

Climate-neutral Cities: learning from inspiring implementation examples

A review of the Connective Cities/COVID-19 program's Climate-neutral Urban Development led by Mesopartner

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Photo: Connective Cities

How do we promote climate-neutral urban development?

The world must dramatically reduce its CO₂ emissions by 2050 to avert the worst impacts of climate change. Globally, we are seeing an influx into cities in both developing and developed countries over the past 30 years. Cities are one of the main spaces where CO₂ emissions are directly caused. This happens through construction projects, traffic flows, the increased energy consumption of the population, the production of waste and other factors. "*However, the urban space is also the solution space for the climate change,*" said one of the participants of the COVID cluster program. And this is also confirmed by international studies (e.g., the study by the German Advisory Council on Environment, "The Transformative Power of Cities").

Urban solution approaches include the use of new mobility formats such as traffic-calmed urban spaces, the use of e-mobility and bike lane solutions, the reduction of pollution in resource-intensive economic sectors, the construction of sustainable buildings and building renovations with circular production and product approaches, the development of urban spaces to promote local economic cycles and community activities, decentralized energy supply and waste concepts as well as other solution approaches.

Aim of the COVID program "Climate-Neutral Urban Development"

The COVID program "Climate-neutral Urban Development" was led by the consulting company Mesopartner in cooperation with staff from the German Think Tank Wuppertal Institute. The program included a cluster of three working groups, each with 3 to 4 cities and their representatives, mostly partners from local city governments or local research institutions. The objective was to promote the implementation of concrete projects that promote climate-neutral city efforts

The three working groups had the following focus areas:

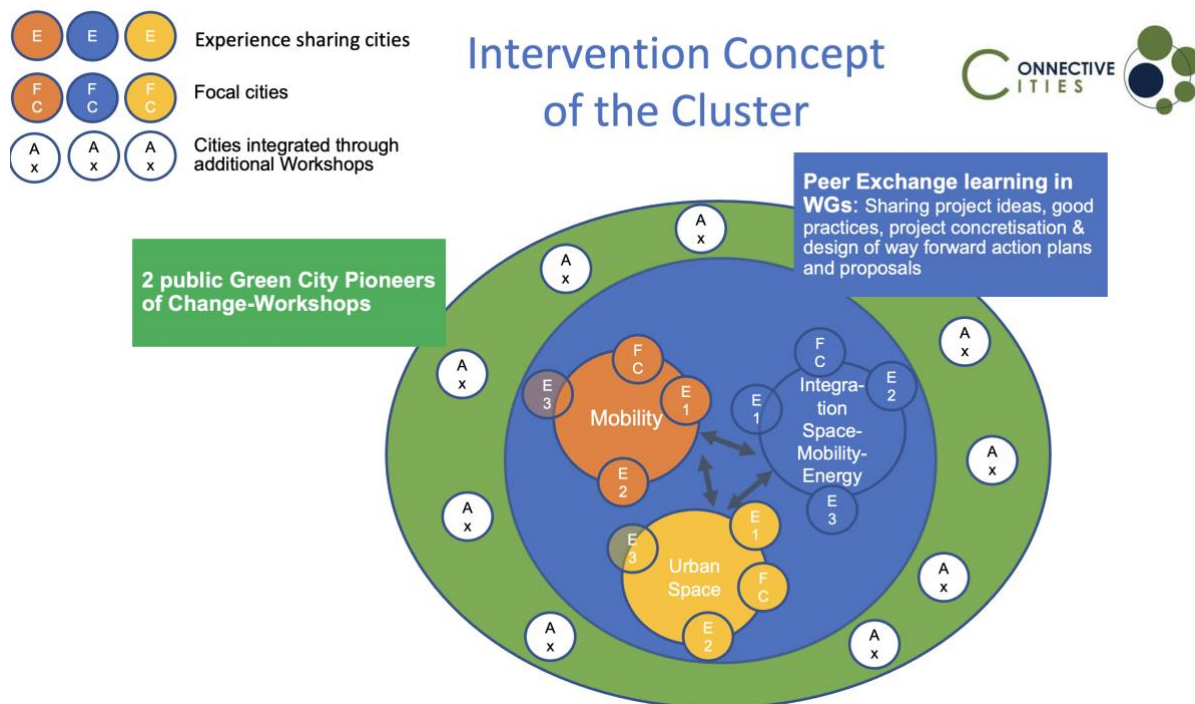
- Working Group 1: Mobility solutions in cities.
- Working group 2: The transformation of urban spaces and reuse of "urban space" through new community formats and mobility solutions
- Working Group 3: a mixed group linking urban energy, mobility and space approaches.

Already during the formation of the working groups, it became clear that solution approaches often overlap or that different solution approaches create synergies. This also enabled an exchange of experiences between the working groups of the cluster. The participating cities in the program were Bhuj/Ahmedabad, Belo Horizonte, Kochi, Lalitpur, Dortmund, Buenos Aires, Quito, Montevideo, Hamburg, Kigali, Kisumu and Bremen.

The "focus cities" approach

The cluster's management consortium was able to build on existing city linkages. Due to the short duration of the COVID program, it was aimed to select specific cities as "focus cities" that showed particular interest and effort to implement climate-neutral initiatives. A network was built around the focus cities, integrating both cities that have special experience on the respective working group topics or cities that have an interest in learning from others on these topics. The focus cities of the three working groups were Lalitpur, Belo Horizonte, Buenos Aires, Kigali and Bhuj/Ahmedabad.

Figure 1: Approach of the COVID program "Climate-neutral City Development"



Source: Mesopartner

First, second and third process steps of the cluster: From ideas to concrete project proposals

In the first step, project ideas were developed in the respective working group. It became clear that many project ideas were also of interest to other cities. Some of the project ideas that emerged are briefly mentioned below:

- the creation of a bicycle traffic concept using the example of the bicycle paths in Lalitpur

- the creation of a child-friendly environmental zone in the neighbourhood and the design of speed-reduced recreation areas
- Greening rooftops to create a sustainable and green urban environment and combining it with renewable energy solutions and urban gardening activities
- Municipal bio-waste management at the neighbourhood level in collaboration with local citizens
- Promotion of traffic-calming zones in Kigali
- Increasing green, retention and infiltration areas in cities.
- Application of sensor technologies to analyse neighbourhoods and places with high Co2 emissions.
- Planning pop-up bike lanes and building safe bike lanes.
- Last-mile connectivity solutions and e-based logistics solutions in the centre of cities.

In bilateral meetings with the focus cities and other interested and experienced cities, the topics of interest were explored, and the management team also looked at which city experiences would be useful to network with each other. The management team in the program took on an important role in the phase to subsequently link cities with similar interests in a way that was as demand-oriented as possible.

In the second step of the project, larger network meetings were organized in each working group. Here, the cities in the respective working group exchanged their experiences and presented inspiring implementation approaches. A variety of solution approaches and experience reports were exchanged here, including the creation of a pollution mapping and the e-mobility concept of Kigali, first last mile connectivity approaches in Buenos Aires, the development of the e-mobility hub in Quito, pop-up lanes in Berlin, environmental zones and bike lanes approaches in Belo Horizonte, the development of first bike lanes and app sharing concepts in Lalitpur, etc.

Based on this concrete exchange across the working groups, further bilateral experience exchange meetings were initiated to further develop initial ideas of prototypes. The prototypes included.

- Delivery/unloading areas and electronic transport via hubs in the old city of Buenos Aires
- Child-friendly and traffic-calming spaces in Bhuj
- Scaling up bicycle infrastructure projects and app-sharing solutions in Lalitpur.

Based on these prototypes, concrete project proposals were developed for the focus cities with the objective to start fundraising for the implementation of the initiatives. In the Urban Space working group, Bhuj will implement the project "Safe access to schools for children through child-friendly and traffic-calmed zones." The mobility-urban space-energy working group developed a project for Belo Horizonte, the establishment of an urban ecology laboratory. The exchanges in the Mobility Working Group eventually led to the project "Applied Technology for Loading and Unloading Public Zones in Buenos Aires".

Implementation of Green City Pioneer of Change Events

In addition to the internal network exchange in the working groups, the goal of the COVID program was to involve other stakeholders from other cities around the world in the reflection process for new climate-neutral city solutions. For this purpose, two large "Green City Pioneer of Change" workshops were organized, wherein each of them more than 50 international participants were presented. The events had the objective to share good practices as well as to reflect jointly on key success factors and challenges.

Key learning experiences from the cluster program.

From Mesopartner's perspective, the short-term COVID program was successful because

- it was able to build on already established international network contacts with a wide range of cities
- it adopted the focus cities approach, selecting dynamic individual cities and initiating a networking and exchange process around their needs
- instead of a large number of initial workshops, project ideas were collected through bilateral queries
- the exchange process in larger network meetings focused on good practices, based on which further targeted exchange processes were initiated.
- with the two "Pioneer of Change" workshops, the program also reached many actors who are just beginning to be sensitized to the topic or who would like to take further steps in this direction.

Detailed information

A variety of input speeches, video presentations, PowerPoint presentations, workshop results and good practices can be found on the Connective Cities website from various documented events:

Connective Cities Lab - Expert input

with Climate City Expert Prof. Oliver Lah (Wuppertal Institute), 11. November 202:

<https://community.connective-cities.net/en/node/968>

Participation of the three working groups in Design Thinking Workshops (15-17.November 2021):

<https://community.connective-cities.net/en/node/959>

<https://community.connective-cities.net/en/node/960>

<https://community.connective-cities.net/en/node/961>

Working group meeting with exchange of good practices in the working group „Mobility“

<https://community.connective-cities.net/en/node/1102>

Working group meeting with exchange of good practices in the working group Urban Space, Mobility, Energy (03.12.21)

<https://community.connective-cities.net/en/node/1095>

First large Green City Pioneers of Change Event (19.01.2022)

<https://community.connective-cities.net/en/node/1111>

Second Green City Pioneers of Change Event (25.02.22)

<https://community.connective-cities.net/en/node/1130>