Policy Brief
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Enhancing the quality of urban nature to support the shared wellbeing of people and other species: a multispecies justice approach

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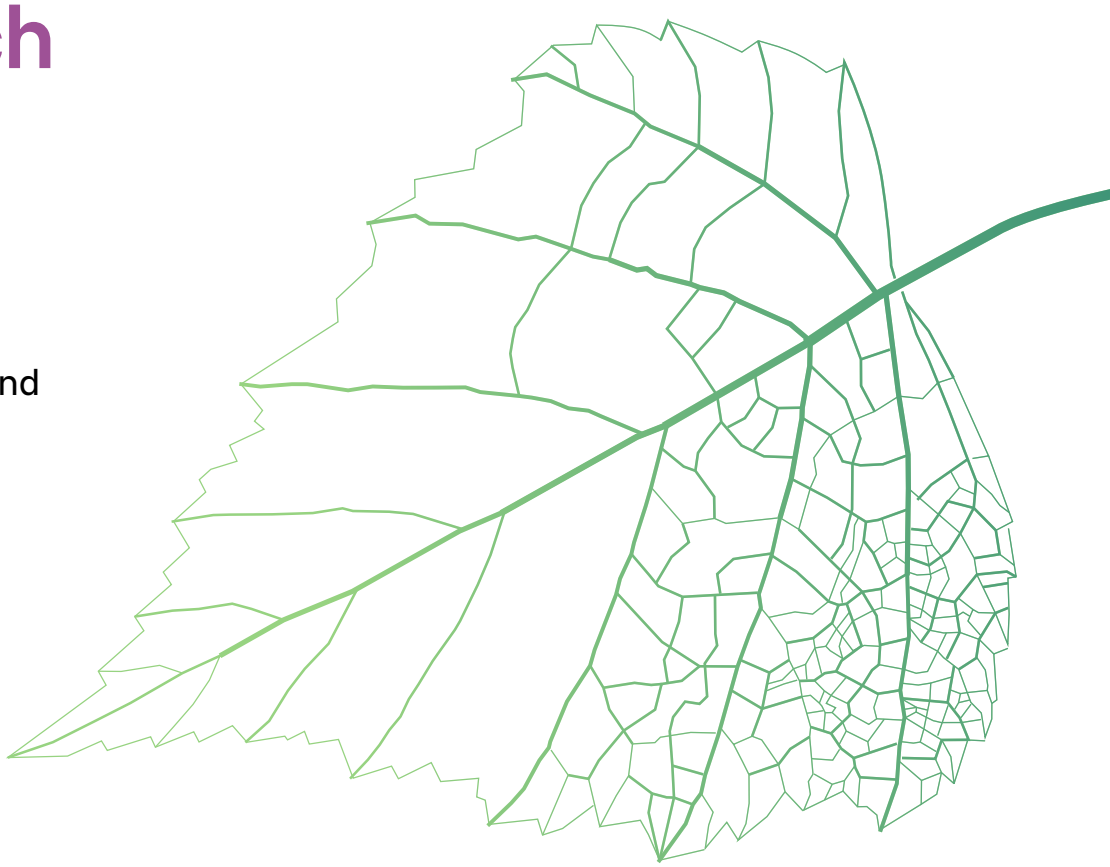

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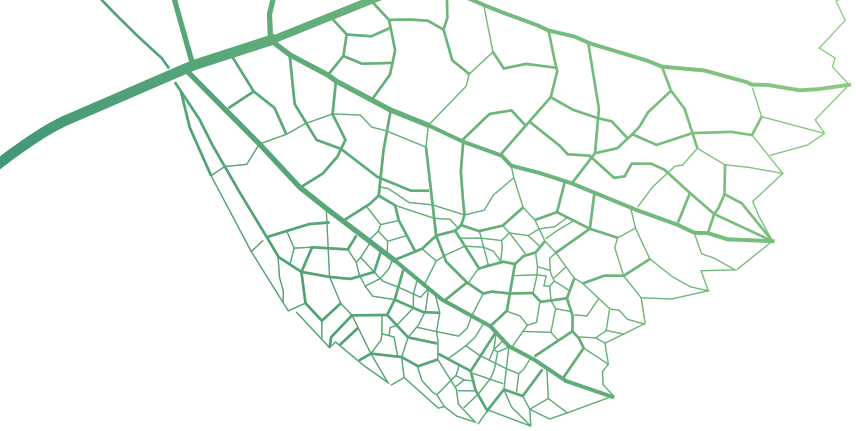
Enabling multispecies transitions

strategic RESEARCH



Introduction

Urban nature plays an essential role in halting biodiversity loss, adapting to the impacts of climate change, and promoting human health and well-being. Over the past decades, many cities throughout Europe have lost green infrastructure mainly due to unsustainable urban expansion (ESPON, 2020; Simkin et al., 2022). Today, urban nature is threatened by fragmentation in rapidly growing and densifying cities.

In this policy brief, we argue that achieving the ambitious targets of the Kunming-Montreal Global Biodiversity Framework (COP CBD, 2022) and the European Union's Biodiversity Strategy (European Parliament, 2020) and Nature Restoration Law (European Parliament and Council, 2024) requires **focus not only to quantity-based indicators, such as the area of habitat protected or urban tree canopy cover, but also to quality-based indicators from both ecological and social perspectives.** These are essential for understanding how restoration efforts impact both humans and other species. This is particularly relevant in urban areas where there are close interactions between people and nature.

We propose **a multispecies justice approach** - recognising the wellbeing of both humans and other species - as a means to integrate qualitative dimensions of urban nature into city planning, restoration, and wellbeing strategies. Efforts to halt biodiversity loss and adapt to climate change require challenging established ways of thinking that separate people from nature. Instead, humans should be seen as a part of nature and ecosystems. This perspective requires, for example, that urban nature planning does not prioritise human needs at the expense of the ecological requirements of other species, but rather fosters conditions that support the wellbeing of both (Rupprecht, 2020). The key goal of multispecies justice is to create space, or 'agency', for the voices of other species and the often overlooked human groups in decision-making (Maller, 2021, Raymond et al. 2025). **In this policy brief, we advocate assessing the quality of urban nature from a multispecies justice perspective that uses place-based participatory methods to support the shared wellbeing of humans and other species in urban planning and restoration.**

Key recommendations for considering the 'quality' of urban nature in restoration actions

- **Balance the needs of humans and other species.** Urban planning and restoration action should strive to balance the spatial requirements of humans and other species. A multispecies justice approach enables the integration of both ecological and human perspectives.
- **Incorporate qualitative indicators.** Nature restoration efforts should evaluate not only the quantity (e.g. area) of urban nature, but also its quality, ensuring that actions support both human wellbeing and biodiversity.
- **Plan connectivity for both people and nature.** Linking green spaces and habitats supports species persistence and ecosystem processes while providing humans with health, recreation, and wellbeing benefits.
- **Recognise the diverse values of nature.** Valuation methods can be used to identify and prioritize the meanings that different groups of people attribute to nature – and also from the perspective of other species, especially when considering how we live together with nature or as a part of it.
- **Apply place-based participatory mapping methods to support qualitative valuation.** Tools such as digital map-based surveys can help identify how different groups of citizens value urban nature from diverse perspectives, including those of other species.

We further describe and justify each of these key recommendations below, drawing on the peer-reviewed literature and recent empirical insights from the MUST research project.

Restoring urban nature should support the shared wellbeing of humans and other species

When properly directed, urban nature restoration can enhance the wellbeing of both humans and other species, and thus align with a multispecies justice framing. For people, the benefits are multifaceted and extend across both physical and mental health domains. On the physical health side, urban nature provides spaces for outdoor recreational activities such as walking, jogging, cycling, and playing (Fagerholm et al., 2021), supporting healthier lifestyles, enhancing cardiovascular health, and contributing to the prevention of asthma and allergies (Nieuwenhuijsen et al., 2017).

On the mental health side, contact with urban nature fosters relaxation, reduces stress, and enhances overall psychological wellbeing. Empirical studies have documented positive effects, including lowered blood pressure, reduced heart rate, and improved immune system functioning (Twohig-Bennett & Jones, 2018). Urban nature also facilitates social interactions and community cohesion, which are important determinants of mental health. Beyond these direct physiological and social benefits, experiences in nature can support deeper aspects of human wellbeing, such as self-acceptance or personal growth and reflection on the meaning of life (Lima & Mariano, 2022). Studies have shown that the physical and mental health benefits derived from natural environments can generate significant economic impacts (e.g. Buckley & Chauvenet, 2022).

> A key challenge for urban planners is to balance human interests with the needs of different species, as well as to design urban environments that deliver multispecies benefits.

Restoring urban nature is also essential for the wellbeing of non-human species. Urban habitats, for example urban grasslands, provide valuable habitats for a wide range of species (Herrmann, Buchholz & Theodorou, 2023). Biodiversity loss in cities often results from the degradation and fragmentation of habitats, highlighting the importance of maintaining and restoring urban ecosystems and connections between them (Spotswood et al., 2021). In addition to supporting biodiversity, urban nature plays a critical role in climate change adaptation by moderating urban temperatures during heat waves, managing stormwater and flood risks, and improving air quality. Restoring urban green environments, therefore, has significant wellbeing benefits for both humans and other species. A key challenge for urban planners is to balance human interests with the needs of different species, as well as to design urban environments that deliver multispecies benefits.

Nature restoration efforts should evaluate not only the quantity (area) of urban nature, but also its quality

The EU Biodiversity Strategy and the Kunming-Montreal Global Biodiversity Framework specify that countries must protect 30% of land and sea areas and restore 30% of degraded habitats by 2030. Complementing these objectives, the EU Nature Restoration Law requires the restoration of at least 20% of the EU's land and sea area by 2030, with the long-term goal of restoring all ecosystems in need of recovery by 2050. In urban contexts, the law mandates no net loss of urban green space and tree cover by 2030 and a 5% increase by 2050. To meet these targets, EU Member States are required to develop national restoration plans within two years of the Law's enactment.

While these policies establish ambitious quantitative, area-based targets, they provide limited guidance on ecological quality and biodiversity outcomes for urban nature. Article 8 of the EU Restoration Law sets the objective of achieving a "satisfactory level" of urban greenery (in terms of green structure and canopy cover), yet it lacks clear definitions or operational guidelines for local implementation, particularly at the neighbourhood scale (Klaus et al., 2025; Penca & Tănăsescu, 2025). Without complementary qualitative criteria, there is a risk that restoration efforts may increase the extent of urban green areas without meaningfully enhancing their ecological and social quality and, hence, fail to deliver benefits to people and other species. To address this concern, we argue that **restoration plans should take into account not only quantitative criteria but also the quality of urban nature to ensure that restoration efforts are targeted in the best possible way to support both the wellbeing of humans and other species, and to halt biodiversity loss by 2030.**

Enhancing connectivity and developing green infrastructure is essential to achieving quantitative conservation and restoration targets.

From an ecological perspective, biodiversity depends on sufficient habitat area and quality, as well as the connectivity of ecological networks that enable species dispersal and gene flow. Enhancing connectivity and developing green infrastructure is, therefore, essential to achieving quantitative conservation and restoration targets. However, strategies that focus narrowly on protecting individual species are not always sustainable long-term, as species exist within complex ecological networks. If unprotected species are allowed to decline, ecological processes may deteriorate, leading to habitat degradation that undermine both protected species and human wellbeing. A functioning ecosystem relies on a diverse range of species, and overlooking the needs of common species risks their eventual decline and possible endangerment. For further insights into the ecological quality in urban nature, see e.g. Garrard et al., 2018, Parris et al., 2018.

Connectivity in urban planning refers to the degree to which green spaces, habitats, and ecological networks are physically and functionally linked, enabling the movement of species, ecological processes, and human access to nature.

A multispecies justice perspective requires that connectivity be understood from both ecological and human viewpoints—ensuring that corridors support species survival and ecosystem functions, while also meeting diverse human needs for recreation, health, and wellbeing. For example, connectivity may look very different from a frog's perspective, which relies on wetland corridors, than a bird's perspective, which prioritises larger habitat patches. Similarly, the value of everyday urban nature differs for a jogger seeking a continuous running route versus a family with children in search of a recreational area for play and nature observation. Balancing these multiple needs is crucial for creating inclusive and sustainable urban environments.

Nature restoration efforts should acknowledge the diverse values of nature

Nature restoration efforts should acknowledge the diverse ways people interact with and value nature, extending beyond purely ecological criteria. Building a sustainable and just future requires a shift in mindset so that nature is seen more broadly than merely from the perspective of material exploitation. This is the central message of the IPBES Value Assessment (Pascual et al., 2023), which provides a framework to understand the **diverse ways people value nature.**

Building a sustainable and just future requires a shift in mindset so that nature is seen more broadly than merely from the perspective of material exploitation.

To operationalise these values, the Values Assessment identifies four 'life frames' through which people relate to nature:

1. **Living from Nature:** nature is valued primarily as a resource for human use and exploitation,
2. **Living in Nature:** nature is valued as a place for wellbeing, culture and identity,
3. **Living with Nature:** humans and nature are seen as coexisting, and
4. **Living as Nature:** humans are an intrinsic part of nature.

To align with a multispecies justice perspective, all four life frames may be used to identify the diverse ways people value nature, while the 'living with' and 'living as' frames may also be used to help incorporate the perspectives of other species. A wide range of nature-based, statement-based, and behaviour-based methods exist to assess these values (IPBES, 2022), where values may be expressed using economic, biophysical, and socio-cultural indicators. **Integrating these valuation methods with place-based methodologies, such as participatory mapping, supports the understanding and consideration of the nature values in urban planning and restoration efforts, enabling decision-making that reflects both human and non-human interests.**

Recognizing the quality of urban nature through place-based methods

In this policy brief, we advocate assessing the quality of urban nature through participatory methods that engage citizens. **Place-based participatory methods, i.e. participatory mapping, can be used to understand, document, and improve the quality of urban nature, as well as to examine it from the perspectives of different human groups and other species.** These methods support the operationalization of multispecies justice and the perspective of a shared wellbeing between humans and other species. They are particularly useful in studying connectivity as they enable the identification of ecologically and socially significant areas that should be preserved.

Participatory mapping is often applied through map-based surveys (Kyttä et al., 2023). **In digital map-based surveys**, respondents, i.e. city residents themselves, can pinpoint and describe on the map the place-based values they associate with their everyday environment and landscape (Figure 1). These values can range from exercise and recreational opportunities to wellbeing and health benefits, as well as deeper dimensions of wellbeing, which may align with the four life frames. By analysing the spatial and descriptive data, it is possible to examine the spatial distribution, clustering (Figure 2), or accessibility of diverse values of nature both at the neighbourhood level and more broadly across an entire city (Fagerholm et al., 2021).

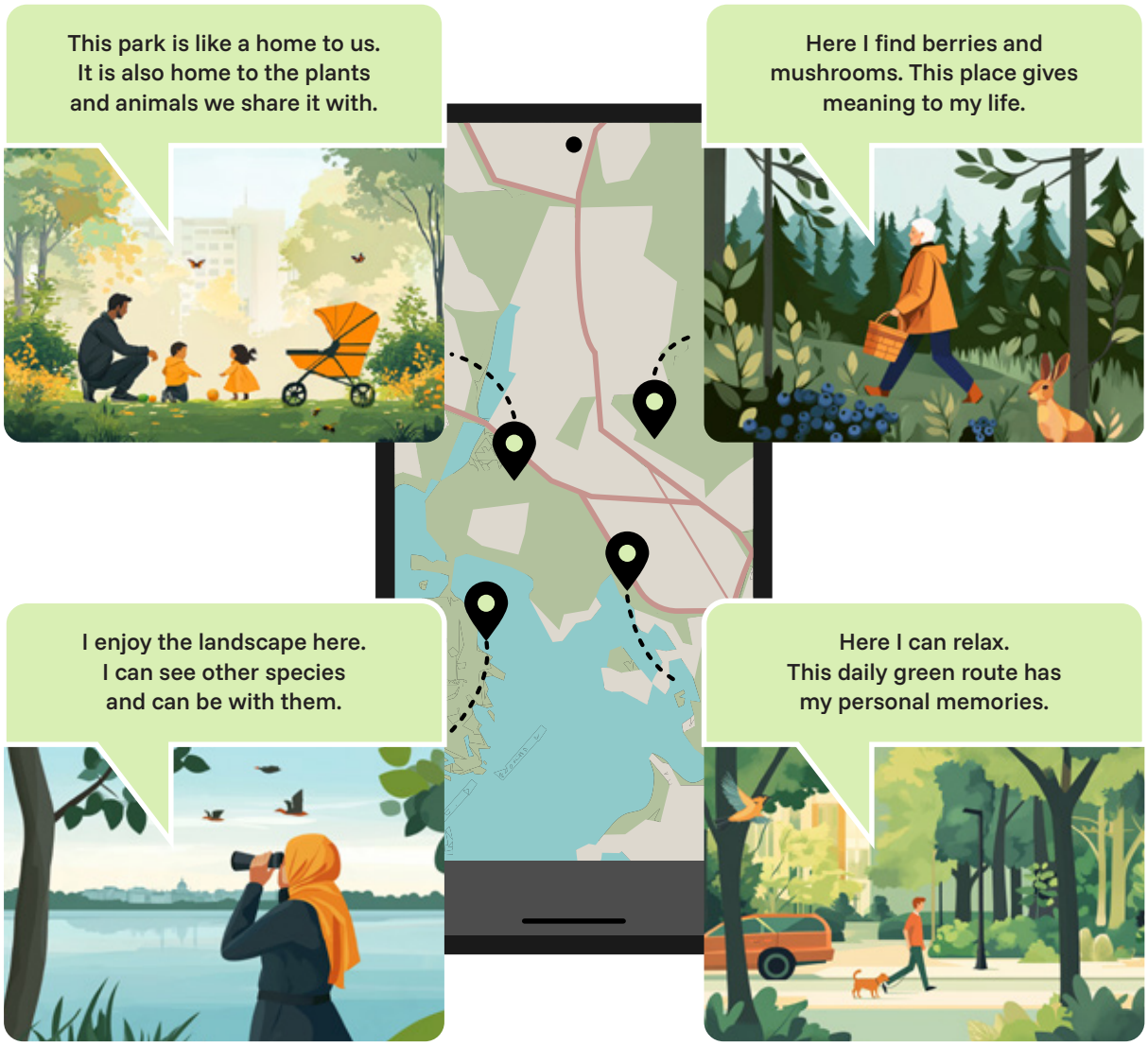
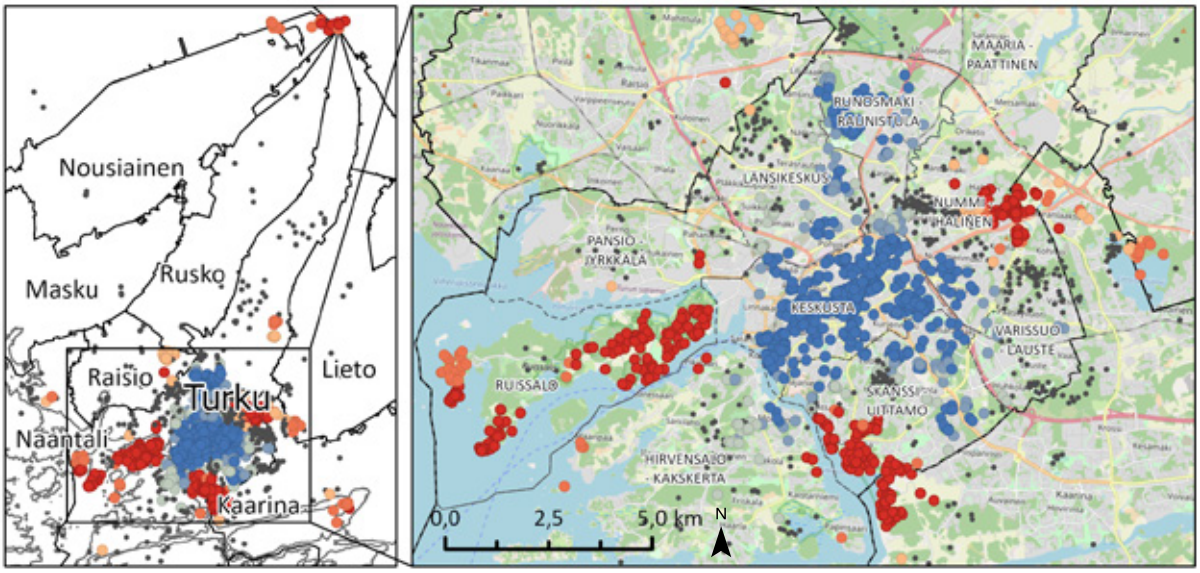


Figure 1. Digital map-based surveys help to understand the quality of urban nature from the perspective of different groups of people and other species.

Figure 2 shows an example of a place-based analysis of nature values. In the mapping survey, residents in the Finnish city of Turku were asked to map their important outdoor activity locations on a map and to specify values associated with each site. The most frequently cited values were being outdoors, walking, beauty, and closeness to nature. The map highlights statistically significant clusters of outdoor areas (with percentages indicating the cluster's level of statistical significance). Areas offering a wide range of nature-related values appear as "hot spots", concentrated in well-known natural environments. By contrast, the Turku city centre appears as a blue "cold spot", reflecting that outdoor opportunities there are largely limited to parks and sports areas, which respondents associated with fewer and more narrowly defined nature-related values.

The place-based approach described here helps to identify and prioritize the values that different human groups assign to urban nature, as well as to examine urban nature from the perspective of other species—particularly when addressing human coexistence with nature or living as part of nature (life frames 3 and 4). Spatial data collected from people can be combined with other spatial data, such as data describing ecological connectivity, to understand the interactions and contradictions between urban nature and human experiences. Many cities are already utilizing map-based surveys as part of urban planning, and these methods could be expanded for use in restoration planning.



- cold spot (99%)
- cold spot (95%)
- cold spot (90%)
- not significant
- hot spot (90%)
- hot spot (95%)
- hot spot (99%)

Figure 2. The clustering of outdoor activity locations analysed through values connected to them (Fagerholm ym., 2021; background map data © National Land Survey of Finland, the city of Turku, and OpenStreetMap).

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Authors

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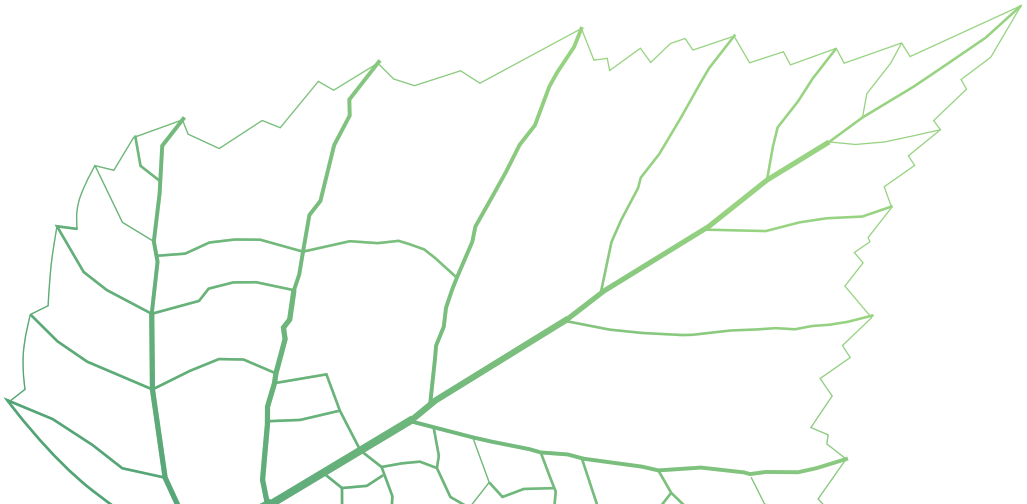

MUST - Enabling Multispecies Transitions in Cities and Regions

MUST is a multidisciplinary research project that aims to enable a multi-species transition towards a way of life in which humans and other species can adapt to a new way of life that supports their mutual well-being. We develop new theory, methods and practical tools for a multispecies transition to support citizens, teachers, urban planners, and decision-makers in recognizing values of nature and relationships between different species in discussions, planning, and decision making. Our research team includes experts in e.g. human geography, ecology, urban and land use planning, environmental economy and environmental education.

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