Implementing NbS co-governance in local schools for student-based assessment: stories from tree inventories and summer school in Gzira, Malta

Gzira is a small city in the central region of Malta, with a population of around 13,000. The city, approximately 0.6 km², lies on a basin-type terrain that is partially at sea level. Malta itself is an island state subdivided into 68 localities, each administered by a local council. Apart from its waterfront, Gżira has limited green spaces, mostly recreational areas such as Gzira Park. The lack of integrated urban planning and green infrastructure has resulted in a densely built environment dominated by buildings, narrow streets, and car traffic. This contributes to elevated levels of air pollution and intensifies urban heat island effects.

Climate challenges have been disproportionately affecting vulnerable groups, including children, older adults, commuters, and residents near busy roads or low-lying areas. Working with stakeholders, the Gżira Local Council partnered with the Research Innovation Unit (RIU) and the University of Malta to use data, sensors, and participatory tools to reveal local risks and empower their community and decision-makers to co-create climate-resilient, equitable solutions in the short and long term. Implementation relied on collaborative engagement through the JUSTNature project, bringing together residents, authorities, and experts. Early meetings aligned goals and priorities, and workshops explored NbS for dense urban areas using mapping and participatory tools.

A key focus of the pilot was the engagement of school communities, particularly Stella Maris College, where activities were designed to build awareness of climate change and NbS among students. Initial engagement began with discussions between the project team, the headmaster, and teachers to explore how NbS could be integrated into the school context. These exchanges helped identify opportunities and constraints, laying the groundwork for collaboration and the development of tailored activities.

Building on this foundation, a series of interactive workshops and learning activities were developed to include NbS and climate knowledge within the school's formal and informal learning. These included workshops that emphasised participation and engagement through interactive methods, such as games (using LEGO, hands on activities and the arts) and group discussions, helping to establish trust between students, teachers and the project team. Students were encouraged to reflect on their local environment, identify challenges, and contribute ideas for potential interventions, including those linked to the greening of the Council of Europe Garden, unfortunately this could not be done due to central government political and legal interventions.

At Stella Maris, a summer school programme led by the University of Malta was also implemented. It comprised several hands-on sessions designed to introduce students to local environmental challenges. The students played games so that they could learn about Malta's habitat, flora and fauna building stewardship for their environment. The summer school also had exercises for the students to create cube's to co-create an outdoor learning area for the students, which was successfully implemented.

Further activities integrated NbS into school learning, linking the topic to subjects such as mathematics and biology. A central component was the development of a tree inventory, in which students collected and analysed data on local vegetation for their biology class and used the data to further learn mathematical concepts and calculations. This exercise formed part of their School-Based Assessment,

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enabling students to apply scientific methods in a real-world context while contributing to the project. Through these activities, learning extended beyond the classroom, fostering environmental awareness and practical skills.

The experience revealed important considerations for working with school groups. Students often generated a wide range of ideas, some of which were not feasible within the project's scope and resources. Managing expectations and maintaining focus proved essential, as did ensuring that all students felt able to participate. While sometimes school teachers can be great facilitators, they can also influence students' responses. More broadly, the project highlighted the importance of continuous communication, effective facilitation, and the involvement of local educators to support meaningful collaboration, and that collaborations towards a future with NbS are not built solely by co-creating an intervention. Here, co-governance was not used only to co-create an NbS, but rather to develop activities and strategies to foster their knowledge.

Overall, the Gżira experience demonstrates how schools can act as entry points for engaging younger generations in NbS and co-governance processes. By linking educational activities with real-world interventions, the project contributed to building local knowledge, fostering environmental awareness, and supporting more inclusive approaches to urban climate adaptation.

"Focus on lasting impact: It's not just about creating solutions now, but about helping people learn and stay involved so the work continues even after the project ends". Shirley Attard, Gzira Local Council, Malta.

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KEY MESSAGES

- Communicate clearly: Use simple language, visuals, and be transparent about constraints.
- Keep engagement ongoing: Regular feedback and visible follow-up improve feasibility and relevance.
- Use schools as entry points: They enable engagement with younger generations.
- Prioritise hands-on learning: Practical activities strengthen understanding and ownership.
- Guide the process: Facilitation and expectation management are essential.

Text credit: Original version by Shirlley Attard, Gzira Local Council. Adapted by Mariana Binder, Institute for Urban Excellence, and Beatriz Kauark Fontes, Technical University of Munich.