

# *Universities as Catalysts for Sustainable Development: Advancing SDG 3 in Post-Communist and Western Balkan Contexts*

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## **Abstract**

*Post-communist countries, including those of the Western Balkans, continue to face significant public health challenges such as high non-communicable disease (NCD) burdens, workforce shortages, weak preventive services, and limited health literacy. At the same time, universities across the region are undergoing substantial transformation under European integration pressures, offering new opportunities for alignment with the Sustainable Development Goals (SDGs).*

*Purpose: This paper examines how universities in post-communist and Western Balkan contexts can contribute to Sustainable Development Goal 3 (Good Health and Well-Being) by strengthening public health capacity and supporting health system reform.*

*Design: A narrative review and conceptual analysis were conducted using academic literature, WHO and EU frameworks, regional health indicators, and higher education reform trends to identify mechanisms through which universities can advance SDG 3.*

*Findings: Five pathways for university engagement emerged: curriculum integration of prevention and health promotion; interdisciplinary research and digital/public health innovation; community health literacy initiatives; development of healthy and sustainable campus models; and evidence-informed contributions to national health policy and SDG monitoring. Despite challenges such as limited funding, weak research infrastructure, and health workforce emigration, universities remain key actors for long-term health improvement.*

*Research limitations: As a conceptual review, findings may not be generalisable across all institutional settings. Empirical studies are needed to assess implementation.*

*Practical implications: The findings can guide universities and policymakers in aligning curricula, research priorities, and institutional strategies with SDG 3.*

*Social implications: Stronger university engagement can enhance health literacy, equity, and community well-being.*

*Originality: This paper offers an early integrated framework for how universities in post-communist regions can operationalise SDG 3.*

**Keywords:** SDG 3; Western Balkans; Post-communist transition; Universities; Public health; Health promotion

## Introduction

The Sustainable Development Goals (SDGs) have reframed the role of higher education institutions (HEIs) as key actors in national and global development. Universities are no longer only centers of knowledge production; they now operate as strategic institutions capable of shaping public policy, strengthening community well-being, and supporting long-term societal transformation (Findler et al. 2019; Purcell 2019; Leal Filho et al. 2024). This shift is particularly relevant for post-communist and Western Balkan countries, where educational institutions continue to play a central role in nation-building, economic development, and democratic consolidation (Zgaga, 2011; Matache, 2023).

SDG 3 (Good Health and Well-Being) is especially pertinent for the Western Balkans, a region characterized by high premature mortality from non-communicable diseases, limited access to preventive services, fragmented primary health care, significant health workforce emigration, and low levels of health literacy (Gabrani, 2025; Council of Europe Development Bank, 2022; World Health Organization (WHO), 2025). Over the past two decades, universities across the Western Balkans have undergone deep reforms — curricular restructuring, alignment with the European Higher Education Area, increased mobility and quality-assurance mechanisms — which redefined their institutional identity and opened the potential for broader societal engagement, research, and contribution to sustainable development.” (Dhima, 2011; Vukasović, 2012)

This paper examines how universities in the Western Balkans and broader post-communist regions can act as catalysts for health system strengthening, evidence-informed policymaking, health promotion, and community empowerment aligned with SDG 3. Through teaching, research, community engagement, and institutional governance, universities hold unique potential to advance public health and societal well-being.

Higher education systems in the Western Balkans continue to reflect the legacies of post-communist transition. The collapse of communist regimes in the 1990s produced rapid expansion, chronic underfunding, and politicized governance structures, leaving universities with limited research capacity and fragmented quality assurance systems. Although reforms aligned with the Bologna Process have encouraged convergence toward European standards, key challenges such as weak scientific infrastructure and limited investment in research remain visible across the region (EuropaNova 2023; Arenliu Qosaj et al., 2024,).

At the same time, the region faces persistent public health pressures. Studies consistently show high premature mortality from non-communicable diseases, limited preventive services, and significant workforce shortages exacerbated by emigration (European Commission, 2025; IHME, 2024). These systemic constraints undermine progress toward SDG 3 and highlight the need for institutions capable of strengthening public health competencies, generating evidence, and supporting health system reform (Gabrani et al., 2024).

Globally, universities contribute to sustainable development through curriculum innovation, interdisciplinary research, community engagement, and policy support. However, in post-communist settings, such practices remain uneven and often project-based rather than institutionally embedded (WHO Europe, 2021). Despite growing attention to health system challenges and higher education reforms, little research examines how universities in the Western Balkans can act as strategic partners in advancing SDG 3. This gap provides the rationale for the present study.

Post-communist transitions have left a lasting imprint on higher education and health systems in the Western Balkans. Following the collapse of communist regimes in the early 1990s, universities experienced rapid expansion, chronic underfunding, politicized governance structures, and the loss of experienced academic staff. Despite gradual alignment with European standards through Bologna Process reforms, many institutions continue to face weak research capacity, limited scientific infrastructure, uneven quality assurance mechanisms, and underdeveloped collaboration with government bodies. These structural challenges intersect with significant public health pressures, including high premature mortality from non-communicable diseases, limited preventive services, demographic ageing, rural–urban disparities, and ongoing emigration of health professionals. Such conditions constrain the region's progress toward

SDG 3 and underscore the need for institutions capable of strengthening public health competencies and producing evidence to inform health policy. This makes the Western Balkans a region where enhanced university engagement with SDG governance could generate substantial long-term benefits for both health systems and broader societal development.

## Methodology

This study employs a narrative review and conceptual analysis to explore how universities in post-communist and Western Balkan contexts can contribute to advancing SDG 3. The approach synthesizes peer-reviewed literature on higher education, public health, and sustainable development, alongside policy frameworks from WHO Europe, OECD, EU4Health, and national health strategies of Western Balkan countries. Additional sources include regional reports on higher education reform, demographic trends, and health system performance. Rather than providing a systematic review, the methodology prioritizes conceptual integration, drawing together diverse strands of evidence to develop an analytical framework for understanding university contributions to SDG 3 through education, research, community engagement, and institutional governance. This approach is well suited to examining transitioning contexts where empirical evidence remains fragmented and where conceptual clarity can support future empirical work.

## Results

The narrative review identified four major domains through which universities in post-communist and Western Balkan contexts are contributing—or have the potential to contribute—to the advancement of SDG 3 (Good Health and Well-Being). These domains reflect both the structural legacies of the region's higher education systems and the emerging opportunities created through European integration, internationalization, and ongoing sectoral reforms. The review identifies several pathways through which universities can advance SDG 3.

## Education and Workforce Development

First, curriculum integration of public health, health promotion, and sustainability can address gaps in workforce competence and strengthen preventive approaches. Across the Western Balkans, universities continue to serve as the central institutions

for training the health workforce, including physicians, nurses, public health specialists, and allied health professionals. The review indicates that despite this central role, substantial challenges persist. Public health and primary-care training often remain misaligned with contemporary European competency frameworks, in part due to outdated curricula and uneven curricular modernization. Reforms associated with the Bologna Process—such as modularized degree structures, the adoption of the European Credit Transfer and Accumulation System (ECTS) and expanded opportunities for academic mobility—have contributed to improvements in educational organization, though they have not always translated into substantive enhancements in pedagogical content or competencies.

There is evidence of an increasing incorporation of global health perspectives and SDG-related themes within medical and health sciences programs; however, these innovations are applied inconsistently across institutions and countries. Compounding these curricular challenges are persistent shortages of academic staff and high levels of health workforce emigration, both of which undermine institutional stability and constrain universities' ability to scale up high-quality training. Consequently, while universities in the region are making gradual progress toward aligning educational provision with SDG 3 priorities, structural limitations—particularly those related to staffing, resources, and modernization—continue to impede their full potential to support health system strengthening.

## Research and Knowledge Production

Second, interdisciplinary research and innovation, particularly in digital health, epidemiology, and health systems research, offer important opportunities to generate locally relevant evidence.

The review demonstrates that universities in the Western Balkans possess an emergent, yet still constrained, capacity to contribute to research and knowledge production relevant to SDG 3. Despite gradual improvements in research output, the region continues to face significant limitations in scientific infrastructure, research funding, and institutional support mechanisms. Many universities operate with outdated laboratory facilities, restricted access to international databases, and fragmented research governance structures, all of which impede their ability to conduct high-quality, policy-relevant health research. National investments in research and development (R&D) remain markedly below European averages, resulting in limited opportunities for sustained research careers and contributing to the emigration of early-career scholars.

External funding—most notably from Horizon Europe, EU4Health, and COST Actions—has provided important avenues for international collaboration and capacity building, leading to incremental increases in research productivity,

particularly in fields related to public health, noncommunicable diseases (NCDs), and health systems performance. Nonetheless, collaboration between universities and health institutions remains inconsistent and often project-based, reducing the potential for systematic translation of research into policy and practice. Overall, while the region's universities demonstrate a growing research orientation, their ability to generate robust evidence in support of SDG 3 remains significantly curtailed by structural and financial constraints.

## **Community Engagement and Societal Outreach**

Third, universities can contribute to community well-being by engaging in outreach activities, supporting health literacy, and partnering with municipalities and civil society. Universities in the Western Balkans are increasingly recognized as important societal actors with the potential to contribute directly to public health and community well-being. The review reveals a gradual expansion of community engagement activities, including participation in health promotion initiatives, vaccination campaigns, and public education efforts—particularly visible during the COVID-19 pandemic. Many institutions have begun to develop partnerships with municipalities, non-governmental organizations, and local health providers, leading to the establishment of community clinics, public health centers, and student-led outreach programs.

Despite these promising developments, community engagement remains uneven across the region and often lacks formal institutionalization. Activities are frequently dependent on project funding, external partnerships, or individual academic initiatives rather than being embedded within long-term institutional strategies. Health literacy promotion, mental health outreach, and NCD prevention represent emerging areas in which universities are beginning to assume a more proactive role, yet sustained investment and strategic planning are needed to translate these initiatives into durable societal impact. Thus, while universities exhibit growing engagement capacity, the extent to which they can fulfil their potential contribution to SDG 3 remains contingent on strengthening governance frameworks, resources, and institutional incentives for public engagement.

## **Institutional Governance and Leadership**

Fourth, institutions can model healthy and sustainable practices through campus-wide initiatives that promote mental health, environmental sustainability, and safe learning environments. The findings indicate that ongoing governance reforms, internationalization, and European integration processes are reshaping

the institutional landscape of higher education in the Western Balkans. Although universities have made progress toward adopting transparency, accountability, and quality assurance practices aligned with European Higher Education Area (EHEA) standards, many continue to grapple with post-communist legacies, including politicized governance structures, bureaucratic fragmentation, and limited institutional autonomy. These systemic constraints hinder universities' ability to respond effectively to emerging public health and development challenges. At the same time, internationalization efforts—through Erasmus+ mobility, joint degree programs, and participation in European research consortia—have positioned universities as increasingly active contributors to regional cooperation and sustainable development agendas. The adoption of strategic planning processes, research priorities, and quality assurance mechanisms aligned with European norms reflects a gradual shift toward more modern institutional leadership models. However, the depth and consistency of these reforms vary substantially across individual countries and institutions. While universities in the region are moving towards a more strategic and outward-facing orientation, their capacity to exert leadership in advancing health equity and SDG 3 is still shaped by long-standing structural limitations and resource constraints.

Finally, universities can act as policy partners by supporting SDG monitoring, informing health strategies, and contributing to national reform processes. Collectively, these pathways highlight the potential of universities to act as catalysts for health system transformation.

## Discussions

The findings suggest that universities in the Western Balkans are navigating complex institutional transitions while simultaneously being positioned to contribute meaningfully to sustainable development. Persistent barriers including limited research funding, dependence on external donors, politicized governance, and workforce emigration, continue to constrain their capacity. Weak linkages between academia, government, and industry further limit opportunities for coordinated action. Nonetheless, the alignment of SDG commitments with EU integration processes and increasing access to international research networks offer new opportunities for institutional strengthening.

The findings of this review indicate that universities in the Western Balkans occupy an increasingly important position in advancing Sustainable Development Goal 3 (SDG 3), although their capacity to do so remain significantly constrained by structural, financial, and governance-related limitations. This aligns with broader analyses of post-communist higher education systems, which consistently highlight the enduring influence of legacy structures on institutional performance

and reform trajectories (Zgaga et al., 2011; EuropaNova 2023). Similar to previous studies, the present analysis shows that higher education institutions (HEIs) in the region remain marked by underinvestment, politicized governance, and limited research infrastructure, all of which restrict their ability to fulfil expanded societal roles (European University Association, 2022; Dobbins, 2017).

The results demonstrate that universities continue to face substantial gaps in public health and primary-care training. This mirrors findings from comparative studies across the Western Balkans showing that medical and public health curricula often lag behind European competency frameworks and remain insufficiently aligned with contemporary health system needs (Arenliu Qosaj & Bourdeaux, 2024). Although the Bologna Process has facilitated the adoption of modular structures and mobility opportunities, regional studies similarly report that these reforms have been more successful in restructuring degree formats than in improving pedagogical quality or competency-based training (Vukasović, 2014; Zgaga et al., 2013). Additionally, the persistent outflow of skilled academic and health professionals, widely documented in analyses of health workforce migration (WHO Regional Office for Europe, 2025), continues to weaken university capacity to scale up training aligned with SDG 3.

Consistent with previous mapping studies, the review found that universities in the region exhibit limited research capacity, low R&D investment, and fragmented governance frameworks. These constraints parallel broader regional patterns in which weak research ecosystems hinder the production of evidence needed for health policy development and system strengthening (Cowey, L. 2017). At the same time, internationalisation—particularly through participation in Horizon Europe and EU4Health—appears to function as a critical lever for enhancing research collaboration and visibility, echoing conclusions from comparative regional analyses. However, as noted in similar studies, project-based collaboration has not yet translated into sustained institutional research strategies, limiting long-term contributions to SDG 3.

The findings also indicate that universities are increasingly active in community engagement, especially in areas such as vaccination outreach, health literacy promotion, and NCD prevention. This trend has been observed elsewhere in the region, particularly during the COVID-19 pandemic, when universities assumed more visible roles as knowledge intermediaries and public health partners (Arenliu Qosaj & Bourdeaux, 2024). However, as other scholars have argued, community engagement across the Western Balkans often remains ad hoc, project-driven, and insufficiently embedded in institutional strategies (European University Association, 2022). This limits the sustainability and scalability of university contributions to population health and well-being.

The review confirms that governance reforms and European integration processes have begun to reshape the organizational and strategic orientation of

universities. Like prior analyses (Dobbins, 2017; Vukasović, 2014), this study finds that despite formal progress in adopting quality assurance and accountability mechanisms, many institutions still face challenges related to autonomy, political interference, and administrative fragmentation. Internationalization efforts—through Erasmus+, joint degrees, and participation in European networks—appear to offer a pathway for developing institutional capacity and enhancing contributions to sustainable development. This aligns with observations in regional policy analyses which emphasize internationalisation as a catalyst for modernization and improved quality in higher education (EuropaNova, 2023).

## Limitations

This analysis is based exclusively on secondary literature and conceptual synthesis. It does not draw on empirical data from universities or provide comparative case studies across institutions. Future research should examine SDG-related practices within individual universities, evaluate the effectiveness of specific interventions, and include perspectives from key stakeholders such as policymakers, academic staff, and students.

## Conclusions

This review demonstrates that universities in the Western Balkans occupy a strategically important yet structurally constrained position in advancing Sustainable Development Goal 3 (Good Health and Well-Being). While higher education institutions in the region have begun to assume more dynamic roles in health workforce development, research, community engagement, and institutional leadership, their ability to make sustained contributions remains impeded by long-standing post-communist legacies, chronic underfunding, and governance challenges. Comparisons with existing regional studies further confirm that despite meaningful progress—particularly through Bologna Process reforms and expanding international partnerships—persistent deficits in academic staffing, research infrastructure, and quality assurance continue to limit the transformative potential of universities.

The findings underscore that universities are not merely educational entities but increasingly integral components of health and development systems. To fully leverage their contributions to SDG 3, Western Balkan countries will need to prioritize coordinated policy reforms and targeted investments that strengthen institutional autonomy, research capacity, and cross-sector collaboration. Enhancing partnerships between universities, health systems, and local

communities can further support health equity, improve public health literacy, and increase the region's resilience to demographic and epidemiological pressures.

Ultimately, the transition toward more modern, socially responsive universities represents both a significant opportunity and an ongoing challenge. By addressing structural constraints and fostering environments that enable higher education institutions to engage more meaningfully in health promotion and sustainable development, Western Balkan countries can position their universities as essential drivers of progress toward SDG 3 and broader societal transformation.

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