Asia-Pacific
Economic Cooperation

Advancing Free Trade
for Asia-Pacific Prosperity

3rd APEC Low Carbon Model Town (LCMT) Symposium

Lima, Peru | 21-22 October 2019

APEC Energy Working Group

June 2020

APEC Project: EWG 01 2018A

Produced by:

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APEC#220-RE-04.6

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1. Background

The APEC Low-Carbon Model Town (LCMT) Project was launched in response to the declaration at the 9th APEC Energy Ministers Meeting (EMM9), held in Fukui, Japan on 19 June 2010, where ministers discussed low-carbon pathways to energy security and growth strategies through cooperative energy solutions for a sustainable APEC. Among several messages, they noted that introducing low-carbon technologies in city planning to boost energy efficiency and reduce fossil energy use was vital to managing rapidly growing energy consumption in urban areas of the Asia-Pacific region.

The Concept of Low-Carbon Town in the APEC Region (Concept) had been developed under the LCMT Phase 1 and refined in Phase 2-6. The first edition of the guideline and evaluation sheet of the APEC Low-Carbon Town Indicator (LCT-I) System were developed in tandem with the Concept since Phase 3 and published in November 2016. From Phase 7, the Concept and the LCT-I system have been utilised as a tool to disseminate low-carbon towns (LCT) in the APEC region.

2. Objective

The purpose of this symposium is to further promote the development of low-carbon towns in the APEC region by disseminating the LCT-I system, sharing information on various types of low carbon planning projects in the world, and exploring the possibility of using the LCT-I system to develop bankable low-carbon projects in APEC developing economies.

3. Symposium Description

The 3rd APEC LCMT Symposium was held on 21-22 October 2019 in San Borja municipality of Lima, the capital of Peru. The agenda of the symposium on the first day consisted of four parts:

i) **Opening**: Welcome remarks of the hosts and the organisers, followed by the review presentations on low carbon town development in Peru, and in San Borja;

ii) **International stories**: Presentations of guest speakers about promoting low carbon model in various contexts and the possibility of obtaining financial support from international institutions;

iii) **Applying LCT-I system**: Introduction to LCMT and LCT-I system, presentations from three volunteer towns who applied the LCT-I, expert reviewers' evaluation and comments for each case.

iv) **Closing**: Discussion on LCMT project and its way forward, certificate giving ceremony and closing remarks.

On the second day, San Borja organised a site visit to several places inside the municipality. Participants had a chance to tour around San Borja eco-efficient park, composting plant, biophysical surface water treatment plant, Qaira electronic station, and renewable energy demonstration plant - Kallpa Wasi.

The full agenda and group photo are in the Appendices. Presentations are available on APERC website at
https://aperc.ieej.or.jp/publications/reports/lcmt_detail.php?article_info__id=357

4. Symposium Sessions Summary

4.1 Welcome and Opening Remarks

The symposium started with the welcome remarks of the host and the organisers. San Borja's mayor, **Dr Alberto Tejada** delivered welcome remarks and showed San Borja's willingness to host this event. The Chair of the APEC-LCMT Task Force, **Mr Takanori Yamashita**, Director for Natural Resources and Energy Research of International Affairs Division, Agency for Natural Resources and Energy, Japan Ministry of Economy, Trade and Industry (METI) on his opening remarks briefly introduced about the event's background and expressed the organisers' gratitude to the host and participants.

Figure 1: San Borja's Mayor on his opening remarks

Dr Alberto Tejada also represented the host to introduce San Borja's effort in building a low-carbon living space with a high priority in human and environmental health. Some initiatives made by the district so far include the promotion of social health by sports and recreation, public electric vehicles (EV) transport and cycling, urban forestry, and circular economy that focuses on renewable energy and strict waste management. All activities are under a strong commitment of the leader, with the backup of the Peruvian Army in building a greener district.

Ms Daniella Rough, represented the Ministry of Energy and Mines, made a presentation on the national project of Nationally Appropriate Mitigation Actions (NAMA) in the power generation sectors and their final use in Peru. The project is a collaborative work between UNDP, GEF and the Ministry in the effort of tackling climate change. Four main actions are

energy efficiency in the public and private sectors, grid-connected renewable energy, universal access to sustainable energy and promotion of electric transport. Alternative cooking methods, public EV transport, and promoting PV are among the key measures that NAMA focuses on. (Ms Rough left after her presentation for another business, therefore no further discussion was made afterward).

Figure 2: Ms Rough in her introduction to NAMA project

4.2 Presentations by guest speakers

ICLEI South America: ***Mr Rodrigo de Oliveira Perpétuo,*** *Executive Secretary*

ICLEI (International Council for Local Environmental Initiatives, now known as Local Governments for Sustainability) is a local governmental network of more than 1750 contact points that offers sustainable agenda and actions for municipalities to improve their work in thematic approaches of biodiversity, sustainable development, or climate change. Main projects of ICLEI South America in 2019 includes the APL (Local Protected Areas) for conserving biodiversity in designated areas of Brazil, Colombia, Ecuador and Peru; INTERACT-Bio for improving the use and management of nature in fast-growing cities and their neighbouring regions (mainly in Brazil); Urban-LEDS II for cities to develop comprehensive low emissions development strategies which involves 15 local governments in South America; and EcoLogistics for promoting effective regulatory, planning and logistics tools. ICLEI also helps local governments with receiving financial supports to their low carbon plans through a wide network of an international organization. The speaker from ICLEI highly appreciated the partnership that the Peruvian Army and San Borja created for the prosperity of the local people (not for suppressing them), stating that the role of local government was very

important in city planning. When being asked about how locals could reach ICLEI for support, he said that locals could come directly to ICLEI, but they will be more powerful when being assisted by the national level. At the same time, the national level should always empower local governments to decide on their development pathway.

Figure 3: Partners of ICLEI

100 Resilient Cities (100RC) Latin America: ***Mr Eugene Zapata-Garesché,*** *Managing Director*

100RC is an organisation pioneered by The Rockefeller Foundation in 2014-2019 to help cities around the world become more resilient with an investment of about USD 200 million. 100RC has now moved to the project-based phase to continue supporting the implementation of resilience initiatives incubated through its work. They learned that the value of the network, the need to adapt more closely to regional and local contexts and institutionalisation of resilience in the city development created the opportunities and strengths for cities to pursue their low carbon pathways. On the other hand, locals need to overcome several the challenges of continuity after mayoral changes, retaining local expertise, change of mindset, from sectoral siloed policy-making to holistic resilience, and access to international capital markets from municipal governments. He noted to all participants that consulting could sometimes be very expensive, thus recommended getting access to 100RC or similar kinds of organisation for more advice. Also, resilience is a long term strategy that needs institutional changes. Therefore we should not just think sector by sector but also politically to allow holistic view and system change in the city planning.

Figure 4: 100RC's network cities and activities in Latin America

4.3 Applying LCT-I system in volunteer towns

4.3.1 Introduction to the LCT-I system

Dr Nguyen Linh Dan, the LCMT project coordinator, introduced the LCT-I system which was developed by the APEC-LCMT Task Force and APERC since 2011 through seven phases of the project. To illustrate the LCT-I system, she delivered a short hands-on exercise for participants to practice, as if they were the volunteer towns.

LCT-I system (Figure 5) is a self-assessment tool to assess and monitor the progress of each LCT development project. The concept aims to promote the development of LCT in the APEC region by providing a basic principle that can assist the central and local government officials in planning effective low-carbon policies and in formulating an appropriate combination of low-carbon measures while taking socio-economic conditions and city-specific characteristics into consideration. The tool is designed to be user-friendly and straightforward so that central and local governments can easily use it. The Concept of the Low-Carbon Town in the APEC Region (the sixth edition) and APEC Low-Carbon Town Indicator System Guideline (the first edition) were distributed to each participant on one's table.

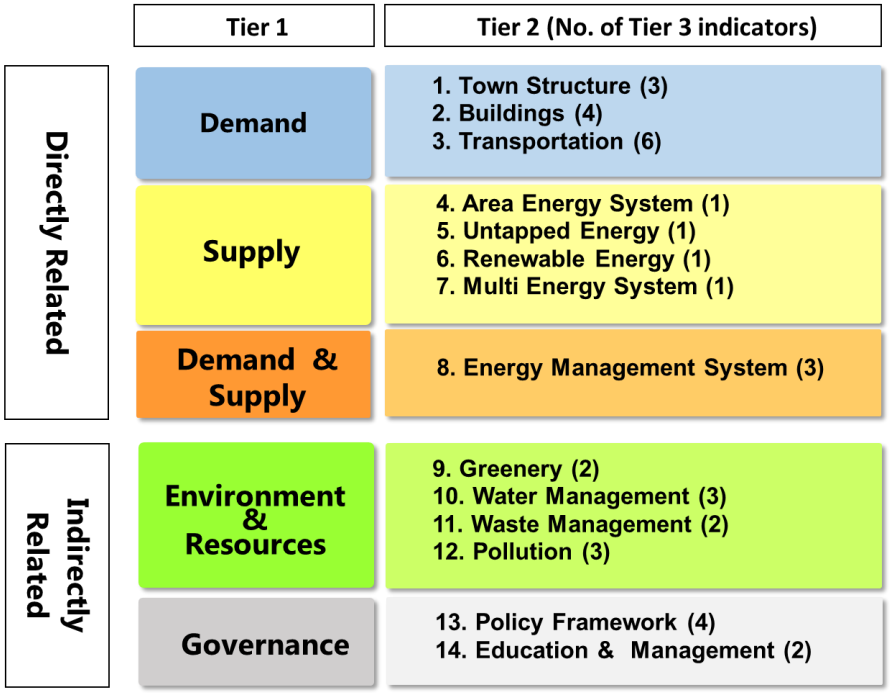

Figure 5: Abstract Framework of APEC LCT-I system

The assessment areas of the LCT-I system are comprehensive and use a five-point scale evaluation. As the low-carbon measures addressed in the Concept are originally designed from the energy perspective, the assessment areas of the LCT-I system are first grouped into two main categories: measures 'directly related' to energy usage; and measures 'indirectly related' to energy usage. The assessment targets comprise five major items (Tier I), 14 mid-level items (Tier II), and 36 lower-level items (Tier III). In directly-related measures, Tier I includes 'Demand', 'Supply' and both 'Demand & Supply', each of which consists of specific low-carbon measures under Tier 2 and 3. Indirectly-related low-carbon measures are aspects of 'Environment and Resources' and 'Governance', like education, policy framework or

water/waste management. Some indicators refer to evaluation standards in existing assessment scheme, such as CASBEE (Comprehensive Assessment System for Built Environment Efficiency) and LEED (Leadership in Energy and Environmental Design). The calculation for CO_2 emission is according to the calculation criteria of each economy, but for economies that do not have a regulated calculation method, IPCC or ISO14064 guidelines can be used as an example.

4.3.2 LCT-I System Self-Evaluation of La Molina (Lima), Peru

Mr Luis Ferroel Gamarra Romero from the Public Services of the district made the presentation on its development plan. La Molina is a residential district with 178,000 people living within 65.75 km^2, where is now under redevelopment for existing areas with low carbon targets. La Molina plans to become a model cultural residential sustainable city, being greener, walkable and accessible, promoting a healthy lifestyle, community spaces, respect and love for nature. Six chosen focused areas are mobility, urban greenery, solid waste management, water, public spaces, and energy. The district aims to reduce emissions by 12% by 2027 compared to emissions of 2019, which is about 260,000 tCO_2.

Low carbon measures for the demand side include reducing urban heat island effect (planting more trees), developing LED street lights, cycling pathways, energy-efficient home appliances, solar PV, and green roofs. Low carbon measures for the supply side include renewable energy of solar PV and wind and waste heat recovery.

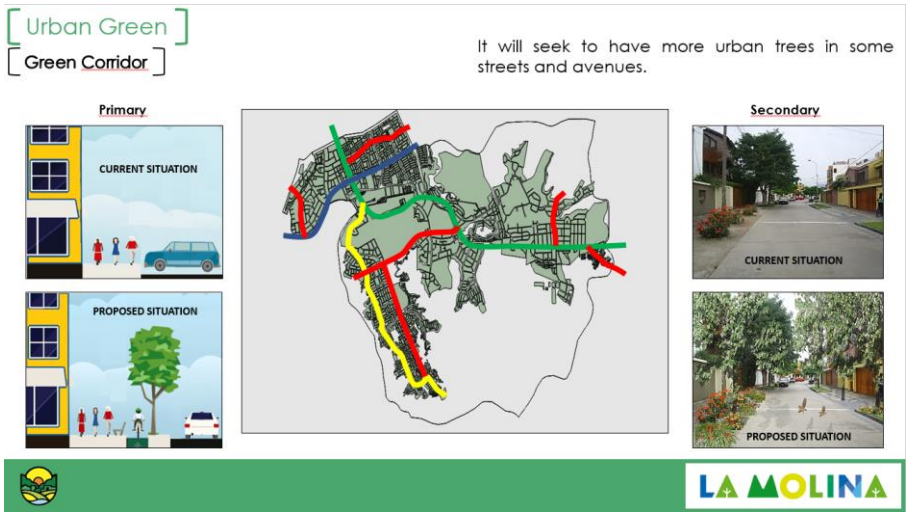

Figure 6: One of La Molina's development plan

Mr Saiful Adib bin Abdul Munaff, Director of Low Carbon Cities department of Malaysian Green Technology Corporation, delivered a review presentation on the LCT-I system application in La Molina as a review expert. After screening the materials submitted by Peru before the Symposium, Mr Saiful Adib agreed that the district had done well in understanding and applying the LCT-I system in the assessment. Yet explanation and illustrative information

were not as plenty as expected, such as in identifying whether it was a 'Residential Oriented Town' by the ratio of commercial buildings or validating the number of green spaces. Since the district is now at the planning stage, there are rooms to improve all Tier 2 items, noting that solutions are all co-related and integrated. He also showed some ideas for development such as the passive design in a building (Figure 7), rainwater harvesting, micro waste-to-energy. He cited the example of Shah Alam city of Malaysia in integrating such measures.

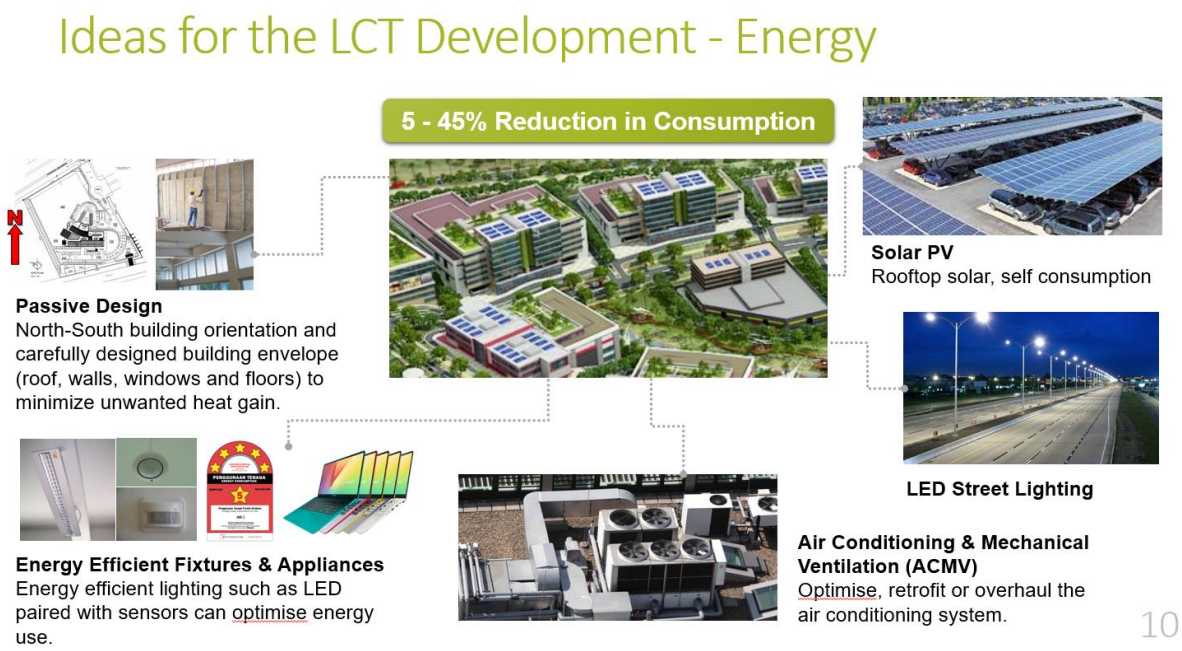

Figure 7: Expert's suggestion for energy system development in La Molina

4.3.3 LCT-I System Self-Evaluation of Khon Kaen Municipality (Khon Kaen), Thailand

Dr Pattanapong Topark-ngam from Khon Kaen University represented Khon Kaen Municipality. The district of 46km^2 and almost 120,000 people has had general strategies for green space, energy-saving, and sustainable development, resulting in 30,000 tons of CO_2 reduction in 2018. Their development plans include developing an energy management system with electric vehicles, buses, LRT (light rail transit), smart houses, clean energy sources such as solar, hydro, natural gas and near-zero energy buildings. Khon Kaen Municipality has a close collaboration with the private sector and academia and has attained their support in the planning so far. The district needs APEC consultation in conducting a feasibility study for using alternative energy such as solar, wind, or biogas as a kick-off and in-detail design suggestions for the city to be green, walkable, bicycle-based and connect people to the public transit system.

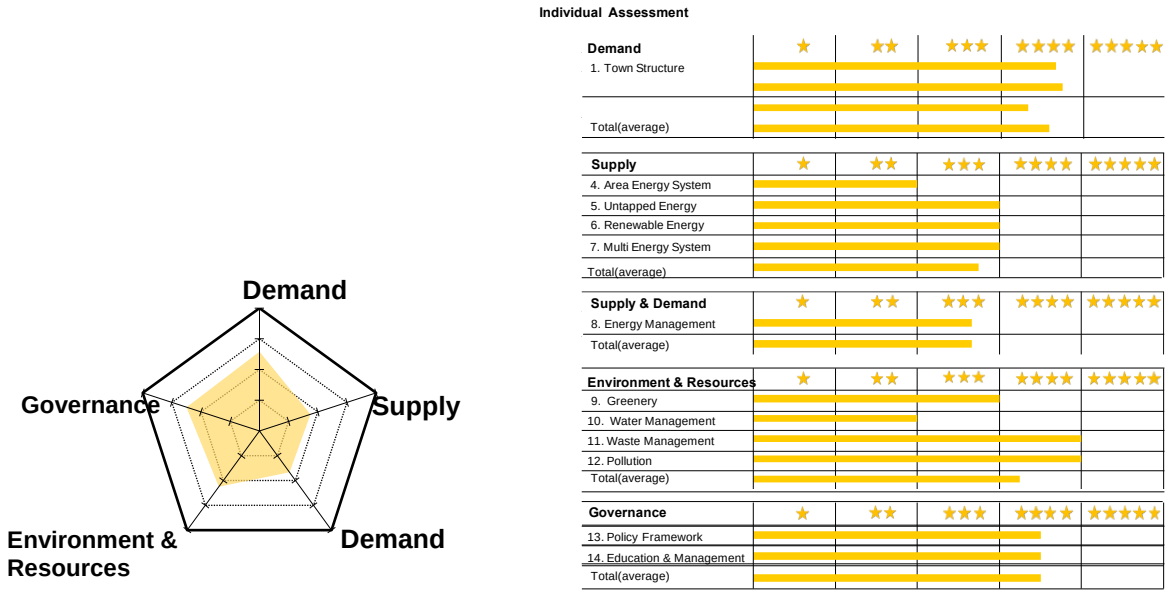

Figure 8: Self-evaluation results of Khon Kaen Municipality

Mr Nguyen Quang Huy, an LCMT review expert of two-year's experience, made a focused review on Khon Kaen Municipality's LCT-I self-evaluation. The district submitted a fair amount of explanation and evidence, although the calculation of CO_2 emissions was not yet fulfilled. Current development plan of Khon Kaen Municipality should involve stakeholders of all levels: central (Department of Alternative Energy Development and Efficiency, Ministry of Energy; Thailand Greenhouse Gas Management Organization), local (Regional Environment Office, Khon Kaen Provincial Offices for Natural Resource and Environment and Municipality School and the district administration), investor/implementer (Khon Kaen Transit System Co., Ltd, Khon Kaen Think Tank (KKTT)), Alliance Clean Power Co. Ltd) and other partners (UNDP or Khon Kaen University). Mr Huy suggested Khon Kaen Municipality develop the renewable energy like solar or wind, with special attention to charging station for EV; take advantage of IoT, AI in solid waste management towards a circular economy; promote LCMT in a wider public and set up the MRV system for monitoring the low carbon implementation.

4.3.4 LCT-I System Self-Evaluation of Phu Quoc (Kien Giang), Viet Nam

Mr Huynh Quang Hung, Vice Chairman of Phu Quoc People's Committee, introduced the island-district of Kien Giang province. Phu Quoc is located near the southern coast of Cambodia in the Gulf of Thailand, with 67% of its 574 km^2 are forest area. It is the largest island of Viet Nam and is a hot spot for tourism. The district plans to develop itself sustainably with particular concern to conserving the environment and culture: "to save energy from 5% by 2020; reducing electricity consumption at state agencies and offices from 10%, public lighting from 10%, production facilities from 5%, other sectors and fields from 3%" (2010 master plan). Phu Quoc under LCMT project chooses to focus on investment for domestic waste treatment plants, electric bus system, renewable energy projects, and energy management model in buildings.

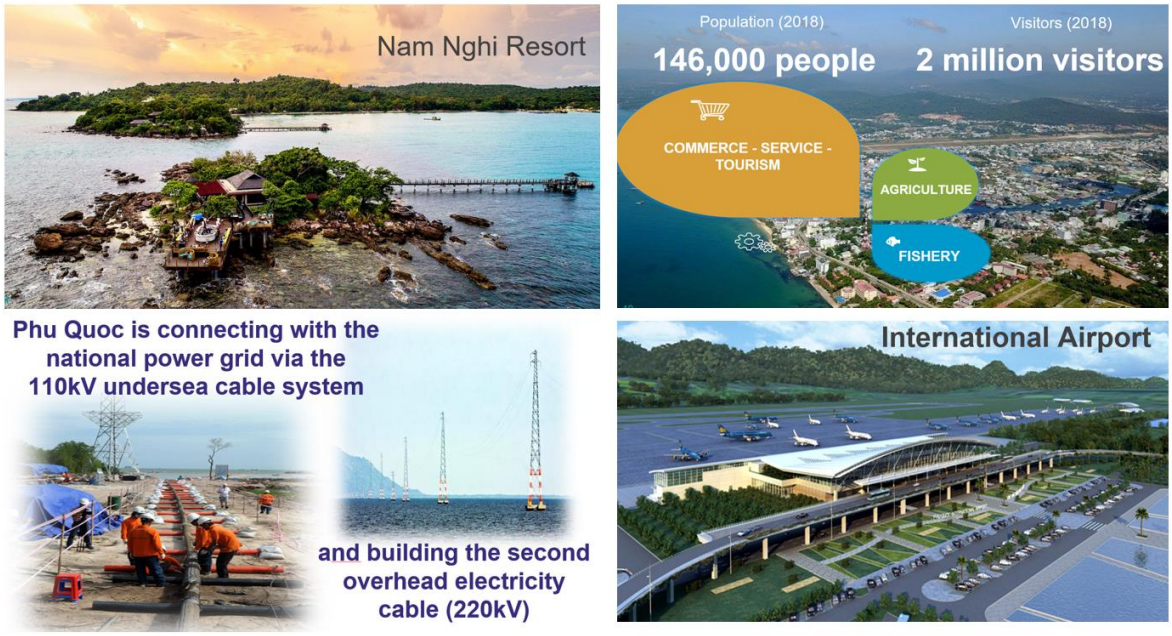

Figure 9: Overview of Phu Quoc

Mr Michinaga Kohno, President and Chief Executive Officer of the Michi Creative City Designers Inc, as a review expert, delivered a review presentation on the LCT-I system application in Phu Quoc. He learned from the development master plan to 2030 of Phu Quoc, which was issued in 2010, and used it as a background to comment on the self-evaluation. The overall provided information was good enough, although some pieces of evidence were not clear. Solid system to execute the master plan, especially in pollution control and environment protection were necessary. Some indicators in the "Supply-side" were not uniformly understood. Mr Kohno suggested that the district should focus more on the supply of clean energy sources, assuming the future increase of population and tourists that could boost energy supply. As it is a "remote island model", using renewable and untapped energy sources can be more justifiable in terms of capital investment and return. He quoted several similar examples such as Maui of the United States, Okinawa of Japan, and Samui of Thailand, especially the latter, who was also a part of the LCMT network.

4.3.5 Panel discussion of reviewers on all cases

Besides one-to-one review presentations, this session enables reviewers to comment on other cases that he/she was not in charge of making a presentation on and other participants to engage in the process. **Mr Michinaga Kohno**, a veteran in the LCMT project, was the moderator. He initiated the discussion by commenting on La Molina's case that it was difficult to change the urban structure (literally demand-side challenge), thus investing in the supply side should be more effective. Khon Kaen Municipality has many visitors, therefore, improving transportation, especially public transport, is important. The district can rely on international programs such as of the United Nations and domestically developed master plans for energy and waste management.

Figure 10: Mr Michinaga Kohno as the moderator of the panel discussion session

Mr Saiful Adib concerned about Khon Kaen Municipality's transport plan of shifting to LRT while traditional railway already existed. BRT could be another substitute due to its economics, flexibility, and efficiency. For any plan, the involvement of the private sector is vital in ensuring its continuity in the next ten years, yet being independent of political change. Regarding Phu Quoc, he wondered whether the district could meet the rapidly growing energy demand or not when tourism expands fast. Phu Quoc should plan well beforehand with solutions for renewables like battery storage, and not rely on conventional fuel.

Mr Kohno added that BRT in Khon Kaen Municipality might be attractive for people to live there as the first place in Thailand (except Bangkok) to implement this plan. A balance of finance and actual demand should be considered then.

Regarding La Molina, Mr Huy did not have detailed comments for the district due to their limited information in the nomination sheet and LCT-I self-evaluation form. As a Viet Nam nominated expert, he did not comment on Phu Quoc either as that was his home case.

On La Molina's side, they confirmed their willingness and openness to APEC's diagnosis and suggestions. They have been trying their best to leverage the carbon emission even in areas with green spaces.

Dr Pattanapong from Khon Kaen University agreed that many works need to be done, such as establishing carbon footprint scheme for the district and focusing on transportation that could be a significant sector within their smart city concept. Regarding BRT, as seeing some deficiencies from Bangkok's application, the district wants to do something different. LRT is more attractive by its modernised fuel usage such as electricity. A collaborative LRT project is going on with Hiroshima. Khon Kaen Municipality is now one of the model districts in Thailand, which look at alternative energy towards net-zero energy and not limited to solar energy. All stakeholders, especially academia and private sectors, are involving closely in developing the project.

Mr Hung further clarified about the current development of Phu Quoc. The primary energy supply system on the island is electricity, backed up with the on-going second underground

220kV cable system and coming natural gas supply plan. As a result, no more diesel is utilised. Phu Quoc is now also investing in charging stations for the electric bus system. Phu Quoc is very cautious about the new development plan, such as floor areas which should not exceed 25% of total land and buildings not be higher than five storeys with some special exceptions.

Mr Zapata-Garesché from 100RC drew participants' attention to the plastic pollution in the ocean since island municipalities like Phu Quoc may face this. Representatives from San Borja, Lima, and Mira Flores municipalities then shared their supportive views for low carbon projects. Each of them had their authority on their planning without depending on Lima capital. It is a good sign in Peru that local authorities can be empowered in designing their own living spaces. From the viewpoint of MOFA, Mr Jose Bustinza agreed that an overall strategy was important to municipalities to design their own local.

4.4 Discussion

Dr Nguyen Linh Dan facilitated the discussion on the applicability of LCT-I system in symposium-participating APEC economies and other related topics. Participants could take this opportunity to make clarifying questions or comments to any previously made presentations.

Malaysian representative thanked the event organisers for creating a platform to learn more about low carbon practices and opening opportunities for collaboration. Malaysia has a few cities within the network of ICLEI, one of 100RC, and often refers to the LCT-I when developing local low-carbon city framework, especially in the upcoming master plans. Engagement of both local and federal government is crucial for the initiative.

Russian delegate from the Academia of Science stated that a low carbon project should balance all steps and activities to optimise financial resources and knowledge in each area. Under the main common goal, we can formulate several equations for different economies or fields. For example, heating is the primary source of emission in Russia. Researchers can propose some mathematical methods to focusedly deal with it, using historical data and project.

Other Russian delegate added the comment that the Concept and its guidance were unique and comprehensive; through the symposium, she could see how it was done. Project management usually prioritises the budget, which is the bottleneck for each city. The LCT-I material might transform into a universal set of measures that apply to all cities, with minor adjustments.

Peruvian representative affirmed the importance of a thorough holistic methodology. Cooperation between partners is vital in designing policies and maintaining them in the long term.

Active participant from Thailand said that LCT-I system was useful because it has been well used for these three model towns. Replicating them is worthwhile, and Thailand will apply the tool to reduce emissions.

Vietnamese participant was glad to see the idea of reducing carbon emission being circulated within the region; and agreed with the Russian's opinion on having a comprehensive modelling and adding some modification for more convincing results.

Mr Rodrigo Perpétuo suggested that LCMT could collaborate with other globally- and locally-established institutions like ICLEI. Both bottom-up and top-down approaches are recommended. ICLEI has experience in connecting development plans with financial sources and has found 71 chances of funding for such projects. Towns should improve their international relations strategy more actively.

Figure 11: Discussion session

Mr Zapata-Garesché believed in the future of LCT based on today's current approaches. Those plans are not only the affairs of the government; all levels and actors have their crucial roles. Towns should not try to do the work in isolation; they should be connected in a network to exchange good and bad experiences. He also looked forward to the COP25 to see changes in protecting the environment.

Mr Kohno, who has been involved in the LCMT project since 2010, found that some indicators could lead to misunderstanding. APEC guidelines should be subjected to operation and maintenance to become global standards.

Mr Saiful Adib expressed his thought that the financial aspect of a project was an important indicator.

4.5 Certificate Giving Ceremony and Closing

After LCT-I system application session, the certificate giving ceremony was held to show the organisers' appreciation to the towns and the host. **Mr Yamashita** presented a certificate to La Molina, Khon Kaen Municipality, and Phu Quoc, commending their voluntary works in the LCMT Dissemination Phase 2. Based on the focused items identified in each proposal, a feasibility study could be conducted to support volunteer towns' ongoing efforts in LCT development in the next project, if the LCMT Dissemination Phase 3 is approved by APEC-

EWG. The LCMT Chair presented mementos to San Borja and Peruvian Ministry of Foreign Affairs for their active contribution.

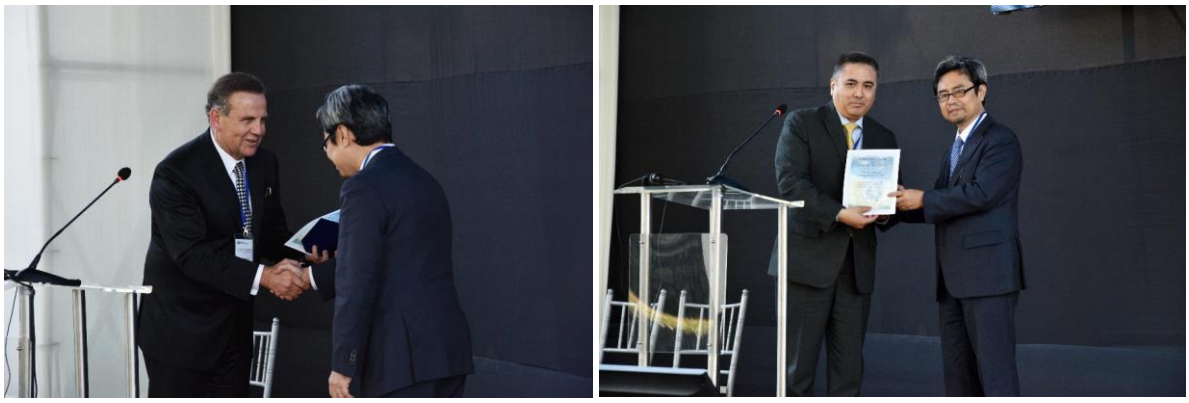

Figure 12: Certificate giving ceremony to the symposium's hosts

Mr José Bustinza, the SOM Peru for APEC expressed the pleasure that the symposium was well organised with the various collaboration of MOFA, San Borja, and LCMT project organisers.

Mr Munehisa Yamashiro, Vice President of APERC, concluded the symposium with success and confirmed that we had a fruitful discussion during an intensive day. He thanked the host and pre-announced that the wrap-up symposium will be held in Tokyo in late 2020.

5. Site Visit to San Borja

On the second day of the symposium, San Borja's municipal officers, led by the Mayor, Dr Alberto Tejada Noriega, held a site visit to several green spots inside the district, showing its effort since the full-scale feasibility study conducted under LCMT project in 2014. Participants were first welcomed at San Borja municipal office and then took a bus to the sites described below.

The waste collection system in San Borja was designed to be underground to prevent all possible pollution while creating beautiful scenery on its surface. An automated truck does the collection.

Figure 13: Waste collection mechanism in San Borja

Biophysical Surface Water Treatment Plant of the Surco River within a public park enables self-irrigation the surrounding areas. Specific types of plants do the water treatment, which is under the periodical test of metal and chemical level of contamination. Qaira electronic station helps the public to know about contemporary air and environmental quality at the spot and on its website.

Figure 14: Biophysical Surface Water Treatment Plant of the Surco River and Qaira electronic station

The Army joins hands with the municipality in collecting bio-waste and exceeding plantation and produces composting free.

Figure 15: Composting plant run by the Army

The final destination was the Kallpa Wasi demonstration plant for renewable energy in cooking.

Figure 16: Renewable energy demonstration plant - Kallpa Wasi

6. Symposium Analysis

Location: The meeting was held outdoor at Parque Olimpico (Olympic Park), as suggested by San Borja municipality. An event production company is contracted to arrange a conference setting. The first time an APEC LCMT held outdoor required exceptional effort of San Borja (in providing green and safe public space) and the organisers (in adapting facilities and preparation to an open-air context). Thanks to the stable weather of Peru in October, participants reflected an enjoyable and pleasant experience for the whole day.

Figure 17: View of the symposium from the stage

Participation: 59 participants registered to join the symposium. Twenty flew from outside Peru. From the Peruvian side, there were representatives from Ministry of Foreign Affairs, Ministry of Energy and Mines, mayors of the neighbouring municipalities, San Borja's public staff, and related agencies. Two nominees from the Philippines and one from Viet Nam could not come because of domestic affairs. APEC-funded delegates include those from Malaysia, Russia, Thailand, and Viet Nam.

Logistics: The event production company did an excellent job in providing facilities necessary for the symposium, including staging, lighting, heating, catering and the like. San Borja provided security services to make sure the conference areas be protected, and transportation from the hotel to the venue be smooth. Before the event, all participants

agreed to go paperless, and presentations' handouts were not necessary. Symposium materials included only two LCMT publications that were brought from Japan and the agenda printed by MOFA.

Presentations of San Borja and La Molina and greeting remarks were given in Spanish. Although the simultaneous translation was provided, some minor gaps existed when participants needed to communicate directly with each other. Speakers and participants sat between each other to provoke more lively and diverse discussions.

On the margins of the symposium, guest speakers from ICLEI and 100RC had several meetings with mayors of different municipalities in Lima about low-carbon development plans. San Borja mayor invited 13 neighbouring leaders from such as Jesús Maria, La Victoria, Surquillo, Pueblo Libre, San Isidro, Miraflores, and they had a positive reflection on LCMT projects, particularly on what San Borja has achieved so far.

Figure 18: Some of the neighbouring mayors joined the symposium

7. Appendix 1: Agenda

Monday, 21 October 2019 ***Meeting at Olympic Park, San Borja*** ***MC: Mr Diego Rivera Rivota, APERC***	
08:00-08:25	Registration at Delfines Hotel
08:30~	Leave for Olympic Park
09:00-09:10	Welcome remarks of the host city **Dr Alberto Tejada Noriega,** Mayor (Alcalde) of San Borja
09:10-09:20	Opening remarks **Mr Takanori Yamashita**, Director for Natural Resources and Energy Research, International Affairs Division, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI) Japan and Chair of APEC Low-Carbon Model Town Taskforce (LCMT-TF)
09:20-09:40	Presentation on the low carbon town development in Peru **Ms Daniella Rough**, Project Coordinator for "Nationally Appropriate Mitigation Actions (NAMAs) in the energy generation and final use sectors in Peru" Project, Energy Efficiency General Directorate, Ministry of Energy and Mines, Peru
09:40-10:00	Presentation on the progress of LCT projects in San Borja and the LCT-I system application **Dr Alberto Tejada Noriega,** Mayor of San Borja
10:00-10:30	Photo session and coffee break
10:30-11:00	Presentation on the ICLEI's successful projects **Mr Rodrigo de Oliveira Perpétuo**, Executive Secretary, ICLEI South America
11:00-11:30	Presentation on the activities and experiences of 100 Resilient Cities (100RC) **Mr Eugene Zapata-Garesché**, Managing Director for Latin America of 100RC
11:30-13:00	Lunch
13:00-13:30	Presentation on the APEC Low-Carbon Town Indicator (LCT-I) System **Dr Nguyen Linh Dan**, Researcher, Asia Pacific Energy Research Centre (APERC)
13:30-14:45	Presentations on the LCT-I system application by the three volunteer towns (25 minutes each) 1. La Molina (Peru) – **Mr Luis Ferroel Gamarra Romero**, Public Services of La Molina

	2. Khon Kaen Municipality (Thailand) – **Dr Pattanapong Topark-ngam**, Khon Kaen University 3. Phu Quoc (Viet Nam) – **Mr Huynh Quang Hung**, People's Committee of Phu Quoc
14:45-15:15	Comment of reviewers for each volunteer town (10 minutes each) 1. La Molina (Peru) – **Mr Saiful Adib Abdul Munaff**, GreenTech Malaysia 2. Khon Kaen Municipality (Thailand) – **Mr Nguyen Quang Huy**, Viet Nam Ministry of Industry and Trade 3. Phu Quoc (Viet Nam) – **Mr Michinaga Kohno**, Michi Creative City Designers Inc.
15:15-15:45	Coffee break
15:45-16:30	Panel discussion of reviewers on the volunteer towns Moderator: **Mr Michinaga Kohno**, Michi Creative City Designers Inc.
16:30-16:45	Certificate giving ceremony **Mr Takanori Yamashita**, Chair of LCMT-TF
16:45-17:15	Discussion on ways forward: LCT-I applications to participants' local and the future of low carbon towns Moderator: **Dr Nguyen Linh Dan**, Researcher, APERC
17:15-17:30	Closing remarks **Mr José Bustinza**, SOM Peru for APEC **Mr Munehisa Yamashiro**, Vice President, APERC
17:30 ~	Leave for welcome dinner
	Tuesday, 22 October 2019 ***Site visit***
08:30-08:55	Registration at Delfines Hotel
09:00~	Leave for San Borja City Hall
09:30-12:30	Delegate reception by the Mayor Site visit in the District of San Borja • Eco-Efficient park • San Borja Composting Plant • Biophysical Surface Water Treatment Plant of the Surco River and Qaira electronic station

• Renewable energy demonstration plant - Kallpa Wasi	
12:30-14:00	Lunch at the San Borja plants propagation place
14:00~	Leave for Delfines Hotel

8. Appendix 2: Group photo