

NEWSLETTER

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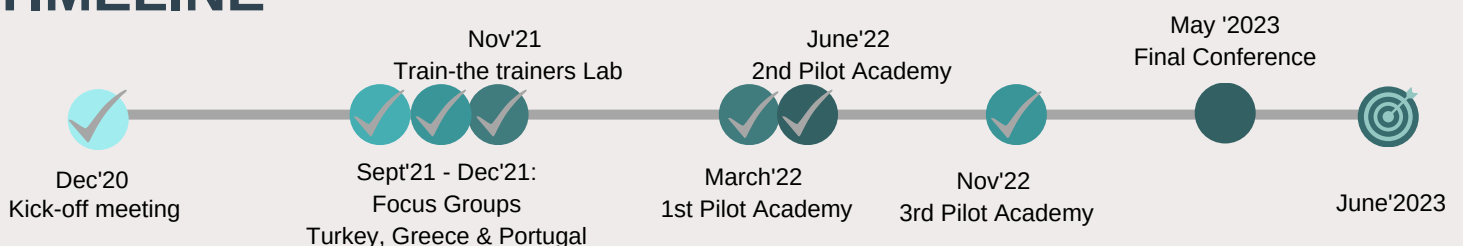


SUSTAIN-CE: Integration of Sustainable Design and Circular Economy Concepts in Civil Engineering Curricula



- **ACTIVITY HIGHLIGHTS: 3rd Pilot Training Academy**
Focusing on the Fundamentals of Sustainable Infrastructure and the Role of Structural Engineering in a Sustainable World
- **NEXT STEPS: Final Conference in İzmir, Turkey**

TIMELINE



THIRD PILOT TRAINING ACADEMY FOCUSING ON THE FUNDAMENTALS OF SUSTAINABLE INFRASTRUCTURE AND THE ROLE OF STRUCTURAL ENGINEERING IN A SUSTAINABLE WORLD



The **3rd and last Pilot Training Academy** of the SUSTAIN-CE project took place face-to-face in Urla, Turkey, between **9-11 November 2022**. The Academy was successfully co-organised by Izmir Institute of Technology (IYTE) and Yasar University, with the participation of 30 students and 12 experts from all partners and external stakeholders who gathered together to work on the:

- Fundamentals of Sustainable Infrastructure
- Role of Structural Engineering in a Sustainable World



Environmental, Economic and Social Sustainability

On the first day of the academy, Dr. Ferda Soyer from IYTE talked about the three pillars of sustainability and highlighted the importance of not disturbing the natural cycles of water, carbon, nitrogen, phosphorus and sulphur through human activities. Her speech was followed by the presentation of Dr. Eleni Feleki, from AUTH., that focused on “Circular Economy as a Sustainability Enabler”.

Fundamentals of Sustainable Infrastructure

Prof. Dr. Maria Stefanidou from AUTH. introduced the topic of "Applying the Principles of Cyclic Economy: The Perlmat Project". Dr. Stefanidou's presentation covered a successful case study on transforming the industrial waste of perlite production in Greece to raw material for ready mix grout for the construction industry.

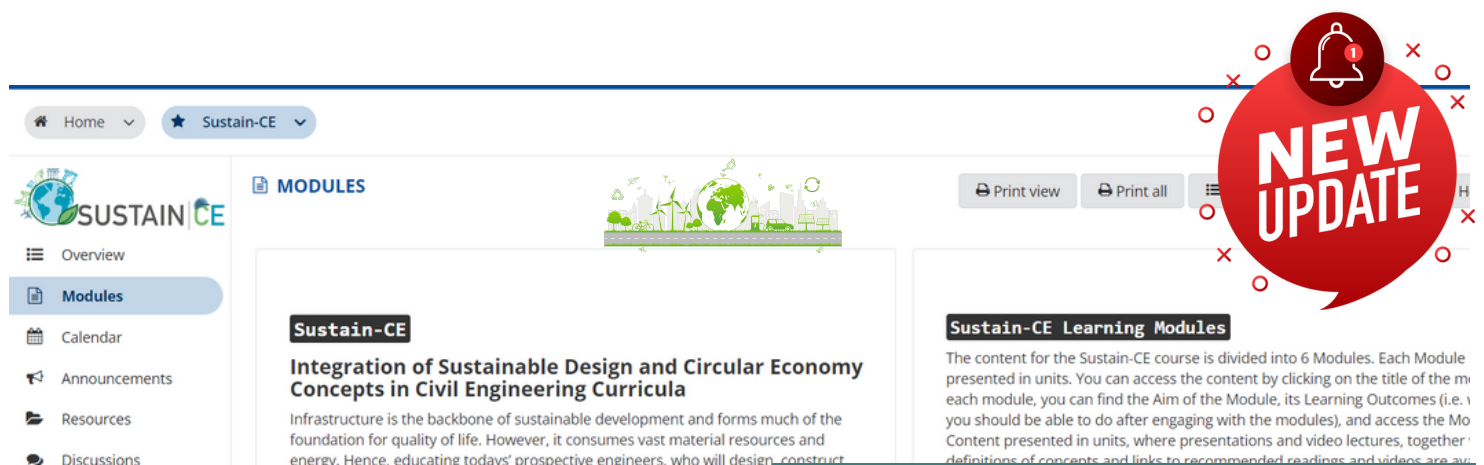
In the following, Dr. Feleki from AUTH. and the participating students had the opportunity to work together on a case study that aimed to direct the participants to define solutions about: how to use the five elements of the planet to serve sustainability, to brainstorm on energy efficiency, water preservation, and efficient building materials and how to use them in a specific environment and to think about the needs of all the residents, other than living and working in a building.



A sustainability consultant from PLANT in Sweden, Mrs. Pinar Dağıstan, discussed the topic of "Building with Wood: A Comparative Life Cycle Analysis Study". The final presentation of the day 1 was shared by Dr. Effi Staiou, from Yaşar University.

Dr. Staiou introduced the SUSTAIN-CE Virtual Learning Environment (VLE) and explained how the users can register and use it for their continuous education.



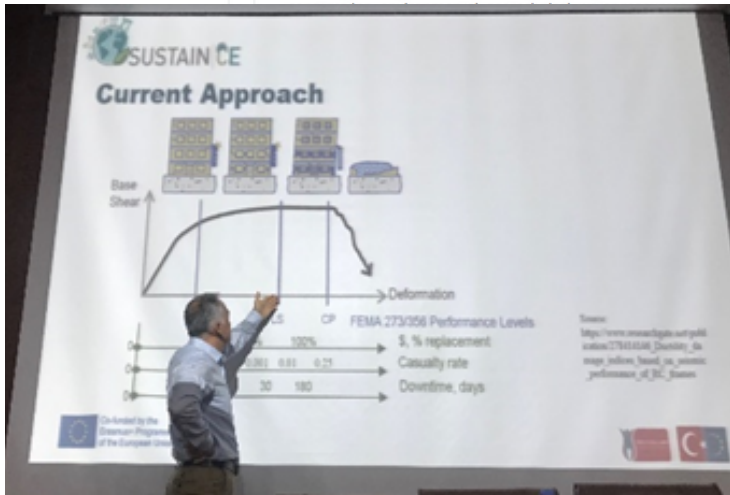


Structural Engineering For a Sustainable World

The second day of the academy was devoted to Structural Engineering for a Sustainable World. The first speaker was Dr. Cemalettin Dönmez from IYTE, discussing "Sustainable and Resilient Structural Design". Dr. Dönmez's presentation focused mainly on contemporary strategies to achieve sustainable and resilient structures.

Dr. Kostas Katakalos, from AUTH, then introduced the consideration of the disassembly in the original design with his presentation focusing on the "Sustainable design using Structural System Disassembly". Prof. Dr. Ozgur Egilmez, from Yasar University discussed including adaptability in the original design of structures as a strategy for possible future usage to avoid obsolescence. His speech was followed by the presentation of Mrs. Helena I. Monteiro from ISQ on the topic of "Sustainable Design and Construction Principles".

Dr. Dönmez shared the second case study of the Academy, which dealt with the conceptual design of three different structures at three different geographical locations and local resource capabilities. Students were asked to provide a discussion about the structural framing of the structures considering local material, labour and expertise availability and resilience related to local natural hazards.



Keynote Speakers

The last day of the academy was devoted to Keynote Speeches and the Case Study presentations. The first speaker Dr. Ilker Kahraman, Chairperson of the Association of Architects Izmir Branch, answered the question ***"Green Building and Materials: How Green they are?"*** in his presentation and covered several aspects associated with green building certificates and sustainable building assessment tools. His presentation was followed by Mr. Murat Dogru's presentation on sustainable buildings, urbanism and infrastructure.



As a part of keynote speaker presentations, Assist.Prof. Dr. Cüneyt Tüzün from Yasar University, presented an alternative solution for mitigating earthquake risk in the buildings through base isolation and showed several examples from buildings with base isolation. Keynote speaker presentations were concluded with the presentation of Dr. Virginia Couch and Dr. Anne Frary, from IYTE on Bionspired Design Teaching Methods.

Case Study Presentations

At the end of the academy, student teams from both IYTE and Yasar University presented their solutions to the case study projects. The Academy was then concluded with the awarding of the 3rd SUSTAIN-CE Pilot Training Academy "Certificates of Attendance" to all participants and a warm greeting from the organizers Dr. Dönmez and Dr. Eğilmez.



NEXT STEPS ...

The next event of SUSTAIN-CE project will be the **Final Conference** that will be organised by Yasar University on **May 12, 2023 in İzmir, Turkey**. The theme of the conference will be Sustainability and Circular Economy in Engineering Education. The conference will host local, national and international stakeholders. The project partners will be presenting on one hand the final outcomes and deliverables of SUSTAIN-CE project and on the other hand opening the discussion about recent developments and trends in Sustainability and Circular Economy in Engineering Education on a European level.

So, if you want to learn more about the **fundamentals and principles of sustainable design and circular economy in structural engineering, water resources engineering, transportation engineering, geotechnical engineering, construction materials and more**; as well as to listen to inspirational Key Note experts discussing several aspects in related topics, join us in the beautiful city of İzmir for the Final Conference of SUSTAIN-CE. Participation, as always, will be free of charge!



Stay tuned, follow us on social media and register for participating in SUSTAIN-CE Final Conference by following the link:
<https://forms.gle/2eMXuRCskR9hvsrK6>

INTEGRATION OF SUSTAINABLE DESIGN AND CIRCULAR ECONOMY CONCEPTS IN CIVIL ENGINEERING CURRICULA



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