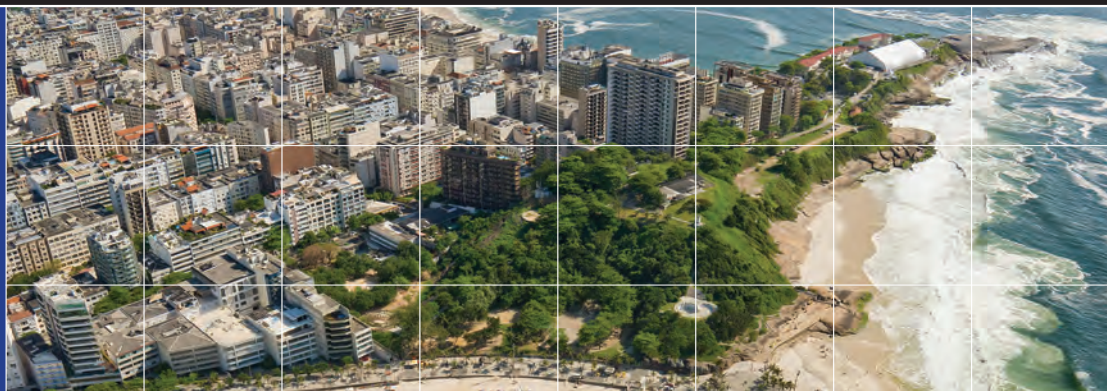




GLOBAL REPORT ON HUMAN SETTLEMENTS 2011
**CITIES AND CLIMATE CHANGE:
POLICY DIRECTIONS**

UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME



CITIES AND CLIMATE CHANGE: POLICY DIRECTIONS

GLOBAL REPORT ON HUMAN
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INTRODUCTION

The effects of urbanization and climate change are converging in dangerous ways that seriously threaten the world's environmental, economic and social stability. *Cities and Climate Change: Global Report on Human Settlements 2011* seeks to improve knowledge, among governments and all those interested in urban development and in climate change, on the contribution of cities to climate change, the impacts of climate change on cities, and how cities are mitigating and adapting to climate change. More importantly, the Report identifies promising mitigation and adaptation measures that are supportive of more sustainable and resilient urban development paths.

The Report argues that local action is indispensable for the realization of national climate change commitments agreed through international negotiations. Yet most of the mechanisms within the international climate change framework are addressed primarily to national governments and do not indicate a clear process by which local governments, stakeholders and actors may participate. Despite these challenges, the current multilevel climate change framework does offer opportunities for local action at the city level. The crux of the challenge is that actors at all levels need to move within short time frames to guarantee long-term and wide-ranging global interests, which can seem remote and unpredictable at best.

An important finding of the Report is that the proportion of human-induced (or anthropogenic) greenhouse gas (GHG) emissions resulting from cities could be between 40 and 70 per cent, using production-based figures (i.e. figures calculated by adding up GHG emissions from entities located within cities). This is in comparison with as high as 60 to 70 per cent if a consumption-based method is used (i.e. figures calculated by adding up GHG emissions resulting from the production of all goods consumed by urban residents, irrespective of the geographic location of the production). The main sources of GHG emissions from urban areas are related to the consumption of fossil fuels. They include energy supply for electricity generation (mainly from coal, gas and oil); transportation; energy use in commercial and residential buildings for lighting, cooking, space heating, and cooling; industrial production; and waste.

However, the Report concludes that it is impossible to make accurate statements about the scale of urban emissions, as there is no globally accepted method for determining their magnitude. In addition, the vast majority of the world's urban centres have not attempted to conduct GHG emission inventories.

The Report argues that, with increasing urbanization, understanding the impacts of climate change on the urban environment will become even more important. Evidence is mounting that climate change presents unique challenges for urban areas and their growing populations. These impacts are a result of the following climatic changes:

- Warmer and more frequent hot days and nights over most land areas;
- Fewer cold days and nights in many parts of the world;
- Frequency increases in warm spells/heat waves over most land areas;
- Increased frequency of heavy precipitation events over most areas;
- Increase in areas affected by drought;
- Increases in intense tropical cyclone activity in some parts of the world; and
- Increased incidence of extreme high sea levels in some parts of the world.

Beyond the physical risks posed by the climatic changes above, some cities will face difficulties in providing basic services to their inhabitants. These changes will affect water supply, physical infrastructure, transport, ecosystem goods and

services, energy provision and industrial production. Local economies will be disrupted and populations will be stripped of their assets and livelihoods.

The impacts of climate change will be particularly severe in low-elevation coastal zones, where many of the world's largest cities are located. Although they account for only 2 per cent of the world's total land area, approximately 13 per cent of the world's urban population lives in these zones – with Asia having a higher concentration.

While local climate change risks, vulnerabilities and adaptive capacity vary across cities, evidence suggests some key common themes. First, climate change impacts may have ripple effects across many sectors of city life. Second, climate change does not impact everyone within a city in the same way: gender, age, race and wealth have implications for the vulnerability of individuals and groups. Third, in terms of urban planning, failure to adjust zoning and building codes and standards with an eye to the future may limit the prospects of infrastructure adaptation and place lives and assets at risk. Fourth, climate change impacts can be long-lasting and can spread worldwide.

In proposing the way forward, following a global review of climate change mitigation and adaptation measures taken by cities all over the world, the Report emphasizes that several principles are fundamental to an integrated, multipartner approach towards climate change action at the urban level:

- No single mitigation or adaptation policy is equally well-suited to all cities;
- It would be beneficial to take an opportunity/risk management approach in a sustainable development perspective, considering not only emissions, but also risks that are present in a range of possible climate and socioeconomic futures;
- Policies should emphasize, encourage, and reward 'synergies' and 'co-benefits' (i.e. what policies can do to achieve both developmental and climate change response goals);
- Climate change policies should address both near-term and longer-term issues and needs; and
- Policies should include new approaches that support multiscale and multisector action, rooted in the different expectations of a wide range of partners.

The Report suggests three main areas in which the international community can support and enable more effective urban mitigation and adaptation responses:

- Financial resources need to be made more directly available to local players – for example, for climate change adaptation in vulnerable cities, for investment in a portfolio of alternative energy options, and in mitigation partnerships between local governments and local private sector organizations;
- Bureaucratic burdens on local access to international support should be eased, with the international community helping to create direct communication and accountability channels between local actors and international donors; and
- Information on climate change science and options for mitigation and adaptation responses should be made more widely available by the Intergovernmental Panel on Climate Change (IPCC), the United Nations and other international organizations, including available knowledge on observed and future climate impacts on urban centres, on urban-based mitigation and adaptation alternatives, and on the costs, benefits, potentials and limits of these options.

With respect to the national level, the Report suggests that national governments should use the following mechanisms to enable mitigation and adaptation actions at the local level:

- Engage in the design and implementation of national mitigation strategies and adaptation planning;
- Offer tax rebates, tax exceptions and other incentives for investments in alternative energy sources, energy-efficient appliances, and climate-proof infrastructure, houses and appliances, among other climate change mitigation and adaptation actions;

- Encourage appropriate climate responses (for example, redesign policies enacted with other issues in mind or in periods prior to climate change, such as flood protection policies that can result in maladaptations);
- Enhance coordination and streamlining between sectoral and administrative entities (for instance, make sure that decisions by one city to protect coastal areas with barriers do not have impacts on basins that are suppliers of fresh water, or wetland ecologies that are important to the economic base of that city or other cities inland);
- Develop partnerships with non-governmental actors to share risks (for example, national governments can work with private insurance providers to offer protection to each city without requiring each to make a sizeable investment in order to reduce risks from a particular kind of low-probability threat); and
- Anticipate and plan for the possibility of much more substantial climate change impacts and adaptation needs in the longer term than those that are currently anticipated in the next decades.

For the local level, the Report suggests, broadly, that urban policy-makers should begin from an awareness of local development aspirations and preferences, local knowledge of needs and options, local realities that shape choices, and local potential for innovation. In this context, urban local authorities should:

- Develop a vision of where they want their future development to go and find ways to relate climate change responses to urban development aspirations;
- Expand the scope of community participation and action by representatives of the private sector, neighbourhoods (especially the poor) and grassroots groups, as well as opinion leaders of all kinds, in order to ensure a broad-based collection of perspectives; and
- Using an inclusive, participatory process, cities should conduct vulnerability assessments to identify common and differentiated risks to their urban development plans and their different demographic sectors, and decide on objectives and ways to reduce those risks.

To achieve more effective policies, local governments need to expand the scope, accountability and effectiveness of participation and engagement with non-governmental organizations (NGOs), such as community and grassroots groups, the academic sector, the private sector and opinion leaders. Effective engagement with NGOs will serve multiple purposes:

- It will become a source of innovative options, as well as both scientific and locally relevant knowledge;
- It will allow participants to understand and mediate the diverse perspectives and interests at play; and
- It will provide broad-based support for decisions and promote knowledge on the causes of emissions and

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