

Arlati, A. (2025). *The (re)imagination of urban biodiversity. How nature-based solutions shape urban planning discourses, practices, and relations in Germany and Italy*. Doctoral dissertation, HafenCity University Hamburg.

In this dissertation, I have investigated the phenomenon of nature-based solutions (NbS) upscaling in the European Union (EU) context as a means to integrate biodiversity into urban planning. Scientific and grey literature within the urban planning discipline has surged in the last 10 years, suggesting that upscaling solutions is imperative in times dominated by the climate crisis and uncertainty about the future to foster broader institutional change as quickly as possible. As part of the Research Training Group “Urban future-making: professional agency across time and scale” at HafenCity University Hamburg, this dissertation advances the understanding of NbS upscaling as a collective process to define, stabilise, and enact a specific urban future imaginary based on biodiversity. The concept of social imaginary highlights the tensions between built environment professionals when debating possible urban futures. Each imaginary supports specific ideas about what the problem is and what the right solution should be. I propose an analytical framework composed of three distinct yet interrelated lenses: discourses, practices, and relations.

I studied discourses, practices, and relations around NbS upscaling in urban planning in the EU context through four independent but connected publications. The results indicate that while there is a strong desire for the upscaling of NbS to incorporate biodiversity into urban planning, built environment professionals seldom discuss NbS specifically; instead, they tend to refer to urban biodiversity in general terms. At first glance, these professionals seem to form a unified discourse coalition that values the integration of biodiversity into urban planning. However, through the analytical lens of discourses, the findings reveal that both built environment professionals and laypersons fail to translate their discussions into decisions that challenge existing systems of practice. The practice lens highlights various ‘sites’ where built environment professionals establish new practices of urban biodiversity, albeit with differing levels of legitimacy and legal enforceability. However, learning between these sites is limited due to the little exchange of knowledge among the carriers of such practices. Lastly, the relations lens shows that no significant difference in political orientations regarding support for urban biodiversity integration into urban planning exists. Thus, relations focus on disconnecting rather than connecting ideas, which serves to polarise the discourse by introducing new information and perspectives.

This dissertation advances the necessity to fundamentally re-imagine how built environment professionals understand and perceive urban biodiversity through a constant dialogue between past experiences, present actions, and future-oriented planning that questions which meanings and forms of biodiversity should be pursued, rejecting the temptation to innovate at all costs. Improving knowledge about urban biodiversity and communicating it to a wider public are fundamental steps to spark a meaningful discussion on what urban biodiversity is and what role built environment professionals are willing to assign to it in planning the future of the city.