



# Low-Carbon Investment in Cities

## How to Harness the Potential?



### The Potential

Local governments have the potential to significantly shape the world's development towards a low-carbon future – they are key decision makers, have crucial executive and regulatory powers, and approve and often coordinate urban projects that can result in ample economic, environmental and climate benefits. The planning and investment choices made today will determine whether cities' potential can be realised.



### The Barriers

Many local governments, especially in emerging and developing economies, face severe barriers to accessing the investments needed to grow in a climate-compatible way. These barriers include low or no creditworthiness, inadequate capacity to develop bankable projects and apply for financing, limited access to international public and private climate finance, and insufficiency of carbon pricing mechanisms. Small and medium-sized cities in particular are heavily affected by these barriers.



### The Solutions

Solutions to these challenges are currently being developed. Promising pathways include the improvement of local governments' creditworthiness, the development of a green bond market, support for project pipeline development, capacity building, international climate fund windows for cities, and results-based financing approaches.

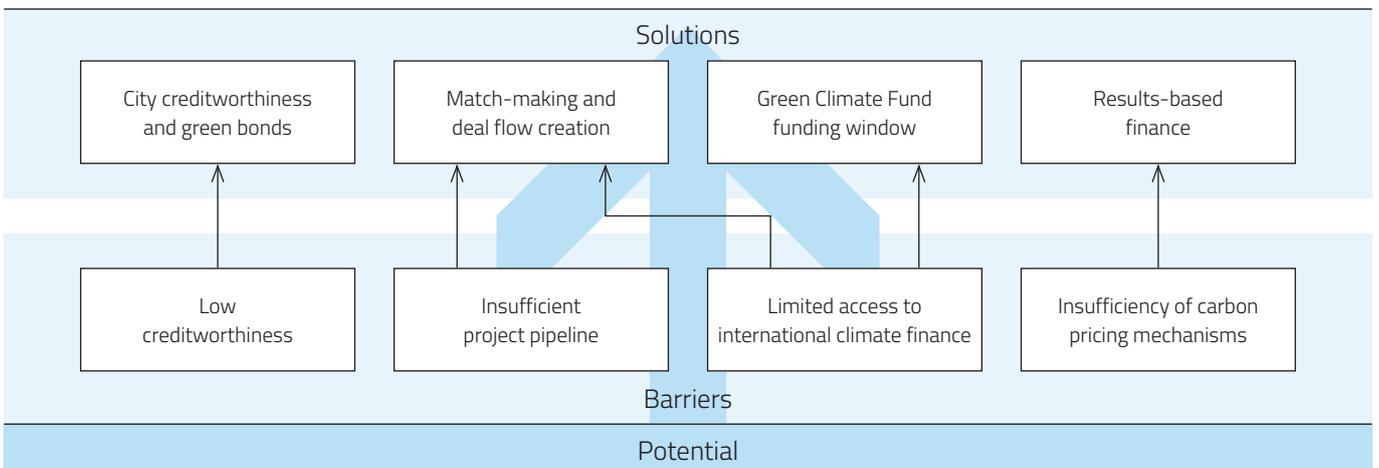
### Low Carbon City Lab (LoCaL)

LoCaL aims to reduce 1 Gt of CO<sub>2</sub> annually and mobilize € 25 billion of climate finance for cities by 2050. The platform's partners provide cities with better tools for assessing greenhouse gas emissions, planning, investing and evaluating progress. This paper was realized as part of the project CGTLA under LoCaL.



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Local governments and cities can significantly shape the world's development towards a low-carbon future. They are not only becoming increasingly active and organised, they also have executive and regulatory power over crucial sectors, play a driving role in mobilising key stakeholders, and could reap ample socio-economic benefits from sustainable investments.

## Local governments are key decision makers

Cities as centres of economic and political activity are important actors in tackling climate change. Testimony of this is the growing number of cities that have pledged to substantially reduce their community-scale GHG emissions, among them Copenhagen, Jakarta, and Seoul.

The momentum around cities' action is also channelled through an increasing number of initiatives. These include ICLEI – Local Government for Sustainability, CDP's cities program, C40 Cities Climate Leadership Group and the Compact of Mayors. Covenant of Mayors, an example of a regional initiative, is a movement of European mayors aiming to meet and exceed the European Union's 20% CO<sub>2</sub> reduction objective by 2020.

## Local governments have crucial executive powers in climate-relevant sectors

Cities are currently responsible for 70% of global energy related CO<sub>2</sub> emissions.<sup>1</sup> Fuelled by continuing urbanisation and economic growth, this share will only increase. While consumption patterns vary, transport, waste and buildings are areas with high CO<sub>2</sub> savings potential, where cities have crucial executive, regulatory and administrative powers. Action in these areas could result in GHG savings corresponding to 15–20% of the emission reductions of cities necessary for a 2°C pathway.<sup>2</sup> Today's planning and investment choices will therefore determine whether this potential can be realised.<sup>3</sup> This is especially the case for small and medium sized cities<sup>4</sup>, as they host almost 40% of the world's city-based population, and have been identified as crucial for the economic development of countries.<sup>5</sup>

## Investments in cities offer ample economic opportunity

Countries worldwide need to invest USD 6.2 trillion per year in low-carbon infrastructure to realise a 2°C pathway.<sup>6</sup> The current USD 5 trillion annually spent falls short of that need. Moreover, only 7–13% of it is geared towards adapting to or mitigating climate change.<sup>7</sup> The percentage being invested in urban green infrastructure is even less. For example, in the Asia-Pacific region, the urban environmental infrastructure investment need is estimated at USD 100 billion a year; actual investments, however, total only USD 40 billion.<sup>8</sup> Higher investments would unlock economic growth and sustainable development by building local green industries.<sup>9</sup> The benefits from green growth are manifold, including economic diversification, resilience and higher quality of life.



"Cities have the potential to cut cumulatively 147 Gt CO<sub>2</sub>e of emissions by 2050 – nearly three times the world's current annual emissions."

Source: C40, "Advancing ambition: cities as partners in global climate action"

<sup>1</sup> University of Cambridge, ICLEI (2014): Climate Change: Implications for Cities – Key Findings from the Intergovernmental Panel on Climate Change Fifth Assessment Report (Cities Summary)

<sup>2</sup> ibid

<sup>3</sup> See f. ex. WWF (2104): "Reinventing the City"

<sup>4</sup> Secondary cities have between 500,000 to 3 million inhabitants, but are often unknown outside of their national or regional context, and are in this document referred to as "small and medium sized cities". World Bank Conference on Land and Poverty (2014): "Integrating Land Governance into the Post 2015 Agenda"

<sup>5</sup> Roberts B. and Hohmann R. (2014), Secondary Cities: Managing Urban Land Governance Systems. Paper presented at the World Bank and Land Poverty 2014: Uses of Spatial Data in Urban Management

# ⚡ The Barriers

A majority of cities, especially in the developing world, face severe barriers to realising the investments necessary to grow in a climate compatible way: low or no creditworthiness, insufficient project pipelines, limited access to international public finance and insufficiency of carbon pricing mechanisms.

“Resources available to even the richest cities are scarce, and access to globally mobile capital is likely to become increasingly competitive. With rising costs across all sectors, strategies to optimise investments to achieve the greatest returns for lowest cost will be critical.”

PWC, Investor Ready Cities

## Low or no creditworthiness

One potential low-cost source of funding for local governments is sub-sovereign lending. However, local governments often lack the required creditworthiness – in fact, only 4% of the largest 500 cities in the developing world are creditworthy in international markets according to the World Bank. In particular, prerequisites such as adequate legal frameworks, sound revenue and financial management systems, and planning and implementation capacities are currently lacking.

## Insufficient project pipeline

While cities often have spatial plans and macro-development strategies, they frequently lack adequately structured infrastructure projects to ensure their effective implementation. Project development barriers include insufficient project planning and pre-feasibility assessment



capacities and a lack of knowledge of potential financing mechanisms.<sup>10</sup> This is especially true for small and medium cities. Moreover, the budgeting cycles of city authorities often conflict with the more long-term development periods required for low-carbon infrastructure.

## Limited access to international climate finance

Public infrastructure funding increasingly needs to be complemented with new sources of capital. China’s government, for example, came to the conclusion that only 10–15% of its green investments can be covered through public funds<sup>11</sup>. International climate finance can help unlock funding from the private sector and thus play a pivotal role. However, cities still have very limited access to international public climate finance<sup>12</sup>.

## Insufficiency of carbon pricing mechanisms

Market mechanisms for carbon credits, such as the Clean Development Mechanism, have not resulted in a large number of urban projects. One barrier is the diversity and small scale of many city-level opportunities (particularly in the building sector). Another important reason is that many activities have an inherent public service component and might not provide adequate financial returns.

Examples include public transport projects or waste management systems with limitations to end-user charges. The development benefits of these projects, while numerous and often quantifiable, cannot be captured via carbon pricing.

<sup>6</sup> The Global Commission on the Economy and Climate (2014): “Better Growth, Better Climate: The New Climate Economy Report”

<sup>7</sup> Canfin and Grandjean (2015): “Mobilizing climate finance: a roadmap to finance a low-carbon economy”.

<sup>8</sup> Cities Development Initiative for Asia: “Financing Schemes for Strategic Infrastructure Investments”.

<sup>9</sup> See f. ex. WWF (2014): “Reinventing the City” or OECD (2012): “Green Growth and Developing Countries”

<sup>10</sup> See inter alia WWF (2015): “Financing the Transition: Sustainable Infrastructure in Cities”

<sup>11</sup> The People’s Bank of China, UNEP Inquiry into the Design of a Sustainable Financial System (2015): “Establishing China’s green financial system.” Final Report of the Green Finance Task Force.

<sup>12</sup> e.g. only 10% of 2010–2014 commitments of multilateral climate funds have been focused on cities, see Overseas Development Institute (2015): “Climate Finance for Cities”

Solutions to the challenges faced by cities in realising low-carbon investments are being developed. Promising pathways include the development of a green bonds market, support mechanisms for deal flow creation, international climate fund windows dedicated to cities and results-based financing approaches.

## City creditworthiness and (green) bonds

Green bonds are an increasingly used financing instrument by cities. However, cities in emerging countries are often not able to take advantage of them due to low creditworthiness and a lack of capacity. There is, therefore, large untapped potential, as bonds would help local governments to attract low-cost and long-term capital. The green label serves as a tool for investors to discover sustainable bonds and thus facilitates the investment process.

The World Bank's City Creditworthiness Initiative aims to improve the credit standing of cities, and a coalition led by the Low Carbon City Lab is exploring ways to promote green bonds in emerging economies. Creditworthiness and access to low-cost capital can also be approved through guarantees from the (inter-) national level or subnational pooled financing mechanisms.<sup>13</sup>

## Deal flow creation and match-making

There is great potential for international actors to help local governments develop a pipeline of financially viable projects. Such efforts need to empower cities to demonstrate the bankability and sustainability of their projects and at the same time

support investors in making informed financing decisions. One such effort is the development of a matchmaking platform under the Low-Carbon City Lab based on the Transformative Actions Program (TAP), an ICLEI-led initiative on urban climate actions with wide stakeholder support (e.g. WWF), and the Climate Financier project from CDP that specifically focusses on the information needed by private investors.

## Funding windows for cities

Only 10% of climate finance in the period from 2010 to 2014 flowed into explicitly urban projects.<sup>14</sup> Given that cities emit 70% of global GHG, this appears to be vastly disproportionate.

The Cities Climate Finance Leadership Alliance (CCFLA) explores ways to enhance city-level climate finance and international climate funds are increasingly taking note. For example, the Global Environment Facility (GEF) recently launched its Sustainable Cities Program and one of the Green Climate Fund's (GCF) first eight projects to be funded is an urban water project. However, a funding window dedicated to local governments is still lacking, as well as engagement plans with local governments by national contact points.



## Results-based finance

Results-based finance is a mechanism to disperse funds based on the verifiable achievement of predefined targets (e.g. jobs, air quality). This mechanism allows cities to generate revenues for their projects based on development benefits beyond CO<sub>2</sub> emission reductions, while funders see the clear impact of their money. To date, results-based finance has not been adapted to the context of urban low-carbon development. Efforts to develop appropriate frameworks, for instance by the Gold Standard Foundation, are ongoing.

## Find out more on [LoCaL.Climate-KIC.org](https://www.localclimate-kic.org)

<sup>13</sup> For more information see inter alia Global Fund for Cities Development (FMDV, 2015): "The Potential Catalytic Role of Subnational Pooled Financing Mechanisms"

<sup>14</sup> Overseas Development Institute (2015): "Climate Finance for Cities"

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