

BOOK SUMMARY

18 TRANSFORMATIVE ACTIONS TO DESIGN, LIVE IN AND ENJOY CITIES IN HARMONY WITH NATURE BY 2030

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Global urbanization represents a genuine social and environmental paradox. Cities have become the most important centers of access to services, housing, physical infrastructure, and the development of knowledge and processes of technological and social innovation. However, cities are also responsible for an extensive transformation of the natural ecosystems on which they are settled, as well as biodiversity and their capability to provide services closely linked to the wellbeing of urban dwellers.

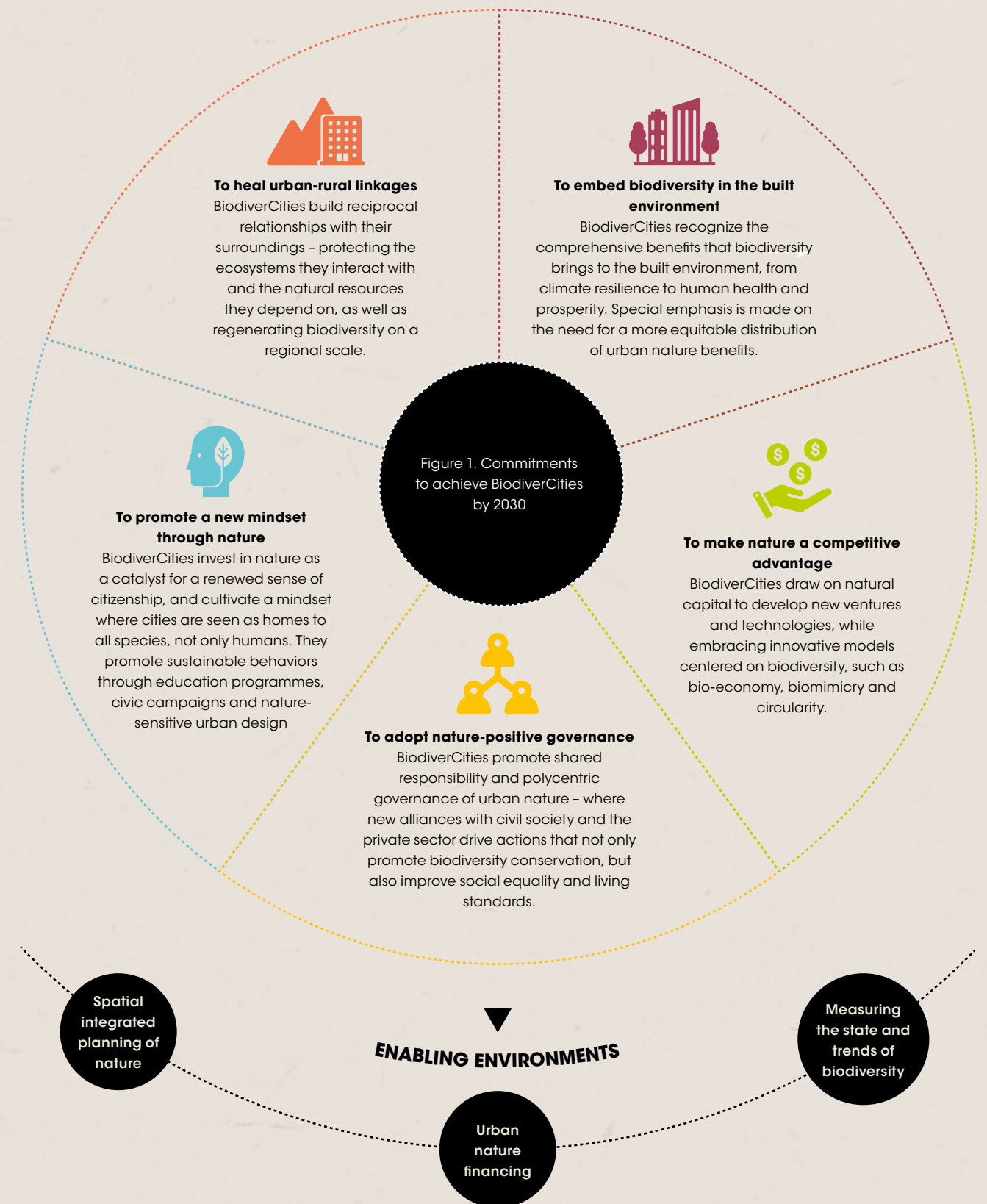
This centrality of cities as hotspots of world population growth and demand for better living conditions worldwide highlights the urgency of understanding how urban areas' economic, social, and ecological functions can work to-

gether to benefit the environment and human society alike. Our transition to new growth and sustainable development models will inevitably pose serious challenges. Tackling the latter by reconciling human and ecological dimensions is the most significant contribution cities can make to a nature-positive world by 2030.

BiodiverCities arise as an opportunity for humans to live, work and evolve in harmony with their environment. This vision is an action framework in which cities can be comprehensively planned as truly interconnected living socio-ecological systems that ensure ecosystems' integrity and ability to offer human well-being and climate resilience. Thus, BiodiverCities represents a transformative concept of city futures that can avoid environmental degradation of ecosystems and the negative impacts on natural environments and human well-be-

ing. This transformative vision of BiodiverCities emphasizes the need for change processes based on a new approach to policy that goes beyond "systems optimization" through top-down technocratic approaches.

According to the Alexander von Humboldt Biological Resources Research Institute and the World Economic Forum, BiodiverCities can restore the balance between urban management and nature, by increasing green infrastructure; improving governance schemes that promote nature-based solutions; the generation of positive links between the rural and the urban, the conservation of biodiversity; the prioritization of circular economy models and innovative actions for economic competitiveness; and the promotion of a new mindset and set of values. BiodiverCities by 2030 promotes five commitments and three enablers as follows (Figure 1):



Source: Alexander von Humboldt Biological Resources Research Institute and the World Economic Forum, 2021.

The achievement of these commitments will depend on actions, tools and instruments aimed at the spatial integration of nature, the integration of nature for urban investors, as well as the measurement of the status and trends of biodiversity and ecosystem services.

When this book project started, we invited all contributors to reflect on the question: What are the transformations needed to reach BiodiverCities by 2030? With this invitation in mind, in August 2021, over 80 scholars, practitioners, leaders, promoters, and visionary individuals from 44 cities were convened to reflect on the commitments and enablers mentioned above in which cities can transform and move towards sustainability by restoring their relationship with nature (see section Transformation). This book showcases conceptual approaches, case studies, and op-ed articles addressing why nature in and around cities is crucial to ensuring planetary health.

Contributors analyzed urban natures ranging from Montería and Mompox (riverside cities that functioned as amphibious lands in pre-colonial times) to real estate practices in Milan and Villavicencio. Their analysis included a circular green hotspot in Amsterdam, planetary health diets in Quezon City and Copenhagen, a pan-European toolbox to manage blue environments, a comprehensive methodology to value the benefits of urban trees in Medellín, a food security approach based on green roofs in Rio de Janeiro, and practical applications to

advance biodiversity in the public space in the Chinese “sponge-city” of Shenzhen. We organized these contents to guide readers into understanding why a system transformation is needed to adopt a nature-positive approach to urban development and how it actually happens.

In the following pages, we propose a set of transformative actions grouped in six dimensions to initiate (and navigate through) change toward cities in harmony with nature by 2030. System transformation implies change across all those dimensions. The book also contains vital messages that offer new approaches to promote change and, hopefully, trigger transformative actions. We hope these actions speak to and inspire subnational governments, national authorities, the international community, business, finance, and society in general to imagine the future cities we want to live in -and make them happen.

TRANSFORMATIVE ACTIONS

Values, beliefs, and worldviews

➔ **Overcoming the notion of cities as a threat to biodiversity.** Some emerging concepts that accompany this change of mentality are urban landscape design, re-naturalization, Nature’s Contribution to People (NCP), and regeneration (p. 110, 206, 252).

➔ **Envisioning the role of BiodiverCities in enabling transformative change.** As more people access education, communication tools, and financial means, they hold greater potential to make critical

reflections, discuss imaginaries of future cities and build new development pathways¹ (p. 138).

➔ **Reconnecting citizens to nature for creating stewardship** -through education programmes, civic campaigns and biophilic, playful urban design (p. 178, 182).

Norms and regulations

➔ **Shaping new economies to align economic demands with biodiversity maintenance.** Cities demand models of multilevel governance, market regulation, bio-intensification, and environmental accounting that ensure maintaining large-scale ecological processes e.g. water, materials, and energy cycles, and ecological succession (p. 216).

➔ **From BiodiverCities to BiodiverRegions?** Urban planning and, overall, our urban way of living overlook the ecology that governs, determines, explains, and makes every city possible. It is important to transform norms and regulations that directly address the environmental liabilities caused by cities at regional scale.

➔ **Informing land use planning with data on urban expansion on priority areas for biodiversity.** It is pivotal to provide local authorities with information about where and how cities should expand, taking biodiversity as the entry point of the analysis. This data and information will ideally impact land market dynamics, densification policies and partnerships with land owners to

recognize and safeguard nature (p. 116, 241).

Information and knowledge flows

➔ **Promoting citizen engagement to generate biodiversity data.** Digital platforms such as eBird and iNaturalist can stimulate participatory projects for monitoring and inventorying biodiversity in urban environments and feeding systems for its evaluation and monitoring.

➔ **Give way to platforms that help spread good ideas and practices in maintaining and recovering biodiversity in cities.** Collaboration, co-creation, and innovation processes can be supported by generating and exchanging knowledge based on positive links between governmental and academic sectors and local communities (p. 110, 202).

➔ **Ensuring that local reports demonstrate the value of maintaining and recovering biodiversity concerning the achievement of key SDGs at the urban level.** It is crucial to develop evaluation systems and indicators that can monitor long-term interactions between drivers, pressures, states, impacts, and responses that describe the relationship between biodiversity and several human dimensions (p. 152).

Resource flows

➔ **Developing a new urban economy based on biodiversity and equitable distribution of its benefits.** Adopting circular bio-economy models, nature-based

economies, and biomimicry will allow cities to increase competitiveness while proposing ways to redistribute wealth (p. 210).

➔ **Diversifying the supply of financial instruments, incentives, and aids to promote the incorporation of biodiversity in urban planning.** Cities seeking to increase nature’s contributions to people’s well-being need to develop incentive programs and tax schemes that facilitate public, private, or joint investments around the maintenance and recovery of ecological and social functions of ecosystems and biodiversity.

➔ **Encouraging the creation of natural capital funds and NbS projects at the municipal level.** An agency or fund to finance NbS projects focused on nature, biodiversity, and ecosystem adaptation to climate change in cities could explore several direct or indirect forms of financing.

Roles and routines

➔ **Placing the Urban Commons at the heart of a BiodiverCity.** Urban Commons include material resources such as parks, community gardens, streets, abandoned buildings, and intangible aspects such as culture, public services, and community bonds (p. 166, 220).

➔ **Promoting experimental spaces implying the creation of platforms for new interactions.** Such is the case of a growing number of Urban Living Labs (or FabLabs), Makerspaces, and “Transition

arenas” where stakeholders envision transformations.

➔ **Instead of doing more, we need to do less.** It is important to let nature reconquer urban spaces—to abandon our fixation on order and the “cleanliness” of green areas. Instead, city managers could try preserving the biomass that allows ecological succession and maintains ecosystem services (such as pollination) that have a regional impact.

Power relations

➔ **Approaching cities as a space for distributed agency.** Cities are no longer a clean-cut green vs. gray system or a human against the non-human matrix. They are now a socio-ecological system where people experiment, connect, share, learn and innovate (p. 138).

➔ **Promoting a shared vision of the future city based on principles of equity and well-being.** Biodiversity management can benefit from community-led networks that push for institutional and behavioral changes around nature, well-being, sufficiency, and inclusion (p. 254).

➔ **Acting decisively to reduce social gaps around the distribution and access to the benefits derived from biodiversity in cities.** Nature’s contributions to people e.g. disaster risk reduction or adaptation to climate change must be capitalized equally for the entire population, rather than just becoming another inequality factor, especially for the most vulnerable.