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Policy brief “Towards green university”

D5.2 Stakeholders made aware of green university policy Towards green university

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Abstract	A policy brief Towards Green University will be jointly developed by P2 and P6, summarizing the main project topic of creating green universities and offering recommendations, best options, and justifications for greening initiatives. It is intended for anyone interested in establishing a policy framework for prospective green universities, communities, and transitions. The brief aims to secure the project's sustainability by promoting it to a wider audience.
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Summary

This policy brief outlines a strategic framework for Western Balkan higher education institutions (HEIs) to develop and implement green policies, emphasizing sustainability in university operations. Funded by the Erasmus program under the GROWTH project, the document aims to raise awareness about the importance of integrating sustainability into the core functions of HEIs. It discusses the global urgency of climate change, aligning with the European Green Deal and the United Nations' Sustainable Development Goals.

The brief examines current trends and practices in sustainability within higher education, advocating for a holistic approach that encompasses governance, curriculum, research, and daily operations. It highlights the need for comprehensive green metrics to measure progress and effectiveness in sustainability efforts, such as energy management, waste reduction, and sustainable transportation.

Finally, the brief concludes that a successful transition to a green university model requires dedicated leadership, effective communication, and cultural shifts among stakeholders. By prioritizing sustainability, WB HEIs can significantly contribute to environmental preservation and foster a climate-neutral future.

1. Introduction

A green policy, also referred to as an environmental or sustainability policy, aims to minimize environmental impact by advocating responsible resource utilization¹. Such policies intertwine environmental consciousness with cost reduction and form a crucial part of broader sustainability initiatives. The European Green Deal encompasses various initiatives aimed at reducing carbon emissions and promoting sustainability across different sectors. As part of this effort, implementing green policies becomes imperative. These policies advocate for responsible resource utilization and are essential for mitigating environmental impact. By aligning with the goals of the European Green Deal, green policies play a crucial role in driving the transition towards a more sustainable and climate-neutral future.

As higher education institutions (HEIs) leave significant economic, social, and environmental footprints, it's expected that universities would adopt a more comprehensive and strategic approach to greening. This involves embedding sustainability efforts across Governance/Management, Curriculum/Training, Research/Innovation, Operations/Daily Practice, and Outreach/Service. Greening of HEIs encompasses reducing environmental impacts from campus decisions, raising environmental awareness within the university community.

2. Aim of this Brief

The aim of this Brief is to analyze current green and sustainability trends in universities worldwide and offer insights for WB HEI's development of its green policy outlined in the Towards green university strategy. It forms part of a series addressing Higher Education Issues, aiming to identify factors influencing WB HEI's long-term sustainability, thus informing strategic planning at campus and university-wide levels.

3. The Global Imperative for Sustainability and the Role of Universities – an overview

In the global context, the urgency of addressing climate change is reinforced by scientific consensus, aligning with the goals of the European Green Deal and the 17 Sustainable Development Goals set by the United Nations. Climate change poses multifaceted challenges, impacting health, food security, and economic stability, necessitating both adaptation and mitigation efforts alongside enhanced climate science communication.

¹ Brundtland Commission 1987: <https://www.are.admin.ch/are/en/home/media/publications/sustainable-development/brundtland-report.html>

Discussions surrounding climate change have catalyzed dialogue on the green economy and sustainable policies, with stakeholders mobilizing towards a low-carbon, climate-resilient economy. This transition, in line with the European Green Deal, demands collaboration across sectors to create an enabling environment for sustainable investment and development.

Universities, as key players in education and research have a crucial role in promoting sustainability and advancing sustainability agendas. Through curriculum updates and research initiatives aligned with the Sustainable Development Goals, universities equip students with the knowledge and skills needed for green growth and eco-innovation. Additionally, universities contribute to community and government initiatives through outreach and service programs, supporting the implementation of sustainability practices.

By implementing green policies, universities integrate sustainability principles into their operations, contributing to broader environmental objectives. This proactive approach not only enhances competitiveness but also resonates with environmentally conscious students. Ultimately, universities serve as leaders in sustainability, driving progress towards addressing climate change and fostering a seamless transition from theory to practice.

3.1. Analysis of current green and sustainability trends in universities worldwide

The global movement toward sustainability has significantly influenced higher education institutions (HEIs), prompting them to adopt green policies and practices that reduce their environmental impact and promote social responsibility. This analysis explores the current trends in sustainability initiatives among universities worldwide, highlighting key strategies and challenges faced in the quest for greener campuses.²

Incorporating sustainability in governance and management

A notable development is the embedding of sustainability into the structure and processes of governance and management of the universities.³ The Sustainable development goals implementation strategies are increasingly being pursued by the adoption of exclusive offices and committees designated for sustainability in many regions. This new approach is underpinned by the growing consensus that sustainability has to be internalized across all aspects of the university's mission, vision, and strategy. More and more universities are employing the position of CSO to spur such efforts, encouraging integration of other fields, and promoting the sustainability approach throughout these activities.⁴

² Kauffman, C. (2019). The Role of Higher Education in Promoting Sustainable Development. *Journal of Sustainability Education*, 22

³ Svanström, M., et al. (2008). Towards a Sustainability Assessment Framework for Higher Education. *International Journal of Sustainability in Higher Education*, 9(2), 108-117

⁴ Lozano, R., et al. (2015). A Holistic Approach to Sustainability in Higher Education: A Case Study of a University. *Sustainability*, 7(12), 16506-16529

Curriculum formulation and educational projects

Every new educational trend embraces the cross-cutting aspect of the education which sustainability is. New courses and degree programs that target sustainability, environmental science and climate change are being developed in universities to prepare students for green employment opportunities.⁵ Current curricula are also being revised to incorporate issues of sustainability so that all the students graduating have a basic knowledge of environmental issues. In addition, substantial numbers of colleges and universities are actively encouraging experiential opportunities for their students such as sustainability internships, service learning or research projects to solve real world problems.⁶

Sustainable campus practices

More and more institutions of higher learning are integrating sustainability into every facet of their operations. Investment in energy efficiency, waste minimization, and use of environmentally friendly modes of transport are some of the steps that are being taken. Syllabus of these institutions, include upgrading existing buildings to meet environmental standards, using renewable energy sources like wind and solar, as well as improving waste management through proper recycling and composting. Sustainable transport programs are also developing, including bike sharing, charging stations for electric cars, and better access to public transport on the campus, thus reducing the carbon footprint of commuting to and from the campus.⁷

Research and innovation in sustainability

Within universities, research is very important for promoting sustainability practices. More and more institutions are concentrating their research on sustainability issues and solving problems like climate change, resource allocation, and social justice. There is a synergy of efforts among universities, private sector, and government institutions in promoting the development of new green technologies and sustainable practices. Other than traditional research activities, universities are also establishing centers focusing on sustainability studies that help advance knowledge but allow students and staff to carry out collaborative research.⁸

Community engagement and outreach

Universities are recognizing the importance of community engagement in their sustainability efforts. Many institutions are partnering with local governments, non-profit organizations, and businesses to promote sustainable practices beyond the campus.⁹ Outreach initiatives often involve community education programs, sustainability workshops, and public events that raise

⁵ Barth, M., & Timm, J. (2011). Higher Education for Sustainable Development: The Role of Curriculum and Teaching. *Sustainability*, 3(2), 226-246

⁶ Thomas, I. (2015). Curriculum for Sustainability: A Higher Education Perspective. *Environmental Education Research*, 21(4), 580-603

⁷ Hsu, C.-W., & J. Chao, C.-C. (2015). A Study of University Sustainable Campus Operations. *International Journal of Sustainability in Higher Education*, 16(2), 178-196.

⁸ Leal Filho, W., et al. (2018). Sustainability Research in Higher Education Institutions: A Systematic Review. *International Journal of Sustainability in Higher Education*, 19(1), 23-48.

⁹ Scott, W. A. (2015). Sustainable Development and University Community Engagement: A Review. *International Journal of Sustainability in Higher Education*, 16(4), 445-465

awareness about environmental issues. By engaging with their communities, universities can amplify their impact and contribute to the broader movement toward sustainability.¹⁰

4. Advancing Sustainability in Higher Education: Trends and Practices – Discussion and Analysis

As central hubs for both education and research, universities play a vital role in advancing sustainable development initiatives. Recognizing this, international sustainability policies and declarations have spurred universities to integrate sustainability into their operations, teaching, research, and public service initiatives. This trend is informed by global strategies aimed at mitigating climate change and advancing sustainable development goals.

However, sustainability efforts on campuses often adopt divergent approaches, focusing either on operational eco-efficiency or environmental studies. The imperative lies in developing a holistic green policy that integrates sustainability across all university facets, from curriculum and research to strategic planning and resource management.

While strides have been made in operational sustainability, particularly in energy efficiency and renewable energy, progress in teaching, research, and outreach remains slower. Addressing this requires a concerted effort to embed environmental sustainability within university governance and administrative functions.

Sustainability in higher education institutions in Germany encompasses a multifaceted approach aimed at reducing environmental impact, promoting social responsibility, and fostering sustainable development. Key trends and practices include comprehensive green campus initiatives focused on energy efficiency, waste reduction, and sustainable transportation options. German universities are integrating sustainability principles into their academic curriculum, offering courses and research opportunities on topics such as renewable energy and climate change mitigation. Research institutes within universities are conducting groundbreaking studies to address pressing sustainability challenges, often collaborating with government agencies and industry partners. Student-led initiatives play a crucial role in promoting sustainability on campus, while partnerships and collaborations with external stakeholders further advance sustainability goals. Additionally, universities are adopting green procurement practices and publishing annual sustainability reports to transparently communicate their environmental performance. These trends and practices reflect a commitment to environmental stewardship and contribute to Germany's leadership in sustainable higher education. Similar initiatives are emerging across Europe, with universities implementing measures to reduce consumption and account for environmental impact.

¹⁰ Waterman, A. S., et al. (2013). Promoting Community Engagement in Higher Education: A Practical Guide. *Journal of Higher Education Outreach and Engagement*, 17(3), 73-101.

By committing to carbon reduction targets and investing in sustainable practices, universities contribute significantly to mitigating their carbon footprint and advancing global sustainability objectives. Through a multifaceted approach encompassing operations, teaching, research, and outreach, universities serve as catalysts for sustainable development, shaping a more environmentally conscious future.

In tandem with the implementation of sustainability policies and strategies within higher education institutions (HEIs), numerous ranking systems have emerged to gauge the effectiveness of colleges and universities in fostering sustainable practices, policies, and programs. These rankings serve as valuable benchmarks for HEIs, offering a structured framework for evaluating their sustainability endeavors in comparison to their counterparts. Moreover, they serve as diagnostic tools, highlighting areas where improvements are needed, thus facilitating targeted interventions for enhancing sustainability efforts. Notable examples of these rankings include:

1. **UI GreenMetric World University Ranking:** This ranking evaluates universities worldwide based on their commitment and performance in advancing sustainability across various dimensions, including infrastructure, energy and climate change, waste management, water usage, and transportation. It provides a comprehensive assessment of campus sustainability initiatives and allows institutions to benchmark their efforts on a global scale.
2. **THE Impact Rankings:** Developed by Times Higher Education (THE), these rankings assess universities' contributions to addressing global challenges through their research, stewardship, and outreach efforts. Sustainability is one of the key criteria considered, alongside factors such as social justice, gender equality, and quality education. THE Impact Rankings provide a holistic view of universities' sustainability performance and their societal impact.
3. **GreenMetric by Webometrics:** Similar to UI GreenMetric, this ranking system evaluates universities' environmental sustainability efforts but also considers their digital presence and online resources related to sustainability. It examines factors like green spaces, eco-friendly infrastructure, environmental policies, and online sustainability communication. GreenMetric by Webometrics offers insights into universities' online engagement and sustainability outreach.
4. **Sierra Club's Cool Schools Ranking:** Focused on institutions in North America, this ranking assesses colleges and universities based on their sustainability initiatives, policies, and practices. It evaluates factors such as sustainability curriculum, campus energy usage, waste management, transportation options, and environmental activism. Sierra Club's Cool Schools Ranking provides a regional perspective on sustainability efforts in higher education.
5. **Green Campus Index:** Developed by the Association for the Advancement of Sustainability in Higher Education (AASHE), this index evaluates colleges and universities in the United States and Canada based on their sustainability performance in various categories, including curriculum, energy, transportation, waste, water, and administration. It offers a comprehensive assessment of campus sustainability efforts and helps institutions identify areas for improvement.

5. Recommendations – Green metrics

In the process of developing a "Towards Green University Strategy," it's essential to consider a range of green indicators that can effectively measure progress towards sustainability goals. These indicators serve as benchmarks, allowing universities to track their environmental performance and identify areas for improvement. Some possible green indicators to include in such a strategy might encompass aspects like energy consumption and efficiency, waste management practices, water usage and conservation efforts, greenhouse gas emissions, transportation policies promoting sustainable commuting options, procurement practices prioritizing environmentally friendly products, biodiversity conservation initiatives on campus, and integration of sustainability principles into the curriculum and research activities.

The WB HEI's might consider assessing its advancements towards sustainability across the following areas:

EXAMPLES OF INDICATORS		
Area	Purpose	
Recycling	Percentage of paper/cardboard that is recycled	
	Number of paperless procedures introduced	
Energy Management and Consumption	Electricity consumption generated from non-renewable and renewable sources	Promotion of the conservation of our natural resources
	Reduce greenhouse gas emissions per student, per square foot, and overall	Greenhouse gas emissions
Building	Percentage of buildings/classrooms/space retrofitted with green elements	Energy consumption for cooling contributes to greenhouse gas emissions. There are opportunities for constructing and renovating buildings to maximize efficiency and promote health.
	Percentage of new green buildings	
Transport and Mobility	Transport Mode of transport of staff and students	Reducing greenhouse gas emissions that impact on the environment while promoting healthier travel options
	In campus promotion and services for green transport	Developing a culture of micromobility and a healthy lifestyle
Procurement	Percentage of expenditure on products that meet environmental certification	Shows the steady increase in total purchases of environmentally preferable or energy star products (appliances, electronics, lighting fixtures, and more).
Campus Policies and Actions	Green/Sustainability/LCD University policy implemented	The university has a long term sustainability plan.
	Campus Sustainability Groups	University groups dedicated to and champions for sustainability or 'green'
	Community Service Participation	Measure the annual community service participation of University faculty and staff.
Teaching and Learning	Environmental or Sustainability focused courses or study programs	Identify programs/courses/learning outcomes with sustainability and green focus

		or content and which would fulfill one of the key attributes of a graduate - socially, culturally and environmentally responsible.
Research	Sustainability Research Identification	Identify research related to sustainability and green practices (published books, papers, attendance to conferences, organizing conferences, etc.)
	Faculty Involved in Sustainability Research	

By incorporating these diverse indicators, universities can comprehensively assess their environmental impact and work towards creating a more sustainable future.

6. Conclusion

In transitioning towards a green policy, WB HEIs should prioritize embedding sustainability principles within its core framework, guided by the interconnected pillars of sustainability. This entails addressing Governance/Management, Curriculum/Training, Research/Innovation, and Operations/Daily Practice. Such a policy demands not only an Operational Plan and performance metrics but also dedicated champions, effective communication, and change management strategies. Given that many initiatives require behavioral shifts and cultural transformations, these elements are essential for successful implementation.

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