ST open

EDITORIAL

50 years of the University of Split: striving to reach sustainable development goals

Igor Jerković[1], Petra Jelić[1], Ana Marušić[2]

[1] Rectorate Department for Science and Innovation, University of Split, Croatia

[2] University of Split School of Medicine, Split, Croatia

Correspondence to:
Ana Marušić
University of Split School of Medicine, Split, Croatia, Šoltanska 2A, 21000 Split, Croatia
ana.marusic@mefst.hr

Cite as:
Jerković I, Jelić P, Marušić A. 50 years of the University of Split: striving to reach sustainable development goals. ST-OPEN. 2024;5: e2024.2419.17.

Since 2020, the University of Split (UNIST) has been actively engaged in systematic monitoring of the activities in line with the United Nations Sustainable Development Goals (SDGs). SDG committees, appointed for each of the 17 SDGs, prepare an annual report on the University's activities and identify opportunities for aligning all aspects of its daily operations with sustainable practices. The UNIST also continuously engages in research that contributes to the SDGs. This editorial highlights the UNIST's multidisciplinary research topics in six key areas, where the University addresses some of the global challenges, including promoting well-being, organizing sustainable cities, managing natural resources, enhancing digital technologies, developing innovative energy solutions, and protecting cultural heritage. These research efforts and related initiatives have a positive impact on the UNIST community and the environment and contribute to the achievement of the SDGs.

Keywords: sustainable development goals; SDGs; research for SDGs; SDGs in higher education

Introduction

Universities can actively contribute to achieving Sustainable Development Goals (SDGs) – as outlined in a blueprint for the prosperity of society and the planet by 2030 set by the United Nations (UN) –through teaching, research, community engagement, non-academic services, and governance practices (*1*).

At the University of Split (UNIST), researchers have been working on various topics important for science in general, as well as employees, students, the local community, and industry specifically, providing an opportunity to position the University in the global scientific community. Through its research, the University attracts top scientists and students and improves its quality of teaching. The ST-OPEN overlay+ journal is also one of the

UNIST's activities whose aim is to build capacity for research and work with early career researchers and their mentors and teach them about scientific writing and publishing (*2*).

Since 2020, the UNIST has been systematically monitoring activities that contribute to the Sustainable Development Goals (SDGs) of the United Nations (UN) (*3*). In addition to mapping its activities, the University demonstrates its commitment to the SDGs and compliance with the UN's 2030 SDGs through planning of its strategic activities, teaching practices, research, organizational culture development, and international partnerships. The UNIST tends to involve as many stakeholders in these activities and promote them in all aspects of institutional functioning, thus making their impact more significant.

Increased engagement from universities in promoting, documenting, and communicating sustainability initiatives and their outcomes results in better sustainability performance and a stronger reputation among the public. Creating a sense of ownership of the activities in line with SDGs among all stakeholders – including university management, researchers, teachers, administrative and support staff, students, partner institutions, and the wider community – leads to better results in achieving these goals. Continuous communication and understanding of sustainability matters help to bridge gaps in stakeholder perceptions and mitigate potential conflicts among stakeholders (*4*).

To maximize its efforts in achieving the SDGs and follow up on their implementation, we identified how the activities within the Action Plan for the implementation of the 2021–2025 UNIST Strategy correspond to each of the SDGs. To monitor the activities in a systematic and timely manner, dedicated committees were appointed for each of the 17 SDGs in 2022. They are tasked with preparing an annual report on the UNIST's activities and identifying opportunities for aligning all aspects of its organizational operations to sustainable practices.

Through these research activities and innovative approaches, the UNIST strives to contribute towards the UN's 17 SDGs by 2030 (**Figure 1**).

The main research topics at the UNIST (*5*) are:

- Healthy lifestyle;
- Sustainable and resilient society;
- Natural resources;
- Digitalisation;
- Energy, materials and advanced technologies;
- Culture, heritage, and identity.

This editorial describes specific research activities at the UNIST's constituents that contribute to achieving each SDG. While SDG 17 ('Strengthen the means of implementation and revitalize the global partnership for sustainable development') is not addressed specifically as a research topic at the UNIST, the university has extensive global collaborations with different stakeholders in working toward this goal (*4*).

Figure 1. United Nation's SDGs. The informational use of the SDG logos in the figure is for illustrative, non-commercial purposes and is not intended to raise funds. Such use does not require prior permission from the United Nations nor the conclusion of a licensing agreement, as per UN guidance (https://www.un.org/sustainabledevelopment/wp-content/uploads/2019/01/SDG_Guidelines_AUG_2019_Final.pdf).

Healthy lifestyle

Ensuring a healthy, active, and independent life requires a comprehensive, multidisciplinary, interdisciplinary, and transdisciplinary approach. This can be achieved, for example, through translational research in biomedicine, from prevention, physical activity and sports, mental health, healthy food and nutrition, development of new medicinal substances for prevention and treatment, all the way to new methods, technologies, and diagnostics, and the organization of work and the provision of healthcare. The contribution of engaging in kinesiological activities to health and anthropological status is also relevant in this regard, as is the role of law in medicine and sports. Sub-themes within the scientific research topic 'Healthy Lifestyle' are represented in the work of several UNIST faculties, schools, and departments, especially the School of Medicine, the Faculty of Kinesiology, and the Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture in the field of digital health (**Table 1**).

Table 1. Research activities at the University of Split related to healthy living and corresponding United Nations' sustainable development goals (SDG)

Research topic	University constituent
SDG3 – Ensure healthy lives and promote well-being for all at all ages	
Cardiovascular diseases	School of Medicine
Lifestyle medicine	School of Medicine
Biology of neoplasms	School of Medicine
Kidney development and diseases	School of Medicine
Inflammatory bowel disease	School of Medicine
Neuroscience, sleep medicine, and neurodegenerative diseases	School of Medicine
Endocrine disorders	School of Medicine
Regenerative medicine and rehabilitation	School of Medicine
Human genetics	School of Medicine, University Department of Health Studies
Cell and tissue biology, biochemistry and biophysics	School of Medicine
Anthropology, bioinformatics, and data analysis	School of Medicine, University Department of Health Studies
Dental medicine and pharmacy research	School of Medicine
Public health and clinical skills	School of Medicine
Prevention and protection of children and elderly health	University Department of Health Studies
Determinants of lifestyle and mental health	University Department of Health Studies
Human remains analysis	University Department for Forensic Sciences
Microbiota analysis	University Department for Forensic Sciences
Biomedical engineering and cognitive sciences	School of Medicine
Medical bionics and neuroelectronics	Faculty of Science
Quality of life and disease development	School of Medicine
Kinesiological activities for health and anthropological status	Faculty of Kinesiology

Table 1. (Resumption)

Research topic	University constituent
Sports performance and analysis	Faculty of Kinesiology
Substances in sports and physical activities	Faculty of Kinesiology
Innovative analytical methods in biomedicine	School of Medicine, Faculty of Science, Faculty of Chemistry and Technology
Development of derivatives from natural compounds for biomedicine and health	Faculty of Science, Faculty of Chemistry and Technology
Artificial intelligence to support a healthy life	Faculty of Science, Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
Effect of electromagnetic fields on humans	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
Machine learning in the classification of medical data and signals	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
SDG3 – Ensure healthy lives and promote well-being for all at all ages, SDG5 – Achieve gender equality and empower all women and girls	
Law and sport	Faculty of Law
SDG3 – Ensure healthy lives and promote well-being for all at all ages, SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Biomedical applications of electromagnetic fields	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
Biomechanics	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
Telemedicine	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
SDG3 – Ensure healthy lives and promote well-being for all at all ages, SDG13 – Take urgent action to combat climate change and its impacts	
Atmospheric aerosols and health	Faculty of Science
SDG3 – Ensure healthy lives and promote well-being for all at all ages, SDG16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	
Law and medicine	Faculty of Law, University Department for Forensic Sciences
Medical ethics	School of Medicine

Sustainable and resilient society

Scientists at the UNIST base their research on the sustainable management and engineering of the built environment and the approach to management on the concept of smart cities. This work also focuses on issues of sustainability and resilience of local populations, examines scenarios of future life in the city, and explores the management of resilience of the architectural heritage, economy, and business systems. A resilient society also requires forensic studies, especially in terms of establishing a sustainable economy and investigating possible financial manipulation. The UNIST plays an important role in promoting sustainable development and the development of socially responsible behavior. Its most active constituents in this sense are the Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture, the Faculty of Economics, Business and Tourism, and the Faculty of Humanities and Social Sciences (**Table 2**).

Table 2. Research activities at the University of Split related to sustainable and resilient society and corresponding United Nations' Sustainable Development Goals (SDG)

Research topic	University constituent
SDG4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
Philosophy and sustainable development	Faculty of Humanities and Social Sciences
Andragogy (adult education)	Faculty of Humanities and Social Sciences
SDG5 – Achieve gender equality and empower all women and girls	
Autonomous law and the legal position of women	Faculty of Law, University Department for Forensic Sciences
SDG8 – Promote sustained, inclusive and sustainable growth, full and productive employment, and decent work for all	
Strategy and entrepreneurship	Faculty of Economics, Business and Tourism, University Department of Professional Studies, Faculty of Maritime Studies
Macroeconomics and monetary economics	Faculty of Economics, Business and Tourism, University Department of Professional Studies
Economy and business systems resilience	Faculty of Economics, Business and Tourism, University Department of Professional Studies, University Department for Forensic Sciences
SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
AI methods, techniques and tools for a sustainable and resilient society	Faculty of Science, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
SDG10 – Reduce inequality within and among countries	
Politics and ethics of migration	Faculty of Humanities and Social Sciences, Faculty of Economics, Business and Tourism
SDG11 – Make cities and human settlements inclusive, safe, resilient and sustainable	
Sustainability and disaster risk	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism, University Department for Forensic Sciences
Research in firefighting	University Department for Forensic Sciences
Urban renewal planning	Faculty of Civil Engineering, Architecture and Geodesy
SDG12 – Ensure sustainable consumption and production patterns	
Sustainable economy and financial manipulations	Faculty of Economics, Business and Tourism, University Department of Professional Studies, University Department for Forensic Sciences
Waste disposal and its impact on the environment	Faculty of Science
SDG13 – Take urgent action to combat climate change and its impacts	
Climate changes	Faculty of Science, University Department of Marine Studies
SDG16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels	
Criminal justice system and protection	Faculty of Law, University Department for Forensic Sciences
Development of criminal procedure and judicial system	Faculty of Law, University Department for Forensic Sciences
Law in economic relations	Faculty of Law
Public and private law in the contemporary context	Faculty of Law
Argumentation in civil, criminal, commercial and administrative proceedings	Faculty of Law
Forensic identification	University Department for Forensic Sciences
SDG4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Adoption of new technologies – universal interactions	Faculty of Science, Faculty of Economics, Business and Tourism

Table 2. (Resumption)

Research topic	University constituent
SDG8 – Promote sustained, inclusive and sustainable growth, full and productive employment, and decent work for all, SDG16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	
Labor law and company law	Faculty of Law, Faculty of Economics, Business and Tourism, University Department for Forensic Sciences
SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation, SDG11 – Make cities and human settlements inclusive, safe, resilient and sustainable	
Civil engineering for resilience to natural disasters	Faculty of Civil Engineering, Architecture and Geodesy
Infrastructure and maintenance	Faculty of Civil Engineering, Architecture and Geodesy
Architectural heritage resilience management	Faculty of Civil Engineering, Architecture and Geodesy
Smart cities and local development	Faculty of Economics, Business and Tourism, University Department of Professional Studies, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Maritime Studies

Natural resources

Within this topic, researchers from many of the University's constituents, but predominantly from the Faculty of Science, the University Department of Marine Studies, the University Department of Forensic Sciences, the Faculty of Chemistry and Technology, and the Maritime Faculty, focus on a wide range of areas, including the ecology of natural communities (sea, water, soil, plants, etc.), chemical profiling and potential of natural compounds, agriculture, blue biotechnology, food technology, and bioeconomy (**Table 3**). Areas such as shipping, hydrography, shipbuilding, seaports, maritime law, and transport are also explored, with a special emphasis on the sustainable development of water management, maritime facilities and systems, and water protection.

Table 3. Research activities at the University of Split related to natural resources and corresponding United Nations' Sustainable Development Goals (SDG)

Research topic	University constituent
SDG7 – Ensure access to affordable, reliable, sustainable and modern energy for all	
Sustainable use and management of natural resources (sea, water, soil, plants, food, etc.)	University Department of Marine Studies, Faculty of Economics, Business and Tourism, Faculty of Science, Faculty of Chemistry and Technology, Faculty of Maritime Studies
Sustainable agriculture in Mediterranean ecosystems	University Department of Marine Studies
Blue biotechnology, food technology, and bioeconomy	STIM-REI Center of Excellence for Science and Technology, Faculty of Chemistry and Technology, University Department of Marine Studies, Faculty of Economics, Business and Tourism
Coastal and marine area management	Faculty of Maritime Studies, Faculty of Economics, Business and Tourism
Oceanography	Faculty of Science, University Department of Marine Studies
Maritime risk management	Faculty of Maritime Studies
Marine engineering	Faculty of Maritime Studies, University Department of Professional Studies
Geotechnics and hydraulic engineering	Faculty of Science

Table 3. (Resumption)

Research topic	University constituent
Research in geodesy and transport	Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Maritime Studies
Meteorology	Faculty of Science, University Department of Marine Studies
Ecological modeling	Faculty of Science
AI algorithms in the management and protection of natural resources	Faculty of Science, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Research in environmental physics	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture, University Department of Marine Studies, Faculty of Maritime Studies
Astroparticle physics	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
Experimental and theoretical physics of elementary particles	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture
SDG12 – Ensure sustainable consumption and production patterns	
Quality of natural products	Faculty of Chemistry and Technology
SDG12 – Ensure sustainable consumption and production patterns SDG13 – Take urgent action to combate climate change and its impacts	
Advanced methods in environmental protection development	Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture, Faculty of Chemistry and Technology
SDG14 – Conserve and sustainable use the oceans, seas and marine resources for sustainable development SDG15 – Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt reverse land degradation and halt biodiversity loss	
Ecology and biodiversity	Faculty of Science, University Department of Marine Studies, University Department for Forensic Sciences
SDG3 – Ensure healthy lives and promote well-being for all at all ages SDG14 – Conserve and sustainable use the oceans, seas and marine resources for sustainable development SDG15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt reverse land degradation and halt biodiversity loss	
Chemical profiling and potential of different origin natural organic compounds	Faculty of Chemistry and Technology, Faculty of Science
SDG6 – Ensure availability and sustainable development of water and sanitation for all, SDG14 – Conserve and sustainable use the oceans, seas and marine resources for sustainable development, SDG15 – Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt reverse land degradation and halt biodiversity loss	
Protection of water, sea, and natural resources	University Department of Marine Studies, Faculty of Chemistry and Technology, Faculty of Maritime Studies, Faculty of Law

Digitalization

The digital transition is horizontal and permeates all areas from upbringing, education, work, and research to security, energy, and social media, especially at the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, the Faculty of Economics, Business and Tourism, the University Department of Professional Studies, the Maritime Faculty, Faculty of Chemistry and Technology, Faculty of Science, Faculty of Civil Engineering, Architecture, and Geodesy (**Table 4**). Research on this topic at the UNIST focuses on a wide range of areas, including mathematical and computational methods, model design, software and hardware development, security, digital services and business models, and models for decision support in urban infrastructure management. Related social challenges such as the right to privacy and the general social and ethical implications of digital transformation are also explored. Digital transformation has great potential for

improving the quality of life and creating a sustainable future, but at the same time, it creates new challenges. The UNIST strives to understand and solve these challenges so that digitalization is realized at the service of society and the community in general.

Table 4. Research activities at the University of Split related to digitalization and corresponding United Nations' Sustainable Development Goals (SDG)

Topic	University constituent
SDG4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
Design of visual communications	Arts Academy, Faculty of Humanities and Social Sciences
Interaction design	Faculty of Science
Film and video	Arts Academy
SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Information and communication technologies	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism, University Department of Professional Studies, Faculty of Maritime Studies
Innovative technologies and smart systems	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism
Advanced methods of analysis and optimization	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Chemistry and Technology, Faculty of Economics, Business and Tourism, Faculty of Maritime Studies
Quantum computing	Faculty of Science
Modern production systems	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Chemistry and Technology
Digital control systems	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism, University Department of Professional Studies, Faculty of Maritime Studies
AI and machine learning applications	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism, University Department for Forensic Sciences, School of Medicine, SOZS, Faculty of Maritime Studies
Robotics	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Science
VLSI chips and systems design	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Computer vision methods	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Internet of Things (IoT)	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Wireless and network technologies	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Human-machine interaction	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Big Data	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Geographic information systems	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
User interfaces	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Electroacoustics	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Application of advanced digital technologies in construction	Faculty of Civil Engineering, Architecture and Geodesy
Geoinformatics	Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Maritime Studies

Table 4. (Resumption)

Topic	University constituent
SDG16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
Legal regulation of digitization	University Department for Forensic Sciences, Faculty of Law, Faculty of Economics, Business and Tourism
SDG2 – End hunger, achieve good security and improved nutrition and promote sustainable agriculture, SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Digital technologies in agriculture	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
SDG4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Virtual and augmented reality applications	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture,
SDG4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, SDG11 – Make cities and human settlements inclusive, safe, resilient and sustainable	
AI in education and society	Faculty of Science, Faculty of Economics, Business and Tourism, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Digitization and publication of the heritage of Don Frano Bulić	Faculty of Catholic Theology

Energy, materials, and innovative technologies

The Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture, the Faculty of Civil Engineering, Architecture, and Geodesy, the Maritime Faculty, the University Department of Professional Studies, the Faculty of Chemistry and Technology, and other UNIST constituents are dedicated to research and development of new solutions that will contribute to the green transition and sustainable development (**Table 5**). This research covers a wide range of areas, from the development of renewable energy sources, energy efficiency, and power systems to innovative materials and advanced technologies such as robotics, bionics, neuroelectronics, nanomaterials, and geotechnics. This makes these areas vital to the development of sustainable technologies (chemical, food, biotechnology, etc.) and solutions that will help in the fight against climate change, as well as for the promotion of circular economy and green technologies.

Table 5. Research activities at the University of Split related to energy, materials, and innovative technologies and corresponding United Nations' Sustainable Development Goals (SDG)

Topic	University constituent
SDG7 – Ensure access to affordable, reliable, sustainable and modern energy for all	
Electromagnetism and energetics	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University Department of Professional Studies, Faculty of Maritime Studies
Renewable energy sources and energy storage systems development	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Civil Engineering, Architecture and Geodesy, University Department of Professional Studies, Faculty of Maritime Studies
Alternative energy sources and technologies	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Maritime Studies

Table 5. (Resumption)

Topic	University constituent
Energy from waste	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Energy efficiency (buildings, transport, and industry)	Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Maritime Studies
Energy transition (decarbonization of energy systems)	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Maritime Studies
SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Materials and constructions	Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Chemistry and Technology, University Department of Professional Studies, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Advanced technology on the micro and nanoscale	STIM-REI Center of Excellence for Science and Technology, Faculty of Science, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
Geotechnics and geoinformatics	Faculty of Civil Engineering, Architecture and Geodesy
Advanced technologies application	Faculty of Chemistry and Technology, STIM-REI Center of Excellence for Science and Technology, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism, Faculty of Maritime Studies
Development and application of methods for the investigation of matter and its interactions	Faculty of Science
Fusion and plasma physics	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
High energy physics	Faculty of Science
Advanced power grids and microgrids	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University Department of Professional Studies
SDG12 – Ensure sustainable consumption and production patterns	
Circular economy in energy	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
SDG13 – Take urgent action to combat climate change and its impacts	
Research in energy and environment	Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Economics, Business and Tourism
SDG3 – Ensure healthy lives and promote well-being for all at all ages, SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
Medical bionics and neuroelectronics	Faculty of Science, School of Medicine
SDG7 – Ensure access to affordable, reliable, sustainable and modern energy for all, SDG13 – Take urgent action to combat climate change and its impacts	
Electric vehicles	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
SDG9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation, SDG12 – Ensure sustainable consumption and production patterns	
Research and development of environmentally friendly materials and sustainable processes	Faculty of Chemistry and Technology
SDG7 – Ensure access to affordable, reliable, sustainable and modern energy for all, SDG12 – Ensure sustainable consumption and production patterns, SDG13 – Take urgent action to combat climate change and its impacts	
Energy and environment	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Civil Engineering, Architecture and Geodesy, Faculty of Maritime Studies

Culture, heritage, and identity

The UNIST's geographical position abounds in cultural heritage sites from prehistoric to modern times. The main research area in this sense focuses on contributing to the preservation and valorization of cultural heritage and the understanding and presentation of the rich cultural identity of Dalmatia and Croatia. Its subareas include research in art, archaeology, ethnology, history, linguistics, sociology, anthropology and other social and humanistic disciplines. Scientists from all of the UNIST's constituents, led mostly by the Faculty of Philosophy and Social Sciences, the Academy of Arts, and the Faculty of Law, strive to understand and valorize cultural heritage, promote cultural tourism, and contribute to the development of cultural policies and practices through their research (**Table 6**). The University's goal here is the preservation and presentation of cultural heritage for future generations, but also its valorization as a resource for sustainable development and improvement of the community's life quality. As part of the European Union membership, we participate in the harmonization of Croatian and European law and contribute to the organization and development of the Croatian judiciary and state administration.

Table 6. Research activities at the University of Split related to culture, heritage, and identity and corresponding United Nations' Sustainable Development Goals (SDG)

Topic	University constituent
SDG3 – Ensure healthy lives and promote well-being for all at all ages	
General, clinical, health, social and developmental psychology	Faculty of Humanities and Social Sciences
Sport and popularity as heritage, part of identity, and an opportunity for the development of society	Faculty of Kinesiology
SDG4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
Croatian studies, English, theory and history of literature, Roman studies, German studies, linguistics, phonetics	Faculty of Humanities and Social Sciences
History of philosophy, logic, political philosophy, cognitive theory, philosophy of science, social philosophy, ontology, ethics	Faculty of Humanities and Social Sciences, University Department for Forensic Sciences
Didactics, pedagogy of early and preschool education, family pedagogy, general pedagogy, special pedagogy	Faculty of Humanities and Social Sciences
Philosophy and theology (study of St. Jerome)	Faculty of Catholic Theology
Theological education and pastoral care	Faculty of Catholic Theology
SDG8 – Promote sustained, inclusive and sustainable growth, full and productive employment and decent work for all	
Tourism	Faculty of Economics, Business and Tourism, University Department of Professional Studies
SDG10 – Reduce inequality within and among countries	
Sociological methodology, special sociologies	Faculty of Humanities and Social Sciences
Anthropological research in the context of cultural heritage preservation	University Department for Forensic Sciences
Liturgy and art	Faculty of Catholic Theology
Music art	Arts Academy
Fine art	Arts Academy

Table 6. (Resumption)

Topic	University constituent
SDG11 – Make cities and human settlements inclusive, safe, resilient and sustainable	
Sustainability and disaster risk	Faculty of Humanities and Social Sciences, Arts Academy
Theater art	Arts Academy
Historical buildings and architectural units	Arts Academy
Architecture	Faculty of Civil Engineering, Architecture and Geodesy, Arts Academy
SDG16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
Croatian, world, modern and contemporary history	Faculty of Humanities and Social Sciences
Ethnology, anthropology, traditional culture, theatrology, traductology	Faculty of Humanities and Social Sciences
Argumentation in civil, criminal, commercial, and administrative proceedings	Faculty of Law
Public and private law in the contemporary context	Faculty of Law
Law in the context of social and cultural phenomena	Faculty of Law
Harmonization of Croatian and European law	Faculty of Law, Faculty of Maritime Studies
Organization and development of the Croatian judiciary and state administration	Faculty of Law
History and church law	Faculty of Catholic Theology
Research of Turkish documents in Dalmatia	Faculty of Catholic Theology, Center for Croatian, Venetian and Ottoman Studies
SDG14 – Conserve and sustainable use the oceans, seas and marine resources for sustainable development, SDG16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
Maritime law	Faculty of Law, Faculty of Maritime Studies

Way forward

The UNIST has been actively contributing to the UN's SDGs through its multidisciplinary research and day-to-day operations. Its research, therefore, includes topics related to global challenges; promoting well-being, fostering sustainable cities, managing natural resources, developing digital technologies and innovative energy solutions, and preserving cultural heritage. By performing research in these areas, it not only creates knowledge, but also contributes to a more sustainable and equitable future for all stakeholders.

The University has established committees for each of the 17 SDGs to monitor its progress and ensure its activities are in line with the SDGs. These committees play an important role in monitoring its activities, identifying opportunities for improvement, and ensuring that each aspect of the university's operations is aligned with sustainable practices. Through the work of the committees, the UNIST continues to actively integrate sustainability into its core functions of research, teaching, and governance.

Provenance: Commissioned.

Peer review: Internally peer-reviewed.

Received: 25 September 2024 / **Published online:** 7 October 2024.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Authorship declaration: All authors conceptualized the article and participated in the writing, revising, editing, and finalizing of the manuscript. All authors read and approved the final manuscript.

Disclosure of interest: The corresponding author completed the ICMJE Disclosure of Interest Form and disclosed no relevant interests.

ORCID:

Igor Jerković https://orcid.org/0000-0002-0727-6662

Petra Jelić https://orcid.org/0009-0008-7538-8288

Ana Marušić https://orcid.org/0000-0001-6272-0917

References

1. Chankseliani M, McCowan T. Higher education and the Sustainable Development Goals. High Educ (Dordr). 2021;81(1):1–8. https://doi.org/10.1007/s10734-020-00652-w
2. Wager E. ST-OPEN: Innovation based on ancient traditions. ST-OPEN. 2020;1:e2020.1919.2.
3. Make the SDGS a reality [cited 2024 Aug 30]. United Nations Department of Economic and Social Affairs. Available from: https://sdgs.un.org
4. Alfirević N, Jerković I, Jelić P, Piplica D, Rendulić D. Sustainability Reporting and International Rankings in Higher Education: A Case of the University of Split, Croatia. WORLD. 2024;5(1):107–18. https://doi.org/10.3390/world5010006
5. Jelić P, Jerković I. Research Topics at the University. In: Ljutić D, Marušić M, editors. Fifty years of the University of Split. Split, Croatia: University of Split; 2024. p. 151–156.