Chapter 7

Networking Cities for Better Environmental Management: How networking functions can enhance local initiatives

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Toshizo Maeda

1. Introduction

Global environmental challenges, such as climate change, not only need international negotiation and national legislation but also local actions as the consequences eventually, and indifferently, affect the life of every citizen. In fact, in response to emerging global issues, a number of new development concepts have appeared recently at the local level: sustainable urban development, environmentally sustainable cities, low carbon cities, liveable cities, green cities, resilient cities, smart cities, green growth and green economy, among others. Obviously, cities are the focus of increasing attention, especially in the climate change regime. Considering these challenges and demands posed to cities, this chapter reviews intercity networking functions in order to facilitate sharing of useful knowledge and lessons, which will boost more voluntary local actions to deal with the range of global challenges.

As more than half of the global population is now living in urban areas and the population influx from rural to urban areas will continue to rise in the coming decades, particularly in developing regions including Asia (UN 2007), cities need to learn how to cope with the consequent challenges. These challenges include provision of housing, jobs, education and health services, as well as maintenance of an acceptable living environment and related services, such as adequate solid waste management, clean water supply, sanitation, air quality management, pollution control, and so on. Infrastructure development, including buildings, roads, bridges, public transportation,

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Key Messages

- Rapid urbanisation is a global trend, particularly in growing Asia. By mid-2020, it is estimated that more than half of the population in Asia will be living in urban areas.
- 80% of the region's wealth is produced in cities, but this requires significant resources, water and energy to sustain growth; consequently, they generate significant amounts of solid waste, wastewater and greenhouse gases—and many challenges for local governments.
- There is high demand for investment in infrastructure and capacity development of local officers in order to manage a liveable environment with sustainable growth, especially for small to medium sized cities.
- An effective approach to improve the capacity of local governments is networking between cities for knowledge sharing and mutual learning. The Kitakyushu Initiative for a Clean Environment, CITYNET, and Clean Air Initiative for Asian Cities have been successfully employed by a wide range of organizations.
- This chapter studies the functions, achievements and impacts of intercity networks, as well as the evolution of their management and operational strategies in response to the needs of network members and emerging global environmental challenges.

river and sea dykes, and sewerage and drainage systems, is also a pertinent challenge. The "to-do" list additionally covers energy management, including the promotion of energy efficient measures for buildings and industries and use of under-utilised and renewable energy. Greenhouse gas (GHG) emissions accounting in the city, as well as a strategy development for reducing emissions, is also required. The list also includes land-use planning and greenery management, as well as adaptation to climate change and disaster preparation and management so as to reduce risks caused by natural disasters. In fact, in the 20th century, more than 90% of all deaths and about 50% of all damage as a result of natural disasters occurred in Asia; as well, 18% of the urban population in Asia lives in low-lying coastal zones subject to future sea level rise, tsunamis, and storm surges (UN-HABITAT 2010).

At the international climate change negotiations under the United Nations Framework Convention on Climate Change (UNFCCC), it has become clear that reaching an international consensus, or setting caps, on national GHG reduction targets may require many more years of continuous negotiation, in part due to different national backgrounds and interests. In contrast, many mayors have voluntarily committed their cities to reduce GHG emissions by setting ambitious targets and forming city alliances to influence the decisions made by international negotiations. This cooperative spirit has been seen in the formulation of a Local Government Climate Roadmap in Bali, Indonesia in 2007, a Global Cities Covenant on Climate (The Mexico City Pact) at the World Mayors Summit on Climate in Mexico City in 2010 (WMSC 2010), and the Regional Greenhouse Gas Initiative implemented to reduce GHG emissions in nine north-eastern and mid-Atlantic states in the United States (RGGI 2012), among others.

It is apparent that quite a few local governments are moving ahead of national governments in combating climate change challenges and enhancing local level efforts is becoming more important for finding a sustainable development path globally. Consequently, the tasks and demands for local governments in incorporating such new concepts and demands into city development plans and developing pertinent new strategies, policies, regulations and work plans are increasing. However, many local governments lack adequate capacity to deal with these new demands–as even traditional environmental challenges have not been tackled effectively in many places–and accordingly, there is a huge demand for capacity building of local government officials.

Networking cities for knowledge sharing and expansion of good practices and policies is one simple and effective way to improve such capacities and enhance local actions, which have been facilitated and supported by various external supporting organizations for many years. This chapter focuses on such efforts and examines how these networking activities have contributed to the capacity improvement of local government officers and looks at how these network programmes have been modified and transformed in response to the demands of member cities in the context of global trends. Lessons derived from this experience are summarised in view of further improving networking functions and boosting more local actions.

2. Networking functions

Networking modes can be categorised into three types according to size and the number of members: (i) open networks in the form of seminars and forums which invite many participants mainly for information sharing among participants; (ii) networks with a limited number of members designed for more intensive information exchange; and (iii) bilateral, or city-to-city, cooperation arrangements for learning directly from each other.

Often, networking organizations embody these three networking modes as they grow and respond to the demands of their members, and some networks possess these three modes from initial setup. In addition, city awards programmes which often result in the formulation of a new network by selected cities have also been added as a derivation of these three types.

This section looks into the functions of these four types of networks mainly focusing on selected networks in Asia which deal with urban environmental issues, have ten years or more of operational experience and involve more than 30 cities. These include the Kitakyushu Initiative for a Clean Environment, CITYNET (the Regional Network of Local Authorities for the Management of Human Settlements), Clean Air Initiative for Asian Cities (CAI-Asia), and ICLEI – Local Government for Sustainability. Among them, ICLEI is the largest and most extensive global network of cities, extending beyond Asia, with over 1,200 local government members supported by 200 staff in 14 offices around the world. Features of these four intercity networks are summarised in Table 7.1 and highlights of their activities and strategies adopted are summarised in section 3.

Table 7.1 Features of selected intercity networks in Asia

Features	Kitakyushu Initiative for a Clean Environment	CITYNET[i]	Clean Air Initiative for Asian Cities (CAI-Asia)	ICLEI – Local Governments for Sustainability
Establishment	2000 – 2010	1987 –	2001 –	1990 –
Budget source	ESCAP[ii], Ministry of the Environment (Japan), Kitakyushu City, project funds from partners	Yokohama City, membership fee, project funds from partners	Grants for ADB[iii] projects (core fund from ADB ceased in 2007), membership fee from private companies	Membership fee, project funds from partners
Secretariat	IGES[iv], Kitakyushu City; 4 – 10 staff	Based in Yokohama City; about 10 staff; Regional Training Centre in Kuala Lumpur, Malaysia	CAI-Asia Center in Manila, Philippines, with offices in India and China; about 19 staff	14 offices around the world; 200 staff; World Secretariat in Bonn and International Training Centre in Freiburg, Germany
Members	More than 170 cities in 19 countries	More than 70 cities in 23 countries, NGOs, community based organizations, municipal associations, development authorities, research institutions, and private companies	45 cities in 11 countries, 8 country networks, 32 government agencies, 104 NGOs and academe, 17 international development agencies and foundations, 33 private companies	Over 1,200 local government members in 68 countries
Platform meetings	Network Meeting (every few years)	Congress (every 4 years), Executive Committee (almost every year)	Better Air Quality (BAQ) Conference (every 2 years)	Council (every 3 years)

Features	Kitakyushu Initiative for a Clean Environment	CITYNET[i]	Clean Air Initiative for Asian Cities (CAI-Asia)	ICLEI – Local Governments for Sustainability
Objectives, main activities and programmes	Promotion of urban environmental improvement through local level actions; Thematic Seminars; workshops and trainings for transferring good environmental practices	A network for helping local authorities improve the lives of its citizens and create the urban sustainability across Asia-Pacific and beyond; 4 Clusters (Infrastructure, Disaster, Millennium Development Goals, Climate Change), city-to-city cooperation, capacity building, knowledge sharing	Promotion of better air quality and liveable cities by reducing air pollution and GHG emissions from transport, energy and other sectors. Clean Air Scorecard, Clean Air Portal, Blue Skies Asia Exchange Program, Clean Fleet Management Toolkit, Walkability Survey	An international association of local governments for sustainable development; Cities for Climate Protection Campaign, Resilient Cities, Local Agenda 21, Sustainable Procurement Program, Water Program, Local Action for Biodiversity
Notes	After closing of the Kitakyushu Initiative in March 2010, Kitakyushu City and IGES continue maintaining the network with some members	Established with support of ESCAP, UNDP[v], UN-HABITAT; Granted consultative status with the UN ECOSOC[vi] in 1995 and the Habitat Scroll of Honour of UN-HABITAT in 2002	Founded by ADB, USAID and World Bank; Registered UN Type II Partnership	Close linkages with the United Nations, including UNCSD[vii], UNFCCC[viii], UNCBD[ix] and UNEP[x]

[i] CITYNET: The Regional Network of Local Authorities for the Management of Human Settlements
[ii] ESCAP: United Nations Economic and Social Commission for Asia and the Pacific
[iii] ADB: Asian Development Bank
[iv] IGES: Institute for Global Environmental Strategies
[v] UNDP: United Nations Development Programme
[vi] UN ECOSOC: United Nations Economic and Social Council
[vii] UNCSD: United Nations Commission on Sustainable Development
[viii] UNFCCC: United Nations Framework Convention on Climate Change
[ix] UNCBD: United Nations Convention on Biological Diversity
[x] UNEP: United Nations Environmental Programme

Sources: Kitakyushu Initiative for a Clean Environment: http://kitakyushu.iges.or.jp/ (accessed 25 January 2012), CITYNET: http://www.citynet-ap.org/ (accessed 25 January 2012), Clean Air Initiative for Asian Cities, Annual Report 2010: http://cleanairinitiative.org/portal/index.php (accessed 25 January 2012), ICLEI: http://www.iclei.org/ (accessed 25 January 2012)

2.1 Open network: An information sharing platform

2.1.1 Horizontal and vertical networks for policy changes

A typical type of network function is provision of an information sharing platform for members in the form of conferences, seminars, forums and meetings. For example, the Kitakyushu Initiative for a Clean Environment (2000-2010), an intercity network managed by the Institute for Global Environmental Strategies (IGES) which engaged a total of more than 170 cities in 19 countries in Asia and the Pacific, organised network meetings every few years to exchange knowledge and experiences on effective environmental practices at city levels. Specific thematic seminars were also held in parallel once or twice a year on select environmental topics such as solid waste management, water supply and sanitation, urban air quality management, and use of information and communication technologies (KI 2010).

CITYNET organises a major Congress every four years to decide on a four-year medium term plan and convenes Executive Committee Meetings almost every year for organizational decision-making and information exchange and discussions among members on various environmental topics. The last Congress held in Yokohama, Japan in 2009 convened about 2,000 participants from over 30 countries (CITYNET 2009). Its members include local governments, non-governmental organizations (NGOs), research institutions and private companies. CITYNET has also expanded its network by establishing linkages with the United Cities and Local Governments Asia-Pacific Regional Section (UCLG-ASPAC) in 2008.

CAI-Asia invites not only local government officers but also central government officials, international and regional organizations, donors, academia, research institutions and private companies to its Better Air Quality (BAQ) Conference, held every two years. For example, the BAQ Conference 2010 held in Singapore convened about 550 participants from 39 countries and 25 partner organizations, and had a total of 33 breakout sessions (CAI-Asia 2010).

These platforms are originally designed for information exchange among members but often gradually expand to involve other stakeholders including ministries and national agencies, international and regional organizations, supporting organizations, academia and research institutions, NGOs and private companies as the networks grow and respond to the demands of members.

The secretariat of the Kitakyushu Initiative, IGES, has also followed a similar path after the closing of the programme in 2010 and being appointed as the secretariat of a new platform, the High Level Seminar on Environmentally Sustainable Cities (HLS ESC), developed under the framework of the East Asia Summit Environment Ministers Meeting, in which central and local governments as well as other international, regional and supporting organizations are invited to exchange information and activities towards the development of environmentally sustainable cities. Three HLS ESC held in the last three years have seen the participation of national and local government representatives from the 16 East Asia Summit member countries, as well as other organizations.

In this way, networking functions tend to expand not only horizontally but also vertically, connecting various types of organizations in multiple layers and facilitating knowledge sharing and dialogues in expectation of driving actual policy changes in each country. Obviously, this is one of the functions and advantages of networks which can in turn attract more members to participate in the network.

Some forums and city summits are designed in such a way from the beginning: involving not only city representatives, but also representatives from central governments and international, regional and supporting organizations. These examples include the Asia-Pacific Urban Forum (APUF) organized by the United Nations Economic and Social Council for Asia and the Pacific (ESCAP) since 1993, the World Cities Summit organized by the Centre for Liveable Cities in Singapore since 2010, the Asian Urban Forum by the Asian Development Bank (ADB) since 2011, and others. Obviously, there have been many recent forums organized by various organizations primarily targeting cities and reflecting the importance of their roles and the demand for local actions.

2.1.2 *Providing opportunities to present local achievements*

Another key function of intercity networks is giving an opportunity to best-performing cities to present their activities and achievements in front of many other cities and

various organizations, which gives recognition and encouragement for them to perform even better. In fact, some well-performing cities are repeatedly invited to present their achievements and initiatives in a number of forums and seminars. Recognition for good performance can also attract external support from central governments, as well as from other supporting organizations, as has been observed in some cities (Box 7.1). Some far-sighted cities are not only willing to give the usual presentation but also independently hold seminars and workshops in their city to visibly showcase their achievements.

Taking advantage of this willingness provides an opportunity for network secretariats to promote good practices and policies effectively, as well as save costs. For example, CITYNET and CAI-Asia are able to share costs with host cities and national governments when organizing meetings and events; as well, the Kitakyushu Initiative organized a varety of workshops in a number of cities in the same way.

Box 7.1 Voices from cities: Nonthaburi, Thailand

Nonthaburi, a neighbouring city to Thailand's capital Bangkok, with a population of about 300,000, participated in the Kitakyushu Initiative from its beginning in 2000 until its closure in 2010. Throughout this period, Nonthaburi City attended various meetings and seminars and was motivated to be a more environmentally friendly city by learning from, and being inspired by, other cities' practices. As the city implemented a number of environmental measures and projects during this period, including setting up a composting centre, environmental education centre, septage treatment (bio-fertiliser) facility and wastewater treatment plant in city hall, distributing designated transparent waste collection bags and tracking waste collection vehicles with a global positioning system (GPS), Nonthaburi has become one of the most well-known environmental cities in Thailand, today receiving thousands of visitors annually.

The Director of the Environment Department, Ms. Pornsri Kitcham, who was in this position throughout this period and acted as a driving force behind the city's transformation, recalls that she learned something whenever she attended meetings and seminars, and started implementing projects in the city every year. Ms. Kitcham adopted a strategy to start with a small-scale pilot project first, observed the outcomes, resolved the problems, and then scaled it up and expanded the project to other areas in the city.

The way she marketed the compost produced from the septage treatment facility illustrates her management skill. First, she gave compost free of charge to farmers to allow them to see the actual results. Then, she asked the farmers how much they would pay for the compost. Initially, the rate offered by farmers was THB 1,000 (USD 30) per tonne of compost, but as the effect was recognized and demand increased, it is now sold at THB 3,000 (USD 90) per tonne, which supports the operation of the facility. She was also successful in branding the vegetables produced using the compost by at first allowing school children to eat the produce and then promoted the approach to other people.

Her good management records attracted external support for project implementation, including the construction of a composting plant by the European Commission, a septage treatment facility guided by the Royal Development Project, and a wastewater treatment plant by the Government of Denmark.

Source: Presentation on 'Environment Management, Nonthaburi Municipality', by Pornsri Kitcham, Municipal Secretary, Nonthaburi City, at a Networking Seminar on KitaQ System Composting in Asia, 29 June – 1 July 2011, Kitakyushu, Japan. http://www.iges.or.jp/en/kuc/pdf/activity20110628/Nonthaburi_Thailand.pdf (accessed 25 January 2012).

2.1.3 Sending consolidated messages from cities to international meetings

Establishing linkages with important international meetings to deliver the messages of member cities, and thus influence decisions made by these meetings, is another strategy adopted by some networks, in particular, ICLEI which consolidates messages from member cities and delivers them to Conferences of the Parties (COPs) for UNFCCC and the United Nations Convention on Biological Diversity (UNCBD).

This cooperative spirit is also seen in the formulation of the 2007 Local Government Climate Roadmap and the World Mayors Summit on Climate in Mexico City in 2010, mentioned earlier, which attracted signatures from 147 mayors around the world on the Global Cities Covenant on Climate (the Mexico City Pact) (WMSC 2010). These commitments are registered in the carbon Cities Climate Registry as a global mechanism for reporting local actions on GHG emissions reduction efforts.

ICLEI, together with Aichi Prefecture, Nagoya City and other partners, also organised a City Biodiversity Summit in 2010 in conjunction with COP10 of UNCBD in Nagoya, Japan in 2010 with participation of more than 180 local governments from 30 countries (Aichi 2010). The Summit adopted the Aichi/Nagoya Declaration on Local Authorities and Biodiversity, a document which affirms city awareness about biodiversity and establishing partnerships among citizens, businesses, academia and local governments.

2.2 Networks with limited members: More intensive information exchange

As networks grow, the number of member cities also increases, and as a result, functions tend to become diluted and more generic. In order to address these challenges, networks often formulate sub-networks, clusters or internal programmes which cater to a limited number of members to ensure the effective use of limited resources.

This development approach is a common feature for intercity networks. For example, the Kitakyushu Initiative organised a series of workshops and trainings in various cities to assist the replication of successful composting practices from Surabaya City to other cities, inviting only the cities that showed initial interest and commitment later on. In this way, a group of concerned cities was formulated for further information exchange, facilitated by the secretariat (KI 2010).

CITYNET has set up four clusters, namely infrastructure (transport and land use planning), disaster (disaster risk reduction), Millennium Development Goals (MDGs), and climate change (adaptation and mitigation), to induce more active participation of its members. Member cities and organizations select the topics which match and contribute to their interests. Training programmes on water and sanitation, solid waste management, and sustainable transport held at the Kuala Lumpur Regional Training Centre (KLRTC), which was developed in cooperation with the city of Kuala Lumpur, Malaysia, United Nations Institute for Training and Research (UNITAR) and others, also invites only interested cities and requires them to pay participation fees, thus resulting in an automatic screening of cities with serious intentions to participate. CITYNET has also set up national chapters in Bangladesh, Indonesia, Nepal and Sri Lanka and works closely with municipal associations in Indonesia, India, Nepal, Philippines, Thailand and Viet Nam to facilitate further information exchange among member cities and organizations in the same country in line with its decentralisation policy (CITYNET 2010).

CAI-Asia has also established eight country networks in China, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka and Viet Nam. Each of these country networks has

their own members composed of multiple stakeholders representing cities, national governments, NGOs, academe and the private sector (CAI-Asia 2010).

Similar approaches are also taken by other network programmes. For example, C40 Cities Climate Leadership Group (C40) and the Clinton Climate Initiative target only large and capital cities for intensive information exchange. In contrast, Clean Air for Smaller Cities, an ASEAN regional programme implemented by German International Cooperation (GIZ), selects a maximum of two cities each from seven countries, which have populations between 200,000 and 1.5 million, to take part in the programme. The Ecological Cities as Economic Cities (Eco2 Cities) programme funded by the World Bank also targets a few cities in select country for project implementation. These programmes screen only a few cities using various criteria, including past performance, preparedness, commitments and reputation based on interviews with and recommendations by national ministries and agencies, as well as other organizations.

The approaches taken by these networks and programmes are reasonable in efficiently using the often limited resources that, in return, demand member cities' commitments for effective implementation. Targeting cities with similar sizes and backgrounds is also another feature of these approaches which works to best apply the experiences and policy tools to similar types of cities. In this way, these cities tend to stimulate, as well as learn from each other relatively easily.

2.3 Bilateral cooperation: Learning directly from each other

When resources are most effectively used, it generally involves city-to-city cooperation on a one-on-one basis. Some cities assist other cities in transferring some knowledge and management skills based on request or by facilitation of a third party, such as a city network.

For example, Kitakyushu City has assisted Dalian, China, in improving the air quality and other environmental management skills; Surabaya, Indonesia, in solid waste management (see Box 7.2); and Phnom Penh, Cambodia, in improving the water supply system, in addition to other vast examples of other cities in environmental management (Kitakyushu 2009).

Box 7.2 Voices from cities: Surabaya, Indonesia

Surabaya City, Indonesia, has received technical assistance from Kitakyushu City, Japan, in various ways over the last two decades. Since the implementation of solid waste management studies in 1993 and 2002, respectively, followed by relevant research and projects in Surabaya City, many city officers have visited Kitakyushu City for training and in return, experts from Kitakyushu City have visited Surabaya City.[i]

After establishing a long partnership, Kitakyushu City and Surabaya City signed a joint statement on a strategic environmental partnership toward creation of a resource-efficient and low-carbon society in March 2011, which has further propelled the implementation of new studies and projects in a variety of areas, including wastewater treatment, energy efficiency and measurement of GHG emissions.[ii]

The long partnership has nurtured a mutual trust between the two cities and some of the Surabaya City officers who were once trained in Kitakyushu City have been promoted as directors and director generals, which further helps consolidate the partnership. One notable example is Ms. Tri Rismaharini, Director of the Public

Cleansing and Landscaping Department in 2006-2008, who was the driving force of the successful composting and waste reduction achievements and greening efforts in the city (achievment of 30% waste reduction and 10% increase in city parks areas[iii]), who was elected as mayor of the city in 2010.[iv]

Sources:
i. Presentation by Kitakyushu City on exporting recycling industries, "*Kitakyushu-shi ni okeru jomyakusangyou kaigaitenkai no torikumi ni tsuite*," on 3 August 2011, http://www.jesc.or.jp/info/jyomyaku/forum01/02.pdf (accessed on 25 January 2012)
ii. "Kitakyushu's Challenge to Promote the Development of Green Industry," presentation by Kitakyushu City, http://www.unido.org/fileadmin/user_media/PCOR/Kitakyushu,%20Mr.%20Kitahashi%20201111116final_Eng.PDF (accessed on 25 January 2012)
iii. "Low carbon in Surabaya City, approaches and challenges," presentation by Surabaya City at the 3rd International Forum on Sustainable Asia and the Pacific on 27 July 2011, http://www.iges.or.jp/en/kuc/pdf/activity20110727/3_zaky.pdf (accessed on 25 January 2012)
iv. "Risma elected as Surabaya's first female mayor," *The Jakarta Post*, http://www.thejakartapost.com/news/2010/06/08/risma-elected-surabaya039s-first-female-mayor.html (accessed on 25 January 2012)

CITYNET has facilitated mutual cooperation between Seoul, Republic of Korea, and several other cities including Palembang and Jakarta, Indonesia on sustainable transport. CITYNET has also implemented Integrated Environmental Education in Asian Cities (AWAREE) and Post-AWAREE programmes in selected cities including Yokohama (Japan), Da Nang and Ha Noi (Viet Nam), Phnom Penh (Cambodia), Colombo (Sri Lanka), Dhaka (Bangladesh) and Makati (Philippines) (see Box 7.3). CITYNET and Yokohama Water Works Bureau have been organising an annual water supply training programme since 1999 which has led to further exchanges between Yokohama and participating cities, including the agreement with Banda Aceh (Indonesia) following the 2004 tsunami, mainly in the form of city-to-city cooperation.

Box 7.3 Voices from cities: Phnom Penh, Cambodia

Phnom Penh City was one of the beneficiaries of the Awareness on Environmental Education in Asian Cities (AWAREE) programme in 2004-2007, funded by Japan International Cooperation Agency (JICA) and managed by CITYNET, which linked Yokohama City and six other Asian cities to promote environmental education. Various activities were carried out in selected schools in Phnom Penh under the programme, including environmental education campaigns, waste segregation, recycling, composting, greenery management, creation of biotopes and others. High level commitments, as well as resource input were obtained from counterpart agencies. As a side effect of the programme, and through facilitation by CITYNET, the two focal point departments, namely the Department of Environment and Department of Education, Youth and Sport, nurtured a good cooperative relationship by sharing resources and jointly implementing the projects.

Phnom Penh City also benefited from implementing biogas projects by a technical assistance extended by Sri Lankan experts through facilitation by CITYNET. A total of six biogas plants of 6, 8 and 22 cubic meters, were installed for farmers, where the gas is used for the cooking and lighting in ten households and the residue is used as fertiliser. Observing the benefits, Phnom Penh City further replicated the project by installing an additional five plants with a size of 22 cubic meters for the slaughterhouses and there are plans to implement more.

Source: Interview with Bernadia Irawati Tjandradewi, Programme Director, CITYNET, on 25 January 2012

Notably, these city-to-city cooperation projects are usually supported by funding agencies, including the Japan International Cooperation Agency (JICA) Grassroots Technical Cooperation Programmes, Council of Local Authorities for International Relations (CLAIR), Japan Fund for Global Environment (JFGE), Global Environment Centre Foundation (GEC), and others, as those cities usually do not have funds budgeted to assist other cities. Therefore, these kinds of supporting funds are essential to facilitate bilateral cooperation projects.

One unique example of a city-to-city cooperation model is demonstrated by Santo Tomas City in the Philippines, where the city has assisted more than 20 cities in the region in replicating a solid waste management model which has successfully reduced the amount of daily solid waste disposed at the landfill as much as 80% by strictly implementing a "no segregation, no collection" policy. Santo Tomas City charges other cities relevant fees for extending such services for dispatching city officers for lectures and training, but demand still continues to increase. Notably, the National Solid Waste Management Commission in the Philippines supported this activity by promoting the Santo Tomas model as a role model for other cities to copy (Santo Tomas 2009).

In 2008, the United States Agency for International Development (USAID), the Asian Development Bank (ADB) and the International Water Association (IWA) established a network called WaterLinks to promote improved and expanded access to safe water and sustainable sanitation in Asia-Pacific cities by facilitating bilateral, or "twinning," partnerships between urban water and wastewater service providers, including water utilities, companies and government departments. In a typical twinning arrangement, a model service provider serves as a mentor to its counterpart by sharing practical knowledge and proven methods to improve operations and management, and build overall institutional capacities (WaterLinks 2010). Since 2008, WaterLinks has facilitated more than 60 twinning partnerships across the region that resulted in over one million urban residents having better access to water supply and sanitation services. It has also trained 2,500 practitioners and leveraged USD 10,000,000 in capital and capacity investments by service providers.[1] The WaterLinks secretariat provides assistance in facilitating the partnerships, as well as organizing regional trainings, developing toolkits and promoting knowledge sharing to help the providers achieve higher performance. Each partnership generally lasts for 12-18 months and costs around USD 50,000.[1] The results show that this kind of peer-to-peer learning approach based on partner needs is effective in building the capacities of recipient cities and delivering tangible outputs in a short period of time. However, it also requires a strong facilitator and supporting budget, as well as partner commitments (see Box 7.4 for a practical example).

Box 7.4 Voices from cities: Palembang, Indonesia

The water operator partnership (WOP), or "twinning," between PDAM Tirta Musi in Palembang, Indonesia, and Perbadanan Bekalan Air Pulau Pinang (PBAPP), Malaysia, started in December 2009 with facilitation by USAID under the WaterLinks programme. Through its 22-month partnership, more than 200,000 residents of Palembang City benefitted from the improved service.

Before the establishment of the partnership, PDAM Tirta Musi, the only water supplier in Palembang with 1.5 million residents, had high water losses due to historically poor management of its distribution network. More than 70% of its customers had intermittent supply of 10 to 12 hours per day.

After a diagnostic field visit in Palembang by PBAPP staff, partners agreed to focus first on a pilot area called Cempaka Dalam, where the service was 12 hours per day and the non-revenue water (NRW) rate was above 36%.

With support from PBAPP, PDAM Tirta Musi effectively isolated the Cempaka Dalam area by installing flow meters at all inlet points, divided the area into smaller areas, or steps, took flow meter data at each step and analyzed it, and pinpointed the location of the losses. More than 40 staff of PDAM Tirta Musi has also visited Penang to learn PBAPP's practices and to participate in tailored capacity building programmes.

After a 10-month intensive partnership, PDAM Tirta Musi successfully reduced the NRW rate in the Cempaka Dalam area by about 50% by replacing 309 meters and 300 meters of pipeline and identifying 12 unauthorised connections in cooperation with neighbourhood groups. As a result, all 1,400 households received 24-hour water supply service with adequate pressure and the revenue generation from the area increased by 95%.

The Cempaka Dalam success encouraged PDAM Tirta Musi to scale-up the practice in other areas, which resulted in a total of 36 areas covering over 200,000 residents. PDAM Tirta Musi now also works as a mentor for other water suppliers in other cities to share their experience which is facilitated by ADB under the WaterLinks programme. Learning from the PDAM Tirta Musi's success, the Indonesia Water Supply Association (PERPAMSI), which also joined a training event in Penang during one of the twining activities, initiated its own water operator partnership programme in early 2011 to let larger water service providers support smaller ones by sharing practical knowledge and good practices. As of June 2011, PERPAMSI had established 13 water operator partnerships.

Source: "Delivering Continuous Waste Supply for the First Time in Palembang, Indonesia," field notes from Water Operator Partnerships in Asia, 2011, Waternotes, WaterLinks, USAID, IWA, ADB.

In general, learning directly from a tutor rather than with many others in a classroom is more effective in delivering results as more resources can be concentrated and commitments from recipients can also be expected. Thus, it could be said that the smaller the number of cities involved–with two being the smallest–the larger the impacts delivered per city by a networking arrangement, although facilitating costs may increase accordingly, as shown in the following figure.

Figure 7.1 Relationship of impacts and number of cities involved in a network
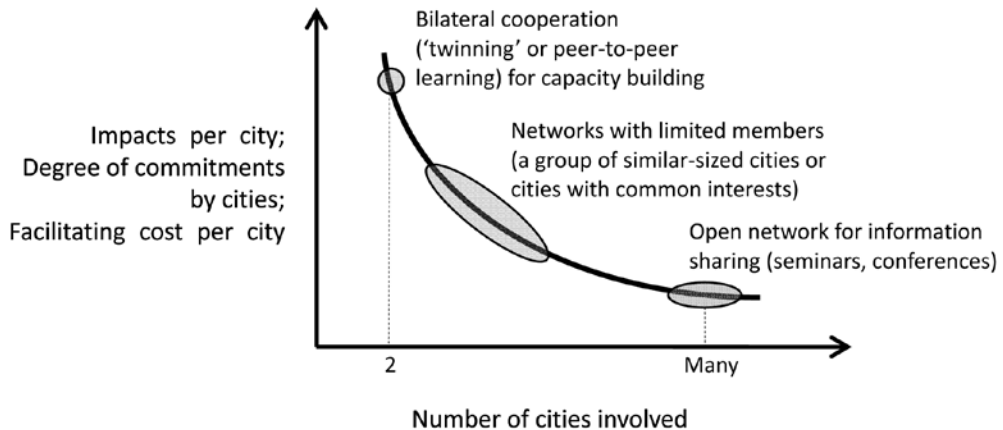
Source: Author

2.4 Awarding cities: Let cities emulate each other

Giving awards to best performing cities is another way to stimulate local actions. Recognition in such a way gives more incentive to cities to perform even better and encourages other cities to emulate these actions. In fact, a large number of visitors usually flow into awarded cities, which gives a sense of pride to city officers and citizens, and ushers in economic benefits as a result of expenditures by visitors. Furthermore, these awards often lead to additional funding offers for implementing national pilot projects or other demonstration projects and studies funded by donors and other organizations, as the awards underscore the good governance and management systems in place in these cities in order to deliver expected outputs. This is often a precondition for funding agencies to screen partner cities.

There are a number of national award programmes in the region including Adipura Award in Indonesia, Liveable Cities Award in Thailand, Bandar Lestari Award in Malaysia, Clean and Green Programme and Galing Pook Award in the Philippines, Eco-model Cities in Japan and so on. Cities selected through these award programmes sometimes formulate a network of cities to further exchange useful knowledge and information among themselves.

For example, 13 awarded Eco-model Cities in Japan, together with other cities and ministries, research institutions and private companies, formed a Promotion Council for the Low-Carbon Cities (PCLCC) in 2008, where members share useful knowledge, activities and barriers in the implementation of projects and policies and are developing knowledge products, including a collection of recommendable good practices and standardized GHG emissions measuring tools (RRB 2011).

Learning from this successful model, IGES, as the secretariat of the High Level Seminar on Environmentally Sustainable Cities (HLS-ESC), designed an ESC Model Cities programme in cooperation with the Association of Southeast Asian Nations (ASEAN) Working Group on ESC and the ASEAN Secretariat as an output of the Seminar to invite each ASEAN member state to develop a national ESC programme. Currently, a total of 14 cities from eight ASEAN countries have been selected through national programmes and proposed activities are being implemented to achieve individual targets (IGES 2011b).

Naturally, this ESC Model Cities programme has close linkages with existing city awards programmes, as well as leagues of cities and municipalities in each country. For example, in Indonesia, the ESC Model Cities programme was linked to the existing Adipura Environment Awards, where two top-performing cities, Surabaya and Palembang, were selected as Model Cities and given incentives to implement pilot projects for a new national initiative called Clean Indonesia 2014. In Lao PDR, Xamneua was selected as a Model City based on a nomination by the Ministry of Public Works and Transport out of a list of environmentally best cities from each province. In Malaysia, the award winner of the national Bandar Lestari Sustainable City Awards, North Kuching, was selected (Box 7.5). In the Philippines, two cities, Puerto Princesa (Box 7.6) and Palo, Leyte, were selected as Model Cities from the top environmental cities in 16 regions. It is expected that all 16 regions will be involved in the second year. In Thailand, the three selected Model Cities, Maehongson, Muangklang and Phitsanulok, were winners of ongoing national Thailand Liveable Cities Awards programme (IGES 2012). It is also expected that the programme will eventually merge with the existing ASEAN Initiative on ESC Awards to form an integrated regional programme.

The ESC Model Cities programme also functions as a platform for collaboration with other ASEAN-related programmes and activities. For example, one of the selected cities, North Kuching, Malaysia, seconded their city officers to Nonthaburi, Thailand and Kitakyushu and Sasebo, Japan, through facilitation by IGES, for training and site visits to solid waste management facilities. Officers of water supply facilities in Yangon, Mandalay, Nay Payi Taw and others in Myanmar visited Penang Water Supply Company, Malaysia, for a capacity building training programme based on a recommendation by USAID and WaterLinks. JICA Kyushu set up a training course on low-carbon city planning and technologies in 2011, which was announced to relevant countries, and North Kuching was given a seat from Malaysian Government for the training. ESCAP extended support in organising the inception workshop of the ESC Model Cities programme in June 2011 in conjunction with the 5th Asia-Pacific Urban Forum, and CAI-Asia provided support in organizing the preparatory meeting in November 2010 in conjunction with the 2010 Better Air Quality Conference.[2] Incidently, these cities and supporting organizations were all invited to the 3rd High Level Seminar on ESC in Siem Reap in March 2012 as resource persons and for information sharing.

In this way, city awards programmes not only stimulate cities to emulate each other but also has a potential to formulate a new network of cities, as well as to be a platform for collaboration of multiple organizations.

Box 7.5 Voices from cities: North Kuching, Malaysia

With a population of about 200,000, North Kuching is a modern mid-sized city located in the State Capital of Sarawak, Malaysia. The city's foray into regional and international sustainable city activities began with its involvement in a World Health Organization (WHO) Healthy Cities project in 1994. Subsequently, it hosted the first ASEAN Healthy Cities General Assembly in 2002, which led to the city undertaking the Chair of the Steering Committee for the Alliance for Healthy Cities, an international network of aspiring sustainable cities formed in 2004. Guided by the framework of Healthy Cities, North Kuching implemented a wide range of innovative initiatives which garnered awards under the Alliance.[i]

North Kuching's outstanding efforts have also won the recognition of the national government, by twice winning the Bandar Lestari Sustainable City Awards Programme

(for 2006/07 and 2010/11) organized by the Department of Environment (DOE) under the Ministry of Natural Resources and Environment. As a result, DOE, which is the national focal point for the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) and the ASEAN ESC Model Cities Programme, nominated North Kuching to receive the ASEAN ESC Awards in 2011,[ii] as well as to represent Malaysia in the Model Cities Programme.

Waste reduction is a priority for North Kuching. Through a series of community-based 3R initiatives, the city has achieved a recycling rate of 11.6% and the current daily waste generation per capita is 0.6kg as compared to the national average of 1.0-1.5kg. It has further committed to reduce daily per capita waste by 50% to 0.3kg by 2020, and a major strategy is to scale up composting with financial and technical support via the Model Cities programme. Encouraged by its experiences with city networks and awards, the city has recently turned its attention to low-carbon city development after being selected to attend a JICA training on low-carbon city planning and technologies in October 2011 and is keen to be a model for other cities in Malaysia.[iii]

<div align="right">Contributed by Teoh Wei Chin, IGES</div>

Sources:
i. Abdullah, Haji Onn. 2011. "Engaging Private-Public Participation Towards Sustainable City Development." Presentation made at the 2nd High Level Seminar on Environmentally Sustainable Cities, 15-16 March 2011. http://www.hls-esc.org/Presentations/Thematic%20Session%20C/03-2HLS_T2C_EngagingPPPTowardsSustCityDev_TuanHajiOnnAbd.pdf (accessed 24 January 2012).
ii. ASEAN Secretariat. 2011. "ASEAN Celebrates the 2nd ASEAN Environmentally Sustainable Cities Award." http://www.aseansec.org/26743.htm (accessed 24 January 2012).
iii. Interview with Rudzaimeir Malek, Head of Environmental Health Division, North Kuching City Hall, 16 December 2011.

Box 7.6 Voices from cities: Puerto Princesa, Philippines

In the Philippines, Puerto Princesa, a city of about 160,000 in the Province of Palawan, is blessed with bountiful natural assets famed for eco-tourism. With its successful forest conservation and urban greening policies, the city was recently recognized by the Intergovernmental Panel on Climate Change (IPCC) as a carbon-negative city (sequestering more carbon than it emits) in South East Asia.[i]

Under the leadership of Mayor Edward Hagedorn, the city established itself as one of the country's most well-known sustainable cities. Puerto Princesa has won various local awards for good governance and best practices and was an active member of ICLEI's Cities for Climate Protection Campaign as well as the Kitakyushu Initiative Network. Similar to North Kuching, its good reputation led the national government to select it as one of Philippines' Model cities under the ASEAN ESC Model Cities Programme last year. The city had undertaken serious waste reduction initiatives, and composting has been intensively implemented since 2009. As a result, current waste generation was reduced by about 50% from projected figures.[ii] Currently, it is mentoring the other selected Model City (Palo, Leyte) on community-based composting, and is often invited by various organizations to share its knowledge and experience in many regional and global seminars.

<div align="right">Contributed by Teoh Wei Chin, IGES</div>

Sources:
i. Juancho, Mahusay. 2011. "Puerto Princesa first 'carbon-neutral' city in SE Asia." *The Philippine Star*. http://www.philstar.com/nation/article.aspx?publicationsubcategoryid=67&articleid=714039. (accessed 23 January 2012).
ii. Interview ith Jovenee Sagun, City Planning and Development Coordinator, Puerto Princesa Municipality, 18 November 2011. Puerto Princesa's projected daily waste generation for 2011 is 120 tonnes, compared to current generation at 70-75 tonnes. From this, about 25 tonnes are diverted from final disposal via composting and recycling.

3. Strategies adopted by intercity networks

What strategies have been adopted by intercity networks, or by the secretariats of the networks, for their survival and expansion? One common and prominent strategy is involvement of, and establishing linkages with, other organizations to supplement their functions. For example, these measures include engaging links with national ministries and agencies to influence national policies; inviting donors, banks and supporting organizations to mobilise funds and technical expertise; working with academia and research institutions to provide objective and cross-cutting analysis on successful models; and inviting private companies to learn cutting-edge technological options.

3.1 Kitakyushu Initiative for a Clean Environment (IGES)

The main activities of the Kitakyushu Initiative in the first half of its ten-year history were the organization of three network meetings and seven thematic seminars, mostly for information exchange among the member cities. Through this, many good environmental practices at the local level were collected and shared and success/enabling factors were discussed. However, dissemination and replication of such practices and policies did not appear as expected. Because of that, the focus in the second half was shifted to replication of good practices to see actual changes and impacts on the ground. In line with that, three study tours and nine workshops were held to learn directly from good practices on-site in host cities where only interested cities were invited. As a result, Surabaya's composting practices for waste reduction–one of the good practices recognized by other member cities–were disseminated and replicated in many other cities through facilitation by the secretariat (KI 2010; Maeda 2009). Even after the conclusion of the Kitakyushu Initiative in 2010, the cities carrying out composting practices continue to meet up through facilitation by IGES and Kitakyushu City using support from JICA, ESCAP and others (IGES 2010; IGES 2011a). In other words, the Kitakyushu Initiative in name has ended, but actual linkages and collaboration withmember cities have been sustained without the use of a core fund.

IGES serves as the secretariat of the Kitakyushu Initiative and the HLS-ESC which was established under the framework of the East Asia Summit Environment Ministers Meeting. This seminar, first held in Jakarta, Indonesia in 2010 followed by the second in Kitakyushu in 2011 and the third in Siem Reap, Cambodia in 2012, has convened national government officials from 16 East Asian countries as well as a total of more than 80 cities, including some of the Kitakyushu Initiative member cities, to discuss the ways to realise environmentally sustainable cities.

An ASEAN ESC Model Cities programme developed based on the recommendations made at the first High Level Seminar on ESC has been implemented in eight ASEAN countries since 2011, for which IGES also serves as a secretariat together with the ASEAN Secretariat.[3] As some Kitakyushu Initiative member cities were also selected as ESC Model Cities in select countries, IGES continues to maintain the network with these cities together with other cities to disseminate good environmental practices and facilitate mutual learning opportunities. In addition, IGES became a member of CITYNET in 2011, which also has a number of Kitakyushu Initiative member cities, to collaborate with CITYNET and make use of its network rather than maintaining a separate one.

3.2 Kitakyushu City

It is also worthwhile to see the international cooperation strategies adopted by Kitakyushu City which include acting as the host city for the Kitakyushu Initiative, among

others. Kitakyushu City's international cooperation has a 30-year long history with the establishment of the Kitakyushu International Techno-cooperative Association (KITA) in 1980. Since then, Kitakyushu City and KITA with close collaboration with JICA's Kyushu International Center, located near the KITA building, organized a number of technical trainings for environmental management and dispatched more than 100 experts worldwide. The total number of trainees is more than 6,000 from 138 countries.

Kitakyushu City also strategically established strong partnerships with select cities. Among them are Dalian (China), Phnom Penh (Cambodia) and Surabaya (Indonesia). The partnership with Dalian started in 1979 when the two cities became friendship cities. Since then, a number of environmental technical cooperation projects were implemented and city officers and experts have participated in study tours to both cities. The series of technical cooperation facilitated environmental improvement in Dalian, especially in air quality, which resulted in Dalian being awarded a Global 500 Award by UNEP in 2001—the first city in China (Kitakyushu 2009). The Waterworks Bureau of Kitakyushu City contributed to improvement of the water supply management system in Phnom Penh through extensive technical cooperation since 1999. The rate of NRW of Phnom Penh Water Supply Authority (PPWSA) improved from 72% in 1993 to 8% in 2006, for which Kitakyushu City also contributed (Chan 2011). Environmental cooperation with Surabaya started in 1993 through a JICA-funded study on solid waste management. Since then, many Surabaya City officers have trained in Kitakyushu and who are now key liaison persons with promotions to managerial positions. As a result of these technical trainings, Surabaya City has achieved about a 30% reduction in waste disposal over the past five years (Surabaya 2011).

3.3 CITYNET

CITYNET, the Regional Network of Local Authorities for the Management of Human Settlements, is one of the largest and oldest intercity networks in Asia with more than a 25-year history. It was established in 1987 with the support of ESCAP, the United Nations Development Programme (UNDP) and United Nations Human Settlements Programme (UN-HABITAT) and the Secretariat was set up in Yokohama in 1992 with the support of the city government. Since then, the number of members has increased from 26 to over 100 in 23 countries. Four countries adopted national chapters, namely Bangladesh, Sri Lanka, Nepal and Indonesia, in line with the decentralisation policy and focus on national level activities.

One of the highlights of CITYNET activities is the establishment of a Regional Training Centre in Kuala Lumpur (KLRTC), Malaysia in 2003 in cooperation with Kuala Lumpur City, United Nations Institute for Training and Research (UNITAR), Veolia Environment and others. A number of training programmes have been held there including on sustainable urban transport, integrated urban planning, sanitation improvement, solid waste management, financing, and climate and disaster resilience. The Congress held every four years is a well-recognized networking opportunity for the international community as the last one held in Yokohama in 2009 saw about 2,000 persons from over 30 countries participate. CITYNET's extensive partners include ADB, JICA, United Nations University (UNU), World Bank, Yokohama City, IGES and many other Japanese institutions. CITYNET has further expanded its network by establishing a linkage with the United Cities and Local Governments Asia-Pacific Regional Section (UCLG-ASPAC) in 2008. The hosting city of UCLG-ASPAC, DKI Jakarta (Special Capital City District of Jakarta), is now a member of CITYNET.[2]

CITYNET's activities are supported by membership fees which range from USD

600-10,000 per year for full members (local governments within Asia-Pacific region) depending on the city's population and income level. As for NGOs from developing countries, membership fees are only USD 100 per year. The secretariat has about ten staff, which is supplemented by interns recruited throughout the year and the staff seconded from member cities through an exchange programme. Fund raising and project development are also a task for the secretariat to boost networking activities. A JICA-funded city-to-city cooperation project called Awareness on Environmental Education in Asian Cities (AWAREE) and post-AWAREE, which connect Yokohama City and six other cities in five countries, were also developed by the secretariat. The secretariat is moving to Seoul, Republic of Korea, in 2013 which is expected to result in new inputs to the CITYNET activities.

3.4 CAI-Asia

The Clean Air Initiative for Asian Cities (CAI-Asia) was established in 2001 by the Asian Development Bank (ADB), the World Bank and the United States Agency for International Development (USAID) as an informal network of international agencies, governments, academic institutions, NGOs, and private companies to support improved air quality management in Asia. ADB hosted CAI-Asia and its secretariat and provided core funding through its regional technical assistance projects until 2007. Since then, CAI-Asia has been registered as a UN Type II Partnership and its Center, where the secretariat is located, was incorporated in the Philippines as a non-stock, non-profit corporation. This means CAI-Asia operates without receiving core funds from the ADB anymore but undertakes ADB's air quality-related projects as a consultant on a competitive basis, and in this way, saves the necessary funds to manage network activities. CAI-Asia also receives grants from other donors, including private companies, to carry out specific projects.

The flagship of CAI-Asia activities is the bi-annual Better Air Quality (BAQ) Conference. Since the first meeting held in Hong Kong in 2002, the number of participants has increased from around 200 to over 1,000 in 2008 in Bangkok, Thailand and over 500 in 2010 in Singapore. Now, it is widely recognized as a good networking opportunity in relation to air quality management in the international community as 25 partner organizations supported BAQ 2010 and 33 breakout sessions were held. Fund raising from private companies is also a unique feature of CAI-Asia as BAQ 2010 had seven corporate sponsors and donations from private company members accounts about 5% of the annual income. The number of secretariat staff increased from three or four in 2001 at its inception to 19 in 2011, including the Center in the Philippines and offices in China and India. Interns are accepted throughout the year to supplement the work force and a staff exchange programme with network partners is in place funded by Fredskorpset Norway, a private company.

The assets of CAI-Asia include their extensive network in Asia, especially the national networks in eight countries (China, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka and Viet Nam), and their domestic networks with national ministries and agencies, research institutions, academia and NGOs. Their network with international organizations and donors is also extensive, and includes ADB, the World Bank, German International Cooperation (GIZ), Swedish International Development Cooperation Agency (SIDA) and others. The air quality database in 300 cities and other air quality-related toolkits and research outputs are also additional strengths of CAI-Asia. The Initiative also conducts perception surveys on their activities evaluated by their partners and other stakeholders to reshape their strategies by understanding strengths, weaknesses and expectations (CAI-Asia 2004, 2011). The remaining challenge is sustainability as the core fund from

ADB was terminated in 2007 and necessary funds for sustaining networking activities are not guaranteed. As a large portion of donor funds has recently shifted to climate change projects, CAI-Asia has also shifted its focus accordingly to co-benefits approaches pertinent to air quality management to attract more funds.[3]

Box 7.7 Voices from cities and national governments: Achievements by CAI-Asia

The work by CAI-Asia has resulted in actual policy changes in some countries. For example, Sri Lanka banned the importation of two-stroke engine three wheelers from 2008, which emit ten times as much air pollution compared to the four-stroke engine. The decision was made after the then Minister of Environment and several other officials attended the Better Air Quality (BAQ) Conference in Yogyakarta, Indonesia in 2006.[i] Before that, no restrictions were in place for three-wheelers in Sri Lanka. CAI-Asia also supported Mandaluyong City, Philippines to set up a revolving fund for drivers to replace two-stroke tricycles with four-stroke engines using interest-free loans.[ii] Funding is provided by the Petroleum Institute of the Philippines and supported with funds by Mandaluyong City.

In the Philippines, the Department of Environment and Natural Resources (DENR) mandated Euro IV emission limits for all new passenger and light duty motor vehicle types from January 2016. This regulation was released in September 2010 almost ten months after the National Workshop for Clean Fuels and Vehicles organized by the Department of Energy, CAI-Asia and others,[iii] which discussed an action plan for moving from the Euro II to Euro IV standards citing the experience in Thailand where Euro IV emission standards for new light duty vehicles and gasoline vehicles will be adopted in 2012.[iv]

Similarly, in Viet Nam, the Prime Minister approved new motor vehicle emission standards in September 2011 which require automobiles to comply with Euro IV emission standards by January 2017, with further tightening to Euro V emission standards by January 2022.[v]

In this way, CAI-Asia works with national and local governments, as well as local partners and international organizations, in inducing policy changes for better air quality management which has actually been achieved in some cities and countries as described above.

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ii. "Mandaluyong Tricycle Upgrading Program gets P1M boost," 2011-11-14, http://cleanairinitiative.org/portal/node/7835 (accessed 30 January 2012)
iii. "Philippines Issues Euro 4 Vehicle Emission Standards," 2010-09-16, http://cleanairinitiative.org/portal/node/6362 (accessed 30 January 2012)
iv. "Philippines National Workshop on Clean Fuels and Vehicles (2009)," 2009-11-16, http://cleanairinitiative.org/portal/node/964 (accessed 30 January 2012)
v.   "Vietnam sets vehicle emissions standards and fuel quality roadmap," 2011-09-07, http://cleanairinitiative.org/portal/node/7530 (accessed 30 January 2012)

4. Expected roles of facilitators

There are many types of intercity networks, but one common salient fact is that these networks are all managed and facilitated by the secretariat. Network secretariats function as manager, facilitator, coordinator, inter-mediator, broker, core and hub to facilitate

exchange of information among members. Without a secretariat, networks cannot function. In other words, well-functioning networks usually have capable managers and efficiently functioning secretariats which cater to the demands of its members and manage the network efficiently within a limited budget. This is an essential element for any network to function, and deserves more recognition and evaluation.

As seen in previous sections, the main expected facilitating roles of network secretariats are the following:

- Provision of a platform for information exchange among members, and for presenting and showcasing members' achievements, through the organization of seminars and conferences, and disseminating related information through internet media and paper publications.
- Connecting city officers with other organizations including central government ministries and agencies, international and regional supporting organizations, donors and others by highlighting their achievements and accountability.
- Dissemination of useful information to members through objective analyses of case studies and sieving from an ubiquitous supply of information.
- Sending consolidated messages from cities to international meetings to influence meeting outcomes and decisions.
- Fund raising and project development to sustain network operations, including organising seminars and workshops, facilitating knowledge sharing and technical cooperation, and implementing pilot projects.

In fact, one advantage of a network secretariat is its externality and neutrality. Network secretariats can evaluate performances of local governments' activities objectively through comparisons with other cities and disseminate useful knowledge using various channels. Cross-cutting policy analysis by a network secretariat can also influence policy changes in different cities and countries. Access to multiple stakeholders is another advantage which allows a network secretariat to coordinate multiple ministries and national agencies, donors, international and regional organizations, NGOs and local governments, which local governments cannot do.

5. Conclusion

Networking cities is an effective way to stimulate local actions and facilitate the exchange of useful knowledge and information among members. These practicies and provision of peer-to-peer learning, as well as competing opportunities can also improve the capacity of local government officers.

One notable fact is that the performance of network functions largely depends on the management skills of the network secretariat. In other words, poorly performing networks do not last long and often cease operations when core funding ends. It also implies that long-lasting networks are led by capable managers who modify the programmes and expand the networks and scope of the activities continuously to meet the demands of its members and in response to global trends, as well as attracts new funds. Thus, capable network secretariat provide not only useful information and knowledge sharing opportunities, but they also raise funds and recruit capable staff using various means to sustain and expand their operations.

On the other hand, the risk of all intercity networks is their sustainability, particularly for those managed by a small budget and a few staff in the secretariat. Without enough

core funds and human resources, networks dwindle unless other funding sources can be secured. Usually, maintaining a network incurs major costs unless members pay membership fees and self-finance their attendance at meetings. Another risk is the hub function of a network. Networks are not a substance but a person-to-person connection built upon and entrusted over a long period of operation. This hub function often belongs to a person, or a few persons, who work in the secretariat. Therefore, there is a risk that a network may lose its "hub" when a key person leaves. To avoid this, there must be a strategy to retain these key persons, or institutionalise the hub functions among several staff by devolving and sharing tasks and responsibilities. Often, long-lasting networks have such a system in place and that is why these networks deserve recognition and commendation.

Enhancing voluntary local actions and capacity development of local government officers are imperative to address emerging and extensive global environmental challenges. For that, networking cities is a conventional but an effective and proven approach. To further enhance existing intercity networks functions or redesign new networks in view of dealing with emerging challenges and realizing various city-related new concepts, recognition and revision of long-lasting and well-performing networks is worthwhile to avoid duplication of similar networks developed from scratch by multiple organizations.

Another hidden function and advantage of networking activities is screening and identification of cities which have credible management and governance records. Often, well-performing cities appear in multiple networks, voluntarily or by invitation, and that improves the city officers' mindset and capacities as well as expanding the opportunities to attract funds for further developing and implementing projects. Considering all these points, intercity networks, particularly the performances of secretariats who are responsible for the operation and management of the networks, deserve more analytical revision to make better use of their functions more effectively.

Notes

1. Interview with Saengroaj Srisawaskraisorn, Program Development Specialist, Regional Environment Office, USAID/RDMA, on 4 May 2010.
2. Interview with Bernadia Irawati Tjandradewi, Programme Director, CITYNET, on 31 January 2012.
3. Interview with Glynda Bathan-Baterina, Policy & Partnership Manager, CAI-Asia, on 26 January 2012.

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