

International Forum on Low Carbon Cities

Virtual
23-24 November 2021

REPORT OF THE FORUM

1. UNESCAP and Incheon Metropolitan City, in collaboration with Incheon Climate and Environment Research Center, ICLEI, Innovative Green Development Program, and Green Climate Fund, jointly organized the International Forum on Low Carbon Cities on 23-24 November 2021. Joined by about 350 participants and featuring 24 speakers from municipal governments, academia, international organizations and civil societies, the deliberations highlighted best practices of city's climate action planning, low carbon solutions in energy, transport and building sectors, green financing, and stakeholder engagement.

[Opening Session]

2. The Forum was opened by Ms. Armida Salsiah Alisjahbana, Under-Secretary-General of the United Nations and Executive Secretary of ESCAP, who underscored that cities are in the frontline of combatting adverse impacts of climate change, and highlighted ESCAP's efforts in facilitating member countries' just transition to a low carbon and resilient future. Following the speech, Mr. Namchoon Park, Mayor of Incheon Metropolitan City, Ms. Oyun Sanjaasuren, Director of External Affairs of Green Climate Fund, and Ms. Sun-Jin Yun, Co-Chair of Korean Presidential Committee on Carbon Neutrality noted the same call that cities and other subnational actors are essential for a green and climate resilient world. They highlighted that cities should work closely and proactively with the national governments to address the pressing issues of climate change.

[Session 1] Cities for Achieving Carbon Neutrality

3. In the first session, representatives from five cities, Chongqing, Kobe, Shenyang, Kitakyushu, and Incheon presented policies and practices for

addressing climate change and shared their vision for inter-city partnership and international cooperation on low carbon and resilience building, including policy exchange, capacity building, and technical as well as project collaboration.

4. Ms. Yun Tan, Deputy Director, Bureau of Ecology and Environment, Chongqing presented the municipal low carbon development through four aspects, including the upgrade of industrial structure with green development concept, green transition by encouraging pilot projects, promotion of low carbon model by leveraging policy portfolios, and institutional innovation for regulations and systems. By the abovementioned measures, Chongqing's energy intensity and emission intensity reduced by 19.4% and 21.8% from 2015 level. The forest coverage rate reached 52.5%.
5. This was followed by the presentation by Mr. Leo Luchuk, International External Affairs Officer, Kobe on promoting renewables and developing a hydrogen smart city initiative. With the 2050 carbon neutrality goal and the target of 46% GHG emission reduction by 2030 from the 2013 level, the city's green policy highlighted three areas including promoting energy saving, spreading renewable energy, and developing innovative technologies. Kobe has given prominence to the hydrogen industry by developing a series of verification projects such as the establishment of the hydrogen supply chain and the development of a hydrogen energy utilization system, in addition to other renewables projects including the waste combustion energy and biogas generation at wastewater treatment plants.
6. Following Kobe's climate action, Mr. Zhang Chenyu, Deputy Director, Bureau of Ecology and Environment, Shenyang introduced the green transition from a heavily polluted and fossil fuel-reliant city in the northeast of China. In addition to briefing Shenyang's action in carbon peak and neutrality roadmap design, pilot projects for green finance, and technical guideline for carbon inspection, he shared three recommendations. Firstly, cities should further enhance international cooperation, especially in areas such as emission inspection and calculation. Secondly, cities should make full use of international fund and policy for climate change financing. Lastly, cities should attract more foreign investment for the technical upgrade of low-carbon development.
7. Ms. Rie Kudo, Director, Green Growth Promotion Division, Kitakyushu firstly

introduced the municipal Green Growth Strategy: to supply highly economical decarbonized energy, to create new industries and services in green sectors and decarbonize existing industries, and to develop an environment to encourage innovation. Specific projects were also shared, including the creation of a comprehensive base for wind power industries, the RE100 for Public Facilities with solar plus storage power purchase agreement, the car sharing initiative for EV public vehicles with local companies, reuse and recycling of PV panels and storage batteries, and initiatives for establishing bases for hydrogen supply and use.

8. Ms. Hyun Ae Song, Director, Environmental and Climate Policy Division, Incheon introduced its action and vision for 2050 carbon neutral strategy by firstly highlighting its efforts, including the city-level assessment on the climate change impact and vulnerability which was first accomplished in the Republic of Korea, the active engagement in international cooperation, and the close tie between the public and private sectors in climate change collaboration. For a shorter term (2030 and 2040), the city aims to reduce 30.1% GHG emissions by 2030 and 80.1% by 2040 compared to the 2018 level. It also plans to raise the renewable energy penetration rate by 2030 from 22% to 35.7%.
9. In the Q&A session, the representative from Kitakyushu underlined the internal cross-agency cooperation for local governments in climate change policymaking. Moreover, the representative from Shenyang noted that the city has been looking for renewable resources, such as biomass, other than wind and solar due to its natural resource endowment and enhancing cooperation with other international partners such as Kawasaki. Representatives also recommended developing countries to take actions by leveraging the existing technologies such as photovoltaics, working with civil societies, engaging a wider public with rewarding carbon footprint reduction campaigns, and establishing platforms to attract international experts for green technologies.

[Session 2] Innovative Solutions for Low Carbon Cities (energy and building)

10. Speakers in the second session included experts from Asian Development Bank (ADB), Incheon Metropolitan City, C40, and Chinese Ministry of Housing and Urban-Rural Development (MOHURD). They joined the discussion specifically on presenting and exploring how new approaches and technologies for energy transition and upgraded building efficiency could facilitate the low carbon development.

11. This session began with the sharing, by Ms. Shan Liu, Senior Researcher, MOHURD, of a case study on a zero-energy building in Zhuhai, China. Four innovative policies were introduced: (1) a seasonally controllable ventilation system, (2) a smart microgrid system for building power security and efficient energy use, (3) an office building energy management system through an application and (4) a smart control system. As a result, the level of operational energy consumption is approximately a quarter of that of similar buildings in hot summer and warm winter regions.
12. This was followed by the presentation by Ms. Nawon Kim, Senior Urban Development Specialist, ADB on the integrated, multi-sectoral, urban approaches to clean and renewable energy, which underlined the importance of developing GHG inventory at the city level. She stressed the importance of the government's roles in providing the right incentives for technology push, and the creation of new institutions to facilitate dialogues on new technologies among various stakeholders.
13. Mr. Ilwoong Kim, Manager of Energy Policy Division, Incheon Metropolitan City presented Incheon's vision and strategies to be a leading carbon-neutral city including through a hydrogen ecosystem. The City's strategies include developing a hydrogen generation cluster, supplying eco-friendly hydrogen mobilities, and establishing a dispersed generation of blue hydrogen to prepare for the early closure of coal-fired power plants. The expected reduction of carbon emissions from the hydrogen initiatives is equivalent to planting 32 million trees.
14. The last presentation was made by Mr. Luke Sherlock, Head of China Engagement, C40, sharing its experience of implementing China Building Programme which is designed to accelerate the pace of action and innovation on building efficiency. Among C40's pilot projects in China, Beijing has seen the promotion of ultra-low energy buildings, whereas Fuzhou has been piloting to accelerate renewable energy building applications. In addition, Qingdao program focuses more on the energy-saving retrofit of existing residential buildings, and Shanghai has been set to speed up the performance improvements across public buildings for its energy efficiency.

[Session 3] Innovative Solutions for Low Carbon Cities (mobility and infrastructure)

15. The third session focused on low carbon action of mobility and infrastructure sectors. Experts from Toyama City, Beijing City Quadrant Technology, Jeju Research Institute, World Resources Institute (China), and the Leipzig City shared best practices and policy innovations, and discussed new opportunities for greener mobility and urban infrastructure for a low carbon future.
16. The session was unfolded with the presentation from Mr. Keiichi Kobayashi, Chief of Environmental Policy Division, Toyama City on the compact city strategy, which aims at creating an urban structure with a centralized base model supported by extensive public transportation. With the “skewered dumplings” town planning concept, Toyama City highlighted three pillars for the implementation, including revitalizing public transportation, promoting housing in districts along the public transportation lines, and revitalizing the city center. With the announcement of becoming a “zero-carbon city”, the City wishes to accelerate further cooperation with various stakeholders for decarbonization.
17. The next presentation was made by Mr. Yuanhan Wang, Urban Analyst, Beijing City Quadrant Technology Co. on the effective management of shared bicycles using smart technologies. While the excessive supply of share bicycles in Beijing has brought a lot of burdens to the city’s governance, the smart sensor on the streets could connect the bike Bluetooth and further send the operational information and data to a cloud system. With this, the operation team can further support the innovative bicycle management in the city by better allocating share bicycles.
18. Mr. Sanghoon Son, Research Fellow, Jeju Research Institute introduced Jeju City’s 2030 Carbon-free Island (CFI) Plan, which aims at producing 100% of the required electricity on Jeju Island as renewable energy while replacing 100% of the vehicles with EVs by 2030. The presentation includes eight innovative initiatives and policies to facilitate electric mobility transition in Jeju, including EV call center to assist EV users, EV safety education program, charging queue management system and special regulation-free zone for EV charging service.
19. This was followed by Ms. Qiu Shiyong, Research Associate, WRI China Sustainable Cities Program on a case study on promoting zero-emission logistics vehicles in Beijing and its associated challenges. Emphasizing transitions to a zero-emission logistics, the presentation introduced a case

study on the application scenarios for electric light duty vehicle (e-LDV) for delivering grocery, parcel, furniture and home appliance and wholesale products chain logistics. The study provided recommendations that governments should establish a mechanism to support local governments in formulating electric logistics vehicles promotion policies, improve the quality assurance system, establish a national testing, scoring and labeling system, and encourage the promotion and application of new technologies. Recommendations were also made for the local level to set concrete promotion targets for electric logistics vehicles, improve operational efficiency and promote innovative financing schemes.

20. Mr. Torben Heinemann, Head of the Office for Traffic Planning and Road Construction, Leipzig City, Germany, lastly introduced the public transportation system and vision. The city is known as having one of the oldest and biggest tram networks in the world and promoting the idea of “intermodality” to provide all modes of transport interconnected. The city is planning to integrate car- and bike-sharing in whole public transportation system.

[Session 4] Green financing for low carbon cities

21. The fourth session had speakers from Green Climate Fund (GCF), Climate Policy Initiative (CPI), Huzhou City, and ADB, sharing policies and best practices of green financing for low carbon cities. The discussion noted that public funds, multilateral financial institutions, and local governments should lead the private capital to accelerate the green transition in key sectors which see high GHG emissions.
22. Mr. Michael Lindfield, Senior Consultant of GCF, firstly made an introductory presentation by sharing GCF’s sectoral guidance on cities, buildings and urban systems. He highlighted GCF’s paradigm-shifting pathways in urban sector, including decarbonization of energy systems, energy efficiency in building stocks, compact & resilient cities, and circular urban economy. To realize the pathways, GCF counts on four drivers including the transformational planning and programming, catalyzing climate innovation, mobilization of finance at scale, and expansion and replication of knowledge.
23. This was followed by Ms. Tiza Mafira, Associate Director, Climate Policy Initiative, on fund mobilization for urban climate actions. She suggested that

at the municipal level, cities should leverage different roles as providers and stewards to mobilize investment; at the national level, governments should support city-level climate policy alignment both top down and bottom up; at the international level, technical advisory should be prioritized to improve cities' ability to mobilize climate investment; and in a cross-cutting sense, parties should improve reporting and monitoring of urban climate finance spending and investment. She also highlighted the role of national development banks and urged to advance the identification and deployment of financing options.

24. Following that, Mr. Dražen Kučan, Senior Urban and Energy Efficiency Specialist, GCF introduced financing modalities for cities' climate actions by leveraging climate and blended finance. He highlighted the urgent need for urban climate financing recalibration at global scale, with both top-down and bottom-up approaches and noted that GCF could offer financing opportunities for urban projects which could de-risk investments and attract private sectors. He also noted that GCF could support a range of finance mechanisms that would leverage institutional change and linkages.
25. Mr. Dingwei Huang, Deputy Director, Financial Affairs Office of Huzhou Municipal Government introduced the innovative local green financing practices and highlighted detailed pilot projects including photovoltaic loans to individuals to develop rooftop power generation, carbon emission evaluation to industries in terms of carbon intensity, China's first carbon neutral bond for green buildings, and the zero-carbon auto insurance pricing mechanism.
26. The session was concluded by Mr. Arnaud Heckmann, Principal Urban Development Specialist of Mongolia Resident Mission, ADB on the integrated and transformative approaches and financing solutions for low carbon city development. ADB's integrated approach combines different level of horizontal and vertical integration, together with cross-sectoral approaches built on transformative development strategic objectives, and the methodology was exemplified in the Ulaanbaatar project and integrated urban and rural parallel initiatives.

[Session 5] Stakeholder engagement for inclusive and participatory climate action

27. The last session of the forum was joined by the Local Government Association

for Climate & Energy Transition (LGACET), Republic of Korea, innovative Green Development Program (iGDP), ICLEI Japan, Gwangju City, and CityNet. The discussion centered at leveling up inclusive participation of non-state actors in climate decision making and actions.

28. The opening presentation was given by Ms. Jeongyeon Park, Director of LGACET, sharing local actions and collaboration for carbon neutrality in the Republic of Korea. Established by 45 local governments to tackle climate crisis in local communities, LGACET supports local governments with “Climate Emergency Declaration”, participates in discussion for 2050 Local Carbon Neutrality Plan, enhances local capacities by establishing a Local Climate-Energy Center, builds local political capacity for net-zero transition, and enhances online activities to promote local climate actions.
29. This was followed by Ms. Xueye Liu, Analyst, iGDP on China’s city level carbon peak policy assessment and tracking, which examined Chinese local efforts by sector, including management, energy, industry, transport, building, carbon sink and waste management. She highlighted that the urban low-carbon pathway could promote high-quality urban development and policy implementation needs to be further improved.
30. Mr. Togo Uchida, Executive Director, ICLEI Japan office presented Japan’s local efforts in combatting climate change. He highlighted the challenge that although one third of Japanese local governments already have Territorial Mitigation Plan (TMP), drastic and timely revision of plans is needed. Two approaches were underlined in the presentation, including city-to-city collaboration according to their natural resource endowment, and multilevel cooperation to replicate for speed.
31. Following that, Mr. Taeho Kim, Chief of Net Zero R&D Bureau, Gwangju International Climate and Environment Center, briefed the forum on the city’s net-zero policy and citizen participation. With the net-zero goal by 2045, five years early than the national ambition, Gwangju has been speeding up by carbon bank, low-carbon green apartment, town-led energy transition, and inter-city energy collaboration alliance, to achieve 100% eco-friendly vehicles and 100% waste to resource urban parks by 2045.
32. The last presentation was delivered by Ms. Yookyung Oh, Operations Officer, CityNet on the inter-city cooperation project on sustainable urbanism,

featuring key figures of the project including ecological transition & green deal, urban & regional renewal & social cohesion, and innovative sustainable & carbon neutral ecosystems.

[Closing]

33. Mr. Sangmin Nam, Deputy Head of the ESCAP East and North-East Office, commended the insightful presentations of the representatives of different agencies, and expressed sincere gratitude to the co-organizers as well as all the audience and participants for their engagement in forum's constructive discussions. He also indicated the plan for holding this forum annually in collaboration with partner institutions.