



Beavers and people in the city: A beneficial coexistence

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What is it all about?

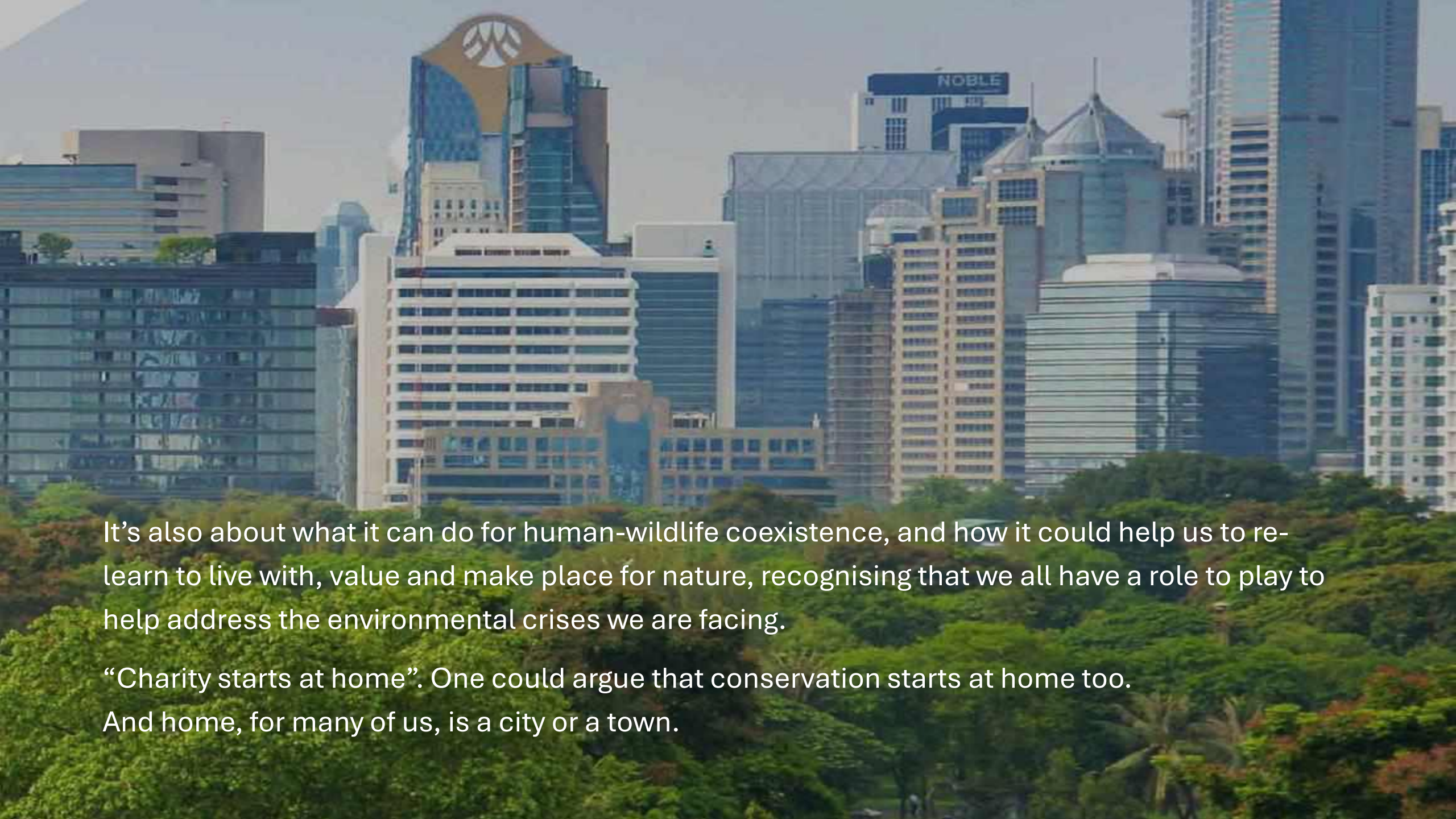


The talk will bring some relevant and empirically tested arguments for a positive co-existence of people and wildlife, including beavers, in cities, embedded in a broader picture of ecosystem services and human-wildlife interactions and perceptions in urban environments.

Bisons roaming endless prairies, wolves chasing elks across snowy landscapes. These are images of distant places devoid of human presence that generally, pop into people's minds when talking about wilderness.

Rarely do people associate wilderness and rewilding with cities, despite the huge potential for both to **boost biodiversity and ecosystem services in our cities.**





It's also about what it can do for human-wildlife coexistence, and how it could help us to re-learn to live with, value and make place for nature, recognising that we all have a role to play to help address the environmental crises we are facing.

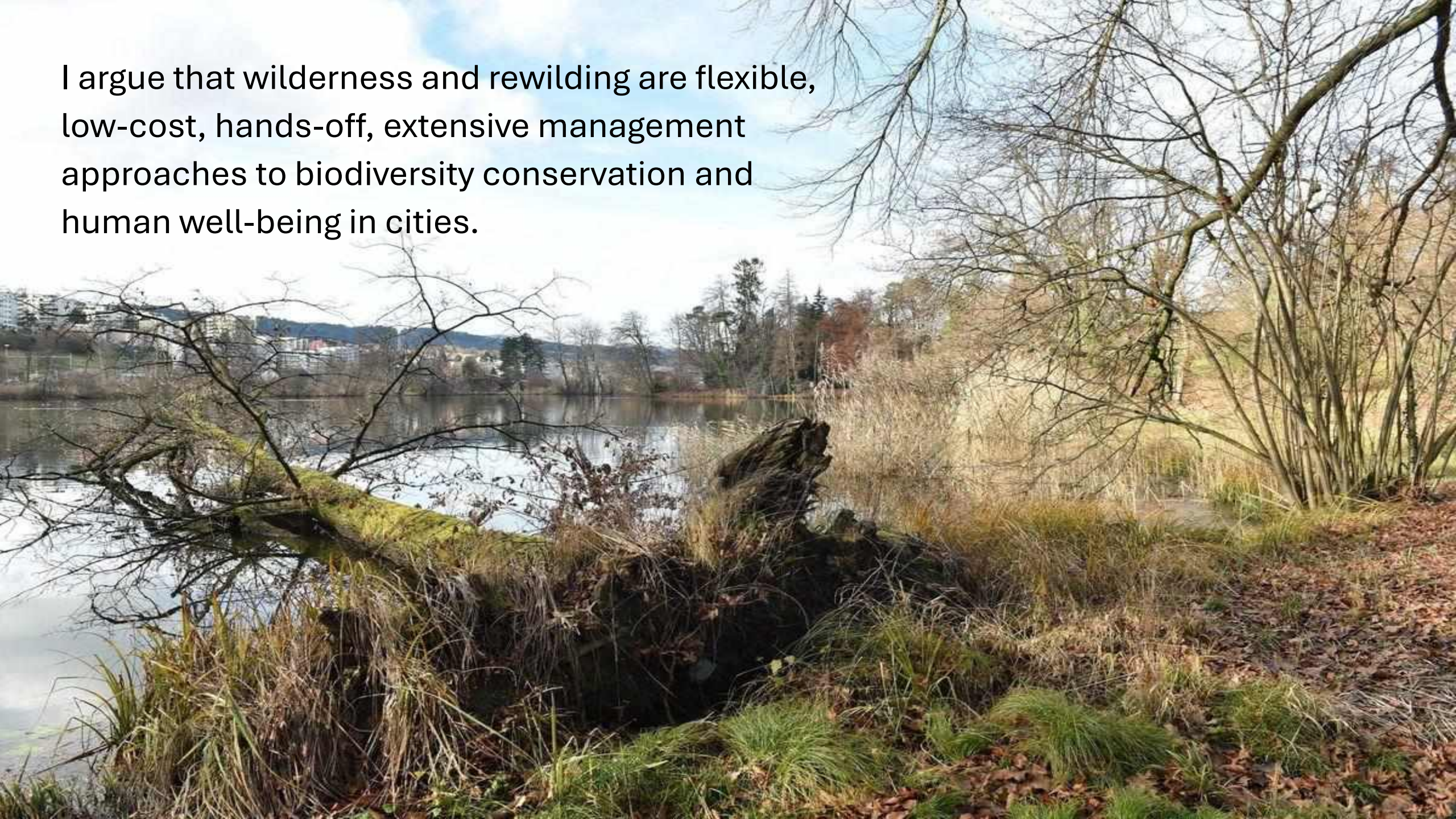
“Charity starts at home”. One could argue that conservation starts at home too. And home, for many of us, is a city or a town.

Climate change is threatening the long-term survival of many species and the integrity of many ecosystems across the globe. At the same time, the loss of biodiversity is reducing our planet's ability to store carbon and nature's and people's ability to adapt to and/or cope with changing climatic conditions.

Both climate change and biodiversity loss underpin the public health crises created by zoonotic disease emergence and spread. We all remember the time when COVID-19 had us firmly under control.



I argue that wilderness and rewilding are flexible, low-cost, hands-off, extensive management approaches to biodiversity conservation and human well-being in cities.



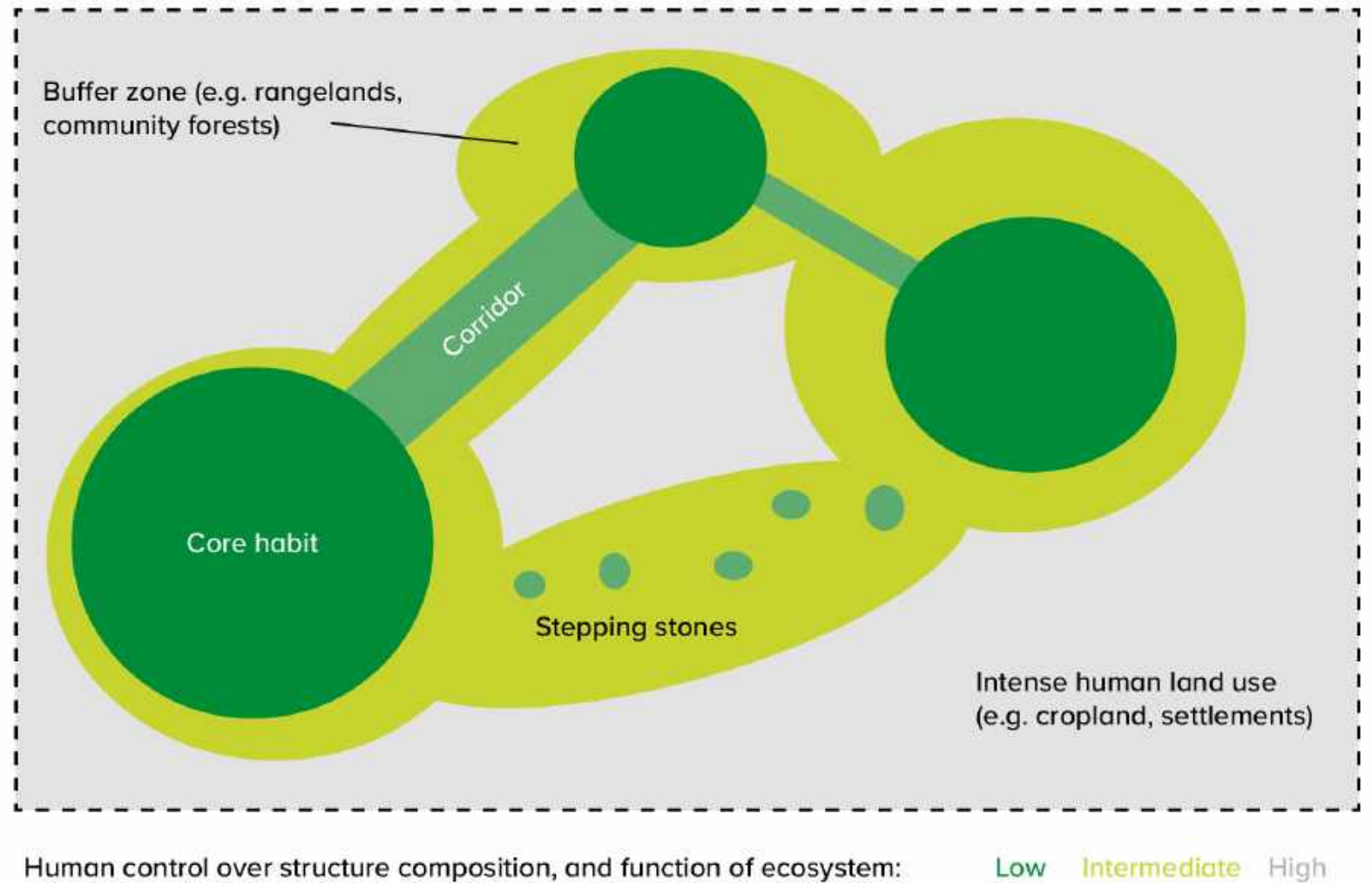
- Increasingly populated cities face the risk of intense heat and flooding.
- Urban design that supports biodiversity can be an effective accelerator of public health and wellbeing, and a cost-saving measure in the long term as the effects of climate change become an increasing economic burden.
- Urban rewilding can provide new ways to engage city residents with nature, including both monitoring and stewardship.
- This, in turn, could provide inspiration for further conservation initiatives.

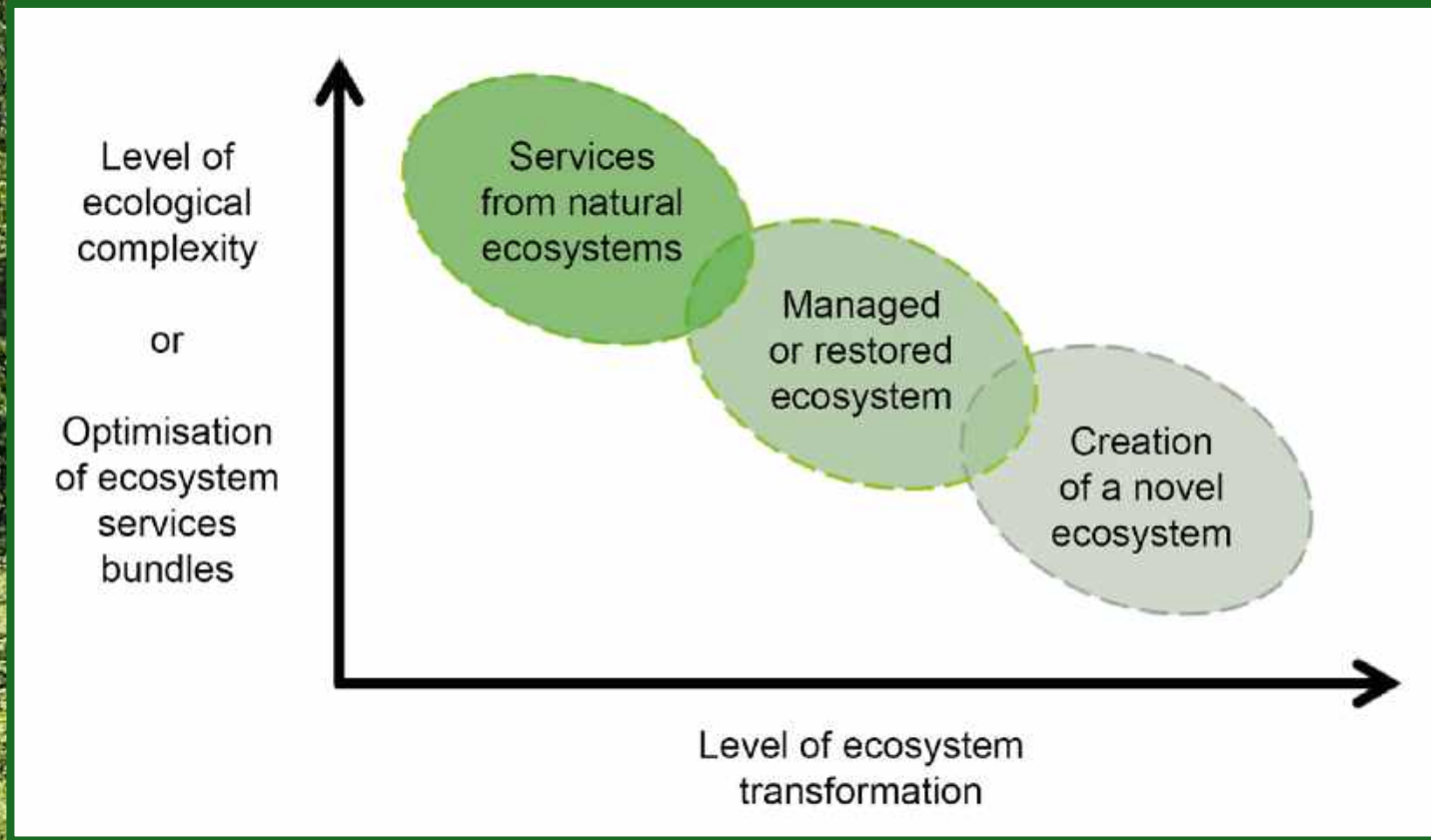


What is wilderness and rewilding cities?

Rewilding is a transformative approach to conserving biodiversity ... based on “cores, corridors, and carnivores” (Soulé and Noss 1998).

Reinstatement of natural processes in functionally degraded ecosystems, ..., developing more ecologically complex and less controlled by humans (Pettorelli et al. 2019, Svenning 2020).



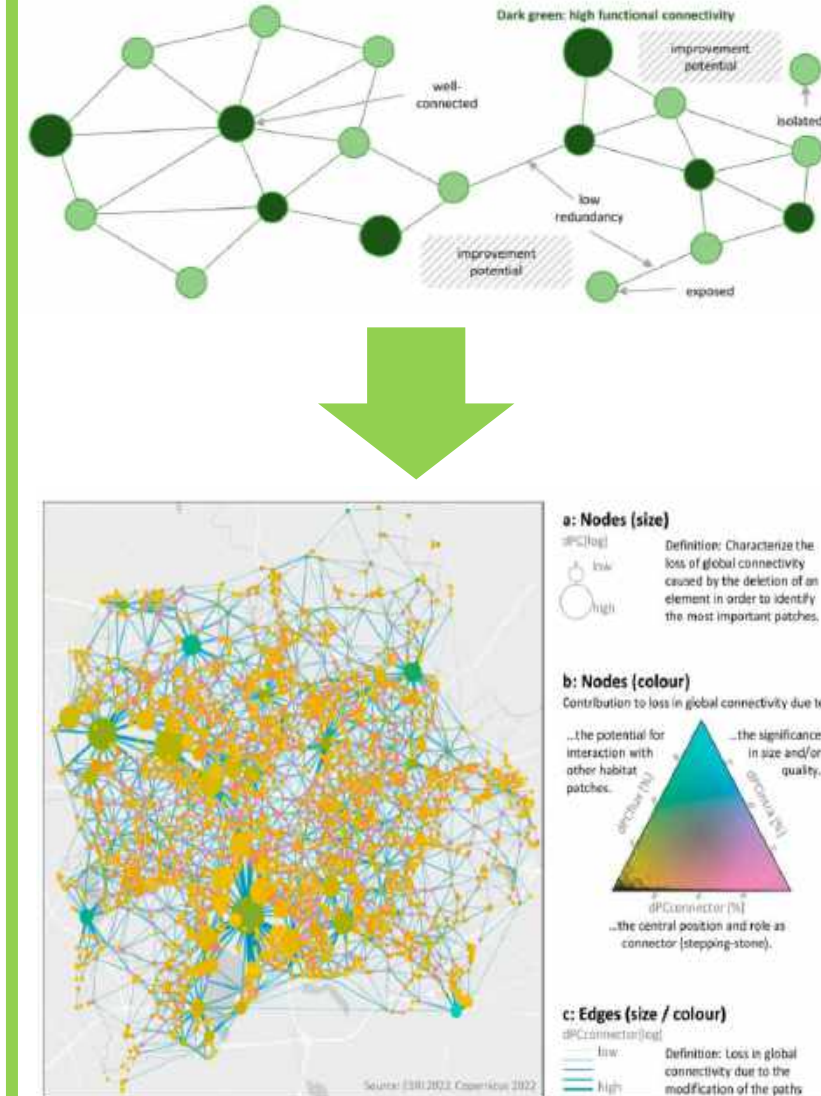


‘Learning with and from nature’: Succession and spontaneous colonisation on brownfield sites along with drought resistance and recreation...

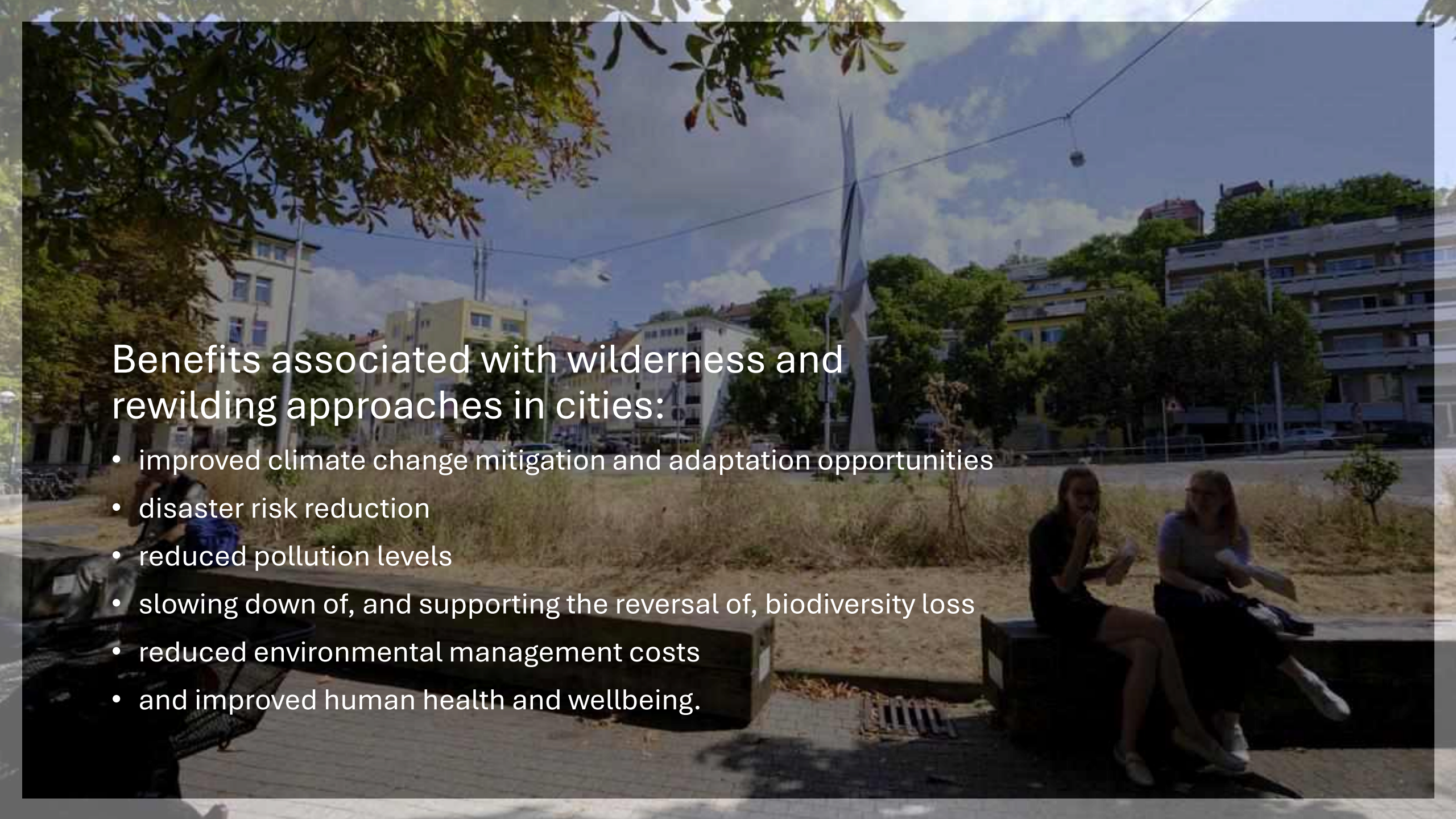




Nature's LinkedIn: Networks using graph theory



Beneficial co-existence?!

A photograph of a city park. In the foreground, two women are sitting on a dark wooden bench, looking at papers. The ground is covered with dry, yellowish grass. In the background, there is a tall, white, abstract sculpture. Beyond the sculpture, there are several multi-story apartment buildings and trees. The sky is blue with some clouds. The overall scene is a mix of urban and natural elements.

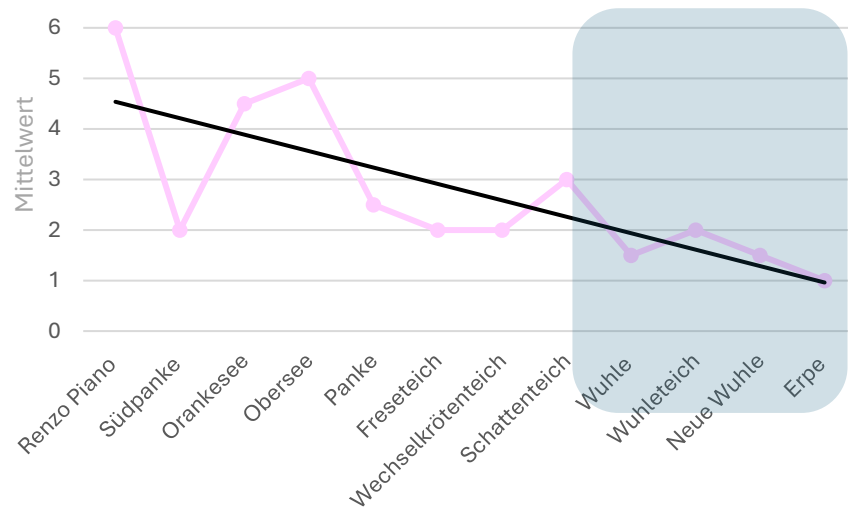
Benefits associated with wilderness and rewilding approaches in cities:

- improved climate change mitigation and adaptation opportunities
- disaster risk reduction
- reduced pollution levels
- slowing down of, and supporting the reversal of, biodiversity loss
- reduced environmental management costs
- and improved human health and wellbeing.

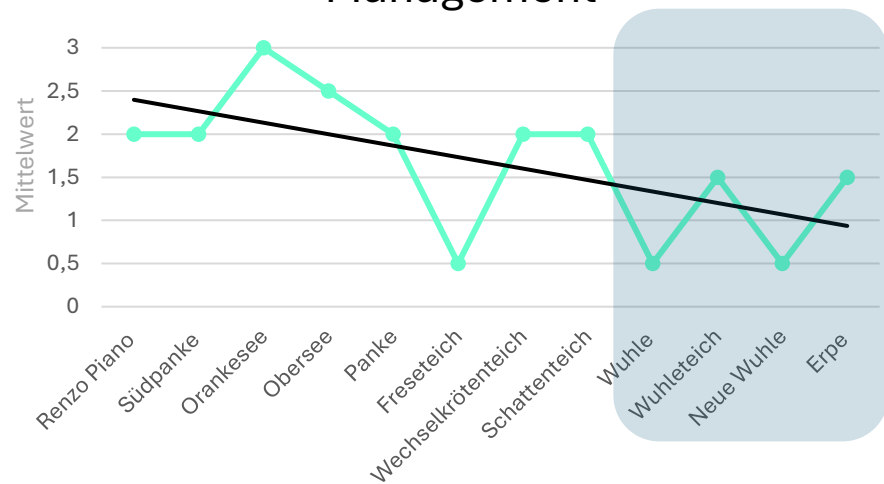




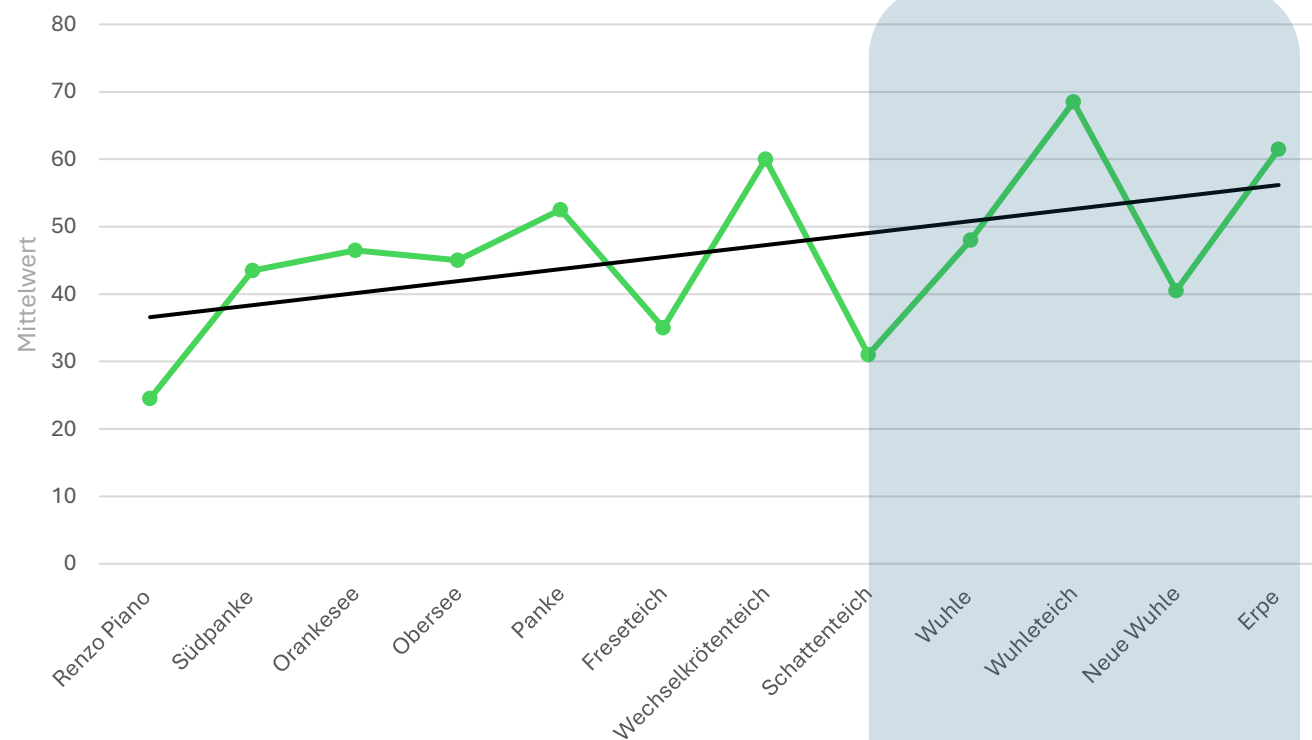
Infrastructure



Management



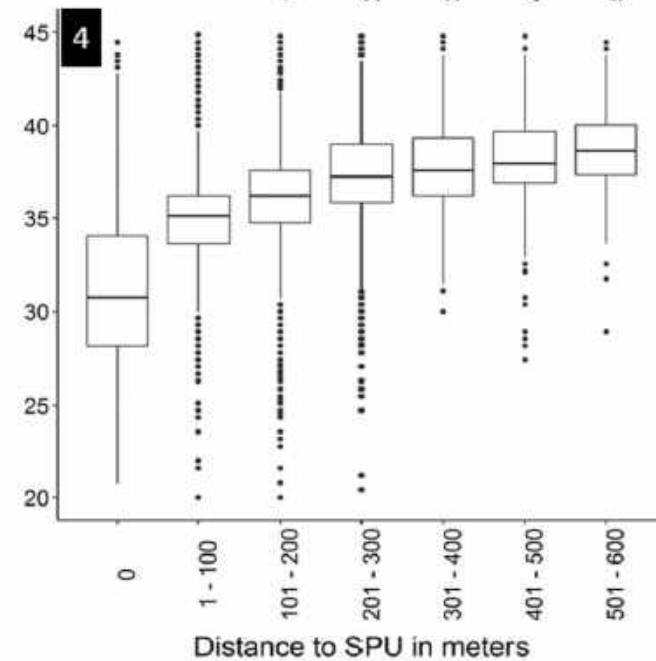
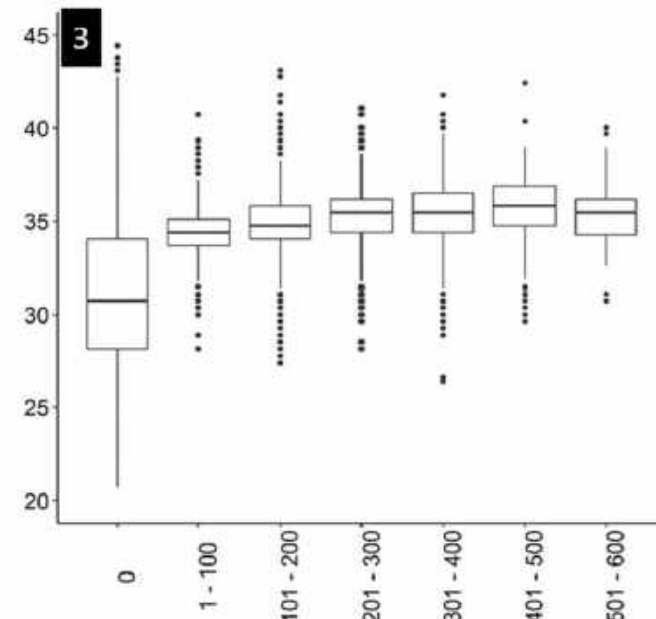
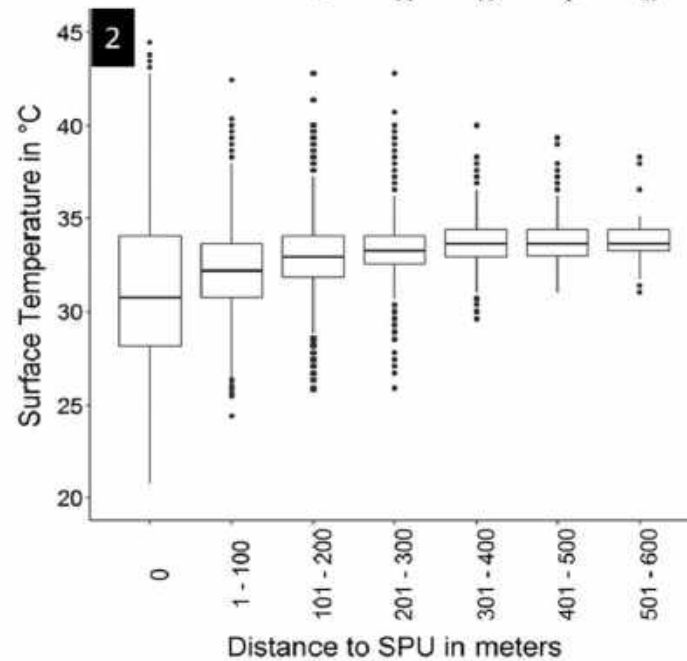
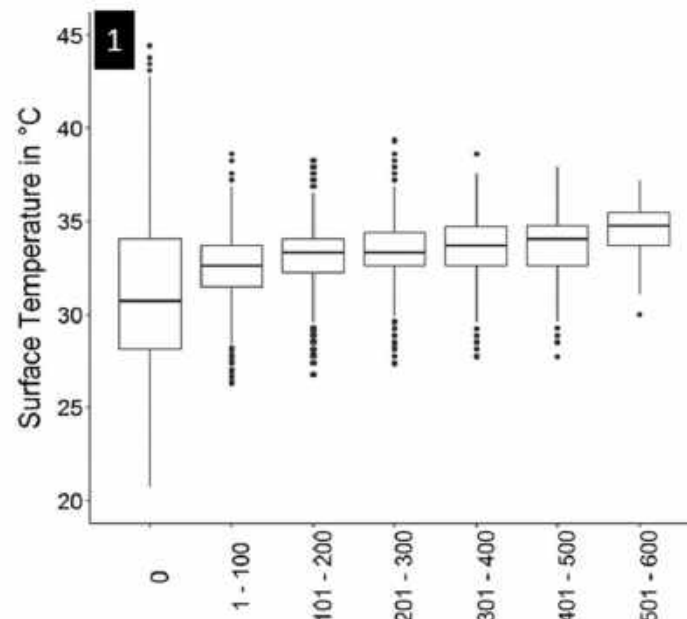
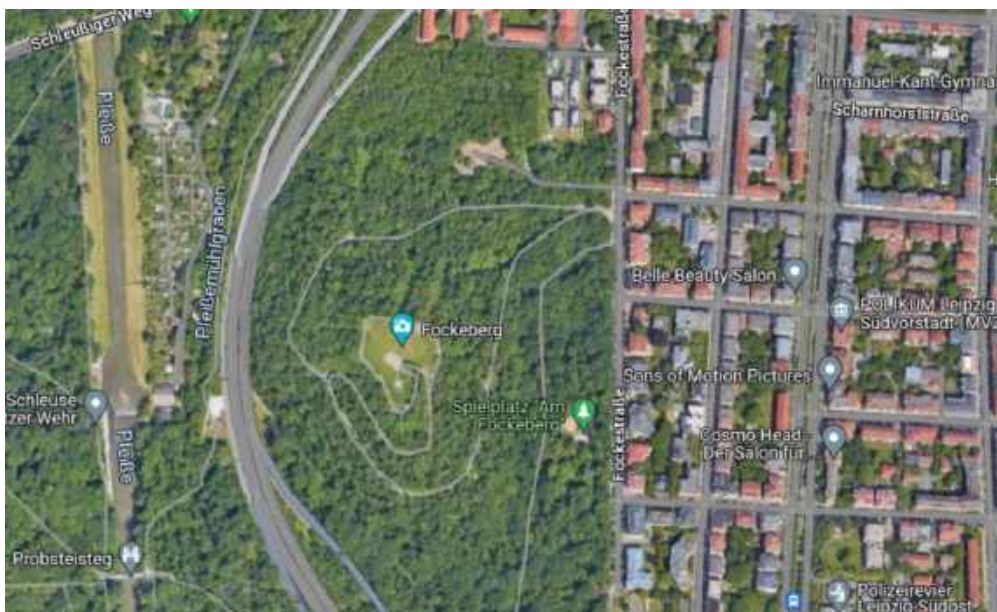
Ecological Integrity

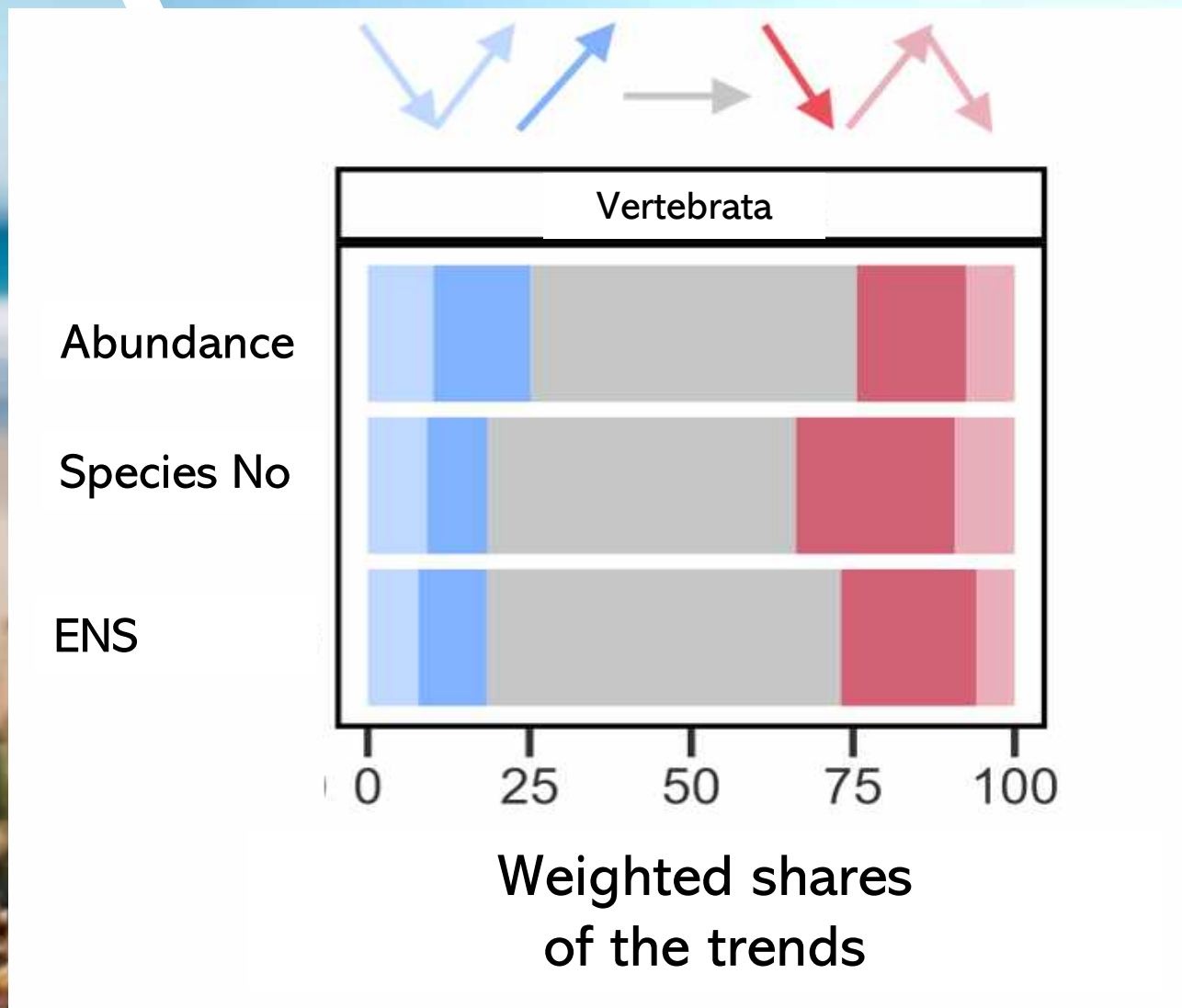


Standortanordnung urban zu rural

—●— Ökolog. Standortqu.
— Linear (Ökolog. Standortqu.)

Influencers at work ...





Urban scepticism?



Eurasian beaver
(*Castor fiber*)



Red squirrel
(*Sciurus vulgaris*)



European hare
(*Lepus europaeus*)



Red fox
(*Vulpes vulpes*)



Hedgehog
(*Ernaceidae*)



Stone marten
(*Martes foina*)



Coypu
(*Myocastor coypus*)



Rat
(*Rattus norvegicus*)



European roe deer
(*Capreolus capreolus*)



Raccoon
(*Procyon lotor*)



European rabbit
(*Oryctolagus cuniculus*)



Wild boar
(*Sus scrofa*)

Listings as liked



1000

0

52.4%

39.8%

46.0%

20.6%

22.2%

11.4%

4.7%

0.9%

11.6%

7.7%

4.8%

1.0%

6.6%



0.2%

0.3%

14.7%

0.8%

4.5%

1.3%

0.7%

1.8%

15.7%

24.7%

22.2%

26.5%

43.8%

0

-1000

Listings as disliked

Moesch et al. (2024)

Squirrel

Hedgehog

Fox

Hare

Roe deer

Rabbit

Beaver

Coypu

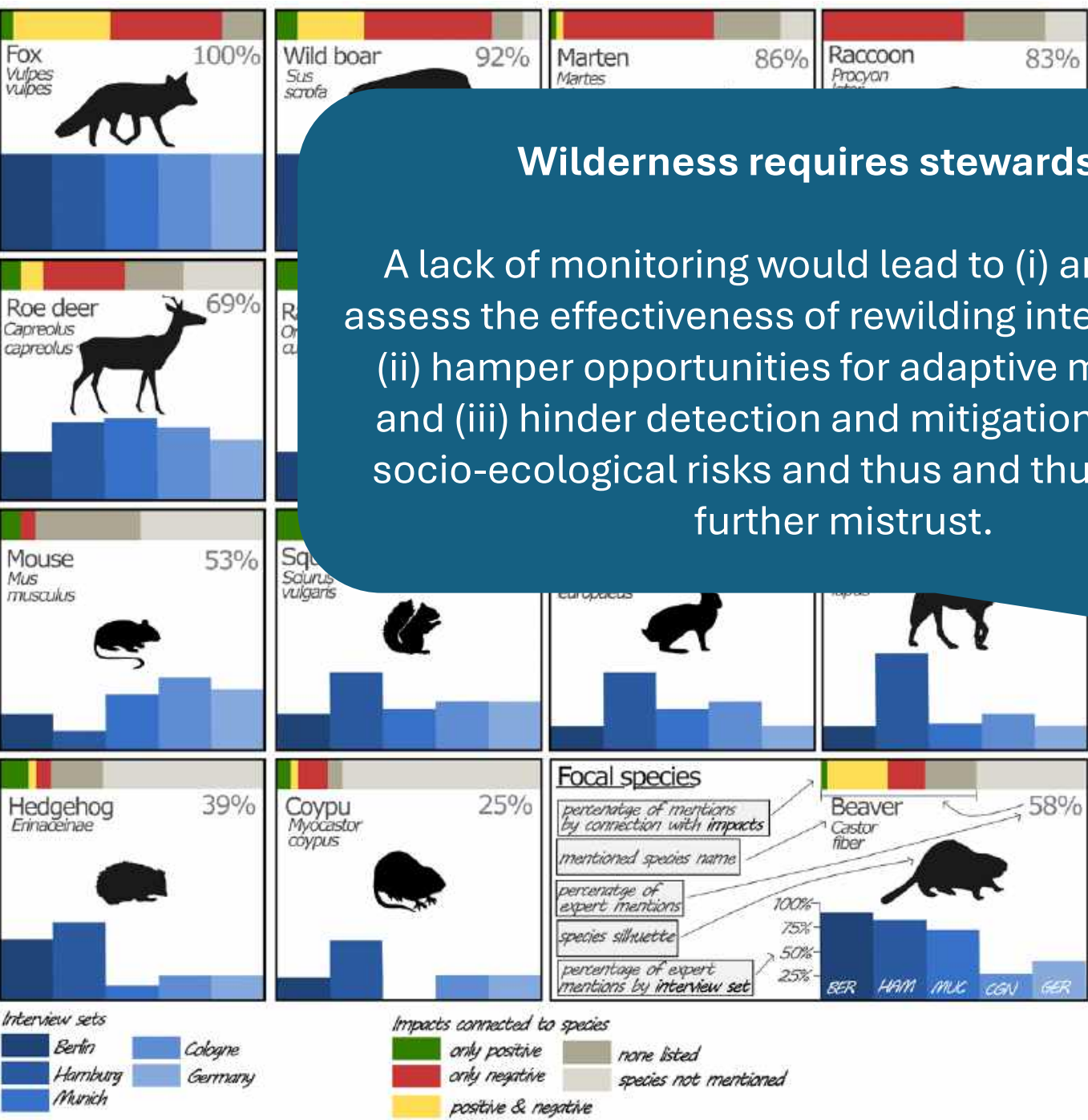
Marten

Raccoon

Wolf

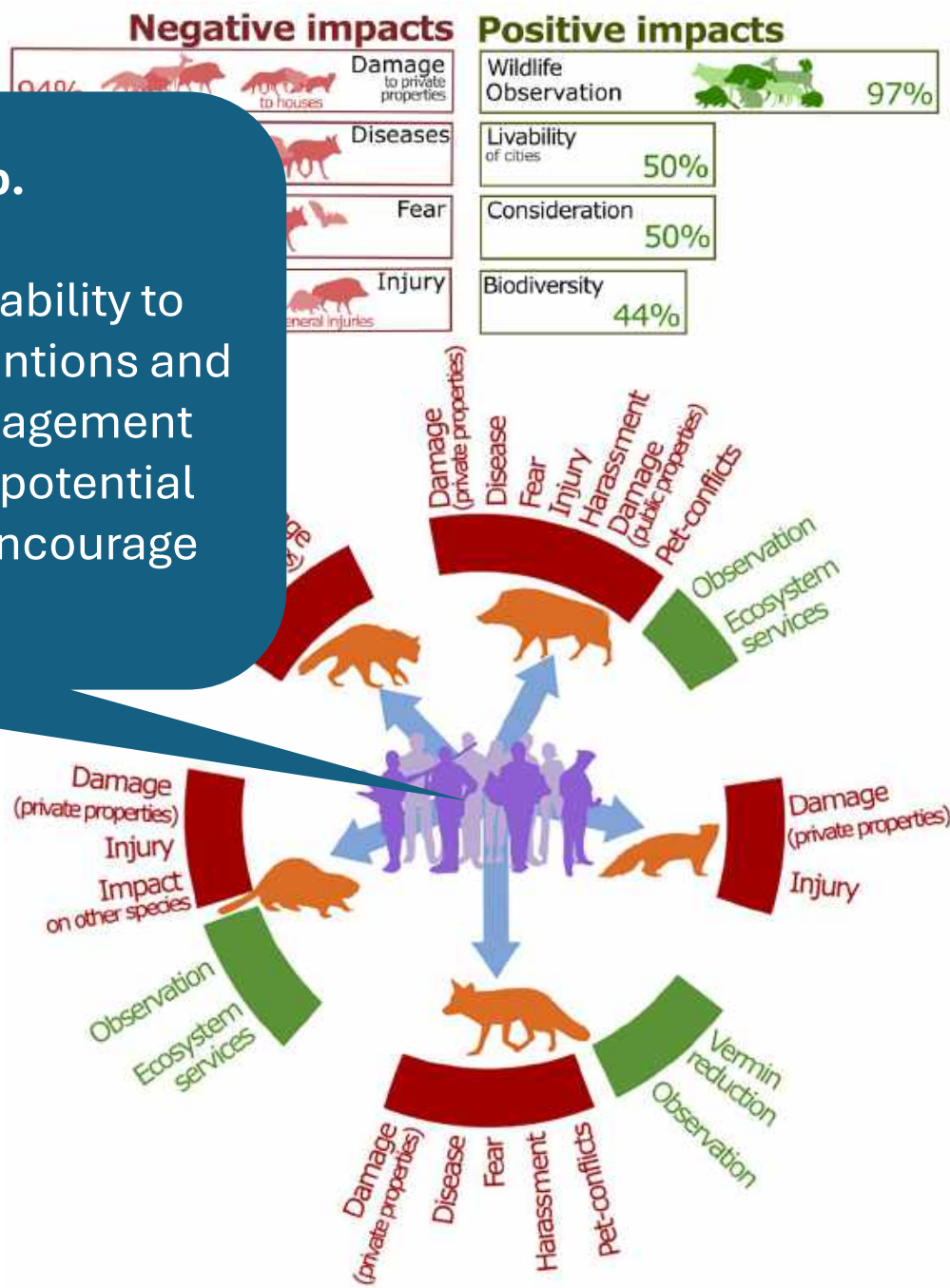
Rat

Wild boar



Wilderness requires stewardship.

A lack of monitoring would lead to (i) an inability to assess the effectiveness of rewilding interventions and (ii) hamper opportunities for adaptive management and (iii) hinder detection and mitigation of potential socio-ecological risks and thus encourage further mistrust.



Positive attitudes about wilderness in cities!

Cemeteries matter!

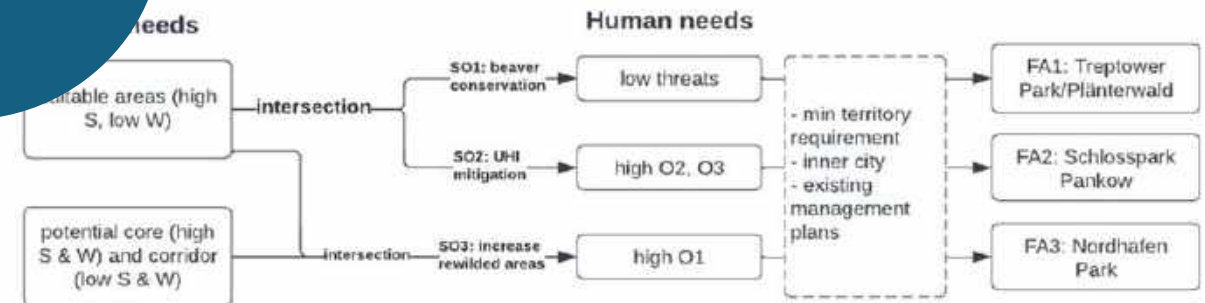
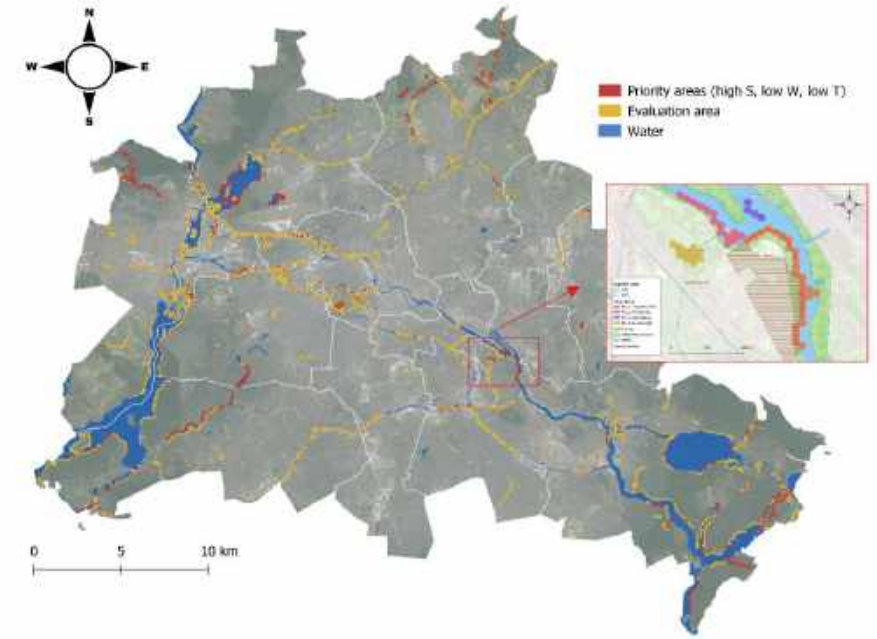
61 tree species, 44 hedge and shrub species 87 ground covers, meadow plants and perennials and >10 large mammals



People in cities tend to be more conservation oriented than their rural counterparts.

We need to find out if and to what extent direct experience with beavers and other wildlife in urban settings influences public opinion on rewilding.

Rewilding matters!



Ten steps towards integrated decision making for ecological restoration in cities: Rewilding the European beaver (*Castor fiber*) in Berlin, Germany ☆☆☆



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ABSTRACT

Ensuring a livable city for all within the more-than-human discourse, restoration of urban ecosystems requires careful consideration of both human and non-human needs. However, traditional assessments and therefore most management plans usually fail to include the latter as a core planning requirement. This article presents and explains a 10-step method which simultaneously and actively considers both to identify potential restoration areas within urban ecosystems. To do so, a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis for the multispecies needs identification is combined with a Multicriteria Spatial Decision Support System (MCSDSS) for the spatial assessment. To validate this method, a case study of Berlin, Germany, an explicitly urban case, is presented. The aim of the study was to evaluate the ecosystem restoration (rewilding) potential of the city's riparian and riverine ecosystems through the enhancement of Eurasian beaver habitats.

- Method combining SWOT analysis with MCSDSS for an integrated spatial assessment
- Well-suited for multispecies (human and non-human) perspective on urban nature restoration

Christian Wirth, Helge Bruehlheide, Nina Farwig,
Jori Maylin Marx, Josef Settele (Hrsg.)



Faktencheck Artenvielfalt

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Zusammenfassung für die
gesellschaftliche Entscheidungsfindung



Thank you very much!

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