GEO FOR CITIES

GLOBAL ENVIRONMENT OUTLOOK

UN environment programme

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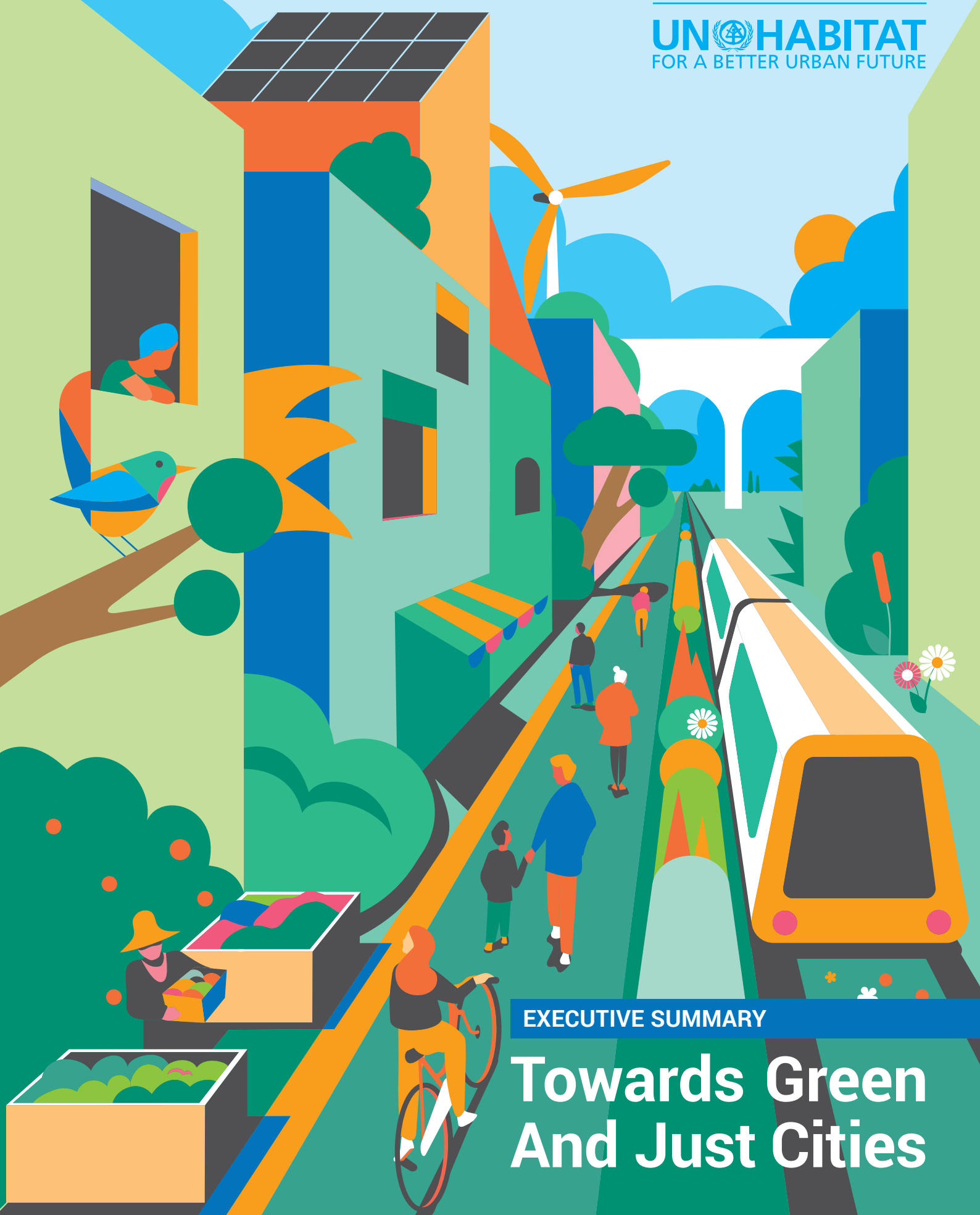
FOR A BETTER URBAN FUTURE



EXECUTIVE SUMMARY

Towards Green And Just Cities

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Strategic Agenda

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Executive Directors' Foreword

Cities can be dynamic engines of economic and social development but come with a huge environmental footprint. Our cities are also weathering the impacts of climate change, sometimes almost daily. The sixth Global Environment Outlook (GEO-6) identified urbanization as one of five main drivers of environmental change. The report also looked at the impact on cities and city residents of related challenges such as biodiversity loss and pollution. The GEO for Cities looks at these issues, but also presents the types of solutions that can lead to environmentally sustainable and just cities.

To achieve this vision, GEO for Cities proposes that decision-makers act decisively to: achieve net zero circular cities; build resilient and sustainable cities; and, foster inclusive and just cities.

This report links social equity and justice with environmental sustainability to avoid the worst impacts of gentrification and, at the same time, to improve the lives of those living and working in informal settings. Equity and environmental sustainability must go hand in hand if cities are to contribute to the positive transformational change described in this publication.

GEO for Cities also highlights the complexity that city managers are confronted with. Many of us are locked into socio-political or behavioural patterns that prevent us from taking action. In other situations, cities are locked into a particular type of political economy or urban planning approaches that inhibit change. These can lead to physical lock-ins of carbon and energy intensive infrastructure that perpetuate inequity across the city.

However, there are tools, such as participatory governance and innovative city networks that can help cities overcome these lock-ins. GEO for Cities looks to provide real-world pathways for achieving the vision of environmentally sustainable and just cities and to support decision makers in overcoming the triple planetary crisis of climate change, biodiversity loss and pollution and waste.

As the voice for human settlements and the environment within the UN system, we are extremely pleased to present a detailed roadmap for decision makers. It is based on the best science we have today and compiled by world-renowned experts. We hope this report will provide practical guidance adding to the extensive work by other groups to propel cities towards a new environmentally sustainable and just future.

Inger Andersen

Maimunah Mohd Sharif

Summary for city-level decision makers

It is clear from the analysis provided in this second edition of GEO for Cities that cities have the potential to drive progress towards the 2030 Agenda and its Sustainable Development Goals. To achieve this, cities must be designed or redesigned to use resources in an environmentally sustainable way and become more resilient, inclusive and just places. This potential can be fulfilled by adopting the transformative visions and pathways towards implementation presented in this report, to make cities beacons for others to follow.

Cities are diverse places of exchange, continuously interacting both internally and with other places. It is through these interactions that urban innovation is possible. In this process, cities can significantly transform their own environments and societies while also impacting places beyond their immediate urban environment.

Urbanization continues to increase across the globe, but growth and prosperity are unequally distributed. While megacities remain economically, socially and ecologically important, growth is also accelerating in small and medium-sized cities, especially in developing countries. Inequality within and between cities affects human health and well-being, as well as the environment. The COVID-19 pandemic has exacerbated this inequality.

However, all cities have difficulty managing these interactions and challenges sustainably. They are faced with multiple dimensions of ecological, social and economic dynamics that reinforce unsustainable trajectories. Several factors "lock" cities into an unsustainable status quo, including:

1. the prevalence of the static political economy, often leading to capture of governance systems by vested interests;
2. the dominance of business-as-usual models of urban planning that tend to focus on controlling, taming or exploiting nature; and
3. the complex and multi-level governance systems to which cities belong and within which they operate. These factors vary across cities but have slowed transformational progress to date.

Global environmental challenges are affecting cities. The conditions under which cities have developed and currently function are changing. Global changes (for example, climate change, biodiversity loss and pollution) have direct impacts at the city level. There is an urgent need to consider the implications of these transformations in urban contexts. Global environmental challenges also affect the value of essential city infrastructure and the quality of life of urban residents. Environmental changes in air, fresh water, biodiversity, oceans, coasts and land, even in far-flung but connected places, affect human aspects such as health, equity and food security at the city level.

Cities also impact all three environmental crises: climate change, biodiversity loss and pollution. Urban activities contribute to current environmental degradation, both within and beyond their boundaries. These environmental impacts primarily result from energy and material use in cities (particularly in transport and buildings), increasing consumption patterns, including for food, and the generation and management of waste. Although enough data and information currently exist to allow cities to take important actions, gaps in data quantity and quality could be filled that would help refine urban planning and environmental management at the city level. Urban environment planning and management needs to consider ecological processes and nature-based solutions for all city inhabitants, both human and non-human.

Some cities are using various governance processes to build more environmentally sustainable and equitable futures. These approaches are built on

1. inclusive, publicly engaged decision-making;
2. partnerships and coalition-based governance; and
3. institutionalization for longevity and scaling up. The success of these approaches depends on time- and place-specific factors.

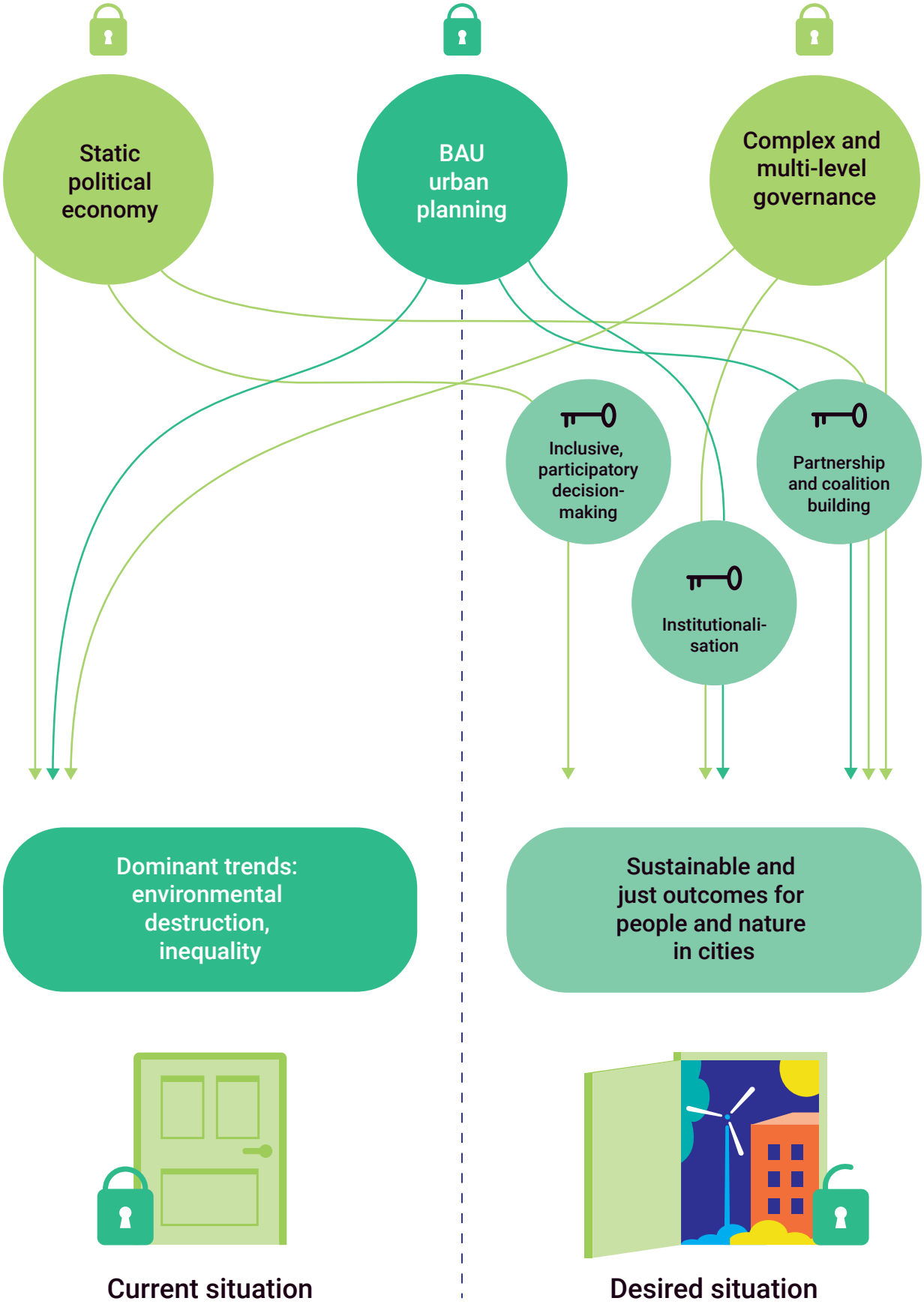
Using these approaches, urban planning and overall city management become important tools for changing the sustainability performance of cities. Urban planning and city management need to consider the complexity, diversity and interconnections within and beyond cities in order to change the current trends and simultaneously achieve multiple Sustainable Development Goals.

GEO for Cities presents a vision of environmentally sustainable and just cities that recognizes the diversity of cities and will help guide these urban transformations. The goals in the vision and the associated dimensions presented in this report are consistent with global conventions and agreements related to development, sustainability, disaster prevention, resilience, reducing biodiversity loss and pollution and addressing climate change. Linked to this future urban vision and its dimensions are transformation pathways tailored to local and regional specificities, priorities and capacities; these are presented in the form of a set of proposed transitional actions associated with each dimension.

Cities must be part of the solution to environmental and climate crises. If it is implemented quickly, the broad, flexible vision for environmentally sustainable and just cities will allow cities to lead the transformation called for in the United Nations Environment Programme's Sixth Global Environmental Outlook (GEO-6) and help avoid irreversible tipping points. This vision is based on strong scientific evidence, case studies, and forward-looking ideas about how changes in policy, practice and behaviour could lead to environmentally sustainable and just cities. With this vision, we identify three main areas of urban action – or urban dimensions – involving

1. low carbon, energy and material efficiency as well as circularity;
2. resilience and sustainability; and

Figure E.1: Ways to overcome lock-ins



(3) social inclusion and multispecies justice as core areas for advancing sustainability.

Together, these dimensions cut across city and regional land uses and sociotechnical systems alongside biophysical features and ecologies; power relationships, governance systems and institutions; energy, materials and information flows; and cultural practices, social behaviour and multispecies interactions.

Shared understanding, commitment and desire for deep, strategic and substantial urban change to tackle interconnected environmental and development challenges are needed to transform the vision into a reality in cities around the world.

Making progress towards environmentally sustainable, just and inclusive urban transformation requires pathways to build urban circularity, achieve deep decarbonization, design for urban resilience and support social inclusion and justice in cities. Injecting a justice perspective across all these pathways is crucial to ensure that the whole is greater than the sum of its parts.

Designing and implementing pathways towards environmentally sustainable and just outcomes requires simultaneous strategies to overcome the deep-seated lock-ins that prevail in many cities, particularly in relation to their political economy, business-as-usual urban planning approaches and at times exclusionary and technocratic governance models.

While most cities pursuing transformative change are only achieving a fraction of the potential outcomes required to ensure that urban development is headed in the right direction, many such experiences show that the successful restructuring of fundamental processes of governance can eventually achieve and sustain these transformational outcomes in the longer term.

The pathways presented in this report are often complex, and they must be so if they are to solve the interlinked problems of social equity and environmental sustainability. An overarching lesson is that it is unrealistic to expect any one actor to play a transformational role alone. Working together is the key.

To achieve these transformation pathways, several important actions will need to be taken, including:

- **Designing urban infrastructure for more equitable, resilient, and environmentally sustainable living, production and consumption:** Because urban infrastructure is long-lasting, it can 'lock-in' and shape resource needs and service inequities for decades to come.

- **Investing in mechanisms for cross-sectoral and multi-jurisdictional collaboration, governance, and implementation:** Systemic, transformative action requires cross-sectoral integration as well as coordination between jurisdictions both within urban and peri-urban regions and between local, subnational, and national authorities.

- **Seeking equity and justice across all local environmental action and programming:** Equity and justice should not be seen as sectoral considerations to be addressed as an afterthought. They require strategies to shift the multiple structural drivers of inequity that are commonly found in cities. For example, in the case of informality, the everyday activities and livelihoods of ordinary women and men need to be recognized and supported, rather than viewed as a burden.

- **Building reciprocal rural-urban linkages:** A range of flows and interactions between urban and rural areas can serve as entry points to develop interventions with reciprocal benefits. These include the two-way movement of people, capital, information, nutrients, ecosystem services and more.

- **Incorporating insights from data and science into decision-making processes:** Many of the insights needed to guide long-range planning and transformational pathways require specialist expertise that often does not sit within local governments. Expert guidance is often needed, for instance, to gather, process and interpret the data required for material flow analyses, greenhouse gas emissions and biodiversity baselines and resilience assessments, among others.

- **Fostering inter-city exchange and co-learning:** Most cities face a combination of challenges that need to be identified and resolved in line with their own development pathways, instead of implementing strategies that may have been externally prescribed. However, although urban agendas need to be adapted to their own contexts, geographies and histories, there is enormous value in sharing experiences with other cities.

As stated by Maassen and Galvin (2019):

> *"[r]eal world examples of deep urban transformations are hard to come by."*

Fortunately, there is a rich history of progress towards the changes we need. Collectively, we must identify what works and what does not, and come up with ethical principles for locally adapted solutions for transformative action from existing experiences and projected trends. Doing so will allow us to develop a collective knowledge and experience base on how cities, citizens, local authorities and their networks are co-producing pathways towards progressive and forward-looking urban agendas while inspiring others to do the same. The responsibility and opportunity to take on this challenge lies with us all so that everyone can live in the kinds of cities that we deserve.

Figure E.2: Steps to start a city on a transformative pathway

"As the voices for human settlements and the environment within the UN system, we are extremely pleased to present a detailed roadmap for decision makers. It is based on the best science we have today and compiled by world-renowned cities experts. We hope this report will give practical guidance adding to the extensive work by other groups to propel cities towards a new environmentally sustainable and just future."

Inger Anderson, Executive Director of United Nations Environment Programme
Maimunah Mohd Sharif, Executive Director of Human Settlements Programme

GEO for Cities aims to inform, engage and support dialogue among city decision makers and other actors involved in urban issues. The GEO-6 report, published in 2019, identified urbanization as one of five main drivers of environmental change and also looked at the impact on cities and city residents of related challenges such as climate change, biodiversity loss and pollution. The GEO for Cities looks at these issues, but also presents the types of solutions that can lead to environmentally sustainable and just cities.

The GEO for Cities process is led by two co-chairs, guided by an Advisory Committee of organizations focused on urban and environment solutions (ICLEI, C40, Cities Alliance, IIED, ODI, IIHS, GCSE), has been drafted by around 20 expert authors and supported by the GEO Secretariat.

The environmental and urban challenges outlined in this report require urgent and sustained attention from everyone involved in building or managing cities. To achieve Sustainable Development Goal (SDG) 11, we must make cities and human settlements inclusive, safe, resilient and environmentally sustainable. UNEP, UN-Habitat, the GEO for Cities Advisory Committee, its co-chairs and the expert authors hope that this report will lead to the urgent action needed for cities to become the beacons of environmental excellence that help their citizens lead productive, prosperous and equitable lives. Enjoy and take action!

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