



An Integrated Strategy for Sustainable Cities

The multiple challenges that cities face also represent a strategic opportunity to build sustainable cities and reap the benefits of rapid urbanization. Urban development should be understood as a balanced and inclusive development of four pillars: economic development, social development, environmental management and urban governance. The enabling mechanisms include an integrated investment on green industrial transformation, improved public infrastructure, access to and efficient use of social services, effective urban governance, and the protection and management of natural resources.

About 6.25 billion people would be living in urban centres by 2050, eighty per cent of which would reside in developing regions, concentrated in cities of Africa and Asia. For example, African cities would house over 1 billion people, which would be three times the figure of urban North America, twice the figure of Latin America and the Caribbean or Europe, and comparable to China's urban population at that time. In many cities of developing countries the main challenge would then be how to provide adequate public services and job opportunities to residents, including marginalized populations in megacities. In addition, the adverse impact of social inequalities on human health and the environment can multiply when we factor the adverse effects of 'natural' disasters. The incidence of natural hazards linked to climate change events has increased in intensity and frequency, which would likely compound the pressure on the use of natural resources and the environment linked to rapid urbanization and economic growth.

The potential for building sustainable cities

In cities of low-income countries, residents often do not have adequate access to piped water, waste disposal, and electricity. Rates of poverty and infant and child mortality are higher, while capacity of governance tends to be weaker. The projected significance of small- and large- size of urban settlements represent challenges for improving access to sound infrastructure and reducing vulnerability to various types of risk e.g. health, disasters. Challenges include the provision of decent employment to underemployed urban populations and with limited access to sound housing and good-quality schools. Upper-middle- and high- income countries with urban populations that already have access to basic public services face the challenge of becoming more efficient in the use of energy and water, reduce the generation of waste, and improve their recycling systems.

Nonetheless, cities can provide significant socio-economic benefits. By concentrating people, investment and resources, cities heighten possibilities for economic development, innovation and social interaction. Similarly, cities lower unit costs to provide public services such as water and sanitation, health care, education, electricity, emergency services, and public recreational areas. For poor countries, in particular, urbanization implies lower costs per household to provide infrastructure such as roads, water, sewers, electricity, and services such as schools, public transportation, and healthcare.

In general, the different complexities of cities' realities dissuade a 'one-size fits all' approach toward sustainability because their priorities, objectives, and paths are also diverse. The measure of progress should be tailored according to the particular challenges and opportunities found and prioritized by the main cities' stakeholders. Governments should develop technical standards e.g. building codes, while working closely with the private sector e.g. civil society and firms. The private sector should develop processes to partner with government, academia, and NGOs to ensure solutions that are both functional and economically feasible.

A framework of four pillars to build sustainable cities

The building of a "green" city has been proposed as a synonymous of urban sustainability. Yet, it is important to understand sustainability as a broader concept. That includes four pillars: (a) social development; (b) economic development; (c) environmental management; and (d) effective urban governance.

The figure below indicates the general sectors and areas within each pillar to ensure urban sustainability. The integration among the four pillars can generate synergistic feedbacks such as between waste & recycling management (environmental management) and access to water and sanitation (social development); air quality conservation and green public transportation; production & distribution of renewable energy sources and green energy access; as well as between the goal of reducing inequities (effective urban governance) and access to education & health (social development).

An integrated and coordinated strategy

Diagramme 1 suggests an integrated approach to build sustainable cities. This involves the coordination of objectives and programmes between different city stakeholders (e.g. citi-

Four pillars for cities' sustainability



Source: UN/DESA.

zens, government, and business sector) as well as the linkages between and within socio-economic sectors. Likewise, an integrated approach tries to improve synergies and efficiencies between activities such as e.g. public transportation, energy consumption, biodiversity, and human health.

At the national level, the integration between rural and urban sectors is critical. Wider access to public services and development of linkages with industrial development can leverage the rural sector capacities to exchange resources, information and social interaction with urban areas. In the medium-term, investment in economic and social infrastructure in rural settlements can be a catalyst for reducing excessive rural-urban migration that give rise to urban squatters and slums' growth.

Learning by doing

The following synthesizes relevant policy approaches and programmes implemented:

- **Integrative approach between sectors:** Integration and coordination between sectors such as land use, food security, employment, transportation infrastructure, biodiversity conservation, water, renewable energy sources, waste and recycle management; education, health, housing, and so forth.
- **Integrative approach within sectors:** For example, within the transportation sector this includes the linkages between various transportation modes such as bus, tram, metro, bicycle, and walking in order to reduce travel time, gas emissions, and the use of private cars.
- **Investment into sound housing:** Access to sound housing can reduce health and environmental costs. Major subsidized housing plans are underway in Chinese cities

for rural workers who come to work temporarily in the city. Similar subsidized housing projects are planned in Bangkok and Kuala Lumpur in order to reduce slums and squatter settlements.

- **Support of biking programmes and infrastructure:** The provision of adequate infrastructure such as bikes parking near Metros; bike lanes, free bike rentals, and bike-sharing have facilitated the rapid adoption and fast growth of bicycles' use in a few cities of both developed and developing countries.
- **Water management:** Cities need to improve water access, efficiency, quality, and infrastructure. Successful programmes in Phnom Penh and Cape Town have been able to provide clean water at affordable rates for all people, including the poor living on the outskirts. Similarly, Singapore has overcome a long-term water dependency with multi-pronged actions that included the installation of desalination plants and recycling of waste water.
- **Waste reduction and recycling:** For example, waste is treated as raw material and energy source in Freiburg, while cities such as Curitiba, Copenhagen, Kampala, Stockholm, Singapore, and Shanghai have made significant progress in creating innovative recycling and waste reduction programmes.

Prepared by Alex Julca and Willem van der Geest

For further information please contact the author at:

Tel: +1 212 963-3218; e-mail: julca@un.org

<http://www.un.org/en/development/desa/policy/index.shtml>

Follow us on [Facebook](#), [LinkedIn](#) and [Twitter](#)