

# Skills Gaps for Nature-based Solutions uptake in Europe and Latin America

Skill gaps hindering the implementation of Nature-based Solutions (NbS) are often pointed out as a challenge to larger scale NbS uptake. This factsheet presents the findings and key messages of an explorative study on skills and competence gaps among NbS professionals. Moreover, it introduces the discussion on linking curricula development and pedagogic approaches.

## Background

CONEXUS is a collaborative Research & Innovation project led by European and Latin American organizations. Among its objectives, CONEXUS aims to boost NbS uptake by contributing to improving professional skills and inspiring curricula to include urban NbS. To date, little research has been done to identify the competencies and skills that need to be built among NbS professionals. To fill this void, CONEXUS performed an exploration on skills gaps and evaluated the interests of NbS professionals and undergraduate

students from different education backgrounds. Building on our findings, we gathered first insights towards content and pedagogic approaches for higher education and continuous professional development (CPD) that can enhance future work on NbS.

## Why skills?

Designing, implementing, maintaining and assessing NbS requires consideration of ecological, social and economic dimensions, calling NbS practitioners, researchers, and students to mobilize different value systems, knowledge

## Highlights



1. Inclusive governance, cross-sectoral competences, data-literacy, and economic valuation were among the most relevant skill gaps identified in the report.
2. There is a high demand for NbS resources (handbooks, guidelines, trainings) that are infrastructure specific and tailored to local settings.

## Explorative research design on professional skill gaps done by CONEXUS



### Online workshops

with European undergraduate students  
from different academic backgrounds  
& CONEXUS partners



### Skill gap survey

with NbS professionals  
58 respondents across different sectors  
from Latin America and Europe

fields, competences and skills. Moreover, as an alternative to grey infrastructure, NbS can be highly disruptive to conventional built-environment professions, due to the focus on participatory approaches, ecosystem services, and biodiversity benefits. In addition, while coming from their main field of expertise, NbS practitioners and researchers also need to understand, apply and often translate knowledge and practices across disciplines and sectors.

## Key Findings

### Conceptualizing NbS

The results show that students and NbS professionals plead for a more inclusive conception of NbS that recognizes the diverse value systems and non-utilitarian perspectives on Nature (such as indigenous peoples' cosmovisions) and considers the experiences from the Global South. This resonates with the Kunming Montreal Global Biodiversity Framework's set in December 2021, which recognizes and considers the diverse value systems and concepts on nature and nature's

contributions to people as an integral part of successful NbS implementation. The very conceptualization of NbS cuts across disciplines, sectors, geographies, and scales, which welcomes different understandings and applications in different contexts.

### Educational approaches for transformative learning

Concerning CPD, the analysis calls for more context-based and locally adapted NbS training and knowledge production, especially in the social and environmental settings of the Global South. In terms of higher education, the report points out the need to adopt pedagogic approaches connected to real life problems and to guide towards a more just and inclusive society. It also emphasizes the need to promote horizontal exchange between research/higher education organizations and on-the-ground actors such as communities, public officials, and policy makers. Lastly, it calls for moving beyond knowledge transfer towards greater agency of students on defining learning

## At a Glance: Recommendations for NbS professionals

### Adaption of NbS definitions

- A more inclusive NbS concept that recognizes diverse value systems and the experiences from the Global South.



### Education



### Adapting educational programs

- On the ground NbS training adapted to local ecological, economic and social conditions.
- Promotion of horizontal exchange between NbS stakeholders (e.g. academia, public officials, communities and policy makers).
- Stronger student participation in defining NbS learning topics, methods, knowledge generation, and dissemination.

### Enhancing NbS competence and skills

- Set educational approaches that promote green competences, such as “systemic thinking”, “problem framing”, and “policy agency”.
- Promote data literacy and knowledge on economic valuation tools to better assess co-benefits and impacts of NbS on the ground.
- Provide local communities with tailored technical NbS education resources to support citizen engagement and NbS stewardship.



topics and methods, as well as on NbS knowledge generation and dissemination. Beyond addressing competencies and skills in curricula there is a need to adapt educational and training programs towards more co-creative formats that can reflect the transformative nature of NbS.

### Skills Gaps

In terms of soft skills, many respondents

highlight the lack of skills to cut through different knowledge systems and political contexts in order to create engaging narratives and to build cross-sector collaboration (identified by the EU as Green Competences).

Technical skill gaps identified by the survey include data literacy (spatial data, modeling, metrics and monitoring), practical knowledge on ecosystems management,

and economic evaluation tools to generate evidence and inform decision-making. In terms of NbS maintenance and stewardship, the survey points to the need of contextualized and locally tailored technical training and guiding materials. In conclusion, to cope with this huge

complexity in terms of required knowledge, skills and competences, higher education and CPD programs should incorporate multidisciplinary approaches, facilitating a culture of collaboration and mutual learning between different professional fields.

### Key messages

1. Recognizing the diverse cultural values, concepts and perceptions on nature is necessary for NbS successful implementation.
2. NbS education should adopt pedagogic approaches connected to real life problems and engaged towards a more just and inclusive society.
3. Effective and long lasting NbS require cross-sectoral competences, inclusive approaches, and a sound evidence base.
4. Multidisciplinary and inclusive partnerships foster the uptake of NbS by pooling together skills and knowledge.
5. Funded research projects such as CONEXUS can support bridging skill gaps by promoting multisector and multidisciplinary collaborations and responding to the diversity of local contexts, in research and practice.

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