



Hochschule für Angewandte
Wissenschaften Hamburg
Hamburg University of Applied Sciences



FEE
Facultad de Economía y Empresa

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UNIVERSIDAD DE
MURCIA



ODSesiones
Objetivos de Desarrollo Sostenible



FOURTH WORLD SYMPOSIUM ON SUSTAINABILITY SCIENCE AND RESEARCH

Murcia, Spain, 19th-20th January 2023

PROGRAMME





Background:

The United Nations Summit, held on 25 to 27 September 2015 in New York, adopted the post-2015 development agenda and a set of Sustainable Development Goals (SDGs) which are outlined in the document "**Transforming our world: the 2030 Agenda for Sustainable Development**". This Agenda, according to the UN, is a plan of action for people, planet and prosperity, which seeks to strengthen universal peace in larger freedom. It contains 17 Sustainable Development Goals and 169 targets, which demonstrate both a vision and an ambition. It seeks to build on the Millennium Development Goals and complete what these did not achieve. The document "Transforming our world: the 2030 Agenda for Sustainable Development" also clearly shows the need for an integrated handling of the three main dimensions of sustainable development: the economic, social and environmental.

There is a world consensus in relation to the fact that Sustainability Science -i.e. a branch of science concerned with an integrated view of the three main dimensions of sustainable development, can provide an important contribution in order to achieve the Sustainable Development Goals. Even though in the past the potential of Sustainability Science has been largely overlooked – some say underestimated – it is clear that it can provide a key contribution to the implementation of the Sustainable Development Goals (SDGs) and, more specifically, the realization of the vision set at the 2030 Agenda for Sustainable Development.

Further to the 1st, 2nd, and 3rd World Symposium on Sustainability Science and Research, held in the UK (2018), Brazil (2019) and online (2021) respectively, the 4th World Symposium on Sustainability Science and Research is now being prepared. The event is organized by the European School of Sustainability Science and Research (ESSSR) and the International Sustainable Development Research Programme (IUSDRP) in cooperation with various organizations. It will be hosted by the University of Murcia and will be held in the city of Murcia, Spain, from 19th-20th January 2023.

Under the theme "The Contribution of Universities Towards Education for Sustainable Development: accelerating the implementation of the UN SDGs at universities", the 4th World Symposium on Sustainability Science and Research aims to identify, document and disseminate ideas, experiences and visions from educators, scientists, members of non-governmental organizations, decision-makers and citizens, on how universities may contribute to fostering education for sustainable development, which is important in pursuing sustainable future scenarios.

Sustainability researchers from across the world are warmly invited to attend and present their work at the Symposium: their active inputs will help to reiterate the potential of Sustainability Science and Research, showing how it may contribute to the realization of the goals of the 2030 Agenda for Sustainable Development.

WORLD SYMPOSIUM ON SUSTAINABILITY SCIENCE AND RESEARCH
THE CONTRIBUTION OF UNIVERSITIES TOWARDS EDUCATION
FOR SUSTAINABLE DEVELOPMENT: ACCELERATING THE
IMPLEMENTATION OF THE UN SDGS AT UNIVERSITIES



Aims:

Consistent with the goals of the 2030 Agenda for Sustainable Development and the many requirements to be fulfilled so as to allow its implementation, the aims of the "**4th World Symposium on Sustainability Science and Research**" are as follows:

- I. to provide a platform to discuss the contribution of Sustainability Science and Research towards the implementation of the SDGs;
- II. to mobilise the relevant actors (i.e. government offices and authorities, universities, enterprises, NGOs and grassroots organisations) working with sustainable development, to gather and deliberate how Sustainability Science and Research can help to achieve the SDGs;
- III. to offer an opportunity for those working with Sustainability Science and Research, and with its various ramifications, to meet their peers from across the world, and to display and present their works;
- IV. to foster the exchange of information, ideas and experiences acquired in the execution of projects, from successful initiatives and good practice.

As an output and long-term documentation of the event, selected papers will be published in the book "The Contribution of Universities Towards Education for Sustainable Development", which will follow on the success of the "Encyclopedia of Sustainability in Higher Education" which is a "living edition" and the "Encyclopedia of the UN Sustainable Development Goals", the world's largest editorial project on sustainable development ever undertaken. The book will be published as part of the World Sustainability Series which is the leading peer-reviewed book series on matters related to sustainable development. Over 3.000 authors from across all geographical regions have contributed to the series to date.

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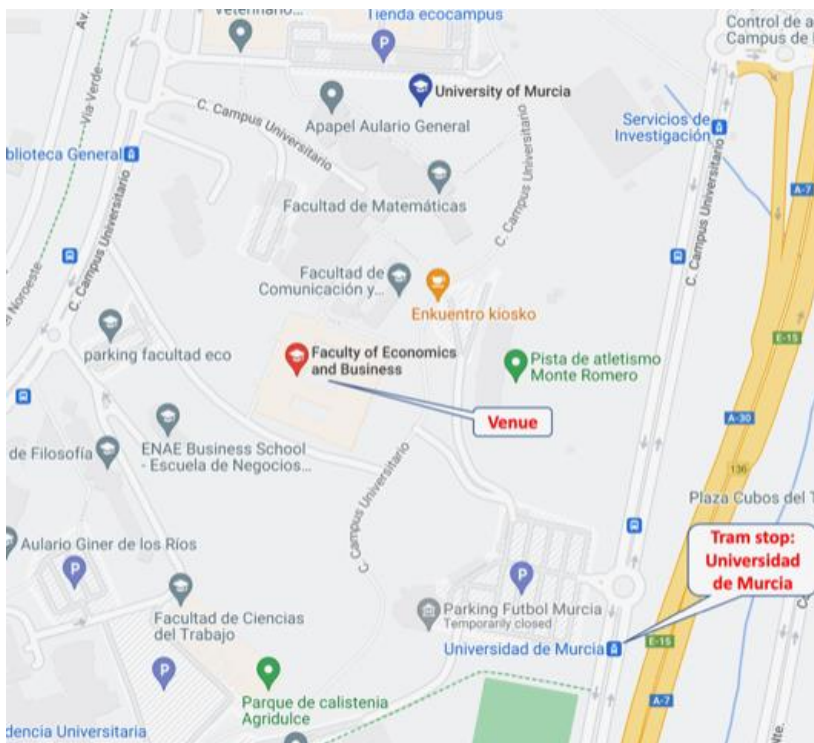


Venue:

University of Murcia (Spain)
Facultad de Economía y Empresa
Campus de Espinardo
30100 Murcia

To get around Murcia, it is recommended that delegates use the tram. There is only one line. The nearest tram stops to the place where the Symposium is held, is called "**Universidad de Murcia**". To get back, go to the city center and access the recommended hotels, the tram stop is called "**Plaza Circular**".

Figure 1 – University of Murcia map



Source: adapted from Google Maps.

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THURSDAY, 19th JANUARY 2023

Morning – Place: Salón de Grados

Moderator: Walter Leal

09:00-09:45: Arrival, registration and set-up of displays

09:45-11:00: Welcome Session:

- Walter Leal Filho. Head of ESSSR and Co-Chair of 4th Symposium on Sustainability Science and Research.
- José Luján Alcaraz. Rector. University of Murcia.
- Salvador Ruiz de Maya. Co-Chair of 4th Symposium on Sustainability Science and Research.
- Rafael Hernández Maestro. Digital Platforms Director, Santander Universities
- Samuel Baixauli. Dean of the Facultad de Economía y Empresa. University of Murcia.

11:00-11:30: Plenary Presentation I: Universities, sustainable development and climate change: towards integrative approaches, Prof. Walter Leal, Hamburg University of Applied Sciences, Germany & Manchester Metropolitan University, UK

11:30-12:00: Plenary Presentation II: European Universities' Discourse on SDGs in Social Networks, Elvira Ferrer-Bernal & Salvador Ruiz-de-Maya, University of Murcia, Spain

12:00-12:30: Discussion

12:30-14:00: Lunch

14:00-17:20: Parallel Sessions 1A and 1B

Session 1A – Room F0/19

Chair: Tobias Klös

14:00-14:20- Citizenship and sustainable development at university level, the role of students: Analysis of their perceptions (Carmen Sánchez-Fuster, Lourdes Molera Peris & Antonia Teresa Pérez Franco - University of Murcia, Spain)

14:20-14:40- Fieldwork Resource Pack as a tool in the teaching of Chemistry and Education for Sustainability in Secondary Schools (Nadine Sciortino & Mark Mifsud - St. Mark Foundation School & University of Malta)

14:40-15:00- Contributing to food security and sovereignty: Standardization of the conditions for a sustainable dehydration process of strawberry flakes (Abraham Juárez Ma. del Rosario, Ramírez Móreles Lidia Abigail, Joel Everardo Valtierra Olivares, Everardo Mares Mares, Carreño Aguilera Gilberto & Baltazar Vera Juan Carlos - Universidad de Guanajuato, Tonic World Center S.A de C.V. Irapuato Gto. & Instituto Tecnológico Superior de Guanajuato)

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15:00-15:20- Leave no student behind, the Social Assistance Office at the University of Murcia (Clara Alvarez de Toledo, Sonia Miñano, Inés López, Longinos Marín & Marcos Bote - University of Murcia)

15:20-15:30- Discussion

15:30-16:00- Break and visit to displays

16:00- 16:20- The integration of ESD in geography syllabi at higher education level in Malta (Rebecca Cassar & Mark C. Mifsud - University of Malta)

16:20-16:40- The environmental, social and governance dimensions in the development of a country's sustainability indicator (Karen Vargas-Santander, Susana Álvarez-Diez, Samuel Baixauli-Soler & María Belda-Ruiz - University of Murcia)

16:40-17:00- Discussion and End of Day One

19:00: Dinner Reception

Session 1B – Room F0/22

Chair: Walter Leal

14:00-14:20- A process to introduce sustainability in the Economics degree at University of Murcia (Lourdes Molera Peris, Juan Vicente Llinares Ciscar, Mari Carmen Puigcerver Peñalver, Mari Carmen Sánchez Antón, Eugenio José Sánchez Alcázar, Pedro Juan Martín Castejón, Matilde Lafuente Lechuga, Úrsula Faura Martínez, Longinos Marín Rives, Federico Martín Carrasco-Pleite - University of Murcia)

14:20-14:40- Latin American knowledge production on Education for Sustainable Development: an analysis of policy documents using the Overton software (Thais Dibbern, Denis dos Santos Alves, Evandro Cristofolletti, Priscila Rampazzo, Milena Serafim, Ludmila Pioli & Milena Eugênio da Silva - University of Campinas)

14:40-15:00- Wellbeing at the bottom of the pyramid through transformative services. A challenge at the heart of SDGs (Marcela Pincay-Pilay, Inés López- López & Salvador Ruiz-de-Maya - University of Murcia)

15:00-15:20- Teaching Economics at Spanish State Universities: is sustainability really being addressed? (María Semitiel-García, Pedro Noguera-Méndez & Lourdes Molera-Peris - University of Murcia)

15:20-15:30- Discussion

15:30-16:00- Break and visit to displays

16:00-16:20- Teaching the SDGs: Looking for more social awareness of business students (Nuria N. Esteban LLoret & María Pemartín González-Adalid - University of Murcia)

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16:20-16:40- The SDGs in Marine Aquaculture Practices (Francisco José Fernandez-Hernandez, Ángel Luis Enriquez-Garcia, Jorge Escobar-Mengual, Lucía Iniesta-Saura, Ana Navarro-Boluda, Carmita Isabel Silva-Molina, Antonio Torralba-Hellin, Sonia Velez-Jimenez, Mario Zamora-Marin, Alberto Cuesta, Francisco Antonio Guardiola, María del Mar Collado-González & María Ángeles Esteban - University of Murcia)

16:40-17:00- Introducing Sustainability in the Neoclassical Growth Theory (María F. Morales - University of Murcia)

17:00-17:20: Discussion and End of Day One

19:00: Dinner Reception

FRIDAY, 20th JANUARY 2023

Moderator: Walter Leal

Place: Salón de Grados

09:00-09:15: Review and Impressions from the First Day

09:15-10:00: Plenary Presentation IV: Implementation of a transversal and multidisciplinary sustainability project during the Bachelor's and Master's Degree Final Project for students at the Engineering School of Bilbao, UPV/EHU (Spain) (Esther Acha, Miren Martinez, Mikel Oregui, Mireia Irazola, Alexander Lopez, Borja B. Perez, Miryam Gil & Karmelo Zabala - Universidad del País Vasco)

10:00-10:30: Break and visit to displays

10:30-12:30: Parallel Sessions 2A and 2B

Session 2A– Room F0/19

Chair: Nuria N. Esteban Lloret

10:30-10:50- Climate Action: Pollutant Emissions Trading (Mari Carmen Sánchez-Antón & Juan-Vicente LLinares-Ciscar - University of Murcia)

10:50-11:10- Sustainability in Higher Education Institutions and the Brazilian Environmental Agenda in Public Administration (Laís Viera Trevisan, Janaina Mazutti, Thais Dibbern, Walter Leal - Hamburg University of Applied Sciences)

11:10-11:30- A guide on environmental education: Current pedagogical problems and recommendations for its implementation in the University English classroom (Estefanía Sánchez Auñón - University of Murcia)

11:30-11:50- Towards more Sustainable Labs in the Immunobiology for Aquaculture team at the University of Murcia (Spain) (Claudia Marin, Francisco Antonio Guardiola, Alberto Cuesta & María Angeles Esteban - University of Murcia)

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11:50-12:10- Multi-Disciplinary Innovation Design and Advanced Practice Real-World Student-Centric Strategies in UK Higher Education Towards Sustainable Futures: A Northumbria University Reflective Case Study (Marco Zilvetti, Matteo Conti & Richard Kotter - Northumbria University)

12:10-12:30- Higher education ecosystems for sustainable development: Tecnocampus- Pompeu Fabra University learning process to achieve SDGs (Marian Buil-Fabrega & Estel Paloma Cisa - Pompeu Fabra University)

12:30-13:10: Conclusions and hand over of the Best Papers Awards

13:10-14:00: Farewell Lunch

Session 2B – Room F0/22

Chair: Mark Mifsud

10:30-10:50- An exploration of Preschool and Primary School pre-service teachers' knowledge on the SDGs (Olga Mayoral, María Calero, Tatiana Pina, Mari Àngels Ull, José Cantó, Amparo Vilches - University of Valencia)

10:50-11:10- Towards a sustainable mining industry: Study using CFD to obtain the necessary time and provide adequate thermal and environmental conditions for workers in an underground work (Juan Carlos Baltazar Vera, Yolanda Guadalupe Zamarripa Perez, Carolina de Jesús Rodríguez Rodríguez, Gilberto Carreño Aguilera, Adrian Zamorategui Molina, Lucía Guadalupe Alvarado Montalvo, Roberto Ontiveros Ibarra, Ma. del Rosario Abraham Juárez & Joel Everardo Valtierra Olivares - Universidad de Guanajuato)

11:10-11:30- Innovation labs as part of university teaching and regional transformation: Theoretical foundations and didactic potentials for university teaching towards sustainable development (Tobias Klös & Marc-André Heidelmann - IU International University of Applied Sciences & Philipps-Universität Marburg)

11:30-11:50- Role of microfinance and nwfp value addition in reducing poverty w.r.t. Andhra Pradesh India (Teki Surayya - Adikavi Nannaya University) - *Online Presentation*

11:50-12:10- Putting Sustainability at the heart of Transnational Education: Principles and Practice from a UK-UAE partnership (Andrew Reeves, Manjeet Ridon & Stuart Lawson - De Montfort University) - *Online Presentation*

12:30-13:10: Conclusions and hand over of the Best Papers Awards

13:10-14:00: Farewell Lunch

An exploration of Preschool and Primary School pre-service teachers' knowledge on the SDGs

^{1,2}Mayoral, O.; ¹Calero, M.; ¹Pina, T.; Ull, M.A.; ¹Cantó, J.; ¹Vilches, A.

¹Department of Experimental and Social Science Education. Faculty of Teacher Training. University of Valencia. ²Botanical Garden of the University of Valencia

This study analyzes the knowledge on the Sustainable Development Goals (SDGs) of a sample of 1040 students in the Degree in Preschool Education, Primary School Education and Environmental Sciences of the UV, and their evolution over three academic years. The results of the research (framed in a broader study on Education for Sustainable Development that our UV team has been conducting for years) show that most participants do not know what the SDGs are and/or have insufficient knowledge of them and their relationships.

These results highlight the need to design and continue promoting proposals to improve the situation and to encourage the implementation of SDG Education in initial teacher training. More specifically, teachers need to understand the seriousness of the socio-environmental crisis and get involved in the indispensable measures to advance in the construction of fairer and more sustainable societies. This is already being done with very positive results, favoring their commitment to contribute to the development of a responsible citizenship regarding the serious global crisis we are facing.



BEST PAPERS AWARD

The Best Papers Award from the *4th World Symposium on Sustainability Science and Research (WSSSR-2023)*, held at University of Murcia, Spain, from 19th-20th January 2023 is herewith given to the paper:

An exploration of Preschool and Primary School pre-service teachers' knowledge on the SDGs

Olga Mayoral, María Calero, Tatiana Pina, Mari Ángeles Ull, José Cantó & Amparo Vilches
University of Valencia



Professor Walter Leal
Chairman of the Organising Committee