



**Bridging Worlds: Crafting Future-Ready NbS
Curricula for Global Sustainability and Justice**
Report on curricula-building workshop results – Main document.



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Executive Summary

This report addresses the current competency and skill gaps among Nature-based Solutions (NbS) professionals, by proposing a set of impactful experiential and inclusive curricula approaches to higher education and professional training providers in Europe and Latin America. It proposes a NbS professional education curriculum, which encourages participatory learning, where students and professionals engage directly with communities to co-create solutions that are culturally appropriate, ecologically sustainable, and socially just. It calls for re-evaluating and reshaping the pedagogical frameworks, content, and practices to acknowledge and incorporate the rich diversity of knowledge systems, especially those of indigenous and local communities. This also involves critically assessing the narratives and power dynamics inherent in the current NbS concept and practices, ensuring that they do not enforce purely utilitarian perspectives over Nature or overlook the rights and expertise of local populations. By embracing emancipatory pedagogy, acknowledging indigenous and Global South perspectives, and fostering critical thinking and sense of ownership among students, NbS curricula can empower a new generation of professionals capable of driving positive and sustainable change.



Key messages

NbS professional education providers should prioritise the integration of ***diverse cultural values*** and perceptions of nature into their curriculum. A deep understanding of varied concepts surrounding nature is fundamental for effective and inclusive NbS deliverance.

NbS professional education needs to emphasise ***experiential pedagogic approaches*** linked to real-life challenges, and whenever possible, directly engage with local authorities and communities to foster mutual learning. Practical fieldwork, internships, and hands-on projects offer invaluable opportunities for students to produce responsive, and demand-led knowledge and develop essential NbS skills in real-world settings.

Developing ***cross-sectoral competencies***, inclusive methodologies, and evidence-based practices should be the cornerstone of NbS professional education. Equipping learners with communication skills, policy analysis, community engagement, and advocacy, along with design principles, green infrastructure planning, data analysis, ecosystems restoration, will ensure the sustainability and longevity of NbS solutions.

NbS professional education should instil a strong foundation in ***evidence-based*** practices within their curriculum. Teaching learners to critically assess, utilise, and contribute to a robust evidence base strengthens their ability to implement effective NbS solutions and enhance NbS adoption.

NbS higher education providers should establish ***collaborative networks and transdisciplinary partnerships*** among researchers, practitioners, governments, businesses, social movements and communities. Building cross-sector bridges fosters a continuous exchange of expertise, resources, and best practices, enriching NbS education and practice alike.

NbS education providers must prioritise ***adaptable curricula*** that integrate diverse knowledge systems and practical experiences. Flexibility in educational structures allows for the inclusion of evolving NbS methodologies and emerging environmental challenges.

1. Introduction

In both Latin America and Europe, there is an urgent need for updated curricula and innovative pedagogical approaches in higher and professional education, particularly concerning Nature-based Solutions (NbS). As both these regions, despite differences related to their historical, cultural, and socio-economic contexts, grapple with pressing environmental challenges exacerbated by climate change, land conversion, urbanisation, and biodiversity loss, traditional educational frameworks often fall short in adequately preparing future professionals to address these complex issues.

Integrating NbS into professional education curricula from different disciplines is crucial to equip students with interdisciplinary skills encompassing ecology, landscape architecture, urban planning, and sustainable development, as well as arts and humanities. By emphasising hands-on experiences, practical case studies, and community engagement, educational institutions can nurture a new cadre of experts capable of developing, implementing, and advocating for NbS that are contextually relevant, environmentally sensitive, and socially inclusive in both Latin American and European contexts. This shift



in education approaches is essential to foster a generation of professionals equipped to tackle the intricate environmental challenges facing these regions while promoting sustainable and resilient futures.

The present document sparks reflections on higher education and professional training curricula on NbS focusing on students and young careers - the professionals of the future. It builds on the key insights and messages resulting from three CONEXUS “curricula changing workshops”, which explored the perspective from three relevant actors: students, professionals, and recruiters (see detailed description in annex 1). The debate is triggered by key takeaways from the CONEXUS workshops and as well as a Skill Gaps Survey¹ conducted in 2022) by the CONEXUS project. This document is structured according to four main curricula aspects: (i) onto-epistemological dimensions; (ii) pedagogical approaches; (iii) skills and competencies; (iv) curricula content. Through these reflections, CONEXUS seeks to delineate various approaches to higher education and professional development of NbS. The goal is to integrate critical pedagogy, foster interdisciplinary learning, and promote a holistic understanding of NbS that encompasses cultural, social, environmental, and economic dimensions within the context of the living world.

2. The problem of concepts

“Naming is dominating” (Antonio Bispo dos Santos, 2023)

Bina (2020) states that universities face the “persistent problem of unseen biases, unconscious assumptions, unquestioned paradigms, beliefs that stand as barriers to understanding, communication, debate, and co-production of solutions, and that are capable of influencing policy choices without being discussed or questioned”. Not assuming and exposing one’s own bias is a way to perpetuate domination, and, therefore, reenact the colonialist ethos which has been causing our present environmental crisis.

The concept of NbS has become a cornerstone in the international environmental discourse and policy frameworks, yet it is not without controversies and debates. Internationally, the concept is contested primarily due to its broad and sometimes ambiguous definition, which can lead to varied interpretations and implementations across different contexts (Cohen-Shacham et al., 2016). Critics argue that this ambiguity can lead to the misapplication of NbS, where actions may be labelled as 'nature-based' without effectively contributing to biodiversity conservation or sustainable development (Turnhout et al., 2020). Additionally, concerns have been raised about the potential for NbS to facilitate land grabs or the commodification of nature, prioritising economic benefits over ecological integrity and social justice (Fairhead et al., 2012; McAfee, 2012). The international debate extends to governance issues related to NbS implementation and stewardship, especially concerning the marginalisation of local and indigenous peoples in decision-making processes (Díaz et al., 2019). This concern is echoed by CONEXUS partners, as shown by the outputs of the Curricula Changing Workshops and the results of the Skill Gaps Survey (Franco, 2023). Despite these challenges, the concept continues to gain traction, indicating a need for clearer guidelines and more inclusive governance structures to realise its potential benefits fully.

¹ The Skill Gaps Survey is CONEXUS deliverable that evaluated competences and skills needed among NbS professional in Latin America and Europe. The findings are based on the response of over 50 survey participants. More details can be found here: https://engine.conexusnbs.com/sites/default/files/uploads/factsheet_skillsgap.pdf.



The very concept of "Nature" in the definition of NbS poses a nuanced challenge when viewed through the lens of indigenous perspectives. Indigenous communities, with their profound connection to their environments, often contest the conventional dichotomy of "nature" and "culture." Ailton Krenak (2019), a renowned indigenous leader and thinker from Brazil, critiques this conventional separation, advocating for a more integrated understanding of human-environment relationships. He emphasises that indigenous knowledge systems do not recognise a dichotomy between nature and culture, proposing a worldview where humans are part of a larger ecological system, not separate from or superior to it. This perspective challenges the foundational assumptions of many Western-led conservation initiatives, including some of those framed around NbS, by calling for an acknowledgement of the intricate connections between human societies and the natural world. Krenak's work underscores the need to incorporate indigenous ontologies into global environmental policies and practices to ensure they are both equitable and effective.

In this sense, the term "Nature" can be seen as limiting, failing to capture the complex web of relationships and diverse ontological perspectives involving humans and more-than-humans entities. The predominant Western-centric understanding of nature often tends to emphasise a division between humans and nature, overlooking the interconnectedness central to many indigenous worldviews. Thus, critically examining the notion of "Nature" within the NbS concept calls for a more inclusive and culturally sensitive approach that acknowledges and respects the diverse ways in which communities perceive and interact with their natural environments. Such a reassessment is crucial for achieving a truly holistic understanding of NbS that honours indigenous knowledge and possibly, perspectives of more-than-human entities. It includes all forms of life and elements of the natural environment, recognizing their agency, significance, and interconnectedness with humans. This perspective encompasses animals, plants, fungi, microorganisms, as well as rivers, mountains, forests, and ecosystems as entities with their own rights, intrinsic values, and roles within the Earth's systems.

Furthermore, embracing diverse epistemologies can significantly enrich the evolution of NbS curricula and related pedagogical strategies in higher and professional education across Latin America and Europe. By valuing and integrating varied knowledge forms — rooted in indigenous knowledge, local practices, and ancestral wisdom — educational institutions can foster a more holistic understanding on the paths towards planetary health. Recognising the significance of multiple knowledge systems allows for a more comprehensive perspective on bio-interactions (Santos, 2021)², biodiversity conservation, and sustainable development. Incorporating these diverse epistemologies fosters a more inclusive and equitable educational framework, empowering students to understand the interconnectedness between humans and nature and to devise NbS that honour cultural diversity and promote community involvement, in close resemblance to the Nature-based Thinking concept³ (Randrup et al 2020, Mercado et al 2023) developed in the CONEXUS project. This integration not only enhances the educational experience but also equips future professionals with a broader lens through which to address complex environmental challenges while embracing cultural diversity and fostering social cohesion. Embedding justice, inclusion,

² The concept provided by Antônio Bispo dos Santos, a Brazilian peasant, philosopher, teacher, and quilombola leader, stretches the interdependent relationship and equal communal existence of all beings, in contrast to a utilitarian view of ecosystem management.

³ Nature-Based Thinking (NBT) is a problem-solving mindset that sees nature and humanity as indissolubly connected and is ready to work across sectors, disciplines and levels of governance to implement NBS over conventional infrastructure and to advocate and educate for change that supports this transformation.



ancestral cosmivision knowledge, awareness of historical inequities, and contextual adaptability into a transdisciplinary NbS curriculum, based on emancipatory pedagogy, is thus of paramount significance, as elaborated in the following chapters.

3. Pedagogical approaches

In both the Curricula Changing Workshops (annex 1) and the Nature Futures Workshops (Mercado et al 2023) held within CONEXUS project, participants emphasised the need for a careful examination of the promises of NbS to ensure that they align with local priorities and contribute to social, cultural, economic, and environmental benefits. Applying such a critical lens to NbS assessment and monitoring, van der Jagt et al (2022) argue for a politicised assessment approach that facilitates the participation of marginalised groups and the use of citizen science. This approach underscores the importance of including core indicators of environmental justice and ensuring data transparency and accessibility for political lobbying and activism. These are concrete examples on how NbS practitioners can enhance societal impact by integrating a critical and emancipatory perspective into their practice.

In this context, the emancipatory pedagogy rooted in the work of Paulo Freire and other influential thinkers from Latin American social movements holds valuable lessons for both higher education and professional development. Grounded in critical thinking, social awareness, and transformative action (Freire, 1985; Nouri & Seyed, 2014), this pedagogical approach offers a compelling framework for reimagining NbS curricula. Emancipatory pedagogy encourages students to critically examine environmental issues, fostering a deep understanding of societal structures and power dynamics that influence sustainability. By incorporating elements of this tradition, educational institutions can promote a more participatory and inclusive approach to NbS education. Emancipatory pedagogy cultivates a culture of active engagement, interdisciplinary collaboration, and social responsibility among future professionals, equipping them not only with technical skills but also with a profound commitment to addressing environmental challenges while promoting equity and justice in contexts such as Latin America and Europe.

But how can this all be translated into practice within NbS professional education? Rooted in the belief that learning extends far beyond textbooks and lectures, emancipatory pedagogies champion immersive, experiential learning. They emphasise the importance of engaging with the world firsthand, whether through fieldwork, community projects, or practical applications of knowledge. By encouraging students to actively participate in real-world scenarios and owning their learning pathways, these pedagogies foster critical thinking, problem-solving skills, and a deeper understanding of complex issues. Practical and hands-on professional education for NbS could involve place-based learning experiences that encourage critical reflection on the socio-ecological dimensions of environmental challenges and the development of inclusive and equitable NbS in real-life contexts.

In higher education, immersive field studies can offer students practical experiences such as in ecosystem restoration, green infrastructure design, sustainable land management, and environmental justice. Collaborative projects with local governments, communities and NGOs can provide invaluable opportunities for students to engage directly in NbS implementation, fostering a deeper understanding of real-world challenges. Professional development programmes, on the other hand, can emphasise skill-building through practical workshops and simulated scenarios that enable trainees to develop technical expertise in implementing NbS within different settings. These hands-on activities in both higher education and professional training not only equip future professionals with tangible skills but also instil



a profound appreciation for the transformative potential of NbS in addressing environmental issues at local and global scales.

4. Transformative learning for skills building

Designing, implementing, maintaining, and assessing NbS requires consideration of ecological, social and economic dimensions, calling NbS practitioners, researchers, and students to mobilise different value systems, knowledge fields, competencies and skills. Moreover, as an alternative to grey infrastructure, NbS can disrupt conventional built-environment professions, due to NbS' focus on participatory approaches, ecosystem services, and biodiversity benefits.

In environmental science and ecology, professionals can delve deeper into how NbS contribute to ecosystem restoration and management, designing projects that leverage natural processes to mitigate environmental issues. Urban planners and landscape architects can apply NbS principles to create resilient, sustainable urban environments that integrate green spaces, enhance biodiversity, and improve residents' quality of life.

Civil and environmental engineers introduced to an NbS curriculum learn strategies for integrating natural elements into infrastructure projects, like green roofs and wetlands for water treatment, offering sustainable, cost-effective solutions. Professionals in agriculture and agroforestry can apply NbS to enhance soil health, crop resilience, and biodiversity, leading to more sustainable agricultural practices. The public health sector benefits as NbS curricula link ecosystem health to human well-being, advocating for natural solutions to reduce pollution and promote physical and mental health.

In business and economics, integrating NbS into curricula promotes sustainable business models and an understanding of the economic benefits of ecosystem services, crucial for fostering sustainable supply chains and green infrastructure investment. Policy and governance professionals gain insights into formulating and implementing policies that leverage NbS for climate adaptation, disaster risk reduction, and sustainable resource management, ensuring that policies are effective and inclusive.

Educators can integrate NbS principles into their teaching, nurturing environmentally conscious citizens and professionals ready to address future challenges. Professionals in the social sciences and humanities can explore NbS sociocultural dimensions, focusing on equity, justice, and community engagement, and understanding NbS impact on and interactions with local communities, indigenous peoples, and vulnerable populations. Incorporating NbS into professional education across these diverse fields fosters an interdisciplinary approach to environmental stewardship, preparing professionals not only as experts in their areas but also as champions of sustainable and equitable solutions for our planet.

As illustrated, professionals require a comprehensive understanding across disciplines including ecology, environmental science, engineering, and policymaking to effectively design, implement, and manage NbS. Thus, while originating from their main field of expertise, NbS practitioners and researchers also need to comprehend, apply, and often translate knowledge and practices across disciplines and sectors. NbS curricula, therefore, hold transformative potential across a broad spectrum of professional fields, equipping individuals with the knowledge and skills to tackle pressing environmental challenges through sustainable and innovative approaches.



According to UNESCO (2014:65), the top three types of learning most conducive to education for sustainable development are: (i) participatory and collaborative learning, (ii) critical thinking, and (iii) problem-based learning. Within NbS professional education, the fusion of emancipatory pedagogy and transformative learning emerges as a powerful force in developing the skills and competencies crucial for addressing complex environmental challenges. Emancipatory pedagogy, emphasising the challenge of hegemonic structures, guides learners to critically examine societal structures and power dynamics within socio-environmental contexts. Transformative learning, fostering personal and cognitive transformation, involves critically examining assumptions, questioning norms, and embracing new ideas that challenge existing perspectives.

This type of learning transcends mere acquisition of knowledge or skills; it involves a deep internal change in values, beliefs, and behaviour. Often occurring through reflection, critical analysis, and exposure to diverse viewpoints, transformative learning leads to personal growth, enhanced problem-solving abilities, and a broader understanding of complex issues. It empowers individuals to adapt, change, and constructively respond to new situations, fostering greater self-awareness and engagement with the world (Bina & Pereira, 2020).

In this sense, transformative learning plays a pivotal role in developing skills and competencies essential for NbS professional development (Wickenberg et al, 2022) and education. It goes beyond rote learning, focusing on practical abilities crucial for navigating the complexities of NbS. For instance, through summer schools or fieldwork, students can deepen their ecological literacy, mastering environmental data analysis and utilising GIS tools to model NbS impacts. Transformative learning also emphasises communication skills, enabling students to articulate compelling narratives that bridge science and policy, effectively advocating for NbS. Additionally, transformative project-based learning fosters collaboration and community engagement, cultivating partnerships, and fostering inclusive approaches to NbS implementation. Transformative learning moulds resilient professionals equipped with technical expertise and the empathy, creativity, and interdisciplinary thinking needed to tackle the multifaceted challenges of creating sustainable, nature-integrated solutions for a brighter future.

Intertwining both systemic and individual levels, emancipatory pedagogy and transformative learning pave the way for nurturing a spectrum of skills and green competences essential for NbS practitioners — critical thinking, systems thinking, cross-sector collaboration, adaptive problem-solving, reflexive awareness (Bina & Pereira, 2020; Bianchi et al, 2022). This synergistic blend encourages learners to engage authentically, reflect, and act upon the multifaceted challenges of implementing NbS within diverse social and environmental landscapes.

5. Curricula Content

Knowledge and competence gaps have been identified as important barriers to NbS implementation (Kappos et al, 2019). The authors ascertain that “the skills needed to identify and implement NbS are not normally included in the training of the professionals often involved in designing and implementing adaptation solutions (e.g., engineers)” and that project teams “are rarely diverse enough to encompass skills and knowledge from relevant disciplines”. Moreover, the understanding of what skills are required by NbS professionals is a knowledge gap, as illustrated by this question extracted from Kabisch et al (2016):



“What technical knowledge and skills are required for multifunctional urban planning and how can this knowledge be included and interlinked with knowledge on environmental and social systems to produce the best possible synergies for, e.g., climate adaptation and mitigation?”

The workshops and the survey promoted by CONEXUS shed light on what are the knowledge, competencies and skill gaps faced by current NbS professionals. Building on the results, we list below concrete topics structured around specific, actionable areas that collectively cover the multifaceted nature of NbS.

Technical Aspects for NbS Deliverance

NbS Fundamentals and Contributions: Detailed exploration of various NbS types, such as urban green spaces, wetlands restoration, and agroforestry. Examination of case studies demonstrating their impact on addressing climate change, biodiversity loss, and social well-being.

Analytical Tools and Techniques: Training in the use of advanced software and AI for environmental modelling and simulation. This includes Geographic Information Systems (GIS) for spatial analysis, statistical software for data analysis, and simulation models for ecosystem services.

Design and Implementation of Green and Blue Infrastructure: In-depth modules on the principles of designing, operating, and maintaining infrastructure that incorporates natural elements. This includes green roofs, urban forests, rain gardens, and constructed wetlands, tailored to specific ecosystems and NbS categories.

Evaluation and Impact Assessment: Training in the development and application of indicators for assessing the social and environmental outcomes of NbS. This involves studying methodologies for evaluating climate resilience, water management effectiveness, and social co-benefits like health and cohesion.

Project Management for NbS: Comprehensive coverage of project management principles tailored to NbS initiatives, including planning, execution, monitoring, and stakeholder engagement.

Economic Valuation

Cost-Benefit Analysis in NbS Contexts: Detailed examination of economic valuation techniques for comparing NbS and traditional grey infrastructure, incorporating context-specific variables and long-term benefits.

Valuation of Ecosystem Services: Methods for quantifying and monetising the direct and indirect benefits of NbS, including their contribution to social well-being and health.

Governance and Participation

Stakeholder Engagement and Collaboration: Strategies for effective stakeholder engagement, emphasising participatory approaches for involving communities, especially vulnerable groups. Training in stakeholder mapping and the facilitation of cross-sector collaborations.

Entrepreneurship in NbS: Exploration of how social and public entrepreneurship can drive NbS initiatives and sustainable community development. Case studies on successful NbS business models.



Community Empowerment through Participatory Monitoring: Techniques for equipping communities with culturally appropriate tools and knowledge to actively participate in the monitoring and evaluation of local NbS projects.

Policy Analysis for NbS Implementation: Critical analysis of policy frameworks at various governmental levels, assessing their role in supporting or hindering NbS projects. This includes learning how to advocate for policies that enable NbS and sustainable development.

6. Recommendations

As we learned from the sessions above, NbS professional education should explore innovative teaching methodologies that foster critical thinking, creativity, interdisciplinary collaboration, and problem-solving skills. Experiential learning, for instance, could play a central role in NbS education by enabling students to engage directly with the natural environment and communities, thus bridging the gap between theoretical knowledge and practical application (Kolb, 1984). Similarly, project-based learning could encourage students to undertake real-world NbS projects, promoting a hands-on approach to learning and contributing to societal and environmental well-being (Thomas, 2000). In this session we provide some recommendations on how to integrate the key messages from this report on NbS curricula and on education policy.

Research and Higher Education Policy for more NbS

(i) **Facilitate NbS- focused interactions** among students from Europe and Latin America with a transdisciplinary approach that involves the active participation of public authorities, civil society, and social movements. While these exchanges can take place virtually, the preference is for them to be dedicated to NbS deliberations on specific environmental and societal challenges in the host locality, supporting local actors in developing diagnoses, protocols, small-scale executive projects, impact assessments, economic evaluations, and the formulation of methodologies for nature-based thinking.

(ii) **Prioritise diversity** among students for NbS education, emphasising equity and inclusion across genders, racial groups, and socioeconomic strata. Implement strategies that aim to enhance educational access, ensuring that the educational environment is welcoming and supportive for individuals from all backgrounds. Establish inclusive scholarship policies specifically designed to support undergraduate and postgraduate students of indigenous origin, recognising their unique contributions to NbS knowledge and practice.

(iii) **Foster NbS research endeavours** from a decolonial standpoint by engaging in explicit dialogue with thinkers and practitioners from the Global South, who bring critical insights into NbS from diverse ontologies. Ensure that semantic and epistemological frameworks are fully integrated into NbS skill and competence development, enriching the curriculum with a broad spectrum of ecological and cultural perspectives.

(iv) **Cultivate a transdisciplinary perspective** within academic institutions, specifically aimed at enhancing NbS research and implementation. Guide scientific endeavours toward meaningful and non-hierarchical collaboration with local stakeholders, recognising and valuing local communities' knowledge in the creation, management, and stewardship of NbS projects.

(v) **Promote NbS research projects** authentically aligned with the commitment to Leave No One Behind (LNOB), focusing specifically on how NbS can address social and environmental injustices. Ensure that



these projects are guided by LNOB principles, emphasising the role of NbS in fostering equitable and sustainable development.

Fostering NbS Curricula in Higher Education and Professional Training Programmes

(i) **Incorporate NbS-focused action-research methodologies**, combining theoretical learning about NbS with practical application. Enhance student engagement through a variety of interactive strategies, including gamification, role-playing exercises, and project-based learning that reflect real-world NbS challenges and solutions. This multi-faceted approach ensures the educational experience is dynamic and caters to a diverse range of learning preferences, effectively preparing students to apply NbS concepts and practices in their future careers.

(ii) **Nurture ongoing interactions** between students and local stakeholders pushing for a focus on NbS projects, ensuring that professional education is deeply rooted in addressing real-world environmental and social challenges through NbS. This approach fosters a meaningful exchange of ideas, experiences, and solutions related to nature, enriching the learning process for all involved and contributing to a holistic understanding of sustainable development practices. It encourages a collaborative learning environment where knowledge and innovative strategies can be shared across diverse types of knowledge, leading to more effective and inclusive NbS implementations that benefit both people and the planet.

(iii) **Encourage the formation of interdisciplinary teams**, communities of practices and professional networks focused on NbS. Such collaborative frameworks are essential for enriching the NbS professional education environment with a diverse array of knowledge and a broad spectrum of skills necessary for the successful implementation of NbS projects. This interdisciplinary approach ensures that students can work effectively across various aspects of NbS, from planning and design to implementation and evaluation.

(iv) **Promote the development of comprehensive technical courses** tailored to each specific NbS, , such as urban green spaces, wetlands restoration, or agroforestry systems. This specialised approach ensures a nuanced understanding of diverse aspects of specific NbS categories, preparing future professionals with the technical expertise required to design, implement, and manage NbS projects effectively in real-life settings. Such courses should cover the ecological, social, and economic dimensions of NbS, equipping students to contribute to sustainable development goals through their professional endeavours.

7. Conclusions

Professional education curricula should be seen beyond a syllabus that delimits competences and skills to achieve optimal performance required in the labour setting. Education institutions, especially higher education, must be a place to create, practice, feel, experiment, embody, think, envision, design, dream, encounter, and debate paths for societal transformation. Those essential experiences cannot be fully encompassed by even the most comprehensive and inclusive interdisciplinary syllabus. Beyond content gaps, the method, the pedagogy, and the political project need to be explored. This does not mean to dismiss the central role that knowledge generation, and even transferability, play in professional education. It is about promoting a critical debate on the premises of how different types of knowledge are generated, socialised and legitimised.



Based on the three Curricula-Changing Workshops conducted by CONEXUS, this report sparks initial insights on curricula change for NbS professional education. However, further research is pivotal for a more comprehensive contribution on the multiple curricula aspects. Comprehensive surveys identifying the existing knowledge gaps within current curricula, pinpointing the essential NbS concepts that future professionals must grasp to effectively tackle climate change, biodiversity loss, and environmental justice are needed. Moreover, further research is needed to identify the leading organisations at both international and national levels that play pivotal roles in professional training, as well as to examine their pedagogical practices, thereby facilitating the integration of innovative and effective teaching methodologies in NbS across various educational settings.

Moreover, curricula research and policy should also include critical discussions on the epistemological and ethical dimensions of NbS, incorporating diverse perspectives, especially from indigenous and local communities, to ensure culturally sensitive and contextually relevant solutions (Tengö et al., 2014). This approach aligns with the pedagogical principle of "cognitive justice," which recognises the value of diverse knowledge systems in addressing global challenges (de Sousa Santos, 2007). Additionally, continuous assessment and adaptation of NbS curricula, based on feedback from students, educators, and practitioners, will be essential to ensure they remain relevant and effective in equipping future professionals with the skills and knowledge needed to navigate the complexities of environmental sustainability and social justice whilst planning and implementing NbS. Such pedagogical strategies require a supportive policy environment that encourages curriculum flexibility, interdisciplinary cooperation, and investment in educational technology to foster NbS learning and application.

Integrating NbS curricula into higher education and professional training programs represents a crucial step toward preparing future professionals to address the complex challenges of climate change, biodiversity loss, and environmental justice with NbS at the forefront. By embracing emancipatory pedagogy, acknowledging Global South perspectives, and fostering a sense of ownership and responsibility among students, NbS curricula can empower a new generation of professionals capable of driving positive and sustainable change. This document calls for a collective commitment to reimagining education, placing NbS at its core, and shaping a future where professionals are not just experts in their fields but stewards of the environment and advocates for social justice through the implementation of NbS.

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