU's commitment to inclusive, collaborative, and innovative research. Many Priority Areas—such as climate adaptation, community resilience, marine ecosystem health, and sustainable fisheries—naturally intersect, offering valuable opportunities for interdisciplinary and multidisciplinary collaboration (Figure 1). These intersections enrich understanding and foster the development of innovative solutions to complex, real-world challenges.

Central to this approach is the integration of local communities into research processes, ensuring that diverse voices and lived experiences shape research priorities and outcomes. The framework also emphasizes the importance of applying gender-based and intersectional analysis across research policies, funding mechanisms, and practices to enhance the relevance and impact of climate and environmental research. Finally, it highlights the vital role of technological innovation in addressing urgent environmental challenges and promoting long-term sustainability.

Figure 1: Many Priority Areas naturally intersect, offering valuable opportunities for interdisciplinary and multidisciplinary collaboration.



Linking Thematic Categories and Priority Areas

Each Thematic Category contains two Priority Areas, which define key research topics and guide investigation to support national resilience, sustainability, and development (Table 2).

Table 2: Thematic Categories and Priority Areas
I. Building Island Resilience to Climate Change • Priority Area 1: Climate-Resilient Disaster Risk Management • Priority Area 2: Climate-Responsive Public Health and Wellbeing
II. Strengthening Sustainable Resource and Waste Management Systems • Priority Area 3: Integrated Water Resource Management and Security • Priority Area 4: Pollution Control and Waste Management
III. Advancing Sustainable, Self-Sufficient and Circular Economies • Priority Area 5: Renewable and Reliable Energy Security • Priority Area 6: Sustainable Agriculture, Fisheries, and Food Security
IV. Conserving Ecosystems and Strengthening Nature-Based Livelihoods • Priority Area 7: Safeguarding Marine & Coastal Biodiversity & Coral Reef Ecosystems • Priority Area 8: Sustainable and Resilient Tourism

Alignment with the Sustainable Development Goals

The following descriptions of MNU’s research categories, research priorities, and sub-priorities highlights how each area or focus of research aligns with one or more of the SDGs. All of the categories and priorities listed below reflect a commitment to gender equality as per *SDG Goal 5: Achieve Gender Equality and Empower All Women and Girls*.

In addition, these areas of focus—as well as MNU’s broader commitment to advancing research that centers the perspectives, lived experiences, and environmental challenges most relevant to the people of the Maldives—embody the spirit of *SDG 10: Reduce Inequality Within and Among Countries*.

Finally, the climate and environmental orientation of this research framework ensures that all priorities contribute to *SDG 13: Take Urgent Action to Combat Climate Change and Its Impacts*.

Detailed Thematic Categories, Priority Areas, and Sub-Priorities

Research Category I. Enhancing Island Resilience to Climate Change



Priority Area 1: Climate-Resilient Disaster Risk Management

Conduct research to assess and develop effective early warning systems, coastal protection strategies, and adaptive responses to climate-driven hazards such as sea-level rise, coastal erosion, and extreme weather events.

Sub-priorities can include:

- Climate modelling, forecasting and ocean observations
- Climate resilient infrastructure and land use planning
- Coastal erosion and protection
- Community preparedness and early warning systems
- Flood risk mapping

Sustainable Development Goal Alignment:

- *SDG: 9: Industry, Innovation and Infrastructure*
- *SDG: 11: Sustainable Cities and Communities*
- *SDG: 13: Climate Action*



Priority Area 2: Climate-Responsive Public Health and Wellbeing

Investigate the impact of climate change on public health, particularly in relation to vector-borne and waterborne diseases, saltwater intrusion, and heat stress, and explore adaptive strategies to enhance the resilience and effectiveness of healthcare systems.

Sub-priorities can include:

- Behavioural adaptation to climate-related health risks
- Heat stress
- Mental health impacts
- Occupational hazards and exposure to climate change
- Vector- and waterborne diseases

Sustainable Development Goal Alignment:

- *SDG 3: Good Health and Well-Being*
- *SDG 6: Clean Water and Sanitation*
- *SDG 10: Reduced Inequalities*
- *SDG 13: Climate Action*

Research Category II. Strengthening Sustainable Resource and Waste Management Systems



Priority Area 3: Integrated Water Resource Management and Security

Research sustainable, climate-adaptive strategies for the integrated management of water and other natural resources essential to the Maldives' environmental health and climate resilience. This includes innovations in rainwater harvesting, desalination, aquifer protection from saltwater intrusion, and holistic approaches to managing interconnected natural systems.

Sub-priorities can include:

- Desalination technologies
- Groundwater management
- Integrated water resource management
- Rainwater harvesting
- Saltwater intrusion

Sustainable Development Goal Alignment:

- *SDG 3: S6: Clean Water and Sanitation*
- *SDG 12: Responsible Consumption and Production*
- *SDG 13: Climate Action*



Priority Area 4: Pollution Control and Waste Management

Investigate cutting-edge solutions for reducing marine and land-based pollution, focusing on the prevention of plastic waste, efficient wastewater management and surveillance, strengthened waste governance systems, and the development of circular economy practices.

Sub-priorities can include:

- Air pollution
- Agrochemical pollution
- Health sector waste management
- Plastic pollution
- Solid waste management, including biodegradable and food waste
- Wastewater treatment and surveillance

Sustainable Development Goal Alignment:

- *SDG 3: Good Health and Well-being*
- *SDG 6: Clean Water and Sanitation*
- *SDG 11: Sustainable Cities and Communities*
- *SDG 12: Responsible Consumption and Production*

Research Category III. Advancing Sustainable, Self-Sufficient and Circular Economies



Priority Area 5: Renewable and Reliable Energy Security

Conduct research on the expansion of renewable energy sources, energy efficiency improvements, and the development of locally adapted clean technologies to reduce reliance on imported fossil fuels.

Sub-priorities can include:

- Energy efficiency
- Microgrid development

- Renewable energy technologies
- Waste-to-energy technologies

Sustainable Development Goal Alignment:

- *SDG 7: Affordable and Clean Energy*
- *SDG 9: Industry, Innovation and Infrastructure*
- *SDG 11: Sustainable Cities and Communities*
- *SDG 13: Climate Action*



Priority Area 6: Sustainable Agriculture, Fisheries, and Food Security

Investigate climate-smart agricultural and fisheries practices, along with innovative food production systems, to enhance food security, reduce reliance on food imports, and promote sustainable farming and fishing solutions.

Sub-priorities can include:

- Agricultural technology, bioconversion and innovation
- Climate-smart farming and innovative food production systems
- Food security and nutrition
- Local crop resilience and diversification
- Soil health and fertility
- Sustainable fisheries and aquaculture management and diversification

Sustainable Development Goal Alignment:

- *SDG 2: Zero Hunger*
- *SDG 3: Good Health and Well-being*
- *SDG 8: Decent Work and Economic Growth*
- *SDG 12: Responsible Consumption and Production*
- *SDG 13: Climate Action*
- *SDG 14: Life Below Water*
- *SDG 15: Life on Land*

Research Category IV. Conserving Ecosystems and Strengthening Nature-Based Livelihoods



Priority Area 7: Safeguarding Marine and Coastal Biodiversity and Coral Reef Ecosystems

Research ecosystem health and resilience, focusing on coral reefs, coastal habitats, and marine biodiversity in the face of climate change, habitat loss, and human activity.

Sub-priorities can include:

- Blue economy and carbon management
- Coral reef restoration and protection
- Mangrove and coastal ecosystem conservation and restoration
- Marine and coastal protected areas

Sustainable Development Goal Alignment:

- *SDG 13: Climate Action*
- *SDG 14: Life Below Water*
- *SDG 15: Life on Land*
- *SDG 17: Partnerships for the Goals*



Priority Area 8: Sustainable and Resilient Tourism

Research sustainable tourism models that minimize environmental impacts, promote the conservation of natural resources, and enhance resilience to climate change, while supporting the economic viability of island communities.

Sub-priorities can include:

- Green resort practices
- Sustainable Ecotourism development
- Tourism carrying capacity

Sustainable Development Goal Alignment:

- *SDG 8: Decent Work and Economic Growth*
- *SDG 11: Sustainable Cities and Communities*
- *SDG 12: Responsible Consumption and Production*
- *SDG 13: Climate Action*
- *SDG 14: Life Below Water*
- *SDG 15: Life on Land*

Collaboration and Partnerships

MNU is committed to deepening its record of impactful, interdisciplinary research collaborations at both national and international levels. By bringing together diverse academic expertise and fostering strong partnerships across faculties and with external stakeholders—including government, the private sector, and local communities—MNU enables research that is inclusive, solutions-oriented, and contextually grounded. Through these collaborations, MNU’s climate and environmental research supports practical applications that advance gender equity, social inclusion, and sustainability—ensuring that research partnerships are aligned with real-world needs and capable of informing evidence-based policymaking at national and global levels.

Recognizing the Ministry of Tourism and Environment’s pivotal role in shaping national environmental policy, collaboration with MNU enhances the Ministry’s access to research expertise, institutional infrastructure, and scientific knowledge. This partnership strengthens the country’s ability to inform climate policy, access climate finance, and respond effectively to urgent environmental challenges.

These efforts are guided by this *Climate and Environment Research Framework*, which supports strategic, scalable, and transdisciplinary collaboration. Through this approach, MNU contributes to the Maldives’ development agenda and reinforces its leadership in addressing global challenges aligned with the UN Sustainable Development Goals.

Communications and Dissemination

MNU is committed to strengthening the dissemination and visibility of climate and environmental research to ensure it effectively informs policy, practice, and public understanding.

Current communication channels—including the *Theveli International Conference*, the *International Conference of Engineering Science and Technology (ICEST)*, the *Maldives National Journal of Research*, and the University's *Annual Research Report* —serve as core platforms for knowledge sharing across faculties and disciplines. These channels provide valuable opportunities to showcase climate and environment research findings, highlight innovative approaches, and increase the visibility of faculty and student work within academic, professional, and community networks.

MNU is focused on expanding its knowledge mobilization strategies to extend the reach of research findings beyond academic circles and are accessible to industry partners, policymakers, local communities, and prospective students. By strengthening pathways for cross-faculty dissemination and emphasizing equity, inclusion, and actionable outcomes, MNU aims to ensure its research drives real-world impact. This includes informing sustainability and climate change policies and empowering communities with knowledge that supports local adaptation and resilience efforts.

The Role of Robust Data Management

Research data management encompasses the practices and strategies used to organize, store, document, share and preserve research data throughout its lifecycle—from initial collection to long-term archiving. It involves planning how data will be structured and documented, ensuring compliance with ethical, legal, and funding requirements. Effective research data management includes the creation of clear data management plans, thorough documentation to facilitate future reuse, and safeguards to ensure security and confidentiality. It also addresses data sharing, accessibility, and compliance with open data mandates, all while promoting the long-term sustainability and integrity of research data for future use.

To help guide these efforts MNU has developed the “*Creating a University Research Framework*” workbook, a practical tool designed to support the University and staff in developing research frameworks across various disciplines or for the institution as a whole. While the workbook draws on MNU’s experience in climate and environment research, it is intentionally adaptable to other fields, supporting broader strategic research planning.

As part of its commitment to research excellence and coherence MNU is dedicated to strengthening its data management ecosystem by promoting continuous improvement in the development and implementation of robust, transparent, and effective data management plans across all research projects. The goal is to uphold the highest standards of research integrity, reproducibility, and security, ensuring that data is managed responsibly and effectively throughout the research lifecycle. By advancing these efforts, MNU aims to enhance the credibility and societal impact of its research, facilitating seamless data sharing and collaboration, and positioning the University as a national and global leader in responsible, innovative and forward-looking research practices.

Summary: Looking Forward

The Maldives National University is committed to building on the strong foundation of collaboration and knowledge-sharing established with key national partners. As a hub of academic excellence and research innovation, we recognize our vital role in advancing evidence-based approaches to address the pressing challenges of climate change, environmental sustainability, and socio-economic development. Moving forward, we will continue to deepen our institutional capacities and expand interdisciplinary research initiatives that align with national priorities. By leveraging our expertise and infrastructure, we aim to generate actionable insights that inform policy, support resilient communities, and promote sustainable practices across the Maldives.

Looking ahead, the University is dedicated to fostering inclusive partnerships that engage diverse stakeholders—from government entities to local communities and international collaborators. We will prioritize knowledge exchange, capacity building, and participatory approaches that amplify the voices of those most impacted by environmental change. Through these efforts MNU aspires to be not only a leader in research and education but also a catalyst for meaningful, lasting impact that secures a sustainable and resilient future for the nation.

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References & Key Links

The following resources and references provide foundational documents, strategic guidance, and supporting materials that informed the development of the *Climate and Environment Research Framework*.

- [Creating a University Research Framework Workbook](#)
- [Maldives' First Biennial Transparency Report](#)
- [Maldives National Gender Equality Action Plan \(2022-2026\)](#)
- [Maldives Strategic Action Plan 2019-2023](#)
- [Maldives Third Nationally Determined Contribution](#)
- [The Maldives National University Strategic Action Plan 2020-2025: Priorities for Excellence](#)
- [The Maldives National University Policy on Ethical Research](#)