CITYVOICES

CityNet magazine, CityVoices, is published annually and is a collection of experiences and reflections on CityNet's partners and member cities projects, policies and programmes. Each issue focuses on a particular theme related to CityNet's mission to connect urban actors and deliver tangible solutions for cities across the Asia Pacific region. CityVoices is also available online in PDF format on the CityNet website.

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CITYNET

CityNet is the largest association of urban stakeholders committed to sustainable development in the Asia Pacific region. Established in 1987 with the support of UNESCAP, UNDP and UN-Habitat, the Network of cities has grown to include more than 150 municipalities, NGOs, private companies and research centers. CityNet connects actors, exchanges knowledge and builds commitment to more sustainable and resilient cities.

CITYNET

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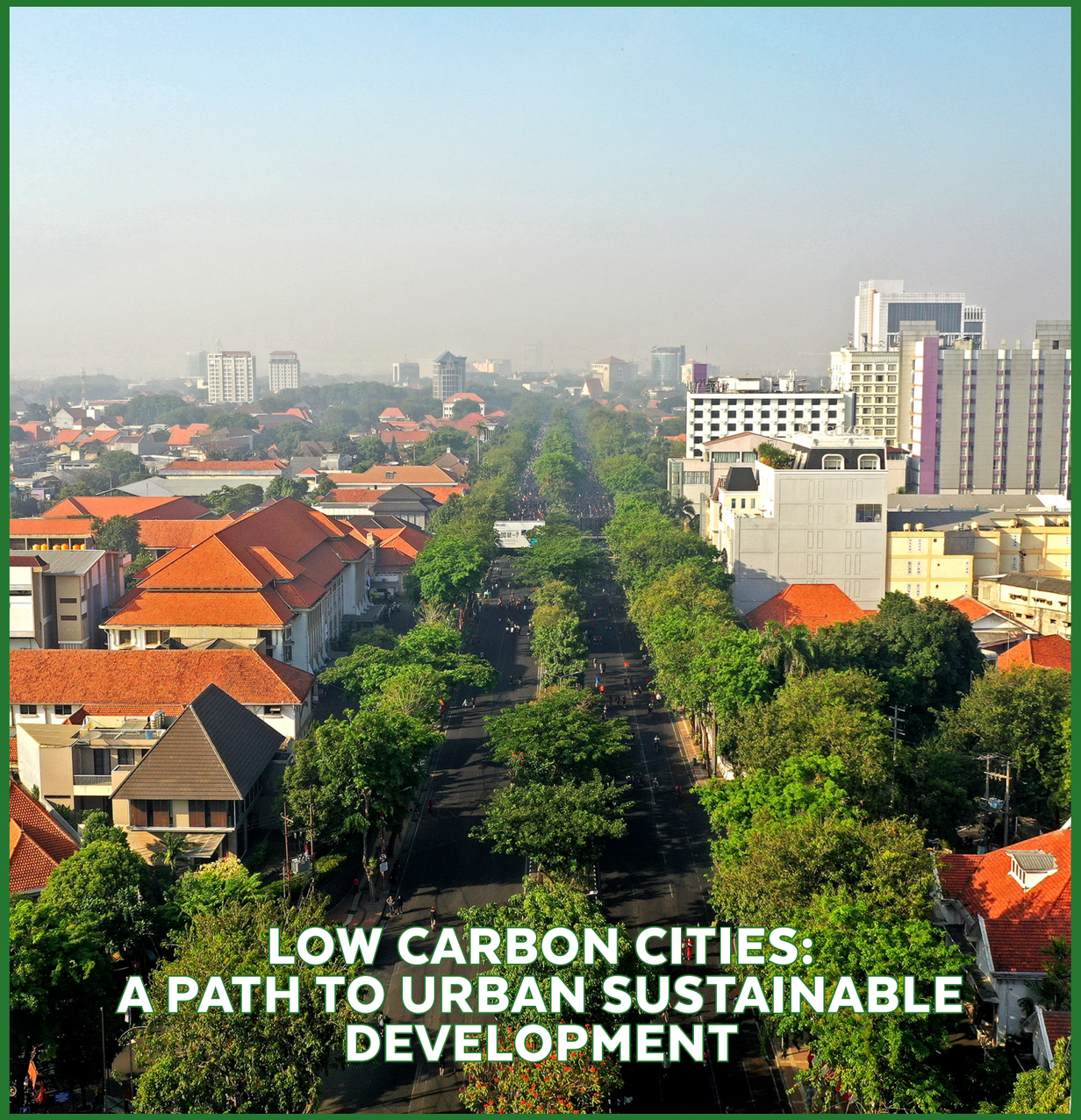
CityVoices

Members' Stories
Seoul
Ho Chi Minh City
Ulaanbaatar
p.6

Special Report
Asian Development Bank
North-East Asia Low Carbon City
Platform
p.22

Highlights
p. 31



LOW CARBON CITIES: A PATH TO URBAN SUSTAINABLE DEVELOPMENT

VOL. 10

CITYNET
TOGETHER WE CAN DO MORE

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CityVoices

Contents

Editorial	4	Editorial from the Secretary General	Vijay Jagannathan
Members' Stories	6	New Renewable Energy Policy & Energy Zero Buildings in Seoul	
	12	Ho Chi Minh City Bus Investment Program	
	16	Climate Campaign: Youth Projects for Sustainable Development in Ulaanbaatar	
Special Report	22	North-East Asia Low Carbon City Platform (NEA-LCCP)	
	26	50 Climate Solutions from the Cities in the People's Republic of China	
Highlights	31	Smart City Summit & Expo (SCSE)	
	32	33rd KLRTC Workshop on Emission Reduction and Low Carbon Society	
	33	Transportation Strategy Workshop for Asian Cities	
	34	34th KLRTC Workshop on Localising the Sustainable Development Goals	
	35	Sustainable Development Jeju International Conference	
	36	2nd International Forum on Low Carbon Development Cities	
	37	International Urban Resilience Forum	
	38	Integrated Sustainable Solutions for Smart City Capacity Building Workshop	
	39	7th Asia-Pacific Urban Forum	

Editorial From
The Secretary General

After the historic Paris Climate Accord in 2015, all countries of the world have committed to achieving their respective Nationally Determined Contributions or NDCs. Many of the national leaders are now appreciating the importance of co-opting their NDCs by climate actions at the local level that achieve co-benefits for communities and the global climate agenda. The importance of localizing climate change through city governments and communities setting the agenda, backed up by appropriate policies and investments is now well recognized, and CityNet members are active leaders of this process.

Even as late as 2017, eighty percent of energy was derived from fossil fuels world over. Cities are drivers of energy consumption not only directly in the form of coal or petroleum-based electricity generation but also of refined petroleum products that fuel cars, two wheelers, buses and trucks. Although renewable energy is becoming important, the reality is that it is barely five percent of total energy of households, industries and transportation. Paradoxically, the good news in our cities where communities are getting richer - and buying more two wheelers, cars, electrical appliances, building new homes – actually end up with some bad news because these actions add to total energy consumption. Actions need to be taken to reverse the path dependency on coal and petroleum products in our cities and communities if the trends in GHG emissions are to be reversed, notably by 'bending' the GHG emissions trend lines by 2030, barely 10 years away

The solution at the city level, no matter whether it is through climate action or by achieving the broader Sustainable Development Goals (SDGs), is to actively engage citizens, civil society organizations and local governments in implementing 'win-win' solutions through which economic benefits accrue to local citizens, while also reducing long term climate risks by lowering the overall carbon footprint.

An obvious 'win-win' example is reforming urban mobility problems cities face. Our cities are clogged with cars and two wheelers, delaying commute time while adding to the air pollution caused by the exhaust fumes from vehicles. Another example is reducing the dependence of citizens on coal and kerosene for cooking and heating, which also add significantly to air pollution, while also affecting the health and well-being of the urban poor, particularly women and children. In each of these examples, actions that reduce local air pollution result in significant co-benefits to the global climate because remedial actions reduce the carbon footprint of the city.

The good news is that there has been a dramatic lowering of costs in wind, solar power and energy storage devices. The enhanced ability of digitized infrastructure to monitor, report and verify reductions in the carbon footprint in an objective manner is further creating new opportunities through distributed generation of renewable energy, private sector engagement in waste to energy projects, and even improve prospects for market-based green finance.

This issue of CityVoices focuses on experiences from some of our members pursuing co-benefits that improve citizen welfare while also reducing the city's carbon footprints. These examples illustrate the importance of good governance oversight, careful planning, while fully engaging the citizens. Cities like Seoul have already transitioned to low carbon urbanization that ensure better quality of life for its citizens. However, there is hope that total decarbonization is feasible between 2030 and 2050 in all our cities.

New Renewable Energy Policy & Energy Zero Buildings in Seoul

¶ Facing energy supply problems, and with electricity self-reliance rate standing at a mere 4.2% in 2013, the Seoul Metropolitan Government (SMG) took a major shift in policy to better cope with the energy crisis and climate change issues. As part of this effort, the city completed the construction of an Energy Zero housing complex, a showcase of what all buildings might look like in a near future.

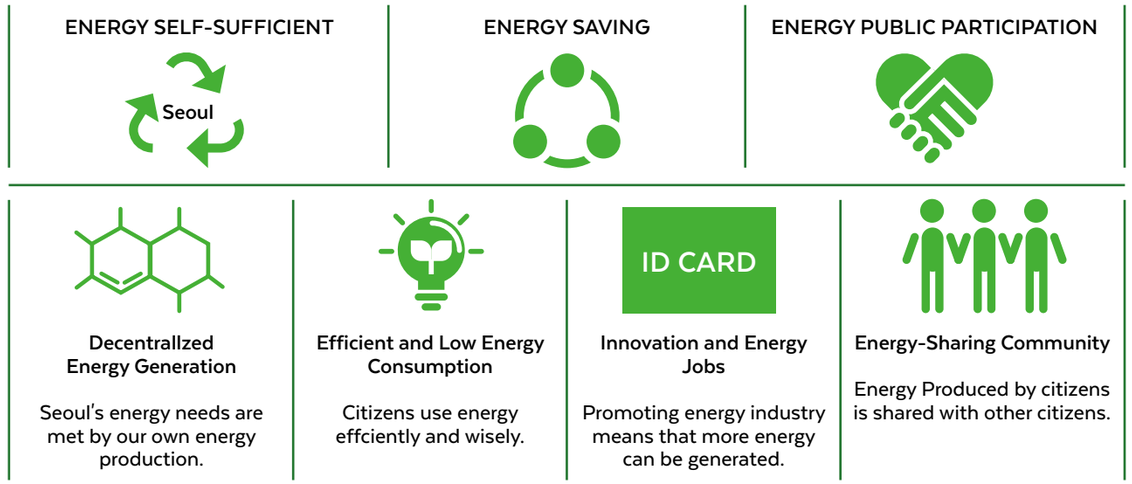
Source: Kim Jihyun / Shutterstock

In an attempt to curb the city's ever-increasing energy consumption, and to boost its own capacity of energy production, the Seoul Metropolitan Government (SMG) launched in April 2012 a regional energy policy, called the Comprehensive Plan for One Less Nuclear Power Plant. The plan was rooted in the specificity and the characteristics of the city and its localities and adapted to energy supply and demand. Early success and reflective of the city's ambitions, a second phase quickly followed in 2014 and represents Seoul's current Sustainable Energy Action Plan.

Through this plan, SMG has set itself the goal to significantly expand its energy self-reliance from 4.2% in 2013 to 20% by 2020. To achieve this, a two-way approach is being used, with 46% of this increase in energy self-reliance coming from the development of new renewable energy and thermal convergence, while 54% will come from improved energy efficiency and reduced energy consumption. This focus on self-reliance is fundamentally changing the city's relationship with energy, transforming it into an energy generating city, rather than a consuming one.

At the core of this plan is the idea that achieving these goals is not solely a matter of policy or government's initiatives, but that producing, saving and increasing efficiency will be achieve with concerted efforts stemming from Citizen participation. This is especially visible when considering the plan three core values and four energy goals.

SEOUL ENERGY SELF-SUFFICIENT CITY WHERE CITIZENS PRODUCE ENERGY AND CONSUME THEM EFFICIENTLY



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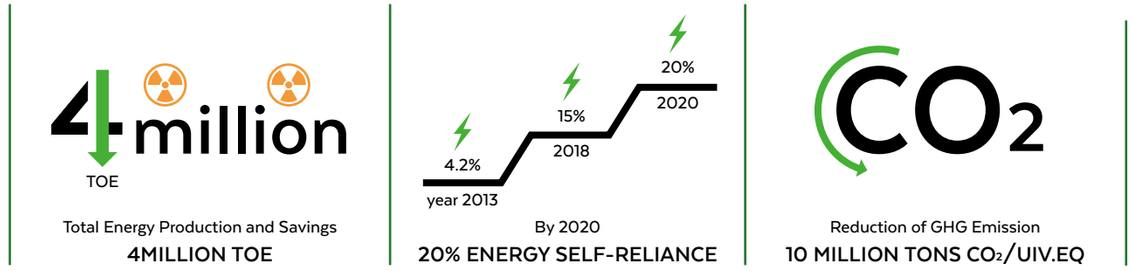
ONE LESS NUCLEAR POWER PLANT PHASE 2 –
SEOUL SUSTAINABLE ENERGY ACTION PLAN MAIN GOALS



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According to SMG's plan, reaching self-sufficiency will be attained by decentralizing energy production, and therefore the city is converting its citizens from energy consumers into energy producers. Some of the key initiatives envisioned by the city includes the installation of mini PV panels for apartment balconies, the construction of solar power plants with citizens' funds, and the implementation of a decentralized energy generation plan through new and renewable energy sources. A requirement that new building needs to generate energy up to 20% of their consumption through renewable sources and decentralized energy generation system will also help the decentralization process, aligning with the city's vision of having everyone involve in generating clean and safe energy.

Specifically targeting buildings is key to Seoul's plan towards energy efficiency and low consumption becoming norms in the city, as buildings account for 56% of the city's total energy consumption. To this end, the city government offers consulting on individual building energy performance and loans (at 1.75% interest) for the cost of insulating or enhancing building energy efficiency. This customized energy diagnosis program for buildings is only one measure amongst many provided by SMG including environmental impact assessment, disclosure of the energy information of buildings, LED substitution, and the Eco-Mileage Program, an energy saving program to engage citizens.

KEY HIGHLIGHTS

Goal
Build a housing complex optimized to be a 'net zero primary energy' consumer.

Construction Cost
32.2 billion won (around US$ 27 million)

Construction Cost per m^2
US$ 1,511

Annual electricity production
409 000 kW or 3.4kW/unit

Annual heat production
229,278 kW

Energy Cost Savings
61% cheaper than comparable buildings

Total Housing Area
17,652 m^2

Total Households
121

Household unit individual floor space
39 – 59 m^2

Annual Zero Primary Energy Consumption Area
Heating (20°C)
Cooling (26°C)
Hot water
Lighting
Ventilation

NOWON ENERGY ZERO HOUSES DEVELOPMENT PROJECT

A key project embodying Seoul energy goals is the recent Nowon Energy Zero houses development. It is the final result of the energy self-sufficient housing R&D project carried out by the Korean Ministry of Land, Infrastructure and Transport since 2013. As Korea's first zero-energy apartment complex, it was design and built making usage of a wide array of energy saving and insulation technologies, leading to energy costs saving of up to 61 percent when compared to comparable regular apartments. These savings could rapidly rise as the land ministry aims to be able to construct zero-energy apartment units capable of reaching saving up to 100 percent of the energy used when compared to today's comparable houses.

The housing complex attain this result through a smart usage of renewable energy technologies, including solar energy panels and geothermal heat pumps, giving each apartment units the capacities to produce and significantly reduce energy for cooling, heating, hot water, lighting and ventilation, without the use of fossil fuel.

To provide for these five primary energy demands stably, in both Korea's hot summer and cold winter, the building are designed in a way that ensure that no internal heat or cold air unwillingly flow in and out of the building through what is called passive design technologies including external insulation, triplex-glass window, thermal break, enhanced air-tightness of the building, external blind, and central heat recovery system. Tilt-and-turn windows and doors prevent both energy and heat losses. The air quality inside is maintained to the level of a nearby woods; centralized and integrated pipes, heat exchangers, a high-efficiency heat recovery ventilation system, and other technologies make this possible. Automated outside blinds go up when the wind blows speeds higher than their threshold to prevent against damage.

Photovoltaic cells were designed to supply electricity for the operation of a geothermal heat pump, which provide, through a system of heat exchanges, heating (at 20°C), hot water, cooling (at 26°C), and ventilation. The capacity of photovoltaic cells installed at each of the 121 unit is of 3.4 kW for a total of 409kW for the whole complex. With these passive technologies, energy efficiency of the building is maximized, with energy shortages being compensated by renewable energy produced within the housing.

To avoid any power shortage, an energy grid connected with the city's regular energy system was installed and can supply the complex if needed, with the Nowon House returning energy back when producing surplus. Surplus electricity is transmitted to utilities through a micro-grid system. By "borrowing" and "returning" energy to the regular energy system, the complex aims to be a "net-zero primary energy" housing with entry and exit of energy consumption and production cancelling each other out. When the energy independently produced within the housing complex suffers shortage, energy from outside supply loop is borrowed, which is returned when the complex has excess energy.

SMG expects the housing units to improve their energy production over time, exceeding its zero-energy goal, with modelling data and results showing that the energy production will eventually produce surplus annually. This fully align with SMG goals of creating a decentralized energy production, where we may eventually see residential buildings become 'power plants' in the city. The residential complex generates more than 407,503 kWh/year of electricity and 229,278 kWh/year of heat.

NOWON EZ HOUSE PROJECT OVERVIEW

Goal	Build a housing complex optimized to be a 'net zero primary energy' consumer. Serve as a demonstration complex, built with current existing technologies to facilitate the expansion and distribution of zero energy housing
Background	Demonstration of multi-unit housing where primary energy consumption and production are equal (net zero) in terms of five main residential energy consumptions (heating, cooling, hot water, ventilation, and lighting) In order to develop design and construction technologies for zero energy housing complexes, the Seoul Metropolitan Government joined forces with the central government and the autonomous districts to commission an R&D project to create a zero-energy housing demonstration complex in Nowon-gu District by 2017
Cost	Construction cost: 32.2 billion won (10.9 billion won for R&D; 21.3 billion won subsidy from the National, city (SMG), and district (Nowon-Gu) level)

BUDGET AND COST BREAKDOWN

The total construction cost of NOWON EZ House is 32.2 billion won (about US$ 27 million), spending 5,990,000 won (about US$ 5,000) per pyong (3.3 m^2), or about US$ 1,511 per m^2, for a gross floor area of 17,652 m^2. The cost includes the construction of all auxiliary facilities such as community facilities, commercial building, and underground parking floors.

For the application of active design (photovoltaic and geothermal facilities, etc.) and passive design (insulation, air-tightness, etc.) needed to achieve zero energy housing, an additional cost of around 48 million won (about US$ 40 000) is incurred per household (16 million won for passive design and 32 million won for active design on average). In other words, zero energy housing requires 30% greater construction costs compared to ordinary buildings.

MOVING FORWARD

The challenge is to reduce installation costs of renewable energy facilities responsible for heat supply. In addition, further research is needed on values created by fossil fuel use reduction and carbon dioxide emissions reduction for a comprehensive analysis of zero energy housing economics. NOWON EZ House will allow for the collection of big data on zero energy housing for the first time in Korea through the monitoring of energy consumption and production of the House. This will contribute to the standardization of data collection and measurement of zero energy housing, which will advance the distribution of zero energy housing through economic benefits.

The Ministry of Land, Infrastructure and Transport (MoLIT) has mandated green building for all new public buildings by 2020, all the other types of new buildings by 2025, and all existing buildings by 2030. All data and results from EZ HOUSE will be shared with the public, and the MoLIT will strengthen and refine energy efficiency standards for residential buildings based on the outcomes.

The ministry will also prepare zero energy residential building design guidelines based on the findings and share them with the private sector to support the industry and stimulate the market. Until 2020, it will be a process of experimenting, finding, and optimizing the best possible models. Once the market takes over after this initial stage, the ministry expects the cost of green construction to lower to the level of 10 percent higher than traditional construction costs. Currently, it is 20 to 30 percent higher in South Korea.

MoLIT plans to verify the feasibility of the zero-energy housing supply target in 2025 through the Zero Energy Demonstration Complex.

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Ho Chi Minh City Bus Investment Program

¶ Ho Chi Minh City's (HCMC) government launched a Bus Investment Program that supported bus operators with a partial interest in new bus investment. It aimed to invest in 1,680 new vehicle buses for the period 2014-2017 in order to replace the old vehicles and to drastically increase the bus fleets.

View of a new bus at a bus station near Ben Thanh Market
Source: StreetVJ / Shutterstock

Ho Chi Minh is a city spanning roughly 2,095 km² and with a population reaching a total of 8.5 million people. By the end of 2013, to deserve this sizeable population, there were a total of 145 bus routes including 110 subsidised and 35 nonsubsidised ones, all of these combined with a respectable 2871 vehicles bus fleet.

Despite the existing bus routes, the number of bus passengers amounted to only 411 million, which accounted for 6.5% of travel demand of HCMC for the year 2013. More importantly, many of the city buses had been in operations for a period of over eight years. This situation had led to buses that experienced significant technical deterioration, and in many cases, failed to meet emission standards and regulations, thus exacerbating the carbon emissions problem of the city. Moreover, a certain number of the 12-seat buses (as much as 461 of the vehicles) did not meet the existing regulations regarding transportation businesses. Finally, the absence of a standardization policy led to a lack of model and colour unity among the bus fleet in operation.

To address these issues, HCMC launched the Bus Investment Program initiative, initially covering the 2014-2017 period. The program has had a positive impact on a variety of transportation and GHG emissions issues and has effectively addressed several SDGs and their associated targets.

First, the program has expedited the development of sustainable community and cities by facilitating the access and process for enterprises to invest in environmentally friendly buses (Goal 11; Sustainable Cities and Communities). The resulting increasing investment in buses helped improve the quality of HCMC's bus fleet, which in turns helped enhance and provide high-quality bus services. The improved services then contribute to an ever-increasing use of public transport. In addition, by adding new buses, the policy helped limit the usage of private vehicles, mitigate traffic congestion and traffic accidents, and reduce fuel consumption and carbon emissions, contributing to a low carbon society.

Second, the program aimed to foster cooperation between the government and transport operators under the affirmed goal and process of socializing bus services (Goal 17; Partnership for Sustainable Development). By taking a partial interest in the investment in environmentally friendly buses, Ho Chi Minh City's government shares difficulties and risks with the transport operators in providing bus

services. By doing so, it contributes to the national goal of socializing bus investments as highlighted in the Public Transport Bus Development Project for the period 2012-2020.

The program sought to achieve two main objectives:

1. The replacement of 12-seat buses with higher quality buses, which both meet emission standards, and use eco-friendly fuel.
2. The replacement of old buses with new vehicles meeting the current status of road infrastructure and travel demand along bus routes.

DEVELOPMENT AND IMPLEMENTATION OF THE PROGRAM

The Bus Investment Program was carried out in the following steps:

Program Preparation

After working with the relevant city government agencies (Department of Finance and the Department of Planning and Investment), the Department of Transport developed a draft version of the bus investment program. Importantly, transport operators, the actual beneficiary of this program, also contributed with their ideas during the proposal development. Their inputs was solicited until the investment support mechanism was mostly agreed upon. Finally, the Ho Chi Minh City People's Committee approved the proposal of the Bus Investment Program by the end of 2013.

Review of Investment Needs

The Department of Transportation reviewed bus routes that could be included in the list of investment for new buses and identified the requirements in quantity and quality to meet travel demand and traffic conditions on every bus route.

Investment Procedure

The Management Center for Public Transportation (MCPT) appraised investment projects submitted by the Department of Transport. After the People's Committee approved the list of investments, bus operators could sign contracts for bus fleet investment.

Budget Allocation

After the Department of Transport submission for bus investment demand, HCMC People's Committee allocated funds in its annual plan for partial funding and interest support for bus investment projects.

Monitoring

MCPT monitors the use of the new buses, which are required to be used for public transport bus service for a period of at least 7 years. Bus operators have written commitments to finish payment of loan and interest before using the new buses for other purposes. In addition to these commitments, the new buses were required to meet the Euro III emission standard for diesel buses or to run on compressed natural gas (CNG). Finally, the new buses part of the fleet not only all have the same appearance in term of size and colour but also have cruise control equipment and electronic signage (LED).

Outcomes and Impacts

By Jan 2018, the program achieved the following results: 1162 new buses including 810 diesel and 352 CNG buses were added under the investment program, covering a total of 53 bus subsidized routes. The number of new buses meets 69% of the original planning target (1680 buses).

The main outcomes of the Bus Investment Program are the following: First, the replacement of 12-seat bus with standard size one contributed to an improvement of the bus service. Second, bus ridership increased on bus routes in which new bus fleets were introduced. Third, bus operators only pay interest at a 5% per year rate for diesel vehicles and 3% per year rate for vehicles using CNG. Fourth, CNG buses has contributed to reducing HCMC environmental pollution and greenhouse gas emissions. Finally, bus appearance became standardize in size and colour, enhancing the image of public transportation in HCMC.

Despite these successes, the program also faced some difficulties and limitations. First, the lack of CNG supply station led to late investment in CNG buses. Second, long procedures affected bus investment progress as well as bus service operation. Finally, disability standards were only partially met due to capital cost constraints.

The Bus Investment Program will be continued in the future to face the continuous need to expand the bus fleet, replace obsolete buses and to cover the planned extension of bus routes. This program is necessary and an integral part to socializing public transport investment and share the cost of enhancing public transportation despite constraint of the city budget. Future iteration of the program should ensure that new buses meet more stringent environmental standards and accessibility requirements for people with disabilities.

BUDGET AND FUNDING BREAKDOWN

Ho Chi Minh City People's Committee arranged an annual budget for supporting the project under the Bus Investment Program for the period 2014-2017. City budget supported a partial interest for 70% of the capital costs over a 7 years period. Since 2017, all new buses under the program are required to be compressed natural gas (CNG) buses. When purchasing diesel buses or CNG buses, bus operators paid a fixed interest rate of 3% per year for CNG buses and 5% per year for diesel buses. HCMC's government supported the remaining interest rate.

THIS ARTICLE IS SOURCED FROM:
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Climate Campaign: Youth Projects for Sustainable Development in Ulaanbaatar

¶ To highlight and solve urban challenges in Ulaanbaatar, Climate Campaign, a non-governmental organization for sustainable growth and a CityNet Associate Member, has carried out a campaign to visualize urban environmental problems through graphic posters.

Fully armed 201.000 chimneys. As of 2017, 52.8% of all households living in Ulaanbaatar used conventional coal stoves.
Poster by Munkhdul Angarag

Known for its vast steppes and nomadic people, rapid growth has reshaped Mongolia's urban centre, a feature in full display in Ulaanbaatar, the capital city. Despite covering a mere 0.3% of all Mongolian territory, Ulaanbaatar is home to over 40% of all the roughly 3 million people Mongolian population.

Originally planned to host significantly fewer residents, this high concentration of people has put strains on the city and Ulaanbaatar now faces a variety of environmental issues, such as poor air conditions, scarcity of freshwater and resources, etc. Climate and pollution problems have also been exacerbated due to the city's geographical location. The city experience extreme winter for about 6 months a year, from October to April, with temperatures reaching at times negative 40°C. Prohibitive residential apartment cost pushes a large portion of the population to resort to living in informal settlement areas called Ger, incapable of affording to live in an apartment building. One of the most prominent issues caused by these areas is their reliance on coal for heat, contributing to 80% of the city's carbon emissions.

ME+WE START WITH OURSELVES

In order to highlight Ulaanbaatar's environmental urban challenges, a successful campaign was launched in 2018 to visualize urban environmental problems through graphic posters. Titled "Me+We Start with Ourselves" (Би+Д Өөрөөсөө эхэлье), the campaign was a collaboration with 15 nationally-acclaimed graphic designers from the largest two visual arts alliance in Mongolia who agreed to donate their "creativity" for the project, creating an exhibition containing over 50 posters "visually screaming" on the most pressing environment and urbanization related issues found in Mongolia. The project was also paired with a series of expert talks and consultation on the topic depicted by the posters.

The project took the tasks with utmost seriousness, giving training about environmental issues to the participating graphic designers for a period of two months. Specialists, in fields such as waste and air conditions, trained the designers using a data and evidenced-based approach. This approach was especially important to give the necessary background to the designers to come up with their own ideas. The resulting posters were then exhibited at the UN House in Ulaanbaatar, at three of the main universities in the city, at the Shangri-La Mall, and went on an exhibition tour in Mongolia's provincial areas. This campaign helped mobilize the youth for environmental and social issues and showcase to authorities the potential they had.

CLIMATE CAMPAIGN

The project Me+We was spearheaded by Climate Campaign, a consultancy and advocacy-based non-governmental organization in Ulaanbaatar, and an Associate Member of CityNet. The organization conduct and promote policy relevant analysis to help accelerate green growth in Mongolia. They also offer integrated carbon-reducing solutions for sustainable growth designed for policymakers and practitioners at the national, subnational and community level. Climate Campaign is committed to bringing positive change through awareness-raising campaigns and creative approaches.

Smog inside the brain
Air pollutants damage the children's brain nervous system.
Poster by Tamir Tsetsegmaa (Tomthink)

The impact of air pollution on growing fetus.
-Lung Cancer
-Cardiac Arrest
-Brain Degrowth
Pregnant women and children are most vulnerable to the adverse effects cause by air pollution.
Poster by Ido Nyamsuren

MISSION

Climate Campaign's mission is to promote sustainable development by providing integrated solutions for climate change.

With a priority for sustainability, Climate Campaign impact falls into three major categories:

- Lead Policy Change
- Facilitate High-Level Cooperation
- Empower Community Development

The Me+We project fell right into the organization's aim to raise awareness among young people about sustainability issues. Moreover, it furthered the organization capacity to connect the government, youth, academic, and professionals.

Following the early success of Me+We, a second phase was proposed to the Mongolian Ministry of Environment. This phase would focus on raising awareness about environmental issues among youth girls, and would involve educating young female champions for the movement. Following positive feedback from the ministry, the project will likely come about next year. One girl per province from each of Mongolia's 21 provinces will be identified and trained on how women can tackle climate changes and be a leader in this field. Every girl will be presenting one or multiple sustainability issues in their region and province, and then come to Ulaanbaatar to gather, share ideas and get mentoring and academic knowledge. They would then return to their provinces to advocate and raise awareness among their peers.

CREATIVE100

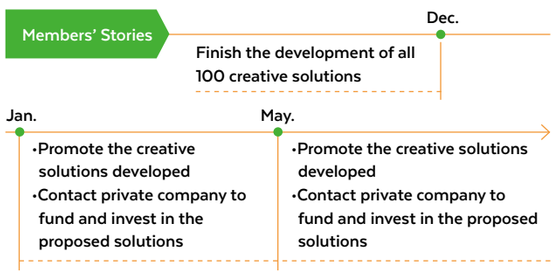
For Ms. Zolzaya Enkhtur, Founder and Managing Director of Climate Campaign, her organization could build upon Me+We's achievements, and tackle other problems faced by the city. According to Ms. Enkhtur, Ulaanbaatar's urban design is a major issue, with a majority of streets and parks poorly designed. Through her own experience studying Environmental Science at the graduate level and researching on urban design, she wants to raise awareness about the role of public spaces and streets in urban areas. As a result of her publications on the topic and the interests it generated among the city's residents, she was called by the municipal government and met with Ulaanbaatar City Deputy Mayor to discuss on the role of public spaces and ways to improve them.

This spurred the Creative100 project. The original goal to recruit 100 creative people to work on embellishing public streets was quickly surpassed. There are now about 140 people working in the field, such as architects, street artists, graphic designers, interior and exterior designers, furniture designers, teaming up to create solutions to street design issues. For Ms. Enkhtur, the participants' selflessness is a source of pride given that they are all acting voluntarily, without compensation, dedicating their free time to better their city.

The project follows a similar path to the Me+We project, namely that participants are undertaking trainings, creative workshops and meetings focused on how to make the city and the streets more inclusive, and to consider vulnerable groups at every stage of the design process. This is especially important given the current layout of the streets in Ulaanbaatar making it challenging for disabled or elderly to easily get from point A to B.

Recently, two workshops were organized for the project, one with around 260 private stakeholders, and one with Ulaanbaatar municipal government. The workshop's discussions with the municipal government discussion revolved around the current design and state of the streets. The government showed openness about these young designers coming up with creative ideas for the city's streets. For Ms. Enkhtur, this was an important step as it is not only an opportunity to create creative solutions but also a chance to advocate to make long-term changes to the current procedures, procurement and laws. The current process favours the lowest bidder on street projects, often leading to disappointing results. Changes could bring the procurement to include criteria on design and help promote creativity and functionality.

CREATIVE100 PROJECT TIMELINE



TARGET

30~40 Solutions implemented out of 100

Creative100 Workshop
Creative100 Workshop with young professionals to design better streets for Ulaanbaatar

According to Ms. Enkhtur, Ulaanbaatar's residential areas are heavily concentrated, therefore even a few changes to make streets more pedestrian-friendly can have a significant impact for the citizens. The improved design will make it convenient to reach any point in the city centre, especially when considering the rather small downtown area.

Through the Creative100 project, Climate Campaign also engages with the municipal government in various ways, trying to collaborate on more technical aspects. Ideally, the municipal government would provide their current planning and blueprints for the city's streets, thus allowing Creative100 participants' to focus on streets with the most pressing needs, or streets which have no upcoming re-design plans undertaken by the city government.

Ms. Enkhtur acknowledges that the city has its own challenges in terms of human and technical resources, and that the procurement procedure is also an obstacle. Nonetheless, she thinks that Creative100 can help address these challenges, providing the municipal government with what she called a "design menu for the streets."

The relationship with the municipal government has been promising so far. "We want to help the municipal government with their design needs. The government can actually decide on what project they want to have. We are not pushing for investment in all 100 projects, it is very much a voluntary approach" she added. This participatory approach providing tangible projects coming from young professionals, citizens of Ulaanbaatar who care and want to improve their city, these are aspects that can make the initiative all the more legitimate and attractive to the municipal government.

Moving forward, Climate Campaign will try to get the municipal government to take on a more leadership-oriented role, which could help to the overall success. Having the mayor himself to sit down with the young professionals participating in their projects is one of the avenue considered. Having people from the government assigned to Climate Campaign's projects could also help further the projects due to their knowledge of government procedures.

Finally, as part of their knowledge-sharing effort, Ms. Enkhtur is also looking for technical assistance from other cities. One area she would like to explore is to get to know how, for example, other cities are successfully developing and designing their streets and whether municipal government design streets themselves or hire externally to do it.

When pressed about success Climate Campaign has experienced so far, either through the Me+We or Creative100 projects, she is adamant about one point; that despite the city seemingly having many problems, there is even more solutions, and that for each problem there are tens of solutions.

Zolzaya Enkhtur, Founder and Managing Director of Climate Campaign

MORE INFORMATION:

Climate Campaign
non government organization

http://www.climatecampaign.mn/
http://www.creative100.mn/
https://www.facebook.com/creative100ub/
https://www.facebook.com/UBGreens/

THIS ARTICLE IS SOURCED FROM:

An interview with Zolzaya Enkhtur, Founder and Managing Director of Climate Campaign. Interview by Kevin Drouin. October 15, 2019.

Environmental Poster Campaign April – June 2018 "Me+We Start with Ourselves (Би+Д Өөрөөсөө эхэлье)". Climate Campaign. 2018

Green Development Strategic Action Plan for Ulaanbaatar 2020. (January 2015). The Asia Foundation. https://asiafoundation.org/wp-content/uploads/2016/01/Green-Development-Strategic-Action-Plan-for-Ulaanbaatar-2020-English_revised.pdf

North-East Asia Low Carbon City Platform (NEA-LCCP)

In view of the significant role of cities in supporting national actions on climate change as well as environmental sustainability, the North-East Asia Low Carbon City Platform (NEA-LCCP) was launched as a platform to enhance collaboration and empower local governments through peer-to-peer support and experience-sharing on low carbon city development.

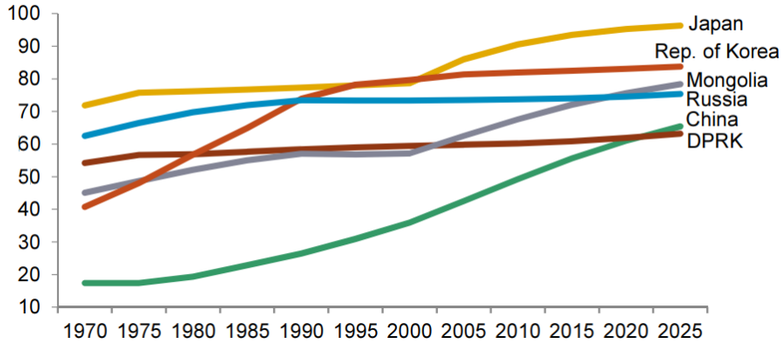
The rising percentage share of urban population is a phenomenon that has been going on for the past decades and is expected to continue for years to come. Continuous rapid urbanization, despite being a worldwide trend, is more prominent in some of the world's region. This is the case for East and North East Asia (ENEA), one of the regions with the highest share of urban population, a share expected to exceed 70% by the next decade.

Correspondingly, the region contributed to almost one-third of the global greenhouse gas (GHG) emissions in 2013, including four of the world's top ten emitters: China (1st), Russia (4th), Japan (5th) and ROK (12th). These high energy and carbon intensity economies require immediate actions in reducing energy consumption, where radical changes in urban development have a critical role.

Nonetheless, the high concentration of population and energy consumption also provide a great potential to decrease GHG emissions as cities are also where more progress can be achieved through better urban planning and greater citizen participation.

With cities potential in mind, and in a concerted effort to support improving low carbon city plans and programmes, and reviewing government policies, the North-East Asia Low Carbon City Platform (NEA-LCCP) was launched in 2015 under the North-East Asian Subregional Programme for Environmental Cooperation (NEASPEC). As a comprehensive intergovernmental cooperation framework addressing environmental challenges in North-East Asia, NEASPEC was the ideal institution to carry out a platform such as the NEA-LCCP.

Share of urban population in North-East Asia, 1970-2025



Retrieved from World Urbanization Prospects (WUP) database, Percentage of Population at Mid-Year Residing in Urban Areas by Major Area, Region and Country, 1950-2050

FOUR AREAS OF ACTIVITIES UNDERTAKEN BY NEA-LCCP PARTICIPATING ORGANIZATIONS

1. INFORMATION SHARING AND COMMUNICATIONS

his is the core service of the platform through the following activities:

i. Events such as symposiums, workshops, field visits, topic-specific/ expert group meetings. Events can be jointly organized with national, regional or global agencies to connect subregional LCC development to wider geographical and/or context scope.
ii. Web-based platform containing subregional LCC information, case studies sharing, relevant activities, platform events, updates, publications, etc.

2. TECHNICAL ASSISTANCE

Participating institutions and experts can provide practical and direct assistance to cities through the platform. Cities are invited to submit their LCC development plan/ approach for peers or experts to seek review and recommendations. It can be a benchmarking exercise to compare overall LCC or specific sectoral performance, and an opportunity to discuss and learn from other's experiences.

3. ANALYTICAL STUDIES

Identify gaps and generate practical knowledge required by cities to formulate, implement or improve low carbon development. Conduct analytical studies with institutions, researchers and other practitioners to address specific low carbon city issues in the North-East Asian context

4. CAPACITY BUILDING

With both the demand and the supply of knowledge and experiences available within the subregion, capacity building activities can directly enhance local capacity and enable first-hand experiences to be shared. Capacity building can target specific audience or technical aspects, and be tailored to specific requests. Capacity building elements can also be incorporated into other activities such as at workshops or to support implementation of recommendation from peer review, etc.

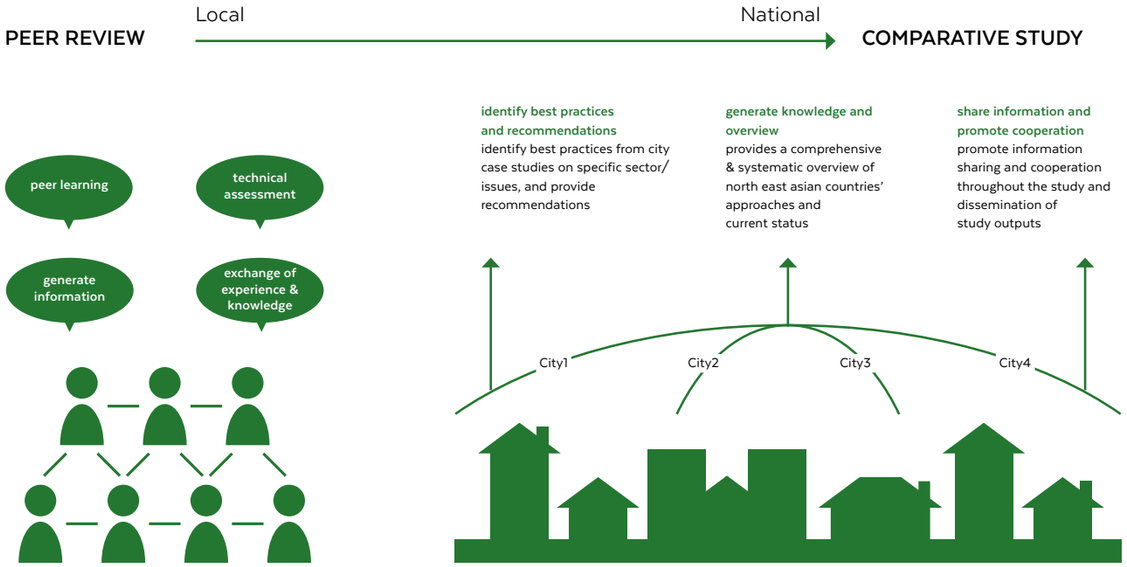
NEA-LCCP OBJECTIVES

With an acknowledgement that a broad range of stakeholders and numerous global and regional networks in Asia were already working on LCC development, the NEA-LCCP set out to add value to these existing networks. Consultations with experts helped identify the subregion's need for a platform to communicate and exchange on the demand and supply of services and information. As a result, the platform was created to provide enhanced access to information and current activities; serve as a channel to express needs, and to discuss and implement actions required for the subregion; link to wider LCC development beyond the subregion, and; act as a gateway for cooperation and partnerships. Working with these existing networks and organizations working on LCC approaches, policies, and programmes, the platform aims to:

- Synergize the works of research institutions, civil society organizations and international organizations
- Bring together existing and new information and knowledge on LCC approaches and policies
- Collectively support municipal authorities in moving towards and continuing to advance LCC

PEER REVIEW AND COMPARATIVE ANALYSIS

North-East Asia has a wealth of experiences to offer as the subregion initiated policies and plans for LCC development at both national and city levels. It has also expressed great demand to learn from each other. Following experts consultations to further elaborate on the activities of the platform, NEASPEC proposes two main activities – peer review at the city-level to support improving low carbon city plans and implementation in selected cities; and comparative study at the national-level to review government policies on low carbon city development. These activities aim to strengthen knowledge, capacity and networking of experts, and agencies and cities in North-East Asia



Recent examples of these activities include the completion of Peer Review Study of both Wuhan City and Guangzhou City of China, and the completion of a Comparative Study on Low Carbon City Policies in China, Japan and the Republic of Korea. These studies led to meaningful outcomes, furthering low carbon development through the production of analytic review, recommendations and technical support, identification of key challenges and policy gaps and generation practical knowledge tailored to the respective situation of cities and countries involved.

COMPARATIVE STUDY ON LOW CARBON CITY POLICIES IN CHINA, JAPAN AND THE REPUBLIC OF KOREA; GOOD PRACTICES FROM CITIES

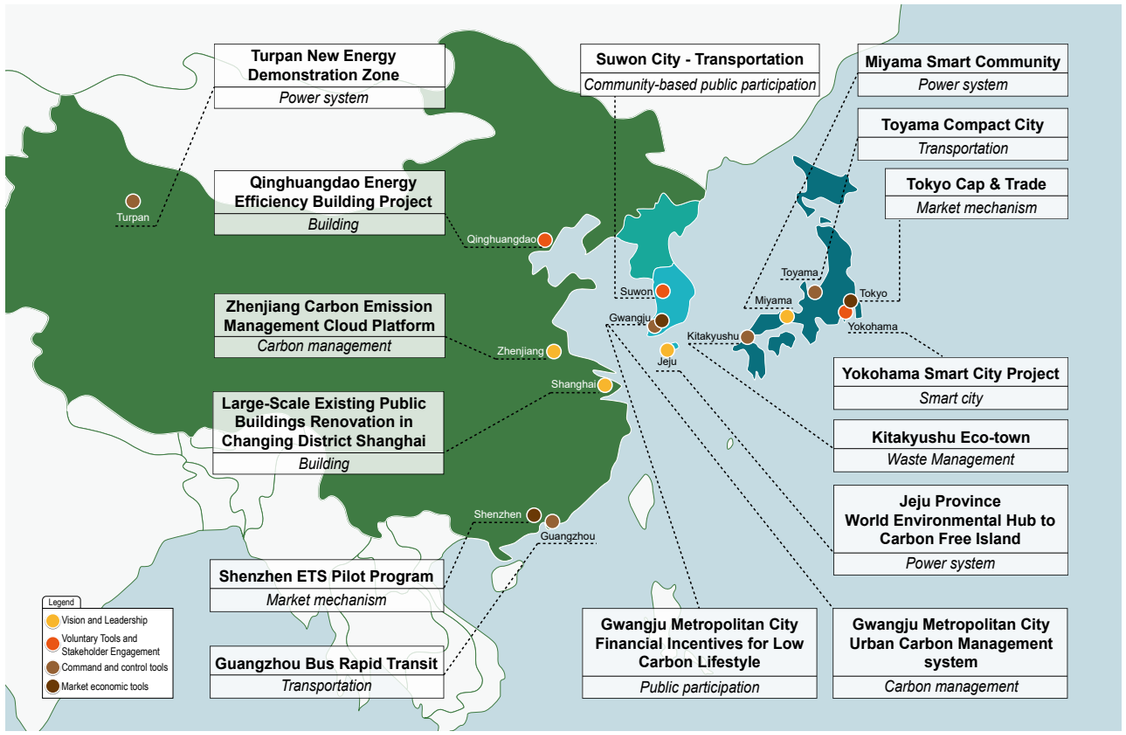
This research project in collaboration with the Innovative Green Development Programme (iGDP), Institute for Global Environmental Studies (IGES) and Korea Environment Institute (KEI) aimed to generate a comprehensive and systemic overview of national approaches and the status of low carbon development specifically in China, Japan, and the Republic of Korea. Part of the study also identified good practices from cities, reviewed and analyzed in light of effectiveness and efficiency; sustainability; and transferability (the relevance of the policy or practices to other cities). Some of these cases can be found in the map below:

For the North-East Asia Low Carbon City Platform, these studies and joint collaborations help highlights the potential for future projects under the platform and showcase how it can contribute to the development of low carbon cities. Moving forward, collaboration with similar initiatives and the variety of existing local stakeholders working on LCC development could offer a significant potential for synergy and mutual benefits.

THIS ARTICLE IS SOURCED FROM:
North-East Asia Low Carbon City Platform (NEA-LCCP). North-East Asian Subregional Programme for Environmental Cooperation (NEASPEC). Retrieved from http://www.neaspec.org/our-work/low-carbon-cities

NEASPEC/SOM (23)/4. (September 4, 2019) Review of Programme Planning and Implementation. United Nations Economic and Social Commission for Asia and the Pacific.

Local-level Low Carbon City Policies and Approaches



50 Climate Solutions from Cities in the People's Republic of China

¶ Rapidly growing urbanization in Asia and the Pacific has led to surging pollution level and a deteriorating environment. These climate issues have spurs cities to pursue and create solutions that emphasize low-carbon growth and climate resilient development. ADB newest publication showcases 50 innovative case studies from cities in the People's Republic of China that are mitigating against and adapting to climate change.

Information campaigns have been held at schools throughout Ningbo to educate pupils about the benefits of waste separation and recycling
Source: ADB, photo by Lie Wu

Recent years have seen pollution resulting from increasing Green House Gases (GHG) emissions having direct consequences on the environment and threatening to negatively impact people quality of lives. Despite the urgent need to take significant actions to address climate, reconciling growth and development with lower carbon emissions has remained one of the most arduous challenge of our time. There is, however, a growing movement stemming from innovative cities showing that lower emissions and growth can be simultaneously achieved.

A recent publication from the Asian Development Bank (ADB) titled '50 Climate Solutions from Cities in the People's Republic of China; Best Practices from Cities Taking Action on Climate Change' provides examples of recent innovative climate solutions. As part of an initiative to support the People's Republic of China efforts to address climate change, ADB released a report showcasing 50 examples where cities in China are implementing climate solutions in areas of energy, land use and resilience waste, climate action and mobility.

Sharing these solutions being implemented in these cities is especially important giving that they are proving that reducing carbon dioxide emissions and protecting the environment need not sacrifice economic prosperity. Moreover, by sharing these examples, other cities could be inspired, further driving innovation and protecting cities against climate change.

According to Ayumi Konoshi from ADB, it is estimated that the cost of pollution damage in China is close to 10% of GDP. Prompted by such a number to make drastic changes, the publication highlights how the People's Republic of China is taking measure to foster a true sustainable growth model, putting cities at the center due to their exposition to climate change's risks and their crucial role at mitigation efforts.

For each case study introduced, there is a variety of key information attached including the main challenge to be addressed, co-benefits realized across the economic, environmental and social pillars of sustainable development, and the city's characteristics, such as population, GDP per capita and geographic area covered. An example from each sector covered by the publication can be found on the next pages.

The publication has compiled the case studies through a multi-step process through a collaboration of ADB, Sustainia, and local experts from China. Cases were assessed and selected based on their expected carbon reductions, co-benefits, the extent to which methods or solutions were considered innovative, and governance, or how well the project has collaborated with other entities and actors.

The carbon credit concept enables citizens to know about their individual contribution to carbon emission reduction with every ride.
Source: ADB

SECTOR: ENERGY **CITY: BEIJING**

On energy, the near zero-energy-emissions project in Beijing is using the latest technology to explore how to greatly reduce emissions, while maintaining indoor comfort levels. The 4,025 m^2 pilot building shows how to achieve more than 50% emissions savings by implementing innovative technology, and is a landmark building for the future development of emissions reducing technology in PRC buildings.

270 TONS OF CO_2, EMISSIONS HAVE BEEN AVOIDED IN JUST ONE BUILDING.

Economic

Compared with traditional buildings, this project saved 341 MWh in 2015, corresponding to almost CNY 240,000 of avoided expense.

Environmental

The pilot building has achieved 80% energy savings. In addition, the project has also made significant water and material savings, improving environmental standards and comfort.

Health

The pilot building regularly monitors PM2.5, the concentration of volatile organic compounds and CO_2, as well as real-time information on temperature and humidity, ensuring high air quality and safeguarding the health of those who occupy the building.

SECTOR: LAND USE AND RESILIENCE **CITY: CHANGDE, HUNAN**

On land use and resilience, the city of Changde, Hunan, restored its extensive river system that covers more than 17% of the city. With a CNY 5.5 billion investment, the city has reconnected the tributaries and, together with other initiatives, including urban dwelling renewal with ecological stream rehabilitation, improved the drainage capacities to make the city more resilient to climate change, while including the development of 24 recreational sites.

700 TONS OF CO_2, SEQUESTERED ANNUALLY BY GREENING THE CITY.

Economic

A more resilient city will reduce emergency expenses and recovery costs associated with landslides and floods, such as infrastructure damage and loss of livelihood.

Environment

The use of wetland and other green infrastructure creates benefits of increased biodiversity, improved air quality, and reduced urban heat effects in the city.

Health

The improvements will all lead to an increasingly active population, through sports and improving the walkability of the city. The green spaces will also help to improve air quality, which will reduce respiratory issues.

SECTOR: WASTE **CITY: NINGBO, ZHEJIANG**

On waste, the city of Ningbo, Zhejiang, is implementing an advanced waste separation, collection and treatment strategy, incentivizing the separation of municipal waste at the source, before it is collected and either recycled or converted to energy.

173K TONS OF CO_2, EQUIVALENT PER YEAR WILL BS SAVED BY THE KITCHEN WASTE TREATMENT FACILTY BY 2019.

Economic

Increasing recycling rates provides access to cheaper resources, and separating organic waste allows for harvesting of natural gas for energy and heat.

Environment

The project will improve solid waste collection and separation at the household level in six urban districts in Ningbo, reducing the amount of waste sent to the existing landfill and incineration facilities.

Social

Community workshops are designed to educate citizens and improve waste segregation at the source. In 2014–2017, more than 1,750 training sessions have been organized, engaging 108,000 citizens.

SECTOR: CLIMATE ACTION **CITY: QINGDAO, SHANDONG**

On energy, the near zero-energy-emissions project in Beijing is using the latest technology to explore how to greatly reduce emissions, while maintaining indoor comfort levels. The 4,025 m^2 pilot building shows how to achieve more than 50% emissions savings by implementing innovative technology, and is a landmark building for the future development of emissions reducing technology in PRC buildings.

40M TONS OF CO_2, EMISSIONS BE REDUCED BY 2020, SLASHING CARBON BY 2020, SLASHING CARBON INTENSITY PER UNIT OF GDP BY 50% FROM 2005 LEVELS

Economic

The city has experienced rapid economic growth, yet at the same time cut its carbon intensity, signaling healthy growth and preparing the city to decouple carbon emissions from economic growth in the future.

Environment

The annual average PM2.5 concentration has decreased to around 32%. Likewise, the quality of water and soil has improved.

Health

Morbidity and mortality connected to climate change-related local epidemics have been on the decline. Curbing the growth of carbon emissions can further improve air quality and the well-being of urban residents.

SECTOR: MOBILITY **CITY: WUHAN, HUBEI**

On mobility Wuhan, Hubei, rolled out one of the world's largest bike-sharing projects, installing 20,000 bikes at 856 stations since 2015. Plans called for 80,000 bicycles and 3,160 stations to be installed citywide by 2018. A unique component of the system is the integration of a carbon credit scheme, through which bike-sharing users' individual CO_2 reduction is calculated based on average riding speed and other factors, and converted into a carbon credit registered to individual users. The credit can be used to purchase small personal commodities and services, such as movie tickets, or used to offset other carbon emissions.

170 TONS OF CARBON WILL BE REDUCED ANNUALLY BY 2018 WITH THE BIKE SHARING PROGRAM

Economic

As the first hour of bike use is free, and most bike trips last less than one hour, users are able to save money on transport.

Environmental

Annual CO_2 emissions reduced by the bike-sharing system have reached 25,000 tons.

Health

The bike-sharing program addresses health problems related to vehicle emissions, and encourages the population to participate in a daily fitness activity.

THIS ARTICLE IS SOURCED FROM:

Asian Development Bank. (November, 2018). 50 Climate Solutions from Cities in the People's Republic of China; Best Practices from Cities Taking Action on Climate Change. Retrieved from https://www.adb.org/sites/default/files/publication/469536/50-climate-solutions-prc-cities.pdf

Kan, Lei and Karen Lane. (December 4, 2018). ADB Report Shares Best Practices in PRC Cities to Combat Climate Change. Asian Development Bank. Retrieved from https://www.adb.org/news/adb-report-shares-best-practices-prc-cities-combat-climate-change

Highlights

Throughout the year, CityNet carried out a variety of programs and events in line with the needs and objectives of its members. Some of the most prominent activities included the 33rd and 34th KLRTC Workshops, the 1st Sustainable Development Jeju International Conference, and the 2nd International Forum on Low Carbon Development for Cities.

Smart City Summit & Expo (SCSE)

The Smart City Summit & Expo (SCSE) took place in Taipei City, one of CityNet valued member city, on 26-29 March, 2019. SCSE is the largest Smart City and IoT business event in Asia. Global city leaders and business elites meet together in Taipei every year to discuss and share smart city development experiences and strategies.

This year, CityNet was invited to speak at the Sustainable City Forum, which featured Smart City ideas and initiatives on the topics of Green Economy Growth; Green Finance; Smart Energy: Energy Creation, Energy Storage, Energy Saving; and Circular Economy. During the Green Economy Development session, within the Sustainable City Forum, part of the SCSE, CityNet Special Adviser Mary Jane Ortega addressed a keynote speech to the audience.

This forum focused on the Sustainable Development Goal 8, promoting job creation, decent work and equal pay for work of equal value, reducing the number of youth unemployed, eliminating child and forced labour, protecting labour rights and promoting safe working environments, and promoting sustainable tourism to create jobs and promote local culture.

Ms. Ortega shared how cities can play a critical role in addressing SDG 8 as cities are hubs for innovation and economic development. With the ability to find solutions through innovations to various urban challenges – ranging from pollution, congestion, climate change that may hinder productivity and residents' quality of life – cities can secure economic growth and sustainable lifestyle.

However, cities do not have to reinvent the wheel as urban solutions can be shared and replicated with adaptation to the local context. These efforts could be done through knowledge sharing programs that CityNet is mandated with, from capacity building workshops to city-to-city cooperation.

During this event, Ms. Ortega reached out to potential new partners that include Mayor of Taoyuan Cheng Wen-tsan and Deputy Mayor of New Taipei City Wu, Ming-Ji to explore opportunities of cooperation to foster sustainable, livable and people-centred cities. These objectives are directly aligned with SDG 11 "Sustainable Cities and Communities," which point out that cities are an important arena for people's lives, and reiterate every city leaders' need to make cities inclusive, safe, resilient and sustainable.

Created in 2014, the SCSE facilitates cross-industry knowledge exchange by bringing together city officials, IT experts, investors, and IoT businesses. The SCSE allows participants to gain insight into Smart City concepts and learn about the most recent advancements in ICT. The event brought together about 35,000 visitors to experience the expo's forums and 1260 booths on IT and Smart City development. The event also hosted a Mayor's Summit with over 150 city leaders, and Taipei City featured the launch of their newly created platform 'Go Smart'. CityNet has supported this event annually since 2018.

33rd KLRTC Workshop on Emission Reduction and Low Carbon Society

In partnership with Kuala Lumpur City Hall, the European Union's International Urban Cooperation – Asia Project (IUC-Asia), and the Global Covenant of Mayors (GCoM), CityNet co-organised the XXXIII Kuala Lumpur Regional Training Centre Workshop and the IUC-Asia training, Module 2, on GHG Emission Reduction and Low Carbon Society.

Taking place on April 22-24, 2019, the workshop was attended by more than 70 participants from across Asia and addressed the following key points:

1. Basic Principles and Climate Actions on GHG Emission Reduction
2. Climate Action Plan in Asia Pacific
3. Low Carbon Solution Policies
4. Strengthening Infrastructure to Support the Implementation of Low-Carbon Strategies

Setting the discussion, the workshop started with a keynote speech from Prof. Dr. Ho Chin Siong from the Universiti Teknologi Malaysia highlighting climate change impacts and emission reduction potential in Asian cities.

This dialogue was enriched by the Asian Development Bank (ADB) and the Institute for Transportation and Development Policy addressing the visions and strategy necessary to develop a low-carbon society. For that purpose, illustrations and cases of low-carbon infrastructures from various Asian cities looking into local circumstances and needs were used, with a specific focus on access to alternative energy and sustainable mobility.

These topics are highly relevant based on the recent infrastructure cluster study of CityNet member cities conducted by CityNet in collaboration with the Korea Associates Business Consultancy. The study revealed that most Asian cities have not yet measured greenhouse gas emissions and lack access to data on emissions, particularly regarding key sectors such as transportation. Moreover, the study shows that in Asian cities, mobility accounts for about 20% of emissions and buildings makes up 33% of carbon emissions.

Contributing to the practical aspect of this workshop, GHG inventory tools that have the potential to be adopted by participating cities were also featured during lectures by the World Resources Institute China and C40 Cities. Moreover, to kick-start the workshop, international participants had the experience to take part in Kuala Lumpur Car Free Morning on April 21 from 7 am to 9 am. This initiative of the city of Kuala Lumpur is held on every first and third Sunday of the month and features closed roads allowing people of all walks of life to cycle, run, skateboard, rollerskate, rollerblade or more simply, just walk.

Simultaneously to the workshop, CityNet operated a pavilion promoting the Urban SDG Knowledge Platform activities and providing a venue to reach out to new partners. A survey was also conducted to better understand cities' needs regarding Smart Innovation and Urban Development as part of an effort to devise the program for the upcoming workshop on "Smart Cities".

Closing the workshop on behalf of Kuala Lumpur's Mayor, the Director of Infrastructure Planning Department, Sulaiman Mohamed, expressed Kuala Lumpur City Hall intention to provide more training to ensure that the Asia Pacific region stays up to date with the latest initiatives of urban solutions and innovations.

Transportation Strategy Workshop for Asian Cities

CityNet and Seoul Human Resource Development Centre (SHRDC) held a workshop on Transportation Strategy for Asian Cities, bringing together city planners and urban professionals to discuss urban transport problems and analyse solutions of current Bus Rapid Transit (BRT) systems.

The workshop, taking place on April 7-14, connected 14 urban transport experts from Colombo, Bangkok, Barisal, Ho Chi Minh, Da Nang, Lalitpur, Biratnagar, and Islamabad to exchange best practices on BRT and transfer system. The weeklong event featured a series of lectures and discussions with urban practitioners for sustainable policy-making and provided an opportunity to strategise on a new agenda for the planning and operation of BRT.

The sessions covered a diversity of topics from history to implementation principles. These included lectures on the history of Seoul's transportation policy, BRT operation system and implementation processes, transportation demand management, and eight different site visits.

During the workshop, the participants had an opportunity to present their city cases and build feasible action plans reflecting the knowledge they gained throughout the workshop.This ensures that the Asia Pacific region stays up to date with the latest initiatives of urban solutions and innovations.

Bus Rapid Transit (BRT) Planning and Operation Workshop

34th KLRTC Workshop on Localising the Sustainable Development Goals

CityNet Vice President and Infrastructure Cluster co-leader, Kuala Lumpur City Hall hosted the 34th session of the Kuala Lumpur Regional Training Center (KLRTC) workshop focusing on "Localizing the Sustainable Development Goals (SDGs) from 23-25 July 2019. Facilitators from CityNet, partner organizations and participants gathered to exchange knowledge and experiences in localizing the SDGs. By engaging with stakeholders from the local level, participants could improve their capacities to integrate the SDGs into their core policies and action plans.

The workshop was initiated with an overview of the global agenda and the SDG relevance delivered by Christopher Rollo, UN-Habitat Philippines Country Program Manager. Together with two other speakers from the Urban and Regional Development Institute (URDI) and the Seoul Metropolitan Government (SMG), they elaborated on the role of Local and Regional Government (LRG) and the context of localizing SDGs.

The highly practical workshop also featured lectures from the Institute for Global Environmental Strategies (IGES) that introduced a toolkit, the Voluntary Local Review (VLR), that could be utilized to measure the progress of local government in implementing the SDGs. The session was further enriched by addressing specific examples, cases, and challenges from various countries including Malaysia, Philippines and Indonesia.

Making use of this opportunity, CityNet showcased the online SDG cases repository Urban SDG Knowledge Platform, where users can learn and benchmark a wide range of initiatives or policies implemented by different cities across the globe.

Classroom-based lectures and discussions were supplemented with the participants visit to one of Kuala Lumpur's public housing projects that have been successfully growing a Community Garden in the Seri Semarak public housing. The Community Garden was introduced in line with the Green Policy, Climate Change Policy, and the National Physical Plan as well as the 5-year Malaysia Plan in order to strengthen the unity among local communities while contributing to carbon reduction.

Finally, under a special request made by one of CityNet Associate Members, Clean Ciliwung Movement / Gerakan Ciliwung Bersih, a study visit to the Blue Pool and the River of Life (RoL) Project was conducted in order to benchmark Kuala Lumpur's clean water management system. The RoL project was designed to transform the Klang and Gombak River in the City of Kuala Lumpur into vibrant waterfronts with high economic value through river cleaning and river beautification.

Sustainable Development Jeju International Conference

On 17-19 June, CityNet participated in the 2019 Sustainable Development Jeju International Conference that was organized by Jeju Special Self-Governing Provincial Council (Jeju Council) and Jeju Special Self-Governing Province. Titled "Healthy Planet! From the Local", the conference was held for the first time as Jeju focuses on implementing localized SDGs and raising public awareness.

The conference was attended by 30 different countries, including partner organizations such as the United Nations Development Program (UNDP) and the Institute for Poverty Alleviation and International Development (IPAID), and promoted the importance of implementing the SDGs at the local level and sharing best practices.

CityNet Secretary-General Vijay Jagannathan delivered a speech in the 'Leaders Roundtable Session' about how the SDGs can be implemented at the local level given each region own challenges. His presentation focused on the topic of 'Local Role in Sustainable Development and Plan to promote Networking.'

During this session, the speakers announced a Joint Declaration on the Local Actions for the SDGs addressing the imperative needs to create a roadmap outlining feasible targets to implement the SDGs in local communities and engage actors from every walk of life allowing local marginalized people to be well-represented.

During this visit to Jeju Island, CityNet promoted the Urban SDG Knowledge Platform to support SDG implementation at the local level by displaying a booth and engaging with the conference's participants. CityNet Secretary-General Vijay Jagannathan also had a meeting with Chairman of Jeju Council Tae-suk Kim where they discussed potential collaborations focusing on SDGs in the near future.

Before the conference, CityNet also had an introductory meeting with Director of Jeju International Training Center (JITC) Kyunghoon Sul in order to discover opportunities to co-organize capacity building workshops in Jeju inviting CityNet members.

2nd International Forum on Low Carbon Development for Cities

Asian Development Bank (ADB) in collaboration with CityNet organized the 2nd International Forum on Low Carbon Development for Cities under the title of "Acting Together for Low Carbon, Liveable, and Prosperous Cities."

The forum, held in Seoul on 2-5 September 2019, helped share international best practices on the following topics:

- Integrated systems thinking and transformation
- Low carbon options in mega-cities
- Sustainably built environment including buildings and adaptation infrastructures
- Advanced low carbon technologies including ICT and smart technology
- Green finance and innovative funding mechanisms.

The forum also emphasized the importance of engaging all social actors for low carbon city development. Seoul's low carbon development path was also showcased through site visits, inspiring other cities in achieving pedestrianization and over 60% use in public transport mode. Achieving this goal is rendered possible by using intelligent transportation system and integrated transport business models, clean and diversified energy system using advanced technology including fuel-cell technology for hydrogen, non-combustion waste-to-energy applications, among others.

The forum also emphasized the importance of engaging all social actors for low carbon city development. Seoul's low carbon development path was also showcased through site visits, inspiring other cities in achieving pedestrianization and over 60% use in public transport mode. Achieving this goal is rendered possible by using intelligent transportation system and integrated transport business models, clean and diversified energy system using advanced technology including fuel-cell technology for hydrogen, non-combustion waste-to-energy applications, among others.

During the workshop, CityNet Secretary-General Vijay Jagannathan delivered the opening remarks, depicting the relevance of low carbon city development to the Climate Change Agenda and recent developments in global low carbon policies relevant to ADB developing member countries. Throughout the forum, Secretary-General Vijay Jagannathan presented on "Synergies between the Green and Blue Agendas."

CityNet Deputy Secretary-General Sangbum Kim also participated as a moderator and speaker presenting on "Vertical Synchronization for Urban Transitions" and CityNet Deputy Secretary-General Aisa Tobing discussed on "Green Zone and Climate Village in Jakarta" as a speaker and gave the closing remarks. Senior Advisor Gyeong Cheul Kim also made an appearance as a speaker to share Seoul's cases.

International Urban Resilience Forum

In addition to CityNet Secretariat presence in the 2019 International Urban Resilience Forum Seoul hosted by Seoul Metropolitan Government on 23-24 September 2019, Mr. Kendra Hirata, CityNet Yokohama Project Office's Director, addressed the participants during a session focused on Urban Resilience. The Forum aimed to share trends and best practices and to discuss ways to strengthen resilience to disasters and increase sustainable city development.

Under the theme of Enhancing Urban Resilience through Smart Technology, Mr. Kendra Hirata, delivered a key speech on mainstreaming disaster issues within each city to achieve better coordination, make better plans, and ultimately be better decision-makers.

In response to a question on the importance of data for city-to-city cooperation, Mr. Hirata mentioned how data integration helps cities to increased coordination. He added that fully coordinating data still represented a challenge, but that multiple good initiatives are starting to come up, citing some of CityNet's work in Yokohama, the Philippines and Indonesia as examples.

Integrated Sustainable Solutions for Smart City Capacity Building Workshop

To provide an opportunity to address urban challenges through a Smart City approach, CityNet held a Smart City Workshop from August 18-25 together with Seoul Metropolitan Government (SMG) and UNESCAP as an offline activity of the Urban SDG Knowledge Platform. The workshop focused on sharing and explaining SMG's best practices and policies regarding the creation of a livable and sustainable city through the application of smartness to enhance the process.

Following the workshop, participants acquired a better understanding of Smart City system and ICT development, concept, design and implementation; fostered a cooperative relation between Seoul and CityNet member cities by sharing and transferring knowledge, technology and information on smart city; understood challenges from members' cities on implementing best practices in the Asia Pacific region; and analyzed problems with other city leaders and found solutions to develop smart city policies for rapidly developing cities. Through their development of an action plan and SWOT analysis, they now understand any current smart city development performance and contemplate how to enhance smart city policy strategies.

The Workshop was launched with participants' presentation on their cities performance, including successes, failures and future strategies on smart city. The participants benefitted from the opportunity to reflect upon their own cities existing problems and exchange feasible solutions. The lectures provided an insightful overview of Seoul's smart city initiatives and technology, including big data, transportation, and smart operation & maintenance (O&M) technologies for infrastructures. A wider range of topics was also examined in the lectures, such as the smart city pilot complex in Magok M-valley located in Seoul, Machine learning process known as AlphaGo, Open Data Plaza where SMG shares their big data with citizens, and existing Smart Monitoring & Management System placed on bridges and buried pipes.

Site visits allowed the participants to closely observe Seoul's best practices. The participants visited TOPIS, Seoul City Hall, Digital Civic Mayor's Office, Seoul Botanic Garden, Big Data Campus, Seoul Cyber Security Center, Seongsu IoT Street Lab and Seoul Data Center. Site visits offered the participants a chance to directly communicate with Seoul's experts on Smart City technologies and policies. The workshop concluded with a specialized session for Action Plan designing. Upon sharing their Action Plans with fellow participants and urban development experts, dialogues to enhance future strategies and explore fields of future cooperation continued.

7th Asia-Pacific Urban Forum

The 7th Asia-Pacific Urban Forum was held on 15-17 October 2019 in Penang, Malaysia. APUF-7 is a multi-stakeholder forum for sustainable urban development solutions, co-organized by UNESCAP, UN-Habitat, Urbanice Malaysia, the Ministry of Housing and Local Government and the Host City (Penang State Government & City Council of Penang Island).

During the forum, CityNet organized, in collaboration with the Institute for Global Environmental Strategies (IGES), an Urban Innovation Session titled "Meeting the Asian Urban Challenges: Where are we in the realization of localizing SDGs?" The session, taking place on October 15th, featured two rounds of panellists and Q&A session with participants.

Given that local authorities play a crucial role on the SDG implementation as currently more than half of the world population lives in the cities, the session highlighted ways in which local governments can communicate challenges, lessons learned and calls for policy changes at the national level. These discussions helped raise awareness on the importance of governments in implementing the global agenda, challenges, opportunities, examples and entry points for awareness campaign in aligning different goals into local planning processes and strategies.