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PROFEEDBACK POLICY BRIEF

THE ROLE OF HIGHER EDUCATION INSTITUTIONS IN ADVANCING THE INTERNATIONAL DECADE OF SCIENCES FOR SUSTAINABLE DEVELOPMENT (2024–2033)

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1. Summary

Higher Education Institutions (HEIs) are vital nodes in the global knowledge space for sustainability. Beyond their core educational role, they provide infrastructure, research capacity and tangible, intangible assets, to link internal processes with international sustainability agendas. This policy brief explores this role in the context of the International Decade of Sciences for Sustainable Development (IDSSD) (2024–2033). It provides an overview of the readiness of European HEIs, based on five dimensions: curricula integration, research orientation, open science practices, societal engagement, and policy alignment, through qualitative evaluation of existing literature, policy frameworks and expert observations. The results indicate limited curricular cross-disciplinary integration and the need for more mission-driven programs. While open science practices are growing, to increase societal engagement systematic structures are required. Policy alignment is fragmented and varies across countries and institutions. To be active players in the IDSSD, European HEIs can build on the existing contributions, such as the United Nations Decade of Education for Sustainable Development (DESD) (2005–2014) and Sustainable Development Goals (SDGs) and strengthen inter-institutional policy coherence with European Union policy frameworks.

2. Background

The United Nations General Assembly proclaimed the period 2024–2033 the International Decade of Sciences for Sustainable Development, led by UNESCO. This Decade presents a unique opportunity to unlock the full potential of science in pursuing sustainable development and strengthen worldwide scientific cooperation (International Decade of Sciences for Sustainable Development (2024-2033) | Science Decade). The document “Fostering Science for All: International Decade of Sciences for Sustainable Development, 2024-2033 emphasizes the need for science systems to embrace a more transdisciplinary approach to problem-solving; to generate science that can accelerate the drive for sustainable development; to build trust in science, to make science systems more responsive to societal needs and to embrace a more

transdisciplinary approach to problem-solving (UNESCO, 2024). Furthermore, IDSSD aims to advance scientific knowledge to accelerate progress towards the SDGs and beyond. The IDSSD builds upon the foundations laid during the DESD, which fostered the integration of sustainability into education systems and promotion of ESD in curricular and extra-curricular activities (Žalėnienė and Pereira 2021), creating the basis for the SDGs, especially SDG4-Quality Education (UNESCO, 2021).

During this decade, European Universities strengthened their institutional commitments to sustainability, by adopting strategies, launching campus greening initiatives, and involving in many international agreements and partnerships (e.g. the Bologna Charter, The Halifax Declaration, the Talloires Declaration, Copernicus Charter for Sustainable Development, Global Universities Partnership on Environment and Sustainability (GUPES), European University Alliances under Erasmus+, such as CIVIS and Una Europa, etc). However, the main accomplishment is a wide integration of ESD into curricula across a broad range of disciplines (Mokski, 2023; UNESCO, 2014). European universities have developed interdisciplinary courses, established research centers, launched sustainability-focused degree programs, and integrated sustainability principles (e.g. University of Bern, Switzerland, Leuphana University in Germany, Gothenburg University, Sweden, etc.). Furthermore, HEIs contributed to the monitoring and evaluation of ESD practices, developing methodologies for assessing the integration and impact of sustainability initiatives (UNESCO, 2018).

During the DESD, through a unique initiative, the Regional Centers of Expertise (RCEs) promoted by the United Nations University in Japan (197 worldwide, over 43 in Europe, in Germany, France, Portugal, Sweden, and the United Kingdom, Albania, Belarus, etc.), positioned HEIs as central actors in advancing sustainability education by connecting them with a wide range of actors, such as schools, local governments, civil society, the private sector, etc. Several RCEs were hosted by universities (RCE Graz-Styria, RCE Hamburg, RCE Vienna, etc.), to provide structured platforms for ESD in teaching, research, community engagement and institutional strategies. As a result, universities were integrated into regional sustainability efforts, gained experience in

co-creating knowledge with non-academic partners and helped build the transformative capacity needed for sustainable development (UNU-IAS, 2021).

While the DESD contributed including ESD in all aspects of teaching, the IDSSD aims to mobilize scientific capacities for global sustainability transformation. These existing platforms provide European HEIs with infrastructures and collaborative cultures and transdisciplinary research that can be the basis for this contribution. However, funding, improved impact assessment and reporting frameworks, and support for countries outside the EU are needed (Samhita et al., 2025).

According to the IDSSD strategic plan, educational institutions can integrate the Decade into their activities to enhance science and engineering education and contribute to actionable research programs for the SDGs as part of the global science community (Strategic Plan: International Decade of Sciences for Sustainable Development (2024-2033) - UNESCO Digital Library). Since the adoption of the 2030 Agenda for Sustainable Development in 2015, HEIs have acted on the SDGs, but without any formal educational path, through fragmented cooperation with other actors, mainly through individual initiatives (Shulla and Tase 2025; EU, 2016; Shulla, et. al 2020). The IDSSD, as a strategic extension of the 2030 Agenda, encourages science institutions to play a transformative role in advancing the SDGs.

In this regard, European universities with their diverse academic disciplines and strong international cooperation through networks, can foster links between scientific research and global policy innovation to address societal needs (Leal et al. 2019). Current challenges such as technological advancements, artificial intelligence, etc. call for reshaping the international educational landscape to reflect societal needs, beyond curricula. Although the European HEIs, as hubs of knowledge, can synergize the IDSSD objectives, by advancing cutting-edge research and preparing the next generation of leaders, etc., it is important to assess their readiness through the criteria based on the International Decade of Sciences for Sustainable Development, and draft recommendations that can enforce these commitments.

3. The European HEIs Readiness overview to contribute to the IDSSD

To assess the readiness of European universities in contributing to the IDSSD, a qualitative approach is used, based on existing literature review (recent studies on HEIs and sustainability, EU policy documents and reports on higher education and research, and observations from sustainability-focused university networks) and author's observations. The readiness assessment follows the five dimensions identified in the IDSSD Action Plan: Curriculum Integration, Research Orientation, Open Science Practices, Societal Engagement, and Policy Alignment. Each dimension was evaluated (based on the author's judgement) using two qualitative criteria: status (descriptive) and readiness level (low, medium, or high) used in organizational and policy evaluation (Baier et al. 2019; Weiner, 2009).

Table 1 provides an overview of this assessment through a description of the status, readiness level, identified gaps, and relevant EU and Global Policy frameworks.

Dimension (from IDSSD action plan)	**Status** (descriptive)	**Readiness Level** (High/ Medium/ Low)	**Identified Gaps**	**Relevant EU and Global Policy Frameworks**
Curricula integration (Empowering global community through scientific literacy)	Emerging	Medium	Limited cross-disciplinary integration	Council Recommendation on Learning for the Green Transition (2022); European Education Area (EEA); UNESCO ESD for 2030 Framework European Universities Initiative.
Research Orientation (Advancing actionable scientific knowledge for SDGs)	Strong in parts	Medium/ High	Need for more mission-driven programs	European research area - European Commission Horizon Europe (2021–2027); Horizon Europe (HORIZON) | EU Funding & Tenders Portal Erasmus+ Programme (2021–2027); Erasmus+ - 2021-2027; ERA Policy Agenda 2022–2024- Commission adopts proposal for the next European Research Area Policy Agenda 2025-2027 - European Commission; Home - Marie Skłodowska-Curie Actions.

Open Science Practices (Democratizing scientific processes and access to knowledge)	Growing	Medium	Need broader adoption and infrastructures	Council Conclusions on Open Science (2022); European Open Science Cloud (EOSC); UNESCO Recommendation on Open Science (2021); Open Science Policy Platform Report (2020).
Societal Engagement (Engaging societal actors in science advancement)	Mixed	Medium	Need more systematic engagement structures	Science with and for Society (SwafS); HE Innovate Framework; Global University Engagement Monitor (IAU) Engagement Readiness Monitor.
Policy Alignment (Transforming innovation systems to meet societal needs)	Fragmented	Low/ Medium	Varies significantly by country/ institution	Renewed EU Agenda for Higher Education (2017); Bologna Process / EHEA; SDG 17 Partnerships Policy Guidance; The 2030 Agenda for Sustainable Development- UN SDG Indicator Framework; Communication on deepening cooperation within the European Education Area: Addressing policy fragmentation in education, skills, and innovation (COM(2025) 340 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025DC0340; European Commission: Report on the outcomes and transformational potential of the European Universities initiative, 2025, https://data.europa.eu/doi/10.2766/32313.

Table 1. The European HEIs Readiness assessment to contribute to the IDSSD by a description of the status, assessment of readiness level (High/Medium/Low), identified gaps, and relevant EU and Global Policy frameworks according to five dimensions: Curriculum Integration, Research Orientation, Open Science Practices, Societal Engagement, and Policy Alignment.

According to the readiness assessment overview, there is an uneven landscape for HEIs, to contribute effectively to the IDSSD. The research orientation toward sustainability is one of the strongest dimensions driven by EU funding programs, institutional mandates, and global reporting frameworks (OECD, 2022; Leal et al., 2023;

Shulla et al., 2023). Curriculum transformation remains limited in scope and ambition. Despite positive developments, especially around sustainability literacy, implementation is often in isolated programs, with little cross-disciplinary coherence. This emphasizes the need for redesigning curricula to integrate sustainability across faculties and disciplines (OECD, 2021; Erguvan, 2024). Progress in open science is promising. Institutions are increasingly adopting principles of transparency, open access, and collaborative research models. However, disparities remain in infrastructure, data management, and institutional incentives (UNESCO, 2023; Science Europe, 2024). Engaging societal actors in science is complex. While many initiatives are aimed at community outreach, science communication, and SDG-related partnerships, structured engagement mechanisms are still underdeveloped (OECD, 2023; UNU-IAS, 2024). Despite a favorable EU-level framework, the policy alignment remains fragmented. The European Commission report "Assessment of the State of Play for European Higher Education Cooperation", emphasis that uneven implementation of reforms hinders full implementation of cooperation programs (EUA, 2025; Loorbach, 2024). Although EU countries are committed to transnational cooperation in higher education, they rely on diverse approaches to address it (EC, 2025).

4. Conclusions and recommendations

The International Decade of Sciences for Sustainable Development builds on the United Nations Decade of Education for Sustainable Development and extends toward accelerating the implementation of the 2030 Agenda for Sustainable Development. The IDSSD calls for external engagement and global responsibility and requires a science mobilization for global transformation. The European HEIs landscape is promising, but stronger emphasis is needed on policy alignment, mission-driven research, open science, integrated curricula and societal engagement. HEIs can exploit the accumulated knowledge and infrastructure for DESD and the SDGs but go beyond this internal focus. Engaging with the IDSSD provides universities with opportunities for greater international collaboration, ensuring that their research and educational efforts align with these global sustainability agendas.

Recommendations for enforcing the HEIs contribution to the IDSSD, though all five dimensions:

- Participating in calls for initiatives issued by UNESCO (e.g. Second call for initiatives: International Decade of Sciences for Sustainable Development (2024-2033) | Science Decade);
- Stronger participation in the EU funded programs;
- Strengthening collaboration within European networks and global partnerships;
- Exploiting DESD established networks (e.g. RCE European network);
- Integrating IDSSD's objectives into HEIs institutional missions and strategic plans;
- Adjusting curricula to integrate interdisciplinary approach for sustainability;
- Establishing hubs for interaction between scientists, policymakers, students and society, enhancing the societal impact of scientific research;
- Developing monitoring and evaluation mechanism to track HEIs' contributions to the IDSSD;
- Coordinating activities with other institutions involved in IDSSD implementation, at national and international level;
- Promoting student's participation in SDGs and IDSSD related initiatives;
- Ensuring open access to research outputs and investing in infrastructures for open data sharing;
- Investing in training programs for academic staff and researchers on sustainability science, interdisciplinary methods, and science communication;
- Implementing the 17SDGs as a direct contribution to global commitments for sustainability;
- Leveraging European policy context and better utilization of a favorable policy climate.

Recommendations for EU Institutions, aligned across all five dimensions:

- Ensure greater inter-institutional policy coherence and synergies with HEI;

- Expanding funding schemes for interdisciplinary research and SDG-focused academic programs;
- Foster, science-policy interfaces by engaging HEIs in decision-making processes.

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This publication is based upon work from COST Action CA20112 PROFEEDBACK, supported by COST (European Cooperation in Science and Technology). COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation. Visit www.cost.eu