

NBS EduWORLD - Project Education Learning Unit Template

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Learning Unit (LU) Planning Template - High Level Overview

Name of Learning Unit (LU) Topic		Public procurement for NBS					
NBS Context (e.g. urban rural, coastal)	NBS keywords <u>complete checklist at the end of the document</u>	Other Keywords (topics other than NBS) <u>add in Other below</u>	Linked or complementary concepts to NBS (to assist curriculum integration)	Prior learner knowledge of NBS (high, moderate, low/none)	Prior instructor knowledge/ skills/ competences of NBS or equivalent	Key EU NBS resources used (for instructor preparation) include link	Type of LU - lecture, workshop, field trip/site visit, case study
any				none	Some knowledge of NBS and Public Procurement Procedures	https://statics.teams.cdn.office.net/evergreen-assets/safelinks/1/atp-safelinks.html	Lecture
Target academic subject / discipline / professional area or group	Target learners/ groups [age range of learners] if applicable	Min/ Max # of learners (if applicable)	Sector (e.g, professional, higher education, community)	Prerequisites required of learners if applicable (education)	EQF (European Qualifications Framework) level (or Irish NFQ) indicative only	Time for LU (aim is 50 minutes per learning unit)	Course delivery format (e.g. in-person, hybrid, online)
Planners/Procurement Officers	Vocational Learning Workforce Professionals/CPD	n/a	Professional/Community	Some understanding of planning and tendering procedures		50 minutes	Online
Overall Purpose	Understanding and addressing barriers and challenges to the public procurement of NBS in cities						
LU Summary (2-3 sentences)	This unit provides an understanding of public procurement, and highlights its role in the promoting and implementing NBS in urban areas by providing an overview of procurement practices, challenges, and opportunities for using public procurement to implement NBS projects.						
Learning Outcome 1	Introduce and understand the concept of public procurement for NBS						

Learning Outcome 2	Identify barriers & challenges to public procurement for NBS
Learning Outcome 3	Highlight how the challenges impact the delivery of NBS procurement projects
Learning Outcome 4	Extract insights from lessons learnt from case studies
Learning Outcome 5	Reflect on opportunities to incorporate practices into workplace

LU designer resources for writing learning outcomes (click Learning Outcomes - Using Taxonomies tab or pyramid [here](#))

Activities and Elements of Learning

Aim that each learning unit include at least 4 activities for an interactive learning experience

Time (duration of activity, typically 50mins)	Aims - linked to NBS concepts or topics)	Link to Learning Outcome	Learning Activity [PPT Slide # - if applicable]	Teacher action/activity (Learner action/activity)	Confirmation of learner's learning (assessment of learning)	Link to online NBS resources	Offline resources and materials (e.g. post-its,)
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00:00 (10 mins)	Assumption of limited knowledge of NBS public procurement. Introduction to Public Procurement of NBS (PPNBS)- Assumes some knowledge of NBS	1	PPT (1-6) (/Menmti Exercise-ASK - Provide three words that describes public procurement from your perspective	Teacher to conduct Menti wordcloud exercise to understand current level of knowlegde on procurement.	Learners respond to question. and outcomes are dicussed. Definition is provided and discussed in context of learners responses as group session. Reference made to EU policy on public procurement.	European Commission, Directorate-General for Research and Innovation, Mačiulytė, E., Durieux, E., Public procurement of nature-based solutions: addressing barriers to the procurement of urban NBS: case studies and recommendations, Publications Office (2020) Available at: https://data.europa.eu/doi/10.2777/561021; https://www.menti.com/; https://europa.eu/youreurope/business/selling-in-eu/public-contracts/public-tendering-rules/index_en.htm;	
00:10 (10 mins)	Explore the barriers & challenges associated with Public Procuremnt of NBS	2,3	PPT (7-10).	Teacher presents barriers and challengees to PP NBS	Learners discuss basrriers and challenges.	https://ec.europa.eu/environment/gpp/whats_en.htm ; ; https://green-business.ec.europa.eu/green-public-procurement_en ;	
00:20 (15 Mins)	Explore the use of tender process to encourage PP of NBS	2,3	PPT(11-12); Excercise - Review of materials. Mutlichoice menti Q&A exercise.	Teacher to present and discuss tender process and conduct short multichoice Q&A.	Learners particpate in Q&A online to reflect on understanding of PP NBS, barriers and challenges	https://www.menti.com/ ; - https://c2e2.unepccc.org/kms_object/innovative-stormwater-management-approach-takes-advantage-of-synergistic-opportunities/	

00:35 (10 Mins)	Explore PP NBS Case Studies	2,3,4	PPT (13-17)- Exploration of case study & provision of other examples	Teacher to present and discuss Case Study reiterating issues associate with PP NBS and solutions found.	Learners share their thoughts on the capacity to adopt PP NBS in their workplace.	https://growgreenproject.eu/about/ ; https://connectingnature.eu/ ; https://unalab.eu/en/ ; https://clevercities.eu/	
00:45 (5 Mins) 50 minutes total	Conclusion: Reflect on Learnings	5	PPT (18-20)	Teacher to present and discuss principles and mechanisms for supporting PP NBS	Learners share their thoughts on the capacity to adopt PP NBS in their workplace.	https://networknature.eu/networknature/nature-based-solutions/ ; https://nbseduworld.eu/networks	

NBS- Application of Curriculum, Trends and Skills

Curriculum integration (how it may connect to curriculum)								
<u>Teaching & Learning Trends employed</u> <u>Highlight all that apply</u> <u>(Source)</u>	Project-based learning: e.g., students work in groups on a research project on greenhouses and the greenhouse effect, alternatives to waste management or investigate what are the views of their peers on climate change.	Peer learning: e.g., students work in groups, evaluate the work of their peers, or develop assessment questions to assess peers.	Problem-based Learning: e.g., students are introduced to a problem and challenged to find a solution together based on the information provided to them.	Student-centred learning: the learning scenarios are not based on classical instruction by the teacher, but they are expected to actively engage students in the lessons.				

<p>21st Century Skills</p> <p><u>Highlight all that apply</u></p> <p>(Source)*</p>	<p>Creativity: e.g., students think of various solutions for promoting a better lifestyle in their communities or encourage greener solutions to their schools' issues.</p>	<p>Information/ Media literacy: students explore examples of NBS, research similar solutions in other communities.</p>	<p>Collaboration: e.g., students work in groups and engage in task division to produce outputs.</p>	<p>Critical thinking: e.g., students learn that a debate on deforestation or climate change does not consist of two opposing camps only but involves many stakeholders with different perspectives.</p>	<p>Communication: e.g., students present their work to the whole class and learn to put forth strong arguments based on facts.</p>
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*Gras-Velázquez, À., Mulvik, I. B., Campodonio, A., Nada, C. & Pocze, B. (2020) *Nature-Based Solutions in education - Validation report, European Commission, August 2020* [accessed on 25/03/2024 <https://files.eun.org/NBS/NBS-pilot-validation-report-final.pdf>] p.8.

<p>GreenComp - European Sustainability Competency Framework</p> <p><u>Highlight all that apply</u></p> <p>(Source) 1- Embodying Sustainability Values and 2 - Embracing Complexity in Sustainability (see pp.13-14)</p>	<p>1.1 Valuing Sustainability: To reflect on personal values; identify and explain how values vary among people and over time, while critically evaluating how they align with sustainability values</p>	<p>1.2 Support Fairness: To support equity and justice for current and future generations and learn from previous generations for sustainability</p>	<p>1.3 Promoting Nature: To acknowledge that humans are part of nature; and to respect the needs and rights of other species and of nature itself in order to restore and regenerate healthy and resilient ecosystems</p>	<p>2.1 Systems Thinking: To approach a sustainability problem from all sides; to consider time, space and context in order to understand how elements interact within and between systems.</p>	<p>2.2 Critical Thinking: To assess information and arguments, identify assumptions, challenge the status quo, and reflect on how personal, social and cultural backgrounds influence thinking and conclusions.</p>	<p>2.3 Problem Solving: To formulate current or potential challenges as a sustainability problem in terms of difficulty, people involved, time and geographical scope, in order to identify suitable approaches to anticipating and preventing problems, and to mitigating and adapting to already existing problems</p>
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<p>GreenComp - European Sustainability Competency Framework</p> <p><u>Highlight all that apply</u></p> <p>(Source) 3- Envisioning sustainable futures and 4 - Acting for Sustainability (see pp.13-14)</p>	<p>3.1 Futures Literacy: To envision alternative sustainable futures by imagining and developing alternative scenarios and identifying the steps needed to achieve a preferred sustainable future.</p>	<p>3.2 Adaptability: To manage transitions and challenges in complex sustainability situations and make decisions related to the future in the face of uncertainty, ambiguity and risk. generations and learn from previous generations for sustainability</p>	<p>3.3 Exploratory Thinking: To adopt a relational way of thinking by exploring and linking different disciplines, using creativity and experimentation with novel ideas or methods.</p>	<p>4.1 Political Agency: To navigate the political system, identify political responsibility and accountability for unsustainable behaviour, and demand effective policies for sustainability.</p>	<p>4.2 Collective Action: To act for change in collaboration with others.</p>	<p>4.3 Individual Initiative: To identify own potential for sustainability and to actively contribute to improving prospects for the community and the planet</p>
<p>Author and organisation to credit when using the LU</p>						

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NBS Keywords Checklist (tick here below)

	Forest Preservation
	Forest Restoration

<p>Teacher Resources (If 'Notes' are used in the related PowerPoint presentation please indicate here)</p>	<p>Learner Resources (e.g. academic articles or links) for advanced reading or review (citation in individual cells)</p>
<p>Notes in the PowerPoint</p>	<p>Commission</p>

	Rural municipal/local authority/government planning
	Coastal municipal/local authority/government planning
✓	Urban municipal/local authority/government planning
	Improving well-being and quality of life
	NBS and new business and investment models
	NBS and CCAM (Connected, Cooperative and Automated Mobility)
	Other 1: (Please specify)
	Other 2: (Please specify)
	Other 3: (Please specify)

Keywords Source 1: United Nations Environment Programme (2020). *The Economics of Nature-based Solutions: Current Status and Future Priorities*. United Nations Environment Programme Nairobi., p.5. (keywords above in italics)

Keywords Source 2: Faivre N, Fritz M, Freitas T, de Boissezon B, Vandewoestijne S. (2017)'Nature-Based Solutions in the EU: Innovating with nature to address social, economic and environmental challenges.' *Environ Res.* 2017 Nov;159:509-518. doi: 10.1016/j.envres.2017.08.032. Epub 2017 Sep 8. PMID: 28886502.

Keywords Source 3: European Commission (2015). *Towards an EU Research and Innovation policy agenda for Nature-Based Solutions & Re-Naturing Cities: Final Report of the Horizon 2020 Expert Group on 'Nature-Based Solutions and Re-Naturing Cities' Full Version*. Luxembourg: Publications Office.