MUĞLA SITKI KOÇMAN UNIVERSITY

MİDUG
MUĞLA CLIMATE RESILIENCE AND ADAPTATION INITIATIVE
2026

MUĞLA CLIMATE RESILIENCE AND ADAPTATION INITIATIVE

TOWARDS COP31:

CLIMATE RESILIENCE AND A SUSTAINABLE FUTURE IN MUĞLA

COP31 WORKSHOP – 5 OCTOBER 2026
WORKSHOP PROCEEDINGS
AND DRAFT OUTCOME STATEMENT

SCIENCE
—
COLLABORATION
—
ADAPTATION
—
A SUSTAINABLE FUTURE

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FROM THE EDITOR

One of the most valuable outcomes of our preparations for COP31 has been the opportunity to establish new connections among research activities conducted across different disciplines. The COP31 Workshop, held on 5 October 2026, enabled us to gain a better understanding of the work undertaken by our academics and students and to explore opportunities for future collaboration.

We have prepared this booklet, entitled **"**Towards COP31: Climate Resilience and a Sustainable Future in Muğla – Workshop Abstracts and Outcome Statement,**"** to document the research and project proposals presented at the workshop, highlight connections between different fields of expertise, and provide a reference for future collaborative activities. The outcome statement included in the final section of the booklet is a draft containing proposals for consideration and further development at future meetings, rather than decisions formally adopted during the workshop.

My greatest hope is that the Muğla Climate Resilience and Adaptation Initiative (Muğla İklim Direnci ve Uyum Girişimi- MİDUG)**,** which emerged during this process, will continue to develop through the participation of our academics and students and make tangible contributions to climate adaptation efforts in Muğla through regular scientific meetings, collaborative research, and new projects.

I would like to express my sincere gratitude to all researchers and students who contributed to this booklet, my colleagues at the Sustainable Green Campus Coordination Office, and everyone involved in this initiative, particularly our Rector, Prof. Dr. Turhan Kaçar, and our COP31 University Coordinator, Prof. Dr. Hatice Hicret Görgülü, for their support.

I hope this publication will mark the beginning of new scientific collaborations and joint initiatives.

Assoc. Prof. Dr. Sena Akçer Ön
Sustainable Green Campus Coordinator
Faculty Member, Department of Geological Engineering

CHAPTER I

TOWARDS COP31: MUĞLA SITKI KOÇMAN UNIVERSITY'S CLIMATE JOURNEY

1.1. COP31 and the Role of Universities in Climate Action

Climate change is increasingly affecting natural systems, economic activities, and society through rising temperatures, changing precipitation patterns, droughts, wildfires, and sea-level rise. Particularly in climate-sensitive regions such as the Mediterranean Basin, reducing these risks and developing adaptation strategies have become urgent priorities.

The Conference of the Parties (COP), held under the United Nations Framework Convention on Climate Change (UNFCCC), is an international platform where global climate policies are negotiated and countries' commitments and actions are reviewed. COP31, to be hosted by Türkiye in Antalya from 9 to 20 November 2026, provides an important opportunity to strengthen scientific research, international collaboration, and local action in addressing climate change.

Universities are responsible not only for investigating the causes and consequences of climate change but also for translating research findings into education, policy development, and practical applications. Interdisciplinary research, student participation, and partnerships with public institutions are among the main mechanisms through which academic knowledge can generate societal benefits.

Muğla Sıtkı Koçman University (MSKÜ) has approached the COP31 process as an opportunity to assess its existing research capacity, strengthen interaction among different fields of expertise, and develop new initiatives addressing regional climate challenges.

1.2. MSKÜ's Preparations for COP31

MSKÜ's preparations for COP31 focused on identifying climate change- and sustainability-related research conducted across the university, evaluating project proposals, and encouraging the participation of academics and students.

The preparations were coordinated by **Prof. Dr. Hatice Hicret Görgülü**, Vice Rector and COP31 University Coordinator, with scientific and organisational contributions from the Sustainable Green Campus Coordination Office.

1.2.1. Academic and Student Participation

Muğla Sıtkı Koçman University's preparations for COP31 began following a request from the **Council of Higher Education (YÖK)** for universities to organise calls for applications to ensure their representation through academic and student projects at the YÖK Pavilion during COP31.

Accordingly, ongoing research and new project proposals from different faculties and departments were reviewed, and preparations were undertaken to align these activities with the thematic priorities of COP31.

A university-wide open call was launched to encourage student participation. Applications were evaluated by the COP31 Project Evaluation Committee based on candidates' academic backgrounds and project experience, relevant competencies, foreign language proficiency, and motivation.

The aim was to enable students to participate in COP31 not merely as attendees but as young researchers actively involved in research and project development.

1.2.2. COP31 Project Submissions

As a result of these preparations, research and applied projects were developed in areas including climate change adaptation, water and coastal management, sustainable tourism, circular economy, clean energy, environmental education, and technological solutions.

All 11 applications, comprising 7 academic projects and 4 student projects, were accepted by the Council of Higher Education (YÖK). Consequently, the university secured the opportunity to be represented at the YÖK Pavilion during COP31 through 11 projects developed by academics and students from different disciplines.

These projects provide an important opportunity to showcase the university's research capacity in climate change and sustainability to national and international stakeholders.

1.2.3. Establishing a Common Framework: MİDUG

During the preparations for COP31, it became evident that projects developed in different fields addressed shared challenges and adopted complementary approaches. Based on these observations, the **Muğla Climate Resilience and Adaptation Initiative (MİDUG)** emerged as an interdisciplinary initiative integrating these activities.

MİDUG aims to connect the university's research capacity with Muğla's environmental and societal needs, facilitate the translation of scientific findings into local applications, and foster new project partnerships.

Established during the preparations for COP31, the initiative is expected to continue its activities beyond the conference and develop into a research and collaboration platform open to academics, students, and relevant stakeholders.

MİDUG's scientific approach, thematic work packages, and implementation objectives are presented in detail in Chapter II of this booklet.

1.3. The COP31 Workshop on 5 October 2026: A Gathering for Science and Collaboration

The COP31 Workshop, organised by MSKÜ, was held on 5 October 2026 in Hall D of the Atatürk Cultural Centre. The event aimed to introduce projects prepared for COP31, strengthen interaction among researchers, and present MİDUG's scientific framework.

The workshop opened with an address by Prof. Dr. Hatice Hicret Görgülü, Vice Rector and COP31 University Coordinator. Assoc. Prof. Dr. Sena Akçer Ön, Sustainable Green Campus Coordinator, then presented the university's preparations for COP31 and introduced MİDUG's objectives.

Throughout the day, academics and students delivered presentations on topics including climate science, water and coastal management, sustainable tourism, circular economy, environmental technologies, and public participation. The programme also featured a study exploring the relationship between art and sustainability.

The workshop marked one of the first steps towards introducing MİDUG within the university and exploring opportunities for future collaboration. The workshop programme, presentations, and further details are provided in Chapter III.

CHAPTER II

MUĞLA CLIMATE RESILIENCE AND ADAPTATION INITIATIVE (MİDUG)

Science, Adaptation, and Living Solutions in the Eastern Mediterranean Climate Hotspot

2.1. Scientific Approach and Main Objectives

The Mediterranean Basin is one of the regions particularly vulnerable to the impacts of global climate change. Rising temperatures, changing precipitation patterns, droughts, wildfires, and changes in coastal ecosystems are placing increasing pressure on the region's natural resources and economic activities. Muğla's coastal areas, wetlands, forests, agricultural production, and tourism activities require these risks to be assessed together.

The consequences of climate change extend beyond the physical environment, affecting water and food security, local livelihoods, social inequalities, and quality of life. Climate adaptation efforts must therefore consider economic, social, and governance dynamics alongside natural processes.

The **Muğla Climate Resilience and Adaptation Initiative (MİDUG)** is an interdisciplinary initiative that connects research addressing these multidimensional challenges through climate science, technological innovation, nature-based solutions, and participatory governance. Its central approach is to ensure that scientific findings provide a foundation for practical adaptation measures that are appropriate to local conditions and whose outcomes can be monitored.

MİDUG's objectives are organised into three main areas:

Scientific research: Investigating climate variability, environmental changes, existing vulnerabilities, and future risks in Muğla and its surroundings using diverse data and methods.

Development of practical applications: Translating research findings into methods and applications relevant to water and coastal management, sustainable production, resource efficiency, clean energy, and disaster preparedness.

Participation and partnerships: Supporting knowledge exchange among universities, public institutions, local authorities, the private sector, and civil society, while increasing the involvement of academics, students, and relevant stakeholders in collaborative activities.

In line with these objectives, MİDUG considers climate adaptation not merely an environmental or technical issue, but a multidimensional process that must be addressed at the regional scale.

2.2. MİDUG's Thematic Structure

MİDUG is structured around six thematic work packages developed on the basis of the university's research and applied projects prepared for COP31. This structure defines the

scope of existing activities while creating opportunities for new research topics and project partnerships.

Work Package 1 — Climate Science and Nature-Based Solutions

This work package focuses on investigating past and present climate conditions and understanding long-term environmental changes. Palaeoclimatic records, geological and hydrological data, environmental observations, and climate projections are among the main sources of information that can be used to assess regional risks.

The approaches developed by past societies in response to drought and water scarcity also provide a historical perspective on present-day adaptation efforts.

The **BlueLegacies: From Ancient Water Heritage to a Climate-Resilient Mediterranean Future** project aims to examine past climate changes alongside historical water management practices by integrating palaeoclimatology, archaeology, hydrology, and environmental sciences. The project focuses on exploring how knowledge derived from cultural heritage can inform contemporary water management and nature-based adaptation approaches.

Work Package 2 — Coastal Areas, Wetlands, and Climate Adaptation Governance

Muğla's coastal areas and wetlands are sensitive systems where ecological values intersect with various human activities, including tourism, fishing, and settlement. Protecting these areas requires the combined consideration of climate-related risks and pressures arising from human activities.

This work package focuses on developing management models aimed at reducing ecosystem vulnerability and increasing the participation of relevant stakeholders in decision-making processes.

The **Climate-Resilient and Sustainable Coastal Governance: Dalyan–İztuzu–Köyceğiz Lake Basin** project envisages developing a participatory governance approach that considers ecological conservation, tourism, and local economic needs, supported by digital monitoring and information-sharing tools.

Work Package 3 — Living Laboratories, Circular Economy, and Youth

This work package considers the university campus a living laboratory where education, research, and practical applications are integrated. Resource efficiency, waste recovery, ecological production, and environmental education are areas in which activities can be developed through direct student participation.

The **MSKÜ Campus Garden** provides an existing example of this approach through ecological agriculture, the conservation of local seeds, biodiversity, and experiential learning. Student projects focusing on the reuse of waste glass and the monitoring of environmental pollutants connect circular economy principles with technological innovation.

By monitoring and documenting these activities, the aim is to transform experiences gained on campus into practical models that can be transferred to other educational institutions.

Work Package 4 — Sustainable Tourism and Local Development

Tourism, a major sector in Muğla's economy, is vulnerable to climate-related risks such as rising temperatures, water scarcity, and extreme weather events. Strengthening the sector's adaptive capacity requires an integrated consideration of education, local production, and economic resilience, alongside efforts to reduce environmental impacts.

The **Climate-Resilient Tourism Education** study focuses on identifying the knowledge and skills that tourism students will need for climate adaptation and integrating them into educational programmes.

The **Regenerative Contribution of Local Markets Integrated into Tourism** study examines the relationships between tourism and local production, exploring opportunities to support short supply chains, local food systems, and regional economic resilience.

Work Package 5 — Policy and Governance

The success of climate-related initiatives depends not only on scientific and technological advances but also on the economic regulations and governance mechanisms that support them.

This work package focuses on examining the economic and social impacts of the green transition and developing evidence-based policy recommendations.

The study entitled **Clean Energy Transition and Emerging Protectionist Trade Policies Amid Green Industrialisation: Policy Recommendations for COP31** examines the relationships between the clean energy transition and international trade regulations, particularly in relation to relevant sectors in Türkiye and Muğla. It focuses on the transformation of carbon-intensive sectors, the potential impacts of new trade regulations, and policy instruments supporting sustainable production.

The work package is also expected to support the translation of research conducted within MİDUG into recommendations that can inform decision-making processes.

Work Package 6 — Digital Climate Solutions and Disaster Resilience

Digital technologies offer new opportunities for monitoring climate-related risks, developing early warning systems, and improving disaster preparedness.

This work package explores the use of sensor technologies, smart systems, data-driven decision-support tools, and alternative communication infrastructure in climate adaptation activities.

The student project entitled **Smart-City Emergency Edge Platform Using Decentralized BLE Mesh Communication** proposes a decentralised communication system that could be used during emergencies when centralised communication infrastructure is disrupted.

Integrating similar technologies with other thematic areas is considered an opportunity to strengthen environmental monitoring capacity and develop applications for disaster management.

2.3. Integrated Approach Across Work Packages

MİDUG's six work packages are designed as complementary components that approach shared research questions from different perspectives, rather than as independent activities.

Climate and environmental research provides a foundation for understanding regional changes, while coastal management, tourism, and campus-based initiatives represent areas where this knowledge can be applied. Policy studies address the economic and governance dimensions, while digital technologies complement data collection, monitoring, and decision-support processes.

For example, assessing a wetland's vulnerability to climate change may require examining hydrological and ecological data alongside tourism activities, local economic relationships, governance mechanisms, and monitoring technologies.

Establishing connections between the work packages is therefore one of MİDUG's fundamental working principles, enabling the development of research questions that extend beyond the boundaries of individual disciplines and bringing different areas of expertise together in joint projects.

2.4. Regional Collaboration and Implementation Potential

With its coastal ecosystems, wetlands, forests, agricultural areas, and tourism destinations, Muğla provides a setting where different climate risks can be observed together. The university campus complements this diversity as a setting for educational and practical activities.

Research conducted within MİDUG is intended to be evaluated in real-world settings through partnerships with local authorities, public institutions, the private sector, and civil society organisations. Experiences gained particularly in water management, coastal conservation, sustainable production, and disaster preparedness may also be valuable for other Mediterranean regions facing similar challenges.

Participation in national and international research networks, joint project applications, and monitoring the outcomes of practical initiatives are among the priority areas for the initiative's development.

MİDUG's long-term objective is to establish a collaborative network that supports the continuity of research conducted in Muğla, brings together different areas of expertise, and facilitates the application of scientific findings to local challenges.

CHAPTER III

COP31 WORKSHOP — 5 OCTOBER 2026

Science, Sustainability, and Interdisciplinary Collaboration

3.1. Purpose and Scope of the Workshop

The **COP31 Workshop**, organised by Muğla Sıtkı Koçman University as part of its preparations for COP31, was held on 5 October 2026 in Hall D of the Atatürk Cultural Centre.

The workshop aimed to provide a platform for sharing climate change- and sustainability-related research, project proposals, and practical initiatives developed across the university's academic units, strengthen interaction between academics and students, and explore opportunities for future collaboration.

The programme featured contributions from various disciplines, covering topics ranging from water and coastal management to sustainable tourism, circular economy, clean energy transition, environmental monitoring technologies, and the arts. Alongside academic presentations, the programme included student projects and sessions where participants could explore opportunities for joint activities.

In this respect, the workshop went beyond showcasing projects prepared for COP31, serving as a gathering aimed at establishing new research connections across the university's different fields of expertise and exploring MİDUG's future activities.

3.2. Workshop Activities and Sessions

The workshop began with an opening address by **Prof. Dr. Hatice Hicret Görgülü**, Vice Rector and COP31 University Coordinator. This was followed by a presentation from **Assoc. Prof. Dr. Sena Akçer Ön**, Sustainable Green Campus Coordinator, introducing the university's preparations for COP31 and the objectives, thematic structure, and future goals of the Muğla Climate Resilience and Adaptation Initiative (MİDUG).

The morning sessions addressed water management and cultural heritage, coastal governance, campus-based sustainability initiatives, climate-resilient tourism education, the role of local markets in regenerative development, youth participation in climate action, and green industrialisation policies.

The afternoon sessions featured research and project proposals focusing on the social dimensions of zero-waste policies, the reuse of waste materials, environmental monitoring technologies, and emergency communication in smart cities.

The programme also included a presentation entitled **"**Artistic Interpretation of Underwater Fauna and Flora Using Ceramic Materials in the Context of Sustainability,**"** which explored the role of artistic production in promoting environmental awareness.

Following the presentations, the **"**Project Networking: Bringing Academics and Students Together**"** session provided an opportunity for students to meet research teams and explore potential contributions to ongoing projects.

The workshop concluded with a joint discussion session entitled "Towards COP31: What Can We Achieve Together at MSKÜ?", followed by a closing session focusing on MİDUG's next steps.

Abstracts of the research and projects presented at the event are included in Chapter IV of this booklet.

3.3. Workshop Programme

MUĞLA SITKI KOÇMAN UNIVERSITY
COP31 WORKSHOP

Date: Monday, 5 October 2026
Venue: Atatürk Cultural Centre, Hall D
Time: 09:30–17:30

Opening and Academic Presentations

Time	Presentation / Activity	Presenter(s)
09:30–09:45	Opening and Welcome Address	Prof. Dr. Hatice Hicret Görgülü
09:45–10:00	MSKÜ's Journey Towards COP31 and MİDUG – Muğla Climate Resilience and Adaptation Initiative	Assoc. Prof. Dr. Sena Akçer Ön
10:00–10:20	BlueLegacies: From Ancient Water Heritage to a Climate-Resilient Mediterranean Future	Assoc. Prof. Dr. Sena Akçer Ön
10:20–10:40	Climate-Resilient and Sustainable Coastal Governance: Dalyan–İztuzu–Köyceğiz Lake Basin	Prof. Dr. Muammer Tuna
10:40–11:00	MSKÜ Campus Garden: A Living Laboratory for Interdisciplinary Learning, Climate Adaptation, and Inclusion Through Cultivation	Res. Asst. Naz Fulya Cibik
11:00–11:15	**Coffee Break**	
11:15–11:35	Climate-Resilient Tourism Education: Developing a Competency and Educational Model for Future Tourism Professionals	Assoc. Prof. Dr. Meltem Altınay Özdemir
11:35–11:55	The Regenerative Contribution of Local Markets Integrated into Tourism	Assoc. Prof. Dr. Meltem Altınay Özdemir, Rabia Cengizhan
11:55–12:15	Climate-Resilient Youth	Prof. Dr. Muammer Tuna
12:15–12:35	Clean Energy Transition and Emerging Protectionist Trade Policies Amid Green Industrialisation: Policy Recommendations for COP31	Asst. Prof. Dr. Özgül Uyan
12:35–14:00	**Lunch Break**	

Student Projects, Practical Applications, and Joint Discussion

Time	Presentation / Activity	Presenter(s)
14:00–14:20	The Social Dimension of Zero-Waste Policy	Prof. Dr. Muammer Tuna
14:20–14:40	Recycling Campus Waste Glass Using the Microwave-Assisted Sol–Gel Method and Heavy Metal Sensing/Treatment Applications in Laboratory Wastewater	Yağmur Demirol
14:40–15:00	Smart-City Emergency Edge Platform Using Decentralized BLE Mesh	Mustafa Morsy

	Communication	
15:00–15:30	Glass Recycling Is in My Hands	Hacer Simnur Bayrak
15:30–15:40	Artistic Interpretation of Underwater Fauna and Flora Using Ceramic Materials in the Context of Sustainability	Sinem Kara
15:40–16:00	**Coffee Break and Poster Presentation:** Recycling Campus Waste Glass Using the Microwave-Assisted Sol–Gel Method and Heavy Metal Sensing/Treatment Applications in Laboratory Wastewater	Oğuzhan Tamir, Umut Çelikyürek, Elif Güntaş
16:00–16:45	Project Networking: Bringing Academics and Students Together	Project Teams and Students
16:45–17:15	Joint Discussion: Towards COP31 – What Can We Achieve Together at MSKÜ?	Participants
17:15–17:30	Closing Session and MİDUG's Next Steps	

3.4. Highlights from the Workshop

Opening Session and Introduction of MİDUG



Figure 3.1. Brochure for the MSKÜ COP31 Workshop.



Figure 3.2. Opening address by Prof. Dr. Hatice Hicret Görgülü, MSKÜ COP31 Coordinator and Vice Rector.



Figure 3.3. Presentation introducing the Muğla Climate Resilience and Adaptation Initiative (MİDUG) by Assoc. Prof. Dr. Sena Akçer Ön, Sustainable Green Campus Coordinator and faculty member of the Department of Geological Engineering.



Figure 3.4. Project presentation by Prof. Dr. Muammer Tuna, faculty member of the Department of Sociology.



Figure 3.5. Project presentation by Res. Asst. Naz Fulya Cibik, Department of Mathematics and Science Education.



Figure 3.6. Project presentation by Assoc. Prof. Dr. Meltem Altınay Özdemir, faculty member of the Department of Tourist Guiding.



Figure 3.7. Project presentation by Asst. Prof. Dr. Özgül Uyan, faculty member of the Department of Customs Management.

Student Projects and Practical Applications



Figure 3.8. Project presentation by Rabia Cengizhan, undergraduate student in the Department of Tourist Guiding.

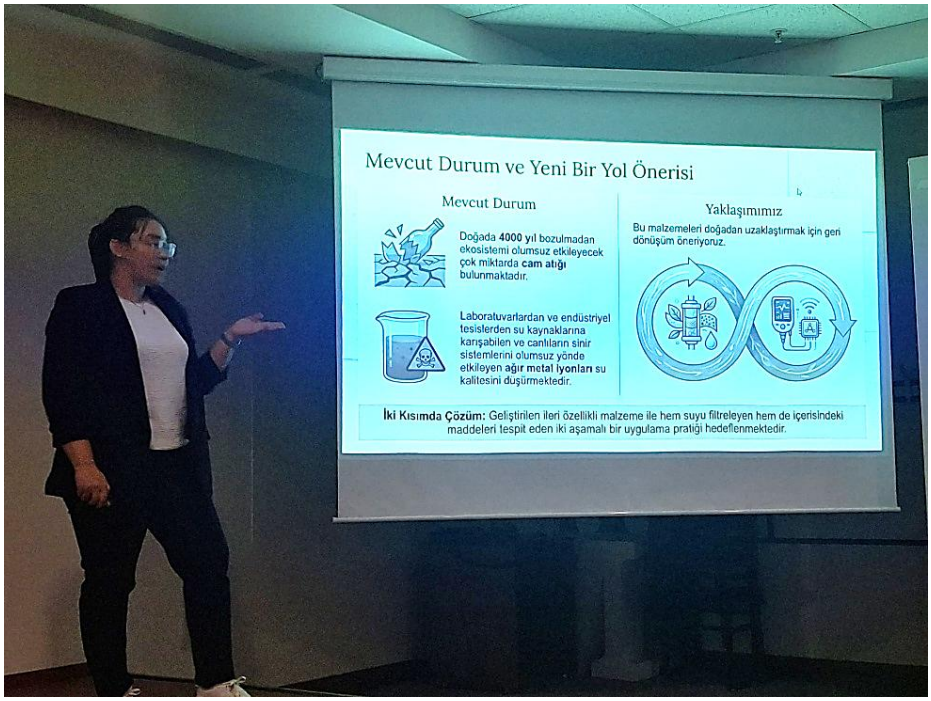


Figure 3.9. Project presentation by Yağmur Demirol, undergraduate student in the Department of Chemistry.

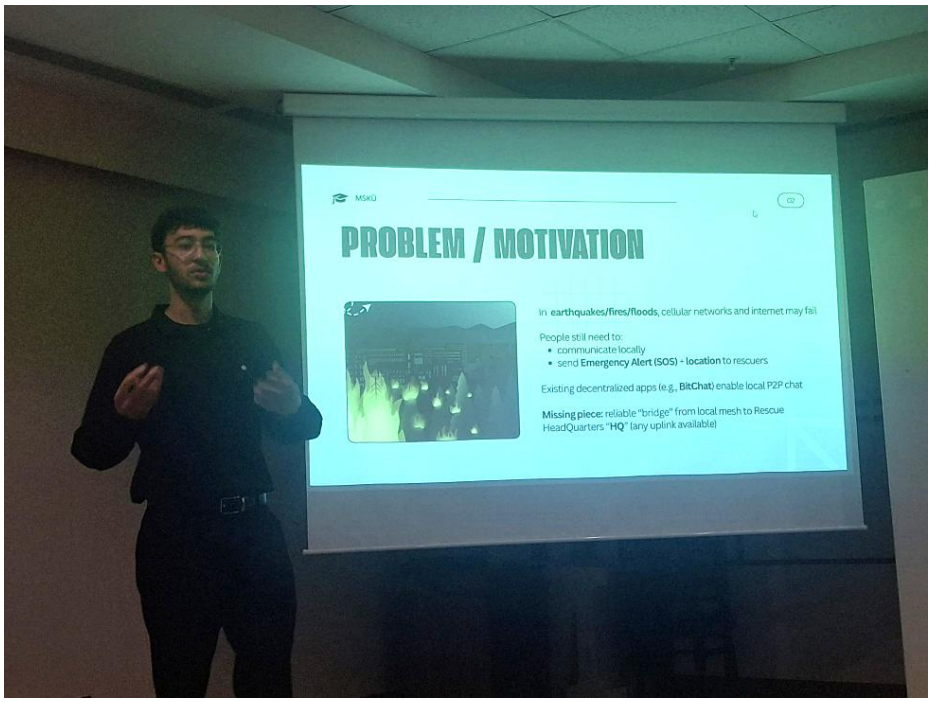


Figure 3.10. Project presentation by Mustafa Morsy, master's student in Software Engineering at the Graduate School of Natural and Applied Sciences.



Figure 3.11. Project presentation by Hacer Simnur Bayrak, undergraduate student in the Department of Political Science and International Relations.



Figure 3.12. Project presentation by Sinem Kara, student in the Ceramics Art and Design programme at the Graduate School of Social Sciences.



Figure 3.13. Assoc. Prof. Dr. Sema Aslan, faculty member of the Department of Chemistry, with her students



Figure 3.14. Undergraduate students Oğuzhan Tamir and Umut Çelikyürek from the Department of Chemistry with their research posters.



Figure 3.15. Hacer Simnur Bayrak, President of the International Relations and Strategic Studies Student Society, and the society's academic advisor, Prof. Dr. Füsun Özerdem.

Interdisciplinary Interaction and Project Networking



Figure 3.16. Joint discussion session entitled “Towards COP31: What Can We Achieve Together?”



Figure 3.17. Prof. Dr. Hatice Hicret Görgülü, MSKÜ COP31 Coordinator, and the Sustainable Green Campus Coordination Office team at the opening of the workshop.

CHAPTER IV

WORKSHOP ABSTRACTS

4.1. About the Abstracts

This chapter presents abstracts of the academic research, practical initiatives, and student projects presented at the COP31 Workshop.

The abstracts were prepared based on the project application documents and relevant research texts associated with the presentations delivered at the workshop. Editorial adjustments were made to ensure consistency throughout the booklet while preserving the scientific content of each contribution. The abstracts are arranged in the order of presentation in the workshop programme, and their connections to MİDUG's thematic research areas are indicated.

The contributions include completed activities, ongoing research, and project proposals under development. Accordingly, the abstracts distinguish between the current status of each study and its intended outcomes.

4.2. Academic Presentations

BlueLegacies: From Ancient Water Heritage to a Climate-Resilient Mediterranean Future

Assoc. Prof. Dr. Sena Akçer Ön

Muğla Sıtkı Koçman University, Faculty of Engineering, Department of Geological Engineering; Sustainable Green Campus Coordination Office

Abstract

The Mediterranean Basin is one of the regions most vulnerable to the impacts of climate change. In particular, rising temperatures, changes in drought frequency, and increasing pressure on water resources highlight the need to strengthen the region's capacity to adapt to climate change. In this context, understanding past climate changes and the adaptation strategies developed by historical societies in response to environmental conditions represents an important area of research that can provide scientific insights for contemporary climate policies.

BlueLegacies is an interdisciplinary and international research initiative that aims to integrate past climate records with ancient water management practices to support climate change adaptation in the Mediterranean Basin. The project will use palaeoclimatic data obtained from natural climate archives to reconstruct past drought periods and hydrological changes and evaluate the water management systems developed by ancient societies in response to changing climatic conditions.

The research brings together expertise from various disciplines, including palaeoclimatology, archaeology, history, hydrology, environmental engineering, and biology. Integrating findings from reconstructions of past climatic and environmental conditions with future climate projections will contribute to identifying regional climate vulnerabilities. Building on this scientific foundation, the project aims to develop low-cost, nature-based solutions informed by ancient water management practices that can be adapted to local conditions.

The project's ultimate objective is to translate scientific research findings into climate adaptation strategies that can be used by local authorities, decision-makers, and communities. The approach developed in Muğla and the Eastern Mediterranean is expected to be evaluated through pilot applications and transferred to other Mediterranean regions facing similar climate risks. The COP31 process is also regarded as an opportunity to strengthen international research partnerships, establish shared scientific infrastructure, and develop new project collaborations through programmes such as Horizon Europe, Interreg, PRIMA, and COST.

Keywords: Palaeoclimatology, climate change adaptation, ancient water management, nature-based solutions, Mediterranean.

MİDUG Thematic Area: WP1 – Climate Science and Nature-Based Solutions.

Climate-Resilient and Sustainable Coastal Governance: Dalyan–İztuzu–Köyceğiz Lake Basin

Prof. Dr. Muammer Tuna

Muğla Sıtkı Koçman University, Faculty of Letters, Department of Sociology

Abstract

Coastal areas and wetlands are among the ecosystems most vulnerable to the combined impacts of climate change and human activities. The Dalyan–İztuzu–Köyceğiz Lake Basin is an important natural and cultural landscape encompassing wetlands, coastal ecosystems, historical and archaeological heritage, fishing and tourism activities, and sea turtle nesting sites. However, the basin faces various environmental and social pressures arising from intensive tourism activities and the impacts of climate change.

This study focuses on developing a participatory coastal governance model to ensure the sustainable and climate-resilient conservation and use of the Dalyan–İztuzu–Köyceğiz Lake Basin. The project's central approach is that decisions concerning the conservation of the basin should be developed and implemented not solely through administrative regulations but also through the participation of economic and social stakeholders operating in the region.

Preliminary research conducted in the basin has identified uncertainties among stakeholders regarding the implementation of existing regulations. Accordingly, the project aims to establish a shared governance mechanism through a process of consultation and negotiation involving local authorities, public institutions, tourism businesses, fishers, civil society organisations, and other relevant stakeholders.

The second component of the proposed model involves establishing an AI-based interactive digital observatory supported by information collected from different stakeholders. This platform is intended to monitor environmental, economic, and social processes within the basin, identify emerging challenges, and facilitate the continuous improvement of the governance mechanism based on the data obtained.

The international project proposal, currently being developed with the participation of researchers from Türkiye, Italy, and Argentina, aims to bring together experiences in coastal management from different countries. The long-term objective is to enable the participatory governance approach developed for the Dalyan–İztuzu–Köyceğiz Lake Basin to be adapted to other coastal regions with similar ecological and social characteristics.

Keywords: Coastal governance, climate resilience, wetlands, participatory management, Dalyan–Köyceğiz.

MİDUG Thematic Area: WP2 – Coastal Areas, Wetlands, and Climate Adaptation Governance.

MSKÜ Campus Garden: A Living Laboratory for Interdisciplinary Learning, Climate Adaptation, and Inclusion Through Cultivation

Res. Asst. Naz Fulya Cibik

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Abstract

The impacts of climate change on agricultural production, food security, and natural resources highlight the need to promote sustainable production practices and integrate climate adaptation into educational processes. University campuses provide important learning environments where such practices can be introduced to students and the wider community.

The Muğla Sıtkı Koçman University Campus Garden, through its activities conducted since 2019, provides a living laboratory model that brings together ecological agriculture, climate adaptation, sustainable food systems, and inclusive education. The project engages students from different disciplines, academics, children, older adults, people with disabilities, and volunteers in production-based learning activities.

At the Campus Garden Ecological Agriculture and Practice Area, activities include cultivation without chemical fertilisers or pesticides, the conservation and propagation of local seeds, seed swap, biological pest control, and the planting of saplings and medicinal and aromatic plants. These activities are supported by courses, student visits, community service activities, and workshops.

The project's central approach is that climate change and sustainability education should not be limited to short-term awareness-raising activities. Instead, students are encouraged to participate directly in cultivation processes, developing skills in ecological agriculture, resource management, collaboration, and environmental responsibility. Practices such as using local seeds, increasing crop diversity, improving water-use efficiency, and protecting soil are considered approaches that may contribute to strengthening the resilience of agricultural production to drought, rising temperatures, and extreme weather events.

In the next phase of the project, activities undertaken since 2019 are expected to be systematically documented, and measurable indicators relating to production, participation, and resource use will be developed. The project also plans to improve the transferability of the model to other higher education institutions through practical guides in Turkish and English, digital promotional materials, and dissemination tools.

The Campus Garden provides a practical sustainability model demonstrating that climate change adaptation is not limited to technological and administrative measures but can also be supported through education, participation, local production, and social inclusion.

Keywords: Living laboratory, ecological agriculture, climate adaptation, sustainable food systems, ecological literacy.

MİDUG Thematic Area: WP3 – Living Laboratories, Circular Economy, and Youth.

Climate-Resilient Tourism Education: Developing a Competency Framework and Educational Model for Future Tourism Professionals

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Abstract

Climate change poses increasing risks to the tourism sector, affecting the use of natural resources, destination management, visitor mobility, and service delivery. These changes require tourism professionals not only to possess knowledge of sustainability but also to assess climate-related uncertainties and develop effective adaptation strategies.

This study aims to identify the competencies needed to strengthen the climate resilience of future tourism professionals and develop a practical educational model for integrating these competencies into higher education programmes in tourism.

The *Climate-Resilient Tourism Education Model* (CRTEM), developed through a literature-based approach, integrates the dimensions of knowledge, skills, mindsets, and values related to climate resilience within a holistic educational framework. The model incorporates problem-based and project-based learning, scenario and simulation exercises, fieldwork, data-driven learning, community-based approaches, and AI-assisted teaching methods.

In the empirical phase of the research, semi-structured interviews with tourism academics are planned to evaluate the core competencies and sub-competencies defined within the model. Based on the findings, a pilot course or training module will be developed and implemented with 30–40 third- and fourth-year undergraduate students enrolled in tourism programmes.

Pre- and post-intervention assessments will be conducted to evaluate changes in students' climate resilience competencies and the effectiveness of the educational module.

The main expected outputs of the study include a climate resilience competency framework, a practical educational model, a sample course module, and an assessment and evaluation approach. The model is intended to be adaptable to different higher education programmes in tourism and further developed in subsequent stages through contributions from industry representatives and international educational networks.

Keywords: Climate-resilient tourism, tourism education, climate competencies, higher education, CRTEM.

MİDUG Thematic Area: WP4 – Sustainable Tourism and Local Development.

The Regenerative Contribution of Local Markets Integrated into Tourism

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Abstract

The impacts of tourism activities on local economies, cultural heritage, and the natural environment have increased the importance of regenerative approaches that go beyond conventional sustainable tourism practices. Regenerative tourism aims not only to minimise the negative impacts of tourism but also to strengthen the economic, social, and ecological well-being of the destinations visited.

This study examines the contribution of local markets integrated into tourism activities to regenerative tourism in Muğla. Conducted within the scope of the TÜBİTAK 2209-A programme, the research involved fieldwork completed in 2026 and analysed the perspectives of 17 producers/market vendors and 17 tourists.

The findings demonstrate that local markets make significant contributions by providing opportunities for direct sales, supporting short supply chains, and generating local economic value. Producers' perspectives particularly highlight the importance of supporting small-scale and women producers, maintaining local production, promoting natural production methods, conserving local seeds, and supporting biodiversity.

Tourists' perspectives reveal additional contributions, including opportunities to experience local products and culture, establish direct social connections with producers, learn about production processes, encourage seasonal consumption, and reduce food waste.

However, the research also identified areas requiring improvement, including plastic use, waste management, limited tourist demand, and the lack of measurable indicators for monitoring certain environmental practices.

Based on the research findings, a guide entitled *Tourism-Supported Regenerative Local Markets: A Guide to Implementation, Monitoring, and Evaluation* has been prepared. The guide is intended to be shared with local stakeholders, and the proposed practices will be evaluated using measurable monitoring indicators.

The study demonstrates that local markets can be regarded not merely as places of economic exchange but also as important components of tourism that support the preservation of local culture, responsible consumption, social interaction, and sustainable production.

Keywords: Regenerative tourism, local markets, sustainable consumption, local development, Muğla.

MİDUG Thematic Area: WP4 – Sustainable Tourism and Local Development.

Climate-Resilient Youth

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Abstract

Climate change has significant impacts on contemporary societies, while the potential environmental, economic, and social risks it poses for the future are of particular concern to younger generations. Therefore, the active participation of young people in the development and implementation of climate policies is essential for strengthening societal resilience to climate change.

This study aims to increase young people's knowledge and awareness of the climate crisis, encourage discussion of the potential impacts of climate change on future generations, and support students' active participation in climate policymaking processes.

The study proposes organising a **Youth Climate Forum**, primarily involving students enrolled in the Environmental Sociology course in the Department of Sociology at Muğla Sıtkı Koçman University, alongside young people from other departments and academic programmes.

The forum is intended to provide a platform for young people to discuss issues such as climate-resilient cities, the impacts of climate change on coastal areas, agriculture and food security, the health effects of extreme heat, forest fires, biodiversity conservation, and sea-level rise from their own perspectives.

During the preparation phase, participating students and discussion topics will be identified, and students will be encouraged to conduct research on their selected subjects and prepare discussion papers. The forum is also intended to develop into an inclusive platform open to young people from different universities and countries.

One of the key expected outcomes of the study is the preparation of a **Youth Climate Declaration**, bringing together the forum discussions and young people's recommendations for climate policies.

This approach aims to ensure that young people are involved in climate change processes not merely as recipients of information but as active stakeholders who develop informed perspectives, propose solutions, and contribute to decision-making processes.

Keywords: Climate resilience, youth participation, climate awareness, environmental sociology, climate policies.

MİDUG Thematic Area: WP3 – Living Laboratories, Circular Economy, and Youth.

Clean Energy Transition and Emerging Protectionist Trade Policies Amid Green Industrialisation: Policy Recommendations for COP31

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Abstract

Clean energy transition and green industrialisation policies developed to address global climate change are reshaping the structure of international trade and the competitive conditions faced by countries. While carbon regulations, green subsidies, and strategic industrial policies support the achievement of environmental objectives, they also give rise to new forms of protectionism.

This study examines the interaction between policies supporting the clean energy transition and emerging protectionist measures in international trade. Particular attention is given to the impacts of the European Union's Carbon Border Adjustment Mechanism (CBAM), Emissions Trading System (ETS), and green industrial incentives on developing countries.

The primary objective of the study is to analyse the relationships between the clean energy transition, critical raw materials, and protectionist trade policies and to develop policy recommendations aimed at aligning environmental objectives with international trade rules.

The research is expected to draw on relevant academic literature, reports from national and international organisations, policy documents, sectoral data, and information to be obtained from local stakeholders.

The significance of the study for Türkiye is particularly related to the potential impacts of green transition policies on sectors characterised by carbon-intensive production processes. Muğla's marble, mining, cement, and energy sectors are also considered in relation to international carbon regulations and changing trade conditions.

The intended outcome of the research is the preparation of a report containing practical policy recommendations to support Türkiye's adaptation to the green transition, contribute to the management of carbon-related costs, and help maintain international competitiveness.

The study is expected to provide the public and private sectors in developing countries with a guiding framework, within the COP31 process, for aligning international trade policies with decarbonisation objectives and accelerating the clean energy transition in industry.

Keywords: Green industrialisation, clean energy trade, new protectionism, CBAM, international trade policies.

MİDUG Thematic Area: WP5 – Policy and Governance.

The Social Dimension of Zero Waste Policy

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Abstract

Preventing waste generation, using resources efficiently, and promoting sustainable consumption habits are becoming increasingly important in addressing climate change and environmental challenges. In this context, zero waste policies offer technical and administrative solutions aimed at reducing waste and recovering resources. However, the success of these policies depends not only on technological infrastructure but also on changes in individual and societal behaviour.

This study examines zero waste policy from the perspective of environmental sociology, discussing the social causes of waste generation and approaches to promoting sustainable consumption behaviour.

The study explores the relationships between consumption habits, energy use, and waste generation, considering the potential effects of different patterns of social behaviour on achieving zero waste objectives.

Within this framework, a broad spectrum of social behaviours is examined, ranging from lifestyles based on low consumption and limited resource use to behavioural patterns characterised by intensive consumption and the pursuit of continuous economic growth.

The central question addressed by the study is how, and under what social conditions, consumption behaviours that contribute to environmental problems can be transformed. Accordingly, the study emphasises that zero waste policies should not be limited to waste collection, separation, and recycling but should also be considered in relation to consumption culture, social values, and lifestyles.

The study highlights the importance of complementing solutions developed in engineering, economics, and technology with perspectives offered by the social sciences in addressing the climate crisis.

Strengthening public acceptance of zero waste policies and achieving lasting behavioural change are regarded as essential components of efforts to achieve environmental sustainability objectives.

Keywords: Zero waste, environmental sociology, social behaviour, sustainable consumption, climate change.

MİDUG Thematic Area: WP5 – Policy and Governance.

Recycling Campus Waste Glass Using a Microwave-Assisted Sol–Gel Method for Heavy Metal Sensing and Wastewater Treatment Applications

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Abstract

Recycling glass waste generated in university laboratories represents an important area of research in sustainable resource management and circular economy practices. In particular, recycling borosilicate laboratory glass can not only reduce waste generation but also enable the development of value-added materials.

This project aims to convert waste borosilicate (Pyrex) glass generated in university laboratories into silica-based quantum dots (Si-QDs) using a microwave-assisted sol–gel method.

The proposed synthesis approach involves using organic waste from the campus for surface passivation. By incorporating different types of waste into the same production process, the project aims to establish a materials development approach based on circular economy principles.

The use of the microwave-assisted sol–gel method is intended to reduce synthesis time and energy consumption. By exploiting the ionic trapping properties of the pores in the resulting silica-based nanomaterials, the project aims to develop preconcentration techniques and surface-sensitised electrochemical sensor kits for detecting toxic heavy metals in laboratory wastewater.

The project brings together several sustainability objectives, including converting laboratory waste into high-value nanotechnological products, developing energy-efficient synthesis methods, and monitoring water pollution.

The expected outcomes include the development of a synthesis approach for recycling waste glass and an investigation of the potential applications of the resulting nanomaterials in environmental sensing and wastewater treatment.

Keywords: Waste glass, circular economy, sol–gel method, silica quantum dots, heavy metal sensors.

MİDUG Thematic Area: WP3 – Living Laboratories, Circular Economy, and Youth.

Smart-City Emergency Edge Platform Using Decentralised BLE Mesh Communication

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Abstract

Climate change-related disasters, including extreme weather events, floods, and forest fires, pose significant risks not only to urban physical infrastructure but also to communication systems. During disasters and emergencies, damage to or disruption of conventional communication infrastructure can hinder the transmission of distress calls and coordination with emergency response teams.

This project aims to develop a decentralised emergency communication platform that enables communication between mobile devices when centralised communication infrastructure is unavailable.

The proposed system uses a mesh communication approach based on *Bluetooth Low Energy* (BLE). Within this network, SOS messages, location information, and other critical emergency data generated by users can be transmitted between nearby devices.

The system is designed to relay messages between devices within the network until they reach an appropriate connection point or a dashboard accessible to rescue teams. This approach aims to establish a local emergency communication network that does not depend entirely on cellular networks or centralised communication infrastructure.

The project is particularly relevant to maintaining communication continuity and strengthening emergency response capacity during disasters such as forest fires, floods, and extreme weather events.

The expected outcome is the development of a functional prototype and a demonstration of its scalability under suitable field conditions.

The proposed approach aims to develop a solution that applies digital technologies to climate change adaptation, disaster management, and smart-city applications.

Keywords: Smart cities, disaster management, BLE mesh, decentralised communication, climate resilience.

MİDUG Thematic Area: WP6 – Digital Climate Solutions and Disaster Resilience.

Glass Recycling Is in My Hands

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Abstract

Reusing waste materials and raising environmental awareness play an important role in promoting sustainable consumption habits. In particular, engaging young people in practical environmental education activities can contribute to strengthening sustainability awareness across society.

The project *Glass Recycling Is in My Hands* is a collaborative initiative involving public institutions, universities, and the wider community. It aims to repurpose waste glass through upcycling and increase zero waste awareness among young people.

Supported under the ÜNİDES programme of the Republic of Türkiye Ministry of Youth and Sports, the completed project was designed around university students participating in environmental awareness training and subsequently sharing their knowledge and experiences with younger age groups.

In the first phase, university students received training on climate change and zero waste from academics and experts. The training programme was complemented by a screening of the film *WALL-E* and practical glass-painting workshops.

In the second phase, the trained university students visited three secondary schools in the Menteşe and Fethiye districts of Muğla, where they delivered similar educational and practical activities using a peer education approach.

As part of the project, waste glass was transformed into decorative objects, providing a practical demonstration of how discarded materials can be repurposed into reusable products.

Although the project initially aimed to reach 100 participants, it ultimately engaged **127 students (66 female and 61 male)**. In addition, promotional activities organised as part of the 19 May celebrations increased the visibility of the project's outcomes at the local level.

The project demonstrates that combining environmental sustainability education with practical activities and peer learning can provide an effective approach to encouraging young people to develop a sense of environmental responsibility.

Keywords: Upcycling, waste glass, zero waste, peer education, environmental awareness.

MİDUG Thematic Area: Related to WP3 – Living Laboratories, Circular Economy, and Youth.

4.3. Art and Sustainability

Artistic Interpretation of Underwater Fauna and Flora Using Ceramic Materials in the Context of Sustainability

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The interaction between nature and humanity has been one of the fundamental sources of artistic inspiration throughout human existence. As in all branches of art, this relationship is also central to ceramic art. The relationship between humans, as meaning-making beings, and nature has led them to explore the natural world, draw upon its resources, meet their basic needs, and express their creativity through inspiration from nature. In a cultural context, this relationship has also enabled artists to develop their own artistic language through nature. Marine environments are among the areas affected by environmental problems.

This study aims to draw attention to issues such as marine species, their life cycles, and endangered species through ceramic art. Marine organisms, including tube worms, seagrasses, corals, and sea sponges, were researched and observed, and original ceramic works were created based on their forms, life processes, and the beauty of the underwater world. Despite the adverse conditions affecting marine environments, the struggle of living organisms to survive remains evident in many ways. Artistic applications using ceramic materials can raise public awareness of underwater fauna and flora. While marine pollution is a prominent theme in the works produced, careful consideration was given to the selection of materials and techniques used in the ceramic production process.

For example, recycled materials were used as extensively as possible in clay bodies and glazes. The aesthetic qualities and emotional impact of the artworks created within the scope of this study aim to raise awareness of nature, marine life, and marine ecosystems. The works invite viewers to reflect on these issues, reinforce the importance of environmental conservation, and encourage critical questioning.

Keywords: Ceramic art, marine biodiversity, underwater fauna and flora, environmental awareness, sustainability.

MİDUG Thematic Area: Related to WP3 – Living Laboratories, Circular Economy, and Youth.



Figure 4.3.1. Sinem Kara's ceramic artworks entitled *"Derin"* and *"Derin III"*.

CHAPTER V

WORKSHOP EVALUATION AND OUTCOME STATEMENT

Towards COP31: Scientific Collaboration, Climate Resilience, and a Shared Future

5.1. Overall Evaluation of the Workshop

The COP31 Workshop, organised by Muğla Sıtkı Koçman University on 5 October 2026, provided an opportunity to assess the university's research and practical capabilities in the fields of climate change and sustainability.

The studies presented at the workshop highlighted the need to address not only the environmental impacts of climate change but also its economic, social, and cultural dimensions. Contributions from the natural and environmental sciences, engineering, social sciences, tourism, education, and the arts demonstrated how different areas of expertise could be brought together around shared research questions.

In particular, projects focusing on water resource management, coastal and wetland conservation, sustainable tourism, local production, clean energy transition, circular economy, and disaster preparedness highlighted areas of research directly relevant to Muğla's climate adaptation needs.

One of the notable features of the workshop was the presentation of student projects alongside academic research. This approach supported young people's participation in scientific research and practical activities while creating opportunities for new partnerships across different disciplines.

Overall, the workshop marked an initial step towards connecting the university's existing research potential with regional challenges and identifying opportunities for collaborative activities within MİDUG.

5.2. Key Common Themes Emerging from the Workshop

A collective assessment of the presentations and project proposals highlighted five main themes that could guide future research and practical initiatives.

5.2.1. Translating Scientific Knowledge into Climate Adaptation Practices

Palaeoclimatic research, hydrological observations, ecosystem studies, and environmental monitoring methods provide valuable data for understanding climate variability and regional vulnerabilities in Muğla.

Applying this knowledge to areas such as water management, coastal ecosystem conservation, and nature-based solutions, and translating research findings into methods and tools that can be used by local authorities and decision-makers, emerged as important opportunities for collaboration.

5.2.2. Strengthening Local and Regional Climate Resilience

Muğla's coastal areas, wetlands, forests, agricultural production, and tourism activities are affected by climate change in different ways. Adaptation strategies must therefore consider economic activities and societal needs alongside ecological conditions.

The projects presented at the workshop demonstrated the potential of participatory governance models, environmental monitoring systems, and initiatives undertaken with local stakeholders to strengthen regional climate resilience.

5.2.3. Sustainable Production, Circular Economy, and Green Transition

Campus gardening initiatives, student projects focusing on the reuse of waste materials, and research on the clean energy transition demonstrated how resource efficiency can be addressed at different scales.

These activities support the use of the university campus as a **living laboratory** for sustainable production, environmental monitoring, and practical education. Examining the green transition in terms of economic policies and consumer behaviour, alongside technological innovation, is another important component of this theme.

5.2.4. Education, Youth Participation, and Public Awareness

The educational models, student projects, and awareness-raising activities presented at the workshop demonstrated that young people's participation in climate action can be supported through different approaches.

Integrating climate change and sustainability into educational programmes, increasing student participation in applied research, and strengthening knowledge exchange between the university and wider society emerged as key areas for future activities.

5.2.5. Interdisciplinary and International Collaboration

The topics discussed at the workshop highlighted the importance of bringing together different areas of expertise to address shared research questions.

In this context, sharing data and methods, establishing thematic research groups, strengthening connections with national and international scientific networks, and preparing joint project applications are among the priorities that could be pursued within MİDUG.

5.3. COP31 Workshop Outcome Statement

A Shared Approach to Science, Climate Resilience, and a Sustainable Future
DRAFT OUTCOME STATEMENT

The COP31 Workshop, organised by Muğla Sıtkı Koçman University on 5 October 2026, brought together academics and students from different disciplines to discuss research, project proposals, and practical initiatives addressing climate change and sustainability.

Based on the studies presented, the following principles and priorities for future activities are proposed to strengthen Muğla's climate resilience and make effective use of the university's scientific capacity.

1. Science-Based Climate Action

It is recommended that climate adaptation policies be supported by up-to-date scientific data, long-term environmental records, and regional research, and that the resulting findings be translated into knowledge and tools that can inform decision-making processes.

2. Strengthening Muğla's Climate Resilience

Priority should be given to the integrated assessment of climate risks affecting coastal areas, wetlands, water resources, forests, agriculture, and tourism, and to the development of adaptation strategies suited to the region's environmental, economic, and social characteristics.

3. Promoting Nature-Based Solutions and Drawing on Cultural Heritage

It is recommended that nature-based approaches to ecosystem conservation be supported and that the experiences of past societies in adapting to environmental change, including historical water management practices, be investigated for their relevance to present-day conditions.

4. Promoting Sustainable Production and Circular Economy Practices

It is recommended that resource efficiency be improved, waste generation reduced, reuse and recycling practices expanded, and production models supporting the clean energy transition encouraged.

5. Developing the University Campus as a Living Laboratory

It is recommended that the MSKÜ campus be developed as a research and learning environment where practices related to sustainable production, resource management, environmental monitoring, and climate education can be tested, monitored, and disseminated.

6. Supporting Young People's Active Participation in Climate Action

Greater student involvement in research projects, sustainability initiatives, and climate policy assessment processes is encouraged, alongside the development of platforms where young people can share their views and proposals.

7. Strengthening Climate Change Education

It is recommended that climate change-related knowledge and competencies be integrated into different higher education programmes, opportunities for experiential learning be expanded, and climate literacy be promoted throughout the university.

8. Developing Participatory and Science-Based Governance

The establishment of collaborative mechanisms among universities, public institutions, local authorities, the private sector, and civil society organisations is supported, together with the integration of scientific findings and stakeholder experiences into decision-making processes.

9. Using Digital Technologies for Climate Adaptation and Disaster Resilience

It is recommended that environmental monitoring systems, data-driven decision-support tools, smart city applications, and alternative communication technologies be explored to reduce climate-related risks and strengthen disaster preparedness.

10. Strengthening National and International Research Partnerships

The development of interdisciplinary research networks, the sharing of data and methodologies, and the preparation of joint project applications for national and international funding programmes are encouraged.

11. Developing MİDUG as a Long-Term Collaboration Platform

It is recommended that the Muğla Climate Resilience and Adaptation Initiative (MİDUG), established during the preparations for COP31, be developed as a platform that connects the university's research and practical activities, remains open to the participation of academics and students, and supports local and international partnerships.

Conclusion

The studies presented at the COP31 Workshop demonstrated that Muğla's climate adaptation needs can be addressed through contributions from different disciplines and that the university has considerable research potential in this field.

The principles and priorities outlined in this draft statement are proposals developed on the basis of the studies presented at the workshop. They are intended to be further developed through consultation with participants and relevant stakeholders and subsequently translated into a shared agenda for future activities.

The long-term objective is to develop MİDUG into a sustainable research and implementation network capable of continuing its activities beyond COP31.

Declaration of Artificial Intelligence Use

During the preparation of this booklet, **ChatGPT (GPT-6)**, an artificial intelligence tool developed by OpenAI, was used to improve the language and clarity of the texts, reduce repetition, ensure consistency across sections, and develop editorial suggestions.

The use of artificial intelligence was limited to editorial assistance. Final responsibility for the scientific content, evaluation of research findings, and verification of project information remained with the respective researchers and the editor of the booklet.

All AI-generated suggestions were reviewed by the editor, and necessary revisions were made.

Tool used: ChatGPT (OpenAI, GPT-6)
Purpose of use: Language editing, text simplification, editorial assistance, and content organisation
Editorial responsibility: Assoc. Prof. Dr. Sena Akçer Ön
Date of use: October 2026