

UNITED NATIONS

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Twenty-third Senior Officials Meeting (SOM) of NEASPEC

9-10 October 2019

Ulaanbaatar, Mongolia

REVIEW OF PROGRAMME PLANNING AND IMPLEMENTATION

(Item 5 (d) of the provisional agenda)

Low Carbon Cities

Note by the Secretariat

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I. BACKGROUND

1. In view of the significant role of cities in supporting national actions on climate change as well as environmental sustainability, the SOM-19 in 2014 endorsed launching of the North-East Asia Low Carbon City Platform (NEA-LCCP) as a platform to enhance collaboration and the empowerment of local governments through peer-to-peer support and experience-sharing on low carbon city development.

2. The SOM-20 acknowledged the NEA-LCCP as an open platform for organizations to jointly mobilize their efforts in adopting and advancing LCC development through four areas of activities: (i) information sharing and communications, (ii) technical assistance, (iii) analytical studies and (iv) capacity building. Subsequently, the Secretariat had a series of consultations with experts to further elaborate the approaches and activities of the Platform and reviewed the latest LCC development in the subregion.

3. The SOM-21 approved the plan for two activity components of the NEA-LCCP: peer review at municipal level to support improving low carbon city plans and implementation in selected cities; and comparative study at national level to review government policies on low carbon city development.

4. The Secretariat, in collaboration with Innovative Green Development Programme (iGDP), a think-tank based in Beijing which operates the policy database and interactive platform on low carbon city policies in China, carried out the first pilot peer review of Wuhan city, as reported at the SOM 22. The second peer review of Guangzhou City was conducted during the reporting period. The Secretariat also carried out a comparative study of national policies on low carbon cities in partnership with iGDP, Institute for Global Environmental Studies (IGES) and the Korea Environment Institute (KEI). This report highlights key activities and findings of the two study outcomes: (1) the Peer Review Study of Guangzhou City, China and (2) the Comparative Study on Low Carbon City Policies in China, Japan and the Republic of Korea.

II. PROGRESS OF THE NEA-LCCP ACTIVITIES

Peer Review Study of Guangzhou City, China

5. Guangzhou City was officially selected as one of the second batch of national low-carbon pilot cities by the National Development Reform Commission (NDRC) in 2013. Since the selection, Guangzhou has carried out rigorous planning for low carbon development, considering both central and low carbon pilot requirements and local economic conditions. The city has developed a low carbon management system, a comprehensive low carbon strategy and specific sectoral low carbon measures.

6. The peer review for Guangzhou City under the NEA-LCCP consisted of three stages: (1) analysis on Guangzhou's low carbon development, (2) consultation with key stakeholders, and (3) assessment and production of the report.

7. **Preparation:** A comprehensive background report on Guangzhou's low carbon progress was developed (see attached the annex I). The report provides the key features of Guangzhou city that are relevant to low carbon development policy, as well we the city's key carbon reduction policies. The background report was produced to provide general information in support of the peer-review workshop.

8. **Consultation:** An international consultation workshop was organized in Guangzhou on 25th January 2019 in collaboration with iGDP. The workshop provided technical review and advice by experts from various fields and facilitated peer-to-peer networking and experience-sharing. The workshop in Guangzhou brought together about 40 participants, including experts from domestic and international peer cities (Wuhan, Shenzhen, Shanghai, Zhejiang, Seoul, Tokyo, and Incheon), and research institutes for the review exercise of Guangzhou city's low carbon development.

9. **Assessment:** The peer review report (see attached the annex I) was produced, incorporating comments, inputs and recommendations received in the International Consultation Workshop in Guangzhou. The peer review exercise highlighted the policies and the key sectors that Guangzhou should strengthen. **Key findings and recommendations on Guangzhou's low carbon development as follows:**

Key findings

- **[Institutional reforms]** Having been listed in the second batch of national low-carbon pilot cities in 2013, Guangzhou Development and Reform Commission (DRC) had operated the city's overall low-carbon development as the implementing agency, while hosting a leading group which oversees the city's overall low-carbon development. With institutional reforms of the central government in March 2018, the Department of Climate Change was transferred from NDRC to the newly established Ministry of Ecology and Environment (MEE). As of January 2019, Guangzhou had begun to absorb this institutional reform. Mirroring the new national government structure, a municipal Bureau of Ecology and Environment (BEE) was established and the division of climate change and carbon emission management was transferred from the DRC to the BEE. Guangzhou city needs to figure out how the objectives, frameworks and supporting policies of low-carbon development are integrated into the other policy priorities of MEE.
- **[Uncertainty in future low-carbon development in Guangzhou]** The construction of the Guangdong-Hong Kong-Macao Greater Bay Area will bring uncertainty in low-carbon development in the area as it physically integrates the Greater Bay Area, leading to regional expansion and city clustering. This change will directly impact on the orientation and future trajectory of Guangdong's economy, industry and energy systems.
- **[Uncertainty in urban economic structure]** Guangzhou's urban economic structure has gradually shifted from heavy and export-oriented industries to high-tech and service

industries while adjusting to regionalize the economy under the plans of the Greater Bay Area. Guangzhou's economy also appears to be moving from investment driven to consumption driven. These changes in capital, labor force composition, technological and institutional innovation and other potential driving forces of emissions should be reflected into Guangzhou's low carbon development strategy.

Recommendations / key observations drawn from the Peer Review workshop:

- **[Low carbon development strategy]**
 - Guangzhou should set targets that can achieve both air pollution and carbon reductions during the 14th Five-Year Plan, focusing its strategy on co-benefits.
 - Guangzhou can formulate unified low-carbon city policy system, integrating low-carbon cities, low-carbon industrial parks and low-carbon towns, low-carbon communities, etc.
 - Guangzhou should also formulate medium- and long-term strategies which are forward-looking and inspiring in line with global efforts responding to Guangzhou's development vision.
- **[Low carbon development in sectors]**
 - **Energy:** The city's transformation of energy system needs to address (i) growth control, (ii) structural improvements, (iii) efficiency improvements, and (iv) smart energy systems. Improvement of the energy structure and efficiency requires an increase in the use of natural gas, which in turn requires cooperation with natural gas pipeline deployment operators and promotion of its own pipeline system reform to address challenges of the transmission capacity of natural gas pipeline systems and higher price of natural gas. Establishing a smart energy system requires quality data on energy and information sharing mechanism.
 - **Transportation:** Guangzhou's low-carbon transportation, albeit significant progress, still faces some challenges. Management system for the electrification of public transportation requires extensive coordination among various government agencies. Coordination with the grid is another challenge. For proper infrastructure for the electrification of transportation, careful coordination is also required between Guangzhou's land use and urban planning bureaus to ensure efficient transmission between charging spots, charging stations and the grid.
 - **Buildings:** Promotion of low-carbon building needs to involve society and the city government needs to clarify the responsibilities of all stakeholders, including government agencies, enterprises and the public. The current technical standards need to be improved to suit the local condition while the quality of green building needs to be improved to meet the standard. Developing a data platform to address the lack of basic data in the building sector is also recommended.

- **Waste:** The city needs to pay more attention to the increased generation of waste, due to rapid urbanization and economic growth. As landfills remain as the main avenue of waste disposal in Guangzhou, biomass-to-energy conversion technologies should be promoted to capture energy and reuse methane from landfill to shape a sustainable future of Guangzhou.

The Comparative Study on Low Carbon City Policies in China, Japan and the Republic of Korea

10. The comparative study of national policies on low carbon cities in China, Japan, and the Republic of Korea was conducted to (1) generate a comprehensive and systematic overview of national approaches and the current state of low carbon city development in three countries and (2) identify good practices from cities and on specific sector for sharing information and promoting cooperation.

11. The comparative study involved a series of activities as shown in the figure 1. The country studies of China, Japan and the Republic of Korea were prepared by the Innovative Green Development Programme (iGDP), the Institute for Global Environmental Studies (IGES) and the Korea Environment Institute (KEI), respectively, to provide the analytic review, recommendations and technical support, identify key challenges and policy gaps and generate practical knowledge on low carbon city development in the three countries. The country studies involved literature review, site visits, and interviews with cities highlighted as best practices.

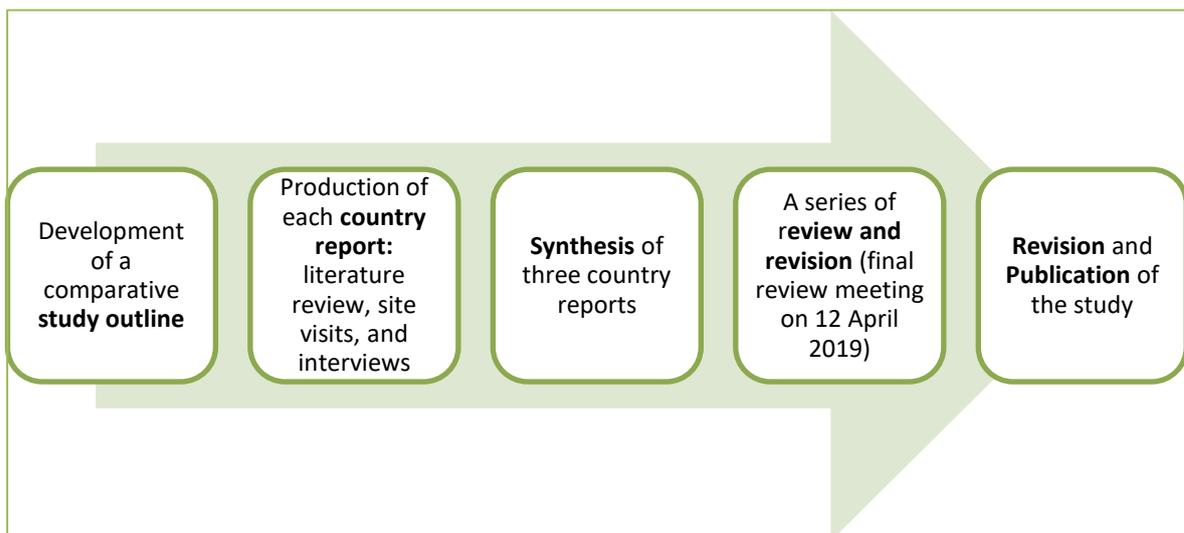


Figure 1. Work flow of the comparative study project

12. Based on the country studies, iGDP was commissioned to synthesize them to prepare the comparative study report. The study compared low carbon city policy in the

three countries highlighting carbon emission drivers, institutional structures, major national and subnational policies. Key components of the study are shown in the table 1.

Table 1 . Key components of the comparative study

Chapters	Contents
Background	Driving factors of carbon emissions
Low carbon policies at national level	<ul style="list-style-type: none"> • Low carbon development policies • Institutional frameworks and governance structures • Low carbon city policies
Comparisons and analyses	<ul style="list-style-type: none"> • Governance and infrastructure • Support mechanisms for LCC • National level and local level responsibilities and obligations, etc.
Good practices-case studies	<ul style="list-style-type: none"> • LCC good practices across sectors and cities
Conclusions	<ul style="list-style-type: none"> • Common challenges in low carbon city development • Recommendations

13. The comparison and analysis of the study identified some of the key elements that affects low carbon city development in the respective country such as institutional setting and incentives. Some examples are given in the table 2 below.

Table 2. Comparison in low carbon city development

	China	Japan	Republic of Korea
Governance and institutional structure	Highly decentralized fiscal and policy responsibilities	Heavy reliance on central government for its direction and resources (except few e.g. Tokyo)	Heavy reliance on central government for its direction and resources (except few e.g. Seoul)
Low carbon target setting	Top down target setting	Bottom-up approach	No sectoral target handed down
National-level low carbon city policy	Low carbon pilot cities programme to generate lessons and information	Cities are responsible to develop their own low carbon/climate mitigation plans under national climate change laws	Cities are responsible to develop their own low carbon/climate mitigation plans under national climate change laws
Cities' ambition in target setting	Low carbon pilot cities are the most ambitious compared to their national target (pilot cities: emissions peaking between 2020-2030; national target-emission peaking by 2030)	Adopt absolute emission reduction targets (for cities: average 19% and national target 25% by 2020/2030)	Align with the national target of reducing emissions (30% below BAU by 2020)

Local Level Low Carbon City Policy approaches	Dominantly led by local authorities with the strong fiscal capacities and top-down decision-making process	Dominantly voluntary approaches due to limited fiscal and regulatory authority	Dominantly voluntary approaches due to limited fiscal and regulatory authority
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14. While the study recognizes the significant difference in terms of the social, political and economic drivers and constraints for low carbon city development, there are some common challenges that all three countries face in low carbon city development.

- **Ambitions and incentives:** Most targets of cities fall short to meet the international goal of keeping global warming below 1.5 or 2 degrees. Developing ambitions long-term goals remain a challenge.
- **Support from national government:** National governments need to help align national and local infrastructure and energy development plans, create market and financial regulations that affect investments decisions broadly, and provide funding and capacity building services for local efforts.
- **Capacity and data transparency & consistency:** Pursuing low carbon development involves new ideas and often new resources. Harnessing these is a common challenge for cities which, apart from the large and most wealthy, often lack capacity in terms of human, technical, and financial resources.
- **Political and economic uncertainty:** Political and economic uncertainty can affect the commitment or compliance for environmental protection and emission reductions. Economic downturns can be associated with a decreased support for environmental protection and emission reductions. In this scenario, cities will find it challenging to advance a low carbon agenda.

15. The **good practices** from cities are reviewed and analyzed in light of effectiveness and efficiency; sustainability; and transferability (the relevance of the policy or practices to other cities). The case studies illustrates some key features and initiatives of low-carbon city development at local level in the three countries, in such areas as transportation, energy and buildings. These good practice cases in the study are shown in table 3, broadly categorized such as vision and leadership, voluntary participation in low carbon city programs or campaigns, and types of policy tools such as market-economic incentives and command-and-control tools.

Table 3. Case Studies

Country	Local-level Low Carbon City Policies and Approaches			
	Vision and Leadership	Voluntary Tools and Stakeholder Engagement	Command-and-control Tools	Market-economic Tools
China	Zhenjiang Carbon Emission Management Cloud Platform (carbon management) Large-scale Existing Public Buildings Renovation in Changing District, Shanghai (building)	Qinghuangdao Energy Efficiency Building Projects (building)	Turpan New Energy Demonstration Zone (power systems) Guangzhou Bus Rapid Transit (transportation)	Shenzhen ETS Pilot Program (market mechanism)
Japan	Miyama Smart Community (power system)	Yokohama Smart City Project (YSCP) (smart city)	Toyama Compact City (transportation) Kitakyushu Eco-town (waste management)	Tokyo Cap & Trade (market mechanism)
Republic of Korea	Jeju Province - World Environmental Hub to Carbon Free Island (power system)	Suwon City - Transportation (community based public participation)	Gwangju Metropolitan City - Urban Carbon Management System (carbon management)	Gwangju Metropolitan City - Financial Incentives for Low Carbon Lifestyle (public participation)

III. FUTURE ACTIVITIES

16. Main objectives of the NEASPEC North-East Asia Low Carbon City Platform (NEA-LCCP) are to (a) bring together existing and new information and knowledge on Low Carbon City and (b) synergize the works of specialized organizations.

17. In this context, collaboration with similar initiatives offer a significant potential for synergy and mutual benefits. For instance, opportunities for collaboration have been actively explored with the research project “*China-Japan-Korea*” cities climate action towards decarbonization and sustainable development” launched by the Tripartite Environment Minister’s Meeting (TEMM) in 2017. In this context, partnering with IGES and KEI for the NEA-LCCP comparative study provided mutual benefits with the TEMM’s research project as they are part of the TEMM’s project. Thus, the Secretariat was invited to share the preliminary outcomes of the comparative study at the 2nd China-Japan-Korea Research Project Workshop which was held in Yokohama, Japan, on 1 August 2019.

18. As a further step for collaboration with the TEMM’s research team, the Secretariat is exploring to hold a Peer Review consultation meeting in Gwangju in conjunction with

the TEMM's research workshop in Gwangju Metropolitan City on 22 October 2019, taking advantage of the presence of experts from the three countries. The Peer Review Workshop aims to have an in-depth review on Gwangju Metropolitan City's low carbon development. The outputs of the Comparative Study, as well as the two Peer Reviews could provide practical references and recommendations for Gwangju Metropolitan Government.

19. The peer review and comparative study focusing on the three member States as the first stage activity of the NEA-LCCP could provide a good reference for cities and governments of other member States, which could utilize the outputs and host NEA-LCCP activities.

IV. ISSUES FOR CONSIDERATION

20. The Meeting may wish to invite Member States to express their interest in hosting Peer Review workshops in their cities active or interested in the low carbon city development.

21. The Meeting may wish to request Member States to provide their views on key outcomes of the two studies and joint collaborations.

22. The Meeting may further wish to request member States to guide and express their interests in the areas of the North-East Asia Low Carbon City Platform, and potential projects under the Platform.

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