NBS EduWORLD - Project Education Learning Unit Template - DRAFT

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Initial Learning Unit (LU) Planning Template - High Level Overview

Name of Learning Unit (LU) Topic		Introducing UbN for learning on wastewater treatment NBS					
NBS Context applies to urban, peri-urban and rural settings	NBS keywords	Other Keywords	Linked or complementary concepts to NB	Prior learner knowledge of NBS	Prior instructor knowledge/ skills/ competences of NBS or equivalent	resources used NICE Webinar 1 Lisode, GUT and CETIM. Available here: https://urbanbynature.eu/public-materials/sear	Type of LU - workshop and field trip/site visit
any	wastewater, Nature-based Solutions, Rain-Gardens, Water Quality, Biodiversity	Contaminant Removal, Co-Creation and Stakeholder Engagement, Built Environment, Green&Blue Infrastructure	Finance, Investment and Governance, Multi-Level Stakeholder, Co-Participatory Processes	none	moderate knowledge of NBS, especifically rain-gardens, and multi-stakeholders p		
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)
Overall Purpose	During this workshop, the instructor will provide the presentations from a EU-funded project focused on the topic: wastewater NBS, to brief about the topic and the main actions carried out to connect and explore with stakeholders how to develop these solutions, we will showcase a simple experience in conducting these activities in a given context. This will help the learners get a general knowledge on NBS for wastewater treatment, innovation in governance, regulatory frameworks and finance barriers and pathways to overcome them, last, they will understand how to co-create ideas, develop cross-collaboration in a multi-stakeholder						

LU Descriptor (2-3 sentences)	Join and explore the topic of NBS for wastewater treatment and its benefits for a more sustainable wastewater management, including wastewater treatment and reuse at the source, as well as increased greening and biodiversity, and engage in a multi-stakeholder discussion for identifying common regulatory, governamental and financial barriers and ways to overcome them for the mainstreaming of cross-collaborative frameworks and co-design of these solutions in the learners individual settings.
Learning Outcome 1	Understand what is a water treatment NBS, including the different kinds of wastewater and NBS typologies to treat them
Learning Outcome 2	Identify your stakeholders groups by analysing your challenges for including these solutions: which NBS Hub and/or Community of Practice you would like to engage
Learning Outcome 3	Connect to the NBS Hub or CoP with the key stakeholders, and bring in EU-level institutions that might support in innovation for governance, cross-collaboration, co-design actions and co-participatory processes
Learning Outcome 4	Know what EU-relaguratory and policy frameworks exist and can support you to be financed for mainstreaming these stakeholder engagement and co-participatory processes for implementing these solutions in a long-term run

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)	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,)

Teacher **30 minutes** **Learner** **1hr 30 min** (resource visualisation and validation of knowledge acquired) **30 min** (filling the form on CoP or Hub learner is willing to engage)	Understand what is water treatment NBS Identify NBS Hub or CoP to engage	**Outcome 1** Understand what is a water treatment NBS, including the different kinds of wastewater and NBS typologies to treat them **Outcome 2** *(not accomplished yet, but basic information provided to support achieving the outcome)* Synergise with different stakeholders groups to identify key challenges for implementing these solutions and ways to overcome	NBSEW LU 1 - I	**Teacher** circulate resources for visualisation and a form to validate their knowledge acquired circulate spreadsheet/form to be filled out with contact info and NBS CoP or NBS Hub of interest inform on timeline for receiving the filled forms and evaluate them	**Form 1** will help the teacher confirm the learner's learning (he will validate through this form if the learner visualised and acquired the required knowledge previous to conducting the workshop) **Form 2** will help the teacher confirm learners learned what specific NBS Hub or CoPs is of interest to them (he will them be more capable to better tailor the workshop based on learners' contextual scope of interest)	**Material to visualise** What is water treatment NBS (H2020 NICE presenting main concepts) https://urbanbynature.eu/multimedia/ubn-nice-webinar-1-nbs-water-treatment-nice-project-experiences-daiane-trevisan-cetim **Generic form 1 and 2** validate learners' learning and NBS Hub of interest **MISSING**	**MISSING (tb included)**

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NBS- Application of Curriculum, Trends and Skills

Curriculum integration (how it may connect to curriculum)				
Teaching & Learning Trends employed Highlight all that apply (Source)	**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.

21st Century Skills Highlight all that apply (Source)*	**Creativity:** e.g., students think of various solutions for promoting a better lifestyle in their communities or encourage greener solutions to their schools' issues.	**Information/ Media literacy:** students explore examples of NBS, research similar solutions in other communities.	**Collaboration:** e.g., students work in groups and engage in task division to produce outputs.	**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.	**Communication:** e.g., students present their work to the whole class and learn to put forth strong arguments based on facts.

*Gras-Velázquez, À., Mulvik, I. B., Campodonio, A., Nada, C. & Pocze, B. (2020) *Nature-Based Solutions in education - Validation report, European Commission, August 2020* [ac

Author and organisation to credit when using the LU	