

SDGs-ALIGNED INTERNATIONAL RESEARCH GROUPS

SUSTAINABLE DEVELOPMENT GOALS



We are pleased to invite researchers from different countries and universities to join our **Working Groups (WGs)**, which have been established to foster **interdisciplinary and international academic collaboration** aligned with the United Nations Sustainable Development Goals (SDGs).

The Working Groups bring together scholars from engineering, natural sciences, health sciences, social sciences, and humanities to support **joint research activities, scientific publications, international project proposals, joint doctoral and postgraduate initiatives, researcher mobility**, and the development of sustainable academic networks.

Each Working Group is designed to enable participating researchers to:

- Join thematically relevant research groups aligned with their expertise,
- Contribute to international research consortia and collaborative projects,
- Share academic knowledge and research experience,
- Develop long-term institutional and individual research partnerships.

Researchers who are interested in contributing to these Working Groups are kindly invited to complete the [participation form](#).

Your participation will play a valuable role in strengthening international, interdisciplinary, and impact-oriented academic cooperation.

Sincerely,
Selçuk University
Office of Dean of Research



WG 1: Semiconductor Materials & Functional Thin Films

Aligned SDGs:

- SDG 7 (Affordable and Clean Energy)
- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 13 (Climate Action)

Scope / Thematic Focus:

Advanced semiconductor and thin-film materials for photocatalysis, photovoltaics, sensing, and hydrogen-related applications.

WG 2: Optoelectronics, Photonics & Sensor Systems

Aligned SDGs:

- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 11 (Sustainable Cities and Communities)

Scope / Thematic Focus:

Photonic devices, flexible optoelectronics, optical sensors, and integrated sensing systems.

WG 3: Sustainable Energy Generation & Conversion

Aligned SDGs:

- SDG 7 (Affordable and Clean Energy)
- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 13 (Climate Action)

Scope / Thematic Focus:

Renewable energy systems, energy conversion, combustion optimization, and decarbonization technologies.

WG 4: Energy Storage & Electrochemical Systems

Aligned SDGs:

- SDG 7 (Affordable and Clean Energy)
- SDG 12 (Responsible Consumption and Production)
- SDG 13 (Climate Action)

Scope / Thematic Focus:

Electrochemical energy storage materials, batteries, supercapacitors, and system integration.

WG 5: Water Treatment, Desalination & Resource Recovery

Aligned SDGs:

- SDG 6 (Clean Water and Sanitation)
- SDG 12 (Responsible Consumption and Production)
- SDG 14 (Life Below Water)

Scope / Thematic Focus:

Water purification, desalination, adsorption, selective separation, and industrial waste valorization.

WG 6: Integrated Water Resource Monitoring & Geospatial Systems

Aligned SDGs:

- SDG 6 (Clean Water and Sanitation)
- SDG 11 (Sustainable Cities and Communities)
- SDG 13 (Climate Action)

Scope / Thematic Focus:

IWRM, GIS and remote sensing for water governance, monitoring, and climate resilience

WG 7: Smart Agriculture & Precision Irrigation

Aligned SDGs:

- SDG 2 (Zero Hunger)
- SDG 6 (Clean Water and Sanitation)
- SDG 13 (Climate Action)

Scope / Thematic Focus:

Smart irrigation systems, precision agriculture, climate-adaptive farming, and resource-efficient crop management in semi-arid regions.



WG 8: Bio-Resources, Biotechnology & Bioactive Compounds

Aligned SDGs:

- SDG 2 (Zero Hunger)
- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 12 (Responsible Consumption and Production)

Scope / Thematic Focus:

Sustainable production of bioactive compounds, spirulina and phycocyanin, medicinal plants, and bio-based industrial processes.

WG 9: Control Systems, Automation & Intelligent Diagnostics

Aligned SDGs:

- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 12 (Responsible Consumption and Production)

Scope / Thematic Focus:

Control, optimization, fault diagnosis, predictive maintenance, and intelligent monitoring of complex systems.

WG 10: Robotics & Autonomous Systems

Aligned SDGs:

- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 11 (Sustainable Cities and Communities)

Scope / Thematic Focus:

Autonomous robotic systems, human–robot interaction, industrial and service robotics.

WG 11: Communication Systems, Antennas & Electromagnetics

Aligned SDGs:

- SDG 9 (Industry, Innovation and Infrastructure)
- SDG 11 (Sustainable Cities and Communities)

Scope / Thematic Focus:

Advanced antenna systems, wireless communications, radar technologies, and electromagnetic applications.

WG 12: Biomedical Engineering & Neuro-Technologies

Aligned SDGs:

- SDG 3 (Good Health and Well-Being)
- SDG 9 (Industry, Innovation and Infrastructure)

Scope / Thematic Focus:

Biomedical devices, neuro-technologies, biomedical signal processing, and AI-assisted health diagnostics.

WG 13: Quantum Technologies & Cryogenic Electronics

Aligned SDGs:

- SDG 9 (Industry, Innovation and Infrastructure)

Scope / Thematic Focus:

Quantum-ready electronic systems, cryogenic circuits, and low-temperature microelectronics.

WG 14: Sustainable Built Environment & Thermal Performance

Aligned SDGs:

- SDG 11 (Sustainable Cities and Communities)
- SDG 12 (Responsible Consumption and Production)
- SDG 13 (Climate Action)

Scope / Thematic Focus:

Energy-efficient buildings, thermal comfort, sustainable construction materials, and climate-responsive architecture.

WG 15: Health Systems, Public Health & Medical Education

Aligned SDGs:

- SDG 3 (Good Health and Well-Being)
- SDG 4 (Quality Education)
- SDG 10 (Reduced Inequalities)

Scope / Thematic Focus:

Public health systems, preventive medicine, medical education, health policy, and equitable healthcare access.



WG 16: Society, Inequality & Human Well-Being

Aligned SDGs:

SDG 1 (No Poverty)

SDG 5 (Gender Equality)

SDG 10 (Reduced Inequalities)

Scope / Thematic Focus:

Social inclusion, inequality, migration, mental health, resilience, and behavioral change for sustainability.

WG 17: Governance, Law & Sustainable Policy Frameworks

Aligned SDGs:

SDG 16 (Peace, Justice and Strong Institutions)

SDG 17 (Partnerships for the Goals)

Scope / Thematic Focus:

Environmental and energy law, climate governance, policy design, regulatory impact assessment, and international agreements.

WG 18: Ethics, Digital Governance & Human-Centered Transformation

Aligned SDGs:

SDG 9 (Industry, Innovation and Infrastructure)

SDG 16 (Peace, Justice and Strong Institutions)

SDG 17 (Partnerships for the Goals)

Scope / Thematic Focus:

Ethics of AI, digital governance, data protection, inclusive digital public services, trust, and accountability.

WG 19: Economy, Finance & Responsible Business

Aligned SDGs:

SDG 8 (Decent Work and Economic Growth)

SDG 9 (Industry, Innovation and Infrastructure)

SDG 12 (Responsible Consumption and Production)

Scope / Thematic Focus:

Circular economy, sustainable finance, ESG frameworks, entrepreneurship, and climate–economy interactions.

WG 20: Culture, Languages & Knowledge Sustainability

Aligned SDGs:

SDG 4 (Quality Education)

SDG 10 (Reduced Inequalities)

SDG 16 (Peaceful and Inclusive Societies)

Scope / Thematic Focus:

Multilingualism, translation, cultural narratives, academic literacy, and equitable access to knowledge.

WG 21: Media, Science Communication & Sustainability Awareness

Aligned SDGs:

SDG 12 (Responsible Consumption and Production)

SDG 13 (Climate Action)

SDG 16 (Peace, Justice and Strong Institutions)

Scope / Thematic Focus:

Science and climate communication, media ethics, misinformation, public engagement, and risk communication.

WG 22: Sport, Physical Activity & Social Cohesion

Aligned SDGs:

SDG 3 (Good Health and Well-Being)

SDG 11 (Sustainable Cities and Communities)

SDG 16 (Peaceful and Inclusive Societies)

Scope / Thematic Focus:

Sport for health promotion, inclusion, social cohesion, peace-building, and sustainable sport infrastructure.