INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT
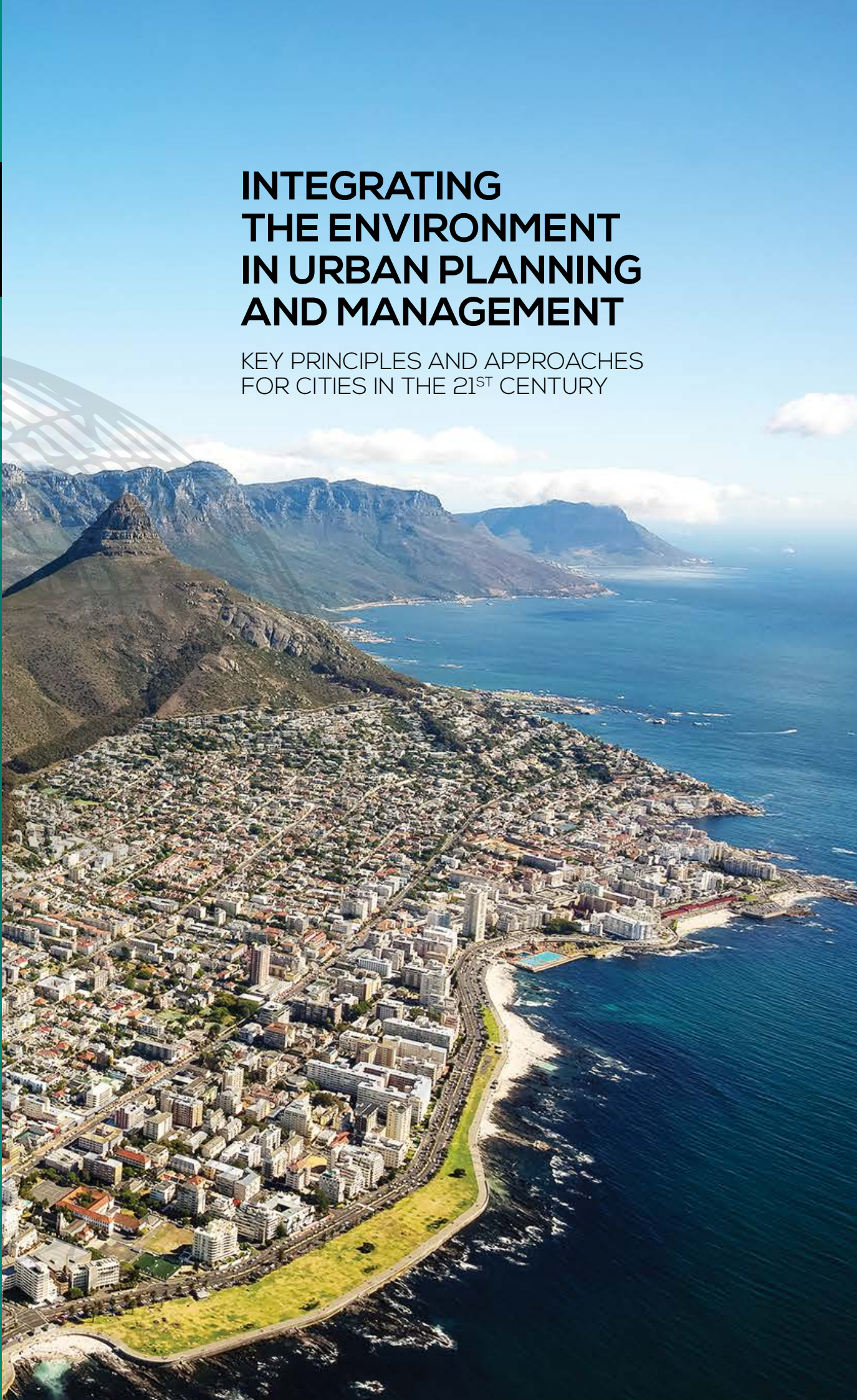
KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

UNEP

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT

KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

David Dodman, Gordon McGranahan and Barry Dalal-Clayton

International Institute for Environment and Development (IIED)

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

Acknowledgements

❭ CREDITS

* All dollar ($) amounts refer to US dollars.

Contents

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ CONTENTS

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

FOREWORD

The world is becoming increasingly urbanized, and with this accelerating process comes a host of challenges. Urban areas now contain more than 50 per cent of the world's population, occupy just two per cent of the world's terrestrial surface, and consume up to 75 per cent of natural resources. In addition, 90 per cent of urban growth is taking place in developing countries and experts believe that by 2030 towns and cities in Asia, Africa, and Latin America will hold 80 per cent of the global urban population.

These growing cities can have an impact on the surrounding sensitive ecosystems—such as wetlands, forests, mountain ecosystems—and need increasing amounts of resources, which could result in over-exploitation. However, the unprecedented rate of urban growth represents a unique opportunity to build more sustainable, innovative and equitable towns and cities.

It is clear that the decisions and actions needed to move society towards more sustainable patterns of consumption and production will need to focus on and be delivered in cities. The United Nations Environment Programme (UNEP) aims to produce reports that help city leaders make critical decisions at the local level. In 2007, UNEP and its partners published *Liveable Cities: the Benefits of Urban Environment Planning*, which brought together case studies from cities around the world. That report presented the experiences of 12 urban areas in different contexts to offer options for integrating environmental concerns in city planning. Building on the *Liveable Cities* report and drawing on the documentation from 15 cities and three workshops, the authors of this publication carried out an in-depth review of one widely used planning tool, the City Development Strategy, and describe how city planning processes can mainstream environment concerns.

Cities are well-placed to play a major role in decoupling economic development from resource use and environmental impacts, while finding a better balance between social, environmental and economic objectives. Resource-efficient cities combine greater productivity and innovation with lower costs and reduced environmental impacts, offering at the same time financial savings and increased sustainability. Compact, relatively densely populated cities, with mixed-use urban form, are the most resource-efficient settlement pattern with similar levels of economic output; although less-dense, more-spread out development also offers options for enhanced resource efficiency.

This publication provides a refreshing perspective to the urban environmental discourse. It recognizes that cities are human creations and so are shaped according to the principles and approaches that our societies are founded upon. In order to build more resource-efficient cities, a change to global thinking on urbanization is needed.

Achim Steiner
Executive Director, UNEP

EXECUTIVE SUMMARY

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ EXECUTIVE
SUMMARY

Cities can use a range of principles and approaches to integrate the environment in urban planning and management. This report is intended to encourage and support urban decision-makers in this process. It starts with recognizing that action taken in towns and cities is essential for addressing global environmental problems. It accepts that, with an increasing proportion of the world's population living in urban areas in low- and middle-income countries, these are important sites for engaging with the environment. The report describes the social and economic benefits that can be generated by addressing environmental challenges, and provides convincing evidence to support engagement with these issues.

Cities are important sites for engaging with environmental issues. More than half of the world's population now lives in urban areas. By 2050 more than half of Africa and Asia's population, will live in towns and cities. Substantial international programmes have been implemented to support urban environmental management. These have contributed to a growing "green" awareness in towns and cities – although there is much more that can still be done.

Activities in towns and cities affect the environment locally, regionally and globally – in both negative and positive ways. Although localised issues of public health, sanitation, and waste management are very visible in low-income cities, high levels of consumption can generate far-ranging environmental consequences through the use of raw materials and energy in distant locations to produce goods and services. At the same time, urbanization provides a range of opportunities for addressing social and environmental burdens. These 'sustainability multipliers' include lower costs per capita for providing services in densely populated areas, greater options for recycling, and better opportunities for the use of public transport. Cities can therefore contribute substantially to achieving higher levels of resource efficiency.

A range of strategies can be used to integrate the environment in urban planning and management. City Development Strategies (CDSs) have shown how to integrate environmental concerns in long-term city visioning exercises. These strengthen relationships between stakeholders, but need to take nationally mandated planning cycles into account. Environmental mainstreaming can help to incorporate relevant environmental concerns into the decisions of institutions, while emerging ideas about the green urban economy show how density can generate environmental and social opportunities (including through green urban infrastructure) and can foster environmental and social innovation and competition.

Environmental strategies for urban areas need to be supported by key underlying principles. Political support and commitment are vital, as is broad-based enthusiasm from urban residents. The strategies need to be underpinned with governance structures that facilitate integration of environmental concerns in the planning process. Therefore, financial limitations have frequently impeded meaningful environmental action, the report not only identifies direct mechanisms for funding environmental activities, but also presents an economic case for the benefits of addressing environmental issues.

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ GLOSSARY

GLOSSARY[1]

Adaptation: Adjustment in natural or human systems to a new or changing environment, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation. In relation to climate change, refers explicitly to actions taken to reduce the consequences of future changes in the climate.

Bus Rapid Transit (BRT): A passenger traffic system that builds on the quality of rail transit and the flexibility of buses. The BRT combines intelligent transportation systems technology, priority for transit, cleaner and quieter vehicles, rapid and convenient fare collection, and integration with land use policy.

City Development Strategy: An action-oriented process, developed and sustained through participation to promote equitable growth in cities and their surrounding regions to improve the quality of life for all citizens.

Climate change: Any change in climate over time, whether due to natural variability or as a result of human activity. (The UN Framework Convention on Climate Change defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.")

Ecosystem: A dynamic complex of plant, animal and micro-organism communities and their non-living environment, interacting as a functional unit.

Environmental Impact Assessment (EIA): An environmental impact assessment (EIA) is an analytical process or procedure that systematically examines the possible environmental consequences of the implementation of a given activity (project). The aim is to ensure that the environmental implications of decisions related to a given activity are taken into account before the decisions are made.

Environmental mainstreaming: The informed inclusion of relevant environmental concerns into the decisions of institutions that drive national, local and sector-specific development policy, rules, plans, investment and action.

Environmental problems: Environmental problems are human and/or natural influences on ecosystems that lead to a constraint, cutback or even a cessation of their functioning. They may be broadly categorized into environmental problems with proven solutions, and problems with emerging solutions. Urban environmental problems are threats to present or future human well-being, resulting from human-induced damage to the physical environment originating in or affecting urban areas.

Governance: The manner with which society exercises control over resources.

---

1   Many of these definitions have been adopted or modified from UNEP (2007) Global Environmental Outlook 4. Others can be identified in the main text of the report.

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

It denotes the mechanisms through which control over resources is defined and access is regulated. For example, there is governance through the state, the market, or through civil society groups and local organizations. Governance is exercised through institutions: laws, property rights systems and forms of social organization.

Green economy: A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

Mitigation: Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards. In relation to climate change, refers explicitly to measures taken to reduce the concentration of greenhouse gases in the atmosphere, either by reducing the production of these or increasing their absorption.

Participation / participatory approaches: Securing an adequate and equal opportunity for people to place questions on the agenda and to express their preferences about the final outcome during decision making to all group members. Participation can occur directly or through legitimate representatives. Participation may range from consultation to the obligation of achieving a consensus.

Policy: Any form of intervention or societal response. This includes not only statements of intent, such as a water policy or forest policy, but also other forms of intervention, such as the use of economic instruments, market creation, subsidies, institutional reform, legal reform, decentralization and institutional development. Policy can be seen as a tool for the exercise of governance. When such an intervention is enforced by the state, it is called public policy.

Pollution: The presence of minerals, chemicals or physical properties at levels that exceed the values deemed to define a boundary between "good or acceptable" and "poor or unacceptable" quality, which is a function of the specific pollutant.

Strategic Environmental Assessment (SEA): A structured process of assessing the environmental impacts associated with plans, programmes, and policies in a more extensive manner than in EIAs.

Sustainable development: Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

Urban sprawl: The decentralization of the urban core through the unlimited outward extension of dispersed development beyond the urban fringe, where low-density residential and commercial development exacerbates fragmentation of powers over land use.

Urban systems: Built environments with a high human population density. Operationally defined as human settlements with a minimum population density commonly in the range of 400–1,000 persons per square kilometre, minimum size of typically between 1,000 and 5,000 people, and maximum (non-)agricultural employment usually in the range of 50–75 per cent.

Urbanization: An increase in the proportion of the population living in urban areas.

1

**INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT**
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

❯**INTRODUCTION**

The skyline of the modern and high-rising city of Doha in Qatar.
© SHUTTERSTOCK

10

1

**INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT**
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

1.1 The context for the report

Increasing urbanization will be one of the defining features of the 21st century. This produces particular environmental challenges, but also creates opportunities for urban development that can contribute to broader goals of improving the quality of life for urban residents while achieving greater levels of global sustainability. Half of the world's population already lives in urban areas, with a growing number of these people living in towns and cities in low and middle-income countries. As well as being a demographic phenomenon, urbanisation is intricately linked with economic, social and environmental transitions.

The increasing proportion of the world's population living in urban areas has been driven by the growing concentration of new investment and employment opportunities. In general, nations with the most rapid and sustained economic growth have urbanized most.[2] Urban centres provide opportunities for a range of social and cultural activities, as well as being critical for innovations in science, technology and education. Indeed, urban areas are of critical importance for social and economic development: as the Cities Alliance recognizes, "only sustained urban growth has the capacity to lift both rural and urban populations out of poverty".[3]

Recognizing the increasing role of cities, this report builds on the 2007 report *Liveable Cities: the benefits of urban environmental planning*[4] to explore how a variety of issues have been taken into account in different urban areas, and how a range of activities have been implemented that show the potential for integrating the environment in urban planning and management. Since the launch of the *Liveable Cities report* in 2007, cities have become increasingly prominent in terms of addressing global environmental issues. Much of this has been around climate change, with the expansion of initiatives such as the *C40 Cities Climate Leadership Group*, the launch of the *Carbon Cities Climate Registry* in 2010, and the initiation of the *Durban Adaptation Charter* in 2011.

Alongside this, a growing number of cities have taken actions to achieve sustainable principles and practices – from Curitiba's longstanding commitment in this area, to Stockholm's environmentally conscious redevelopment of its inner-city, to the widespread use of bus rapid transit systems in cities as far-afield as Ahmedabad (India) and

---

2   Satterthwaite D (2007). *The transition to a predominantly urban world and its underpinnings.* IIED Human Settlements Working Paper, Urban Change 4.

3   Cities Alliance (2009). *Building Cities and Citizenship, 2009 Annual Report.* Washington DC, Cities Alliance.

4   Cities Alliance / ICLEI / UNEP (2007). *Liveable Cities: the benefits of urban environmental planning.* Washington DC.

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

Cities struggle to balance environmental and economic concerns. © SHUTTERSTOCK

Bogota (Colombia).[5] These leading cities have begun to demonstrate that the entry point for sustainable urban development does not need to be purely environmental, but rather can be from a dual focus on economic development and environmental objectives.

They also show that, while addressing particular sectoral priorities (such as water, waste, or air pollution) can help to address specific issues and can be an effective entry point for wider action, there is a much greater potential from a more integrated approach.

Taken together, these types of examples show progress and new achievements by cities in areas relevant to urban and global environmental concerns, demonstrate how these can also contribute to socially and economically positive outcomes, and highlight areas in which other cities can also contribute.

While the 2007 report focused on a listing of tools that the city government could use to integrate environment issues into city processes, this report sought to understand how the tools were used by cities. Focusing on the City Development Strategy (CDS), the report draws on two main sets to determine the effectiveness of using the CDS to integrate environmental issues into city planning processes.

Firstly, it draws on an analysis of documentation from 15 cities in Africa, Asia and Latin America[6] that have engaged in the process of developing a City Development Strategy under the auspices of Cities Alliance (although a rigorous assessment of the effectiveness/efficacy of CDSs in actually

---

5   Moffatt S, Suzuki H, Iizuka R (2012). *Eco2 Cities Guide: Ecological Cities as Economic Cities.* The World Bank, Washington DC.

6   Bengaluru (India), Can Tho (Vietnam), Dakar (Senegal), Dosso (Niger), Douala (Cameroon), Ekurhuleni (South Africa), Ha-Da-Qi (China), Ha Long (Vietnam), Maradi (Niger), Ouagadougou (Burkina Faso), Sana'a (Yemen), Santa Adriana (Chile), Thimphu (Bhutan), Tshwane (South Africa), Yangzhou (China)

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

> INTRODUCTION

influencing long-term urban development patterns lies outside its scope). Secondly, it incorporates insights from in-depth Learning and Leadership Groups conducted with three additional cities (Metro Manila [Philippines] [specifically Makati City and Quezon City], Kampala [Uganda] and Accra [Ghana]) that have engaged in this process. The report does not present the results of these workshops directly, but rather uses the insights from these to contribute to a broader understanding of the potential for the incorporation of environmental concerns in urban planning and management, the barriers to this, and the opportunities to overcome these. In addition, the background documents to inform these discussions are summarised in Appendix I.

From these two sources, the report extracts two key elements that cities can use to integrate their priority environment issues in urban planning and management[7] regardless of the tools they select.

The first key element of this report is a focus on **strategic approaches** that have been used to achieve this outcome. This element draws not only on lessons from City Development Strategies (which – as their name suggests – always focus on urban areas), but also on lessons from environmental mainstreaming and recent thinking about the "green economy". The second aspect that contributes to this is a focus on **principles** rather than on reviewing existing methodologies. There are a plethora of methodologies that have been used and developed by a range of actors in cities and in international organizations, many of which have positive elements that can be adopted in a range of contexts, and many of which were reviewed in the *Liveable Cities* report. However, this report draws on the specific

experiences of cities that have engaged with the Cities Alliance City Development Strategy approach to urban development, and more focused engagement with a sub-set of these cities to identify the underlying principles that have shaped successful integration of the environment in urban planning and management, or that are seen to be critical for overcoming barriers to this.

This report is intended primarily to encourage and support urban decision-makers to integrate environmental concerns more centrally in their planning and management activities. These concerns are understood as threats to present or future human well-being, resulting from human-induced damage to the physical environment originating in or affecting urban areas.[8] Environmental goals for cities can therefore include ensuring healthy living and working environments for all inhabitants, the provision of the necessary services that are essential for health and important for a proper economic base, and ecologically sustainable relationships between the demands of the city and the environmental resources, waste sinks, and ecosystems on which they draw[9] – in ways that also contribute to social and economic goals.

The report is not a step-by-step guide, but rather an encouragement to engage with these issues in a contextually appropriate manner. It provides evidence that can be drawn on to convince other city officials to prioritise the environment in their work, or to influence donors and funders (including international organizations and the private sector) to support these types of activities. The report is also intended to speak directly to external organizations that can provide the necessary support and impetus for more integrated environmental activities in urban

---

7   Where "urban planning and management" is understood as the core set of activities that city and local governments undertake to ensure the efficient functioning of urban places to support citizens, communities, and economic activities.

8   DANIDA Workshop Papers (2000). *Improving the Urban Environment and Reducing Poverty*. Copenhagen.

9   Hardoy J, Mitlin D, Satterthwaite D (2001). *Environmental Problems in an Urbanizing World*. London, Earthscan.

areas, including representatives of national government ministries and agencies.

The report is divided into four sections. The first section of the report describes the global state of urbanization, explores the ways in which urbanisation relates to economic growth and development, and reviews some of the main efforts that have been used in the last two decades to bring environmental concerns into urban planning and governance. The second section explores the current state of environmental concerns affecting cities, with a particular focus on climate change (which was not explicitly addressed in the *Liveable Cities* report) and on the benefits for integrating the environment in urban planning and management. This section explains what is meant when we refer to "environment" in succeeding sections and what types of environment issues cities are integrating into their current processes. Section 3 examines key principles for integrating the environment in urban planning and management, discussing the importance of participation, politics and political commitment; harmonization and multi-level governance; and identifying and overcoming gaps and challenges. Section 4 then explores three key strategic approaches that can be used to accomplish this integration: City Development Strategies; the Urban Green Economy; and Urban Environmental Mainstreaming.

1.2 Urbanization in global perspective

Any effort to draw general conclusions and lessons for urban planning and management needs to take account of the current distribution of the world's urban population. Whereas the majority of Europeans, North Americans and South Americans have long lived in urban areas, the proportion of the world's urban population living in Asia and Africa has been growing rapidly: more than half of the world's

urban population now live in Asia.[10] This has two specific implications. Firstly, the rapid expansion of the urban population in Africa and Asia (Figure 1) demonstrates that it is essential for efforts to integrate the environment in urban planning and management to take account of the particular issues and priorities facing cities in low- and middle-income countries. Any approaches or strategies that ignore this (in itself, very heterogeneous) context will be only marginally relevant for the world's cities and their residents in the coming decades.

Figure 1: Total Urban Population by World Region (1950-2050)[11]
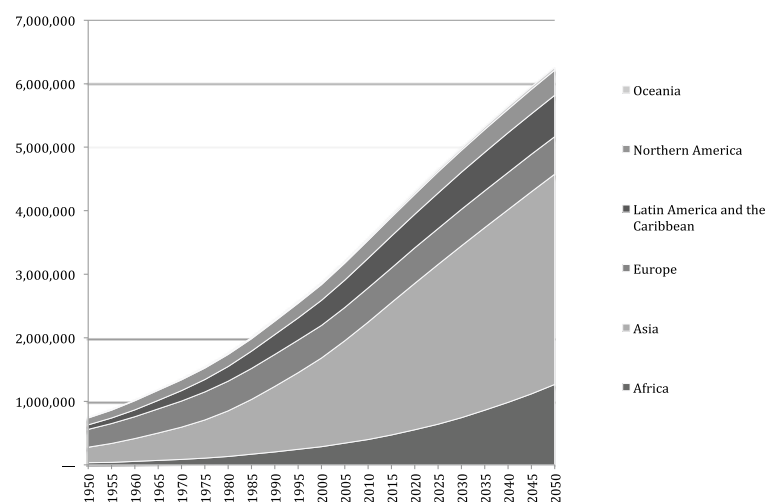
Secondly, the rapid growth in the proportion of national populations in Africa and Asia living in urban areas (Figure 2) makes it clear that countries in these regions need increasingly to take account of urban areas if their environmental (and other) policies are to fit their current and future demographic profiles. This figure also demonstrates the growth in the urban population of Latin America during the

10   Source: Satterthwaite D (2007). *The transition to a predominantly urban world and its underpinnings.* International Institute for Environment and Development, Human Settlements Discussion Paper. Page v.

11   Source: United Nations, Department of Economic and Social Affairs, Population Division (2012), World Urbanization Prospects: *The 2011 Revision*, http://esa.un.org/unpd/wup/index.htm.

1
INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT
KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

› INTRODUCTION

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

period of 1950-2000 – a growth that was accompanied by the creation of informal settlements but which has gradually seen democratic improvements and improved quality of life for many residents.

Figure 2: Proportion of Population Living in Urban Areas by World Region (1950-2050)[12]
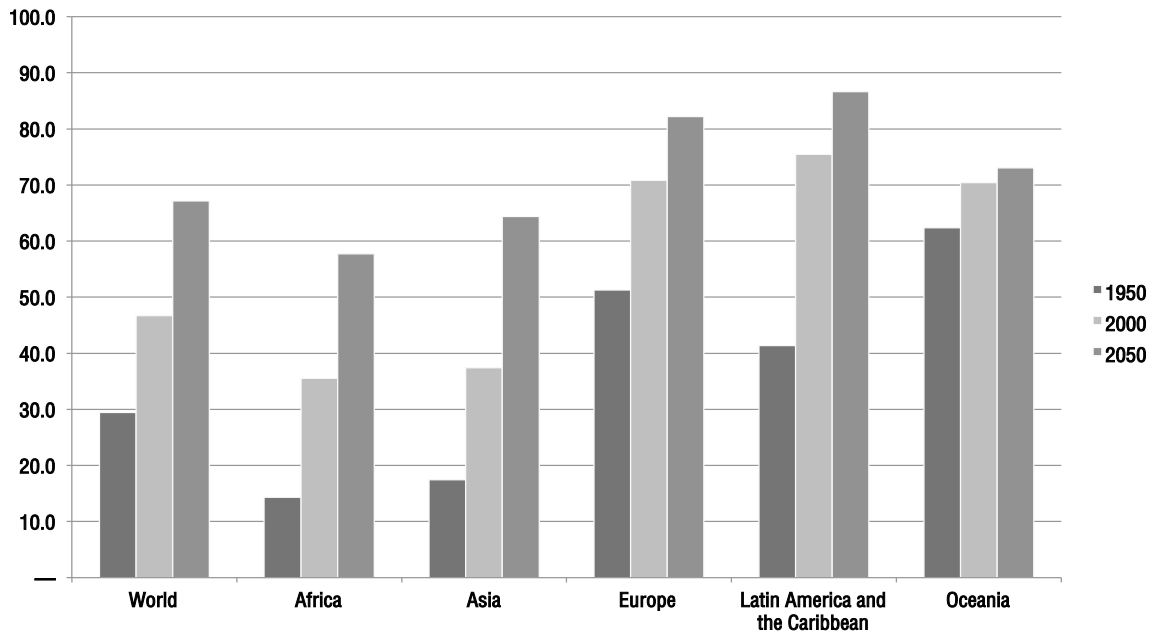
Urbanization is not just an outcome of the shift out of agriculture and into an economy dominated by industrial and later services, but it is part of what makes this shift more economically productive. Municipal governments, which once focused almost exclusively on the delivery of urban services, have become increasingly involved in seeking external investment and developing city economies.[13] This means that integrating the environment in city government activities must engage both with the service delivery and the economic development components of their work.

The economic advantages of urbanization have recently been emphasised by a number of international agencies, and provided the basis for the World Bank's *World Development Report 2009,* subtitled Reshaping Economic Geography[14] (World Bank 2009). Some of the economically successful Asian countries, including most notably China, have grounded their economic strategies in urban innovation and growth.

---

12 Source: United Nations, Department of Economic and Social Affairs, Population Division (2012), *Ibid.*

13 Harvey D (1989). 'From managerialism to entrepreneurialism: the transformation in urban governance in late capitalism' *Geografiska Annaler Series B, Human Geography* 71(1): 3-17.

14 World Bank (2009). *World Development Report 2009: Reshaping Economic Geography*. The World Bank, Washington D.C.

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› INTRODUCTION

Thus, China's rapid economic success in the 1980s and 1990s involved opening up a growing number of cities and urban regions to trade and foreign investment, incrementally opening them up to rural migrants seeking work, encouraging cities to experiment with innovative ways of attracting and directing investment, amplifying market pressures by giving cities political reasons to compete economically, and providing local authorities with the tools needed to provide serviced land to property developers and other productive enterprises.[15] Africa's experience with urbanization and economic growth has been more ambiguous, with rural-urban migration (including international migration) being much less controlled, and with continued (and growing) inequality within urban centres. However, the claim that Africa has been urbanizing without commensurate economic growth may be based on questionable statistics.[16]

1.3 Methodologies and initiatives for urban environmental management

An immense number of toolkits and methodologies for city authorities to be used in planning and environmental management have been produced,[17] and several important international programmes have been implemented in the last two decades that are relevant for this analysis. In the wake of the United Nations Conference on Environment and Development (the 1992 Rio Earth Summit) a number of international programmes were initiated to help cities incorporate environmental issues into their planning processes.

The International Council for Local Environmental Initiatives (now ICLEI – Local Governments for Sustainability) worked to ensure that Local Agenda 21 emerged from Rio as the local counterpart of national Agenda 21, and then extended their network in an attempt to get Local Agenda 21 adopted widely. Their Planning Guide[18] described an approach that not only put environmental issues at the centre of urban planning, but engaged a wide range of stakeholders in the planning process, and worked through partnerships and action planning as well as more conventional government programmes and policies. Many countries also developed their own versions of Local Agenda 21, to support their local authorities in addressing the new "sustainable development" agenda.

Other international programmes initiated in this period included the Sustainable Cities Programme (UNEP and UN-Habitat), Localizing Agenda 21 (UN-Habitat) as well as several bilaterally funded programmes (e.g. Danida's Green Cities programme). Each had their particular features, but all attempted to include a concern for the environment and sustainability into urban planning, and to include civil society and the private sector in the planning process. There were also many cities and city networks that developed innovative environmental and planning programmes apart from these international programmes. In Latin America, cities such as Curitiba[19] and Porto

---

15   McGranahan G, Martine G (2012). *Urbanization and development: Policy lessons from the BRICS experience.* Discussion Paper, IIED, London.

16   Potts D (2009). 'The slowing of sub-saharan Africa's urbanization: Evidence and implications for urban livelihoods' *Environment and Urbanization* 21(1): 253-259; Potts D (2012). *Whatever happened to Africa's rapid urbanisation?,* Counterpoints, Africa Research Institute, London.

17   Many of which are identified in Cities Alliance / ICLEI / UNEP (2007). *Liveable Cities: the benefits of urban environmental planning.* Washington DC.

18   ICLEI (1996). The Local Agenda 21 Planning Guide: an introduction to sustainable development planning, ICLEI - Local Governments for Sustainability, Toronto.

19   Schwartz HH (2004). *Urban Renewal, Municipal Revitalization: the case of Curitiba, Brazil.* Higher Education Publications.

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

Alegre[20] in Brazil, and Manizales[21] in Colombia, gained international reputation for their innovative planning, as did networks such as Peru's Cities for Life.[22]

Many of the principles and approaches promoted in these programmes, along with their more or less explicit critique of more conventional urban planning, were still evident in UN-Habitat's (2009) *Global Report on Human Settlements on Planning Sustainable Cities.* However, within the international agencies, integrated approaches to environmental management lost momentum, in favour of more issue-specific approaches (such as water and sanitation, or climate change). By the 2006 World Urban Forum in Vancouver, ICLEI had shifted its priorities towards climate change, and, while Local Agenda 21 continued, it was no longer their flagship programme. Currently, while UN-Habitat still has a web page for the Sustainable Cities and Localizing Agenda 21 programmes, the activities listed stopped in 2007/8, which is when the website says the "current" phase of the Sustainable Cities programme ended.

The decline in international support for global networks of urban sustainable development planning programmes should not be taken to imply that they failed – or for that matter that they succeeded so well that they were no longer necessary. They did face a number of problems. Many were more successful at generating an inclusive dialogue on urban environmental and planning issues than they were at influencing mainstream urban planning. In particular, the participatory planning processes did not prove to be effective in holding developers and planners to account, and often had little influence over the major flows of investment that determine the environmental futures of the cities.

Moreover, despite their participatory character, the internationally supported planning processes had trouble responding to local concerns, and were often perceived to be foreign implants, steered by foreign agendas. However, although the notion that small projects designed to encourage new approaches to urban planning would catalyse radical shifts in the practices of urban authorities and investors was never very realistic, it did contribute to a broader shift in attitudes to environmental issues, and these have had a significant influence on urban planning. At the same time, there has been increasing use of Environmental Impact Assessments (EIAs) and Strategic Environmental

20   Menegat R (2002), Participatory democracy and sustainable development: Integrated urban environmental management in porto alegre, Brazil, *Environment and Urbanization,* Vol 14, No 2, pages 181-206.

21   Velasquez L (2001), *Environmental Management and Local Action Plans in Manizales, Colombia.* Human Settlements Working Paper 4, Local Agenda 21 Series, IIED, London.

22   Miranda, L. (2004), Cities for life revisited: Capacity-building for urban management in peru, *Environment and Urbanization*, Vol 16, No 2, pages 249-261.

Assessments (SEAs) as a means of understanding and addressing the environmental consequences of particular projects and activities. Discussions in Ghana and Uganda (see Appendix III) show that these have become part of the mainstream process of urban planning in a range of countries.

One process of strategic engagement in a wide-ranging set of issues linked to urban economies and environments has been the City Development Strategies supported by the Cities Alliance. These frequently address environmental issues in a serious and sustained way, and the City Development Strategies themselves are in many ways following on from the planning exercises undertaken under programmes like Sustainable Cities and Localizing Agenda 21. City Development Strategies are based on the recognition that effective urban governance involves a range of stakeholders, that urban growth and economic growth are mutually interdependent, and that growth puts pressure on the environment while simultaneously offering opportunities for resource efficiency; and they try to reconcile these challenges through an integrated, participatory, and sustainable approach to planning. Many of the suggestions presented in this report draw directly on the experiences of cities that have engaged with City Development Strategies, and these are examined in more detail in Section 3.1. Taken as a whole, these experiences demonstrate and reinforce the importance of urban governance in managing and improving the environmental conditions in towns and cities.

1

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ INTRODUCTION

Makati, Philippines © DAVID DODMAN

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

❯ RELEVANT ENVIRONMENTAL ISSUES FOR CITIES

Key Messages

▸ Activities in urban areas can affect the environment locally, regionally, and globally – cities need to integrate responses to all of these in their urban planning and management.

▸ A significant proportion of global greenhouse gas emissions are associated with activities taking place in cities, both from direct emissions of greenhouse gases and from indirect emissions associated with consumption of goods and services produced elsewhere.

▸ Cities will be increasingly affected by the impacts of climate change, both directly (from physical consequences of changes in the climate) and indirectly (from disruption to food sources, supply chains, and migration).

▸ Cities which are clean and green are more attractive: integrating the environment in urban planning and management not only contributes to global environmental goals, but also generates substantial economic and social co-benefits.

Dhaka, Bangladesh. © DAVID DODMAN

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

2.1 Conceptualising the urban environment

The concentration of people and economic activities in towns and cities inevitably creates localised pressure on the environment – although urban areas are now home to about half the world's population, they occupy only 2.8 per cent of the world's land area.[23] This dense concentration of people in a tiny proportion of land area creates some environmental problems, but can also help to reduce others.

Urban environmental concerns have often been categorised as belonging to either the 'brown' or the 'green' agendas. The 'brown' agenda prioritises environmental health, and addresses local issues related to inadequate water and sanitation, urban air quality and solid waste management – all of which are particularly relevant to poor urban dwellers. Inadequate provision of water, sanitation and drainage, and the generation of large amounts of solid waste, air pollution and water pollution, can cause major environmental health consequences for urban residents, a problem that is particularly acute in low-income areas.

At the same time, activities taking place in urban areas have implications for environmental conditions elsewhere in the world. Towns and cities rely on a wide range of resources from outside their geographical boundaries (including water, food, and raw materials for manufacturing): demands that can have significant environmental effects on distant locations. Urban areas also use large amounts of energy, and contribute significantly to global greenhouse gas emissions. This 'green' agenda is of particular relevance to future generations and natural systems, and places a premium on ecological sustainability and addressing issues related to resource degradation, contributions to global environmental burdens, and other problems that largely occur outside cities.[24]

Because of the centrality of 'brown' agenda issues in low-income urban centres, a full and serious engagement with urban environmental issues must take these into account.

Shenzhen, China © YI LU/CORBIS.

23   McGranahan G, Marcotullio P, et al. (2005). 'Urban Systems' in Millennium Ecosystem Assessment, *Ecosystems and Human Well-being: current state and trends.* New York, Island Press.

24   McGranahan G, Satterthwaite D (2000). 'Environmental Health or Ecological Sustainability? Reconciling the Brown and Green Agendas in Urban Development' in Pugh C (ed) Sustainable Cities in Developing Countries. London, Earthscan.

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

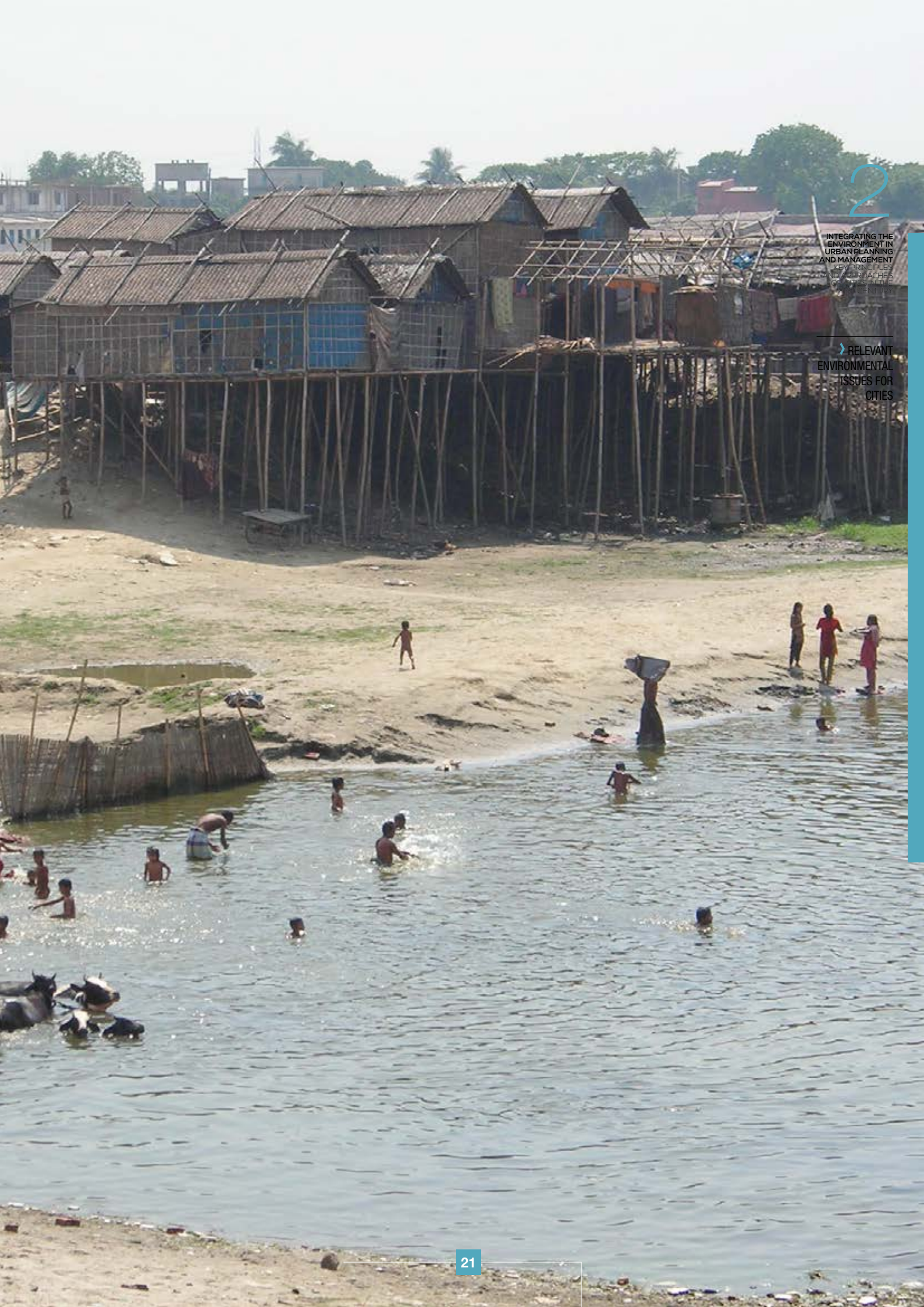❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

'Green' and 'brown' problems are linked, but depending on how they are addressed, the two agendas can be complementary or in conflict. Low-income cities are more concerned with immediate and pressing local 'brown' issues, middle income more 'green', while high income cities often have a more global and inter-generational perspective.[25]

There is growing agreement that a concern for the well-being of future generations needs to be married to a concern for the well-being of current generations, and that this requires engaging with both political economy and the built environment at a range of scales, from local to global.[26]

The relative importance of these issues varies between towns and cities and over time (Figure 4). As urban areas and their residents become wealthier, local environmental health issues decline in importance (as the consequences of these are displaced) while city-regional issues (such as air and water pollution) become more prevalent and severe. Although many of the world's wealthiest cities have been successful in reducing these, they still generate a substantial burden on the global environment as a result of high consumption of material (e.g. concrete and steel for construction), consumer goods (e.g. electronics which rely on the extraction of raw materials and energy-intensive manufacturing processes), and energy (usually associated with high volumes of greenhouse gas emissions).

25   Girardet H (2004). Cities, People, Planet: liveable cities for a sustainable world. John Wiley and Sons.

26   Haughton G, McGranahan G (2006). 'Editorial: Urban Ecologies' Environment and Urbanization 18(1): 3-8.

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❭ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

Figure 4: Stylized curves representing the urban environment and health transition[27]

Local burdens
e.g. indoor air pollution

City-Regional burdens
e.g. ambient air pollution

Global burdens
e.g. greenhouse gas emissions

Increasing Severity

Increasing Wealth (over time or between countries)

Poor Settlements　　　　　　**Wealthy Settlements**

Shifting Environmental Health Burdens

Local ⟶ Global

Immediate ⟶ Delayed

Threaten Health Directly ⟶ Threaten Life Support Systems

Figure 4 also helps to identify the range of environmental issues that need to be addressed in urban planning and management for this process to be meaningful. These can be summarised as follows:

i)   **Local environmental issues:** reducing risk and improving amenities within the urban area. This includes improving water supply and sanitation provision to reduce the burden of environmental health problems; and improving systems and infrastructure to reduce environmental hazards.

ii) **Regional environmental issues:** reducing environmental impact in the vicinity of the city. In particular, this involves reducing air and water pollution and strengthening ecosystem services.

iii) **Global environmental issues:** ensuring that activities within the city do not have detrimental impacts elsewhere in the world. Many of these burdens are hidden – the environmental consequences are not

felt in the location where decisions driving these are made. But particularly from high income cities, these can be substantial. Some high-income urban areas are now beginning to address these issues through a discourse of resource efficiency, which may also be associated with movements towards 'low carbon' wealthy cities.

The relative importance of these three main areas will vary considerably from city to city. While the level of economic development is strongly associated with these, there can be considerable differences between the environmental impacts of cities at similar economic stages. In addition, even within low-income cities that appear to be facing local environmental issues most strongly, the activities of wealthy individuals will contribute to global environmental issues as well.

For these reasons, urban planning and management needs to take into account all three of these scopes of environmental impact. Cities that do not have significant global footprints will frequently need to address their local and regional impacts; similarly, cities that

Favelas, Brazil. © SHUTTERSTOCK

---

27   Source: McGranahan G, Jacobi P, Songsore J, Surjadi C, Kjellén, M (2001). *The Citizens at Risk: From Urban Sanitation to Sustainable Cities.* London, Earthscan. Page 17. See also Girardet (2004), Op. Cit.

have made significant improvements in their local and regional footprints are likely to still need to address their contribution to global environmental issues.

As will be described in Section 2.3, urbanization provides a range of opportunities to address social and environmental burdens, though the measures required to tap these opportunities are often neglected or unnecessarily delayed. Indeed, countries undergoing rapid urbanization and economic growth have generally been accompanied by comparable sets of social and environmental problems, despite their urban transitions occurring at different times and in different places. The social inequalities and related sanitary crises that accompanied the urbanization of many industrializing countries in the 19th century have been well documented.

Today, more than a century after the "sanitary revolution" in the industrializing countries, many cities in low and middle income countries still face pernicious urban inequalities, again accompanied by serious sanitary deficiencies.[28] Similarly, decades after many of the most affluent cities have managed to achieve much cleaner air and water, ambient air and water pollution remains a serious problem in many industrializing and motorizing cities.

Meanwhile, the wealthiest and superficially cleanest cities now tend to concentrate the consumption of goods whose production may be elsewhere but which entail both pollution and resource depletion, and give these cities very high ecological footprints per capita.

2.2 Local environments and climate change

In recent years, there has been a growing recognition of the role played by activities in urban areas in contributing to greenhouse gas emissions and climate change; and also the effects that climate change will have on particular towns and cities. As one of the most important emerging environmental issues, with wide-ranging consequences for urban areas and urban residents; and as an issue that was less integrated in the first *Liveable Cities* report, it is important to provide some general description of how cities and global environmental change are related.

Cities as drivers of climate change

Firstly, activities taking place in cities contribute to the process of climate change. These can be direct – for example from factories or motor vehicles operating within the city. But they can also be indirect – related to the production of goods and services that are consumed within urban boundaries by urban residents, but where the emissions are generated outside the city (or even outside the country).[29]

At the simplest level, local government operations within urban areas contribute to emissions both directly (e.g. from operating vehicles and buildings) and indirectly (e.g. by purchasing electricity generated outside the municipal boundaries). In addition, urban authorities may provide or purchase services that are associated with emissions. Effective mass transit systems can be an important means of reducing emissions from transportation as they can provide an incentive for people to reduce their use of private motor vehicles. However, this is also dependent on urban form and density that shape how efficient these systems can be. Both these issues are reflected in

2

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ RELEVANT ENVIRONMENTAL ISSUES FOR CITIES

28   McGranahan G (2012). 'Evolving urban health risks: Housing, water and sanitation, and climate change'. In Sclar E, Volavka-Close N, Brown P (eds.) *The urban transformation: Health, shelter and climate change,* Earthscan/Routledge, Abingdon and New York, pages 15-41. WHO/UNICEF (2012). *Progress on sanitation and drinking-water: 2012 update,* WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, WHO/UNICEF, Geneva and New York

29   Dodman D (2011). 'Forces driving urban greenhouse gas emissions' *Current Opinion in Environmental Sustainability* 3: 121-125.

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

Figure 5, which shows the considerable differences in greenhouse gas emissions associated with transportation in several different cities, and which makes it clear that the level of development alone is not the main driver of emissions. However, it must also be remembered that non-motorised transportation represents a considerable proportion of journeys made in low- and middle-income cities (which are often densely settled). Another area in which local government decisions can exercise considerable influence is in the management of solid waste, as landfills can generate high quantities of methane (which is a powerful greenhouse gas). Effective landfill management (including flaring or the use of waste-to-energy) can reduce emissions from this source considerably; for this reason, Geneva, Los Angeles, and London have lower emissions from waste than Bangkok and Cape Town.[30]

Figure 5: Annual greenhouse gas emissions from Road Transportation[31]
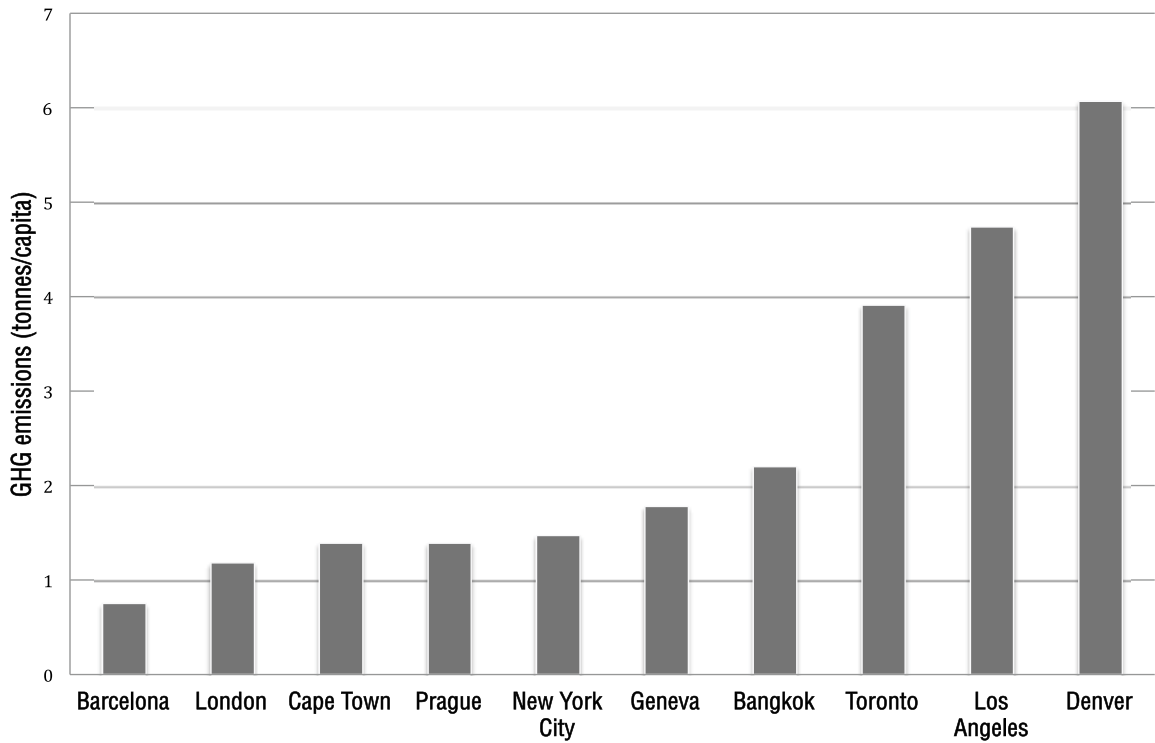
Because of the different ways of allocating emissions to particular cities, it is difficult to make definitive comparisons. However, there are clearly substantial differences, as can be seen in Figure 6 (with cities deliberately chosen to represent a range of geographical and socio-

---

30   Kennedy *et al.* (2009), *Ibid.*

31   Source: Kennedy C, Ramaswami A, Carney S, Dhakal S (2009). 'Greenhouse Gas Emission Baselines for Global cities and Metropolitan Regions' Commissioned Paper presented at World Bank Fifth Urban Research Symposium, Marseille, June 28-30 2009.

economic contexts). These are affected by geographical situation (the amount of energy used for heating and cooling), density (affecting dwelling size and transportation use), type of industry (balance between energy-intensive heavy industry and more service-oriented activities), and source of electricity (cities located in close proximity to hydro-electric generation sites can significantly reduce their emissions from this source).

Figure 6: Greenhouse gas emissions from selected cities[32]

City (year of inventory)	GHG Emissions (tonnes CO_2-eq / capita / year)
Calgary (2003)	17.7
Delhi (2000)	1.50
Denver (2005)	21.5
Dhaka (1994)	0.63
Hamburg (2005)	9.7
Helsinki (2005)	7.0
London (2003)	9.6
São Paulo (2000)	1.4
Seoul (2006)	4.1
Sydney (2006)	20.3

Integrating greenhouse gas emissions reduction strategies in urban planning and management can reduce the impact that cities have on the global environment while improving the quality of life for urban residents. Activities in several specific sectors lend themselves to both of these goals:[33]

---

32   Source: Extracted from Hoornweg D, Sugar L, Gómez C (2011). 'Cities and greenhouse gas emissions: moving forward'. Environment and Urbanization 23(1): 207-228.

33   Lebel L, Garden P, Banaticla M, Lasco R, Contreras A, Mitra A, Sharma C, Nguyen H, Ooi G, Sari A (2007). 'Integrating carbon management into the development strategies of urbanizing regions in Asia: implications of urban function, form, and role' Journal of Industrial Ecology 11(2): 61–81.

Hybrid public bus. © SHUTTERSTOCK

2

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ RELEVANT ENVIRONMENTAL ISSUES FOR CITIES

▶ **Transportation:** improving mobility through the use of non-motorised transport (which is linked to mixed land-use and high density) and improved mass transit, which can also improve access to livelihood opportunities for urban residents

▶ **Shelter:** architectural and urban design approaches that reduce energy consumption (and cost) and improve comfort for residents

▶ **Food supply:** efficient food production and distribution systems that simultaneously reduce costs

▶ **Lifestyle:** opportunities for low-energy goods and services that may also generate new employment

▶ **Infrastructure:** water and sewerage treatment plants decentralized on basis of local environmental potential and preserve for ecosystem functioning

▶ **Urban natural environment:** innovative urban design that integrates natural and built form to conserve ecosystem functioning.

Far from being inevitably associated with improvements in living conditions, therefore, there are many interventions which can be made to reduce urban greenhouse gas emissions that have positive impacts on the quality of life for urban residents. Although the information in Figure 7 is generated at the national level, this clearly shows that many elements of human development can be achieved with relatively low greenhouse gas emissions. These benefits are most likely to be realised if the environmental concerns of addressing climate change are incorporated in a meaningful way in urban planning and management activities.

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

Figure 7: Relationship between life expectancy and greenhouse gas emissions[34]
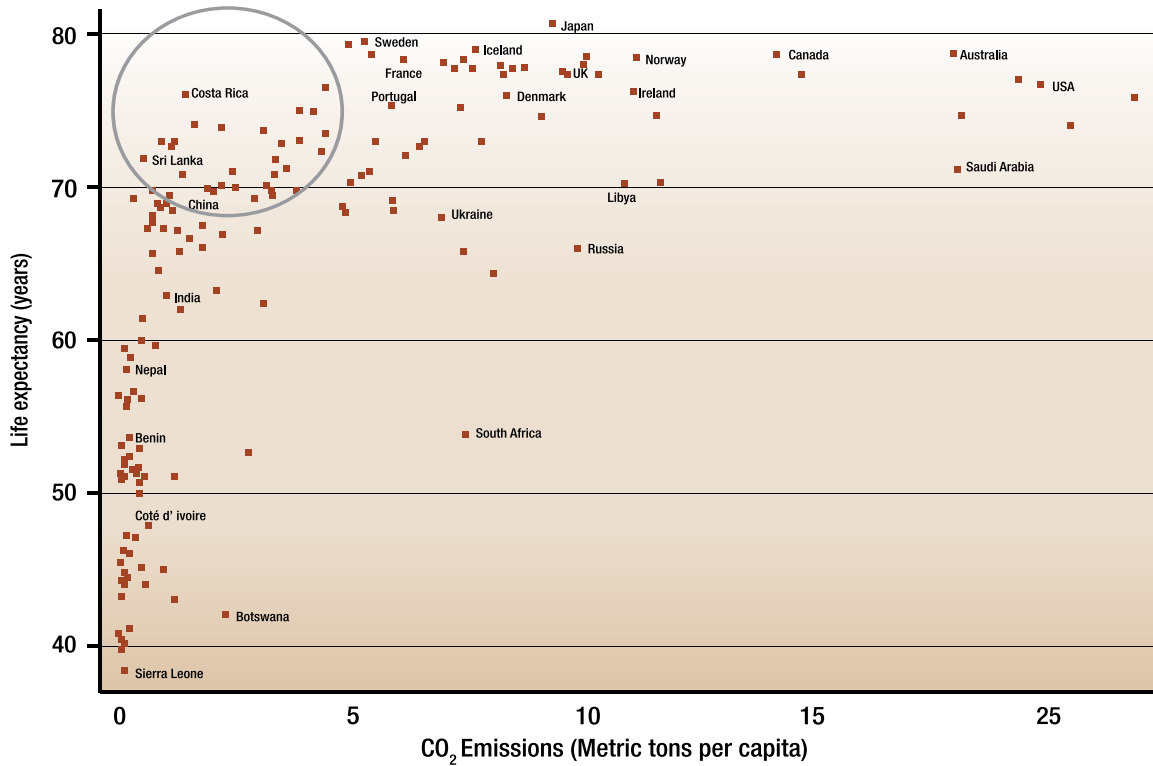
The impacts of climate change on cities

Secondly, towns and cities are exposed to a range of climate-related hazards; and many urban residents (particularly, although not exclusively, in low- and middle-income countries) are highly vulnerable to climate change (Figure 8). The main impacts of climate change are expected in several specific sectors: water, ecosystems, food, coasts, health, and singular events[35] — and all of these will have effects on urban areas. In particular, urban areas are highly exposed to events occurring at or near coasts, including cyclones and sea-level rise, with a disproportionately high number of urban settlements being located in the Low Elevation Coastal Zone[36].

Cities will also be affected indirectly by climate change: for example, changes in rainfall patterns could reduce freshwater availability and food production, which will have knock-on effects for urban residents.

Tsunami hit Indonesian coast. © UNEP

34 Source: Wilkinson R, Pickett K (2010) *The Spirit Level: why equality is better for everyone.* London, Penguin.

35 Parry M, Lowe J, Hanson C (2009). *'Overshoot, adapt and recover' Nature* 458, 30 April 2009.

36 McGranahan G, Balk D, Anderson B (2007). 'The rising tide: assessing the risks of climate change and human settlements in low elevation coastal zones' *Environment and Urbanization* 19(1): 17-37.

There will be a broader set of economic and social challenges as well – including energy shortages, damaged infrastructure, increasing losses to industry, heat-related mortality and illness.[37]

Figure 8: Direct and indirect effects of climate change on urban functions[38]
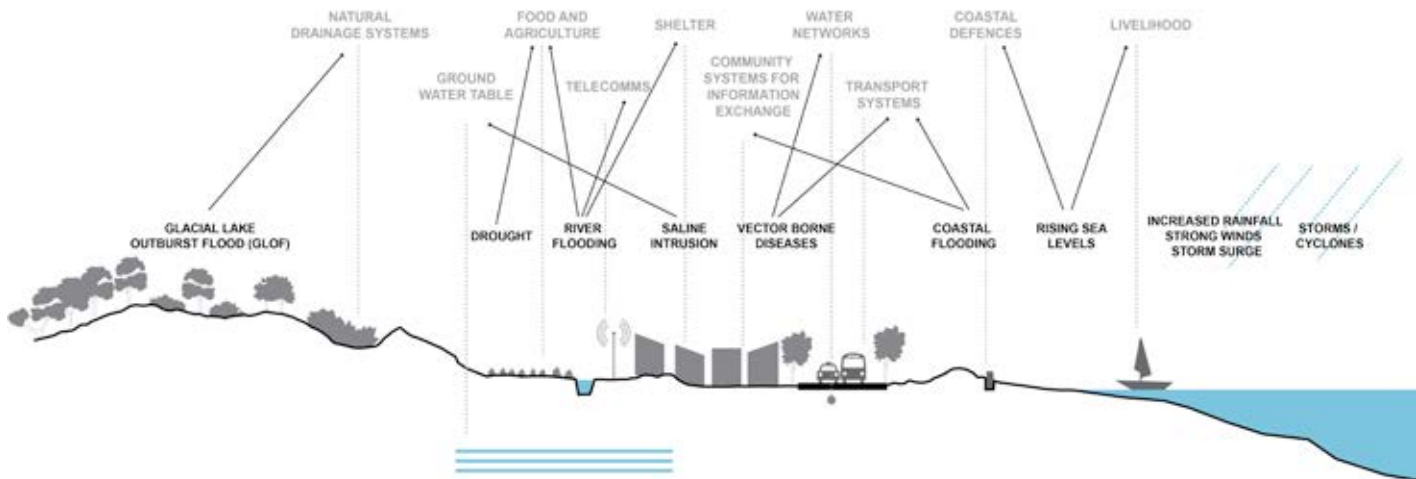
However, the effects of these impacts will vary greatly between and within cities – and will also be shaped by a range of other challenges that these urban areas face. The vulnerability of cities and their residents to climate change is shaped not only by their exposure to particular hazards, but also by the sensitivity of social, economic and environmental systems, and by the capacity of these systems (including urban households and communities) to adapt. Understanding the vulnerability of a city requires looking at all of these different elements – Figure 9 shows one possible conceptual model for doing so.

Figure 9: A framework for understanding urban vulnerability to climate change[39]

---
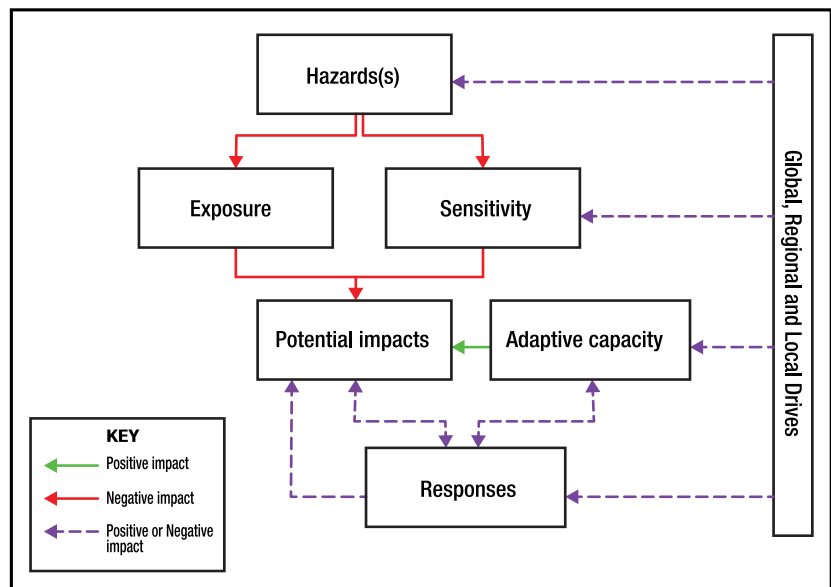
37   Gasper R, Blohm A, Ruth M (2011). 'Social and economic impacts of climate change on the urban environment' *Current Opinion in Environmental Sustainability 3*: 150-157.

38   Source: da Silva J, Kernaghan S, Luque A (2012). ''A systems approach to meeting the challenges of urban climate change' International Journal of Urban Sustainable Development 4(2): 125-145.

39   Source: Romero Lankao P, Qin H (2011). 'Conceptualizing urban vulnerability to global climate and environmental change' *Current Opinion in Environmental Sustainability 3*: 142-149.

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

Tsunami-ravaged village of Kolhuvaariyaafushi, in the southwestern Mulaaku Atoll, Maldives. © UNEP

In addition, particular groups within cities will be disproportionately affected by climate change.[40] Young children and the elderly are more susceptible to the effects of extreme heat and air pollution that are likely to increase as a result of climate change.[41]

Informal settlements are often located on land at the 'margins' of cities, which are highly exposed to particular hazards (frequently flooding). Low-income residents locate to these areas in order to gain access to livelihood opportunities, despite the hazards they face. Even in locations exposed to similar hazards, there are considerable differences in the infrastructure that protects these – and this is often seriously lacking for low-income communities, as are the safety nets such as insurance that can reduce impacts. Low-income urban residents also lack the capacity to take short-term measures to limit impacts of extreme events, and to adapt to reduce

the impacts of these in the future.[42] Adapting cities to climate change can best be achieved through addressing underlying development and infrastructure deficits.[43] Integrating climate change mitigation and adaptation into urban planning and management activities therefore has significant potential for addressing these issues in association with other environmental challenges.

2.3 Global benefits of integrating the environment in urban planning and management

In addition to improving local environmental conditions, the benefits that can be achieved from integrating the environment in urban planning and management can be seen as working in two directions. Addressing environmental issues in urban areas is not

40   Dodman D, Satterthwaite D (2008). 'Institutional capacity, climate change adaptation and the urban poor' Institute for Development Studies Bulletin 39(4): 67-74.

41   Harlan S, Ruddell D (2011). 'Climate change and health in cities: impacts of heat and air pollution and potential co-benefits from mitigation and adaptation' Current Opinion in Environmental Sustainability 3: 126-134.

42   Hardoy J, Pandiella G (2009). 'Urban poverty and vulnerability to climate change in Latin America' Environment and Urbanization 21(1): 203-224.

43   Carmin J, Dodman D, Chu E (2013). Urban Climate Adaptation and Leadership: from conceptual understanding to practical action. Paris, OECD.

only good for these towns and cities, but also good for the global environment: "although cities, particularly high-income cities, have large eco-footprints, they also provide many opportunities to lighten the human load on Earth's ecosystems."[44]

With the growing proportion of the world's population living in urban areas, decisions made about the environment in towns and cities will have increasing consequences for planetary environments and ecosystems, as urban residents draw on food supplies and raw materials from ever-widening geographical areas.

In addition, this process can also generate a wide range of co-benefits (both economic and social), including poverty reduction, in particular locations. Indeed, the *Towards a Green Economy* report emphasises that measures to green cities can increase social equity and the quality of life in several ways:[45]

▸ Enhancing public transport can reduce inequality by improving access to public services;

▸ Using cleaner fuel for transport and power generation can reduce both local pollution and health inequality;

▸ Reducing traffic and improving conditions for pedestrians and cyclists can help foster community cohesion and health;

▸ Improving access to green spaces can make children more resistant to stress and can lower the incidence of behavioural disorders.

---

44   McGranahan G, Marcotullio P (2005). 'Urban Systems' in Millennium Ecosystems Assessment *Ecosystems and Human Well-Being: current state and trends.*

45   UNEP (2011). *Towards a green economy: Pathways to sustainable development and poverty eradication. UNEP,* Nairobi.

Zero-emission transport. © SHUTTERSTOCK

Sustainability Multipliers in Cities[43]

The scale and "agglomeration economies" in cities present strong opportunities for addressing sustainability issues in ways that generate other benefits. Some of these include:

▸ Lower biophysical and economic costs per capita of providing piped treated water, sewer systems, waste collection, and most other forms of infrastructure and public amenities.

▸ Reduced per capita demand for occupied land (related to high land prices).

▸ A greater range of options for material recycling, re-use, re-manufacturing, and a concentration of the specialized skills and enterprises needed to make these things happen.

▸ A greater incentive to reduce localized pollution due to the larger numbers of people potentially exposed.

▸ Greater possibilities for electricity co-generation, district heating/cooling and the use of waste process heat from industry or power plants, to reduce the per capita use of fossil fuel for water and space-heating.

▸ More opportunities for co-housing, car-sharing and other cooperative relationships that have lower capital requirements (consumption) per household and individual.

▸ More ways greatly to reduce the (mostly fossil) energy consumption by motor vehicles through walking, cycling, and public transit.

▸ More 'social contagion', facilitating the spread of such more nearly sustainable life-style choices (e.g., 'voluntary simplicity').

▸ The potential to implement the principles of low through-put 'industrial ecology' (i.e., the ideal of closed-circuit industrial parks in which the waste energy or materials of some firms are essential feed-stocks for others).

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

A more recent study[46] of low- and middle-income countries identified a range of potential intervention areas that address concerns of economic development, poverty, and environmental improvement (at both local and global scales). These include:

▸ The creation of 'green jobs': although the net employment benefits of green jobs have been disputed in many temperate and high-income cities (efforts towards strengthening the green economy may simultaneously lead to a contraction in existing industrial activities), in contexts where there is not currently a significant industrial base there is more likely to be a net gain.

▸ Environmental rehabilitation can enhance ecosystem services, improving the quality of the environment while reducing costs of remedial air and water treatment.

▸ Expanding access to energy through greening energy supplies can provide electricity to households that were previously reliant on wood or kerosene: this can improve health by reducing indoor air pollution and reduce energy costs to low-income groups.

▸ Recycling initiatives – whether formal or informal – can reduce the total amount of solid waste generated and can provide employment.

▸ 'Greening' of urban areas can provide a range of tangible and intangible benefits to urban residents, particularly if this takes into account low-income areas.

The lists above identify a range of benefits from integrating the environment in urban planning and management. These can be broadly synthesised into three main sets of benefits: **economic benefits** (from investment

46   Simon D (2012). 'Climate and environmental change and the potential for greening African cities' *Local Economy* 28(2): 203-217.

Plastic recycling initiatives. © SHUTTERSTOCK

Firewood cooking. © SHUTTERSTOCK

2

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ RELEVANT
ENVIRONMENTAL
ISSUES FOR
CITIES

in new industries, cost savings for industrial activities, creation of jobs, support for livelihood activities, increased access to income generation opportunities); **health benefits** (from improved environmental conditions, increased physical activity); and **quality of life benefits** (from improved access to environmental amenities). Taken together, these global and local benefits provide a compelling case for integrating the environment in strategic urban planning and management – and emphasise that effective solutions to global environmental problems will require substantial action at the scale of individual cities.

Integrating the environment in urban planning and management can also contribute to increased levels of resource efficiency – both within cities and for the world as a whole. Resource efficiency involves reducing the total environmental impact of the production and consumption of goods and services, from raw material extraction to final use and disposal. Within cities, it can enhance quality of life by minimizing resource extraction, energy consumption and waste generation while simultaneously safeguarding ecosystem services. At the same time, it can contribute to the global transition to a green economy and help to achieve sustainable development.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT

Key Messages

▸ The most effective strategies for integrating the environment in urban planning and development involve incorporating the environment in existing tools, rather than developing stand-alone approaches.

▸ Integrating environmental concerns in investment decisions can contribute substantially to the greening of the building sector and other infrastructure.

▸ Considering the underlying nature of urban planning and governance is central to effective integration of the environment in urban planning and management.

▸ Good urban design can help to generate environmental, social and economic benefits for cities and their residents.

▸ Acquiring finance for infrastructure remains a significant challenge for many cities, but if environmentally sound investments can be encouraged these can produce significant benefits.

Santo Domingo, Dominican Republic. © DAVID DODMAN

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

This section of the report shows strategies that have been used in urban planning and management to incorporate the environmental concerns raised in earlier chapters. Drawing from the experience of cities that conducted city development strategies, the section describes how city planners can effectively integrate environmental issues into urban planning and management by (a) using the CDS, and (b) understanding the green economy approach. Taken together, they show the centrality of governance – and also highlight the fact that this requires a coalition of actors and effective multi-level governance to generate meaningful changes.

3.1 Lessons from the City Development Strategy (CDS)

A review of CDS documentation from 18 different countries clearly indicates that CDSs already give far more attention to environmental issues than do city politics more generally. In fact, CDSs have been commended by researchers for representing a policy arena in which the dual agendas of economic growth and development can both be taken seriously, while simultaneously expressing concern with the promotion of an environmentally sustainable city.[47]

This may reflect the priorities of the international organizations involved in their funding, which incorporate the environmental concerns that are currently prevalent in the international development discourse. However, it may also be because they sit in the cross-cutting policy arena of city-wide issues, where discussion of the environment is more readily acceptable.

In many cases, the CDS was a process run in parallel but not within the city planning processes mandated by local and national laws. This posed a considerable challenge to its developers. While perceived in general as an internationally relevant approach, it needed to adapt to the local political, economic and bureaucratic context. However, many have used the CDS as a tool to engage in a more liberal-thinking process that allowed them to develop strategies without the constraints imposed by traditional planning methods.

---

47   Parnell S, Robinson J (2006). 'Development and Urban Policy: Johannesburg's City Development Strategy' *Urban Studies* 43: 337-355.

City of Montreal. © SHUTTERSTOCK

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

The City Development Strategy Process

Cities Alliance defines a City Development Strategy (CDS) as: "An action-oriented process, developed and sustained through participation, to promote equitable growth in cities and their surrounding regions to improve the quality of life for all citizens". CDSs are intended to help cities create a vision for 20 to 30 years in the future and to identify the necessary strategies and actions to achieve this. They are unique and context-specific, but tend to address five main themes: livelihoods, environmental quality, service delivery and energy efficiency, spatial form and infrastructure, financial resources, and governance. In addition, they explicitly try to empower urban managers, often in cases where these have been traditionally marginalized.

The process of conducting a CDS typically follows eight steps:

▸ Initiating the process
▸ Establishing the initial parameters and the scope of the CDS
▸ Making an initial assessment
▸ Formulating a vision
▸ Identifying strengths, weaknesses, opportunities and threats
▸ Setting strategic directions
▸ Building awareness
▸ Starting implementation

A more recent attempt at developing a harmonized basic conceptual framework for the CDS, developed by a sub-group of Cities Alliance members, is intended to provide a basic structure for incorporating cross-cutting issues, including environmental concerns in order to allow flexibility while still ensuring that important issues are included. This conceptual framework has three main phases: assessing city development opportunities and capacities, strategy planning and strategy implementation.

Whether the CDS is based on the eight step process, or whether the more flexible conceptual framework is applied, there are clear opportunities for incorporating environmental concerns and priorities. For example, in Makati (Philippines), the CDS was identified as having been particularly helpful in aiding the thought process for the government-required

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

Comprehensive Land Use Plan; while in Jinja (Uganda), it provided a platform for stakeholder interaction in a context in which this is relatively unusual.

Capitalizing on Synergies between Environment and Development Goals

A study of City Development Strategies finds that the CDS is more effective in integrating environment issues into city plans when it is anchored to a broader concern that is already affecting the city's constituents. This was evident in the integration of climate change adaptation approaches in Metro Manila, Philippines which is significantly exposed to a wide range of environmental hazards and has consequently had to respond to these.

There was also an explicit attempt to focus on approaches that ensure that addressing environmental concerns can strengthen the city economy. The documents from Ha Long (Vietnam) portray environmental degradation as a threat to tourism, therefore suggesting that more effective environmental management can actually generate positive economic returns. Similarly, the Thimphu (Bhutan) CDS identifies the sustainable use of environmental resources as a potential strategy for helping poor communities move out of poverty.

In Ha-Da-Qi Corridor (China), environmental management is linked with the process of cluster-based economic development, based on the argument that region-wide planning enables better environmental management. Effective environmental management in this region is seen as having the potential to attract particular industries through "proactively marketing environmental", for example, green-built technology parks for bio-products companies.

There have also been attempts to integrate the environmental and the poverty alleviation elements of CDS-related activities. In Uganda, the Transforming Settlements of the Urban Poor in Uganda (TSUPU) strategy is intended to be an integral element of the CDS in Arua, Jinja, Kabale, Mbale and Mbarara, through recognizing environmental components and processes relevant to various 'traditional' planning sectors including services, utilities, financing, infrastructures and institutional structures. This is recognized elsewhere, although explicit efforts to integrate shelter and environment concerns are surprisingly few: Learning Group participants from Quezon City (Philippines) recognized that a good housing programme can be a key factor in improving the condition of the environment through reducing the pressure on vulnerable areas such as river banks.

The CDS documentation however, varies in the way that the environment is treated in relation to development. In some cases, managing the environment appears to be portrayed as a constraint to development, for example in highlighting the need for rigorous Environmental Impact Assessments (EIAs) – although if these are conducted well they can lead to development plans that substantially reduce environmental impacts. In other cases, it is seen as a development goal, for example by visions and supporting policies for environmentally healthier and more sustainable cities. In still others, the two are seen as more intertwined, with an expectation that achieving environmental goals will lead to developmental objectives also being met.

A clear case of the former approach is in Bhutan, where the national urbanization strategy strongly focuses on the prevention of negative environmental outcomes from urbanization. Elsewhere, a focus predominantly on EIAs presents engagement with the environment as a technical problem that needs to be overcome before developments are undertaken, rather than as a proactive strategy for achieving a broader set of benefits.

In some cases, for example in Uganda, EIAs are seen as being "anti-poor" because

the requirements can only be met by wealthier individuals and developers. This tension is identified and – to an extent – addressed in the documentation produced by Tshwane (South Africa), where "the processes surrounding the fulfilment of EIA requirements are time-consuming, expensive, and often appear to be anti-development" – although this recognition represents the first step in attempting to address the problem.

A surprisingly small sample of City Development Strategies identify climate change as a priority area despite the fact that much of the impact of climate change is on the poor. This is perhaps an area that needs further support from the global community. Sana'a (Yemen) had produced a "Study of Climate Change Impact on Development of Sana'a City" as a distinct project output, but few others prioritised either reducing the city's contribution to climate change (mitigation) or reducing the consequences of climate change (adaptation).

This may be a function of the timing of the projects that are reviewed: city-led action for mitigation and adaptation is a relatively recent policy focus. However, Learning Group participants in both Uganda and the Philippines did identify climate change as one of the main environmental challenges they will have to address in the coming 15-20 years.

Lessons for future city development strategies

The CDS approach is one that has been used in a range of cities with the support of a network of international alliances. As can be seen from the documentation reviewed, and the case studies examined, the approach has not only generated substantial environmental improvements in many cities, but has also strengthened urban governance more broadly through creating spaces to discuss future visions and to enhance working relationships between different stakeholders. The review of these CDSs has also generated several

lessons that are applicable for future efforts at integrating the environment and urban development:

‣ Strengthening relationships across local government departments and between local governments and other actors are very important in contexts where the resources and opportunities for doing this are limited. This was highly evident in Jinja, Uganda, where there had been few other opportunities for this type of strategic planning conversation to take place.

‣ The benefits from this type of integrated approach may not always be attributed to the project itself but may still yield positive long-term outcomes. In Makati City, Philippines, the CDS process was not recalled by junior members of staff – but more senior members could point to the way in which this had strengthened capacity to engage in subsequent nationally mandated planning processes.

‣ Integrated planning approaches will be most successful if they can be synchronised with national planning cycles. In Ghana, this had been a major impediment to implementing some of the key outputs of the City Development Strategies, as the plans were produced at different times and for different periods.

‣ Effective and aspirational visions for cities can also lead to technically sophisticated strategies to address these. Perhaps the best example of this comes from Tshwane, South Africa, which provides a succinct yet detailed definition of a sustainable human settlement that clearly includes environmental, economic and social goals:

3

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT
KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ STRATEGIES FOR INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

Bangkok, Thailand. © SHUTTERSTOCK

"*A sustainable human settlement is a settlement that works for its residents, both now and in the future. It is a settlement in which people live; in which they shop, seek entertainment, care for their children, and socialize. A sustainable human settlement is a settlement in which residents access social amenities such as healthcare clinics, libraries, schools, open space, and so on. A settlement is sustainable when its residents can breathe fresh air, where the water quality is good, where waste is managed so that they don't face health risks, and where the continued existence of ecological habitats is supported and ensured. A sustainable human settlement is also a settlement in which people vote and express their opinions freely; in which they work and pay taxes; and in which all of these things are possible without putting undue stress on the community, the family, the individual, the economy, or the environment. Finally, a sustainable human settlement is a settlement where residents can expect that all these things will be true for their children and their children's children.*" — **CDS from Tshwane, South Africa**

Environmental Mainstreaming and the CDS

One approach that lends structure to understanding how the environment can be integrated into planning decisions is the environmental mainstreaming approach. It is often used to assess the incorporation of environmental concerns in urban planning and management.

Environmental mainstreaming is "the informed inclusion of relevant environmental concerns into the decisions of institutions that drive national, local and sector-specific development policy, rules, plans, investment and action".[48] Environmental mainstreaming is about much more than the inclusion of key 'green' words in plans and strategy documents, but rather reflects a longer-term process of institutional and behavioural change, involving many pathways (both bottom-up and top-down), driven by civil society as well as government, and including economic, technical, and political concerns.

An environmental mainstreaming approach can therefore help to assess the ways in which environmental concerns are incorporated in the key decisions and institutions that govern urban development, and particularly in the development and implementation of CDS.

An environmental mainstreaming approach can help to find integrated solutions that avoid "development vs. environment" arguments. The conflict between development and environment is amplified when environmental costs and benefits are not factored into economic planning, or economic costs and benefits are not factored into environmental planning. While it is important to recognise trade-offs between environmental and developmental goals, it is also important to

---

48   Dalal-Clayton B, Bass S (2009). *The challenges of environmental mainstreaming: experience of integrating environment into development institutions and decisions.* London, International Institute for Environment and Development. Page 19. See also www.environmental-mainstreaming.org.

identify and exploit complementarities. This should enable stakeholders to develop and pioneer activities that seek to achieve real sustainable development potentials.

At its most meaningful, environmental mainstreaming requires substantial change of various types. Dalal-Clayton and Bass suggest the following key elements, with the later elements being the ones that represent more significant mainstreaming:

- **Box ticking:** attempts to demonstrate that environmental concerns have been dealt with, but with no real change.

- **Informing:** offering environmental information to 'mainstream' decision-makers in an effort to change behaviour;

- **Scaling-up:** addressing the policy implications of environmental 'projects'.

- **Power-exercising and empowering:** either forcing the views of 'powerful' players when these contribute to mainstreaming, or elevating the concerns of 'weaker' players.

- **Institutional and cultural change:** systematic integration of a particular environmental idea, value, or objective into governance, business practices and value systems.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

They then identify the outcomes that ought to be achieved through successful environmental mainstreaming:

▸ Greater participation and interaction between environment and development stakeholders;

▸ integrated environment development policy and associated political leadership;

▸ inclusion of development environment linkages in urban/municipal/national plans;

▸ inclusion of development environment linkages in budgets and fiscal instruments;

▸ increased municipal, national and international investment in environmental priorities;

▸ strengthened institutions and capacities to mainstream environment;

▸ sustained behavioural change by individuals, institutions and society;

▸ development impacts, demonstrated through improved productivity and sustainability of use of environmental assets, and better management of risk from environmental hazards.

During the workshops held in Ghana, the Philippines, and Uganda, the participants were requested to respond to a diagnostic tool to determine whether or not environmental management was adequately mainstreamed into their planning processes. The exercise was not meant to provide sufficient detail for a careful examination of the extent to which environmental mainstreaming has taken place, but rather to identify the extent to which environmental issues are included within the CDS process—and not the degree to which responses to these are implemented on the ground.

The results of the exercise highlighted that many of the elements of environmental mainstreaming that have been examined at the national level are directly applicable to cities. This underscored the reality that many of the issues at the national level are very similar to those at the local level. This is evident from the ground-truthing exercise of the 'Environmental Mainstreaming Diagnostic for Cities' in workshops in Ghana, the Philippines, and

Cape Coast fishing houses and town in Ghana. © SHUTTERSTOCK

Uganda (Appendix II), in which participants reinforced (with few modifications) the approach for assessing mainstreaming in city administrations and mainstreaming in specific projects.

3.2 Green Urban Economy Approach

In the Rio+20 United Nations Conference on Sustainable Development held in 2012, the green economy was one of the two overarching themes, with cities deemed to be one of the seven areas needing priority attention. UNEP has described a green economy as one that "results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities".

As such, what is new about the emphasis on the green economy is not so much the goal, which is similar to that of sustainable development, but the focus on re-aligning economies to achieve this goal. This realignment entails shifting economic incentives, and a green economy is one in which incentives encourage people and enterprises to use natural resources and ecological systems with care, and with due consideration for the well-being of others.

Cities are critical to the transition to a green economy because they are key sites of (largely private) economic production, grassroots collective action, and formal state regulation and coproduction. From an environmental perspective, they are among the principal places where changing economic incentives can make a difference, and where local negotiation can help ensure that development is both economically advantageous and socially equitable. Moreover, most developing countries are also urbanizing. Capturing the environmental, social and economic benefits of urbanization, as well as its economic potential, is critical to the global transition to a green economy.

Some of the specific areas in which urban actions are important to achieving a green economy are summarized below. These include taking advantage of the environmental and social opportunities of density; investing in green urban infrastructure; greening the urban economy with taxes and subsidies; fostering urban social and environmental innovation and competition; and green urban governance for a green urban economy. Local conditions and priorities vary enormously around the world.

Cairo slums from Citadel, Egypt. © SHUTTERSTOCK

As already described, income can make an enormous difference to the sorts of environmental burdens a city is imposing, and where this burden falls. Demographics also matter, and it is very relevant that in many countries urban populations are relatively stable, while the combined urban populations of Africa and Asia are projected to double over the next 40 years.

Perhaps most important, however, are the numerous local variations that help determine what the leading social and environmental challenges are, and how they can be overcome, and which also make the urban scale of action so important.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

Taking advantage of the environmental and social opportunities of density

Density is a defining characteristic of urban settlement, and, historically, urbanization has involved a shift in population from relatively small and dispersed rural settlements to larger and denser urban settlements.

However, urban densities are declining around the world, and it is quite possible that the global expansion of urban built-over land is currently related more to declining urban densities than to increasing urban population shares in urbanizing countries. In effect, if urban is defined in terms of settlement density, one of the key drivers of the expansion of cities is that they are becoming less urban. While densities are declining around the world, they are generally lower in higher income countries, where this decline has a longer history.[49]

Although density brings challenges as well as its opportunities, compact cities have long been advocated on environmental grounds.[50] From the perspective of achieving a green economy, it is important to ensure that productive and inclusive urbanization is encouraged, without fostering the sort of congestion and crowding that can themselves impose undue environmental and social costs. This constitutes a significant challenge.

To secure the potential benefits of density requires giving people and enterprises considerable leeway in finding their most productive and desirable locations. To prevent density from causing environmental and social distress requires the right sort of physical infrastructure, legal regulations, economic incentives and social norms, and the strategic use of these to help guide settlement patterns. This in turn requires good governance, supported by national policies, but providing the political space for locally designed and implemented solutions.[51]

In other words, achieving a greener economy does not involve maximizing density, but it does require recognizing the environmental costs and benefits of density, and "leveraging density" to serve green goals.[52] This relates to many of the other dimensions of an urban green economy, and includes:

▸ Providing public infrastructure that allows people to take advantage of the potential health benefits of compact urban living, which, in wealthier settings, may include more opportunities for walking and bicycling,[53] and in poorer settings, better access to affordable water and sanitation services;[54]

▸ Developing the sort of energy-efficient public transportation systems that reduce congestion, pollution and greenhouse gas emissions, while even/also allowing low-income residents to take advantage of dense settlement;[55]

▸ Taking advantage of urban density (including through the provision of decentralized infrastructure) to help to reduce pressure on environmentally sensitive

49   Angel S, Parent J, Civco D, Blei M (2011). *Making room for a planet of cities.* Policy Focus Report, Lincoln Institute of Land Policy, Cambridge, MA.

50   Jenks M, Burgess R (2000). *Compact cities: Sustainable urban forms for developing countries.* Spon Press, Oxon.

51   Satterthwaite D (2011). 'How urban societies can adapt to resource shortage and climate change' *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences,* Vol 369, No 1942, pages 1762-1783; Williams K, Jenks M, Burton E (eds.) (2000). *Achieving sustainable urban form.* E & FN Spon, London.

52   Henshilwood E, Cullinan M (2012). *Urban patterns for a green economy: Leveraging density.* United Nations Human Settlements Programme (UN-Habitat), Nairobi.

53   Frumkin H, Frank L, Jackson R (2004). *Urban sprawl and public health: Designing, planning and building for healthy communities.* Island Press, Washington D.C.

54   Parkinson J, Mulenga M, McGranahan G (2011). 'Provision of water and sanitation services', in *Urban health: Global perspectives* Vlahov D *et al.,* (eds.), John Wiley, San Francisco, pages 269-282.

55   Jenks M, Burgess R (2000). *Ibid.*

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

Public Estate in Hong Kong. © SHUTTERSTOCK

areas,[56] without resorting to involuntary removals of existing residents;

▸ avoiding policies that actively encourage the sort of sprawl that imposes unnecessary environmental and transport costs;[57]

▸ encouraging public agencies, private enterprises, and civil society groups actors to exploit the benefits that urban density can provide for both mitigating and adapting to climate change.[58]

In order to achieve social equity, it is especially important to ensure that economically and politically weak urban groups can take advantage of density, and are not spatially as well as socially excluded. Settlements with one storey housing, of the sort typically found in informal settlements, cannot achieve high densities without overcrowding. At low densities, however, low income residents risk either being priced out of good locations,

or facing eviction. In the rapidly urbanizing countries of Asia, a common government compromise has been to try to get developers to rehouse low-income residents in apartment blocks, in return for development rights over the freed up land.

Such negotiated settlements rarely work to the advantage of the poorest residents, however, and to achieve a green economy it will be important to find alternative routes to achieving relatively high density, including some over which low income residents can maintain a high degree of control. At all income levels, dense settlement can be achieved in a variety of ways, and some of the most liveable in many parts of the world are high density low-rise communities.[59] A recent study in Karachi suggests that settlements built incrementally by low-income residents on small plots with some minimal technical assisstance could provide the basis for liveable low-rise settlements that would reach high densities over time.[60]

---

56   Van der Waals J (2000). 'The compact city and the environment: A review' Tijdschrift Voor Economische En Sociale Geografie 91 (2): 111-121; Yeh A (2002). Urban form and density in sustainable development. Centre of Urban Planning and Environmental Management, Hong Kong University, Hong Kong.

57   Blais P (2010). Perverse cities: Hidden subsidies, wonky policy, and urban sprawl. UBC Press, Vancouver.

58   Satterthwaite D (2011). Ibid.

59   Dalziel R, Qureshi Cortale S (2012). A house in the city: Home truths in urban architecture. RIBA Publishing, London.

60   Hasan A, Sadiq A, Ahmed S (2010). Planning for high density in low-income settlements: Four case studies from Karachi. Series on Urbanization and Emerging Population Issues 3, IIED and UNFPA, London.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

Similarly, the Sakhasonke Village Housing Initiative in Eastern Cape, South Africa provides high-density housing that is sufficiently close to the town centre to enable new residents to have easy access to their former and potential places of employment. This is achieved by reducing the plot size but providing larger houses and a greater extent of public areas.[61]

At the opposite end of the technological spectrum, New Songdo City in Incheon, South Korea, has integrated an additional 'urban services layer' in new developments that enables direct access to healthcare, education and council services through videoconferencing – which provides both a greater return to developers and reduces the need for travel.[62] Much more would need to be done, however, to bring such approaches into the mainstream, and provide these sorts of alternatives on a large scale.

Investing in green urban infrastructure

Urban infrastructure, as already indicated above, provides an important means of greening urban economies, while taking advantage of urban densities. Cities rely heavily on urban energy, transport, communications water and sanitation infrastructure—all of which require a significant level of public sector oversight, investment or provision. Some level of coproduction by users is also often needed to achieve good service delivery, particularly where financial resources are small.

This infrastructure is critical to urban economic productivity, and one of the economic challenges for economically ambitious low-income cities is how to finance infrastructure improvements that raise productivity, attract investment and achieve economic growth.

Infrastructure also mediates between cities and their environments, helping to determine levels of resource use, pollution and the cities' contributions to long term sustainability. The role that the public sector already plays in investing in urban infrastructure and/or setting up regulatory systems and developing public/ private partnerships, can put public agencies in a good position to support urban infrastructure that contributes to a green economy.

The relevance of green infrastructure can clearly be seen in Copenhagen, where 'greener' local drainage of rainwater and diversion of storm water to reduce flooding is cheaper than traditional measures (such as expanding the sewage network), while simultaneously improving the quality of life for urban residents through increasing the number of parks, streams, and ponds.[63]

A recent report on optimizing urban infra-structure for the green economy[64] identified eco-efficiency and social inclusion as the over-arching principles, and used a range of case studies to illustrate how these principles could be pursued, including:

▸ A closed loop landfill site in Durban, South Africa,

▸ a biofuel powered public bus system in Linkoping, Sweden,

▸ A bus rapid transit system in Lagos, Nigeria,

▸ Community-driven ecological sanitation in Lilongwe, Malawi,

▸ Energy efficient apartments in Sofia, Bulgaria,

▸ Recycling in Curitiba, Brazil,

▸ A climate action plan in Portland, USA,

▸ A concerted strategy for doing more with less in Singapore.

---

61   http://www.innovations.harvard.edu/awards.html?id=42951

62   Infrangalis (2013). *Stronger resource efficiency for desirable communities: how local innovation in asset stewardship ensures a green and prosperous economy.* Association for Public Service Excellence.

63   Infrangalis (2013). *Ibid.*

64   Robinson B, Swilling M (2012). *Urban patterns for a green economy: Optimizing infrastructure.* United Nations Human Settlements Programme (UN-Habitat), Nairobi.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

Other examples include the development of cable cars to serve informal hillside settlements in cities including Medellín (Colombia) and Rio de Janeiro (Brazil). These are relatively cheap and quick to construct – and while the original drive for implementing these hinged on social and mobility considerations, environmental benefits have been considered since the planning stages.[65]

As well as innovative solutions of this type, improvements in conventional infrastructure are also important, including even incremental ones such as:

▸ Increasing the share of solid waste recycled,

▸ Improving the efficiency of electricity generation and distribution system,

▸ Decreasing water losses in the water distribution system,

▸ Improving the efficiency or fuel mix of the public transportation system,

▸ Introducing information infrastructure that can reduce the demand for resource-intensive services,

▸ Improving urban water flows so as to reduce flooding risks.

If such infrastructure-based environmental improvements are to be achieved in ways that improve human well-being and social equity, it will be critical that the infrastructural improvements also expand service delivery to currently excluded or underserved populations, which are sometimes a majority in the cities of low-income countries.

While there is sometimes a tension between expanding the coverage of infrastructure-based services such as electricity, water, sanitation and waste removal on the one hand,

and decreasing resource use and aggregate waste generation on the other, this contradiction need not be large. The amount of electricity and water required to meet the basic needs of low-income households is not large, their waste generation is small.

Moreover, lighting with kerosene and cooking with traditional fuels is often very inefficient. Similarly, using wells and simple pit latrines in urban areas can itself be very damaging to local water resources. Targeted policies may be needed to ensure that providing affordable prices to low-income groups does not lead to overconsumption in more affluent groups – or even to the reproduction of unsustainable activities by low-income groups.

This is likely to be one of the big challenges of moving towards a green economy. In other cases coproduction can provide a means of extending services to low-income households at a relatively low cost, without encouraging overconsumption by the affluent, as with the condominial sewerage systems pioneered in Brazil.[66]

Raising the revenues for city governments to invest in green infrastructure can be difficult, particularly in low-income settings or where national governments provide only minimal funding along with very tight restrictions on the rights of city government to raise revenues locally. This is partly because the true costs of traditional (i.e. non-green) development are rarely fully acknowledged, and also partly because the economic benefits of green infrastructure (largely as a result of increased energy efficiencies) are rarely fully appreciated.

Property taxes, development charges, user charges and value-capture taxes can all be used, and private finance can often be

65   Davila J, Daste D (n.d.). Medellín's aerial cable-cars: social inclusion and reduced emissions. Unpublished Working Paper, University College London. Available online: http://www.bartlett.ucl.ac.uk/dpu/metrocables/dissemination/Davila-Daste-2012-UNEP.pdf

66   Nance E, Ortolano L (2007). 'Community participation in urban sanitation: Experiences in northeastern Brazil' *Journal of Planning Education and Research* 26: 284-300; Ostrom E (1996). 'Crossing the great divide: Coproduction, synergy and development' *World Development* 24(6): 1073-1087.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

> STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

leveraged.[67] Green taxes are also an option, though there is no reason to expect the level of revenue raised through green taxes to be commensurate with the investment requirements of green infrastructure, and, in any case, cities are not always the appropriate level of government for imposing green taxes.

Sewage treatment plant. © SHUTTERSTOCK

Greening the urban economy with taxes and subsidies

Taxes and subsidies can help to correct the inappropriate incentives created by market failures, and are central to the transition to a green economy. Many of the taxes and subsidies needed to provide the incentives for green urban economies are best devised and implemented nationally, in some cases even involving international contributions (as with subsidies for reducing carbon emissions in low income countries). Some, on the other hand, can, and indeed should, be the responsibilities of cities – provided urban authorities themselves have the incentives to achieve a green economy.

Figure 10 includes a very short list of fiscal incentives drawn from the chapter on cities in UNEP's report, *Towards a Green Economy*.[68] The first two are rarely under the authority of city government, but they can make a large difference to urban development.

---

67   Merk O, Saussier S, Staropoli C, Slack E, Kim J (2012). *Financing green urban infrastructure*, OECD Publishing.

68   UNEP (2011). *Ibid*.

Fuel taxes can help to internalise the external costs of private vehicle use and can influence driving patterns and habits. © SHUTTERSTOCK

Charging for on- and off-street parking can help to reduce parking demand. © SHUTTERSTOCK

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

One would expect both, for example, to promote more compact cities. Pricing for ecosystem services remains rare, but typically involves services that cross-urban boundaries and hence cannot be implemented by cities acting alone. Some of the others can be implemented by cities, provided they have the legal right to do so, but a city may hesitate for fear of giving an economic advantage to competing cities. However, where conditions vary appreciably between cities, and where the costs and benefits fall within the cities' administrative areas, the city scale may be ideal.

Figure 10: Selected fiscal incentives for moving towards an urban green economy[69]

Carbon pricing	International, national or regional cap and trade schemes that set a maximum for carbon emissions which are being traded
Fuel taxes	Increase fuel tax to internalise external costs of private vehicle use and to adjust demand to the road capacity
Pricing for ecosystem services	Payments for ecosystem services (PES) (including outside city boundaries) that links beneficiaries and suppliers of related services
Reduce perverse incentives	Cut tax reductions or incentives that encourage longer commuting, or single family housing
Tax incentives	Provide funding or tax reductions for citizens or companies investing in renewable energy, retrofitting buildings or other green projects
Road user charges	Managing traffic demand and adjusting vehicle levels to available or reduced road capacities by charging private vehicle use in cities
Parking charges	Charging for on- and off-street parking based on market prices to reduce parking demand and release space for higher value usage
Land development tax	Taxing the release of new land to maximise usage and to contribute to financing green infrastructure development

Economists typically prefer the use of taxes over regulations to correct market failures, especially if the taxes can approximate the environmental costs imposed by the taxpayer but not captured by the market. Taxes can provide those imposing the burden with the incentive to choose

---

69   Source: UNEP (2011). *Ibid*. Table 8, p478.

3

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ STRATEGIES FOR
INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT

the most cost-effective means of reducing the burden, and encourages the greatest reduction from those who can reduce their burden at a relatively low cost[70]. On the other hand, under the wrong conditions they can lead to costly avoidance, such as the illegal dumping of waste in response to high disposal charges. Much depends on the local context, including local capacities to enforce, and resulting expectations on the part of waste dumpers.

Thus, when in the 1990s Accra adopted a waste charging system considered best practice internationally (based on experiences in high-income and low-income countries), waste disposal did go down very significantly, but it eventually transpired that this was largely the result of open dumping rather than resource conservation. The equity of taxes and subsidies also depends on the local context. Gasoline taxes are generally considered to be regressive, but in many low income countries, and in some other locations as well, this is not the case.[71]

The equity aspects of taxes and subsidies are especially critical when cities or districts are trying to avoid receiving migrants (or enterprises) they consider undesirable, and may be tempted to use environmental standards or charges as a device to restrict entry.[72] UN-Habitat estimates that almost a billion urban dwellers are living in "slums",[73] and many of these residents live in informal settlements, paying little in taxes and receiving little in environmental services. Local authorities in low income cities rarely

want more such residents, and are not only unwilling to subsidise them, but also unwilling or unable to tax them. Yet informal settlement dwellers often pay especially high prices for their informal water and energy supplies, and must organize to protect themselves against environmental hazards that others receive through the government. Here, the challenge is not so much to implement taxes and subsidies, but to improve governance to the point where such tools can contribute to local economic growth, environmental quality and human well-being.

Fostering urban social and environmental innovation and competition

Cities have long been at the forefront of experimentation and innovation, especially during periods of cultural, economic and environmental transformation. This should hold in the transition to a green economy. Cites have also long been in competition with each other. Economic competition among cities is especially common in our globalized world, and while urban centres do not compete economically in the same sense that enterprises do, they do compete for investment and funding from both public and private sectors. They sometimes also compete environmentally and socially, but not always in a positive manner. Thus one of the challenges of achieving green urban economies is to tap the forces of innovation and inter-urban competition for environmental and social ends.

The standard economic model of positive inter-urban competition, potentially capable of overcoming urban market and policy failures, is based on the idea that people and enterprises can "vote with their feet", and move to settlements where the local public goods and amenities suit their requirements. Even without direct pressure from above, or below, cities that failed to address their local environmental and social problems would lose out, though a few such cities could presumably be populated

70   Fullerton D, Leicester A, Smith S (2010). 'Environmental taxes' in *Dimensions of tax design*. Institute for Fiscal Studies (IFS), (editor), Oxford University Press, Oxford.

71   Sterner T (ed.) (2011). *Fuel taxes and the poor*. Earthscan Routledge, London.

72   Feler L, Henderson J (2011). 'Exclusionary policies in urban development: Under-servicing migrant households in Brazilian cities' *Journal of Urban Economics* 69(3): 253-272.

73   UN-Habitat (2012). *The state of the world's cities report 2012/2013: Prosperity of cities*. United Nations Human Settlements Programme, Nairobi.

with residents for whom such problems were inconsequential. Such population movements cannot address cross-boundary impacts, or global burdens such as climate change, and can amplify social problems related to, for example, ethnic segregation. It could, however, lead to cities competing in their efforts to adapt to the burdens of climate change.[74]

More generally, urban authorities hoping to attract enterprises and their investments may also want to attract certain types of people, and indeed some research indicates that attracting creative people is a key strategy for achieving local economic dynamism in affluent countries[75].

Unfortunately, particularly in urbanizing countries, where government officials tend to worry that their cities are already attracting excessive numbers of low-income rural migrants, this sort of competition is unlikely to serve the goals of social equity. In order to achieve greener economies, national and state governments, as well as civil society groups and social movements, may need to work to change the forms of intercity competition. China for example was extremely ambitious in fostering urban economic experimentation and competition in the 1990s, and economically successful models were widely reproduced[76]. Shifting this competition around to achieve environmental and social goals has proved far more difficult, however, and is likely to require new forms of national support for good local governance.

More positive examples can, however, be identified. Milwaukee has experience of a variety of water resource problems including over-extraction of groundwater, chemical pollution, and sewer overflows – but has turned its experience in managing these challenges into a competitive advantage through modelling itself as a World Water Hub that is home to more than 130 water technology companies.[77]

Green urban governance for a green urban economy

Ultimately, achieving a green economy is likely to require a higher calibre of urban governance than the pursuit of economic growth alone. Achieving the potential advantages that urban centres have for environmental improvement and rising living standards and social equity will depend on "governance structures – local governments and their relations with the population and civil society groups within their boundaries – making and implementing appropriate choices".[78]

National governments will need to provide suitable legal and policy frameworks, support investments in appropriate forms of green infrastructure, and help to ensure that cities that move towards a green economy can succeed economically, as well as socially and environmentally. It is cities, however, that will need to overcome their social divisions, accommodate large migrant populations, extend environmental services to low income populations, implement measures to conserve global as well as local resources, and adapt to climate change. As has been shown throughout this report, reforms in governance – particularly related to informed leadership, innovative policy, and effective implementation – are at the core of achieving environmental gains in urban areas.

3

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT
KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ STRATEGIES FOR INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT

74   Kahn M (2010). Climatopolis: *How our cities will thrive in a hotter future.* Basic Books, New York.

75   McGranahan D, Wojan T (2007). 'Recasting the creative class to examine growth processes in rural and urban counties' Regional Studies 41(2): 197-216; Wojan T, Dayton T, Lambert M, McGranahan D (2007). 'Emoting with their feet: Bohemian attraction to creative milieu' *Journal of Economic Geography* 7(6): 711-736.

76   Lin G (2004). 'The Chinese globalizing cities: National centers of globalization and urban transformation' *Progress in Planning 61(3): 143; McGee T (2007). China's urban space: Development under market socialism.* Routledge, London.

77   Infrangalis (2013). *Ibid.*

78   Satterthwaite D (2011). *Ibid.*

4

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› **CONCLUSION**:
PRINCIPLES FOR
INTEGRATING THE
ENVIRONMENT
IN URBAN
PLANNING AND
MANAGEMENT

› CONCLUSION: PRINCIPLES FOR INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT

Key Messages

▸ It is possible to identify underlying principles that are important for effective integration of the environment in urban planning and management – but it is challenging to make these both specific enough for practical implementation and general enough for broader relevance.

▸ The participation of a range of stakeholders in decision-making is a central element of building more resilient and environmentally aware cities.

▸ Effective environmental governance requires effective urban governance – meaningful long-term changes in the environmental sphere cannot happen without sound governance and decision-making structures that are horizontally and vertically integrated.

▸ A variety of gaps and challenges exist – highlighting the opportunities of engaging with the environmental agenda is more likely to overcome these than focusing on the negative environmental impacts of urbanization.

The City of Makati, Philippines. © DAVID DODMAN

4

**INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT**
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

> **CONCLUSION:**
PRINCIPLES FOR
INTEGRATING THE
ENVIRONMENT
IN URBAN
PLANNING AND
MANAGEMENT

4

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ CONCLUSION:
PRINCIPLES FOR
INTEGRATING THE
ENVIRONMENT
IN URBAN
PLANNING AND
MANAGEMENT

Planning Principles of the 21st Century

The importance of positioning environmental goals alongside broader city development issues is evident in the nine "planning principles for the twenty-first century" proposed in a recent book . Each of these will make a contribution towards more meaningful incorporation of environmental concerns, yet only a few of them (particularly points i and iv) speak explicitly to the environment.

i) **Sustainability:** committing to an environmental ethic

ii) **Accessibility:** facilitating ease of movement

iii) **Diversity:** maintaining variety and choice

iv) **Open space:** regenerating natural systems to make cities green

v) **Compatibility:** maintaining harmony and balance

vi) **Incentives:** renewing declining cities / rebuilding brownfields

vii) **Adaptability:** facilitating "wholeness" and positive change

viii) **Density:** designing compact cities with appropriate transit

ix) **Identity:** creating/preserving a unique and memorable sense of place

Urbanization across the world is continuing at a rapid pace. Much of this growth in population is taking place in small and medium-sized urban centres, where the expansion of population and activities has not been accompanied by an expansion in revenue base or capacity of local authorities. This has the potential to create major environmental challenges in the future – both for these towns and cities, and for their impacts on the regional and global environment. This report shows that there are indeed potential ways of accommodating and even supporting this growth that have beneficial outcomes for the well-being of urban residents, and contribute to environmental improvements at different scales. Previous efforts at integrating the environment in urban planning and management have had mixed results, but demonstrate the opportunities for the future.

Incorporating the environment in urban planning and management in itself requires an integrated approach that recognizes the multiple dimensions and scales of environmental problems and opportunities. This approach should prioritise governance arrangements, which can then provide a basis on which specific tools for integrating the environment in urban planning and management can be utilised. Towns and cities at different stages of population growth and economic development face different issues, and require appropriately tailored responses. Whatever the particular cases, however, participation of a range of stakeholders and political commitment are important; as are ensuring that activities are harmonized and integrated with other levels of government.

One of the key conclusions that can be arrived at from examining interventions in urban areas over recent decades is that narrowly-defined and specific 'off the shelf' methods are rarely effective in the widely differing contexts of cities. The environmental situations of cities vary greatly – as do the size of their populations, their social and economic challenges and priorities, and their level of autonomy for decision-making. For this reason, attempts to integrate the environment in urban planning and management are best supported by guiding principles that are more broadly applicable and that can be adapted to serve the specific needs of urban centres in a range of situations.

The conclusions presented in this report draw lessons from a review of documentation associated with City Development Strategies, and from the in-depth discussions with city practitioners in Ghana, the Philippines and Uganda. As such, they are based on local priorities and learning drawn from on-the-ground experience. They represent issues that may already be in the process of being addressed, or themes that need to be engaged with in greater detail – but that represent significant areas shaping the ability to

engage with environmental concerns or the effectiveness of these interventions.

Central to all of these principles is the fact that processes of environmental change exist alongside – and are mutually informed by – a range of other processes of urban change. These may include in- or out-migration, urban spatial expansion, changes in legislative or governance frameworks, changes in land prices and land markets, and changes in national or global economies that shape local economic processes. These have the potential to encourage or to impede the incorporation of environmental concerns in urban planning and management strategies.

4.1 Participation, Politics and Political Commitment

Perhaps the single most important factor shaping whether environmental concerns have been a central priority in city development and planning processes was the level of political support and commitment. Generating broad participation and enthusiasm from urban residents, as well as from elected officials and city staff is an essential component of addressing environmental challenges and priorities.

Traditional models of city planning have often not adequately taken this into account: indeed, plans that are only used by planners; plans that do not draw on the knowledge of citizens; and plans that are ignored by elected leaders have been identified as being critical reasons why city planning has not averted large scale environmental disasters such as the effects of Hurricane Katrina in New Orleans.[79] Effective participation of urban residents in planning decisions also generates important social benefits around rights and engagement. Where political support and commitment to

address environmental priorities are present, this is seen as a key contribution towards these issues being taken seriously by a broader range of urban stakeholders. For example, the Mayor and Chief of Council in Dosso (Niger) were very active in presenting and defending environmental priorities within the City Development Strategy.

Another reason for success in incorporating environmental issues in City Development Strategies has been the explicit attempt to empower urban managers through enabling them to play a central role in coordinating and shaping visions for city futures, often in cases where they have had limited fiscal autonomy or technical resources to draw on.[80] The efficacy of including environmental concerns in city planning, including the CDS process, can be aided by the institutionalization of particular roles and positions, although the circumstances of city managers with responsibility for the environment vary greatly.

In Uganda, for example, the position of environmental officer has been institutionalized at district and municipal levels, although much of the role of these individuals revolves around ensuring that individual projects are subjected to environmental impact assessments. Participants in the Learning Group also stated that these officers lack the offices, transportation and computer facilities required to do their jobs properly, and suggested that the creation of these positions has created a risk of the environment being addressed as a discrete 'sector' rather than as a cross-cutting issue.

Although there are specific roles for an environment unit and environment officers in all local government units (LGUs) in the Philippines, in some LGUs these only exist on an ad hoc and temporary basis, seriously limiting their ability to effect significant changes. National government attitudes and decisions

4

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ CONCLUSION:
PRINCIPLES FOR
INTEGRATING THE
ENVIRONMENT
IN URBAN
PLANNING AND
MANAGEMENT

---

79 Ford K (2010). *The Trouble with City Planning: what New Orleans can teach us.* Yale University Press, New Haven.

80 Parnell and Robinson (2010), *op. cit.*

4

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ **CONCLUSION**:
PRINCIPLES FOR
INTEGRATING THE
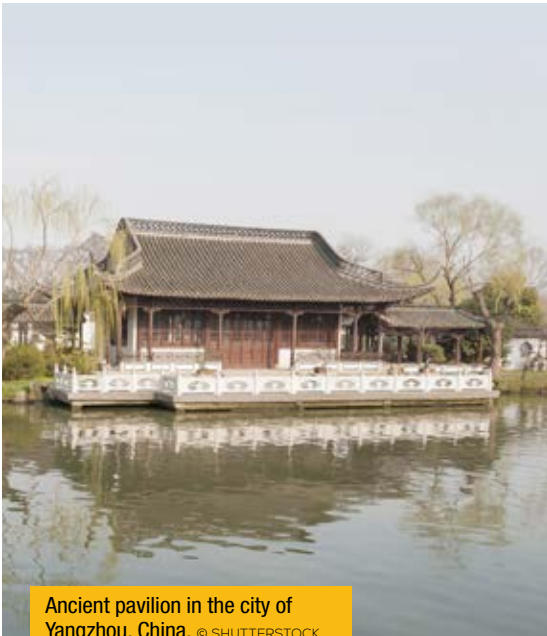ENVIRONMENT
IN URBAN
PLANNING AND
MANAGEMENT

can also support or hinder the abilities of local authorities to act on the environment in a meaningful way: in Uganda, Learning Group participants identified a continued "bias against the urban" in that country. Environmental priorities in Uganda still focus on the protection or sustainable use of terrestrial ecosystems, wildlife and forestry. This limits the scope for officials in municipal authorities to engage with urban environmental concerns.

Broader participation, including civil society involvement, varied greatly across the examples of City Development Strategies. Where participatory elements were presented these were greeted with a high degree of enthusiasm, as was seen in Maradi (Niger). However, in many City Development Strategies there was little explicit mention of participation in decision-making, and sometimes such participation favoured non-environmental concerns: a participatory process of priority identification in Ouagadougou (Burkina Faso) placed the environment as the last of 12 priorities discussed. Although the CDS process highlights the importance of participatory processes, this particular example highlights the need for a sympathetic integration of professional and local knowledge to identify priority areas for action.

The importance of multi-level governance

The *Towards a Green Economy* report makes explicit reference to the importance of multi-level governance[1]:

"Only a coalition of actors and effective multilevel governance can ensure the success of green cities. The most important fundamental enabling condition is a coalition of actors from the national and local state, civil society, the private sector and universities who are committed to advancing the green economy and its urban prerequisites, placing it centrally within the top strategic priorities for the city. The central task of this coalition is to promote the idea of a long-term strategic plan for the city or urban territory. Equally, it is crucial to develop strategic frameworks not just at the local and urban level but also at regional and national levels, ensuring coordinated design and implementation of policy instruments."

4.2 Harmonization and Multi-level Governance

Efforts to address environmental issues in urban areas are clearly linked with other city and national activities. A key criterion for the effectiveness of environmental objectives is how well these are supported (or otherwise) by other, more dominant, political, legal and bureaucratic structures and processes. This can be described as harmonization – ensuring that decisions and programmes implemented in one area (for example the environment) are supported by (or at least not in conflict with) programmes in other areas. Multi-level governance is also important – recognising that the responsibilities and capacities of local authorities are shaped by other levels of government, and that they are frequently over-stretched. In addition, interventions to support environmental concerns in urban planning and management are best achieved through integrating these issues in broader urban plans – a process which has often been proposed but which has been difficult to achieve.

One element that can contribute to success is the scaling up of environmental programmes that were initiated at the level of particular cities. For example, the "eco city" plan for Yangzhou (China) derived from Yangzhou's City Development Strategy is hoped to form the basis for a much larger project, with the Asian Development Bank (ADB) identified as the principal funder.

4

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

Ancient pavilion in the city of
Yangzhou, China. © SHUTTERSTOCK

If the principles of Yangzhou's CDS (which has a strong environmental element) can be incorporated within this larger project, then it will be a demonstration of how the relatively small-scale funding associated with the CDS process can leverage broader change. However, indications of the process for proposal development seem to limit the role of the environment, with little explicit mention of the environment other than ensuring that the environmental requirements of the ADB are met.

In the case of the Philippines, the local government units clearly follow the official national planning cycle, and have been able to incorporate the insights from the CDS process within this. This is able to be effective because of the well-developed and consistent nature of the national planning process. In situations where the national planning process is itself less clear, or harder to engage with, a greater tension is perceived. For example, there is a marked contrast in Uganda between the formalised (and funded) process leading to the CDS in Jinja and Kampala, and the much less rigorous (and less well funded) process of

developing and submitting plans to the national government. This has resulted in frustration for stakeholders who have been involved in the CDS, as there is no clear mechanism for the vision and strategic priorities to be translated into clear actions.

A key challenge in incorporating environmental concerns into CDS is related to the responsibilities held by different levels of government. In many cases, there are tensions between the capacities and responsibilities of local and municipal governments, and the capacities and responsibilities of national government agencies in relation to environmental management. In the Philippines, the primary responsibility for implementing the Philippine Environment Code is the Department of Environment and Natural Resources.

However, Local Government Units have the responsibility to enforce forestry laws (within limits, but include community-based forestry projects), manage solid waste disposal systems, and provide extension services related to agriculture and fisheries.[81] The management of environmental resources, including wetlands, may also be complicated through differences in geographical and sectoral responsibilities. In Kampala (Uganda), urban expansion into wetlands has taken place outside the city's administrative boundaries, meaning that wetland management is constrained by a lack of coordination between district and city authorities.[82]

This type of situation, with significant environmental problems occurring in peri-urban areas outside the authority of urban governments, is increasingly widespread and significant. It may also be a barrier to the efficacy of other CDS processes, as various other types of urban development may take place outside the formal urban boundaries. Given

---

81   Antonio E (2012). *Mainstreaming Environment and Development in the Philippines.* Background Paper prepared for IIED/UNEP Learning and Leadership Group, Makati City, February 15-16 2012.

82   Lwasa (2012), *op. cit.*

4

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ CONCLUSION:
PRINCIPLES FOR
INTEGRATING THE
ENVIRONMENT
IN URBAN
PLANNING AND
MANAGEMENT

the importance of gaining traction, it is clearly critical to ensure that the CDS is able to secure support from existing regulations, policies, powerful actors and public opinions. However, it is important that this kind of opportunistic adaptation does not simply become incoherent and excessively compromised.

4.3 Identifying and Overcoming Gaps and Challenges

The inclusion of environmental concerns in a strategic document does not itself mean that these are taken seriously or result in meaningful changes. As reflected in many of these reports, it is much easier to undertake technical or participatory exercises, and much harder to change budgets, laws, attitudes and politics. One response to this "implementation problem" has been to commission communications reports, or reports with costed action plans. However, it is not clear whether these reports actually achieve anything in terms of broadening support; and it is not clear whether costed action plans are any more likely to be paid for and implemented.

It is also worth noting that the concerns incorporated may not represent the full range of environmental pressures or priorities, as some of these (e.g. food security) may be less directly obvious to policy-makers, or may fall outside their general level of knowledge or understanding. In addition, a common response to the structural limitations (e.g. budgets, laws and attitudes) faced by city practitioners in mainstreaming environmental concerns is to commission a communications report or a report with a costed action plan.

This approach has also tended to be unsuccessful – as it is still a step short of having a budget approved for implementation. In future, it may be more effective to concentrate support on a single issue, ideally a current national priority that has been delegated to the

local government (e.g. water service delivery or solid waste management) as an entry point.

It is important not to focus too narrowly on the amount of attention given to the environment in City Development Strategies and other similar programmes, but also to assess the amount of traction that these initiatives themselves generate. For example, a CDS with solid environmental credentials that is not widely accepted and implemented will have limited environmental benefits for the city. In contrast, the more cities adopt coherent and well-conceived strategies – whether or not these explicitly focus on the environment – the better the environmental and social conditions are likely to be. In other words, the failure to implement any coherent strategy is probably a bigger risk than the failure to include environment in a strategy that is implemented.

The specific environmental issues addressed in urban planning and management activities, and the efficacy of their implementation, vary significantly from place to place. This has the potential to be a positive outcome if it means that these processes adequately take account of local political, legal, bureaucratic

Shenzhen, China. © SHARON GIL

and civil society contexts. In the case of City Development Strategies, the key issue limiting implementation appears to be their institutional positioning outside the main statutory processes and frameworks that are defined by legislation in individual countries. However, this still means that the CDS approach can have significant value as a visioning process, and also as a mechanism for encouraging more formal urban political and planning processes to take environmental and social concerns more seriously.

Financial limitations also frequently impede meaningful environmental action in urban areas. At the same time, these are often not limitations specifically related to funding for the environment, but are a consequence of a weak revenue base or inadequate revenue collection. The financial potential of cities is dependent on the national constitutional and legal framework which shapes both expenditure responsibilities and revenue sources. In particular, the expenditure responsibilities for services related to the built environment (town planning, water, sanitation, solid waste management, etc.) vary greatly between cities. This variation means that meaningful generalisations are of limited value.

For example, the creation of specific budget streams for the environment through dedicated taxes and tariffs can be effective (as discussed in Section 3.2, "greening the urban economy with taxes and subsidies") – but only in situations where municipal authorities have this authority. However, the most productive thinking on financing for the urban environment recognizes that this is unlikely to come from single sources. This includes developing a broader development focus on financing the performance of urban assets and systems – which can then be used as a mechanism to attract various investment flows to investing in the built environment (and therefore to achieve greater "resilience").[83]

In general, there is much more evidence of environmental issues in urban planning and management focusing on avoiding the negative environmental impacts of urbanization rather than on achieving environmental opportunities. As Dalal-Clayton and Bass state: "environmental mainstreaming will not only help to minimize risks and problems, but also enable stakeholders to discuss, make the case, and pioneer activities that tackle real environmental potentials."[84] Meaningful changes in systems of planning and governance will be required if these environmental potentials – which also yield economic and social benefits – are to be realised. At the same time, the greatest potential for overcoming these gaps and challenges is by highlighting the benefits of integrating the environment, rather than posing this as yet another set of costs that need to be incurred.

The experiences of designing City Development Strategies have demonstrated the potential to integrate the environment in urban planning and management. At the lowest level, these have encouraged the creation of environmentally beneficial projects. But at their most ambitious, they have generated sophisticated visions of sustainable human settlement. The approach of environmental mainstreaming – which has been applied extensively at national government levels – also offers an entry point for this. Finally, recent discussions of the green economy show great potential for ensuring that cities are able to meet economic goals while integrating the environment in a meaningful way.

Together, these lessons and approaches point in some directions that can lead to more effective integration of the environment in urban planning and management. But this will require the interest and involvement of a range of urban stakeholders, coupled with the commitment of city officials, in coordinated efforts to address these challenges.

4

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT
KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

› CONCLUSION: PRINCIPLES FOR INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT

83   Brugmann J (2012). "Financing the resilient city" *Environment and Urbanization* 24(1): 215-232.

84   Dalal-Clayton and Bass (2009). *Ibid.,* p17.

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› APPENDIX I

Summaries of Background Reports from Ghana, Uganda and the Philippines

The three background papers summarised here were prepared as background material to inform and stimulate discussion at the three Learning and Leadership Group workshops that generated information for this report. They covered the experiences of mainstreaming environment in urban development activities at the country level for Ghana, Uganda and the Philippines with particular reference to the experiences of developing City Development Strategies.

Kampala, Uganda. © SHUTTERSTOCK

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES

AI.1 Mainstreaming the Environment in Urban Areas in Ghana[85]

The context for urban planning in Ghana

City development, urban planning and urban management in Ghana has occurred in a peculiar historical pattern of decentralisation, with a layered yet differentiated framework of local governance, land management, land use planning and service delivery. Cities in Ghana exist within a decentralised framework that establishes local governments according to population thresholds. The planning framework for all local government is set out by Act 480, which directs the National Development Planning Commission (NDPC) to prescribe, through guidelines to local governments, formats and contents issues for their preparation of mandatory medium-term development plans. The impetus for planning is therefore not driven from the local level, as local governments are constrained from undertaking planning until the guidelines are issued. NDPC is also required by the law to review the output of these processes of local planning which have culminated in the respective Medium Term Development Plans to ensure that it falls in line with the overarching national development aspirations. Thus the thematic thrusts of the local plans are determined by the national priorities identified by actors at the central government level.

This process of local planning is traditionally top-down with local governments dependent on the NDPC for identification of priority themes. Local planning is thus limited in its contextualisation and prioritisation, and is further diminished in its ambitions by the unwillingness of actors in the local governments to go beyond the remit of the NDPC guidelines.

85 This summary is based on a report prepared by Dr Raymond Kasei (rakasei@gmail.com) and Dr Kwadwo Ohene Sarfoh (ohene@ilgs-edu.org), Institute for Local Government Studies, Accra.

The experiences of City Development Strategies

The design and implementation of the CDS in Ghana has not been uniform, with different outcomes that point to the importance of other social, cultural and political conditions. City Development Strategies have been undertaken in Elmina and Kumasi; with some related and relevant activities in Accra.

The Elmina 2015 Strategy was developed and partly implemented through the Elmina Cultural Heritage and Management Project (ECHMP) as a specialised agency of the local government, Komenda-Edna-Eguafo-Abirem District Assembly. The process led to the development of the capacity, particularly of the local authorities, to design a long-term vision and construct partnerships with the goal of enabling local economic development. The process adopted *"Elmina 2015 Strategy, Building on Past to Create a Better Future"* through which it identified the town's priorities and set the pace for sustainable improvement of local living standards.

The strategy was developed in a highly participatory manner actively involving the local private sector, related governmental departments, community groups and people that were directly affected by the identified problems in Elmina. A notable feature of the experience in Elmina is that the process of strategy development occurred in parallel with the development of a medium term plan in compliance with the requirements of the local government law even through the strategic plan by itself did not flout any laws.

However, the Elmina 2015 Strategy has failed to make a sustainable imprint on the city's development partly as a result of personnel changes that took place after the completion of the technical assistance and the exhaustion of the financial grant. This raises questions about institutional development in order to systemically embed new knowledge into local governments and thereby limit the personalization of capacity development.

The Kumasi City Development Strategy was borne out of the Cities Alliance Concept, and was initiated in 2003. The CDS was designed with broad local participation and with strong links to national government and the National Association of Local Authorities of Ghana (NALAG). The ultimate aim of the Kumasi Development Strategy is the alleviation of urban poverty, increased revenue for the city, improved city governance that allows a broad segment of the society to participate in decision-making and expanded opportunities for increasing social capital. However, a 2011 document reports that the Kumasi CDS has stalled after the implementation phase because of a lack of coordination and collaboration.[86]

Accra has undertaken a number of initiatives, some of which incorporate the visioning elements of a CDS. For example, the vision of Accra as a Millennium City was spearheaded by the city management in collaboration with the Millennium Cities Initiative. Under this initiative it is envisaged that the city would adopt sustainable development principles including addressing the poor state of waste management in the city. In addition, a Citizens Report Card was conducted, beginning from 2009 and published in June 2010, to assess citizen's perception of the state of service delivery in the city and responsiveness of the city government. However, there has not been a comprehensive and holistic CDS to date and mainstreaming environment has had minimal coverage in the scheme of activities taking place in the city.

Institutional framework for environmental management at the local government level

Environmental management in Ghana has had a long and chequered history with varying outcomes across the numerous sectors where they have been implemented. Historically, Ghana was the first country in Africa to identify

environmental issues as an important cross-cutting sector, with the establishment of the Environmental Protection Council (EPC) in 1974. The Environmental Protection Agency Act of 1994 established the Environmental Protection Agency (EPA), designating its functions as an advisory, coordinating, regulatory, advocacy and training organisation with respect to issues affecting the environment. The EPA has led or participated in the formulation of laws deriving from Ghana's subscription to numerous international laws, conventions and protocols concerning environmental management ranging from protection of biodiversity to the interfacing of human settlements development.

There are also several enactments that direct environmental management at the local level, placing local governments at the centre of policy, programme and project formulation, implementation and review within situated local contexts. The Local Government Law of 1993 assigns environmental management as a primary function of the District Assemblies, while subsequent Acts incorporating functions including environmental research and ensuring conformity of programme and project proposals with sound environmental norms. However, there are substantial challenges in implementation at the local level for a number of reasons including absence of the EPA at the local level, local government technical, administrative and political staff's limited awareness of pertaining legal regimes on the environment, and lack of resources for enforcement

The Natural Resources and Environmental Governance programme (started in 2007) prioritises the deepening the development and application of the Strategic Environmental Assessment process as a central part of the Environmental Assessment framework in Ghana. Subsequently, the Strategic Environment Assessment (SEA) of district development plans prepared by local governments was initiated: the 2006-9 Medium Term Development Plan incorporated specific directions for the inclu-

86   Amoako C, Cobbinah P (2011). 'Slum Improvement in the Kumasi Metropolis, Ghana - A Review of Approaches and Results' *Journal of Sustainable Development in Africa* 13(8).

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ APPENDICES:

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❭ APPENDICES

sion of environmental considerations in the plan preparation through incorporating a 'Sustainability Test' that examines the environmental and social impacts of proposed projects and programmes.

AI.2 Mainstreaming the Environment in Urban Areas in Uganda[87]

An overview of environment and development issues in Uganda

The environmental status in Uganda has been well documented and widely disseminated through the systematic publication of State of Environment Reports since 1994. This is an indication of the growing importance attached to managing the environment in Uganda for sustainable development. But the focus largely remains protection and or sustainable use of terrestrial ecosystems, air quality and wild life, and only the more recent reports have started to address environmental issues related to urban development.

The mainstreaming of environmental issues in policy did not take shape until the 1980s, when a vibrant CSO community emerged to advocate for the conservation of the environment in view of the fast-paced development that Uganda had started to experience. This included efforts to design strategies and policies to address the urban environmental challenges in Uganda. But although the urban shelter strategy of the 1980s addressed urban development sectors of housing, infrastructure, urban economy, and building materials, it was silent about the urban environmental challenge.

The most implemented regulation supporting environmental mainstreaming in Uganda is the

Environmental Impact Assessment Act (EIA), which requires projects of a certain threshold of investment capital to be subjected to an EIA. More recently, spatial and land use plans, as well as policies, are starting to be subjected to Strategic Environmental Assessment which is not provided for in Law but is considered instrumental in guiding development with environmental concerns – although because SEAs are not included in the Law, this creates challenges for municipalities and cities. Spatial plans of cities and towns in Uganda have elements of environmental assessment and mitigation measures, but this is ad hoc and often done as a requirement and on push by environmental officers at consultation level in the process of formulating plans.

At national level, there has been effort to institutionalize environmental concerns drawing largely from the National Environment Act and associated regulations. With the establishment of NEMA, the environmental officer positions have been institutionalized at district and municipal levels. A district support and coordination directorate in NEMA oversees and guides the implementation of the Act through guidance of the district environmental officers. The National Environment Act also recognizes 'Lead' Institutions in implementation of environmental guidelines and regulations such as the EIA Act. The lead organizations include municipalities but also sectoral ministries and agencies of respective areas in which environmental concerns have to be mainstreamed or considered during planning, design and implementation of projects.

However, a review of the implementation and performance of this mainstreaming coupled with limited interviews of 'lead' agency focal persons, reveals that the role played by this institutional arrangement between the lead agency and NEMA is largely of Environmental Impact Statements than the mainstreaming at planning, design and or implementation of the projects or programs.

---

87   This summary is based on a report prepared by Dr Shuaib Lwasa (lwasa_s@arts.mak.ac.uk), Department of Environmental Management, Makerere University, Kampala.

Environmental activities in urban areas

Several projects focused on elements of urban environment have been implemented in various towns within Uganda. A project for alleviation of poverty (PAPSCA) focused investment in improved sanitation, water supply and education in regard to behavioural change around hygiene and sanitation issues. In 2000 the Kampala Urban Sanitation Project (KUSP), was implemented focusing on sanitation and water. Elsewhere in the country, the Northern Uganda Reconstruction Programme has incorporated environmental mainstreaming into the municipal plans for towns including Gulu and Lira.

Larger programmes have also had some elements of environmental mainstreaming, including the Transforming Settlements of the Urban Poor in Uganda (TSUPU) programme. This is a Cities Alliance project to guide and facilitate five cities (Arua, Jinja, Kabale, Mbale and Mbarara) in preparing and financing City Development Strategies, facilitating establishment of an environment management system, and facilitating implementation of demonstration projects. The approach to CDS in this program is consultative, stakeholder-focused and participatory. The TSUPU can be envisaged as a program-based initiative and 'framework' with potential for mainstreaming environment in urban development.

It recognizes environmental components and processes relevant to the various 'traditional' planning sectors like services, utilities, financing, infrastructure and institutional structures. Technical and financial support has been mobilized under this program to support an additional 11 municipalities to formulate municipal development strategies. Municipalities including Kabale, Arua, Mbarara, Jinja and Mbale have been supported to formulate CDSs while other municipalities are in line to be supported pending the solicitation for resources required to complete the strategies.

Challenges to Environmental Mainstreaming

There are significant challenges to the mainstreaming of the environment in relation to prioritisation of issues and the allocation of resources for planning and interventions in urban areas. While all local governments in Uganda are assessed in terms of performance in relation to pre-determined indicators, the largest number of indicators is related to the sectors from which local governments are by law mandated to oversee (such as education, health, waste management, gender, and HIV/AIDS) – but not in the environmental sector. This has a serious implication related to the local government planning cycle of three-year rolling plans and annual budget plans. For environmental mainstreaming to occur in a meaningful way, the performance assessment for local government would need to include environmental indicators, which would translate into budget allocations for planning and interventions in environmental sector at municipal level. This would imply resources, personnel and activities for restoration or sustenance of environment in urban Uganda.

City Development Strategies in Uganda

Kampala Capital City Authority first embarked on a CDS in 2000, with a series of capacity building workshops on visioning and CDS in general that involved KCC officials, World Bank officials and consultants. A document was produced from this process, which – despite extensive enquiries — unfortunately cannot be traced. In 2003, with the support of UN-Habitat, KCC embarked on the process of a CDS once again formulated by the authority's staff and through consultative meetings with stakeholders. This process yielded a CDS for Kampala with a time horizon of five years between 2004 and 2009. The strategy has two parts: the first comprising a profile of the social, economic, environmental and institutional status of the city, outlining the threats and strengths of the city's structure; the second envisioned where the city would be in five years.

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ APPENDICES:

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES

One specific goal in the strategy is "improving the environmental living conditions" which is normative but remained non-specific to key environmental challenges outlined in the profile. The Kampala CDS points out that the National Environment Act of 1995 requires formulation of District (*in this case City*) Environment Action Plans (DEAP) but this has not been done. However, it does recognize the establishment of the Local Environmental Committees at a lower local Councils levels (as guided by the National Environment Statute, 1995), which again is a lever for CDS mainstreaming.

Although it is difficult to relate the 2004 CDS with present activities, a number of integrated environmental management projects have been implemented in Kampala, including the Kampala Urban Sanitation Project, the Ecological Sanitation (ECOSAN) project, the FOCUS-City project, and the Kampala Integrated Environmental Planning and Management Project (KIEMP). However as reported in a mid-term review of KIEMP, projects within KCC remain 'stand-alone' with loose connection to the routine city management as well as planning and decision making.[88]

Jinja municipality embarked on the CDS process in 2007 with the support of UN-Habitat and SIDA. The grand mission was to evolve Jinja's administrative and political status into a city, with a focus on Local Economic Development and a vision "to improve the quality of life of all residents through tourism promotion, commercial rejuvenation and revitalized industrial economy with equitable access and enhanced service delivery in an attractive and sustainable environment."

A local economic development committee was established to spearhead the formulation of the CDS. The formulation of the strategic plan was a participatory process that brought together, technocrats, policy makers, private sector, non-governmental organizations (NGOs), intergovernmental organizations, opinion leaders, religious bodies, institutions, donors and ordinary residents. With specific reference to the environment, strategic objective 3 of the Jinja CDS is "to enhance Physical Planning and Environmental Management". Strategic actions and activities related to this include extending the sewerage system and beautification of the town.

Conclusion

CDS processes in towns and the city of Uganda show differentiated approaches to the formulation and structure of the CDS but similar focal areas. The CDS processes have been largely externally driven with some capacity building to enhance stakeholder engagement utilizing. A review of reports from studies about projects and programs in the municipalities indicates that capacity building needs to move to capacity development, recognizing continuity in engagement with environmental issues framed in view of the development plans and processes.

AI.3 Mainstreaming the Environment in Urban Areas in the Philippines[89]

The Legal Framework for Environment and Development in the Philippines

As early as 1996, one of the world's leading authorities in environmental laws and law enforcement, Atty. Antonio Oposa, Jr., once said: "The Philippine environmental law is replete. The level of implementation, however, suffers in the sickbed of non-compliance." He claimed then that the legal framework of

---

88   KCC and BTC (2009). Mid-term Review Report, Kampala
     Integrated Environmental Plannng and Management Project
     (KIEMP), August 2009.

89   This summary is based on a report prepared by Ella Antonio
     (ella.antonio@gmail.com), Independent Consultant, Manila.

the Philippine environment, which consists of about 118 environment and related laws, "is sufficient in substance and in form, even superfluous."[90] Notwithstanding the voluminous laws, Philippine environment and natural resources remain at a sorry state and have been deteriorating rapidly.

These words remain true after 16 years to this day. More laws were enacted, some were meant to improve and update old laws, others to respond to new and emerging environmental issues. Still others are major laws on governance (e.g. Local Government Code, Indigenous People's Rights Act, etc.) that have direct implications on the environment. Table 1 briefly describes some of these laws.

The 1987 Constitution of the Philippines sets the principles and policies on environment and natural resources protection and development. Some of the relevant provisions include the following:

- **Article II** states that "the State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature." It also bestows upon the State the obligation to protect a balanced and healthful ecology.
- **Article XII** (National Economy and Patrimony) provides for (a) the efficient use and state ownership of natural resources; (b) more equitable distribution of opportunities, income and wealth; (c) industrialization and full employment based on sound agricultural development and agrarian reform; (d) conservation of forests lands and national parks; (e) prohibition of logging in watersheds; etc.

90   Oposa A (1996). 'Environmental Law: The Philippines Experience'. Paper presented in the Fourth International Conference On Environmental Compliance And Enforcement, 1996, Chiang Mai, Thailand.

Local governments and the environment

The Local Government Code of 1991 (LGC), a landmark law for local governance, strengthened the power and authority of local governments by decentralizing and devolving some functions of the national government to local governments. Its overall objective is to empower LGUs to formulate and implement policies and measures in local autonomy to meet the priority needs and service requirements of its communities. It sets the following responsibilities of LGUs in environment and natural resources management:

- Enforcement of forestry laws limited to community-based forestry projects, pollution control law, small-scale mining law, and other laws on the protection of the environment; and mini-hydro-electric projects for local purposes;
- Solid waste disposal system or environmental management system and services or facilities related to general hygiene and sanitation;
- Extension and on-site research services and facilities related to agriculture and fishery activities which include irrigation system; water and soil resource utilization and conservation projects; and enforcement of fishery laws in municipal waters including the conservation of mangroves;
- Implementation of community-based forestry projects; management and control of communal forests with an area not exceeding fifty (50) square kilometres; establishment of tree parks, greenbelts, and similar forest development projects.

Notwithstanding the LGC, LGUs have been having difficulties exercising their powers and devolved functions due to a number of issues such as (a) conflict with DENR due to the latter's continuing supervision and control of some areas within the jurisdiction of LGUs (e.g. coastal areas, mineral resources);

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES:

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

(b) similar conflict or coordination problems with a number of other agencies and local special bodies involved in the management of an LGU's territory; (c) conflicts between provisions of other national laws and LGC (e.g., Mining Act, Indigenous People's Rights Act); (d) inadequate capacity to finance development programs and projects; and (e) inadequate technical capacity in LGUs. All these likewise hamper LGU efforts to mainstream environment in their development plans, policies, programs and initiatives.

Mainstreaming the environment in the Philippines

The Philippines has had a long history of mainstreaming environment in plans, programs and projects. The NEDA and PCSD have worked hard to ensure that environment is well considered and integrated in local Agenda 21 and the country's 6-year Medium-Term Philippine Development Plans (MTPDP). In addition, a number of other mainstreaming mechanisms and approaches were developed and adopted, especially at the local level.

These include environment and natural resources accounting, environmental impact statement, environmental integrated assessment, among others. Mainstreaming at the local level is even more intense as LGUs and communities undertake ecoBudgeting, integrated coastal management, community-based forest management, LGU alliances for ENR management, payments for environmental services, etc. Common to all these tools is a participatory process that has become a standard operating procedure in the country.

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

› APPENDIX II

Environmental Mainstreaming Diagnostic for Urban Areas[91]

What is environmental mainstreaming?

'Environmental mainstreaming (EM) has been defined as

"the informed inclusion of relevant environmental concerns into the decisions of institutions that drive national, local and sectoral development policy, rules, plans, investment and action"

(Dalal-Clayton and Bass, 2009)[92]

It can help in several ways – to:

▸ Find integrated solutions that resolve, e.g . 'development vs. environment' and 'top-down vs bottom-up' arguments, institutional tensions, and associated cost,

▸ Enable more efficient planning of environmental assets and environmental hazard management,

▸ Support technological innovation that is informed and inspired by nature,

▸ Support informed policy debate and formulation on big issues,

▸ Enable environmental mandates to be fulfilled in effective ways,

and in these ways, improve the productivity, resilience and adaptability of social and economic systems – reducing the risk of collapses and the need for short-term 'bail-outs'.

To achieve these benefits, EM requires collaboration – the integration of environment and development interests and ideas, not just environment being forced into development. It will often be as much a political and institutional change process as a technical one – working directly with politically hot overarching policy issues on matters such as security, macro-economic policy, employment, climate change and 'low-carbon growth'. EM depends upon leadership and catalytic organisations to forge the necessary links and processes, and needs to be a continuing and long-term process, not a one-off project.

Effective EM goes much wider than procedural assessments and embraces a broad array of tactics and approaches and a large toolkit of available analytical and assessment methods. EM has too often been approached as a narrow procedural hurdle – usually the application of a safeguard mechanism: indeed, evidence shows that the traditional safeguarding approach to EM has not been particularly effective.

It needs to be complemented by a more integrated and systematic institutional development approach which realizes the potential of environmental assets and recognizes the limits. In these respects, 'integration' or 'reciprocal mainstreaming' may be more suitable terms, though the former is too generalized and the latter is a new term which we hesitate to introduce.

Nonetheless, this does suggest that (1) the context, and (2) the development aims being considered are as important as (3) environmental aims, and that equal attention should be applied to understanding how all three have and should interact. Hence we have developed this diagnostic.

---

91   This diagnostic has been developed by Barry Dalal-Clayton, Steve Bass and David Dodman. It is based on a draft framework developed by IIED, reviewed by three learning groups in Ghana, Uganda, and the Philippines, and customised for application by cities.

92   Dalal-Clayton D B, Bass S (2009). *Ibid*.

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES

Purpose of diagnostic

This diagnostic focus on cities and sets out a framework of issues and questions which can be used to:

▸ Understand what **progress** has been made to mainstream environment in a city context;

▸ Map and analyse the **EM approach(es)** of a city at organisational (city administration) or development project levels;

▸ Assess how city **institutional structures and procedures** support or inhibit EM;

▸ Examine **EM performance** – internally (within the city administration or other city organisations) and 'on-the-ground' (in terms of outcomes);

▸ Identify areas for **change and improvement.**

A city administration's or project's documents alone are unlikely to provide a sufficient basis for reviewing how well its decisions and actions are informed by and affect the environment, i.e. EM. They rarely address the full range of key aspects of EM and seldom contain frank or unbiased analysis of practice and performance - particularly if written by staff of the city administration concerned; or, if they do, the words are not reflected in 'upstream' beliefs or 'downstream' real actions.

Document review needs to be complemented by open engagement with staff from across the city administration and organisations and other stakeholders involved in or af-

fected by decisions of the city or development activities promoted/funded by it, e.g. national government departments, NGOs, communities, private sector organizations, academic institutions) – through interviews, focus group sessions, workshops, etc.

The questions in the framework can be used in full or in part, as appropriate. The diagnostic includes question sets for two particular applications:

A. **Mainstreaming at the level of the city administration** – internal structure and procedures for EM in the city administration

B. **Mainstreaming at the level of development projects funded or supported by the city**

Diagnosis can be undertaken internally as a self-assessment, e.g. as part of regular tracking, monitoring or review of EM performance; or externally by independent review.

Structure of diagnostic

For each application, generic questions are provided – meant as an agenda for managing or guiding discussions on EM with individuals, small groups or workshops.

These are followed **by more detailed and targeted questions** which aim to guide reviewers/assessors (i.e. as a prompt to aid probing more deeply on particular issues or themes that arise during discussion under one of the generic question), and for scrutinizing documents.

MORE INFORMATION ON ENVIRONMENTAL MAINSTREAMING

See: www.environmental-mainstreaming.org

(A) Mainstreaming in City Administrations

INTERNAL STRUCTURE AND PROCEDURES FOR EM

Generic questions:

- What are the political, institutional and economic **changes** occurring with regard to environment in the country and city? Are these or other factors/influences (local, domestic, or external) driving attention to the environment?

- What are the key institutions and processes that foster the **enabling conditions** in which environment is taken into account by the city and in development decision-making? And are these open to the participation of diverse actors?

- Who is **championing** the environment? Which are the government and city bodies, NGOs, academic institutions, donors and other key actors in the environment field and what are their mandates for mainstreaming? What actions have they taken, or propose to take, in mainstreaming environment at the city level – what are actors doing separately and together?

- Is there **political will** and commitment within the city for EM? And how is this given effect in city policies, ordinances, strategies and plans?

- What **steps/procedures** has the city taken/put in place to mainstream environment - in its organizational structure, policies, operations, working with others (partner organizations and countries), etc?

- Is it possible to identify an individual or department in the city or municipality with the **main responsibility** for EM?

- Has the city made any public or international **commitments** to EM?

- Has the city developed any environmental **safeguard policies**? And what tools/methods does it use in applying such policies?

- Is there a good level of environmental awareness, skills and capacity across the city administration and amongst other stakeholders in the city? What steps has the city taken to increase **environmental awareness, skills and capacity** in the city (amongst city administration staff and amongst other stakeholders)?

- Has the city developed climate change action plans (for mitigation or for adaptation)?

- How are environmental concerns **communicated** within the city and to others (e.g. partner organizations and other cities)?

- **What factors are driving attention to environmental concerns** within the city administration and its work? – external (e.g. markets, electorates) and internal (e.g. incentives, training).

INTEGRATING THE ENVIRONMENT IN URBAN PLANNING AND MANAGEMENT KEY PRINCIPLES AND APPROACHES FOR CITIES IN THE 21ST CENTURY

❯ APPENDICES:

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

- Are there any **opportunities to improve** how the city addresses environmental issues in its work?

- Are there any **constraints** to addressing environmental concerns at the city level, e.g. in national or city government, investment, development decisions (at different levels)? Do particular organizations and individuals ignore, resist or actively work against EM – and how do they oppose it?

- What has been the **progress to date** in EM in the city? - are there examples of **successful EM** (e.g. better decisions, successful outcomes and initiatives associated with them)? What contributions have they made and what was their significance (if not yet actual impacts)? What were the reasons for success (e.g. particular government or non-government protagonists involved?

- Is **adequate information** available about environmental issues?

GUIDE TO DEEPER QUESTIONS

Commitment and political will

- What evidence is there that there is genuine political will and commitment within the city for EM? – commitment to introduce measures and change in order to genuinely mainstream environment in its policies, plans, actions, operations, etc.

- What steps has the city taken to ensure that it respects and adheres to the environmental commitments, policies, guidelines, standards and procedures, etc. of partner organizations (particularly co-funders) and partner cities regarding EM?

Institutional structures, safeguards, approaches and tools

- What administrative and operational structures has the city established to promote EM? E.g.

  ▸ Is there a department with direct responsibility for environmental matters?

  ▸ How is environment addressed across different departments; and how is this linked with the environmental and development responsibilities/activities of government ministries, para-statals, national organizations/agencies that are undertaken within city boundaries and that impact on the city?

- How do the national constitution and particular national laws and legal instruments promote and support EM at city level?

  ▸ Do these support each other and form an integrated suite, or is there overlap, confusion and conflict between them and the responsibilities of city administrations?

- Does the city have clear and accessible environmental and social policies and safeguards – are these aligned, integrated and consistent with national-level safeguards? And are they adequate to achieve effective EM?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

- ▶ What tools are required to be used at city level (e.g. EIA, SEA, other environmental assessment procedures, etc) and when?

- ▶ When are these applied in the city's operations (e.g. during project or planning cycles)?

- ▶ Are there clear guidelines for the applications of such measures/tools?

- ▶ Are any such guidelines, information on tools and support materials/sources clear and easily accessible by all city staff and partners?

- ▶ In what language(s) are these provided?

- ▶ Are they based on or do they conform with international standards and practices?

- ▶ Are they being followed and implemented effectively? And what are the constraints?

- ▶ Are the institutional systems within the city (e.g. departmental structures and procedural arrangements) coordinated and integrated adequately so as to maximize the possibilities of achieving EM?

- Is environmental monitoring and evaluation undertaken of city development activities – to assess progress and outcomes and learn lessons?

- What other tactics, tools and approaches could be used to mainstream environment at different 'entry points' - i.e. those in the institution's planning and project cycles?

- What are the entry points in city planning and decision-making to address environmental issues?

- Has the city assessed the opportunities and constraints in its development planning and in routine management and operations and its engagement with others (collaborating organisations, partners, other cities, etc) for/to effectively mainstream environmental concerns?

Private sector, NGOs and research institutions

- How does the private sector address environmental issues?

- ▶ What is the influence in the city of international business standards and multi-national corporation practices regarding the environment?

- Is there a strong NGO sector addressing environmental issues in the city? How effective is this?

- Do other NGO movements (e.g. addressing shelter, land, education) that are active in the city incorporate environmental concerns or priorities in their work?

- Are research and academic institutions (including universities, training colleges, local government training and research institutions) addressing environmental concerns in the city?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

> **APPENDICES**

Environmental awareness, skills and capacity

- What is the level of understanding/awareness of environmental and social issues and their importance to sustainability, amongst:

  - ▶ Councillors, the Mayor and other elected officials?

  - ▶ City administration departments and officials – particularly those that handle policies, negotiations, development projects at different stages in their cycle?

  - ▶ The public?

  - ▶ Private sector?

  - ▶ NGOs and CBOs?

  - ▶ Academic and research institutions?

- What steps has the city taken to raise environmental/EM awareness amongst its staff and by those it engages with?

- Has the city taken steps to build awareness (among the general public and among city staff) of climate change mitigation and adaptation and relevant strategies to address this?

- What steps has the city taken to:

  - ▶ assess its own skills and capacity for EM?

  - ▶ provide training for staff and others (e.g. partner organizations or cities, affected stakeholders) to implement EM measures such as safeguard policies – and with what success (what is the evidence to indicate success/change)? Does more need to be done – and, if so, what?

Communication

- How does the city 'communicate' the importance of the environment, EM and EM efforts:

  - ▶ Internally to departments and staff?

  - ▶ Externally – to those it engages with – e.g. other cities or organizations, stakeholders, the public, media, in educational curricula?

Drivers, opportunities, constraints

- What are the drivers that potentially provide a 'push' for EM within the city? (internal/external/domestic/international)?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ **APPENDICES:**

Examples might include (to aid discussion – not as a prompt):

▸ International commitments

▸ Legislation, regulations and requirements (national/local)

▸ Company/business plan or objectives, or regulations/requirements

▸ Stakeholder/public demands

▸ Conditions imposed by donors/lenders

▸ Risk management

▸ Personally held or organizational values

▸ Traditional/cultural reasons

▸ Actual or potential environmental events and issues

- Has the city engaged with (and if so in what way) and responded to the array of international drivers of EM, e.g. conventions, UN conferences, UNCSD, Johannesburg Plan of Implementation, MDGs, Paris Declaration, REDD, Millennium Ecosystem Assessment), Mexico City Pact, Durban Adaptation Charter, environmental initiatives led by C40, UCLG, ICLEI, UN Habitat, UNEP, or others?

- Do potential funding sources (from national government, international agencies, private sector, etc) require environmental concerns to be incorporated in city activities? If so, in what way?

- How has the city administration contributed or responded to the national government's commitments to the international community?

- How have issues of 'harmonization' been dealt with: to ensure that the environmental priorities and requirements of different actors are met, and that they do not contradict each other?

- Who are the key individuals/institutions that already champion environmental concerns? Or which ones might willing/well positioned to take a leading role?

- What opportunities for EM are presented in the city's response to 'hot' overarching policy issues such as security, macro-economic policy, employment, climate change and 'low carbon growth'; and those arising through other operating modes of the city, e.g. Board meetings, plan/programme discussions with donors, collaborative discussions/agreements with other cities or co-funders, etc.

- What are the constraints to the city improving its efforts towards EM? (e.g. in policies, ordinances/by-laws, city constitution, administrative structures and arrangements/ procedures, staff mix and skill base, financial provisions).

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES

Examples of constraints might include (to aid discussion – not as a prompt):

▸ Lack of or insufficient data/information

▸ Insufficient human resources (in general) or with particular/relevant skills

▸ Lack of awareness of the range of tools available for EM

▸ Lack of or insufficient funding

▸ Lack of political or bureaucratic will

▸ Lack of understanding and awareness of the relevance of environmental issues in policy-making or development planning

▸ Corruption

Outcomes

• To what extent, and how, have policies, strategies, ordinances/by-laws, development activities (e.g. particular genres of projects) been improved due to application/implementation of EM measures by the city?

(This is likely to be particularly difficult to assess from the review of documents alone – perspectives gathered by an independent reviewer might be needed. And care will need to be taken to distinguish between the outcomes due to EM and those due to other factors/ influences.)

• Have measures been put in place to monitor or assess the environmental benefits or disadvantages of environmental or other development projects?

Quality of assessment procedures and documents

• Are existing environmental assessment tools applied by the city sufficient?

• Does the city administration review EIAs/SEAs? If yes, proceed to following questions.

• Have reports of EIAs/SEAs/or other local environmental assessment tools and similar assessment approaches used by the city been reviewed / assessed for quality?

▸ Are they of good standard and presented in a way that makes them easy to understand and use to support planning and decision-making?

▸ Do they follow international principles and practice?

▸ Do they address the environmental and social aspects that might be expected (from international experience) to be associated with the particular focus (e.g. policies, plans, programmes or projects) to which they are applied; and in their particular contexts (e.g. geographical or environmental location).

• What evidence is there that adequate environmental/social data are available, sufficiently reliable, and appropriately used in assessment and to mainstream environment in the city's operations?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❭ APPENDICES:

Working with others (e.g. co-funders, partners, other cities)

• How does the city seek to harmonise its approach to EM with that of the national government, funding agencies, development banks, international agencies, etc.?

• Does the city require donors, finance institutions, private sector investors, etc. to follow EM procedures required by national laws and legal instruments, or by city ordinances, by-laws or procedures?

  ▶ Do the latter take precedence over the EM requirements of such other organizations?

• How does the city interface with other actors (e.g. NGOs, CSOs and local communities, private sector organizations, national government, politicians, educational and research institutions, etc.) in addressing EM and achieving common and coordinated purpose?

Examples of EM that works

• Are there good examples of approaches to EM that have been used in the city, other cities or elsewhere in the country and have 'worked' (i.e. have successfully enabled/facilitated/ promoted environmental issues to be taken into account and influence policy-making, planning and/or development decision-taking, e.g. the use of particular tactics, EM approaches or methods /tools?

(Such case examples might be useful for EM awareness-raising, or illustrative purposes.)

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES

(B) Project-Level Mainstreaming

Examples of projects likely to be undertaken by city administrations

This list is not exhaustive and the specific responsibilities undertaken by city / municipal authorities varies greatly from place to place.

▶ Hospitals	▶ Housing projects
▶ Schools/universities	▶ Public health centers
▶ Public markets	▶ Roads
▶ Parks	▶ Community halls
▶ Slaughterhouses	▶ Sports complexes

Generic questions

It may be helpful to consider these questions initially in reference to a specific activity that the city / municipal corporation has been involved in as a leading actor.

1. What is the history of the project – how was it planned and who was involved? Who initiated the project, and what was the specific responsibility of the city / municipal government?

2. How were environmental issues addressed through the project cycle? What alternative approaches may have been used, and why were these not selected?

3. Was adequate environmental information available and made use of?

4. How have environmental issues been addressed as part of project monitoring and evaluation?

5. How were the environmental aspects of the project communicated to stakeholders?

6. Have the climate change implications (both for emissions and for resilience) of the project been assessed?

7. Were there any constraints to EM in the project?

8. What lessons does the project provide for improving EM in similar projects?

GUIDE TO DEEPER QUESTIONS

Project planning and implementation

• Who originally proposed the project (e.g. councillors or the Mayor, city officials, partner national government, private sector, other stakeholders, other city, donor/funding organisation)?

• Which department/agency took the lead in:

  ▶ Designing/planning the project?

  ▶ Discussions/negotiations with any funding institution?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

❯ APPENDICES:

- If external (eg donor, private sector) funding was provided to support the project, which offices/ departments (key individuals) of the funding institution handled project through its stages: identification, planning/development, implementation, closure, monitoring/evaluation?

- Who else (key stakeholders) was involved in the project throughout its course – at what stages and how?

  ▶ Government (national), donor/finance institution, private sector, local communities, NGOs/CSOs, academic/research institutions, etc.

- Were partners involved in the project?

  ▶ How did they work with each other? (Was coordination effective- particularly on environmental and social issues?)

- How did any partners interface with other actors (e.g. NGOs, CSOs and local communities, private sector organizations, national-city-more local government, politicians, educational and research institutions, etc.) in addressing EM?

- What opportunities did such stakeholders have to influence the design, implementation and monitoring of the project?

  ▶ Were they able to engage effectively, and particularly to raise environmental and social issues? If not, what were the constraints?

  ▶ What evidence is there that their inputs had any influence as regards EM?

Application of safeguards

(**The following questions are illustrative:** fuller international guidance is available on formally reviewing EIA and SEAs.)

- In general terms, was the project one that was likely (based on past experience) to have significant environmental impacts (positive or negative) and that should have triggered environmental safeguards?

- What environmental and social safeguard policies or environmental and social assessment procedures of the city, or any donor/funding institution involved, were applicable to this project?

  ▶ Which of these was followed, which took precedence?

  ▶ Were these applied as officially required (the correct steps followed, the correct tools applied, etc.)?

  ▶ What specific EM approaches/tools were applied (e.g. EIA, SEA, other environmental assessment approaches/procedures, social impact assessment)?

  ▶ Were TORs set for these and by whom?, and were these followed properly?

  ▶ Who undertook the assessments (e.g. city officials, donor/funding institute officials, independent consultants)?

  ▶ Were all relevant stakeholders (particularly likely affected people) involved, and how?

  ▶ Were the reports of such procedures reviewed and by whom?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

〉 **APPENDICES**

- Did such review show whether these tools conform with TORs?

- Were they undertaken to good professional standards (did they conform with international principles, and standards of practice)?

- Did they examine alternatives (different project focus, locations, etc)? —and examine cumulative effects?

  ▶ Were the findings, conclusions and recommendations taken into account and how did they have influence on key project decisions?

- Were alternatives proposed, taken into account and acted upon?

- Were mitigation measures proposed and put in place?

Monitoring and evaluation

- What structures and procedures were put in place to monitor the environmental and social aspects and outcomes of the project throughout and following its full course?

- Who was responsible for these and who was involved, and how?

- Did these reveal any need to make changes to the project, and were any actions taken as regards these?

- Have any lessons been learned which have influenced the implementation of other ongoing projects or the design of planned projects?

- How have such lessons been communicated and to whom?

Opportunities and constraints

- Has the project revealed opportunities for improved EM in similar projects and constraints to EM which need to be addressed in planning/designing future similar projects?

Environmental awareness, skills and capacity

- Has the project provided any lessons about the understanding/awareness of environmental and social issues amongst different actors and stakeholders (those directly engaged in the project, or others)?

  ▶ How have these been acted upon? – by the city administration or the donor/financing institution, including for similar projects?

- Does the project indicate whether the city administration and/or donor/financing institution had adequate skills and capacity to address environmental issues in relation to the project?

  ▶ Where gaps and deficiencies need to be addressed?

  ▶ What might be the options for appropriate response?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

Information and communication

- Was adequate environmental/social data available for the planning and implementation of the project (including for any environmental and social assessments)? Was it sufficiently reliable, and was it appropriately used to mainstream environmental concerns?

- How were environmental issues communicated, and to whom, throughout the project?

INTEGRATING THE
ENVIRONMENT IN
URBAN PLANNING
AND MANAGEMENT
KEY PRINCIPLES
AND APPROACHES
FOR CITIES IN THE
21ST CENTURY

> APPENDICES

Cities Alliance
Cities Without Slums

Increasing urbanization will be one of the defining features of the 21st century. This produces particular environmental challenges, but also creates opportunities for urban development that can contribute to broader goals of improving the quality of life for urban residents while achieving greater levels of global sustainability.

Recognizing the increasing role of cities, this report builds on the 2007 report *Liveable Cities: the benefits of urban environmental planning* to explore how a variety of issues have been taken into account in different urban areas, and how a range of activities have been implemented that show the potential for integrating the environment in urban planning and management. Since the launch of the Liveable Cities report in 2007, cities have become increasingly prominent in terms of addressing global environmental issues.

While the 2007 report focused on a listing of tools that the city government could use to integrate environment issues into city processes, this report sought to understand how the tools were used by cities. Focusing on the City Development Strategy (CDS), the report draws on two main data sets to determine the effectiveness of using the CDS to integrate environmental issues into the planning process. Firstly, it draws on an analysis of documentation from 15 cities in Africa, Asia and Latin America that have engaged in the process of developing a City Development Strategy under the auspices of Cities Alliance. Secondly, it incorporates insights from in-depth workshops conducted with three additional cities (Metro Manila [Philippines] [specifically Makati City and Quezon City], Kampala [Uganda] and Accra [Ghana]) that have engaged in this process. From these two sources, the report extracts two key elements that cities can use to integrate their priority environment issues in urban planning and management.

Cover photo: Cape Town, South Africa