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## STUDENT AND STAFF ENGAGEMENT FOR CLIMATE CHANGE: LESSONS FROM THE ILCA PROJECT

Otilia-Maria BORDEIANU<sup>1</sup>, Carmen-Eugenia NASTASE<sup>2</sup>, Lucia MOROSAN-DANILA<sup>3</sup>

<sup>1,2,3</sup>*Stefan cel Mare University of Suceava, 13 Univeritatii St, Suceava, Romania*

**Abstract.** Addressing the pressing issue of climate change requires a collective effort encompassing individuals, communities, and institutions. As centres of learning and innovation, universities play a crucial role in fostering a generation of climate-conscious individuals equipped with the knowledge and skills to tackle climate change effectively. Engaging students and academic staff in climate action activities is paramount to driving sustainable solutions and shaping a more environmentally responsible future.

Student engagement in climate action is crucial: students are the future leaders, decision-makers, and innovators who will shape the world's response to climate change. By actively involving them in climate-related initiatives, we instil a sense of responsibility and ownership towards the environment; additionally, students bring fresh perspectives, creativity, and energy to climate action efforts. Their innovative ideas and solutions can spark groundbreaking advancements in sustainable practices. As educators and researchers, academic staff uniquely can guide and mentor students in climate action. Their expertise in various fields can provide students with the necessary knowledge and tools to tackle climate challenges. Academic staff can play a pivotal role in research and development, implementing innovative solutions to mitigate climate change and adapt to its impacts.

**Keywords:** *climate change, climate action, sustainable solutions, environmental responsibility, climate-related initiatives, universities, students, academic staff, innovation*

**JEL code:** *I23, Q01, Q56*

### ***Introduction***

Academic institutions are responsible for educating and empowering students and staff to address climate change. By overcoming the challenges of engaging students and staff in climate action initiatives, universities can play a leading role in mitigating climate change and building a more sustainable future.

Universities act as incubators for knowledge and innovation, with students and academic staff representing a wealth of talent and expertise [1]. Their active participation in climate action initiatives is essential for several reasons:

- **Knowledge and innovation:** Students and academic staff possess a fresh perspective, specialised knowledge, and expertise in various disciplines. Their involvement brings together diverse perspectives and fosters interdisciplinary collaboration, leading to the development of innovative and effective climate action solutions.
- **Sustainability education and awareness:** Engaging students and faculty in climate action activities provides them with hands-on experience, practical skills, and a deeper understanding of the climate crisis. This knowledge and expertise empower them to become agents of change, promoting sustainable practices within their communities and beyond.
- **Community engagement and mobilisation:** Actively involving students and academic staff in climate action initiatives helps raise awareness and encourage broader community engagement. Their involvement serves as a catalyst for collective action, mobilising individuals and organisations to address climate-related challenges.

Stefan cel Mare University of Suceava, Romania (USV) is committed to addressing climate change and promoting sustainable development. The university has initiated several initiatives to

engage students and academic staff in climate action, including the Innovation Laboratory for Climate Actions - (ILCA) project [2].

The project has developed a variety of engagement processes to involve stakeholders in climate action initiatives [2]. These include:

- *Workshops and seminars*: To educate stakeholders about climate change and to discuss potential solutions (Roadmap example, Siret Hub workshop).
- *Competitions and challenges*: The project encourages stakeholders to develop innovative solutions to climate change.
- *Community events*: The project organises community events to raise climate change awareness and promote sustainability practices.

The ILCA project at Stefan cel Mare University of Suceava demonstrates the crucial role that universities can play in engaging students and academic staff in climate action. By overcoming the challenges and harnessing the potential of these stakeholders, universities can contribute significantly to addressing climate change, as shown in Figure 1.



**Figure 1. Role of Stefan cel Mare University (Role of HEIs)**

### ***Fostering Sustainable Solutions through Engagement***

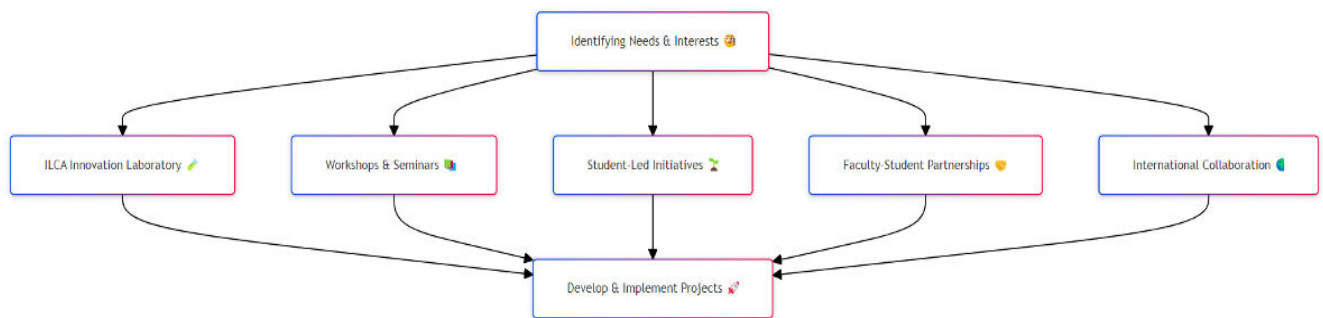
SCMUS's ILCA project exemplifies the transformative power of student and academic staff engagement in climate action. The project aims to integrate sustainability into the university's curriculum, research, and operations, and it has successfully implemented several strategies to engage its stakeholders:

- *multidisciplinary climate action workshops*: The ILCA team organises workshops that bring together students, faculty, and experts from various disciplines to discuss climate change issues and explore potential solutions. These workshops foster collaboration and cross-pollination of ideas, leading to innovative and holistic approaches to sustainability [3].
- *sustainability-focused research projects*: ILCA encourages faculty to incorporate sustainability themes into their research projects, providing funding and support for interdisciplinary research that addresses climate-related challenges [4]. This research contributes to developing knowledge and solutions that can be applied to real-world problems.
- *green campus initiatives*: ILCA spearheads initiatives to promote sustainable practices within the university campus, such as waste reduction, energy conservation, and green building design. These initiatives demonstrate the university's commitment to sustainability and inspire students and faculty to adopt eco-friendly practices in their daily lives [5].

### ***ILCA's Strategies for Engaging Students and Academic Staff***

The ILCA project employs a multi-pronged approach to engage students and academic staff in climate action [6]:

1. Dedicated activities within the ILCA Innovation Laboratory: The ILCA project provides a physical space for students and faculty to collaborate, conduct research, and develop innovative solutions to climate change challenges.
2. Organizing workshops and seminars: Regular workshops and seminars equip students and faculty with the knowledge and skills necessary to understand and address climate change.
3. Promoting student-led initiatives: The ILCA project encourages and supports student-led initiatives focused on climate action, providing them with resources and mentorship.
4. Faculty-student partnerships: The project facilitates partnerships between faculty members and students, enabling them to collaborate on research projects and community engagement activities.
5. Promoting international collaboration: The ILCA project encourages international collaborations to share knowledge, expertise, and best practices in climate action.



**Figure 2. Engagement processes**

This flowchart outlines the various engagement processes employed by the ILCA project, from identifying needs and interests to developing and implementing projects. In conclusion, the Stefan cel Mare University of Suceava has demonstrated a commendable commitment to engaging students and academic staff in climate action initiatives through the ILCA project. By fostering a culture of sustainability and empowering individuals to make a difference, the university is paving the way for a more environmentally conscious future.

Importance of Student and Academic Staff Engagement in Addressing Climate Change results also from the following aspects:

**1. Knowledge dissemination:**

- Students and academic staff act as key knowledge disseminators within institution.
- They have the potential to spread awareness about climate change, its impacts, and potential solutions.

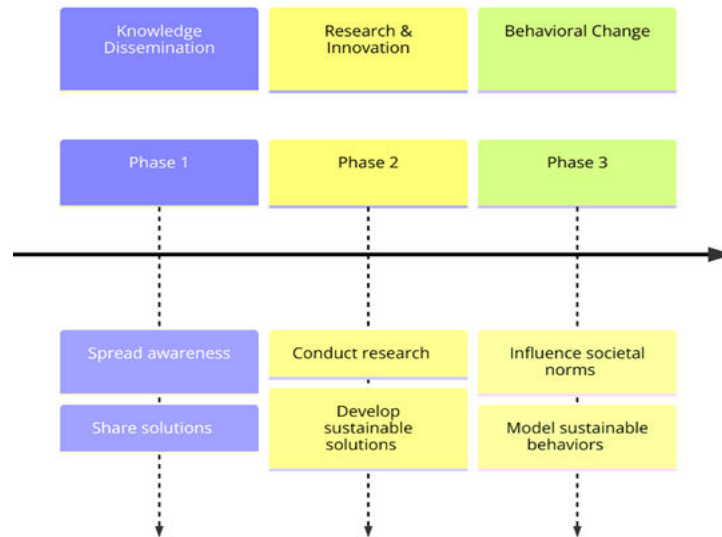
**2. Research and innovation:**

- USV together with its partners are hubs for research and innovation.
- Engaging students and academic staff can lead to the development of sustainable solutions through research projects and academic initiatives.

**3. Behavioural change:**

- Students, as the future workforce, can influence societal norms and practices towards sustainability.
- Academic staff can model sustainable behaviours, contributing to a culture of environmental responsibility.

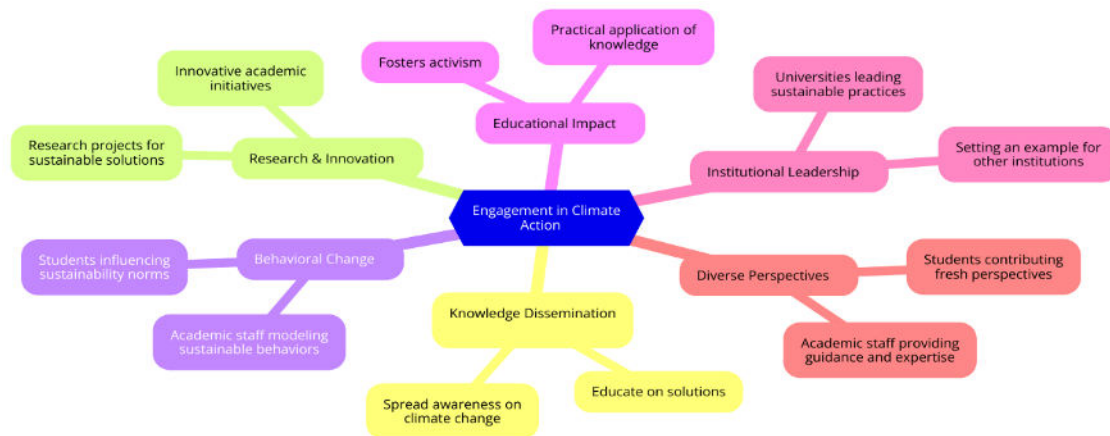
Moreover, involvement in climate action activities enhances the educational experience, providing practical applications of theoretical knowledge. It fosters a sense of responsibility and activism among students.



**Figure 3. Addressing climate change**

Universities and academic institutions can demonstrate leadership in sustainable practices by involving their staff and students. This sets an example for other institutions and contributes to a broader societal shift towards climate consciousness. Students bring fresh perspectives and creativity to problem-solving, contributing to a more comprehensive approach to tackling climate issues. With their expertise, academic staff can guide and mentor students, ensuring the quality of initiatives.

In the following diagram, we represent the mind map illustrating the importance of Student and Academic Staff Engagement in Climate Action:



**Figure 4. Importance of student and academic staff engagement in climate action**

***Designing Engaging Programmes***

The first step in designing an attractive programme is to identify the interests and motivations of students and staff. This process involves a careful exploration of their needs and preferences regarding climate change, the results of which can guide the direction of the programme.

The Programme take into account the diversity of knowledge levels of students and teaching staff. Therefore, different modules and levels of complexity can be developed so that each participant can contribute and feel challenged appropriately.

Educational technologies can add interactivity and appeal to climate action programmes. The integration of online platforms, simulations, mobile applications, and other digital tools can facilitate learning and make content more accessible and attractive.

Including accurate and relevant examples can make programmes more concrete and applicable. When participants see concrete examples of climate change measures and solutions, they can better understand the impacts and are more willing to participate actively.

The programme should be flexible and allow personalisation of the educational experience according to students' and faculty's individual interests and needs. This will create more relevant and engaging educational experiences.

Including interactive and challenging activities such as debates, simulations, role-plays, and open discussions will encourage participants to play an active role and express their views and opinions on climate action.

Optional courses or additional materials may be offered to tailor the programme content to individual skill levels and interests.

The programme can be designed to bring together different experiences and expertise and encourage collaboration between various disciplines. This interdisciplinary aspect can provide a broader climate-issue perspective and promote innovative solutions.

Integrating practical projects into the programme allows participants to apply theoretical knowledge in a practical context. Working on projects related to climate action develops practical skills and a concrete understanding of the issues.

Field trips, study visits, and field activities provide participants with hands-on experience and direct exposure to climate change issues. These experiences contribute to better understanding, awareness and motivation for participation.

Stefan cel Mare University of Suceava (USV) has implemented several strategies and approaches to designing engaging programs on climate change action. These programs are tailored to appeal to students and academic staff, considering their interests, skills, and areas of expertise.

Focusing on real-world problems through interdisciplinary collaboration, project-based learning, and hands-on experiences makes it possible to design engaging and effective programs on climate change action. In this way, USV has created a learning environment that motivates students and faculty to take action on climate change.

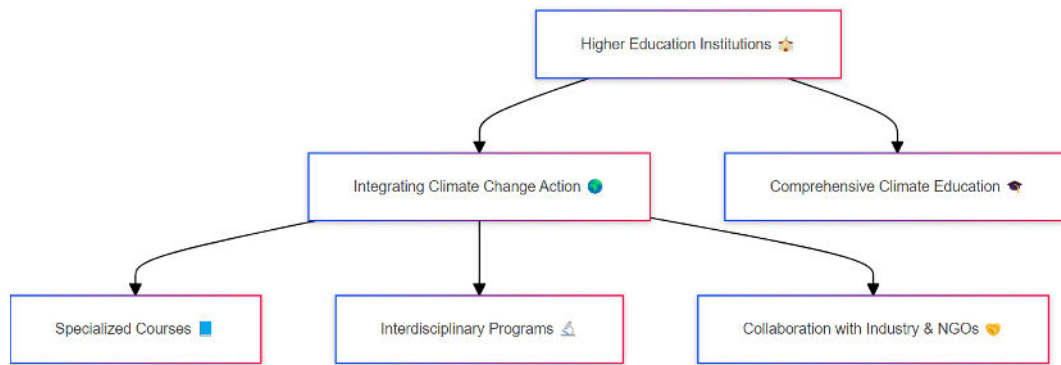
#### ***Integration into curricula***

Starting with the ILCA Project and the courses organised—especially the digitalisation course—we identified the need to launch a new master's program, which we successfully accredited and for which we have already enrolled students for the academic year 2024-2025.

The master's program "Digitalization and Data Science" is designed to meet the labour market's emerging requirements in the digital transformation era and big data. This program addresses essential aspects of digital processes such as cybersecurity, data analysis, artificial intelligence, and digital project management. It rigorously tackles both theoretical and practical aspects of digitalisation, providing students with the skills needed to navigate and innovate in a constantly changing digital landscape. The "Digitalization and Data Science" master's program trains specialists capable of managing and leveraging big data, implementing digital transformation solutions, and addressing the ethical and legal challenges of the digital era. The program also integrates the development of transversal skills necessary for adapting to diverse professional contexts. Entrepreneurial skills offer training in the field of digital entrepreneurship, while Digital Project Management equips students with the skills needed to manage resources and teams in digital transformation projects efficiently [7]. A key aspect of the program is the practical integration of theoretical knowledge through internships and the final dissertation project. These activities allow students to apply the knowledge gained in real-world settings, providing them with a concrete perspective on implementing digitalisation and Data Science projects within organisations [8].

Examining various aspects of student and staff involvement in combating climate change and emphasising the importance of training and capacity building in the context of climate change, several lessons have emerged that need to be learned. How higher education institutions can lead the academic community in addressing this global issue was examined. Discussions focused on integrating climate change action into educational programs and highlighted the need for specialised courses, interdisciplinary programs, and collaboration with industry and NGOs to provide comprehensive education on climate change.





**Figure 5. USV addressing global issues**

Innovative teaching methods, such as problem-based learning and service learning, which encourage students and faculty to engage in finding practical solutions to climate change challenges, were also discussed. Additionally, ways to develop skills and abilities through training programs, workshops, and seminars are analysed, emphasising the importance of adapting to sustainable technologies, understanding climate policy, and developing practical skills [9]. The necessity of promoting a proactive attitude by addressing specific mitigation and adaptation measures through simulations, practical projects, and community involvement was also highlighted.

**Conclusion**

In conclusion, it is evident that education and continuous training are crucial tools in mobilising and preparing students and academic staff to address climate change. By promoting an interdisciplinary approach, innovation in the teaching process, and collaboration with external stakeholders, higher education institutions can play a significant role in creating an academic culture sensitive to climate issues and in developing professionals prepared to contribute to sustainable solutions for the future. The pivotal role of students and academic staff in addressing the climate crisis cannot be overstated. By fostering a culture of climate action within universities, we empower future leaders to drive sustainable solutions and contribute to a greener planet. However, concerted and strategic initiatives are imperative to maximise the impact of these efforts.

By working together, students, faculty, and institutions can create a sustainable future where education and action converge to address the climate crisis.

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