

2026



Umwelt-Campus
Birkenfeld

H O C H
S C H U L E
T R I E R

PROGRAM BOOK

THE 12TH INTERNATIONAL WORKSHOP ON UI GREENMETRIC SUSTAINABLE UNIVERSITY RANKINGS (IWGM)

Theme:

Advancing Sustainable Campuses through Governance,
Digitalization, and Integrated Performance



Hosted by Umwelt-Campus Birkenfeld

IWGM 2026



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UI GreenMetric



uigreenmetric.com

Welcoming Message – Chairperson of UI GreenMetric

It is our distinct pleasure to extend our invitation to the International Workshop on UI GreenMetric, a global forum dedicated to advancing sustainability in higher education.

Initiated by Universitas Indonesia in 2010, the UI GreenMetric Sustainable University Rankings has become a pioneering and widely recognized framework for assessing and fostering sustainability practices across universities worldwide. Through a comprehensive evaluation system, the ranking highlights institutional efforts in key areas such as campus setting and infrastructure, energy and climate change, water conservation, waste management, sustainable transportation, education and research, as well as governance and digitalization.

Beyond its role as a ranking instrument, UI GreenMetric has evolved into a dynamic global network—bringing together universities, leaders, and practitioners to exchange knowledge, share innovations, and collectively address the pressing environmental challenges of our time. This collaborative spirit reinforces the vital role of higher education institutions as catalysts for sustainable transformation.

The International Workshop on UI GreenMetric offers a unique platform for meaningful dialogue and engagement. We sincerely hope you will join us in this important global gathering, as we continue to strengthen our shared commitment to advancing sustainability in higher education and beyond.

We look forward to welcoming you in Germany.



Dr. Vishnu Juwono, S.E., M.I.A.
Chairperson of UI GreenMetric

Welcome Message – President of Umwelt-Campus Birkenfeld Trier University of Applied Sciences

On behalf of Umwelt-Campus Birkenfeld (Trier University of Applied Sciences), it is our great honour and pleasure to welcome you to the International Workshop on UI GreenMetric 2026.

As a campus widely recognized for its strong commitment to environmental sustainability and innovative practices, we are proud to host this important global gathering. We are delighted to collaborate with Universitas Indonesia and the UI GreenMetric network in bringing together universities and sustainability leaders from around the world.

This workshop provides a valuable platform to exchange ideas, share experiences, and strengthen partnerships in advancing sustainability in higher education. At Umwelt-Campus Birkenfeld, sustainability is not only a principle but a way of life—integrated into our teaching, research, campus operations, and community engagement. We are pleased to offer our campus as a living laboratory where participants can experience sustainability in practice.

We believe that meaningful progress can only be achieved through collaboration and mutual learning. Therefore, we hope this workshop will inspire new perspectives, foster impactful discussions, and encourage innovative solutions to address global environmental challenges.

Beyond the conference sessions, we also invite you to enjoy the unique environment of our campus and explore the cultural and natural richness of the surrounding region.

We look forward to welcoming you to Germany and to Umwelt-Campus Birkenfeld for a productive and memorable experience.



Prof. Dr. Dorit Schumann

President, Umwelt-Campus Birkenfeld Trier University of Applied Sciences.

Program Committee (IWGM 2026)

Organizing Committee

UI GreenMetric Team:



**Dr. Vishnu Juwono, S.E.,
M.I.A.**

Chairperson of UI
GreenMetric



**Dr. Abellia Anggi
Wardani, S.Hum., M.A.**

Vice-Chairperson of UI
GreenMetric



**Sabrina Hikmah
Ramadianti, S.Si**

Manager of Program,
Partnership &
Communications



**Rahmi, S.Hum., M.Sc.,
Ph.D.**

Manager of Operations,
Data, and Service
Development



Rayhana, S.Gz.

Partnership & Program
Coordinator



**Dewinda Novitasari,
S.T**

Operations & Finance
Coordinator



**Riska Putri Hariyadi,
S.IP., M.Si**

Communication
Coordinator



**Jauzak Hussaini
Windiatmaja, S.Kom. ,
M.T.**

Data & Research
Coordinator



**Anin Naimatul Kumala,
S.Hum.**

Social Media Officer



**Rinoto Cahyo Utomo,
S.Tr**

Senior IT Staff



**Muhamad Ferdy
Firmansyah, S.E., M.Sc.**

Program Partnership
Officer



**Febi Priska Litami,
S.I.A., M.A.**

Operation Officer



Siti Anisah, S.Si., M.A.B.

Data Analyst Officer

Umwelt-Campus Birkenfeld Trier University of Applied Sciences Team:



Prof. Dr. Klaus Helling

Dean Department
Environmental
Business/Environmental Law



Prof. Dr. Kathrin Nitschmann

Vice Dean Department
Environmental
Business/Environmental Law



Prof. Dr. Klaus Rick

Professor at Department
Environmental
Business/Environmental Law



Prof. Dr. Milena Valeva

Professor at Department
Environmental
Business/Environmental Law



Prof. Dr. Susanne Hartard

Professor at Department
Environmental
Business/Environmental Law



Prof. Dr. Peter Heck

Professor at Department
Environmental
Business/Environmental Law,
Managing Director IFaS



Marco Angilella

Division Manager
International Project
Management IFaS



Dr. Felix Flesch

Vice Division Manager
International Project
Management IFaS



Julia Schmidt

International Project
Management IFaS



Julia Veckes

International Project
Management IFaS



Yvonne Riefer

Management Deanery
Department Environmental
Business/Environmental Law



Anne-Christina Werner

Staff Deanery Department
Environmental
Business/Environmental Law



Shirin Schöpfer

Assistant Department
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Jonas Tralles

Assistant Department
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Lilly Roth

Assistant Department
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Business/Environmental Law

Mareike Betke

Assistant Department
Environmental
Business/Environmental Law

Markus Klassen

Dean's Assistant Department
Environmental
Planning/Environmental
Technology

Scientific Committee:



**Dr. Vishnu Juwono, S.E.,
M.I.A.**

Chairperson of UI
GreenMetric



**Dr. Abellia Anggi
Wardani, S.Hum., M.A.**

Vice-Chairperson of UI
GreenMetric



**Rahmi, S.Hum., M.Sc.,
Ph.D.**

Manager of Operations,
Data, and Service
Development



Prof. Dr. Klaus Helling

Dean Department
Environmental
Business/Environmental
Law



**Prof. Dr. Kathrin
Nitschmann**

Vice Dean Department
Environmental
Business/Environmental Law



Prof. Dr. Milena Valeva

Professor at Department
Environmental
Business/Environmental
Law



**Dessy Ariyanti, ST, MT,
Ph.D**

Universitas Diponegoro



**Prof. Dr. Ing. Wiwandari
Handayani, S.T., M.T.,
MPS**

Universitas Diponegoro



**Prof. Bulan Prabawani,
S.Sos., M.M., Ph.D.**

Universitas Diponegoro



**Prof. Dr. Diana Nur
Afifah, S.TP., M.Si.**

Universitas Diponegoro



Yayuk Astuti, S.Si, Ph.D

Universitas Diponegoro



**Rukuh Setiadi, S.T.,
MEM., Ph.D.**

Universitas Diponegoro



**Ahmad Ni'matullah Al-
Baarri, S.Pt., M.P., Ph.D.**

Universitas Diponegoro

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UI GreenMetric Sustainable University Rankings: Background of the Ranking

The UI GreenMetric, an initiative established by Universitas Indonesia in 2010, was initially created to assess universities' commitment to sustainability and environmentally responsible campus management practices. In 2025, the UI GreenMetric World University Rankings welcomed the participation of 1,745 universities from 105 countries (see Figure 1), further strengthening its position as one of the world's leading sustainability assessment frameworks.

In 2026, the UI GreenMetric World University Rankings was transformed into the UI GreenMetric Sustainable University Rankings and introduced a new category, Governance and Digitalization, complementing the existing categories of Setting and Infrastructure, Energy and Climate Change, Water, Waste, Education and Research, and Transportation (see Figure 2).

In 2022, UI GreenMetric introduced the UI GreenCityMetric to evaluate sustainability performance among cities and regencies. In 2026, the initiative evolved into the UI GreenMetric Sustainable City Rankings and expanded further with the launch of the UI GreenMetric Sustainable Corporate Rankings, focusing on corporate sustainability performance.

Through its online assessment framework, UI GreenMetric provides a comprehensive overview of sustainability policies, initiatives, and achievements across institutions. The rankings serve as a reference for leaders and policymakers in strengthening sustainability initiatives, promoting environmentally responsible practices, and encouraging positive behavioural change.

The assessment covers a range of indicators, including infrastructure, energy and climate change, waste management, water management, transportation, education and research, and governance. Beyond measuring performance, UI GreenMetric also encourages institutions to integrate sustainability principles into their policies, management systems, and long-term strategies.



Figure 1. Number of UI GreenMetric's Participating Universities 2010-2025



Figure 2. UI GreenMetric Ranking Criteria

About Umwelt-Campus Birkenfeld Trier University of Applied Sciences

Welcome to a unique place. Welcome to the Environmental Campus Birkenfeld.

This year, the Umwelt-Campus is celebrating its 30th anniversary – what began as a US Forces reserve hospital has become a flagship for sustainability since 1996. The Umwelt-Campus is one of the most sustainable higher education institutions in Germany and, in 2026, won awards in no fewer than three categories at the prestigious German Sustainability Award. ‘Schools and Higher Education’, ‘Education and Training’ and, in the transformation category ‘Society’ – this is the first time in the 18-year history of the German Sustainability Award that an institution has won three times. The Environmental Campus is also a leader on the international stage and has consistently ranked among the top institutions in the UI GreenMetric rankings for years; in 2025, it was ranked 4th and won the important category ‘Education and Research’.

Currently, around 1,800 Bachelor’s and Master’s students from more than 80 countries are studying on campus across 16 Bachelor’s and 14 Master’s degree programmes, as well as 9 dual study programmes. The wide-ranging, interdisciplinary programme of study spans from business administration and law, through to computer science, mechanical engineering and process engineering, right up to renewable energies, non-profit management and communication psychology. The Environmental Campus has an international network, underpinned by strong regional roots, which attracts students from all over the world to Hoppstädten-Weiersbach – thanks to its pioneering and forward-looking education. Of particular interest to prospective international students are the English-taught Bachelor’s programmes ‘Sustainable Business and Technology’ and ‘Sustainable Business and Law’, as well as the English-taught Master’s programme in ‘International Material Flow Management’.

The Birkenfeld Environmental Campus, a ‘zero-emission campus’, is entirely powered by renewable heat and green electricity; with its modern building and infrastructure technology, it serves as a real-world laboratory for sustainability. Here, sustainability is practised holistically across teaching, research, knowledge transfer and operations. ‘Sustainable. Innovative. Digital.’ is the motto across all 39 degree programmes, which take an interdisciplinary, project-based and research-oriented approach to addressing sustainability within the context of their respective disciplines. In Birkenfeld, every graduate learns what sustainability means in their chosen field of study and how they can shape the transition to a sustainable future.

Alongside teaching, research into sustainable development is of great importance in Birkenfeld. With more than 12 million euros in external funding, pioneering research projects are being carried out at the institutes of the Umwelt-Campus. Through practice-oriented research projects, solutions are being developed for climate protection, resource efficiency, the circular economy, renewable energy and sustainable lifestyles, which are having an impact not only regionally but also internationally. A prime example is the Sahara Renaissance Project (SAREP) powered by our Institute for Applied Material Flow Management (IfaS), which aims to re-green the Mauritanian desert, thereby helping not only the climate but also the local population. Seawater is desalinated using wind and solar power and then used to irrigate trees such as acacias and jatropha, which sequester large amounts of CO₂. A pilot site is to be established by the end of 2025 with the support of an investor; in the long term, plans are in place to cover up to 2 million hectares, financed through CO₂ credits.

Tentative Program

Time Zone based on

1. **Time Zone:** Based on Germany's local time (Central European Time/Central European Summer Time).
2. **On 24 August 2026**, the UI GreenMetric Steering Committee Meeting is exclusively for UI GreenMetric National Coordinators and invited observers.
3. **All speakers and participants** are welcome to join us on **24 August 2026** for the **Welcoming Dinner** for participants, **25-26 August 2026** for the International Workshop on UI GreenMetric (IWGM) 2026, and **27 August 2026** for the Technical Tour.

THE 12th INTERNATIONAL WORKSHOP ON UI GREENMETRIC SUSTAINABLE UNIVERSITY RANKINGS <i>"Advancing Sustainable Campuses through Governance, Digitalization, and Integrated Performance"</i> 24-26 August 2026 Birkenfeld, Rhineland-Pfalz, Germany	
DAY 1: 24 August 2026	
Timing	Session
Whole day	Arrival of participants
-----	UI GreenMetric Sustainable University Rankings Network Steering Committee Meeting (by invitation) Venue: Building 9924 Room 136
01.00 PM – 01.15 PM	Welcome of National Coordinators, quorum established Vishnu Juwono, S.E., M.I.A., Ph.D., Chairperson, UI GreenMetric
01.15 PM – 01.20 PM	Adoption of the agenda
01.20 PM – 01.25 PM	Adoption of the minutes of the 9 th Steering Committee Meeting 2025 in Nice, France
01.25 PM – 01.50 PM	Report Progress of the UI GreenMetric Sustainable University Rankings Network (2025–2026) Dr. Abellia Anggi Wardani, S.Hum., M.A., Vice-Chair, UI GreenMetric
01.50 PM – 02.40 PM	Strategic Discussion Chair: Vishnu Juwono, S.E., M.I.A., Ph.D., Chairperson, UI GreenMetric Future Direction of the UI GreenMetric Sustainable University Rankings Network (2026–2027) • Shaping Global Higher Education and Research in Sustainability • Creating Global Sustainability Leaders • Partnering on Solutions to Sustainability Challenges Discussion on Strengthening the National Coordinator Network, Strategic Partnerships, and Future Collaboration Opportunities

THE 12 th INTERNATIONAL WORKSHOP ON UI GREENMETRIC SUSTAINABLE UNIVERSITY RANKINGS “Advancing Sustainable Campuses through Governance, Digitalization, and Integrated Performance” 24-26 August 2026 Birkenfeld, Rhineland-Pfalz, Germany		
02.40 PM – 05.40 PM	Country Reports from National Coordinators (5 minutes each, 37 Universities from 32 Countries)	
05.40 PM – 05.45 PM	Summary of Key Decisions, Action Points, and Closing Remarks	
05.45 PM – 06.00 PM	Break	
06:00 PM - 09:00 PM	Welcoming Dinner for participants Venue: Umwelt-Campus Birkenfeld, Communication Building	
	Welcome Speech by Prof. Dr. Dorit Schumann, President, Umwelt-Campus Birkenfeld (Trier University of Applied Sciences), Germany	
	Musical performance by André Mertens of the district music school	
	Dinner and Networking	
	Dinner Speech by Mirosław Kowalski, District Administrator of the Birkenfeld District	
	Musical performance by André Mertens of the district music school	
DAY 2: 25 August 2026		
07:30 AM	Train Transfer from Hotel to Venue	
08:00 AM - 08:40 AM	Registration of Delegates • Video Profile UI GreenMetric • Video Profile Umwelt-Campus Birkenfeld (Trier University of Applied Sciences)	
09:00 AM - 09:30 AM	Welcome Speeches Venue: ZN014 • Clemens Hoch, Minister of Science, Rhineland-Palatinate, Germany (video) • Prof. Dr. Dorit Schumann, President, Umwelt-Campus Birkenfeld (Trier University of Applied Sciences), Germany • Dr. Vishnu Juwono, S.E., M.I.A., Chairperson, UI GreenMetric	
09:30 AM - 09:50 AM	Opening – 30 years Environmental Campus Birkenfeld Prof. Dr. Klaus Helling, Dean, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany	
09:50 AM - 10:00 AM	The signing of the Declaration of Membership of UI GreenMetric Network	
10:00 AM - 10:30 AM	Coffee Break and Poster Session** (ZN01 and ZN02)	
10:30 AM - 12:00 PM	Session 1A Managing Education and Research Venue: ZN05	Session 1B Managing Education and Research Venue: ZN03

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“Advancing Sustainable Campuses through Governance, Digitalization, and Integrated Performance”

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Chair: Prof. Dr. Klaus Helling, Dean, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany Co-chair: Dr. Abellia Anggi Wardani, S.Hum., M.A., Vice-Chair, UI GreenMetric (4 presentations – 15 Minutes Each) Speakers: • Cultivating Digital Agriculture Talent through University Social Responsibility: A Sustainability-Oriented Pedagogical Model and Its Systemic Validation along Pingtung County Road 185 Prof. Dr.-Ing. Chin-Lung Chang, Rector, National Pingtung University of Science and Technology (NPUST), Taiwan • Beyond Traditional Curricula: The UFMS Citizenship Education Core as an Innovative Model for Sustainability, Artificial Intelligence, and Entrepreneurship Prof. Dr. Vivina Dias Sol Queiroz, Pro-Rector for Citizenship and Sustainability, Universidade Federal de Mato Grosso do Sul (UFMS), Brazil • Benchmarking Sustainability Performance at Bukhara State University: Insights from the UI GreenMetric 2025 World Rankings Prof. Dr. Abror Juraev, Vice-Rector for International Cooperation, Bukhara State University, Uzbekistan • Strategy to Develop Digital Intelligence (DQ) for SDGs Among Thai University Students Using the City Explorer (CE) Model Prof. Dr. Chanita Rukspolmuang, Ph.D., Vice-Rector, Siam University, Thailand <i>Question and Answer</i>	Chair: Prof. Dr. Milena Valeva, Professor, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany Co-chair: Prof. Anna Tozzi, Rector Consultant for Internationalization, University of L'Aquila, Italy (4 presentations – 15 Minutes Each) Speakers: • Integrating the UN Sustainable Development Goals into Higher Education: An Interdisciplinary Learning Model Prof. Dr. Şebnem Hoşkara, B.Arch., Representative of Rector, Beykoz University, Türkiye • Sustainability Course Development at the University of Szeged Dr. Dénes Mátyás, PhD, Representative of Rector, University of Szeged, Hungary • Supporting Sustainability Integration in TVET Student Innovation Through the DNA Green Digital Self-Assessment Initiative: A Sustainability Profiling Approach Dr Aspalilla Binti Main, Representative of Director, Politeknik Merlimau Melaka, Malaysia • Open Access as a Strategic Driver for Sustainability and Climate Change Knowledge Ms. María Luisa Becerril López, Representative of Rector, Autonomous University of the State of Mexico (UAEM), Mexico <i>Question and Answer</i>
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“Advancing Sustainable Campuses through Governance, Digitalization, and Integrated Performance”

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12:00 PM – 01:00 PM	Networking Lunch	
01:00 PM – 02:30 PM	Session 2A Managing Governance and Digitalization Venue: ZN05 Chair: Prof. Dr. Christian Mock, Professor, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany Co-chair: Prof. Dr. Osama Saadeh, Dean, German Jordanian University, Jordan (4 presentations – 15 Minutes Each) Speakers: • UNDIP Green Monitoring System: An Integrated Digital Framework for Sustainable Campus Governance and Performance at Universitas Diponegoro Prof. Dr. Ir. Hadiyanto, S.T., M.Sc., IPU, Representative of Rector, Universitas Diponegoro, Indonesia • Sustainability Governance in Institutionally Complex Universities: Institutional Trajectory and Reporting Frameworks at UNAM, 2018–2026 Prof. Delfina Corsi Villalobos, M.A., Representative of Rector, National Autonomous University of Mexico (UNAM), Mexico • University as a Sustainable Tourism Destination: The Development Strategy of the NCNU Nature Education Park in Taiwan Prof. Yung Ping Tseng, Vice-President, National Chi Nan University, Taiwan • Embracing Partnerships for the Goals: University College Cork's Continued Journey Towards Sustainability Dr. John Barimo, Representative of President, University College Cork, Ireland Question and Answer	Session 2B Managing Setting, and Infrastructure Venue: ZN03 Chair: Dr. Dénes Mátyás, PhD, Representative of Rector, University of Szeged, Hungary Co-chair: Mr. Marco Angilella, Dipl.-BW (FH), Department Head, Trier University of Applied Science / Institute of Applied Material Flow Management, Germany (5 presentations – 15 Minutes Each) Speakers: • Transforming the Campus, Transforming the University: A Sustainable Infrastructure Approach from Technological University in Armenia Dr. Sargis Asatryan, Vice-Rector, National Polytechnic University of Armenia, Armenia • Smart Campus Technologies and Sustainability in Nigerian Universities: The Case of Lagos State University (LASU) Prof. Dr. Adejuwon Adewale Adeneye, Ph.D., D.Sc. (AM), Representative of Vice Chancellor, Lagos State University, Nigeria • A Sustainability Dashboard: Utilization of ICT towards Effective Management of Sustainable Campus Infrastructure Dr. Eng. Heriansyah Putra, S.Pd., M.Eng, Representative of Rector, IPB University, Indonesia • Assessing Circularity in Higher Education Institutions: A Framework Applied to Unicamp, Brazil Dr. Thalita dos Santos Dalbello, Representative of Rector, University of Campinas, Brazil

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		Strengthening the Institutional Environmental Management System at El Bosque University: Strategies and Actions for University Environmental Sustainability Dr. Jaime Alberto Romero Infante, Representative of Rector, El Bosque University, Colombia <i>Question and Answer</i>
02:30 PM – 02:45 PM	Coffee Break (ZN 01 and ZN02)	
02:45 PM – 04:15 PM	Session 3A Managing Energy and Climate Change Venue: ZN05 Chair: Dr. Massimiliano D'Innocenzo, Project Manager, University of L'Aquila, Italy Co-chair: Prof. Dr. Chanita Rukspolmuang, Ph.D., Vice-Rector, Siam University, Thailand (4 presentations – 15 Minutes Each) Speakers: - Campus Solarization for Energy Sustainability and Green Skills Development in TVET Institutions: A Case Study of The Kisumu National Polytechnic, Kenya Ms. Catherine Kelonye, Rector, The Kisumu National Polytechnic, Kenya - Managing Climate Change at KMUTT Thailand: Climate Change Mitigation and Biodiversity Restoration Asst. Prof. Dr. Prasert Kanthamanon, Vice-President, King Mongkut's University of Technology Thonburi, Thailand - Integrated Sustainability Performance at German Jordanian University: A Multi-Criteria Assessment Aligned with UI GreenMetric Prof. Dr. Osama Saadeh, Representative of Rector, German Jordanian University, Jordan - Improving Energy Performance Through	Session 3B Managing Water Venue: ZN03 Chair: Prof. Dr. Peter Heck, CEO Institute for Applied Material Flow Management, Environmental Campus Birkenfeld, Germany Co-chair: Dr. Rahmi, S.Hum, M.Sc., Manager of Operations, Data, and Service Development, UI GreenMetric, Indonesia (4 presentations – 15 Minutes Each) Speakers: - Water Stewardship Through Nature-Based Bioremediation: Universidad ECOTEC's Urban Mangrove Restoration Living Laboratory in Estero Salado Prof. Rafael Luque, Ph.D., Representative of Rector, Universidad Tecnológica ECOTEC, Ecuador - Hydroponic Smart Campus: A Climate-Resilient and Water-Efficient Model for Sustainable Universities Dr. Gumru Huseynova, Representative of Rector, Baku State University, Azerbaijan - Towards Circular Water Solutions on Campus - Integrating Potable Greywater Reuse, Rainwater Harvesting and Sustainability Assessment Mr. Marco Angilella, Dipl.-BW (FH), Department Head, Trier University of

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	Smart Building Technologies: a case study Dr. Alessandro Sciullo, Representative of Rector, University of Turin, Italy Implementing ISO 14064-1 and Independent Verification in Higher Education: The Carbon Management Journey of Universidad Tecnológica ECOTEC, Ecuador Ms. Francesca Escala, M.Sc., Representative of Rector, Universidad Tecnológica ECOTEC, Ecuador Question and Answer	Applied Science / Institute of Applied Material Flow Management, Germany AquaCientífica: An Integrated Framework for Circular Water Governance, Digitalization, and Wetland Conservation in Higher Education in Latinamerica. Dr. Susan Medina Canzio, Representative of Rector, Universidad Científica del Sur, Peru Question and Answer
04:15 PM - 04.20 PM	Group photo	
04:20 PM - 05:20 PM	Campus Tour (in groups)	
05:20 PM - 07:00 PM	German Barbecue and Refreshments on Campus	
07:00 PM	Train Transfer to Hotels	
DAY 3: 26 August 2026		
07:30 AM	Train Transfer from Hotels to Venue	
08:20 AM - 08:40 AM	Registration of Delegates - Video Profile UI GreenMetric - Video Profile Umwelt-Campus Birkenfeld (Trier University of Applied Sciences)	
09:00 AM - 09:40 AM	Keynote Speech Venue: ZN014 Highlights of 25 years of Applied Research for Sustainability – Decarbonization and Circular Economy in Practice Prof. Dr. Peter Heck, CEO Institute for Applied Material Flow Management, Environmental Campus Birkenfeld, Germany	
09:40 AM - 10:00 AM	Keynote Speech Female Leadership for Sustainability Prof. Dr. Nadine Kammerlander, WHU Otto Beisheim School of Management, Vallendar, Germany	
10:00 AM - 10:30 AM	Coffee Break and Poster Session** (ZN01 and ZN02)	
10:30 AM – 12:00 AM	Session 4A Managing Governance and Digitalization	Session 4B Managing Waste

THE 12th INTERNATIONAL WORKSHOP ON UI GREENMETRIC SUSTAINABLE UNIVERSITY RANKINGS

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	Venue: ZN05 Chair: Prof. Dr. Ir. Hadiyanto, S.T., M.Sc., IPU, Director of Reputation, Partnership, and Global Connectivity, Universitas Diponegoro, Indonesia Co-chair: Dr. Felix Flesch, Department Head, Trier University of Applied Sciences, Environmental Campus Birkenfeld, Institute for applied Material Flow Management (IfaS), Germany <i>(4 presentations – 15 Minutes Each)</i> Speakers: - Greening CSU: Executive Multi-Dimensional Approach to Institutional Development Dr. Arthur G. Ibañez, President, Cagayan State University, Philippines - Integrating Sustainability into Strategy: Ho Technical University's Journey to #1 in the UI GreenMetric ranking within Ghana Prof. George Harrison Coffie, Representative of Vice Chancellor, Ho Technical University, Ghana - Using AI to optimize company responses in sustainability-related webcare – A contrastive analysis Prof. Dr. Stefan Diemer, Professor, Trier University of Applied Sciences, Germany - Public Engagement, Lexical Emotional Framing, and Thematic Alignment of UI GreenMetric Instagram and TikTok Content with the 2026 Sustainable University Rankings Framework Dr. Rahmi, S.Hum, M.Sc., Manager of Operations, Data, and Service Development, UI GreenMetric, Indonesia <i>Question and Answer</i>	Venue: ZN03 Chair: Dr. Thalita dos Santos Dalbelo, Representative of Rector, University of Campinas, Brazil Co-chair: Prof. Dr.-Ing. Susanne Hartard, Professor, University of Applied Sciences Trier/Umwelt-Campus Birkenfeld, Germany <i>(5 presentations – 15 Minutes Each)</i> Speakers: - The impacts of visual pollution from waste sites on the mental and psychological performance of school students Prof. Dr. Hassan Shaker Majdi, President, Al-Mustaqbal University, Iraq - From Paper-Based Administration to Smart Sustainability: Integrating Waste Management and Digitalization at M'Hamed Bougara University of Boumerdes Prof. Dr Hamiane Messaoud, Representative of Rector, M'Hamed Bougara University of Boumerdes, Algeria - Campus Plastic Waste Management and Malaysia's National Roadmap Prof. Dr. Long Chiau Ming, Representative of President, Sunway University, Malaysia - Take-back - Reuse and Repair - Circular Economy at Environmental Campus Birkenfeld Prof. Dr.-Ing. Susanne Hartard, Professor, University of Applied Sciences Trier/Umwelt-Campus Birkenfeld, Germany - Auditing Waste Management Plans at Unicamp
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		Dr. Regina Clélia da Costa Mesquita Micaroni, Representative of Rector, University of Campinas, Brazil Question and Answer
12.00 PM – 01.00 PM	Networking Lunch	
01:00 PM – 02:30 PM	Session 5A Managing Education and Research Venue: ZN05 Chair: Prof. Dr. Kathrin Nitschmann, Vice Dean Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany Co-chair: Dr. Audy R. Quebral, Vice President for Research Development and Extension, Cagayan State University, Philippines (4 presentations – 15 Minutes Each) Speakers: - Advancing Sustainability and Environmental Health in Higher Education: Sustainability and Environmental Health Advancement in Higher Education: A Two-Year Institutional Review of Green Metric Achievements Prof. Thamer AL Hilfi, MBChB/FICMS/FFPH/MHPE, Representative of President, Madenat Alelem University, Iraq - Cultivating Green Behavior Through Ecoliteracy: Designing Digital Leveled Books Based on Baduy Indigenous Wisdom for Sustainable Education Assoc. Prof. Dr. Sani Aryanto, S.Pd., M.Pd, Representative of Rector, Universitas Bhayangkara Jakarta Raya, Indonesia - Traveling University. A signature seminar course to apply international Material Flow Management in practise	Session 5B Managing Governance and Digitalization Venue: ZN03 Chair: Prof. Dr. Klaus Rick, Professor, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany Co-chair: Prof. Dr. Adejuwon Adewale Adeneye, Ph.D., D.Sc. (AM), Representative of Vice Chancellor, Lagos State University, Nigeria (4 presentations – 15 Minutes Each) Speakers: - Effective governance concepts for a holistic implementation of sustainability at universities Prof. Dr. Klaus Helling, Sustainability Director, Umwelt-Campus Birkenfeld (Trier University of applied Sciences), Germany - Retention of tacit knowledge in university administration: design and evaluation of an AI-supported collaborative protocol Mr. Eduardo García Ochoa, M.Sc. Representative of Rector, University of Valladolid, Spain - When Infrastructure Meets Habit: A Human-Based Green University Framework for Distance Education Dr. Rini Dwiyan Hadiwidjaja, Representative of Rector, Universitas Terbuka, Indonesia - Green Metrics Questionnaire as the Foundation for a Green University

THE 12 th INTERNATIONAL WORKSHOP ON UI GREENMETRIC SUSTAINABLE UNIVERSITY RANKINGS “Advancing Sustainable Campuses through Governance, Digitalization, and Integrated Performance” 24-26 August 2026 Birkenfeld, Rhineland-Pfalz, Germany		
	Dr. Felix Flesch, Department Head, Trier University of Applied Sciences, Environmental Campus Birkenfeld, Institute for applied Material Flow Managment (IfaS), Germany SDG 18 as a New Milestone for Ethnic-Racial Equality in Higher Education: The UFMS Experience in Brazil Mr. Leonardo Chaves de Carvalho, M.Sc, Sustainability Director, Universidade Federal de Mato Grosso do Sul (UFMS), Brazil Question and Answer	Strategy: The Case of Ala-too International University Dr. Bekimbetova Turdukan, Representative of Rector, International Ala-Too University, Kyrgyzstan Question and Answer
02:30 PM – 02:40 PM	Coffee Break	
02:40 PM – 03:00 PM	Closing of IWGM 2026 Venue: ZN 014	
	Report by Host of IWGM 2027	
	Spotlight: History and Idea of Germanys youngest National Park Dr. Martin Mörsdorf, National Park Hunsrück-Hochwald	
	Closing Remarks Prof. Dr. Dorit Schumann, President, Umwelt-Campus Birkenfeld (Trier University of Applied Sciences), Germany Dr. Vishnu Juwono, S.E., M.I.A., Chairperson of UI GreenMetric	
03:00 PM – 03:30 PM	Bus Transfer to the location	
03:30 PM – 05:00 PM	Excursion to the Hunsrück-Hochwald National Park	
05:00 PM – 06:00 PM	Bus Transfer to the location	
06:00 PM – 09:00 PM	Visit to Trier with guided stroll in Germany's oldest City Individual Dinner in Trier	
09:00 PM	Transfer to Hotels	
DAY 4: 27 August 2026		
09:30 AM – 12:30 AM	Based on your preferences 9.30 – 10.30 Round Table Cooperation with ECB in English Study Programs and applied Research (ZN01) hosted by Faculty of Environmental Business and Law and	

**THE 12th INTERNATIONAL WORKSHOP ON UI GREENMETRIC
SUSTAINABLE UNIVERSITY RANKINGS**

“Advancing Sustainable Campuses through Governance, Digitalization, and Integrated Performance”

24-26 August 2026

Birkenfeld, Rhineland-Pfalz, Germany

	Institute for applied Material Flow Management 10.30 Round Table Cooperation with ECB in Mechanical Engineering, Process Engineering and Computer Science (ZN02) hosted by Faculty of Environmental Planning and Technology 11.30 Round Table International Cooperation – Erasmus Students and Staff Exchange and Partnerships hosted by the International Office of Trier University of applied Sciences (ZN01)
-----	Individual appointments at the Umwelt-Campus Birkenfeld • Cooperation in study programs • Joined Research • Lab visits
-----	Individual Visits of St. Wendel or Idar-Oberstein (from your hotels)
-----	Train Transfer to Frankfurt International Airport

***) List of Accepted Poster Sessions:**

Managing Setting, and Infrastructure:

1. Building a Sustainable Innovation District: Governance and Territorial Planning in the HIDS Unicamp
Dr. Thalita dos Santos Dalbello, Department Head, University of Campinas, Brazil
2. The University of Sopron's Nature-Positive Campus Model
Dr. habil. András Polgár, Associate Professor, University of Sopron, Hungary
3. Production of Pavers from the Reuse of Dry Solid Waste and Sand for The Construction of Degraded Access Roads in The City of Pemba, Mozambique.
Ms. Elsa Vicente, M.Sc, Assistant Professor, Catholic University of Mozambique, Mozambique
4. Advancing Sustainable Campuses through a Living Laboratory: Integrating Renewable Energy, Smart Water Management and Green TVET Education
Dr. Normazlina Mat Isa, Lecturer and Researcher, Politeknik Merlimau Melaka, Malaysia
5. Building A of ECOTEC University as a Model of Sustainable Infrastructure: Integration of LEED Criteria and University Environmental Management
Ms. Karen Ariana Alvarado Carrion, MGTR., Staff, Universidad Tecnologica ECOTEC, Ecuador
6. Spatial Correlation Analysis of NDVI and LST as a Basis for Predictive Microclimate Modeling on Campus: A Case Study of the Universitas Terbuka, Indonesia
Mr. Mirza Permana, ST.M.Si, Lecturer and Researcher, Universitas Terbuka, Indonesia
7. Sponge Campus Implementation Using LID Practices for Effective Stormwater Reduction of the Integrated Laboratory and Workshop at Manado State Polytechnic
Ir. Dian Puspita Sari, S.T., M.Ars, Assistant Professor, Manado State Polytechnic, Indonesia

Managing Energy and Climate Change:

1. An Intelligent Energy Consumption Management and Load Forecasting Model for Improving the Efficiency and the Sustainability of Energy Systems
Osama Abu-Elnasr, Dean, Luxor University and Luxor National University, Egypt
2. Towards a Sustainable Campus: The UP Manila Strategic Energy Management Roadmap (2024–2027)
Prof. Rosalie G. Flores-Bernardo, Department Head, University of the Philippines Manila, Philippines
3. Green Campus Initiatives: Decarbonizing the National Aviation Academy of the Philippines
Engr. Jerome C. Miranda, Director for Institutional Development and Planning Office, National Aviation Academy of the Philippines, Philippines
4. Sustainable University Transformation through Energy Management Practices and Carbon Emission Reduction Strategies
Kittinut Kaewthonh, Staff, King Mongkut's University of Technology Thonburi, Thailand
5. Green Aviation Sustainability Practices at WCC Aeronautical and Technological College, Inc.: Development and Validation of a Climate-Responsive Sustainability Framework Aligned with UI GreenMetric Indicators

Prof. Dr. Rosalie Sheryll T. Rosales, Department Head, WCC Aeronautical & Technological College Inc., Binalonan Campus, Philippines

Managing Waste:

1. Role of Green Nexus Research Center to implement Campus Innovation Lab: From Waste to Worth at Ala-Too International University
Maral Sagynaliyeva, Sustainability Director, Ala-Too International University, Kyrgyzstan
2. Circularity That Pays Off: How ELTE Saved 1 Billion HUF Through 10R-Driven Volunteer Engagement of ELTE EKSZ
Mudra Viktória, ESG Consultant, Eötvös Loránd University, Hungary
3. Sustainable Conversion of Poultry Waste into Organo-Mineral Fertilizers for Circular Agriculture and Environmental Protection in Turkmenistan
Kadyr Amanov, Department Head, Turkmen Agricultural University named after S.A.Niyazov, Turkmenistan

Managing Water:

1. Technical and Ecological Aspects of Water-Saving Tree Cultivation in Turkmenistan
Yuldashov Bahadir, M.Sc., Department Head, Oguz han Engineering and technology university, Turkmenistan

Managing Education and Research:

1. Creating synergy to support the implementation of education for sustainable development at university level
Amaneh Javid, Vice-Rector, Science and Arts University, Yazd, Iran, Iran
2. Environmental Communication and Sustainable Lifestyle Habits in Higher Education: Proposal of an Indicator-Based Evaluation Framework
Jaime Alberto Romero Infante, Ph.D., Sustainability Director, Universidad El Bosque, Colombia
3. Standardising Environmental, Nutritional, and Socio-Economic Impact Metrics for Food Rescue and Redistribution in Developing Economies — Evidence from Malaysia
Prof. Long Chiau Ming, PhD, Vice-Dean, Sunway University, Malaysia
4. University Ranking in Health Sciences: Evaluating Factors leading to the Muhimbili University of Health and Allied Sciences' position in Sub-Saharan Africa
Dr. Rehema Chande Mallya, Director of Library Services, Muhimbili University Of Health And Allied Sciences, Tanzania
5. Mapping Green-Job Signals in Indonesian LinkedIn Vacancies to Support Sustainable Higher Education Assessment Reporting
Rahmi, S.Hum., M.Sc., Ph.D., Assistant Professor, UI GreenMetric, Universitas Indonesia, Indonesia
6. Restoration of the Old Sariaya Municipal Building for Adaptive Reuse as a Cultural Hub: A Research-based Extension Model for Heritage Conservation, Education, and Community Engagement
Ar. Diane A. Jose, Dean, Eulogio "Amang" Rodriguez Institute of Science and Technology, Philippines
7. From Community to Campus: Translating Climate-Resilient Public Space Research into a University Living Laboratory
Dr. Ir. Ar. R.A Retno Hastijanti, M.T., IPU, IAI, APEC.Eng, Dean, Universitas 17 Agustus 1945 Surabaya
8. Cognitive Bridge: A Sustainable Pedagogy for Critical AI Literacy in Engineering

Education

Ms. Asya Kosyan, Lecturer and Researcher, National Polytechnic University of Armenia, Armenia

9. From Publications to Planetary Impact: Developing a Sustainability Research Impact Index for African Universities
Mr. Joshua Simuka, Department Head, Harare Institute of Technology, Zimbabwe
10. Integrating Sustainability into Forestry Education and Research: A Faculty-Centered Approach to Managing Education and Research for Sustainable Universities
Dr. Sher Shah, Assistant Professor, University of Swat, Pakistan
11. From Policy to Practice: Strengthening Building-Based Waste Management through Discourse-Oriented Policy Communication at Universitas Pendidikan Indonesia
Dr. Mahardhika Zifana, Assistant Professor, Universitas Pendidikan Indonesia, Indonesia
12. Cultural Sustainability in Practice: From Classroom to Community-based Engagement
Asst.Prof.Thanasin Chutintaranond, Ph.D., Assistant Professor, Chulalongkorn University
13. Bibliometric Analysis of Sustainable University Research: Indexes and Publication Trends Using Web of Science Core Collection Data
Fulden Ercan, Ph.D. Candidate, Tarsus University

Managing Governance and Digitalization:

1. Towards Intelligent Sustainable Universities: A Systematic Review of Sustainability Dashboards as Catalysts for Governance Excellence, Performance Monitoring, and Institutional Transformation
Mr. Joshua Simuka, Department Head, Harare Institute of Technology, Zimbabwe
2. Digital Governance For Sustainable University Campuses: A Framework For Data-Driven UI GreenMetric Performance
Dr. Adewale Emmanuel Adeyemi, Ph.D., Department Head, Miva Open University, Nigeria
3. Embedding Sustainability into Teaching, Research, and Community Engagement: The Role of Universities in Advancing the SDGs
Dr. Adewale Emmanuel Adeyemi, Ph.D., Department Head, Miva Open University, Nigeria
4. The Living Lab as Institutional Operating System: Integrating Three University Missions with Sustainability Embedded in the Research, Innovation, and Technology Transfer Portfolio at the West University of Timișoara
Ioan Chindris, Higher Education Specialist, West University of Timisoara, Romania
5. Digital Governance Transformation at Universitas Bhayangkara Jakarta Raya To Support Sustainable Development Goals (SDGs)
Ferawaty Puspitorini, S.S., M.Pd, Department Head, Universitas Bhayangkara Jakarta Raya, Indonesia
6. Bridging the Integration Gap in Campus Sustainability: A Double-Helix Framework for Governance and Digitalization
Renato L. Base, Department Head, University of Science and Technology of Southern Philippines, Cagayan de Oro Campus, Philippines
7. Digital Governance in Higher Education: Evaluating the Role of HEMIS system in Paperless Administration and Sustainable campus Transformation
Dr. Matkarimova Shokhista Khabibullayevna, Associate Professor, Urgench State Pedagogical Institute, Uzbekistan
8. The National Framework for a Green University Environment: A Governance Instrument for Advancing the Ecological Transition of Higher Education in Tunisia
Sifaoui Wiem, Professor, Institut National Agronomique de Tunis, Tunisia
9. Governance, Digitalization, and Public Value in Circular Economy Policies: Comparative Insights from Brazil and the United States.

Luiz Henrique Paiva Pires, Researcher, University of Brasília, Brazil

10. The sustainable development of a federal public education institution - IFSP
Rodrigo de Benedictis Delphino, Sustainability Director, Federal Institute of Sao Paolo, Brazil
11. TaskTracer: A Sustainable Digital Platform for Transparent Continuous Assessment Management
Dr. Hasmaini binti Hashim, Lecturer, Politeknik Merlimau Melaka, Malaysia
12. Governance through Digital Transformation: An Assessment of the Transition to Institutional Quality Circle under the HEC-PSG 2023 Policy
Dr. Muhammad Ammad ul Haq, Associate Professor, Al-Kawthar University, Pakistan
13. Towards Digitalization and Paperless Processes: Barriers and Enablers of Digital Transformation in a Philippine Higher Education Institution
Asst. Prof. Marbert John C. Marasigan, MSc., Department Head, University of the Philippines Manila, Philippines
14. Advancing Sustainable Campuses Through Integrated Environmental Governance: A Case Study of a Brazilian Higher Education Institution
Prof. Dra. Daniela Gislane De Oliveira, Professor, Faculdades Integradas Da América Do Sul, Brazil
15. The Paperless Paradox: A Longitudinal Analysis of Environmental Cost-Shifting and the Myth of Clean Governance in Emerging Universities
Abdyreshit Sadyk, Student, Oguz han Engineering and Technology University of Turkmenistan, Turkmenistan
16. Transforming University Data Governance Through a Decentralized Digital Portal
Dr. Basem Amer, Associate Professor, University of Zawia, Libya
17. Data-driven governance for sustainability: the University of Salamanca's indicator portal as a digital tool for decision-making
Dr. Felipe José Lorenzo Blanco, Quality Technician, University of Salamanca, Spain

Speakers and Chairs



Prof. Dr. Dorit Schumann, President, Umwelt-Campus Birkenfeld (Trier University of Applied Sciences), Germany

Prof. Dr. Dorit Schumann has been President of Trier University of Applied Sciences since 2019. From 2020 to 2025, she served as Vice-President of the German Rectors' Conference, with responsibility for transfer and sustainability. Previously, she was Vice-President for International Affairs at the German Jordanian University in Amman and Vice-President for Research at Fulda University of Applied Sciences. With an academic background in business administration and logistics, she received her doctorate from Goethe University Frankfurt and held a professorship in logistics for many years. Her work focuses on sustainable development, knowledge transfer, international cooperation, and the strategic advancement of universities of applied sciences. As President of Trier University of Applied Sciences, she promotes sustainability as a cross-cutting principle in teaching, research, transfer, and institutional development.



Dr. Vishnu Juwono, S.E., M.I.A.
Chairperson, UI GreenMetric

Appointed as Chairperson in June 2025, Dr. Vishnu Juwono steers the strategic vision of UI GreenMetric toward a truly comprehensive, cross-sectoral future. As a transformative leader, he has orchestrated a holistic approach to global sustainability by pioneering the UI GreenMetric Sustainable Corporate Rankings. Building upon the organization's globally recognized success in evaluating universities and cities, his visionary initiative successfully expands the assessment frameworks into the private sector—completing a vital triad of academic, public, and corporate sustainability.

An Associate Professor of Public Administration at Universitas Indonesia (FIA UI), Dr. Vishnu brings profound expertise in collaborative governance and policy formulation. His current initiatives are anchored by a distinguished executive track record in managing institutional reputation. Previously, he spearheaded UI's global ranking strategies as the Head of the Bureau of Transformation, Risk Management, and Monitoring & Evaluation (TREM), and directed strategic communications as the Head of Public Relations.

Deeply engaged in research on National Resilience and dynamic public services, Dr. Vishnu expertly translates complex governmental frameworks into real-world solutions. Today, he empowers a worldwide network of institutions—from universities and municipalities to corporations—to integrate exceptional governance with impactful sustainable practices.



Dr. Abellia Anggi Wardani, S.Hum., M.A.
Vice-Chairperson, UI GreenMetric

Dr. Abellia champions a uniquely human-centered approach to global sustainability. Serving as Vice Chairperson since August 2025, she plays a vital role in integrating humanities and social equity into UI GreenMetric's global frameworks.

A distinguished researcher at Universitas Indonesia's Faculty of Humanities with a Ph.D. in Cultural Studies from Tilburg University, Dr. Abellia is an expert in bottom-up climate adaptation. Her extensive field research explores the socio-economic resilience of marginalized and post-conflict communities—from advocating for food sovereignty in Eastern Indonesia to studying vulnerable populations along the Myanmar-Bangladesh border.

Through spatial ethnography, she translates grassroots realities into actionable, high-level policies. At UI GreenMetric, Dr. Abellia is driven by a singular mission: ensuring that global sustainable development is inclusive, equitable, and firmly rooted in climate justice.



Prof. Dr. Peter Heck, CEO Institute for Applied Material Flow Management, Environmental Campus Birkenfeld, Germany

Prof. Dr. Peter Heck, born 1962, PhD in Geography, Dipl. Geographer, Director of IfaS, Professor for material flow management at the Trier University of Applied Sciences, Environmental Campus Birkenfeld. He is founder and director of the institute for applied material flow management, IfaS. He is International Chair Professor at the National Taipei University of Technology in Taipei, Taiwan Special Appointed Professor at Ritsumeikan Asia Pacific University in Beppu, Japan and Vice Dean of the Trier-Yantai Technical College in Yantai, China. Prof. Dr. Heck is an international recognized expert in the fields of material flow management, environmental policies, zero emissions and circular economy. Prof. Dr. Heck has more than 30 years of working experience in the development and management of national and international projects in emerging and developing countries, especially in the areas of renewable energies, biomass strategies, integrated solid waste management and circular economy. He speaks fluently English and German and has basic knowledge in French and Chinese.



Prof. Dr. Nadine Kammerlander
WHU Otto Beisheim School of Management, Vallendar, Germany

Prof. Dr. Nadine Kammerlander has been a professor at WHU – Otto Beisheim School of Management since 2015, where she serves as co-director of the Institute for Family Businesses and SMEs. In 2023, she was also appointed to the university's executive board as Vice Rector for Diversity and Sustainability. She studied physics at the Technical University of Munich and Lund University of Technology in Lund, Sweden. She then worked at a strategy consulting firm on projects in Germany, the U.S., and Mexico, focusing on companies in the semiconductor and automotive sectors. After returning to

academia, she earned her Ph.D. from Otto-Friedrich University of Bamberg on the topic of radical change in family businesses and completed her habilitation at the University of St. Gallen. Her work has been recognized with numerous national and international awards, such as the Latsis Prize and the Carolyn Dexter Award. In addition, she was named one of the "Top 40 Under 40" by Capital magazine in 2018 and was recognized as a "Top 100 Global Family Influencer" by Family Capital magazine in 2020 and 2022. In Wirtschaftswoche's ranking of the most research-intensive business administrators under 40, she placed 25th, making her the highest-ranked female researcher. She serves on numerous committees, including the Innovation Advisory Committee at DESY in Hamburg and the Research Institute of the bdvb e.V., and is chair of the Rhineland-Palatinate Council for the Future.

Session 1A



Prof. Dr.-Ing. Chin-Lung Chang

Rector of National Pingtung University of Science and Technology (NPUST)

Prof. Dr.-Ing. Chin-Lung Chang is President of National Pingtung University of Science and Technology (NPUST), Taiwan's leading institution in agricultural science, sustainability, and applied technology. Under his leadership, NPUST has strengthened its global reputation and advanced its vision of becoming a world-class university. Prof. Chang is committed to promoting international collaboration, interdisciplinary innovation, and sustainable development. His leadership continues to enhance NPUST's contributions to education, research, and the achievement of the United Nations Sustainable Development Goals (SDGs).



Prof. Dr. Vivina Dias Sol Queiroz

Pro-Rector for Citizenship and Sustainability, Universidade Federal de Mato Grosso do Sul (UFMS), Brazil

Professor at Federal University of Mato Grosso do Sul (UFMS), with a Master's degree and a PhD in Education from UFMS, and degrees in Social Studies, History, and Pedagogy, as well as postgraduate specializations in Latin American History and in Methodologies and Management for Distance Education. She has extensive experience in both Basic Education and Higher Education, working in teaching, teacher education, educational management, and the application of information and communication technologies in education. She served as Director of the Faculty of Human Sciences (FACH/UFMS) from 2017 to 2024. Since December 2024, she has served as Pro-Rector for Citizenship and Sustainability at UFMS. She is a member of the Education Studies and Research Group (GEPPE). In 2026, she was awarded the title of Emeritus Professor of Higher Education by UFMS, following her nomination by the Faculty of Human Sciences and approval by the University Council.



Prof. Dr. Abror Juraev

Vice-Rector for International Cooperation, Bukhara State University, Uzbekistan

Abror Juraev has extensive skills and experience in organizational, administration and monitoring processes of international projects. A.Juraev has PhD in International Economics awarded for dissertation work titled "Economic and Investment Potential of the European Union and Perspective Ways of Developing Economic Relations with Uzbekistan" at the University of World Economy and Diplomacy in 2010. A.Juraev has passed trainings and research periods at University of Ghent, Vrije Universiteit Brussel (Belgium), University of Padua (Italy), University of Santiago de Compostela, Polytechnical University of Valencia (Spain) and others. He has been awarded State Award for the promotion of higher education achievements. Teaches the course of Global Economic Development. He has published more than 70 scientific articles



Prof. Dr. Chanita Rukspollmuang, Ph.D.

Vice-Rector of Siam University

Professor Dr. Chanita Rukspollmuang is Vice President and Dean of Graduate School of Education, Siam University. She was appointed a member of Phasi Charoen district community development committee and Sustainable University Network (SUN) Thailand. She was appointed an Associate Fellow of the Royal Institute and committee members in the Office of the Education Council and Teachers' Council of Thailand. She was SEAMEO-ESD Fellow and MCO's Research Committee. She also served twice as elected President, Comparative Education Society of Asia (CESA) and is still active in the Board of Directors.

Session 1B



Prof. Dr. Şebnem Hoşkara, B.Arch.

Sustainability Director, Beykoz University (& Eastern Mediterranean University)

On sabbatical leave, Department of Architecture at Eastern Mediterranean University (EMU). Visiting researcher at the CCLab, Institute for Urban Design and European Urbanism, RWTH Aachen; research focus on studying university campuses not only as places for education and research but also as living labs and creators of public spaces. Professor at the Department of Architecture and Director of Impact, Ranking and Sustainability at Beykoz University, Istanbul, Turkey. Director of MiAK-MAK (National Accreditation Board of Schools of Architecture in Turkey). Chairs the Senior Advisory Board on Public Space at City Space Architecture, while also serving as a Scientific Board Member. Member of ISOCARP, ICOMOS Turkey, MiAK and MiMED.



Dr. Dénes Mátyás, PhD

Deputy Director for Sustainability, University of Szeged

Dr. Dénes Mátyás is Deputy Director for Sustainability at the University of Szeged (SZTE), Hungary, where he earned his MA degrees and PhD. He also leads the "Sustainability and Green SZTE" Development Program, coordinating sustainability-related initiatives, events, and online courses. He is a regular contributor to national and international workshops and conferences. His international experience includes serving as Visiting Assistant Lecturer at the University of Naples "L'Orientale" (2009–2010) and Fulbright Visiting Scholar at Cleveland State University (2015–2016).



Dr. Aspalilla Binti Main

Department Head, Politeknik Merlimau Melaka

Head of the Research, Innovation and Commercialisation Unit (UPIK). Her expertise includes TVET innovation, sustainability, and digital transformation. She has led several institution-wide digital initiatives, including DNA Green, SaringMinda, MyBloodMiles, and digital management systems supporting research, innovation, commercialisation, and sustainability practices. Her work focuses on leveraging digital technologies to strengthen sustainability integration and innovation ecosystems in higher education.



Ms. María Luisa Becerril López

Representative of Rector, Autonomous University of the State of Mexico (UAEM), Mexico

María Luisa Becerril López is a faculty member in Linguistics at the Faculty of Languages, Universidad Autónoma del Estado de México (UAEMéx), with extensive experience in linguistics, scientific communication, internationalization, and academic cooperation. She currently serves as Director of Scientific Cooperation and Internationalization at the Secretariat of Science of UAEMéx, where she works to strengthen academic and scientific collaboration at national and international levels. Her work focuses on language accessibility, internationalization, open science, and the equitable dissemination of scientific knowledge.

Session 2A



Prof. Dr. Ir. Hadiyanto, S.T., M.Sc., IPU

Representative of Rector, Universitas Diponegoro, Indonesia

Prof. Dr. Ir. Hadiyanto, S.T., M.Sc., IPU, is a Professor of Chemical Engineering at Universitas Diponegoro and currently serves as Director of Reputation, Partnership, and Global Connectivity at Universitas Diponegoro, Indonesia. He obtained his Bachelor's degree in Chemical Engineering from Universitas Diponegoro in 1998, followed by a Master's degree in 2003 and a PhD in 2007 from Wageningen University, the Netherlands. His research expertise covers renewable energy, biofuels, waste-to-energy, environmental sustainability, water resources, and biomass utilization. He has published extensively in international journals and proceedings and has contributed to research on biodiesel production, microalgae, biomass and waste utilization, sustainable water resources, and renewable energy development. Through his academic and

leadership roles, he has actively contributed to research, innovation, environmental sustainability, and the development of strategic partnerships and global collaboration at Universitas Diponegoro.



Prof. Delfina Corsi Villalobos, M.A.

Deputy Director for Sustainable Campuses and Engagement, National Autonomous University of Mexico (UNAM)

Delfina Corsi Villalobos is Deputy Director for Sustainable Campuses and Engagement at the University Coordination for Sustainability (CoUS) of the National Autonomous University of Mexico (UNAM). She holds a Law degree and a Master's degree in Constitutional Law, with additional specialization in Public Policy, Gender Justice, and Information Law. She teaches Environmental Law and Sustainable Development at UNAM. Her work focuses on sustainability governance, institutional coordination, and the implementation of sustainability policies across university campuses.



Prof. Yung Ping Tseng

Vice-Rector of National Chi Nan University

Professor Yung-Ping Tseng is a faculty member at National Chi Nan University (NCNU), Taiwan, with extensive experience in higher education administration, international collaboration, sustainable development, and tourism research. He has served in key university leadership roles promoting internationalization, sustainability initiatives, industry-academia cooperation, and global partnerships. He was also the principal organizer of the 2025 UI GreenMetric World University Rankings Announcement hosted in Taiwan. His expertise includes sustainable tourism, dark-sky tourism, university social responsibility, green campus development, and regional revitalization.



Dr. John Barimo

Representative of President, University College Cork, Ireland

John Barimo manages the collaborative all-island Sustainable Development Solutions Network Ireland. He is an integrative ecologist holding a Ph.D. from the University of Miami, USA with current research interests focus on socio-ecological transitions and education for sustainability. John guides student learning across UCC's 4 colleges including Walking the Anthropocene: Walking as Critical Pedagogy and developed the open-source SDG Toolkit for Teaching and Learning. His career spans academics, nongovernmental organizations, private enterprise, and governmental agencies. John has extensive experience working within traditional indigenous communities and has gained considerable experience creating educational opportunities within marginalised communities. He is also an associate member of the UCC Futures Sustainability Institute.

Session 2B



Dr. Sargis Asatryants

Vice-Rector, National Polytechnic University of Armenia, Armenia

Sargis Asatryants is Vice-Rector for Internationalization and Reforms at the National Polytechnic University of Armenia. He holds a Ph.D. in Economics and has extensive academic and professional experience in management, economic research, higher education policy, and institutional reform. His work focuses on improving the quality, accessibility, and internationalization of higher education, as well as aligning institutional policies with international standards. Dr. Asatryants actively participates in international conferences and forums, contributing to discussions on higher education reform, student engagement, education financing, governance, innovation, and socio-economic development. He is also the author of publications on governance, innovation systems, and regional development, and is actively engaged in strengthening international cooperation and advancing higher education reforms in Armenia.



Prof. Dr. Adejuwon Adewale Adeneye, Ph.D., D.Sc. (AM)

Professor at Lagos State University

Professor Adejuwon Adewale Adeneye is a distinguished pharmacologist specializing in natural products and alternative medicine. Holding an M.B.B.S., Ph.D., and D.Sc., his breakthrough research includes the discovery of the antihyperglycemic molecule erinidine and the co-development of the mechanistic model for the clinical "Artificial Pancreas." A Fulbright Scholar with more than 110 publications and over 4,700 citations, he is a Fellow of the African Academy of Sciences and the Nigerian Academy of Medicine. He currently serves as Director of the Directorate of Research Management and Innovation at Lagos State University.



Dr. Eng. Heriansyah Putra, S.Pd., M.Eng.

Associate Professor at IPB University

Dr. Heriansyah Putra is an Associate Professor in Geotechnics at the Department of Civil and Environmental Engineering and Assistant Director of Planning and Sustainable Campus Development at IPB University. His research focuses on innovative materials for sustainable construction, including calcite precipitation methods for soil improvement and the use of plastic waste in construction materials. His work integrates geotechnical engineering, materials science, and environmental engineering to promote sustainable infrastructure development.



Dr. Thalita dos Santos Dalbelo

Head of Sustainability Coordination, University of Campinas

Dr. Thalita Dalbelo is an architect and urban planner specializing in sustainability in higher education. She earned her Ph.D. in Urban Sustainability from the University of Campinas and completed postdoctoral studies at the Institute of Advanced Studies, University of São Paulo. As Sustainability Coordinator at the University of Campinas (Unicamp), she leads initiatives in campus sustainability,

nature-based solutions, circularity, climate resilience, and international cooperation for sustainable development.



Dr. Jaime Alberto Romero Infante

Director of Environmental Management Unit, El Bosque University

Dr. Jaime Alberto Romero Infante is a civil engineer with extensive academic and technical experience in environmental management and institutional sustainability. He currently serves as Director of the Environmental Management Unit and Full Professor at El Bosque University, where he leads strategies to strengthen environmental management, regulatory compliance, and sustainability across the institution. He also directs the Choc Izone Group, promoting research and innovation in environmental management, climate action, and sustainable development.

Session 3A



Ms. Catherine Kelonye

Chief Principal of The Kisumu National Polytechnic

Catherine Kelonye is the Chief Principal of The Kisumu National Polytechnic with more than 33 years of experience in Kenya's education sector. She holds a Master's degree in Education (Curriculum and Instruction) and is a licensed Competency-Based Education and Training (CBET) practitioner. Her expertise includes curriculum development, accreditation, institutional leadership, green skills, innovation, and industry-aligned training. She also serves on the Board of Trustees of the Kenya Education Network (KENET), contributing to national education and research development.



Asst. Prof. Dr. Prasert Kanthamanon

Senior Vice President for Administrative Affairs, King Mongkut's University of Technology Thonburi

Asst. Prof. Dr. Prasert Kanthamanon is the Senior Vice President for Administrative Affairs and Chief Information Officer at King Mongkut's University of Technology Thonburi (KMUTT). His expertise includes enterprise computing platforms, digital technologies, platform architecture, computer networks, and internet engineering. He is responsible for university sustainability policy at KMUTT and also serves as Chairman of the Higher Education Administration Committee of the Council of University Presidents of Thailand and Advisor to SUN Thailand.

Prof. Dr. Osama Saadeh

Dean of Scientific Research, German Jordanian University



Professor Osama S. Saadeh is Professor of Electrical Engineering and Dean of Scientific Research at German Jordanian University (GJU). Previously, he served as the President's Advisor for Sustainability and Technology Integration. He holds a Ph.D. from the University of Arkansas, USA, and has published more than 50 scientific papers. His expertise includes power electronics, power systems, renewable energy, and sustainability. He has led approximately 50 MW of photovoltaic implementations across seven Jordanian universities.

and currently manages several internationally funded research collaborations.



Dr. Alessandro Sciullo

Assistant Professor at the University of Turin

Dr. Alessandro Sciullo is an environmental sociologist and policy analyst specializing in the social and political dimensions of ecological and energy transitions. His research focuses on collective action, urban metabolism, circular economy, simulation modelling, and public policy evaluation. He coordinates the Clean Energy Transition for Sustainable Society Programme of the European Energy Research Alliance and leads the ET@UNITO scientific platform and the Workgroup on Energy Communities within the Italian Network of Sustainable Universities (RUS).

Session 3B



Prof. Rafael Luque, Ph.D.

International Researcher, Universidad Tecnológica ECOTEC

Professor Rafael Luque is an internationally recognized researcher in Green Chemistry, Sustainability, and Circular Economy. As an International Researcher at Universidad Tecnológica ECOTEC, he advances research in sustainable technologies, biomass valorization, waste-to-resource conversion, renewable energy, and environmental remediation. With more than 900 scientific publications, he is among the world's leading researchers in his field and actively promotes international collaboration to support sustainable development.



Gumru Huseynova, Ph.D.

Head of the Cell Culture and Genetics Laboratory, Baku State University

Dr. Gumru Huseynova is Head of the Cell Culture and Genetics Laboratory at Baku State University. Her work focuses on biotechnology, hydroponic systems, sustainable agriculture, and resource-efficient farming. She has extensive experience in research and applied projects related to soil-free cultivation and is the founder of a project supporting agricultural SMEs in transitioning to hydroponic farming systems, recognized as a successful initiative at WUF13. Her expertise also supports the Hydroponic Smart Campus project at Baku State University.



Marco Angilella, Dipl.-BW (FH)

Head of International Project Management, Trier University of Applied Sciences / Institute of Applied Material Flow Management (IfaS)

Marco Angilella is Head of International Project Management at the Institute for Applied Material Flow Management (IfaS), Trier University of Applied Sciences. With more than 20 years of experience in international project development and sustainability consulting, he specializes in decarbonization, circular economy, and resource-efficient systems for industry and regional development. He has successfully managed numerous internationally funded projects

and teaches in international Master's and Bachelor's programs, translating research into practical and real-world solutions.



Dr. Susan Medina Canzio

Representative of Rector, Universidad Científica del Sur, Peru

"Dr. Susan Medina Canzio is Head of the Sustainability Innovation Office at Universidad Científica del Sur (Peru), integrating research, governance, and operational sustainability. As Technical Secretary of the Environmental Committee, she leads data-driven strategies and quality management systems that boost the university's standing in global sustainability rankings. A researcher in plant physiology, climate change, and environmental engineering, her expertise spans molecular biotechnology, bioremediation, and advanced phenotyping. She applies this scientific background to transform campuses into Living Labs for circular economy and Net-Zero innovation, as highlighted in her book *Aulas de Sostenibilidad* (2026). An experienced grant manager, scientific editor, and university professor, Dr. Medina works across multidisciplinary and international settings, advancing higher education sustainability through digitalization, innovation, and integrated performance metrics."

Session 4A



Dr. Arthur G. Ibañez

Professor, Cagayan State University

Dr. Arthur G. Ibañez is the OIC University President of Cagayan State University, a respected educator, engineer, and researcher. Known for his commitment to academic excellence, innovation, and sustainable development, he leads CSU in advancing quality education, research, internationalization, and community service.



Prof. George Harrison Coffie

Dean of the Faculty of Built and Natural Environment, Ho Technical University

Professor George Harrison Coffie is Dean of the Faculty of Built and Natural Environment at Ho Technical University, Ghana. An accomplished academic and researcher, he has made significant contributions to the field of the built environment and sustainable development. Under his leadership, the faculty has strengthened student engagement, academic excellence, and professional development while advancing sustainability initiatives. His governance-driven approach has contributed to Ho Technical University's recognition as the top-ranked institution in Ghana in the UI GreenMetric Rankings. At IWGM 2026, he will share the university's experience in institutionalizing sustainability through governance, digitalization, and integrated performance metrics.



Prof. Dr. Stefan Diemer

Professor, Trier University of Applied Sciences, Germany

Prof. Dr. Stefan Diemer is a Professor of International Business Communication and Digital Business at Trier University of Applied Sciences, Germany, and an Associate Professor of English Linguistics and Corpus Linguistics at Saarland University. At the Institute for International and Digital Discourse (InDi), he leads the Applied Language and Communication Program and several research projects on online and business discourse. His research focuses on language use in interaction, particularly in multimodal environments, with publications on multimodality, discourse and interaction, and the use of artificial intelligence in business and marketing.



Rahmi, S.Hum., M.Sc., Ph.D.

Assistant Professor, Universitas Indonesia & UI GreenMetric World University Rankings

Dr. Rahmi is an Assistant Professor in the Department of Library and Information Science at Universitas Indonesia and serves as Manager of Operations, Data, and Service Development at the UI GreenMetric World University Rankings. Her expertise includes human information behaviour, crisis informatics, data governance, digital heritage documentation, sustainability assessment, and evidence-based institutional reporting. Through her academic and professional roles, she supports research-informed decision-making, data quality management, sustainability reporting, and strategic communication to advance sustainable higher education.

Session 4B



Prof. Dr. Hassan Shaker Majdi

Rector, Al-Mustaqbal University

Prof. Dr. Hassan Shaker Majdi is the President of Al-Mustaqbal University, Iraq. He is actively engaged in advancing higher education, scientific research, sustainability, and international academic collaboration. Under his leadership, the university has achieved notable progress in global sustainability and university rankings, digital transformation, innovation, and SDG-related initiatives. He has a strong interest in sustainability rankings, particularly UI GreenMetric, QS Sustainability, and THE Impact Rankings, in addition to supporting green campus initiatives and sustainable research development.



Prof. Dr. Hamiane Messaoud

Professor, M'Hamed Bougara University of Boumerdes

Prof. Dr. Hamiane Messaoud is a Professor of Higher Education at M'Hamed Bougara University of Boumerdes, Algeria. He holds a PhD in Science from the Academy of Mining and Metallurgy in Poland and an International Master in E-Learning from Switzerland. Throughout his career, he has developed scientific research projects and led educational, analytical instrumentation, ICT, and e-learning initiatives. He also serves on the national Algerian committee for

visibility and ranking and chairs the Transition to 4.0, Visibility, and Ranking committees at UMBB.



Prof. Dr. Long Chiau Ming

Vice-Dean, Sunway University

Prof. Dr. Long Chiau Ming is an eminent researcher and academic leader with extensive regional networks across the UK, Australia, India, Malaysia, Brunei, and Indonesia. He holds adjunct professorships at Universiti Brunei Darussalam and Universitas Airlangga. As an active member of the GBD Collaborator Network, he contributes significantly to global health research. With over 493 Scopus-indexed publications, he has been ranked among the Top 2% Scientists globally (2021–2025) and recognized as one of the Top Research Scientists Malaysia (TRSM).



Prof. Dr.-Ing. Susanne Hartard

Professor, University of Applied Sciences Trier / Umwelt-Campus Birkenfeld

Prof. Dr.-Ing. Susanne Hartard is a Professor teaching Industrial Ecology at Environmental Campus Birkenfeld. She holds a PhD in Waste Management and Recycling and has over 35 years of experience in Circular Economy, including waste separation, recycling logistics, recycling technologies, and circular resource management. Her current research focuses on take-back systems for food-to-go, repair and furniture reuse, construction material recycling, and circular business models. She actively supports sustainability initiatives and circular transformation projects with ministries, companies, and student groups.



Dr. Regina Clélia da Costa Mesquita Micaroni

Representative of Rector, University of Campinas

Dr. Regina Clélia da Costa Mesquita Micaroni is a Chemist at the University of Campinas (UNICAMP) with over 25 years of experience in hazardous waste management. She manages institutional environmental licenses and controlled chemical acquisitions while ensuring compliance with federal and state regulations. She has developed technical workflows to resolve long-term chemical waste management challenges and contributes to university-wide waste policies and sustainable practices.

Session 5A



Prof. Thamer Al Hilfi

Professor, Madenat Alelem University

Prof. Thamer Al Hilfi is a Professor of Public Health and Health Professions Education at Madenat Alelem University and Vice President of Scientific Technical Affairs under the Ministry of Higher Education, Iraq. He was honored as the 2019 Award Winner of the United Nations NCD Task Force during the UN General Assembly in New York. He has contributed significantly to medical education, accreditation, quality assurance, and postgraduate education development.



Assoc. Prof. Dr. Sani Aryanto, S.Pd., M.Pd.
Dean, Universitas Bhayangkara Jakarta Raya

Assoc. Prof. Dr. Sani Aryanto is the Dean of the Faculty of Education at Universitas Bhayangkara Jakarta Raya and an academic specializing in literacy development, sustainable education, and innovative learning in primary education. He has served as an international literacy facilitator for the Teacher College Reading and Writing Project (Columbia University–The Ohio State University) and APCEIU UNESCO Seoul. His contributions focus on advancing literacy, educational innovation, and learning quality improvement.



Dr. Felix Flesch
Department Head, Trier University of Applied Sciences,
Environmental Campus Birkenfeld, Institute for Applied Material Flow Management (IfaS)

Dr. Felix Flesch has extensive international experience in material flow management, energy efficiency, renewable energy, circular economy, and decarbonization. Since 2008, he has worked at the Institute for Applied Material Flow Management (IfaS), and in 2022 he was appointed Head of the International Department. He earned his PhD from Universidad Autónoma de Aguascalientes, Mexico, focusing on biochar research. His expertise includes resource management, climate protection, environmental education, and developing transformation pathways toward sustainability.



Mr. Leonardo Chaves de Carvalho, M.Sc.
Sustainability Director, Universidade Federal de Mato Grosso do Sul (UFMS)

Leonardo Chaves de Carvalho is Director of Sustainability at the Office of Citizenship and Sustainability of the Federal University of Mato Grosso do Sul (UFMS), Brazil. He has extensive experience in university administration, institutional development, and sustainability in higher education. His work focuses on sustainability governance, citizenship, and the implementation of the Sustainable Development Goals (SDGs). He is also a member of the Administrative Committee of the Brazilian Network of Higher Education Institutions for Sustainable Development (UniSustentável).

Session 5B



Prof. Dr. Klaus Helling
Dean Department Environmental Business/Environmental Law

Prof. Dr. Klaus Helling, Dean of the Department of Environmental Business and Environmental Law at the Trier University's Birkenfeld Environmental Campus, Director of Sustainability for the Birkenfeld campus, and a founding member of the Executive Board of the Institute for Applied Material Flow Management (IfaS) at the Environmental Campus Birkenfeld. His research focuses on operational material flow management, the development of management systems for the environment, energy, occupational safety and sustainability, the development of international cooperation networks in the fields of the environment and

sustainability, issues relating to IT support for material flow management, and the implementation of the 2030 Agenda.



Mr. Eduardo García Ochoa, M.Sc.

Department Head, University of Valladolid

Eduardo García Ochoa is the Technical Director of the General Secretariat at the University of Valladolid, Spain. He is responsible for institutional rankings, transparency, open data, and open government initiatives. With a strong background in university ICT services, he provides technical leadership and support for institutional management, data governance, and evidence-based decision-making to strengthen university performance and accountability.



Dr. Rini Dwiyan Hadiwidjaja

Associate Professor, Universitas Terbuka

Dr. Rini Dwiyan Hadiwidjaja is an Associate Professor at Universitas Terbuka, specializing in management and institutional quality assurance. She holds a PhD from IPB University and possesses certified expertise in international quantitative research and quality auditing. Her academic achievements have been recognized through the national Satyalancana Award and the Rector Award. She also serves as the Coordinator of Universitas Terbuka's Green University Ranking Team, leading the university's strategic sustainability benchmarking, governance, and international ranking initiatives.



Turdukan Bekimbetova

Dean, International Ala-Too University

Dr. Turdukan Bekimbetova is Dean of the Faculty of Social Sciences at Ala-Too International University, Kyrgyzstan. She is a researcher specializing in sustainability in higher education, Education for Sustainable Development (ESD), and green university transformation. With over 15 years of experience in higher education, academic leadership, curriculum development, and international project management, she focuses on integrating sustainability and the Sustainable Development Goals into teaching, research, and university governance.

Chairs /Co-chairs



Prof. Dr. Milena Valeva

Professor, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany

Prof. Dr. Milena Valeva is a Professor at Umwelt-Campus Birkenfeld, Trier University of Applied Sciences, Germany, where she has been teaching since 2020. Her teaching and research focus on sustainable regional development, Nonprofit and NGO management, social business and social innovation, business ethics and corporate social responsibility, and the socio-cultural dimensions of sustainability. She also has research interests in AI ethics, research integrity and ethics, philosophy of science, and internationalization, particularly in Central and Eastern European

countries. Through her interdisciplinary work, Prof. Valeva contributes to advancing sustainable development, responsible business practices, and social innovation.



Prof. Anna Tozzi,

Rector consultant for Internationalization, University of L'Aquila, Italy

Prof. Anna Tozzi is Rector's Consultant for Internationalisation Policies, University of L'Aquila. She is a Professor of Geometry. She is Excellence in both education and research is at the centre of University's policy. Teaching is designed to be interactive, stimulating and interlocked with research as closely as possible



Prof. Dr. Christian Mock

Professor, Department Environmental Business/Environmental Law, Umwelt-Campus Birkenfeld, Germany

Prof. Dr. Christian Mock is a Professor of Insolvency Law, Business Law, and General Civil Law at Umwelt-Campus Birkenfeld, Trier University of Applied Sciences, Germany. He teaches in the Bachelor's program in Business and Environmental Law and the Master's program in Corporate and Energy Law. He also serves as Director of the Birkenfelder Institut für Ausbildung und Qualitätssicherung im Insolvenzwesen (BAQI) and is involved in the Master's program in Insolvency Law and Reorganization Proceedings. His areas of expertise include insolvency law, corporate acquisitions, due diligence processes, financing, and real estate transactions.



Dr. Massimiliano D'Innocenzo,

Project Manager, University of L'Aquila, Italy

Massimiliano D'Innocenzo is a project manager at the University of L'Aquila. He also as a President of the Consortium for the Protection of Saffron of L'Aquila DOP. He manages university partnership projects, in particular Erasmus+ CBHE (Capacity Building Higher Education) projects. These include the PAWER, RENES and GREB projects with Central Asia, the Caucasus, Mongolia and Russia. He received Master "The New Digital Skills: Open Education, Social and Mobile Learning", organized by the Educational Technologies Laboratory (LTE) of the Department of Education and Psychology (SCIFOPSI) of the University of Florence

Abstracts

Session 1A - Managing Education and Research

Cultivating Digital Agriculture Talent through University Social Responsibility: A Sustainability-Oriented Pedagogical Model and Its Systemic Validation along Pingtung County Road 185

Prof. Dr.-Ing. Chin-Lung Chang, Rector, National Pingtung University of Science and Technology (NPUST), Taiwan

This paper presents a sustainability-oriented teaching model for cultivating digital agriculture talent through University Social Responsibility (USR) at National Pingtung University of Science and Technology (NPUST). The model integrates Artificial Intelligence (AI), the Internet of Things (IoT), big data analytics, and circular economy principles into field-based community learning along Pingtung County Road 185. Through four phases—Curriculum Integration, Technology-Enhanced Learning, Field- and Community-Based Practice, and Systemic Reflection—students work with rural organic farmers to identify agricultural challenges, develop digital solutions, and reflect on their applications. The results demonstrate significant outcomes, including 60% water savings, strengthened smallholder resilience, the incubation of more than ten student-led green startups, and enhanced institutional sustainability governance. This case study highlights how USR can effectively connect digital transformation, sustainability, and community engagement, providing a scalable model for universities worldwide to advance the United Nations Sustainable Development Goals (SDGs).

Beyond Traditional Curricula: The UFMS Citizenship Education Core as an Innovative Model for Sustainability, Artificial Intelligence, and Entrepreneurship

Prof. Dr. Vivina Dias Sol Queiroz, Pro-Rector for Citizenship and Sustainability, Universidade Federal de Mato Grosso do Sul (UFMS), Brazil

To prepare students for an increasingly digital and sustainability-oriented society, the Federal University of Mato Grosso do Sul (UFMS) created the Citizenship Education Core (NFC), an innovative curricular model that integrates sustainability, citizenship, entrepreneurship, innovation, and artificial intelligence into undergraduate education. This paper presents the implementation and results of the NFC based on institutional data from the first semester of 2026. The Core comprises three cross-cutting courses: Life, Citizenship, and Sustainability; Entrepreneurship and Innovation; and Artificial Intelligence: Fundamentals and Practices. The initiative promotes competencies aligned with contemporary social, environmental, and technological challenges. In the first semester of 2026, the Sustainability course enrolled 6,353 students across 116 undergraduate programs, while the Artificial Intelligence and Entrepreneurship courses reached 3,536 students in 110 programs and 3,283 students in 99 programs, respectively. In addition, 94 undergraduate programs had already incorporated all three courses into their curricula. The UFMS experience demonstrates that sustainability education can be effectively integrated with innovation and digital transformation, offering a scalable and replicable model for higher education institutions seeking to strengthen sustainability and active citizenship in university curricula.

Benchmarking Sustainability Performance at Bukhara State University: Insights from the UI GreenMetric 2025 World Rankings

Prof. Dr. Abror Juraev, Vice-Rector for International Cooperation, Bukhara State University, Uzbekistan

Global university sustainability rankings have emerged as powerful diagnostic tools, enabling institutions to benchmark performance, identify strategic gaps, and guide evidence-based policy. Bukhara State University (BukhsU), Uzbekistan, achieved a world rank of #401 among 1,745 institutions in the 2025 UI GreenMetric rankings with a total score of 7,237.5 out of 10,000 points — placing it in the top 23% globally and establishing it as a regional sustainability leader in Central Asia. This paper critically analyzes BukhsU's performance profile across all six UI GreenMetric categories to identify competitive strengths, structural gaps, and strategic priorities for advancement. A category-by-category efficiency analysis was conducted by computing each score against the respective maximum possible points. Findings reveal that

Education and Research is BukhSU's one of the highest-performing dimension, driven by 1,577 sustainability-embedded courses, 530 scholarly publications, USD 155,275 in sustainability research funding, and a 28.4% green graduate employment rate. By contrast, Waste management (WS: 56%) represents the most significant underperforming category, indicating an institutional gap between strong academic sustainability and operational campus practice. These results suggest that BukhSU exemplifies an academically driven sustainability model - strong in knowledge production and green workforce development, yet with untapped potential in campus operations.

Strategy to Develop Digital Intelligence (DQ) for SDGs Among Thai University Students Using the City Explorer (CE) Model

Prof. Dr. Chanita Rukspollmuang, Ph.D., Vice-Rector, Siam University, Thailand

Thailand's 2025 Ministerial Announcement requires every higher education curriculum to embed at least six credits or two courses of artificial intelligence (AI) knowledge, application, and ethics. The authors studied framework of Digital Intelligence (DQ) and its link to the United Nations SDGs and proposed the City Explorer (CE) model's five-stage sequence - Discover (City of Mist), Study (City of Light), Operate (City of Gear), Create (City of Colors), Broadcast (City of Sound) - as a flexible, discipline-agnostic structure for embedding AI knowledge, application, and ethics into teaching. At Siam University, the CE model can be used as a DQ strategy in the revised General Education program which emphasize innovation and sustainability, especially Module 2 (Digital Competency) and Module 3 (Entrepreneurship for Sustainability). These modules can be mapped to its corresponding CE "city", anchored by SDG-framed student projects. The article shows how to apply the CE model and proposes recommendations for assessment design and cross-module faculty coordination, arguing that the CE model can offer Thai universities a coherent, retrospectively applicable narrative for aligning AI-curriculum compliance, DQ development, and sustainability education within a single integrated General Education pathway.

Session 1B - Managing Education and Research

Integrating the UN Sustainable Development Goals into Higher Education: An Interdisciplinary Learning Model

Prof. Dr. Şebnem Hoşkara, B.Arch., Representative of Rector, Beykoz University, Türkiye

HE institutions play a vital role in advancing sustainability by equipping students with the knowledge, skills, and values needed to address global challenges. This paper presents ARCH 320: The UN SDGs—An Interdisciplinary Approach for the Future of Our Planet, a university-wide elective designed to integrate sustainability education across disciplines. The course explores the environmental, social, economic, and cultural dimensions of sustainable development through the lens of the SDGs. Interactive modules combine theory with discussions, case studies, participatory exercises, and experiential learning activities, supported by diverse digital and multimedia resources. A key feature of the course is its emphasis on interdisciplinary collaboration and problem-solving. Students examine sustainability challenges from multiple perspectives and develop responses at different scales. Through awareness campaigns, public service announcements, infographics, surveys, and community-based projects, learners translate SDG principles into practical actions. The paper discusses the course design, pedagogical framework, and learning outcomes, highlighting its contribution to sustainability literacy, civic engagement, and transformative learning. It demonstrates how integrating the SDGs into higher education curricula can strengthen sustainability education and empower students to become active contributors to a more sustainable and equitable future.

Sustainability Course Development at the University of Szeged

Dr. Dénes Mátyás, PhD, Representative of Rector, University of Szeged, Hungary

Sustainability and environmental protection are among the most pressing issues of our time. In response, the international network of the UI GreenMetric World University Rankings originally defined three primary objectives: (1) Shaping Global Higher Education and Research in Sustainability, (2) Creating Global Sustainability Leaders, and (3) Partnering on Solutions to

Sustainability Challenges. Aligned with these objectives, preparations for a unique international online course on sustainability began in 2020 through a joint initiative of seven universities from seven countries across four continents, including the University of Szeged (Hungary). The English-language course was first launched in autumn 2021 for students of the partner institutions. Due to its continued success, the course has been offered annually since then and, from 2025 onward, under the title Sustainable Universities: Global Practices and Sustainable Development Goals. In 2026, it was also offered as a summer course in both hybrid and fully online formats. The impact of the initiative led to the development of Indonesian and Hungarian online sustainability courses, as well as a second international online course involving seven additional universities from six countries across two continents. This presentation discusses the University of Szeged's experiences in developing and delivering this international online sustainability course.

Supporting Sustainability Integration in TVET Student Innovation Through the DNA Green Digital Self-Assessment Initiative: A Sustainability Profiling Approach

Dr Aspalilla Binti Main, Representative of Director, Politeknik Merlimau Melaka, Malaysia

Sustainability integration is increasingly emphasised in TVET innovation to support the Sustainable Development Goals (SDGs). However, student innovators often do not clearly recognise the sustainability dimensions embedded in their projects. This study aims to map sustainability profiles of TVET student innovation projects through the DNA Green Digital Self-Assessment Initiative. A quantitative descriptive approach was employed using self-assessment data from 100 student innovation projects. The framework profiles projects across four sustainability indicators: Green Impact, Energy Efficiency, Waste Reduction, and Social Sustainability. Results showed that Social Sustainability (35%) and Green Impact (34%) were the most frequently identified dimensions, followed by Waste Reduction (17%) and Energy Efficiency (12%). Only 8% of projects achieved all four sustainability indicators. The findings demonstrate the usefulness of digital self-assessment as a practical approach for supporting sustainability integration, sustainability reflection, and SDG-related educational practices in TVET institutions.

Open Access as a Strategic Driver for Sustainability and Climate Change Knowledge Prof. Ms. María Luisa Becerril López, Representative of Rector, Autonomous University of the State of Mexico (UAEM), Mexico

Universities play a critical role in addressing global sustainability challenges by generating, disseminating, and applying knowledge that supports evidence-based solutions for climate change and sustainable development. However, the societal impact of research depends not only on its production but also on its visibility, accessibility, and capacity to reach diverse stakeholders. This paper examines how open access infrastructures can strengthen the contribution of higher education institutions to sustainability by enhancing the dissemination and use of scientific knowledge. Particular attention is given to the experience of the Autonomous University of the State of Mexico (UAEMéx) through Redalyc, one of the world's largest open access scholarly communication infrastructures. Through Redalyc, the university safeguards and disseminates a collection comprising thousands of peer-reviewed open access articles related to climate change, environmental sustainability, biodiversity, renewable energy, environmental governance, and sustainable development, produced primarily by institutions across Latin America. This openly accessible knowledge ecosystem increases the visibility of regional research, facilitates international collaboration, and supports the transfer of scientific evidence to policymakers, educators, communities, and practitioners.

Session 2A - Managing Governance and Digitalization

UNDIP Green Monitoring System: An Integrated Digital Framework for Sustainable Campus Governance and Performance at Universitas Diponegoro

Prof. Dr. Ir. Hadiyanto, S.T., M.Sc., IPU, Representative of Rector, Universitas Diponegoro, Indonesia

The transition toward sustainable campuses is increasingly important for supporting environmental sustainability and achieving the SDGs. Moreover, universities face increasing pressure to respond to environmental challenges while demonstrating measurable contributions to the Sustainable Development Goals (SDGs). The challenge is institutions should adjust major campus core business and operations, governance, decision-making, and performance assessment with sustainability point of view. This study examines how Universitas Diponegoro (UNDIP) addresses this challenge by linking institutional governance, digital monitoring, and performance management through the UNDIP Green Monitoring System. The research used a mixed-methods case study which consist of longitudinal UI GreenMetric performance data were examined alongside governance documents, sustainability policies, institutional reports, and direct observations of UNDIP's digital monitoring platform. The UNDIP Green Monitoring System integrates sustainability indicators across multiple dimensions into a centralized digital platform, supporting evidence-based decision-making, institutional coordination, performance monitoring, and transparent sustainability reporting. The findings show that the platform consolidates sustainability indicators from multiple operational areas, enabling cross-unit coordination, performance tracking, evidence-informed planning, and more transparent reporting. Its practical value depends largely on whether governance arrangements connect monitoring results with planning, resource allocation, evaluation, and institutional learning. The study further proposes an Integrated Campus Sustainability (ICS) Framework comprising four interconnected components: governance architecture, digital monitoring infrastructure, multi-dimensional performance measurement, and a continuous improvement feedback loop. The interaction shifts from fragmented environmental initiatives toward coordinated institutional accountability and adaptive improvement. Some constraints remain, particularly indicator internal flow process, stakeholder participation, cybersecurity, and long-term digital integration. Nevertheless, the framework offers a potentially adaptable references especially for universities in developing economies seeking to advance sustainable campus governance and align institutional operations with the SDGs.

Sustainability Governance in Institutionally Complex Universities: Institutional Trajectory and Reporting Frameworks at UNAM, 2018–2026

Prof. Delfina Corsi Villalobos, M.A., Representative of Rector, National Autonomous University of Mexico (UNAM), Mexico

The National Autonomous University of Mexico (UNAM) developed sustainability initiatives for over four decades through teaching and research programs, yet without a formal coordination structure to consolidate them into university-wide policy and regulatory frameworks. The University Coordination for Sustainability, established in 2018, introduced mechanisms for coordinating and monitoring sustainability across the University. This paper examines that transformation and the role of reporting frameworks, particularly UI GreenMetric, as instruments of sustainability governance, institutional coordination, and accountability. The analysis draws on regulatory instruments, strategic documents, and reporting processes from 2018 to 2026. CoUS developed key instruments, including the University Sustainability Network, the Comprehensive Sustainability Plan, and the Resilience and Sustainability Strategy. UNAM's participation in UI GreenMetric operates as a mechanism for coordination, monitoring, and accountability; entity participation grew substantially between 2025 and 2026, reflecting the consolidation of this process. The findings suggest that reporting frameworks can transcend their evaluative function and operate as instruments of coordination when integrated into institutional trajectories supported by formal mechanisms for measurement and accountability. This experience offers insights for institutions seeking to scale sustainability commitments in complex organizational settings.

University as a Sustainable Tourism Destination: The Development Strategy of the NCNU Nature Education Park in Taiwan

Prof. Yung Ping Tseng, Vice-President, National Chi Nan University, Taiwan

As global rankings intensify competition for research prestige, universities are drawn into a crowded arena shaped by bibliometric output and reputation. This paper argues that a sustainability-leading university can create an uncontested strategic space by becoming a sustainable tourism destination. Using National Chi Nan University (NCNU) in Taiwan's Shuishalian region as a case, the study examines the planned NCNU Nature Education Park. NCNU's 2025 UI GreenMetric results—30th globally and 2nd in Taiwan—are supported by its 148-hectare forested campus, public accessibility, water-recycling system, net-zero-by-2043 roadmap, and demand-management transport program. The paper proposes a four-layer framework that links a Resource-Based View of campus assets, Blue Ocean value innovation, university-led sustainable destination development, and governance assessment, integrating UI GreenMetric and Green Flag Award criteria and carrying-capacity controls. Seven park initiatives, from a pangolin-themed transit gateway and dark-sky nightscape attraction to a Build-Operate-Transfer multi-generational living community, are mapped to both ratings systems. Rather than concealing the tension between development and conservation, the study makes it central and proposes Limits of Acceptable Change safeguards. The contribution is a transferable, governance-anchored model for universities seeking to convert sustainability performance into a durable strategic position.

Embracing Partnerships for the Goals: University College Cork's Continued Journey Towards Sustainability

Dr. John Barimo, Representative of President, University College Cork, Ireland

Sustainability is embedded in the DNA of University College Cork (UCC), where dynamic innovative solutions are recognised as essential drivers of a just transition. The 2030 Agenda for Sustainable Development calls on the academic community to work across society to advance the SDGs and UCC embraces this responsibility. UCC adopts a student-led, research-informed and practice-focused approach across its teaching, research, operations and outreach. This whole-of-institution model enables collective governance and coordinated action. It creates meaningful opportunities for students and staff to contribute, thus supporting UCC's position among the world's leading sustainable universities with consistent ranking in the UI GreenMetric Top 10. UCC published its first Sustainability Strategy in 2016 and embeds emerging sustainability practices into operations especially regarding Net Zero targets. The UCC Futures Sustainability Institute, advances research solutions to global challenges, while an open-source SDG Toolkit for Teaching and Learning supports curriculum (re)development. UCC co-hosts the Sustainable Development Solutions Network Ireland, catalysing solutions-oriented collaboration among universities and NGOs to accelerate SDG and Paris Agreement implementation. Rooted in the ethos of the Good Friday Agreement, this all-island network demonstrates how universities can build partnerships across institutional and jurisdictional boundaries. UCC's experience highlights the value of integrating institutional practices and cross-sector partnerships, offering a transferable model for universities seeking to accelerate sustainability transitions and contribute meaningfully to the 2030 Agenda.

Session 2B - Managing Setting, and Infrastructure

Transforming the Campus, Transforming the University: A Sustainable Infrastructure Approach from Technological University in Armenia

Dr. Sargis Asatryan, Vice-Rector, National Polytechnic University of Armenia, Armenia

Higher education institutions increasingly use their campuses as places where sustainability strategy becomes tangible. This case study examines how the National Polytechnic University of Armenia (NPUA) has used campus setting and infrastructure as a platform for institutional transformation. Drawing on strategic documents, operational records, public institutional data, and relevant literature, the study analyses developments from 2015 to 2026 across governance, physical infrastructure, education and research, mobility, and external engagement. The findings show that NPUA connected infrastructure investment with rooftop

solar systems, real-time monitoring, student and staff participation, electric-vehicle charging, vocational training, research, and external technical support. The significance of the case lies not in solar technology alone, but in the way campus infrastructure became a living laboratory linking operations, learning, research, and institutional mission. The case suggests that sustainable campus transformation is strongest when infrastructure choices respond to local needs, build on institutional capabilities, and generate value across multiple university functions.

Smart Campus Technologies and Sustainability in Nigerian Universities: The Case of Lagos State University (LASU)

Prof. Dr. Adejuwon Adewale Adeneye, Ph.D., D.Sc. (AM), Representative of Vice Chancellor, Lagos State University, Nigeria

This study investigated the impact of smart campus technologies on environmental and operational sustainability at Lagos State University. The research evaluated smart energy architectures, automated lighting, IoT-enabled monitoring, water management, digital waste systems, and intelligent transportation networks toward optimizing resource efficiency and mitigating carbon emissions. Data were gathered via structured questionnaires from a stratified sample of students, academic staff, facility managers, administrators, and ICT personnel. Analysis was performed using descriptive statistics, Pearson correlation, and multiple linear regression. Results reveal a moderate technology adoption rate of 59.8%, with energy and digital management systems being most prevalent. A robust, significant positive correlation ($r = 0.832$, $p < 0.05$) was established between technology deployment and sustainability outcomes. Smart energy infrastructures substantially enhanced efficiency and minimized operational costs, while digital waste management and IoT frameworks optimized resource allocation. However, systemic bottlenecks, including capital constraints, deficient ICT infrastructure, technical skill deficits, weak governance, and low stakeholder engagement, inhibited full-scale optimization. The study concludes that strategic policy frameworks, targeted investments, and institutional commitment are imperative to leveraging smart campus technologies within the Nigerian higher education ecosystem.

A Sustainability Dashboard: Utilization of ICT towards Effective Management of Sustainable Campus Infrastructure

Dr. Eng. Heriansyah Putra, S.Pd., M.Eng, Representative of Rector, IPB University, Indonesia

Information and Communication Technology (ICT) has become a pivotal element in managing the sustainability parameters of higher education institutions. This study aims to present the development of ICT as an effective management strategy for a sustainable campus at IPB University, aligned with the sustainable indicators used in the UI GreenMetric ranking system. Focusing on integrating digital tools and systems, this research explores how ICT enhances operational efficiency, resource management, and environmental impact. Through a qualitative approach, this study shows the implementation of ICT-driven initiatives, such as setting infrastructure, transportation, and energy management systems. The study highlights the significant benefits of ICT in promoting sustainability goals, such as monitoring land use, the carbon footprint, energy usage, and fostering a culture of environmental awareness among campus civitas. Moreover, this study identifies challenges and opportunities in advancing ICT adoption within the university's sustainability framework. The findings emphasize the strategic and beneficial use of ICT to enhance operational performance by providing a real-time and accurate monitoring system.

Assessing Circularity in Higher Education Institutions: A Framework Applied to Unicamp, Brazil

Dr. Thalita dos Santos Dalbello, Representative of Rector, University of Campinas, Brazil

Universities are increasingly recognized as living laboratories of sustainability, with significant potential to promote the principles of the circular economy in campus operations, governance, research, and education. As higher education institutions (HEI) transition from traditional environmental management to regenerative models, there is a growing need for frameworks capable of assessing and monitoring circularity at the campus level. This study proposes a Circularity Assessment for HEI and applies it to Unicamp, Brazil. The assessment tool

was developed through a review of the literature on sustainable universities, circular campuses, industrial ecology, and circular economy assessment methods, as well as case studies. This was combined with an analysis of indicators from the UIGM World University Rankings. Six dimensions of circularity were identified: Materials and Waste, Energy and Climate, Water Resources, Ecological Regeneration, Governance and Education, and Sustainable Mobility. The instrument was applied to Unicamp's sustainability initiatives. The results demonstrate that circularity can be assessed through an integrated approach that connects material, energy, ecological, and institutional flows within the campus environment. The proposed instrument provides a practical and replicable tool for the comparative assessment and monitoring of circularity in HEI. It supports evidence-based decision-making and reinforces the role of universities in advancing sustainability.

Strengthening the Institutional Environmental Management System at El Bosque University: Strategies and Actions for University Environmental Sustainability

Dr. Jaime Alberto Romero Infante, Representative of Rector, El Bosque University, Colombia

This article analyzes the strengthening of the Institutional Environmental Management System (SIGA) at El Bosque University, highlighting strategies implemented to promote environmental sustainability and culture within the university community. The study addresses key areas such as environment and infrastructure, energy and climate change, waste management, water management, environmental education, and research. Environmental performance monitoring between 2024 and 2025 showed increases in several indicators. Per capita energy consumption increased from 12.35 kWh/person to 13.92 kWh/person, while water consumption rose from 0.188 m³/person to 0.2 m³/person. Ordinary waste generation increased from 4.10 kg/person to 4.14 kg/person, and hazardous waste generation rose from 0.55 kg/person to 0.6 kg/person. These results highlighted the need to strengthen strategies for efficient resource management and environmental impact control. In response, the University implemented initiatives focused on energy efficiency, sustainable infrastructure, water conservation, and waste management, including recycling and disposal practices. The institution maintains an Environmental Policy and a structured SIGA, annually audited through the District Environmental Excellence Program (PREAD). Environmental education and research are recognized as pillars for sustainability, continuous improvement, and community participation.

Session 3A - Managing Energy and Climate Change

Campus Solarization for Energy Sustainability and Green Skills Development in TVET Institutions: A Case Study of The Kisumu National Polytechnic, Kenya

Ms. Catherine Kelonye, Rector, The Kisumu National Polytechnic, Kenya

Technical and Vocational Education and Training (TVET) institutions are powerful engines for fostering sustainable development through skills training. However, increasing energy costs, reliance on grid power and the rising demand for green skills calls for adoption of clean energy technologies within education institutions. This study examines the campus solarization initiative at The Kisumu National Polytechnic (TKNP), Kenya, as a strategy for promoting energy sustainability and green skills development. The research adopts a case study approach using project documents, technical designs and institutional energy records. The project comprises a 302.5kWp solar system with 553 kWh lithium battery bank, 310kW hybrid inverters and 3000L solar water heater system. The system is designed to reduce dependence on grid and diesel generator's electricity by around 95% while supporting Kenya's Greening TVET agenda. Preliminary analysis shows an annual energy generation of approximately 448,950 kWh, with projected annual savings exceeding £76,000 and payback periods of 4.4–4.8 years. The project provides a living laboratory for practical training in green energy, with up to 20 trainees actively engaged in the design and installation activities. The study concludes that powering the campus with clean energy presents a viable pathway for enhancing institutional sustainability, minimizing operational costs and equipping trainees with practical green skills necessary for the transition to a carbon-free economy.

Managing Climate Change at KMUTT Thailand: Climate Change Mitigation and Biodiversity Restoration

Asst. Prof. Dr. Prasert Kanthamanon, Vice-President, King Mongkut's University of Technology Thonburi, Thailand

KMUTT has committed to making social sustainability as a role model on managing climate change for communities by providing Mangrove Forest Planting as a model for learning. The objective in this study is to make role models on managing climate change for community by initiating mangrove forest planting project. The project focuses on community engagement and aims to exchange our knowledge which supports climate change mitigation and biodiversity restoration to community surroundings. Managing Climate change strategy for community has been initiated by using Mangrove Forest planting as a tool. The strategy has been done by using community participation concepts, taking their creative for bottom-up approach, local knowledge for planting and empowering the community to support their knowledge, build and get involved in the projects. The mangrove forest planting data have been collected for 4 years (2022-2025) implementation by using the managing climate change strategy. The results showed the 44,295 mangrove trees have been planted and estimated carbon sequestration in the total of 863.75 tCO₂eq. The results on managing climate change for community achieved along with the results of mangrove forest planting project as a role model on recovery of biodiversity, environmental conservation and carbon emissions reduction within university and community surroundings.

Integrated Sustainability Performance at German Jordanian University: A Multi-Criteria Assessment Aligned with UI GreenMetric

Prof. Dr. Osama Saadeh, Representative of Rector, German Jordanian University, Jordan

The German Jordanian University (GJU) has pursued an institution-wide sustainability strategy addressing the full spectrum of UI GreenMetric criteria. This paper presents GJU's 2024–2025 sustainability performance across energy, water, waste, transportation, education, and governance. GJU's 2.11 MWp photovoltaic system — 6,699 panels across rooftops, carparks, and walkways — generated 3,269,000 kWh, covering 72% of campus electrical needs. A 500 kWp expansion targets near-full renewable coverage by mid-2026. SCADA and Building Energy Management Systems (BEMS) across five buildings support the smart campus framework. Water sustainability is ensured through an on-site multi-stage wastewater treatment plant, rainwater harvesting across 48.8% of campus area, and a real-time monitoring system. Waste management includes source segregation, paper recycling, biological waste autoclaving, and a plastic reduction program. A 535-respondent transportation survey found 58.5% of the campus community own hybrid or electric vehicles, with fleet CO₂ emissions declining 19.6% over four years. Governance is embedded through GJU's Strategic Plan, annual sustainability reporting, and SDG-mapped curricula across all schools. These results demonstrate how integrated governance, digitalization, and cross-criteria alignment can advance sustainable campus performance in a resource-constrained context.

Improving Energy Performance Through Smart Building Technologies: a case study

Dr. Alessandro Sciallo, Representative of Rector, University of Turin, Italy

The University of Turin's commitment to reducing its environmental footprint began in 2006. Over the years, the University has strengthened its sustainability governance through its dedicated Green Office, achieving the highest score among participating universities in the Energy and Climate Change category of the 2025 GreenMetric ranking. This result derives from an integrated strategy focused on digitalization and technological innovation to improve the energy efficiency of a large and complex building portfolio: UniTo is one of the largest universities in Italy, with approximately 70,000 students and 5,000 staff distributed across 120 buildings and an annual energy expenditure exceeding €15 million. This paper presents a case study of the collaboration between the University and an Italian SME at the Einaudi Campus. The project enabled the deployment of advanced digital solutions for indoor environmental optimization, dynamic HVAC control, and intelligent lighting management. The implemented smart-building solutions, developed within the framework of the University Strategic Plan, demonstrate how the integration of institutional governance and private-sector technological expertise can improve energy performance and user comfort. The interventions resulted in a reduction in energy consumption of more than 20%, providing a replicable model for supporting sustainability and decarbonization goals in higher education institutions.

Implementing ISO 14064-1 and Independent Verification in Higher Education: The Carbon Management Journey of Universidad Tecnológica ECOTEC, Ecuador

Ms. Francesca Escala, M.Sc., Representative of Rector, Universidad Tecnológica ECOTEC, Ecuador

Higher education institutions play an important role in climate action through sustainable campus management and environmental reporting. This study presents the implementation of a greenhouse gas (GHG) management system at Universidad Tecnológica ECOTEC, Ecuador, based on ISO 14064-1. The objective was to establish a framework for quantifying, reporting, and managing GHG emissions as part of the university's sustainability strategy. The study covered the university's three campuses under an operational control approach and included Scope 1, Scope 2, and relevant Scope 3 emissions. A baseline inventory developed for 2023 reported total emissions of 995.68 tCO₂e. In 2024, improvements in data management and reporting processes strengthened the methodology, resulting in total emissions of 1,273.93 tCO₂e. The 2024 inventory was independently verified by SGS in accordance with ISO 14064-3, achieving a reasonable level of assurance. The process enabled the identification of major emission sources, the establishment of annual monitoring procedures, and the integration of carbon management into institutional decision-making. The results demonstrate that the application of internationally recognized standards and independent verification can strengthen climate governance and improve environmental performance monitoring. The ECOTEC experience provides a practical framework for higher education institutions seeking to institutionalize greenhouse gas management and support climate action initiatives.

Session 3B - Managing Water

Water Stewardship Through Nature-Based Bioremediation: Universidad ECOTEC's Urban Mangrove Restoration Living Laboratory in Estero Salado

Prof. Rafael Luque, Ph.D., Representative of Rector, Universidad Tecnológica ECOTEC, Ecuador

Urban universities located near degraded aquatic ecosystems can transform campus sustainability into direct environmental restoration. This paper presents Universidad Tecnológica ECOTEC's bioremediation program in an urban mangrove sector of Estero Salado, Guayaquil, Ecuador, as a nature-based approach to water stewardship and ecosystem restoration. The objective was to evaluate the implementation of a restoration strategy integrating research, education, and environmental management. The 24-month project combined microbial treatment selection, field bioaugmentation, water-quality monitoring, ecological assessment, and applied research. Baseline analysis identified severe contamination, with ammonia at 28.5 mg/L, total Kjeldahl nitrogen at 61.8 mg/L, biochemical oxygen demand at 110.2 mg/L, chemical oxygen demand at 247 mg/L, and total petroleum hydrocarbons at 2.385 mg/L. Laboratory screening selected a 1:1 combination of Effective Microorganisms and nitrifying bacteria for field application. Monitoring documented environmental improvement, including ammonium reductions exceeding 90% during longitudinal observation and decreased sulfide-related odor conditions. The project also strengthened institutional monitoring capacity, supported student training through applied research, and generated peer-reviewed scientific outputs. The results demonstrate that universities can integrate water stewardship, ecosystem restoration, research, and education through a replicable nature-based framework.

Hydroponic Smart Campus: A Climate-Resilient and Water-Efficient Model for Sustainable Universities

Dr. Gumru Huseynova, Representative of Rector, Baku State University, Azerbaijan

Universities play an important role in promoting sustainability, climate action, and resource-efficient innovation. This study proposes a "Hydroponic Smart Campus" model as a practical approach to improving water efficiency, sustainable food production, and experiential learning in university environments. The model involves establishing a pilot-scale hydroponic system on campus with active student participation. Baku State University provides suitable conditions for implementing this project, including campus space, academic infrastructure, and relevant study programs in biology, ecology, biotechnology, and environmental sciences. Hydroponic cultivation enables soil-free food production in limited urban spaces and can reduce water consumption by up to 90% compared with conventional farming. Smart monitoring tools can improve efficiency by optimizing water use, nutrient delivery, and plant growth conditions. The project also serves as a living laboratory, helping students develop practical skills in sustainability, urban agriculture, resource management, and green innovation. It supports key UI GreenMetric indicators, particularly water

management, infrastructure, climate action, and education. Overall, the study shows that hydroponic systems can strengthen university climate resilience, improve resource efficiency, and contribute to developing future sustainability leaders.

Towards Circular Water Solutions on Campus - Integrating Potable Greywater Reuse, Rainwater Harvesting and Sustainability Assessment

Mr. Marco Angiella, Dipl.-BW (FH), Department Head, Trier University of Applied Science / Institute of Applied Material Flow Management, Germany

Higher Education Institutions (HEIs) serve as "Living Labs" for testing innovative sustainability solutions before urban implementation. In response to drought risks in North-West Europe, campuses offer ideal environments to explore decentralized approaches for securing future drinking water supplies. At the ECB (Trier University of Applied Sciences), a pilot system for potable reuse of greywater from a student dormitory is being developed. Building on existing separate piping, the system combines a membrane bioreactor, ceramic ultrafiltration and UV disinfection to substitute approximately 1 m³ of potable water demand per day. In parallel, Saxion University of Applied Sciences in Enschede is developing a rainwater-to-potable concept to reduce drinking water consumption in laboratory applications using modular treatment technologies. To support these concepts, our team conducts an integrated sustainability assessment. Using the ReCiPe 2018 Midpoint (H) methodology, environmental impacts, including Global Warming Potential (GWP100) and regional water stress, are evaluated for different configurations. This identifies environmental hotspots to support the design of circular solutions with reduced energy demand and carbon footprints. By combining pilot planning and prospective assessment, these campus living labs provide transferable insights for decentralized potable reuse in urban buildings across Europe, addressing technical and regulatory challenges for climate-resilient water systems.

AquaCientífica: An Integrated Framework for Circular Water Governance, Digitalization, and Wetland Conservation in Higher Education in Latinamerica.

Dr. Susan Medina Canzio, Representative of Rector, Universidad Científica del Sur, Peru

Operating adjacent to the critical Los Pantanos de Villa Ramsar wetland in Lima, Peru, Universidad Científica del Sur requires a rigorous circular water model to prevent aquifer depletion and ecosystem degradation in an arid coastal environment. We present AquaCientífica, an institutional program transitioning multi-campus operations to a circular water economy, operationalizing the IWGM 2026 theme: Governance, Digitalization, and Integrated Performance. We execute a three-pillar framework: (1) Governance, enforcing zero-discharge protocols via our Sustainability Office; (2) Digitalization, deploying IoT flow monitoring, >80% efficient fixtures, and a centralized Wastewater Treatment Plant (PTAR); and (3) Integrated Performance, embedding operational data into 430 courses (Sustainable Classrooms) and leading student watershed eco-literacy campaigns. Data confirms a decoupling of potable water demand from rapid campus population growth. The PTAR recirculates 100% of treated wastewater for irrigation and research nurseries, eliminating potable water waste in green spaces under full regulatory compliance. AquaCientífica is a scalable benchmark for Latin America, showing how digitalized circular governance transforms campuses into living labs that safeguard vulnerable wetlands and advance SDGs 6, 12, and 14.

Session 4A - Managing Governance and Digitalization

Greening CSU: Executive Multi-Dimensional Approach to Institutional Development

Dr. Arthur G. Ibañez, President, Cagayan State University, Philippines

Cagayan State University aligns its global standing in compliance with the UI GreenMetrics mandate. Having attained a status of 864th in 2024 and 945th in 2025. Such achievements are a measure of an executive, multi-dimensional approach to institutional development. The paper aims to present a collective, multidimensional approach to integrating the University's functions into the UI Greenmetrics agenda. The program implemented covers the six (6) areas from waste, water, transportation, energy and climate change, education and research, and setting and infrastructure. The multi-dimensional approach emphasizes the integrated role of the University's functions across instruction, research, extension, and production, as well as

administration and financial management. As an executive of a state university, its prime role is to link the entire university ecosystem to the Sustainable Development Goals. For energy and climate change, it captures SDG 7 (Affordable and Clean Energy) for water, it exemplifies SDG 14 (Life Below Water), transportation exhibits SDG 15 (Life on Land) and SDG 13 (Climate Change), and for setting and infrastructure SDG 11 (Sustainable Cities and Communities). The University supports the universal greenmetrics aspirations, and CSU will continue to be a green partner.

Integrating Sustainability into Strategy: Ho Technical University's Journey to #1 in the UI GreenMetric ranking within Ghana

Prof. George Harrison Coffie, Representative of Vice Chancellor, Ho Technical University, Ghana

Attaining sustainability in higher education has become a strategic priority for institutions in resource-constrained countries. This paper presents the experience of Ho Technical University in Ghana, where integrating sustainability into the university's strategic framework produced measurable outcomes. Through initiatives in setting and infrastructure, energy and climate, waste management, education and research, transportation, and water resources, the university attained the top national position in the UI GreenMetric World University Rankings. The study analyses the strategies behind this achievement, including aligning sustainability objectives with institutional performance indicators, promoting faculty-led research, strengthening student participation, and implementing infrastructure retrofits that incorporate green and open spaces. The ranking success triggered renewed institutional commitment, positioning sustainability at the centre of the next strategic planning cycle with emphasis on Sustainable Development Goal (SDG) alignment, climate resilience, and community impact. The case provides a replicable framework for technical universities by embedding sustainability within governance, using the campus as a living laboratory, and leveraging rankings as tools for continuous improvement rather than end goals.

Using AI to optimize company responses in sustainability-related webcare – A contrastive analysis

Prof. Dr. Stefan Diemer, Professor, Trier University of Applied Sciences, Germany

This paper presents an experimental contrastive analysis to test the effects of optimizing company responses to complaints relating to sustainability issues (e.g. resource use, ecological footprint) with the help of artificial intelligence. Research in webcare has shown that the use of conversational human voice (CHV) and personalization (Decock et al. 2020, 2022), informality and style accommodation (Jakic et al. 2017), and a more proactive response (Van Noort & Willemsen 2012) all have a positive effect on customer satisfaction, which is of particular importance in creating sustainable brands (Brunner 2024). Respondents evaluated the quality of original responses to sustainability-related complaints and responses created with the AI tool ChatGPT 4o (OpenAI 2024). Results show that generic AI responses produced with no specific strategy specification were seen less favorably than the original response. Progressively modified responses were seen more favorably by participants, with human responses still maintaining an edge in perceived quality and trust, and modified AI prompts leading in clarity and engagement level. The results illustrate that while companies still cannot rely on generic AI responses in sustainability-related complaint management, they can profitably use AI to improve webcare through responses that use progressive prompt-based addition of conversational human voice, personalization, informality, style accommodation, and degree of proactive sustainability claims.

Public Engagement, Lexical Emotional Framing, and Thematic Alignment of UI GreenMetric Instagram and TikTok Content with the 2026 Sustainable University Rankings Framework

Dr. Rahmi, S.Hum, M.Sc., Manager of Operations, Data, and Service Development, UI GreenMetric, Indonesia

Digital sustainability communication is increasingly important for making sustainability ranking frameworks visible, accountable, and publicly meaningful. This study examines whether UI GreenMetric's official Instagram and TikTok communications align with the multidimensional structure of the 2026 UI GreenMetric Sustainable University Rankings framework. A bounded public digital-trace dataset was collected through profile-based scraping, covering 278 Instagram posts published from 1 January 2025 to 13 June 2026 and 127 TikTok videos published from 26 June 2025 to 29 May 2026. The analysis combined public engagement metrics, caption and hashtag text, rule-based coding into UI GreenMetric categories, NRC lexicon-based emotion analysis, and exploratory nonparametric tests. Findings show that content was concentrated in Education and Research and Governance and Digitalization, while operational categories such as Energy and Climate Change, Waste, Water, Transportation, and Setting and Infrastructure were less represented. Vocabulary was dominated by trust and anticipation, reflecting an institutional tone of credibility, guidance, participation, and future-oriented communication. Instagram generated higher cumulative engagement than TikTok, although this should be interpreted cautiously due to differences in observation span, platform maturity, and audience base. The study offers a self-audit approach for assessing whether sustainability-ranking communication reflects the framework it promotes.

Session 4B - Managing Waste

The impacts of visual pollution from waste sites on the mental and psychological performance of school students

Prof. Dr. Hassan Shaker Majdi, President, Al-Mustaqbal University, Iraq

It is well-known that the environment, both inside and outside the school, has a direct impact not only on the health of students but also extends to affect their learning and understanding levels. Therefore, this study aimed to investigate the impact of visual pollution from illegal waste disposal on the mental and psychological well-being of high school students. A sample of 400 students from a school located in the center of Babylon Governorate during the academic year 2023-2024 participated in the survey. A questionnaire of 15-item visual pollution scale was used to collect data, with responses categorized as "frequently applies," "sometimes applies," and "does not apply at all," and scored as 3, 2, and 1, respectively. Data analysis was conducted using SPSS, calculating mean scores, standard deviations, and Pearson correlation coefficients. The results indicated statistically significant negative effects of visual pollution on various aspects of the students' well-being, with significance set at a level of 0.05. This study concludes that visual pollution resulting from illegal waste disposal sites negatively affects the well-being and performance of high school students, impacting their ability to understand lessons and their mood throughout learning hours. Municipal departments should address this issue by finding solutions to prevent illegal waste disposal and by increasing public awareness of the negative impact of visual pollution on society.

From Paper-Based Administration to Smart Sustainability: Integrating Waste Management and Digitalization at M'Hamed Bougara University of Boumerdes

Prof. Dr. Hamiane Messaoud, Representative of Rector, M'Hamed Bougara University of Boumerdes, Algeria

Universities play a pivotal role in promoting sustainability through resource efficiency, waste reduction, and digital innovation. Aligning with the UI GreenMetric framework and Sustainable Development Goals (SDGs), M'Hamed Bougara University of Boumerdes (UMBB), Algeria, adopted an integrated approach combining waste management and digital transformation to build a sustainable campus. Evaluating initiatives from the 2024-2025 academic year, the study recorded 15,750 kg of paper waste and an average of 755 kg of monthly plastic waste, underscoring the urgent need for enhanced recycling measures. To mitigate this environmental footprint, UMBB expanded digital platforms across academic, administrative,

and research activities, actively fostering online learning and paperless services. This strategic digital transition achieved a 40% reduction in paper consumption between 2020 and 2025, while simultaneously boosting operational efficiency, information management, and service accessibility. Ultimately, the findings confirm that integrating digital transformation with robust waste management significantly lowers a university's environmental impact. UMBB's experience offers a practical, highly replicable model for higher education institutions aiming to optimize resources and enhance environmental performance, directly contributing to UI GreenMetric criteria and global SDGs.

Campus Plastic Waste Management and Malaysia's National Roadmap **Prof. Dr. Long Chiau Ming, Representative of President, Sunway University, Malaysia**

The proliferation of single-use plastics (SUPs) constitutes a global environmental challenge of escalating urgency. This study presents a structured observational assessment of SUP waste streams at a Malaysian private university campus (Sunway University, Selangor), classifying plastic items according to resin type in alignment with Malaysia's National Roadmap on Plastic Waste Management 2021–2030. Five of the six principal resin types: polyethylene terephthalate (PET, Type 1), high-density polyethylene (HDPE, Type 2), low-density polyethylene (LDPE, Type 4), polypropylene (PP, Type 5), and polystyrene (PS, Type 6) were identified across on-campus food service outlets, vending infrastructure, retail spaces, and proximate off-campus establishments. Building on this characterisation, the study proposes a two-pronged institutional action framework comprising: (1) demand-side reduction measures, including packaging surcharges and awareness campaigns; and (2) supply-side recycling enhancement strategies, including source segregation, recyclability guidelines, and support for post-consumer resin markets. The findings are contextualised within Malaysia's national plastic circularity targets and contribute to the broader discourse on transitioning higher education institutions toward circular economy principles. The study highlights key structural barriers, including inadequate waste segregation infrastructure, market distortions favouring virgin plastics, and limited public literacy.

Take-back - Reuse and Repair - Circular Economy at Environmental Campus Birkenfeld **Prof. Dr.-Ing. Susanne Hartard, Professor, University of Applied Sciences Trier/Umwelt-Campus Birkenfeld, Germany**

The presentation intends to show Circular Economy best practice and research at Environmental Campus Birkenfeld (UCB) of University of Applied Sciences Trier. The presentation will outline the sustainability effect of the in-house reusable system at the canteen, the furniture exchange, the Repair Café and the separate collection of recyclables in the campus corridors and near the student houses. The presentation includes quantitative results of the sustainability impact like CO₂-e savings achieved through the reusable system and the furniture lending and cost savings for students. The presentation will showcase an exemplary monitoring system –dashboard–, which is currently being prepared for an expansion. The presentation will show relevant data which can motivate students, professors and staff to contribute to the Circular System. In future, sensor-based data on the quantity of recyclables collected and AI-evaluated data on take-back container circulation will be displayed in the Campus corridors to educate and encourage on participation. The research on the use of reusable containers is highly relevant in the context of Germany's mandatory take-back packages requirement for canteens which is put into force in 2023 and the UCB application is regarded as a flagship example for a University canteen.

Auditing Waste Management Plans at Unicamp

Dr. Regina Clélia da Costa Mesquita Micaroni, Representative of Rector, University of Campinas, Brazil

Since 2020, each sector at UNICAMP has been developing or updating its Local Waste Management Plan (LWMP). This initiative is driven by training sector representatives through a course co-created by the Waste Management Group (GEARE) and the UNICAMP Corporate School (EDUCORP). The course outlines university protocols for managing various waste streams—biological, chemical, radioactive, and domestic—culminating in the creation or

revision of an LWMP. Two years post-formulation, sectors undergo technical visits to monitor the evolution of their waste practices. These visits serve to update diagnostic questionnaires and action plans, as well as evaluate indicators measuring LWMP implementation efficacy. Between 2022 and 2024, 36 sectors were audited. Following these visits, evaluative reports were generated and dispatched to each sector, classifying items as conforming, non-conforming, or partially conforming. The assessment encompassed hazardous and domestic waste segregation, employee training, the existence of standard operating procedures, container adequacy, and management indicators. While these reports have successfully guided sectors in optimizing their waste management practices, a critical conclusion emerged: although hazardous waste segregation is being executed properly, there is an urgent need to invest in waste prevention and the proper segregation of domestic waste streams.

Session 5A - Managing Education and Research

Advancing Sustainability and Environmental Health in Higher Education: Sustainability and Environmental Health Advancement in Higher Education: A Two-Year Institutional Review of Green Metric Achievements

Prof. Thamer AL Hilfi, MBChB/FICMS/FFPH/MHPE, Representative of President, Madenat Alelem University, Iraq

The increasing global emphasis on sustainable development and environmental responsibility has positioned higher education institutions as key drivers of ecological awareness, innovation, and community transformation. In alignment with the objectives of the International Workshop on UI GreenMetric Sustainable University Rankings 2026 and the principles of the UI GreenMetric World University Rankings, this review study presents a comprehensive overview of the sustainability-related developments and achievements accomplished by Madenat Alelem University College during the academic years 2024–2026. The review particularly focuses on curriculum improvement, environmental health integration, governance enhancement, institutional sustainability practices, and digital transformation strategies that support sustainable campus development. This study evaluates the university's progress according to major UI Green Metric indicators, including education and research, infrastructure, energy and climate action, waste management, water conservation, transportation, governance, and digitalization. Special attention is given to the incorporation of environmental health topics into academic curricula across health sciences, engineering, medical laboratory sciences, dentistry, pharmacy, and applied sciences programs. The review highlights recent curricular reforms aimed at strengthening student competencies in environmental sustainability, climate resilience, public health protection, green technologies.

Cultivating Green Behavior Through Ecoliteracy: Designing Digital Leveled Books Based on Baduy Indigenous Wisdom for Sustainable Education

Assoc. Prof. Dr. Sani Aryanto, S.Pd., M.Pd, Representative of Rector, Universitas Bhayangkara Jakarta Raya, Indonesia

Environmental degradation highlights the need to integrate sustainability into teacher education. However, literacy resources for pre-service teachers rarely combine ecoliteracy with indigenous ecological knowledge. The Baduy indigenous community in Banten, Indonesia, exemplifies sustainable living through environmental stewardship, responsible resource use, and ecological balance. This study aimed to develop digital leveled-book designs integrating Baduy indigenous wisdom to promote green behavior through literacy education. Using a Research and Development (R&D) approach with the ADDIE model, the study involved 30 pre-service elementary teachers enrolled in the Elementary Literacy Learning Innovation course and organized into six groups. Data were collected through observations, literature reviews, discussions, design workshops, expert validation, and product assessments. The study produced six digital leveled-book prototypes integrating ecoliteracy, deep learning principles, and green behavior indicators, including environmental stewardship, resource conservation, sustainable lifestyles, and civic engagement. The designs were contextualized through narratives reflecting Baduy ecological practices. The findings indicate that integrating indigenous knowledge into digital literacy resources strengthens sustainability competencies

among future teachers while generating innovative learning materials. This initiative supports UI GreenMetric goals by advancing sustainability education.

Traveling University. A signature seminar course to apply international Material Flow Management in practise

Dr. Felix Flesch, Department Head, Trier University of Applied Sciences, Environmental Campus Birkenfeld, Institute for applied Material Flow Management (IfaS), Germany

Since 1999, the Institute for Applied Material Flow Management (IfaS) at the Environmental Campus Birkenfeld, Trier University of Applied Sciences, has developed and implemented the Travelling University (TU), an innovative higher-education concept designed to bridge the gap between academic theory and professional practice. Conducted in 24 countries through 32 seminars, the TU is a flagship component of the IMAT Master's program. How can students learn to apply theoretical knowledge acquired in lectures more quickly and effectively in real-world settings, particularly in an era increasingly influenced by artificial intelligence and rapidly evolving knowledge systems? While AI facilitates access to information and analytical tools, the ability to contextualize knowledge, solve complex problems, and collaborate with stakeholders remains dependent on practical experience. To address this challenge, TU applies an interdisciplinary approach combining material flow analysis, stakeholder engagement, field research, and project-based learning. Drawing on more than two decades of extensive student feedback, the findings indicate that immersive learning significantly accelerates the transfer of theoretical knowledge into practical competence. Students gain a deeper understanding of theoretical concepts and learn how to apply them to achieve tangible outcomes. The results suggest that experiential learning strengthens systems thinking, problem-solving abilities, and professional readiness.

SDG 18 as a New Milestone for Ethnic-Racial Equality in Higher Education: The UFMS Experience in Brazil

Mr. Leonardo Chaves de Carvalho, M.Sc, Sustainability Director, Universidade Federal de Mato Grosso do Sul (UFMS), Brazil

Although the United Nations 2030 Agenda comprises 17 Sustainable Development Goals (SDGs), Brazil launched SDG 18 – Ethnic-Racial Equality during the 2024 G20 Social Summit, recognizing the need to address racial inequalities as a condition for sustainable development. In this context, the Federal University of Mato Grosso do Sul (UFMS) became one of the first Brazilian universities to incorporate SDG 18 into its sustainability strategy. This paper presents the UFMS experience in integrating SDG 18 into governance, inclusion, and affirmative action policies between 2024 and 2025. UFMS serves more than 46,000 students across ten campuses in a state with one of Brazil's largest Indigenous populations. In 2025, the University recorded 20,425 Black, Brown, and Indigenous students, representing 44% of total enrollments, including 1,160 Indigenous students. The institutionalization of SDG 18 was strengthened through the UFMS Indigenous and UFMS Diverse Programs, which promote inclusion, retention, cultural recognition, and academic participation. UFMS also maintains initiatives such as Indigenous Student Housing, the Connected Villages Program, scholarships, and digital inclusion actions developed with Indigenous and Afro-Brazilian communities. The UFMS experience demonstrates that SDG 18 can be a strategic framework for integrating diversity, social inclusion, and sustainability in higher education.

Session 5B - Managing Governance and Digitalization

Effective governance concepts for a holistic implementation of sustainability at universities
Prof. Dr. Klaus Helling, Sustainability Director, Umwelt-Campus Birkenfeld (Trier University of applied Sciences), Germany

The implementation of sustainability at universities requires a holistic approach that encompasses all areas of the university, from teaching, through research and knowledge transfer, to the university's operations and administration. Furthermore, it is necessary to involve all groups within the university – from students, PhD candidates and staff working on research projects to lecturers, professors and administrative and technical staff – and to ensure that the

interests of all these groups are appropriately taken into account within the governance structures. Using the example of the Birkenfeld Environmental Campus at Trier University of Applied Sciences, this article demonstrates how governance structures can be established. It highlights both the successes and the challenges encountered in establishing these structures. However, good governance requires not only structures but, above all, appropriate mission statements, strategies and processes. To illustrate this, the paper sets out how sustainability can be embedded in the university's overarching mission statement, in the teaching mission statement, in the University Development Plan, the research strategy, the equality plan and other strategic policy documents. Particular attention is paid to the student-run Green Office and its integration into the university. Finally, the new 'SDG Onboarding' project is presented, which aims to integrate sustainability and links to the SDGs into the onboarding of new staff, lecturers and students.

Retention of tacit knowledge in university administration: design and evaluation of an AI-supported collaborative protocol

Mr. Eduardo García Ochoa, M.Sc. Representative of Rector, University of Valladolid, Spain

Spanish university face a significant risk of operational knowledge loss due to 1990s workforce policies, concentrating retirements in administrative units. The median age of University of Valladolid UVA's administrative staff in 2026 is 61. Common mitigation strategies fail to capture experience-based procedural knowledge. This paper presents the design and preliminary evaluation of SAVIA, a protocol for retaining tacit administrative knowledge through mentorship, collaborative tools, and AI-assisted drafting. The paper addresses three questions: (1) which protocol configuration appears to facilitate knowledge transfer, (2) which factors constrain its deployment, and (3) to what extent participants validate the resulting documentation. We conducted an applied case study as an organizational intervention at UVA. Two Proofs of Concept (PoCs) were implemented from November 2025 to March 2026 in administrative offices with different starting conditions. The protocol comprises four phases: planning, recorded technical sessions, digital repository construction, and documentary custody. The evaluation combined qualitative process analysis, observation of implementation incidents, and participant revision of the documentation. A cross-case comparison indicates that protocol viability depends on four operating conditions: anticipation, session granularity, audio and video capture quality, and human validation. SAVIA may provide a basis for larger-scale evaluations in comparable institutional settings.

When Infrastructure Meets Habit: A Human-Based Green University Framework for Distance Education

Dr. Rini Dwiyan Hadiwidjaja, Representative of Rector, Universitas Terbuka, Indonesia

Green University initiatives promote sustainability through governance, infrastructure, resource efficiency, and academic activities. However, most studies focus on environmental systems and outcomes while giving limited attention to human factors. Long-term success requires not only policies and facilities but also awareness, participation, and work habits embedded in organizational culture. This study develops a Human Based Green University Model to examine how governance and leadership shape outcomes through staff practices. A quantitative survey will involve 150 employees of Universitas Terbuka across 39 regional offices in Indonesia. Data will be analyzed using SEMPLS. The model proposes that governance and leadership influence outcomes directly and indirectly through awareness, participation, and sustainable routines. Results are expected to improve when ecological values are reflected in daily practices. The framework is relevant for open and distance learning (ODL), where achievement depends on shared values across dispersed workplaces. This study extends sustainability research by shifting attention from facilities to people. Findings are expected to show that progress depends not only on formal systems but also on staff commitment to responsible practices. The model highlights behavioral change, shared commitment, workplace adaptation, and long-term environmental action for institutional continuity. The framework offers guidance for strengthening institutional contributions to the SDGs.

Green Metrics Questionnaire as the Foundation for a Green University Strategy: The Case of Ala-too International University

Dr. Bekimbetova Turdukan, Representative of Rector, International Ala-Too University, Kyrgyzstan

The growing importance of sustainability in higher education has encouraged universities worldwide to adopt comprehensive frameworks for measuring and improving their environmental, social, and educational performance. This study examines the role of the UI Green Metric World University Rankings Questionnaire as a foundation for developing a green university strategy at Ala-Too International (AIU), Kyrgyzstan. Using a qualitative case study approach, the research analyzes institutional sustainability policies, strategic planning documents, GreenMetric performance indicators, and student-led sustainability initiatives. Particular attention is given to how GreenMetric framework has been integrated into university governance, campus management, academic activities, and student entrepreneurship. The findings demonstrate that participation in UI GreenMetric has evolved beyond a ranking exercise and has become a strategic mechanism for institutional transformation. In the 2025 UI GreenMetric World University Rankings, AIU was ranked 1234th among 1,745 participating universities from 105 countries and placed third nationally, achieving an overall score of 4,280 points. The assessment highlighted strengths in transportation, waste management, and education-related activities while identifying areas for improvement in renewable energy, water management, and green infrastructure. These results have informed institutional priorities and sustainability planning.

List of Accepted Poster Sessions:

Managing Setting and Infrastructure:

Building a Sustainable Innovation District: Governance and Territorial Planning in the HIDS Unicamp

Dr. Thalita dos Santos Dalbello, Department Head, University of Campinas, Brazil

Universities are playing an increasingly important role in addressing sustainability challenges by creating environments that integrate research, innovation, governance, and real-world experimentation. In this context, the Hub for Sustainable Development (HIDS) at Unicamp in Brazil represents an innovative approach to sustainable territorial planning and multi-stakeholder governance. This paper presents HIDS Unicamp's governance model and territorial development strategy. HIDS Unicamp is a living laboratory designed to foster sustainability-oriented innovation, climate action, and ecological transition. Located within a 1.4 million m² area adjacent to the Unicamp campus and connected to a broader regional innovation ecosystem, HIDS Unicamp brings together research centers, government agencies, companies, and civil society through an integrated governance structure. The methodology combines institutional analysis and territorial planning principles to examine how governance mechanisms support sustainable innovation districts. The model is structured around an Executive Coordination, a Strategic Council, and Scientific Committees to ensure alignment between sustainability goals, scientific excellence, and territorial development. Innovation Pavilions serve as thematic hubs where research, technological development, demonstration projects, and stakeholder collaboration converge. The HIDS model provides a replicable approach to integrating sustainability, innovation, and territorial development in HEI.

The University of Sopron's Nature-Positive Campus Model

Dr. habil. András Polgár, Associate Professor, University of Sopron, Hungary

Biodiversity decline is encouraging higher education institutions to move beyond campus greening and develop measurable, nature-positive models. This paper presents the University of Sopron's biodiversity model as a living laboratory integrating nature conservation, education, research and ecological restoration. The case study focuses on the Sopron Botanical Garden, which represents diverse ecological conditions in Hungary and functions as shared infrastructure for education, research, conservation and awareness. The methodology is based on an institutional case study incorporating biodiversity data, educational and research functions, circular garden management and community activities. The protected 17-

hectare Sopron Botanical Garden, with approximately 6,200 plant taxa, serves as the central campus ecosystem, creating daily interaction between students, staff, visitors and nature. The arboreturns extend this model through dendrological collections, gene conservation, climate adaptation, afforestation research on saline soils, water-based habitats and historical landscape gardens. Activities include outdoor classes, thematic walks, educational trails, composting, reuse of garden materials and habitats supporting pollinators and small animals. The findings show that biodiversity-rich university green spaces can generate ecological, educational and social value, offering an adaptable example for higher education institutions seeking nature-positive campus operations.

Production of Pavers from the Reuse of Dry Solid Waste and Sand for The Construction of Degraded Access Roads in The City of Pemba, Mozambique.

Ms. Elsa Vicente, M.Sc, Assistant Professor, Catholic University of Mozambique, Mozambique

Concern for the environment has led society to seek alternatives for more sustainable growth. Within this scenario, waste recycling emerges as a promising possibility in reducing environmental impacts. In Mozambique, specifically in the city of Pemba, the situation of solid waste deposited in inappropriate places has been growing every year. It is in this perspective that the sustainable project for collecting solid waste, such as plastic bottles accumulated in inappropriate places in the city of Pemba, was born, for the production of paving stones that will be used for the reconstruction of degraded access roads. The objective of the study is to demonstrate how dry solid waste, such as plastic, can be used to produce paving stones for the construction of degraded access roads. The research will be of a qualitative-quantitative nature, as it will provide generalized data and statistical patterns that will show the functioning of the phenomenon studied. In this context, it includes dry solid waste deposited on the shores of beaches and in inappropriate places in large cities. This presents a challenge to the environment and other sectors, transforming it into an alternative source of reusable raw material. Therefore, attempts have been made to incorporate the use of recycled plastic for the construction of paving stones. The use of dry solid waste in the production of paving stones presents itself as one of the alternative recycling methods, reducing costs and saving raw materials.

Advancing Sustainable Campuses through a Living Laboratory: Integrating Renewable Energy, Smart Water Management and Green TVET Education **Dr. Normazlina Mat Isa, Lecturer and Researcher, Politeknik Merlimau Melaka, Malaysia**

Higher education institutions with SDG17 inspirations, play an important role in advancing sustainable development through teaching, research, innovation, and campus operations. In response to the need for sustainability-focused learning environments, Politeknik Merlimau Melaka developed the Model Rumah Cepak Tenaga (MRCT) as a living laboratory to support Green TVET education. The MRCT integrates renewable energy and smart water management technologies to provide hands-on learning while enhancing campus sustainability. This paper presents the development and impact of the MRCT, focusing on two main systems: an Off-Grid Photovoltaic (OGPV) system and an IoT-based rainwater harvesting system. The OGPV system, with a 1.6 kWp solar PV installation, supplies renewable electricity for selected loads. The rainwater harvesting system uses IoT monitoring to improve water resource efficiency and management. A case study approach was used to assess the implementation and contributions of both systems. Results show that the OGPV system can generate about 2,100 kWh of electricity annually, reducing carbon emissions by approximately 1.47 tonnes per year. The rainwater harvesting system can collect around 88,000 litres of rainwater annually, reducing reliance on treated water and promoting water conservation awareness. Beyond operational benefits, both systems function as educational platforms for student learning, research, and community engagement.

Building A of ECOTEC University as a Model of Sustainable Infrastructure: Integration of LEED Criteria and University Environmental Management

Ms. Karen Ariana Alvarado Carrion, MGTR., Staff, Universidad Tecnológica ECOTEC, Ecuador

This article analyzes Building A of ECOTEC University as an institutional experience in sustainable infrastructure oriented toward compliance with international green building criteria and application for LEED certification. The study is developed as a best-practice case for the International Workshop on UI GreenMetric Sustainable University Rankings, with primary emphasis on the Setting and Infrastructure criterion and cross-cutting articulation with Energy and Climate Change, Water, Waste, Education and Research, and Governance and Digitalization. The methodology combines documentary review, alignment analysis between LEED and UI GreenMetric criteria, and systematization of measures implemented or under consolidation in the building, such as energy efficiency, circular water management, greywater reuse, conveyance of effluents to the Wastewater Treatment Plant, indoor environmental quality, responsible material selection, and the pedagogical use of the building as a living laboratory. The results show that Building A strengthens ECOTEC's transition toward more resilient, efficient, and measurable campuses by integrating physical infrastructure, environmental management, and applied learning. It is concluded that the building constitutes a strategic platform for demonstrating university leadership in sustainability, documenting environmental performance, and scaling best practices to other institutional spaces.

Spatial Correlation Analysis of NDVI and LST as a Basis for Predictive Microclimate Modeling on Campus: A Case Study of the Universitas Terbuka, Indonesia

Mr. Mirza Permana, ST.M.Si, Lecturer and Researcher, Universitas Terbuka, Indonesia

Urban Heat Island (UHI) effects on university campuses remain poorly documented, particularly in tropical settings where physical development continues to displace green open spaces. This study examines the spatial distribution of Land Surface Temperature (LST) and vegetation density quantified via NDVI across the 18.2-hectare main campus of Universitas Terbuka, South Tangerang, Indonesia, to construct a remote sensing-based predictive microclimate model. Landsat 8/9 Level-2 Collection 2 imagery (Path 122, Row 064) acquired in the dry season was used to derive LST from TIRS Band 10 via the radiative transfer equation with NDVI-based emissivity correction; NDVI was computed from radiometrically corrected surface reflectance Bands 4 and 5. LST distribution across the campus proved markedly uneven. The central and southwestern zones, where building density and impervious surfaces dominate, formed persistent heat clusters, while the northern, eastern, and southern sections, with denser tree cover and open areas, remained cooler. Spatial regression confirmed a strong negative NDVI–LST relationship, with higher vegetation density consistently linked to lower surface temperatures. The regression equation was then applied to project LST changes under greening scenarios calibrated to UI GreenMetric Setting and Infrastructure indicators. These findings demonstrate that spatially explicit, evidence-based analysis is a practical and defensible foundation for campus green space planning and heat mitigation.

Sponge Campus Implementation Using LID Practices for Effective Stormwater Reduction of the Integrated Laboratory and Workshop at Manado State Polytechnic

Ir. Dian Puspita Sari, S.T., M.Ars, Assistant Professor, Manado State Polytechnic, Indonesia

Infrastructure development on modern campuses is increasingly adopting the “Sponge Campus” concept to improve urban hydrological resilience. This concept aims to significantly reduce the risk of flooding and improve overall ecological stability against extreme weather. The planned Integrated Laboratory and Workshop at the Manado State Polytechnic is expected to add 1,680 m² of waterproofed floor area. This increase reduces natural water storage capacity, causing a sharp surge in surface runoff that burdens the existing drainage system and increases the risk of flooding. Based on a review of the technical planning documents, this building currently does not include sustainable rainwater management features, especially those related to reducing stormwater runoff. This study aims to analyze and

recommend design solutions based on Sponge Campus and LID practices to ensure that the new facilities support the hydrological cycle and the vision of a green campus. The methodology used included a review of technical documents, followed by the collection of hydrological input data and measurements of existing surface flow factors. Based on this, design recommendations utilizing the Sponge concept were formulated and implemented through the LID approach. The existing design produces a total rainfall flow volume of 126.61 m³/day. Through the application of LID practices, the total surface flow volume was successfully reduced by 89.88%, so that the residual flow volume was only 12.81 m³.

Managing Energy and Climate Change:

An intelligent Energy Consumption Management and Load Forecasting Model for Improving the Efficiency and the Sustainability of Energy Systems

Osama Abu-Elnasr, Dean, Luxor University and Luxor National University, Egypt

Regulating energy consumption and forecasting demand are crucial aspects for improving the performance of modern energy systems. Recent studies assure that integrating load forecasting models with effective energy management systems serves as a powerful strategy to foster innovation, advance the pursuit of energy sustainability, and facilitate the effective utilization of electrical resources while also refining and improving the reliability of energy system consumption. Load forecasting depends on analyzing past historical data and elements such as weather patterns, temperatures, and daily or seasonal usage behaviors, leading to accurate predictions of future energy demands. These predictions are utilized using artificial intelligence techniques to improve the management of energy consumption, establish optimal storage capacities, reduce energy losses, and guarantee supply according to demand. This research seeks to investigate energy consumption patterns and assess electricity demand, emphasizing the significance of load forecasting models in providing precise insights to aid the oversight of daily operations of energy management systems. This research proposes an intelligent model for energy consumption management and load forecasting using artificial intelligence to enhance the efficiency and maintain sustainability of energy systems. The experimental results show that the proposed model is highly effective at forecasting the energy consumption. Therefore, it acts as a powerful tool for bal

Towards a Sustainable Campus: The UP Manila Strategic Energy Management Roadmap (2024–2027)

Prof. Rosalie G. Flores-Bernardo, Department Head, University of the Philippines Manila, Philippines

Towards a Sustainable Campus: The UP Manila Strategic Energy Management Roadmap (2024–2027) establishes the strategic framework for the University of the Philippines Manila (UPM) to achieve operational efficiency and environmental sustainability across its 5-hectare Academic Zone, with models replicable for nationwide extension campuses. Aligned with Republic Act No. 11285 and the Government Energy Management Program (GEMP), this roadmap details the university's commitment to reducing monthly electricity and fuel consumption by 10% by December 2027. The methodology centers on the formation of a dedicated Energy Management Team and the systematic auditing of Significant Energy Users (SEUs) to identify conservation opportunities. Key findings from initial assessments highlight that facilities like the College of Medicine and the National Institutes of Health are primary energy consumers. Resulting in prioritized capital projects including electrical system upgrades, solar power integration, and the adoption of energy-efficient equipment central to the strategy. This roadmap also balances modernization with the strict preservation requirements of the campus's heritage buildings. By institutionalizing energy efficiency, improving utility accountability, and fostering a sustainable, world-class learning environment, UPM establishes a comprehensive model for health sciences institutions to lead in environmental responsibility while maintaining operational excellence.

Green Campus Initiatives: Decarbonizing the National Aviation Academy of the Philippines

Engr. Jerome C. Miranda, Director for Institutional Development and Planning Office, National Aviation Academy of the Philippines, Philippines

This study assessed the carbon emission profile and green campus initiatives of the National Aviation Academy of the Philippines (NAAP) as a basis for developing a Sustainability Flight Path for institutional decarbonization. It specifically examined greenhouse gas (GHG) emissions across Scope 1 (direct fuel combustion), Scope 2 (electricity consumption), and Scope 3 (waste, wastewater, and LPG use) for the years 2023 to 2025. A descriptive-developmental research design using a quantitative approach was employed, utilizing secondary data from institutional utility records, fuel logs, waste reports, and solar energy output data. Carbon emissions were computed using the Greenhouse Gas Protocol and standardized emission factors from the IPCC, EPA, and DOE. Descriptive statistics were used to summarize emission profiles, while a paired sample t-test was applied to determine the significant difference in electricity consumption before and after solar energy integration. Sustainability performance was also evaluated using the UI GreenMetric World University Rankings for 2024 and 2025. Findings revealed that Scope 2 emissions (electricity consumption) contributed the highest proportion of total carbon emissions, followed by Scope 3 particularly wastewater. Scope 1 emissions from fuel usage contributed the least but remained significant due to aviation fuel consumption. Results further indicated a measurable reduction in electricity consumption following solar energy integration, suggesting its efficiency.

Sustainable University Transformation through Energy Management Practices and Carbon Emission Reduction Strategies

Kittinut Kaewthonh, Staff, King Mongkut's University of Technology Thonburi, Thailand

This study examines the sustainable transformation of King Mongkut's University of Technology Thonburi (KMUTT) through its robust energy management practices and targeted carbon reduction strategies. Central to this initiative are KMUTT's dedicated energy efficiency policy and the ambitious KMUTT Carbon Neutrality 2040 roadmap. Empirical electricity consumption and greenhouse gas (GHG) emission data from 2020 to 2025 were analyzed to evaluate policy efficacy. Following an initial drop during the pandemic in 2021 to 21.7 million kWh, power consumption rose to a peak of 30.5 million kWh in 2024. Notably, due to proactive sustainable interventions, the university successfully reversed this trend by 2025, reducing electricity consumption to 29.2 million kWh and dropping annual emissions to approximately 14,607 metric tons of CO₂ equivalent. These data-driven findings demonstrate that integrated energy governance can mitigate environmental impacts amidst expanding institutional growth. Ultimately, this framework underscores KMUTT's strategic pathway toward absolute carbon neutrality, serving as a replicable blueprint for higher education institutions driving global climate action.

Green Aviation Sustainability Practices at WCC Aeronautical and Technological College, Inc.: Development and Validation of a Climate-Responsive Sustainability Framework Aligned with UI GreenMetric Indicators

Prof. Dr. Rosalie Sheryll T. Rosales, Department Head, WCC Aeronautical & Technological College Inc., Binalonan Campus, Philippines

The growing emphasis on environmental sustainability has challenged aviation higher education institutions to strengthen green campus initiatives that support climate action and sustainable development. This study assessed green aviation sustainability practices at WCC Aeronautical and Technological College and developed a Green Aviation Sustainability Framework aligned with the UI GreenMetric Indicators. A descriptive-developmental research design was employed involving administrators, faculty members, students, safety officers, and operations personnel. Data were collected using a researcher-developed questionnaire validated by experts and demonstrating good internal consistency ($\alpha=0.86$). The instrument assessed sustainability practices in education and research, energy and climate change, transportation, waste management, setting and infrastructure, and water management. Descriptive statistics, weighted mean, ranking, and gap analysis were used. Conducted during

S.Y. 2025–2026, the findings revealed a high level of implementation. Education and Research obtained the highest weighted mean (WM=3.94), followed by Energy and Climate Change (WM=3.89), Transportation (WM=3.78), and Setting and Infrastructure (WM=3.34). Waste Management (WM=3.29) and Water Management (WM=3.21) recorded comparatively lower implementation, indicating priority areas for institutional improvement. The findings guided a framework validated by seven experts, supporting institutional sustainability and the SDGs. for adoption.

Managing Waste:

Role of Green Nexus Research Center to implement Campus Innovation Lab: From Waste to Worth at Ala-Too International University

Maral Sagynalieva, Sustainability Director, Ala-Too International University, Kyrgyzstan

Ala-Too International University is strengthening its sustainability agenda through the Green Nexus Research Center and Campus Innovation Lab: From Waste to Worth. The initiative responds to the need for practical, student-led circular economy models in Kyrgyzstan, where universities can serve as living laboratories for waste reduction, green skills and climate-resilient behavior. The project objective is to connect research, education and campus operations by transforming plastic bottles and paper waste into learning materials, prototypes and awareness activities. The methodology combines a campus waste audit, separate collection points, student workshops, recycling demonstrations, prototype development, and cooperation with Enactus AIU, civil society partners and local recyclers. It also uses applied research and communication tools to document lessons for replication in other universities. Initial results show that the Lab has mobilized students around circular innovation, strengthened the Green Nexus Research Center as a sustainability hub, and created a practical bridge between classroom learning, environmental responsibility and community outreach. The significance lies in its low-cost and scalable approach: it turns waste management from a technical problem into an educational, research and governance opportunity. The experience supports UI GreenMetric priorities by advancing waste management, education and research, and participatory campus governance in a Central Asian university context.

Circularity That Pays Off: How ELTE Saved 1 Billion HUF Through 10R-Driven Volunteer Engagement of ELTE EKSZ

Mudra Viktória, ESG Consultant, Eötvös Loránd University, Hungary

Eötvös Loránd University (ELTE) collaborates closely with the ELTE “Together for Environmental Consciousness” (EKSZ) – Sustainability and Savings Volunteer Program to implement a community driven model that demonstrates how circular economy principles can generate measurable environmental and financial impact at a large public institution. EKSZ leads the design and execution of volunteer based initiatives in waste prevention, resource efficiency and sustainability engagement. The program applies the 10R waste hierarchy as a practical framework for campus level circularity. EKSZ coordinates repair and reuse campaigns, zero waste events and recycled material management, while also delivering environmental awareness education, biodiversity focused activities, and UNSDG and ESG based policy development support for university units, strengthening the integration of global sustainability principles into everyday campus life. Through this collaborative model, ELTE—working in partnership with EKSZ—has achieved over 1 billion HUF in cumulative savings by reducing procurement needs, extending product lifecycles and minimizing waste related costs. The initiative has significantly reduced GHG emissions across campus operations. This presentation showcases the ELTE-EKSZ collaboration as a scalable, evidence based approach that combines the 10R framework, volunteer engagement and SD aligned policies to deliver tangible environmental, social and economic impact.

Sustainable Conversion of Poultry Waste into Organo-Mineral Fertilizers for Circular Agriculture and Environmental Protection in Turkmenistan

Kadyr Amanov, Department Head, Turkmen Agricultural University named after S.A.Niyazov, Turkmenistan

The sustainable management of agricultural waste is a growing global challenge that directly affects environmental quality, resource efficiency, and long-term agricultural productivity. Large volumes of poultry waste generated by modern farming systems require innovative and environmentally responsible management approaches to prevent pollution and support sustainable development. This study explores sustainable strategies for transforming poultry waste into valuable agricultural resources within the framework of circular economy principles. The research aims to reduce environmental burdens associated with organic waste accumulation while improving the efficient use of nutrients and supporting soil health. The proposed approach promotes waste valorization by converting underutilized organic materials into beneficial inputs for agricultural production. By enhancing resource recovery and reducing potential environmental impacts, the study contributes to more sustainable farming systems and responsible waste management practices. The findings demonstrate the importance of integrating circular resource use into agricultural production and highlight the potential of innovative waste-to-resource solutions for achieving environmental sustainability. The research supports global efforts toward sustainable land management, resource conservation, and the transition to a greener and more resilient agricultural sector.

Managing Water:

Technical and Ecological Aspects of Water-Saving Tree Cultivation in Turkmenistan **Yuldashov Bahadir, M.Sc., Department Head, Oguz han Engineering and technology university, Turkmenistan**

Abstract. This study examines the potential for implementing innovative water-saving irrigation systems for tree cultivation under the arid and highly continental climatic conditions of Turkmenistan. Apple trees (*Malus domestica*) were selected as a representative fruit-bearing species, while thuja (*Thuja occidentalis*) was chosen as an ornamental tree species. The experimental results demonstrate significant potential for the widespread adoption of modern irrigation technologies to improve sustainable plant growth and development in the region. The Ecobox system collects moisture from the surrounding atmosphere, converts it into water through natural condensation processes, and gradually supplies it directly to the plant root zone. This approach enables plants to survive and develop over extended periods while requiring only minimal amounts of water.

Managing Education and Reserach:

Creating synergy to support the implementation of education for sustainable development at university level

Amaneh Javid, Vice-Rector, Science and Arts University, Yazd, Iran, Iran

Education for Sustainable Development (ESD) is crucial to equitable, just and sustainable society that empowers learners of all age groups with the public awareness and training, attitudes, skills, knowledge, needed to address interconnected global challenges such as climate change, biodiversity loss, inequality and conflict. Iran has been the cradle of rich culture, civilization and education since thousands of years, and in this country, ESD focuses on the maintenance of its visibility and priority on the education agenda, and identifies obstacles encountered and lessons learned to guide future action, improving access to quality basic education, and reorienting existing educational protocols and public awareness and understanding to address sustainability. Educational policies in Iran call for the integration of ESD and ESD-related 'adjectival' educations, such as; climate change, development, health-care, peace, citizenship and environmental education, both in formal education and non-formal learning that support each other. Education for sustainable development is a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the Earth's natural resources. It emphasizes aspects of learning that enhance the

transition towards sustainability including future education; citizenship education; education for a culture of peace; gender equality and respect for human rights; health education; population education; education for protecting and managing

Environmental Communication and Sustainable Lifestyle Habits in Higher Education: Proposal of an Indicator-Based Evaluation Framework

Jaime Alberto Romero Infante, Ph.D., Sustainability Director, Universidad El Bosque, Colombia

Environmental communication is a key factor in promoting sustainable habits within university communities. This study analyzes the role of communication in encouraging sustainable behaviors and proposes an indicator-based framework to evaluate its effectiveness in higher education institutions. A qualitative and descriptive approach was applied through a review of environmental communication, sustainability education, and behavioral change theories. The proposed framework is structured around three levels: communication management, community appropriation, and observable outcomes. The model includes indicators related to message dissemination, participation, campaign recall, and environmental performance trends. The framework provides universities with a practical tool to assess communication strategies, support continuous improvement, and strengthen a culture of sustainability. The proposed model can be adapted to different higher education contexts and contribute to sustainability-oriented institutional management.

Standardising Environmental, Nutritional, and Socio-Economic Impact Metrics for Food Rescue and Redistribution in Developing Economies — Evidence from Malaysia

Prof. Long Chiau Ming, PhD, Vice-Dean, Sunway University, Malaysia

Food rescue and redistribution organisations (FROs) constitute a pivotal intervention in addressing this gap, directly advancing Sustainable Development Goals (SDGs) 2 (Zero Hunger), 12 (Responsible Consumption and Production), and 13 (Climate Action). However, the absence of a standardised, multidimensional impact measurement framework hinders their ability to demonstrate value, secure funding, and optimise operations. This study reports on the co-development of such a framework through a qualitative, multi-stakeholder workshop engaging 23 participants from non-governmental organisations (NGOs), government agencies, academia, and the private sector. Structured Focused Group Discussions (FGDs) and a grounded theory approach were employed for data collection and analysis. Findings reveal stakeholder consensus on the need for a comprehensive framework organised across three core dimensions: (1) Environmental impact, comprising waste diversion (kg), greenhouse gas (GHG) emissions avoided (CO₂e), and water footprint; (2) Nutritional impact, advocating a paradigm shift from quantifying food volume towards assessing nutrient quality, dietary diversity, and recipient suitability; and (3) Socio-economic impact, encompassing value created for donors (ESG alignment), organisations (operational efficiency), recipients, and volunteers (personal development). Key systemic barriers identified across all dimensions include data fragmentation, resource constraints, and limited technical capacity.

University Ranking in Health Sciences: Evaluating Factors leading to the Muhimbili University of Health and Allied Sciences' position in Sub-Saharan Africa

Dr. Rehema Chande Mallya, Director of Library Services, Muhimbili University Of Health And Allied Sciences, Tanzania

University rankings influence institutional perception, compelling health universities to deliver quality education, research, and innovation. Muhimbili University of Health and Allied Sciences is the leading Tanzanian biomedical sciences university. Objectives: This study examines MUHAS strategies for its 3rd SSA rank. Methodology: Qualitative analysis aligned with THE 2023 university ranking informs that there was an increase in enrolment, funding, infrastructure, exchanges, collaborations, and publications the study found MUHAS expanded programs from 48 to 103 (84 postgraduate, 20 super-specialized). Key Findings: Research output rose to 1,670 publications annually, with 135 projects and 100 international partners, boosting citations and co-authorship. Significance of the work: enhanced visibility, funding, postgraduate

enrolment, and partnerships. This paper highlights MUHAS's positioning advantages among SSA universities. Keywords: University ranking, health education, research visibility, health, teaching and learning, MUHAS

Mapping Green-Job Signals in Indonesian LinkedIn Vacancies to Support Sustainable Higher Education Assessment Reporting

Rahmi, S.Hum., M.Sc., Ph.D., Assistant Professor, UI GreenMetric, Universitas Indonesia, Indonesia

Sustainable higher education assessment increasingly requires evidence that universities prepare graduates for the green transition, yet the boundary between green employment, green-adjacent work, and sustainability branding remains difficult to verify. This study examines how public LinkedIn vacancy data can support green-job category development for ED10 in the UI GreenMetric Sustainable University Rankings 2026, while separating vacancy evidence from verified graduate outcomes. Using Apify, the study collected 758 unique public LinkedIn job postings in Indonesia over a 30-day window from ten predefined English-language green-job search URLs. A rule-based codebook, derived from UI GreenMetric and International Labour Organization definitions, classified postings by green-job strength and environmental contribution. Contextual variables included location, employment type, applicant visibility, and company size. Descriptive statistics were combined with Pearson chi-square, Cramer's V, and Kruskal-Wallis tests. The analysis identified 274 postings, or 36.1 percent, as having core or substantial green-job signals; the rest were green-adjacent or not classifiable as green from vacancy text. Keyword choice was associated with strict green-job classification, showing that search design shapes evidence. The study contributes a replicable demand-side taxonomy to inform tracer studies, curriculum alignment, career-service strategy, and ED10 reporting, without substituting for verified alumni employment data.

Restoration of the Old Sariaya Municipal Building for Adaptive Reuse as a Cultural Hub: A Research-based Extension Model for Heritage Conservation, Education, and Community Engagement

Ar. Diane A. Jose, Dean, Eulogio "Amang" Rodriguez Institute of Science and Technology, Philippines

This paper presents a research-based extension initiative of the College of Architecture and Fine Arts (CAFA) of EARIST focused on the restoration and adaptive reuse of the 1931 Old Sariaya Municipal Building in Quezon, Philippines, a heritage structure designed by Juan M. Arellano. Currently threatened by material decay, moisture intrusion, intrusive alterations, and inadequate conservation management, the project applies a descriptive-exploratory, practice-based approach grounded in value-based heritage conservation. Methods included condition assessment, measured surveys, defect mapping, archival research, and stakeholder consultation. The study produced a Conservation Management Plan, demolition-retention strategy, and adaptive reuse proposal transforming the building into a cultural hub with exhibition, learning, archival, and community spaces. As a higher education–community partnership, the initiative demonstrates how academic expertise can support heritage conservation, experiential learning, and local governance. It contributes to SDGs 11 and 4 by promoting field-based education, documentation skills, and knowledge transfer, while offering a replicable model for integrating research, extension, and sustainable cultural development.

From Community to Campus: Translating Climate-Resilient Public Space Research into a University Living Laboratory

Dr. Ir. Ar. R.A Retno Hastijanti, M.T., IPU, IAI, APEC.Eng, Dean, Universitas 17 Agustus 1945 Surabaya

Universities are increasingly expected to translate research into practical sustainability solutions. This paper presents how the Center for Climate and Urban Resilience (CeCUR), Universitas 17 Agustus 1945 (UNTAG) Surabaya, transformed findings from the Adaptation Fund project Embracing the Sun (2022–2025) into a campus living laboratory. Conducted in Samarinda, Indonesia, the project applied participatory action research and co-design involving communities, government, and academia to develop ten climate-resilient public

space principles: community co-creation, locality-based learning, green entrepreneurship, health and well-being, environmental resilience, climate adaptation, behavioural change, adaptive space use, social safety, and active public life. Instead of replicating the original public spaces, UNTAG adapted these principles into a network of multifunctional public spaces tailored to campus land availability while preserving their core values. These spaces support experiential learning, interdisciplinary collaboration, environmental awareness, and community engagement. The study proposes a community-to-campus knowledge translation model, demonstrating how community-based research can be transformed into institutional innovation through adaptive spatial design. This model offers a practical framework for universities to strengthen sustainability education, campus resilience, and evidence-based public space development while advancing the UI GreenMetric agenda and the SDGs.

Cognitive Bridge: A Sustainable Pedagogy for Critical AI Literacy in Engineering Education

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The responsible integration of artificial intelligence into higher education represents a growing sustainability challenge for universities — not only in terms of digital infrastructure, but in cultivating human capacities fit for an AI-shaped professional world. This paper presents the Cognitive Bridge, a pedagogical methodology developed at the National Polytechnic University of Armenia (NPUA) over nearly two years of classroom practice (2024–2026), designed to build critical AI literacy in engineering students through structured engagement with AI limitations and errors. Drawing on Bloom's Revised Taxonomy and Vygotsky's Zone of Proximal Development, the methodology repositions AI not as a convenient answer-generator but as a productive cognitive challenge. A four-week intervention with approximately 150 engineering students traced a progression from unreflective AI use to independent AI auditing. A parallel survey of N=149 NPUA engineering students reveals moderate AI literacy ($M=3.29-3.34/5$) alongside critically low awareness of the EU AI Act ($M=2.27/5$) — the primary regulatory framework governing AI in professional engineering contexts. Over 70% of students expressed support for mandatory AI ethics instruction at university level. The Cognitive Bridge demonstrates that sustainable AI literacy education requires neither costly infrastructure nor specialist resources. Developed at a resource-constrained institution using freely available tools, it offers a replicable model for diverse settings

From Publications to Planetary Impact: Developing a Sustainability Research Impact Index for African Universities

Mr. Joshua Simuka, Department Head, Harare Institute of Technology, Zimbabwe

Universities play a critical role in advancing sustainable development through research, innovation, and knowledge dissemination. However, prevailing research evaluation systems largely rely on bibliometric indicators such as publication counts and citations, which fail to capture the broader societal, environmental, and economic impacts of sustainability research. This study seeks to develop a Sustainability Research Impact Index (SRII) for African universities that measures the extent to which research contributes to sustainable development beyond academic outputs. The study adopts a qualitative exploratory design. A systematic review of literature and sustainability assessment frameworks will be conducted to identify potential dimensions of sustainability research impact. This will be complemented by semi-structured interviews with university leaders, researchers, policymakers, industry representatives, and community stakeholders from selected African countries. The interviews will explore perceptions, experiences, and expectations regarding the impact of university research on society, policy, innovation, and environmental sustainability. The proposed index is expected to include dimensions such as policy influence, community engagement, environmental outcomes, innovation and commercialization, capacity building, and contributions to the Sustainable Development Goals (SDGs).

Integrating Sustainability into Forestry Education and Research: A Faculty-Centered Approach to Managing Education and Research for Sustainable Universities

Dr. Sher Shah, Assistant Professor, University of Swat, Pakistan

Universities play a pivotal role in advancing sustainability through education, research, and community engagement. Within the framework of the 12th International Workshop on UI GreenMetric Sustainable University Rankings (IWGM 2026) and its theme, “Managing Education and Research,” this paper highlights the contribution of forestry education in fostering sustainability-oriented learning and research environments. As an Assistant Professor in Forestry, my academic responsibilities encompass undergraduate and graduate teaching, student supervision, research mentoring, and the integration of sustainability principles into academic curricula. The study explores how forestry education serves as a platform for developing environmental awareness, climate resilience, biodiversity conservation, and sustainable natural resource management competencies among students. Through classroom instruction, field-based learning, thesis supervision, and research projects, students are encouraged to address real-world environmental challenges and contribute to the achievement of the Sustainable Development Goals (SDGs). Graduate and undergraduate research activities are directed toward contemporary issues such as forest conservation, ecosystem restoration, climate change adaptation, carbon sequestration, and sustainable land-use practices. Furthermore, the paper emphasizes the role of faculty members in creating research-driven learning environments that promote critical thinking, interdisciplinary collaboration, and inn

From Policy to Practice: Strengthening Building-Based Waste Management through Discourse-Oriented Policy Communication at Universitas Pendidikan Indonesia

Dr. Mahardhika Zifana, Assistant Professor, Universitas Pendidikan Indonesia, Indonesia

Universities increasingly implement sustainability policies to improve environmental performance; however, policy implementation often encounters challenges related to stakeholder understanding, participation, and behavioral compliance. In many cases, waste-management policies are supported by adequate institutional regulations and infrastructure but remain insufficiently translated into everyday practices. This study examines the role of discourse-oriented policy communication in strengthening building-based waste management at Universitas Pendidikan Indonesia (UPI). The study was conducted through a community-engagement intervention involving employees of the Bureau of Assets and Environment as key actors in campus environmental governance. The intervention consisted of policy-literacy workshops, training in the development of communication materials, and mentoring activities focused on waste-management policy socialization. Data were collected through observations, participant feedback, and assessments of communication outputs produced during the program. The findings indicate that discourse-oriented communication contributes to improved policy literacy, enhances participants' capacity to communicate sustainability policies, and supports more consistent dissemination of waste-management practices across campus buildings. Participants demonstrated greater awareness of their roles in environmental governance and produced communication materials that were more accessible, persuasive, and contextually

Cultural Sustainability in Practice: From Classroom to Community-based Engagement

Asst.Prof.Thanasin Chutintaranond, Ph.D., Assistant Professor, Chulalongkorn University

Instilling cultural sustainability in higher education remains challenging due to diverse faculty, students, and learning environments. Chulalongkorn University has developed a cultural sustainability learning ecosystem grounded in outcome-based education (OBE), enabling experiential learning through the general education course “Community Engagement and Cultural Sustainability.” This ecosystem integrates asynchronous platforms with synchronous activities, using communities as living learning resources through a folkloristic perspective. A key feature is the use of regional learning spaces as incubators for cultivating ideas, wisdom, and cultural skills in collaboration with local scholars and communities, allowing students to gain meaningful first-hand experience. Recognizing that human exchange is central to

sustainable growth, the ecosystem also fosters collaboration with other higher education institutions, promoting cross-institutional learning and potential credit transfer. Implemented with 40 students during January–February 2026, the course enhanced students' knowledge and lived experience of cultural sustainability and generated nine innovative outputs that extended local wisdom and cultural heritage into community-based products and creative initiatives.

Bibliometric Analysis of Sustainable University Research: Indexes and Publication Trends Using Web of Science Core Collection Data

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This study examines the evolution of the sustainable university concept and summarizes publication trends through a bibliometric analysis of the Web of Science Core Collection. As a key notion in contemporary higher education, the sustainable university refers to integrating sustainability principles into governance, curriculum, and campus operations. Articles published between 2005 and 2025 were analyzed using WOS Viewer to explore countries, institutions, journals, author networks, and citation patterns. A search conducted on January 24, 2026, with the keyword "SUSTAINABLE UNIVERSITY" yielded 403 records across 79 countries, 44 research areas, 10 document types, and 595 affiliations. Findings show that authors such as Leal Filho, Brandli, Lukman, and Lozano significantly shape the field's theoretical foundations. The UK, Spain, and Poland stand out with strong productivity and collaboration networks, while several universities hold central positions in sustainability research. Keyword analysis indicates that studies mainly focus on integrating sustainability into university management, curricula, and campus practices. Overall, sustainable university research is a growing and globally connected domain. However, the concentration of studies in specific regions, limited contributions from developing countries, and the lack of standardized assessment models represent notable gaps. This study offers a quantitative overview intended to guide future research and institutional sustainability strategies.

Managing Governance and Digitalization:

Towards Intelligent Sustainable Universities: A Systematic Review of Sustainability Dashboards as Catalysts for Governance Excellence, Performance Monitoring, and Institutional Transformation

Mr. Joshua Simuka, Department Head, Harare Institute of Technology, Zimbabwe

Universities are under increasing pressure to demonstrate sustainability performance, accountability, and alignment with the Sustainable Development Goals (SDGs). While many institutions have adopted sustainability initiatives, challenges remain in integrating sustainability data into governance processes and strategic decision-making. Sustainability dashboards have emerged as digital tools for monitoring and reporting institutional performance; however, their role in advancing governance excellence and institutional transformation remains fragmented in the literature. This study aims to systematically review the use of sustainability dashboards in higher education and examine their contribution to governance, performance monitoring, accountability, and institutional transformation. Specifically, the study identifies key dashboard functions, performance dimensions, implementation practices, and emerging trends shaping sustainable universities. A systematic literature review was conducted following PRISMA guidelines. Relevant studies published between 2015 and 2026 were retrieved from Scopus, Web of Science, ScienceDirect, and Google Scholar. After applying predefined inclusion and exclusion criteria, 72 peer-reviewed articles were selected and analysed using thematic analysis. Five core functions emerged: strategic alignment, performance measurement, stakeholder accountability, evidence-based decision-making, and continuous improvement.

Digital Governance For Sustainable University Campuses: A Framework For Data-Driven UI GreenMetric Performance

Dr. Adewale Emmanuel Adeyemi, Ph.D., Department Head, Miva Open University, Nigeria

Universities now need to show sustainability through systems that link policy, data, people, action, and results. This paper proposes a digital governance framework for improving sustainable campus management and strengthening performance in the UI GreenMetric World University Rankings. Its objective is to show how higher education institutions can use data-driven decision-making to monitor, coordinate, and improve actions across energy and climate change, waste, water, transportation, education and research, setting and infrastructure, and governance. The study uses a conceptual and practice-oriented approach. It reviews UI GreenMetric criteria and shows how digital tools, policies, reporting structures, and stakeholder engagement can be integrated into one campus sustainability management system. The framework is built on four linked pillars: sustainability data collection, digital monitoring and reporting, leadership accountability, and continuous performance improvement. The paper offers a practical model for universities, especially in developing and emerging contexts, to move from scattered sustainability activities to an integrated and evidence-based approach that supports planning, reporting, and institutional change. It concludes that digital governance is more than a technology issue; it is a leadership strategy for building greener, smarter, and more accountable campuses.

Embedding Sustainability into Teaching, Research, and Community Engagement: The Role of Universities in Advancing the SDGs

Dr. Adewale Emmanuel Adeyemi, Ph.D., Department Head, Miva Open University, Nigeria

Universities have a vital role in preparing graduates who can understand and respond to today's sustainability challenges. Beyond reducing their environmental footprint, higher education institutions can advance the Sustainable Development Goals by embedding sustainability into teaching, research, and community engagement. This paper examines how universities can make sustainability a shared institutional culture rather than a separate activity. Its objective is to present a framework for integrating sustainability into curriculum, research, student participation, and outreach. Using a conceptual and practice-oriented approach, the paper links teaching, research, and community service to sustainable development and the UI GreenMetric Education and Research criterion. It proposes a three-pillar model: sustainability-focused learning, impact-driven research, and community-based engagement. The model emphasizes that students should learn sustainability in classrooms and apply it through projects, campus initiatives, and partnerships. The paper concludes that universities become stronger drivers of environmental awareness, social responsibility, and transformation when they connect academic knowledge with real societal needs. Embedding sustainability into teaching, research, and engagement can help universities produce responsible graduates, strengthen relevance, and contribute meaningfully to the SDGs.

The Living Lab as Institutional Operating System: Integrating Three University Missions with Sustainability Embedded in the Research, Innovation, and Technology Transfer Portfolio at the West University of Timișoara

Ioan Chindris, Higher Education Specialist, West University of Timisoara, Romania

The 2026 UI GreenMetric expansion, adding indicators on governance and digitalization, invites a shift from siloed reporting toward integrated performance. This paper presents the West University of Timișoara (WUT) Digital and Green Living Lab as an institutional operating system that integrates the three university missions (education, research, societal engagement), embedding sustainability directly within research, innovation, and technology transfer portfolios. Rather than building a parallel sustainability office, WUT operationalizes a design principle of integration over creation. Through this approach, the Institute for Advanced Environmental Research, via the Centre for Innovation and Technology Transfer, orchestrates existing institutional structures around three accredited pillars, aligned with the six UNITA

Research and Innovation Hubs and the seven UI GreenMetric criteria. We triangulate three external assessments with internal documents and semi-structured interviews. Empirical evidence spans an energy-poplar plantation, an urban garden recognized as a New European Bauhaus finalist, an annual sustainability program reaching 1,500+ participants, cross-sector AI and geothermal energy projects, and citizen-science initiatives. Finally, we derive a transferable five-step implementation cycle and policy recommendations for higher education institutions advancing on the new UI GreenMetric criteria.

Digital Governance Transformation at Universitas Bhayangkara Jakarta Raya To Support Sustainable Development Goals (SDGs)

Ferawaty Puspitorini, S.S., M.Pd, Department Head, Universitas Bhayangkara Jakarta Raya, Indonesia

The implementation of Sustainable Development Goals (SDGs) has become a strategic agenda for higher education institutions in promoting sustainability through education, research, and institutional governance. Digital transformation is increasingly recognized as an important approach to improving operational efficiency, transparency, and environmentally responsible campus management. This study aims to analyze the implementation of digital governance transformation at Universitas Bhayangkara Jakarta Raya and its contribution to supporting SDGs within the framework of the UI GreenMetric Governance and Digitalization criterion. This study applies a qualitative descriptive method using institutional documents, digital governance reports, and observations of academic and administrative systems as the primary data sources. The research focuses on the implementation of smart campus systems, integrated digital academic services, paperless administration, e-learning platforms, and transparent governance mechanisms. The findings reveal that digital transformation at UBJ has improved administrative efficiency, strengthened institutional accountability, reduced paper consumption, and enhanced accessibility of academic services. This study demonstrates that governance innovation and digitalization are essential strategies for developing sustainable and environmentally responsible higher education institutions.

Bridging the Integration Gap in Campus Sustainability: A Double-Helix Framework for Governance and Digitalization

Renato L. Base, Department Head, University of Science and Technology of Southern Philippines, Cagayan de Oro Campus, Philippines

The UI GreenMetric World University Rankings historically emphasized physical infrastructure. However, the 2026 iteration introduces Governance and Digitalization as weighted criteria, shifting focus from what universities build to how they are managed. This paper introduces the Sustainable Educational Administration (SEA) Framework, a "Double Helix" model coupling administrative governance (the "Brain") with operational sustainability (the "Nervous System"). Using a mixed-method case study of the University of Science and Technology of Southern Philippines (USTP), this research applies institutional document analysis, governance structure mapping, and UI GreenMetric performance benchmarking. Findings reveal a critical "integration gap": USTP achieved near-perfect scores in physical sustainability (smart buildings, toxic waste treatment, zero-emission vehicles) but exhibits a pronounced deficit in digital monitoring and centralized data governance. This disparity proves physical infrastructure is insufficient without a governing digital architecture to optimize it. To address this, the paper proposes a four-phase implementation blueprint to extend existing administrative platforms for environmental data ingestion. The SEA Framework provides a replicable roadmap for global higher education, proving digital governance is the primary catalyst for scalable campus sustainability.

Digital Governance in Higher Education: Evaluating the Role of HEMIS system in Paperless Administration and Sustainable campus Transformation

Dr. Matkarimova Shokhista Khabibullayevna, Associate Professor, Urgench State Pedagogical Institute, Uzbekistan

The digital transformation of higher education is becoming increasingly important for improving efficiency, transparency, and sustainability. However, many universities still use a

combination of paper-based and digital systems. In Uzbekistan, the Higher Education Management Information System (HEMIS) has been introduced as a national platform to support digital governance in universities. This study explores how HEMIS is used to reduce paper-based work and improve administrative processes in higher education institutions. It also examines how the system supports better decision-making and contributes to the development of sustainable campuses. A qualitative case-study method will be used. Data will be collected through interviews with university staff and IT specialists, as well as analysis of documents and system usage. The data will be analyzed to understand the main advantages and challenges of using HEMIS. The expected results show that HEMIS improves efficiency, reduces paper usage, and makes decision-making more data-driven. However, challenges such as limited digital skills and incomplete system use may reduce its full effectiveness. This study highlights the importance of digital governance tools in building more sustainable and efficient universities.

The National Framework for a Green University Environment: A Governance Instrument for Advancing the Ecological Transition of Higher Education in Tunisia
Sifaoui Wiem, Professor, Institut National Agronomique de Tunis, Tunisia

National Agronomic Institute of Tunisia (INAT) – University of Carthage, Tunisia

Climate change is accelerating, biodiversity is declining, and pressure on water, energy, and other natural resources is increasing. In this context, higher education institutions can no longer limit their role to their traditional missions of teaching and research. They are increasingly expected to become key actors in the ecological transition. International university sustainability systems, especially UI GreenMetric, STARS, THE Impact Rankings, and QS Sustainability Rankings, have played an important role in promoting a culture of performance, benchmarking, transparency, and continuous improvement. However, their main purpose is not to provide governments with a national steering framework that connects international commitments, public policies, and institutional strategies. This article presents the Tunisian National Framework for a Green University Environment (RMUV), developed within the ARESSE project, and examines its added value as a governance instrument. Its design combines international benchmarking, analysis of the Tunisian context, consultation with stakeholders, and the co-construction of an integrated indicator architecture. The Framework is organized around six areas: sustainable governance; teaching and training; research and innovation; university life and social engagement; sustainable management of the university environment; and sustainable mobility. It also connects three levels of indicators: strategic, governance, and operational indicators. The main result is that the RMUV moves beyond a simple measurement approach and introduces a steering approach. Indicators are not used only to describe performance. They are also used to guide decisions, organize institutional responsibilities, follow implementation, identify gaps, and support continuous improvement. The RMUV is therefore not intended to replace international sustainability frameworks. Instead, it creates institutional conditions that can help Tunisian universities progress in a coherent way toward national and international sustainability objectives. The Tunisian experience shows that a national framework can become a practical instrument for systemic transformation when it connects strategy, governance, implementation, measurement, and learning within the same structure.

Governance, Digitalization, and Public Value in Circular Economy Policies: Comparative Insights from Brazil and the United States.

Luiz Henrique Paiva Pires, Researcher, University of Brasília, Brazil

Digitalization has become an important strategy for improving governance and advancing sustainability goals. In circular economy policies, digital technologies are increasingly used to strengthen transparency, information sharing, and decision-making. However, their effectiveness depends not only on technology adoption but also on the organizational and institutional conditions that support implementation. This study examines how governance structures and organizational capacity influence the adoption of digital government initiatives in circular economy policies. Using a qualitative comparative approach, the research analyzes the Federal District of Brazil and draws analytical insights from New York State. The study is based on semi-structured interviews, document analysis, and institutional observation

conducted during an international research period in the United States. The findings show that digital technologies can improve coordination and sustainability performance, but their contribution to public value depends on organizational capacity, interorganizational collaboration, and institutional stability. While the Brazilian case reveals challenges associated with fragmented governance, the New York experience highlights the benefits of more mature governance networks. The study concludes that sustainable digital transformation requires the alignment of technology, governance, and institutional capacity, offering practical lessons for universities, policymakers, and public institutions.

The sustainable development of a federal public education institution - IFSP

Rodrigo de Benedictis Delphino, Sustainability Director, Federal Institute of Sao Paulo, Brazil

This paper analyzes the strategies and challenges of the Federal Institute of São Paulo (IFSP), the largest federal autarchy, in implementing actions and regulations aligned with the principles of sustainable development. As a multi-campus institution with 57 campuses either operating or being established, it faces the need to align its territorial expansion with the UN 2030 Agenda guidelines. Methodologically, a descriptive case study was conducted using a mixed quali-quantitative approach. Data were collected through documentary research of the Institutional Development Plan (PDI) and the Sustainable Logistics Management Plan (PLS), as well as a survey of energy consumption and budgetary indicators from the Transparency Portal. Textual data were processed via Content Analysis and numerical data through descriptive statistics. The results indicate that IFSP has advanced in implementing eco-efficiency measures, highlighting the installation of photovoltaic power plants and the rationalization of water and material resources across its campuses. However, budgetary constraints and the lack of specialized technical personnel act as significant barriers to maintaining and expanding these initiatives. It is concluded that, despite the economic and structural obstacles of public administration, institutional governance and centralized strategic planning have been the primary drivers for consolidating sustainable practices at IFSP, demonstrating that eco-efficiency is viable to a public university.

TaskTracer: A Sustainable Digital Platform for Transparent Continuous Assessment Management

Dr. Hasmaini binti Hashim, Lecturer, Politeknik Merlimau Melaka, Malaysia

Continuous assessment serves as a key component in measuring student achievement and supporting learning outcomes in higher education institutions. Nevertheless, lecturers and students frequently encounter challenges in monitoring assessment progress due to scattered records, lack of real-time visibility, and inefficient manual tracking processes. This study aims to develop TaskTracer, a sustainable digital platform designed to enhance transparency in continuous assessment management. The development process adopted the System Development Life Cycle (SDLC) methodology, encompassing requirement gathering, system design, application development, and functionality testing. The resulting platform integrates lecturer and student dashboards that provide real-time monitoring of assessment completion status, submission tracking, notification management, student performance analytics, commitment scoring, and intervention support features. The platform enables lecturers to strengthen academic governance through systematic monitoring while fostering student engagement by providing immediate access to assessment information and progress indicators. The findings demonstrate that TaskTracer successfully fulfils the identified system requirements and provides a comprehensive digital environment for assessment monitoring. In conclusion, the platform has the potential to support sustainable academic management through improved transparency, accountability, and digitalization of continuous assessment processes.

Governance through Digital Transformation: An Assessment of the Transition to Institutional Quality Circle under the HEC-PSG 2023 Policy

Dr. Muhammad Ammad ul Haq, Associate Professor, Al-Kawthar University, Pakistan

The governance of higher education is in a state of radical transformation in Pakistan as a result of digitalization and modernisation of the quality management system. This paper discusses the major shift of Higher Education Commission Pakistan's Policy PSG-2023 from quality control to quality assurance concept. The main objective of the research is to examine effective and efficient IQC (Institutional Quality Circle) mechanism based on the strong process (Feedforward) rather than focusing on outcomes (Feedback). The methodology is based on a quantitative approach, in which a structured questionnaire was sent to Quality Enhancement Cells of various universities of Pakistan for the assessment of Quality Assurance system. It is a systemic analysis that determines gaps and challenges at the technology integration level, and the operational nature of existing (QA) quality assurance. Moreover, a comprehensive digitalized approved Model at Al- Kawthar University is explored to highlight the possibilities of achieving a high efficiency of E-governance within the academic sector. The results highlight the need to move towards a governance model that combines policy and cutting-edge digital infrastructures. The study concludes that, although the policy of the PSG 2023 offers a strong roadmap for the IQC, if it is to be implemented successfully in the universities of Pakistan, it would require breaking down of financial and human resource barriers to achieve transparency and efficiency as it has been achieved

Towards Digitalization and Paperless Processes: Barriers and Enablers of Digital Transformation in a Philippine Higher Education Institution

Asst. Prof. Marbert John C. Marasigan, MSc., Department Head, University of the Philippines Manila, Philippines

In Philippine public higher education institutions, paper-based processes continue to dominate many administrative functions. Although digital submissions through online forms or email are increasingly accepted, many offices still print these documents out of habit, compliance requirements, or convenience. This practice undermines the goals of digital transformation — introducing unnecessary paper waste and preventing data from being reused or shared across systems, forcing redundant manual entry. This paper examines the barriers and enablers to achieving fully paperless processes in a Philippine higher education institution. Key barriers to paperless transformation include external institutional demands for paper documentation and the public's lack of trust in digital records. To address these barriers, this paper argues that Philippine public HEIs must pursue two strategies. First, institutions must "meet in the middle" — where organic, ground-up digital initiatives align with and reinforce the government's top-down mandates, consistent with the Philippines' whole-of-government approach to digital transformation. Second, systems must be designed with interoperability in mind from the outset — avoiding the development of isolated, siloed systems both within institutions and especially between institutions and government — whether through APIs or compliant middleware, in alignment with the forthcoming Philippine Government Interoperability Framework (PGIF) under the Philippine E-Governance Act.

Advancing Sustainable Campuses Through Integrated Environmental Governance: A Case Study of a Brazilian Higher Education Institution

Prof. Dra. Daniela Gislane De Oliveira, Professor, Faculdades Integradas Da América Do Sul, Brazil

This study analyzes how a Brazilian HEI joined environmental governance with campus management, academic work, and community outreach. It is a qualitative case study based on institutional documents, sustainability reports, extension records, and direct observation. The analysis follows UI GreenMetric areas: infrastructure, energy, waste, water, transportation, education, and governance. The results show that sustainability is part of daily routines. Solar energy, rainwater reuse, waste sorting, green area care, sustainable landscaping, environmental education, and hybrid vehicles are linked to planning and management. Extension services, such as legal aid, health actions, vaccination, psychological support, dental care, and veterinary care for vulnerable groups, add a social role to the campus. The case indicates that environmental governance is more effective when connected to teaching, research, operations, and extension programs. This connection helps turn sustainability goals into management practices and public services. The study describes an

institutional experience assessed through UI GreenMetric indicators and related to the SDGs. It also shows that campus sustainability depends on coordination among managers, teachers, students, and community programs. These findings may guide other institutions seeking clearer routines, better governance, and more consistent sustainability practices on campus in the long term and use in similar contexts and regions as well.

The Paperless Paradox: A Longitudinal Analysis of Environmental Cost-Shifting and the Myth of Clean Governance in Emerging Universities

Abdyreshit Sadyk, Student, Oguz han Engineering and Technology University of Turkmenistan, Turkmenistan

Universities frequently celebrate "paperless" digitalization as an absolute environmental victory. However, this transition often hides a critical paradox: it does not eliminate waste, it merely shifts it into hidden digital spaces. This study investigates the myth of clean governance through a ten-year longitudinal case study of an emerging technological university. Our objective was to evaluate whether migrating from traditional, paper-centric administrative workflows to digital platforms genuinely shrinks a campus carbon footprint, or if it simply creates a new, unmonitored ecological burden for developing institutions. Using an institutional data audit spanning a decade, we tracked physical resource reduction against the rising infrastructural demands of digital systems. The findings reveal a stark operational tension. While physical paper procurement dropped by nearly 80%, campus energy consumption allocated to continuous server room cooling, local data centers, and cloud computing spiked exponentially. Furthermore, the rapid replacement and obsolescence cycle of administrative laptops, routers, and tablets generated a massive, unprecedented volume of toxic electronic waste. Ultimately, localized paper reduction creates an illusion of campus sustainability while accelerating invisible digital carbon expenditures. True green governance requires sustainable data infrastructure, not just paperless workflows.

Transforming University Data Governance Through a Decentralized Digital Portal

Dr. Basem Amer, Associate Professor, University of Zawia, Libya

At the University of Zawia, Libya, the International Ranking Committee (IRC) provides data to global platforms including THE, QS, and UI GreenMetric. Prior to digitalization, data collection was paper-based, with requests sent via traditional mail to over 30 distributed colleges across 60 km², serving 25,000+ students and 5,600 faculty. A single request required up to a week. Urgent clarifications relied on unofficial WhatsApp communication, lacking formal approval and auditability. To address this, the university's Information and Documentation Center (IDC) developed a centralized data collection portal, hosted on a sub-domain. Each college receives an account, enabling decentralized entry with centralized real-time visibility for the Ranking Committee. The portal transformed governance: collection time dropped from a week to under one hour; error rates fell from 30-50% to below 10%; and ad-hoc requests are now fulfilled in hours. The portal supported THE Impact Ranking 2026 submission and is being adapted for UI GreenMetric reporting across seven criteria, particularly Governance and Digitalization. This case study demonstrates that a purpose-built portal can transform data governance for sustainability rankings in resource-constrained environments. The University of Zawia's experience offers practical lessons for decentralized universities balancing local autonomy with central accountability. The architecture is scalable and adaptable for future needs.

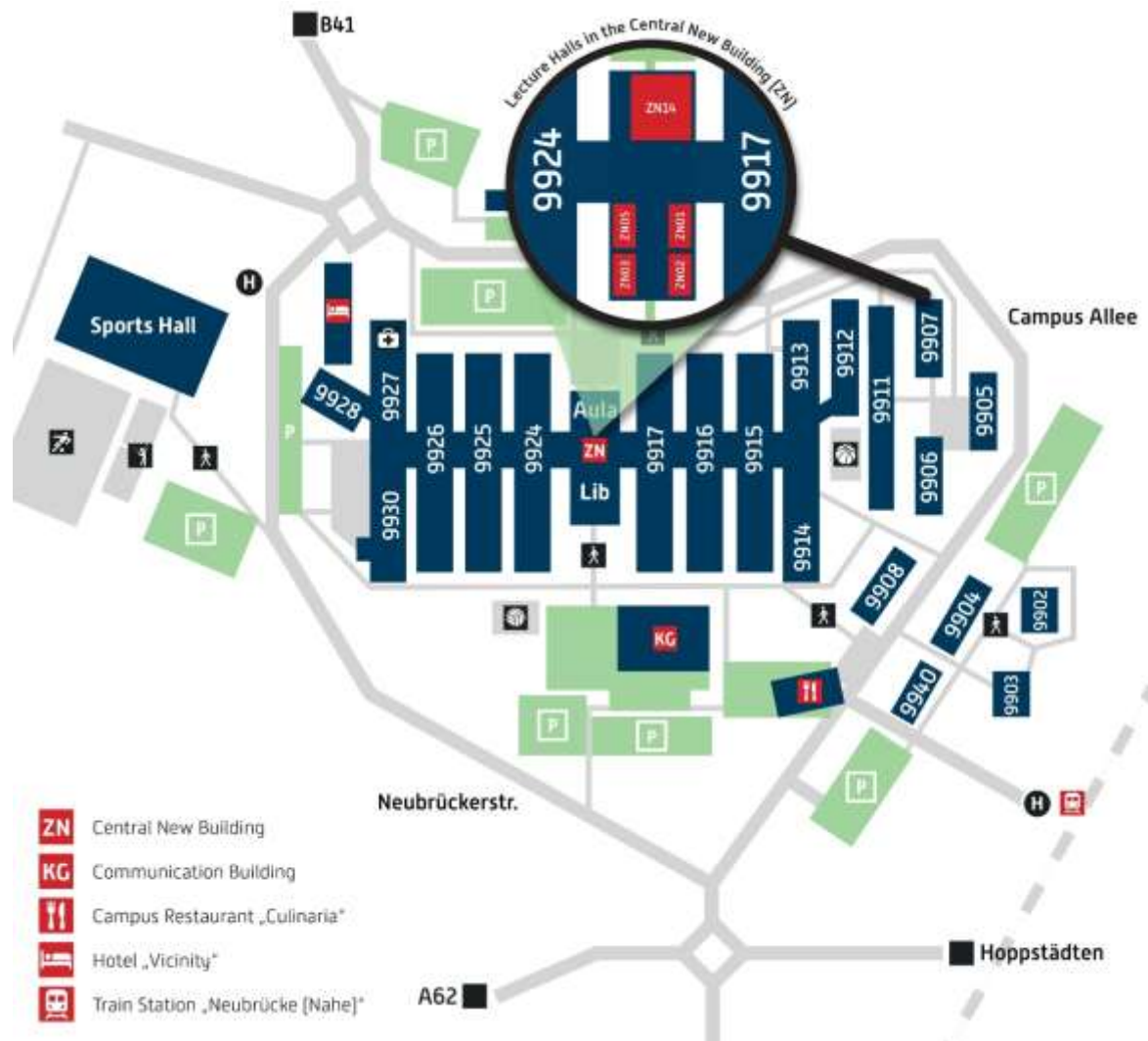
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