Planning for Urban Biodiversity in a Divided World

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Despite over two decades of interest in biodiversity conservation, including movements specific to urban areas, biodiversity loss continues. The few successes are overwhelmed by general losses. The primary drivers of biodiversity loss continue unabated. With repeated failure to meet biodiversity targets, we need to investigate more effective ways to stop biodiversity loss. This study analyzes urban biodiversity planning worldwide to develop an interconnected approach to biodiversity planning that includes social, economic, and cultural factors.

Urban areas are the primary economic and social nodes of our civilization. As such, urban land is costly to obtain and urban environmental impact reaches far beyond city borders. Traditional land-focused conservation approaches not only create conflict but also ignore wider-reaching impacts. Therefore, urban biodiversity planning must avoid engaging in a land war with social and economic interests. A more promising approach communicates the importance of biodiversity to a variety of stakeholders and involves them in the planning process. Urban areas in particular should include social, cultural, and economic factors when planning for the conservation for biodiversity. An approach that interconnects biodiversity impacts and drivers with other issues can broaden support and increase the effectiveness of biodiversity measures. This study surveys urban biodiversity planning documents around the world for signs of this connected approach.

This initial survey explores how urban biodiversity planning today connects the broad array of issues interrelated to biodiversity, if at all. It asks three questions: (1) how strong is biodiversity as a concept? (2) do urban biodiversity plans integrate social, cultural, and economic drivers of biodiversity loss, or are they limited to land use? and (3) do guideline systems promote an interconnected approach to urban biodiversity planning?

To answer these questions, I conducted a mixed methods analysis of 65 plans from cities worldwide, 48 of which are biodiversity plans. The analysis also compares four guideline programs each with over 30 city participants: the Local Action for Biodiversity (LAB) Pioneer program, the Cities Biodiversity Index (CBI), The Economics of Ecosystems & Biodiversity (TEEB) Manual for Local and Regional Policy Makers, and the Urban Biosphere Initiative (URBIS).

As a mixed models/mixed methods study, I combined automated lexical analysis with manual term searches and categorization of concepts. I investigated how the various documents defined and used the term biodiversity. I categorized the discussion of biodiversity into land use, education, social, economic, and cultural topics. I developed a simple integration index to allow for direct comparison of various plan and guideline documents.

My findings show that urban biodiversity plans rarely address connections between biodiversity and other interests. Over 80% of the concepts in urban biodiversity plans discuss land use/environment only, with little attention to social, economic, or cultural issues. Other types of plans have similar limitations. The most integrated discussions of the study can be found in "sustainability" plans. Initiating a participatory process when creating a biodiversity planning document appeared to correlate with a higher integration index. None of the four guidelines promote inclusion of social,

economic and cultural factors, though some show capacity for social and economic integration into biodiversity plans.

The study shows that urban areas have yet to mine the possibilities of a more interconnected approach to urban biodiversity planning. This approach holds great promise and needs to be explored further. Additionally, new guideline systems need to be developed that promote a more interconnected method. Currently, only a combination of guidelines can begin to support an interconnected approach. To gain a more interconnected perspective, planners should use a participatory process that diversifies the stakeholders involved in authoring the plan. A participatory process has the potential to generate the innovative ideas we need to address drivers of biodiversity loss.