Coexisting with Biodiversity in a Multi-Species Garden: the Experience of the Sorelle Mirabal Garden in Milan

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In recent years, biodiversity loss has gained relevance as a major challenge cities face within the broader context of climate and ecological transition. Despite a growing orientation of urban policies toward inclusive and participatory decision-making, nature's needs are still rarely considered in deliberative processes. Moreover, tools capable of recognizing the needs, agency, and dynamics of more-than-human species within urban green spaces remain limited.

Addressing this gap, this contribution examines how multispecies coexistence, understood as a guiding objective, can shape the design and management of urban green spaces. This perspective is explored through a case study focused on the co-design of the Giardino Sorelle Mirabal in Milan. The co-design was developed through a living lab activated in 2024 as part of the research activities of the National Biodiversity Future Center (Spoke 5).

The research integrates participatory activities with ecological monitoring to assess and enhance biodiversity presence and ecological quality. Participatory activities explored a range of collaborative tools and methods, including participatory ecosystem services mapping and multispecies role-playing games, as part of the co-design process. Monitoring focused on tracking pollinator presence, through acoustic sensors, and small-to-medium vertebrates through camera traps. Changes in ecological conditions of grasslands due to differentiated mowing and initial species diversity were also recorded.

Together, these activities contributed to the progressive reconfiguration of the garden as a space attentive to the needs of multiple species, while also functioning as a learning environment for citizens. The findings highlight key challenges, including the crucial role of experts in guiding participants in recognizing species-specific needs and the sometimes limiting influence of institutional actors on the emergence of innovative solutions. The results also demonstrate the potential of targeted design and management actions to support habitat provision, increase biodiversity presence, and foster recognition of the garden as a multispecies environment.