



A Framework for Action for Sustainable Development

Sustainable Cities and Innovation

At a glance

- + Urbanization is the primary development challenge of the 21st century. Today's urban population of about 3.5 billion people is projected to reach 5 billion by 2030. Ninety percent of this growth is in developing countries.
- + Cities are the engines of economic growth, job creation, and poverty reduction. The best cities improve living conditions through good governance, investments in infrastructure, and by building solid policy frameworks that encourage the private sector to thrive. Public-private partnerships can encourage investment into sustainable cities.
- + Sustainable cities are the most cost-effective, environmentally sound, and efficient way to provide basic services, opportunities, and a high quality of life for all. Although cities contribute to greenhouse gas (GHG) emissions and concentrate risk from the effects of climate change, urbanization can create denser, more energy-efficient cities that are climate resilient.

The challenge

Cities are now home to more than half of the world's population. This proportion will rise in the coming decades, with most growth taking place in developing countries. Every year in developing countries, millions of people migrate to cities in search of jobs and better access to services. This growth will increase the demand for urban services, infrastructure, and affordable housing. These needs must be met in order to address informal settlements and urban poverty.

Many cities are vulnerable to extreme weather events and other natural hazards. An estimated 360 million urban residents live in coastal areas, facing the risks related to storm surges and rising sea levels. Cities in developing countries are often vulnerable due to the existence of informal settlements, lack of infrastructure, and limited institutional capacity. The urban poor are most vulnerable as they tend to occupy locations that are more exposed to hazards, and they have limited adaptive capacity.

Cities are critical in addressing local and global environmental degradation that affect human well-being and poverty reduction. Cities and their residents account for about two-thirds of global energy use and over 70 percent of GHG emissions. The economic activities, consumption, and waste production by city residents have significant impacts on land use and agriculture, water resources, air quality, and biodiversity.

The need for action in cities is immediate, and delay is costly. Urban infrastructure and buildings are long-lived and generally "locked in" for decades or more. Action is particularly urgent in the rapidly growing cities of developing countries, where most infrastructure will be built in the next few decades. Reversing course later is possible, but would be very costly.

The future we want

Sustainable cities are urban communities that are committed to improving the well-being of current and future residents; they integrate economic, environmental, and social considerations. The inter-linkages among the three pillars of sustainable development are evident in cities, which function as integrated systems. Innovative solutions in the urban space would span multiple sectors, including buildings, energy, urban transport, water, and solid waste.

With most of world's gross domestic product generated in cities, our economic future hinges on their productivity. Cities are engines of growth and innovation; they contribute to poverty reduction, improved living conditions, cultural development, and knowledge generation. Building sustainable cities maximizes the economic benefits from increased population concentration, while reducing negative impacts such as congestion, resource degradation, pollution, and the risks associated with natural disasters.

Sustainable cities embrace innovation and cost recovery, and use the best available information for decision making. Cities would be smarter by using technology to manage resources and by educating and informing citizens so they are better able to

participate and share the results of policy changes. These changes would promote more intelligent, inclusive, and participatory governance in cities.

Sustainable cities also address poverty reduction and social development by reducing slums, and improving the provision of basic services, and providing a safe living environment free of crime and other threats. Adequate and equitable access to services and opportunities would be provided for the urban poor, residents of informal settlements, and other vulnerable groups such as women, children, the elderly and disabled, and minorities.

How do we get there?

Urbanization and density are key to growth and prosperity.

Density, urban transport, and buildings are three important ways through which cities impact the local and global environment. Urban form has a profound impact on GHG emissions and the sustainability of cities; denser cities emit fewer GHGs per capita. Integrated transport and land-use development can deliver economic, environmental, and social benefits. These include improved mobility, reduced energy use, better air quality, lower GHG emissions, and improved access to jobs, housing and urban services. Urbanization is an opportunity to include efficient designs and materials in new buildings and for urban planning that encourages higher-density living with less sprawl.

Institutions, leadership, and an effective legal framework are necessary for sustainable cities.

Institutions create the incentive framework that dictates individual and collective behavior in the urban environment. The first step in the design of sustainability policies is to review the institutional capacity, identify obstacles, and build the strategy around these limitations.

Participation and inclusiveness are critical for sustainable cities.

Understanding how the poor live in urban areas and engaging them in the decisions that affect their development path will help build sustainable, inclusive cities. Cross-sectoral cooperation is key for integrated economic development in cities. Sustainable urban policies will depend on the contribution of both public and private stakeholders and the incentives to guide individual private action, including funding, new and innovative technologies, and sharing of information.

Integrated technologies adapted to the way cities work would help dense cities to perform efficiently.

Smart, connected cities would take advantage of technology and information flow to monitor and measure resource flows, predict future behavior, and simulate changes in demand in response to policy actions. Smart transport systems can be used to tackle congestion and supply real-time information on traffic problems.

Innovations at the city level require appropriate national policies and an enabling environment that allows cities to experiment and be creative. Often, successful urban policies depend on enabling national policies. Some innovations will require significant investments, generating a need for new and innovative financial tools, including from national government resources.

Cities need access to **information and common diagnostic tools:**

- + Data collection to provide a composite picture of city performance
- + Diagnostics based on evidence and including adequate consideration of risks
- + Benchmarking and relevant indicators, so that cities can assess where they are in terms of service delivery, productivity, and quality of life
- + Assessing alternatives to sustainability at the sector level—for example, buildings, energy efficiency
- + Costing the alternatives and acquiring the necessary financing
- + Engaging citizens in the definition of local sustainability goals in planning processes and garnering public support
- + Establishing and strengthening institutions to guide, share, and monitor progress.

The World Bank Group is responding at many levels. To drive sustainability, we promote urbanization that is efficient, equitable, and inclusive. Our urban strategy promotes knowledge products, standardized tools, and methodologies to help policy makers and city leaders make better decisions. We are increasing our focus on multisectoral approaches to development, with new business lines (such as cities and climate change) in response to emerging challenges. We also work with the private sector through the International Finance Corporation to encourage and promote innovative financing instruments to strengthen local-level capacity.

References and suggested readings

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