Ipoh City (Malaysia)

Mr. WONG Kam Lee

Division Chief, Local Authority One Stop Centre Division, Ipoh City

[Subject]

Rainwater harvesting system in Ipoh City

The rainwater harvesting system of Ipoh can be defined as gathering or accumulating and storing of rainwater. Recovered water is used as household drinking water, for livestock, for irrigation and a way to refill aquifers in a process of ground water recharge. It helps Ipoh citizens to save household water cost, usage consumption as well as protect environment.

Increase of water demand, due to population growth and industrialization, calls for more efficient and effective management of finite water resource.

To respond to the need, one of solutions, considered by Malaysian government is the implementation of "Rainwater Harvesting System (RWHS)." In 1999, the Ministry of Housing and the local government prepared "Guidelines for Installing a Rainwater Collection & Utilization System" which they promoted highly. The system became an eye-catching alternative plan in sustainable water resource management under the "9th Malaysian Plan." Then, in 2007, the Malaysian Government introduced an implementation plan, "Rainwater Harvesting System (RWHS)"and promoted the plan by setting up the National Water Resources Committee with urban development aspect in the context of rainwater harvesting.

In April 2011, through the amendment to the "Uniform Building By Laws (UBBL) 1984," Malaysian Government placed a mandate that compulsory rainwater harvesting for each new housing and government buildings and encouraged the system to be applied to older buildings as well.

The city needs to ensure the rainwater harvesting system being implemented efficiently and effectively, then by identifying and preserving existing water catchments; it needs to include storage in local areas, preferably at elevated locations, by protecting them.

Furthermore, various government agencies, by utilizing mass media, should promote the benefit and importance of Rainwater Harvesting System and to incorporate this into education curriculum at schools in the future.

Jeju Special Self-Governing Province (Republic of Korea)

Mr. OH Seung Ieek

Executive Director, Free International City Bureau, Jeju Special Self-Governing Province

[Subject]

Development of Circular Eco-trail System

Ecotourism* is gaining popularity in Jeju Special Self-Governing Province as a new tourism pattern and is viewed as a model of future city development. The Korean Government chose the top 10 model regions in which Geomum Oreum and UNESCO's Global Geopark, Biosphere Reserve in Jeju are included. In addition, the area environment is highly recognized globally as one of the World Natural Heritage sites and one of Ramsar Wetland sites.

Jeju Olle promotional direction incorporates completion of circular eco-trail system to highlight the area's geographical quality and improvement of trails that are valuable from traveler's perspective. While Jeju Special Self-Governing Province and administrative cities are responsible for the general planning and coordination; the newly established World Natural Heritage Management Office manages preservation and good use of the heritage sites; then the Jeju Olle Foundation and Jeju Special Self-Governing Province handles daily business operation.

Achievements of the project are improvement of walking paths at Mt. Halla circular forest trail and World Natural Heritage Geomun Oreum Trails and establishment of the Jeju Olle Foundation and its activities.

Positive outcome of the project was recognized by the Korean Government as a good example of low carbon green growth and an eco-tourism promotional model which also received high profiled media attentions. Furthermore, many tourists previously limited their visit to Mt. Halla now include Jeju Olle Trails for their destination.

Future development plan includes completion of trails, promotion of Jeju Olle for global recognition by activities such as hosting international events that leads to revitalization of the local economy.

* Ecotourism: Tourism structure promoted by local people that aims for conservation and enhancement of sustainable local natural environment by understanding its historical background, value and beauty. (Ministry of the Environment, Japan)

Kitakyushu City (Japan)

Mr. UMEMOTO Kazuhide

Deputy Mayor of Kitakyushu City

[Subject]

Urban Policy and Inter-city Cooperation for Low-Carbon Green Growth

Kitakyushu experienced severe environmental pollution problem in 1950's but the city reversed its course since 1969 by taking environmental actions such as "Green production," streamlining production process and environmental improvement, and making environmental and economical growth compatible. As a result, today, economic growth and improved environment coexist with this drastic countermeasure against pollution.

In 2009 the city established an action plan of Kitakyushu eco-model, "Green Frontier Plan" and is targeting 50% CO2 reduction still achieving 40% economic growth by 2050. Kitakyushu was elected to be one of the real world testing cities with next generation energy system and it launched "Kitakyushu Smart Community" project this year. The city is developing "regional energy management system" and "dynamic pricing" which enable electrical energy supply and networking through IT in best condition through a smart community center.

Also, by building an environmental cooperation network with Asian cities, the city has been accepting trainees/researchers from developing countries as well as contributing to Cambodia's environmental improvement.

With various projects being successful, in July 2011, the city was named as a model city of green growth by OECD (Organization for Economic Co-operation and Development) and then in December 2011, Japanese Government appointed the city as a "Green Asia International Strategic Comprehensive Special Zone."

In June 2010, the city, in an effort to support international environmental business development, opened the "Kitakyushu Asian Center for Low Carbon Society" carrying the mission to promote Asian economy and reduction of CO2.

The city will continue to move forward into the future by collaborating with citizens with their wisdom to build a sustainable city successful in both economical growth and environmental conservation.

Fukuoka City (Japan)

Mr. TAKASHIMA Soichiro

Mayor of Fukuoka City

[Subject]

Fukuoka City's Approaches Toward Becoming a Green City

Fukuoka City has four distinctive policies in support of building a green city. They are "waste disposal," "conservation of natural environment," "distributed autonomous energy," and "environmental education, increasing citizens' awareness."

Fukuoka City actively carries out waste collection at night, incinerates 100% of combustible trashes, and converts waste into energy through waste power generation (thermal recovery). The City has developed the Fukuoka Method, its own system of landfill technology. To transfer this technology to other cities in the Asian-Pacific region, the Environmental Bureau is sending its staff to provide technical guidance. The Clean Development Mechanism (CDM) Executive Board of the United Nations has approved the Fukuoka Method as new a CDM. After introducing this method into existing landfills, the reduced amount of methane gas emissions can be used for carbon credit (emission trading of global warming gases).

To conserve Hakata Bay area environment, the City is planning to set up a wild bird park in Island City. Also, the City is planning to develop a distributed autonomous energy system to construct a "CO2 zero emission zone", where all residents work together to conserve and create energy. A permanent exhibition of the "smart house," a CO2 zero model home, is opened to public. Other notable projects include the Seibu (Nakata) landfill mega solar power project and the field study of the wind-lens turbine.

The City believes that environmental education and the increase of citizens' awareness are fundamental elements of building a green city, and is working hard to implement them.

Fukuoka City has other world-class technologies. Desalination (drinking water technology) is one of them. The city has also developed advanced wastewater technology (reuse of reclaimed water) for the purpose of practical use. The City is offering international visit and training programs for the following five areas: green city development, water resources utilization, urban design, welfare for the elderly, and firefighting & disaster prevention. Fukuoka City will continue to expand these programs in order to introduce the Fukuoka Model to the world.

Jakarta Capital City Government (Republic of Indonesia)

Mr. Rusman Erwin SAGALA

Head, Conservation and Environment System Division, Jakarta Capital City Government

[Subject]

Green Growth Development based on Low Carbon City in Jakarta

Jakarta, the capital of Republic of Indonesia, is easily impacted by climate changes due to its topography and high population density. It is vulnerable to flood hazard or high tide above sea level from extreme weather caused by global warming with high temperature.

In 2007, Jakarta joined C40 (The C40 Cities Climate Leadership Group), then in 2009, at COP15 (the 15th United Nations Climate Change Conference), the city sets forth to reduce greenhouse gas emissions (GHG) by 30% in 2030.

In developing the Regional Action Plan for Reduction of Greenhouse Gas (GHG) Emissions, Spatial Planning (RTRW) of DKI year 2010-2030 states the city to aim 30% reduction of greenhouse gas emission by 2030. However, the task remains the challenge as how to achieve this reduction goal since 2005 greenhouse gas emission was 35.09 million tons but this is projected to rise to 113 million tons in 2030.

Various action plans are implemented to mitigate and adapt to climate changes. Sector plans for the smart use of energy, traffic, waste, sewerage are in progress as well as other plans are on their ways. For instance, "Smart Adaptation" Program to reduce climate change vulnerability includes mangrove forest planting and flood control sea defense wall structuring.

Also, the project like water management for efficient movement of water through 5R (Reduce, Reuse, Recycle, Recharge, and Recovery) encourages citizen participation.

By integrating various sector programs through the Spatial Plan, Jakarta moves forward to achieve a low carbon green growth city.

Gwangyang City (Republic of Korea)

Prof. LEE Sung-woong

Mayor of Gwangyang City

[Subject]

Building a City of Low Carbon & Green Growth

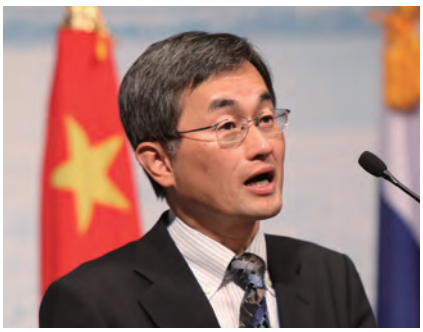
Gwangyang's environmental policy direction centers in having sustainable growth driven by harmony between nature and industry.

There are 6 key sector policies: (1) Urban Regeneration: Based on environmental conditions for eco-city building (2006 – 2015), renews the land, and builds green traffic infrastructure in rural and mountainous areas; (2) Green City: The Green Gwangyang Grand Project involves projects such as joint park development with private companies and construction of industrial complex by joint investment with industry community; (3) Green Life & Waste Recycling: To promote waste reduction and recycling, the city sets and manages "carbon point system" and "green card"; (4) Climate & Atmosphere: By abiding "Curtailment Target of Greenhouse Gas Emissions" the city aims for 31% emission reduction in 2020 compared to 2005 level. By the enactment and revision of the master plan against climate change and the Ordinances on Low Carbon & Green Growth and landscape, the city has established the basic platform for greenhouse gas reduction. At the same time it calls for broader supply of renewable energy expansion; (5) Pure Water Quality: Ensuring biodiversity preservation and restoration along Sumjin River; and (6) Green Industry: Production of Synthetic Natural Gas (SNG) of 0.5 million ton annually (power generation of 92MW). Building of green eco-port and utilization of ware house for photovoltaic power generation are in progress.

Future directions encompass strengthening joint cooperative network among neighboring municipalities and inaugurating "Gwangyang Council on Sustainable Environmental Development (tentative name)." Then the city plans to raise additional environmental awareness among citizens and their spontaneous participation to improve the environment which the city will continue to invest in infrastructure aiming for a green city.

Furthermore, an environmental control center for the Gwangyang Bay Area will be established in order to enhance a joint cooperation network among councils for broad-based actions against environmental issues.

Kumamoto City (Japan)



Mr. HARAMOTO Yasuhisa

Executive Director, Environmental Bureau, Kumamoto City

[Subject]

Moving towards a Low-carbon Kumamoto City

In March 2010, Kumamoto City formulated a plan called, "Strategic Plan for the Realization of Low-Carbon Kumamoto City" to reduce global warming as the community and shifting to a low-carbon society.

To achieve the targeted green house gas emission reduction, the city systematized four strategies and created "Action Plan 80," consisting of 80 leading projects to advance medium-and-long term initiatives. With these strategies and plans, the city has been verifying and implementing the strategic plan.

The city moves with the three important viewpoints, "wide-area cooperation," "civic collaboration," and "personnel training" for the realization of a "Low-Carbon Kumamoto City."

Main initiatives are "groundwater maintenance," "promotion of solar energy," "thorough utilization of energy and resources of waste," and "development support and attracting eco-business companies."

Future vision of a "Low-Carbon Kumamoto City" by implementing these initiatives should be seen in the following improved structures: (1) Integrated multinuclear city with local characteristics; (2) Decentralized efficient energy system including administration and use; (3) Eco-friendly transportation system; and (4) Efficient use of water and greenery resource, strength of Kumamoto, in small hydropower generation and creation of greenery.

Kumamoto wishes to send a message to the world as an attractive city, contributing to global environment, described as "a city utilizing the rich natural sparkling water and greenery, which is low-carbon and livable, where people can feel their lives are vitally connected and enriched," and "a compact city which has accessible public transport, efficient energy saving and production of energy."

Oita City (Japan)

Mr. KUGIMIYA Ban

Mayor of Oita City

[Subject]

Measures to Create a Low Carbon Society in Oita City, Japan

Oita City places global warming countermeasure as one of the top priorities of the city and while seeking sustainable development, aims toward a low-carbon city.

A unique approach under the principle, "creation of a civil cooperation city," citizens, business, and administration are working as a team. The city initiated "Oita Citizens Meeting on Measures against Global Warming" to establish a firm foundation of the movement. Then to raise public awareness on climate change, programs like "civil environment university" and "environmental event in Oita City" were created to get citizens actively involved.

Furthermore, the city actively introduced renewable energy. Solar power generation equipments to households with financial subsidiary is being promoted, and other movements such as "civil challenge to reduce energy consumption" or "green curtain movement" are campaigns both citizens and businesses embrace together to control summer time energy consumption level.

Additionally, aiming to be recycling society, the city promotes in the area of recycling household wastes. By categorizing waste into 12 types and "squeezing water out of food waste," the level of waste management has improved in reducing waste volume, transport efficiency, combustion efficiency at incineration plants.

Looking into the future, there is another city-wide project to create and preserve "everybody's forest." Having established a "Green Dream Bank," in which a certain amount of acorns are exchanged for eco-friendly goods, collection of acorns are well promoted among citizens. Using the collected acorns, "civil campaign to plant trees" is being implemented to enable seedling and planting trees for the future generation.

Though each project may produce only a handful of fruitful result in the grand global scheme, we believe that the each step is the mission that we must accomplish in this generation.

Vladivostok City (Russian Federation)

Mr. Roman Vladimirovich KARMANOV

Vice Mayor of Vladivostok City

[Subject]

Vladivostok's Major Environmental Projects

The City of Vladivostok addresses environmental issues from comprehensive approach with the latest technology and methods. The environmental protection projects were included in the governmental program called, "The Development of Vladivostok as the Center for International Cooperation in Asia Pacific" and the federal target program "Economical and Social Development of Russian Far East and Baikal Territory by 2013."

A new waste treatment and disposal complex as well as the restoration of old domestic waste dump site will be a good example of the efficient waste treatment solution. It is one of the most important ecological projects of the city and it rejects waste combustion and provides the maximal recycling of the waste components and their re-use including the subsequent fabrication of building materials.

And it is expected that improvement will be seen on both Amursky and Ussuriisky bay pollution by construction of three bio-purification facilities that will help to change the situation dramatically by improving the quality of sea water.

Another major project of the city was gasification of the main power plant on the south of the Primorye Region. Converting from coal to gas transfer started in September last year. In the first phase it already accomplished 40% reduction of harmful emissions. In 2010, the city launched programs to upgrade storm drain systems and a long-term "Vladivostok's Greening" program is also in place.

Other methods of environmental projects include education. Ecological education at schools and other institutes involves as many participants as possible with various events and programs.

The city supports various environmental initiatives proposed by local NGO and youth organizations alike. In 2011, for the first time, Vladivostok celebrated the "World Environment Day" and continues to promote ecologically sound environment through many channels.

Kagoshima City (Japan)

Mr. MORI Hiroyuki

Mayor of Kagoshima City

[Subject]

Low-Carbon Policies in Kagoshima City

Kagoshima City is actively moving to promote a low-carbon city by implementing various action plans, including 6 basic policies, under "Kagoshima City Environmental Foundation Plan," which is the compass of the city's environmental policies, as well as taking actions based from "Kagoshima City Counter-Global Warming Action Plan," which is the implementation plan for countering global warming.

As tangible on-going renewable energy implementation is the construction of "Kagoshima Mega-Solar Power Plants" for public facilities, elementary and junior high school use. Since 2004, the plan has expanded to offer grants for residential-use solar-powered systems also. There is a plan for corporations, like Kysocera and IHI, to build 70 megawatts (the largest scale in Japan) capacity plants in the near future.

The city moves forward with installation of biogas facilities utilizing raw waste. Additionally, in an effort of countermeasure against "Heat Island Effect," rooftops, wall sides, rail track surface, or school grounds are covered with turf and thus creating green space. Furthermore, the city advocates eco-friendly technologies to general public with an incentive like subsidizing electric car purchase, replacing 90% of official vehicles to eco-friendly ones, installation of paths for cyclists in the city and subsidizing power-assisted bicycles.

The city built "Kagoshima Museum of the Environment," the base facility for environmental education for learning to gain knowledge to raise awareness and to infiltrate general public.

We believe deepening ties, among the member cities, with collective wisdom through the summit, is crucial to accelerate countermeasure plans against global climate change. Kagoshima City is committed as a willing partner to this endeavor.

Pohang City (Republic of Korea)

Mr. PARK Seung-ho

Mayor of Pohang City

[Subject]

Downtown Revitalization Strategies of Pohang

During the early industrialization when constructing Pohang Industrial Complex, Pohang City experienced serious contamination around Dongbin Port area resulting downtown population departure to the surrounding areas including Jukdo Market as the downtown progressively degenerated into a slum.

With this background, the city realized the need of waterfront development and its renewal based on green growth and revitalization of the traditional urban function reflecting the public demand for attractive urban landscaping. Thus, the necessity of establishing a downtown revitalization strategy was recognized.

The two axes of the Pohang's Downtown Revitalization Strategy are 1) T9 Ocean Project and 2) Green Downtown Building Project.

"T9 Ocean Project" involves building or restoration of: (1) Dongbin Canal and Canal Side Complex; (2) Canal City; (3) Dongbin Wharf Ways; (4) Pohang Ocean Park; (5) Pine Island Park; (6) Songdo Sand Park; (7) Pohang Tower Bridge; (8) a new marine city; and (9) Youngil Bay Bridge.

"Green Downtown Building Project" on the other hand involves creating a downtown forest at the deserted railroad sites, building streams in the central shopping area to revitalize the neighborhood. Additionally, the plan includes building green ways that both enhance the landscape and serves as heat island countermeasure.

The city has a grand vision to develop its port into the 4th beautiful port in the world, with confidence that it will grow as the economic hub in the East Sea Rim, equipped with logistics such as already existing steel industrial complex, sophisticated science institute and R&D facilities that enables infrastructure of Yongil Bay Port as an international container port.

Miyazaki City (Japan)

Mr. KANEMARU Kenji

Vice Mayor of Miyazaki City

[Subject]

Reconstruction after Foot-and-Mouth Disease

The outbreak of foot-and-mouth disease in April 2010, taking place 10 years later with similar case, affected not only Miyazaki City but the entire Miyazaki Prefecture spreading the epidemic into 11 municipalities out of 26 in the prefecture. It forced the prefecture to terminate the spread by mass culling suspected 297,808 animals through vaccination, the first in Japan's history. By May 2010, the governor declared a state of emergency necessitating closing of public facilities, canceling, or postponing many events that affected economy of not only livestock farmers but entire citizens of the prefecture.

It took 129 days before declaring the eradication of the outbreak. Notably, the epidemic was enclosed within the prefecture with utmost effort being made to stop from further geographical spread.

Declaring a state of emergency affected the economy of Miyazaki City severely and negatively. Voluntary restrained events slumped consumption, financial damage in tourism caused by rumors and misinformation to tourists, business declines and increased labor force desertion all contributed to the economical downturn of the city. It was also reported the rising need of mental health care for affected livestock farmers.

The official estimate of economical loss over the 5 year span to the prefecture is expected to be 235 billion yen and 2 billion yen for the meat export industry of the city alone.

The city needed to recover quickly to stabilize citizen's life and counteract many issues like securing employment or reviving tourism. To motivate all, the "Ganbaro Miyazaki Campaign" conference was initiated through both city government and citizens, working hand in hand, aiming for the reconstruction of Miyazaki City to its fullness both economically and quality of life.

Today, thorough measures are taken by livestock farmers to prevent another outbreak. And, should it occur again, contingency plans are in place with neighboring municipalities in Miyazaki Prefecture including a conclusion of the regional epidemic prevention agreement.

Bangkok Metropolitan Administration (Kingdom of Thailand)

Dr. Vallop SUWANDEE

Deputy Governor of Bangkok Metropolitan Administration

[Subject]

Bangkok Flood Protection System

Residents of Bangkok have been fighting against water for a long time.

One of the reasons lies in city's drainage systems. Bangkok has several types of drainage systems; public drainage pipes, canals, pumping stations, retention areas, super giant draining tunnels and flood walls, all of these are traditional ones. Heavy rain beyond drainage capacity cause flooding, but with hourly precipitation up to 60mm can be regularly discharged without any incident.

In regards to 2011 flooding, causes can be traced to several reasons. One of them is that certain drainage systems were not properly managed in the north and the central Thailand, thus high volume of water was retained instead of being released. Furthermore, miscalculation occurred in releasing time and volume of water against the level to be retained. Additionally, five storms bombarded the north and the central part of the country that caused reservoir overflow in such short period of time that required prompt release almost immediately.

Then, there were malfunctions of several sluice gates along the Chao Phraya River. They are under management of the Royal Irrigation Department and Bangkok Metropolitan Administration was informed the malfunction after the flood water gushed into Bangkok.

To add to more damages, residents of the area were misconceived that water would recede better without dykes and open gates thus destroyed dykes. Unfortunately, there was not enough time to disseminate the correct information to them in an emergency. The last blame goes to governmental agencies that are responsible for water system management for their lack of cooperation and coordination.

Going forward, Bangkok will improve the city drastically by new constructions of river banks and drainage system, improvement of drain pipes, cannel, and drain tunnel then monitor their maintenance annually. Also, the city needs to construct additional sluice gates, pumping stations, or reservoirs and installing information system including precipitation radar.

Not to waste the lessons learned from the last year, Bangkok moves forward to be a shining city with beautiful Thai smiles around.

III-6 Secretariat Report

Prof. Ph.D. YASUURA Hiroto

Director-General
Fukuoka Asian Urban Research Center

Report on various activities of the secretariat

The summit, founded in 1994 by Fukuoka City, has membership from the Asia Pacific area representing 30 cities of 13 countries including the newest member, Changsha, which has joined this summit. Fukuoka City has been responsible as the secretariat and the Fukuoka Asian Urban Research Center (URC), an auxiliary organization of the City of Fukuoka has been managing the business since 2006.

Mayors Summit and Working-Level Conference have been held alternately marking Pohang Summit for the 10th Mayors summit and last year's Kagoshima Conference the 9th Working-Level Conference. Themes of the summits address issues and challenges in general that cities face; city planning, infrastructure improvement, introducing great examples of sustainable development, or provides a platform to exchange ideas and opinions that helps to solve problems. The summit also promotes advancement of each city represented and connecting member cities.

The secretariat conducts surveys on policies and projects of member cities and releases the results. Last year, it conducted a survey on environmental policies of member cities and the result was published through the newsletter and the website for all to view. We also support and coordinate exchange projects among member cities. For an example, we held citizen exchange events between community groups of Pohang, Korea and community volunteers of Fukuoka City in the fall of 2011.


Pohang–Fukuoka Citizen Exchange at public halls

Dissemination of Newsletters and other information through APCS website has four language options; English, Chinese, Korean, and Japanese. In Fukuoka City, we also have two promotional spots for "Asian-Pacific City Summit".

Going forward, plans are on their ways to hold the 11th Asian-Pacific City Summit in Kumamoto City, Japan in 2013 and in Vladivostok City, Russian Federation in 2015. There are two cities wishing to hold the conference in 2014. Thus, there will be either the Working-Level Conference in Bangkok Metropolitan Administration, Kingdom of Thailand or Asian-Pacific City Summit in Changsha City, People's Republic of China in 2014.

*About the conference in 2014, Bangkok Metropolitan Administration has been decided as the host city for the 10th Working-Level Conference following the result of the poll among the member cities in November 2012.

Provide information regulary through Newsletters