

CITYVOICES

CityNet magazine, CityVoices, is published twice annually. It is a collection of experiences and reflections on CityNet's partners and member cities projects, policies and programmes. Each issue focuses on a particular theme related to CityNet's mission to connect urban actors and deliver tangible solutions for cities across the Asia Pacific region. CityVoices is also available online in PDF format on the CityNet website.

For inquiries please contact the CityNet Secretariat at media@citynet-ap.org.

CITYNET

CityNet is the largest association of urban stakeholders committed to sustainable development in the Asia Pacific region. Established in 1987 with the support of UNESCAP, UNDP and UN-Habitat, the Network of cities has grown to include more than 130 municipalities, NGOs, private companies and research centers. CityNet connects actors, exchanges knowledge and builds commitment to more sustainable and resilient cities.

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**INVESTING IN
SUSTAINABLE URBAN
INFRASTRUCTURE**

CityVoices

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Editorial From The Secretary General



In 1975, just over 37% of the world's population lived in urban areas. Thirty years later, urban dwellers accounted for 54%, while 46% remained in rural areas. The United Nations predicts that by 2050, 66% of humanity will live in cities (United Nations 2014). Much of this urbanization is taking place in the Asia-Pacific region, where CityNet has an active membership.

We are privileged to serve our member cities, which are facing numerous challenges. On the one hand, our cities are growing rapidly because people come in search of jobs, income, and on the other hand the expectations of services from city hall are also rising because all citizens would like to have efficient and equitable access to basic urban services like clean water and sanitation, reliable electricity, convenient mobility solutions and affordable housing. Building the necessary infrastructure is an enormous challenge as the demand intensifies.

The reality very often is that these cities face an existential crisis caused by urban services not being able to keep pace with rising demand for improved infrastructure, environmental and social services. In their absence, the consumption-oriented urban residents generate a lot uncollected garbage, untreated waste water and air pollution from the rising usage of automobiles. Carbon emissions from these cities will contribute to global warming, while many of the urban poor are also extremely vulnerable to weather related disasters that appear to be increasing in frequency and intensity.

Local governments are increasingly expected to shoulder greater responsibilities for the financing of their infrastructure investments. The question is, how cities can finance their needs and invest on a sustainable urban infrastructure as rapid development is already placing incredible stress on cities.

To meet current and future infrastructure requirements, it is imperative that city governments supplement their own sources with alternative financing. More than two-thirds of total investment in infrastructure in the next 15 years will be made in cities. Investing in sustainable infrastructure is key to tackling the three central challenges facing the global

community: reigniting growth, delivering on the Sustainable Development Goals, and reducing climate risk in line with the Paris Agreement.

In the 2017 CityNet Congress, we had the opportunity to briefly discuss on the needs to find solutions to the large and growing infrastructure financing gap facing cities. In this edition of CityVoices, we have compiled some examples of good practices and success stories from our members to illustrate how local leaders are carving their unique pathways to sustainable urban development.

Our biggest challenge is not merely in generating new ideas, but instead in mobilizing resources to finance sustainable urbanization. We hope to utilize the 2018 meeting in Danang to discuss these challenges.

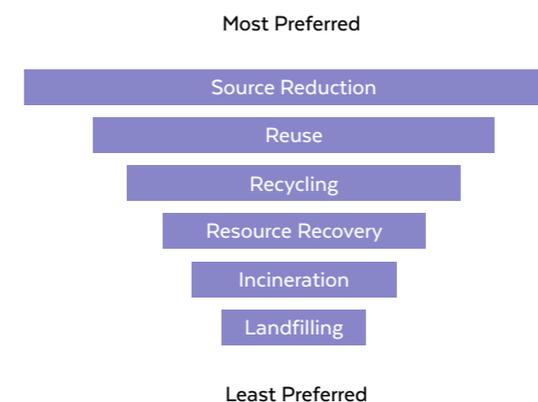
The Importance of Solid Waste Management in the Context of Urban Development in Asia Pacific

Solid waste management is one of major threats to social and environmental wellbeing when they are not properly managed. It brings dire consequence to the health of urban dwellers, degradation of urban spaces, therefore overall quality of life in the city subjected to the problem. Currently, per capita waste generation ranges from 0.44 to 4.3 kg per person per day in Asia with an average of 0.95 kg per capita. As gross domestic product per capita increases, waste generation per capita also increases. As of 2012, world cities generate 1.3 billion tons of solid waste per year and it is expected to rise to 2.2 billion tons by 2025. Of the 1.3 billion tons, Asia's share is 270 million tons and this number is projected to double in Asia by 2025 – which is more than global average increase – given the rapid economic growth and urbanization taking place in this continent. Waste generation, therefore, is also bound to increase and their potential damage needs to be contained with proper solid waste management apparatus and financing scheme.



Nanji landfill and park: This project brought a set of long-term benefits, including tax collection that would be much larger than the project cost.

Waste Management Hierarchy



There is a range of solutions for dealing with solid waste management from the most basic solution of burying collected waste in dump or landfill sites to reducing waste generation at the source – they are not mutually exclusive. Most preferred solution is at the earliest “waste stream” as they reduce the cost of handling waste downstream and decrease negative environmental impact.

In terms of resource recovery, waste can become valuable resource rather than be completely “wasted” through waste-to-energy measures. Active reuse and recycling will help to give rubbish a second chance to life while unrecyclable household waste can be turned into resource through capturing energy in the process of incineration or by collecting methane gas produced as mountain of trash decomposes in landfill sites. Other materials such as organic food waste can also be turned into an alternative resource through applying innovative measures. Seoul today embraces all of solid waste measures outlined in the waste management hierarchy.

SEOUL'S DEVELOPMENT ON MANAGING SOLID WASTE

Seoul went through significant progress on solid waste management in a relatively short period of time. Korean War in the 1950's destroyed about 80% of existing infrastructure leaving Korea in devastation and much to build even for mere survival. Seoul had no formal waste management system until 1978 with an expanding urban population leading to rapid accumulation of generated waste with no proper home for them.

By 1960's, the city saw five unsanitary dump sites in operation although still no designated landfill. The first controlled landfill called Nanji Landfill began its operation in 1978 in then a remote western part of the city. Nanji served as the only landfill site serving Seoul citizens until it was closed in 1993. Before its closure, a new sanitary landfill site was built on a strip of reclaimed land in the vicinity of Seoul to serve Seoul and its entire metropolitan region including Gyeonggi Province and the city of Incheon. Sudokwon Landfill, which is the largest landfill site in the world, has four sites serving 25 million people with the second site currently being filled.

Around the same time, Seoul was making a switch from landfill to incineration facilities to process the city's solid waste. The first incineration facility – Seoul's incineration facilities are called Resource Recovery Center – was built in 1996. Four Resource Recovery Centers are in operation today with maximum aggregate intake capacity of approximately 3,000 tons per day. Of approximately 10,000 tons of garbage that Seoulites produce daily¹, about 27% is processed through incinerators and 8% is buried in landfill site; the rest is recycled.

VOLUME-BASED WASTE FEE SYSTEM

Seoul is one of the cities who are at the forefront in solid waste management. With approximately 1 kg of waste generated per person per day, the city does a great job of reducing waste generation at source. The city also has a high rate of recycling household waste at 65%, almost twice the OECD average, while applying creative methods to recover resources out of rubbish

that will otherwise left to be wasted.

In order to achieve this, Seoul created and applied a policy apparatus called “Volume-based waste fee system”. Designed upon the principle that waste producers pay a fee to dispose them, citizens are partially responsible for the cost incurred to throw away the waste they generate based on volume or weight of waste being disposed of. For household waste, citizens need to dispose the waste in waste bags that they need to purchase in order for the waste to be picked up. Improper disposal is not picked up and traced down for a hefty fine. The bags are inexpensive (about half dollar for a 20 liter bag and are subsidized for people living in poverty), accessible everywhere and biodegradable. On the other hand, disposing recyclable waste is free of charge when they are properly segregated and placed in appropriate receptacles. Placing a fee to throw away garbage while making disposal of recyclables free did wonders: citizens were incentivized to recycle more while produce less household waste.

Volume-based Waste Fee System has been in place for over two decades since it was first implemented nationally in 1995. As the result of this policy, Seoul was able to achieve 57% reduction in waste generated per capita and increased recycling by almost 20 folds.

WASTE AS RESOURCE

The second characteristic of Seoul’s solid waste management is in the city’s focus on turning waste to resource. As already mentioned, Seoul’s incineration facilities are called Resource Recovery Centers precisely due to its function to recover resources from collected waste. Waste-to-energy incineration plants have the ability to capture energy through the burning of the trash. That energy is captured, collected and a portion is used to run the plants and surplus is sold to public energy company for distribution to residences for a fee. The energy captured from five incineration plants in Seoul is enough to supply energy to about 800,000 households. For landfills, methane gas is captured and converted into energy. Other materials, such as floating ash from incinerator tanks are used as ingredients for making construction blocks, while organic food waste goes through composting to produce fertilizers.

COST RECOVERY AND FINANCES RELATED TO SWM

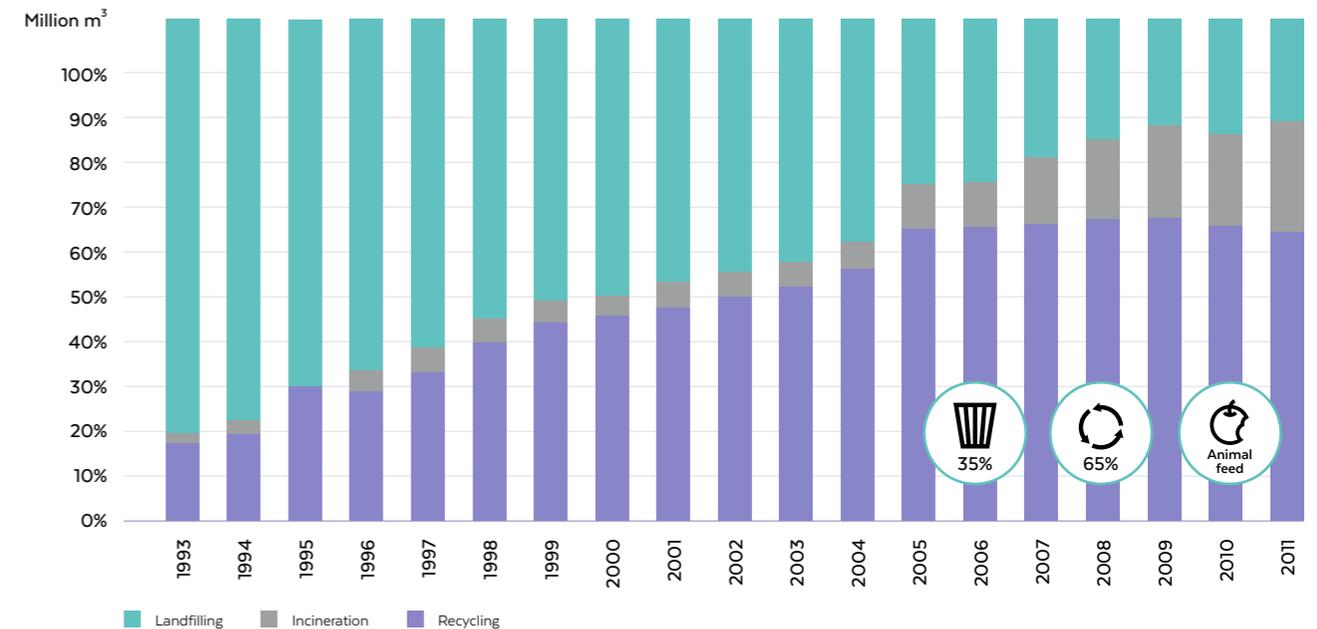
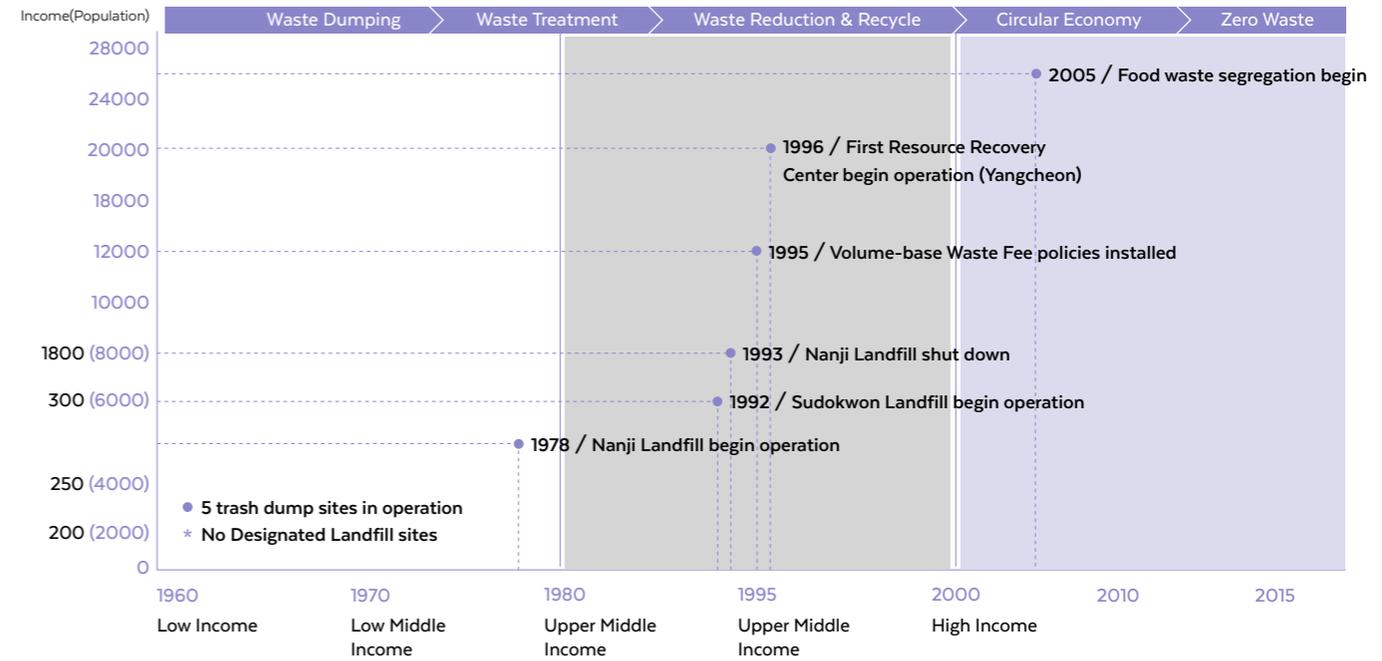
The initial cost of building four incineration facilities in Seoul was covered by public funds from the Seoul Metropolitan Government. The first facility in Yangcheon with an intake capacity of 400 tons per day was built in 1996 with one-time capital investment of USD28 million.² The other facilities became increasingly more expensive due to SMG’s decision to apply more advanced technology as well as varying degree of finances needed to acquire land and build foundation.

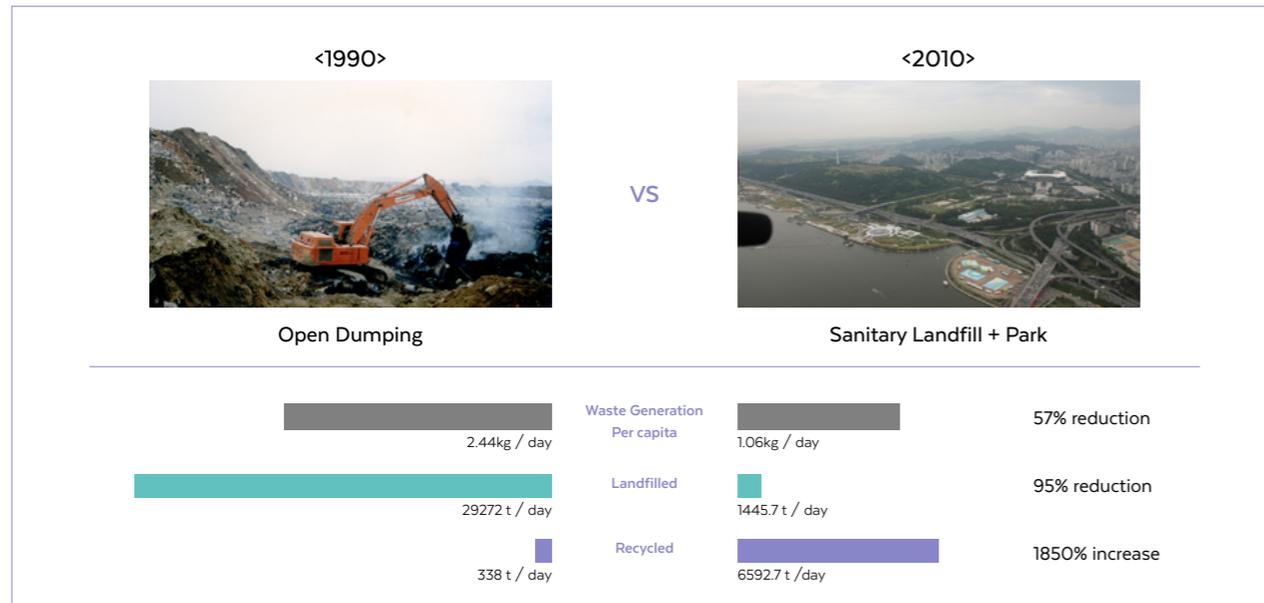
Currently local governments collect tariffs through the selling of waste bags, waste fee for disposing food waste, appliances and furniture, tipping fees as rubbish trucks enter the incineration facilities, income earned through the sale of recyclables and the sale of surplus energy produced at the Resource Recovery Centers. Nevertheless, the rate of cost recovery is still at around 42% while the difference is filled through government subsidy.

Private sector is also engaged in municipal solid waste management but is not sufficiently engaged to offset the cost. The role of private companies are as follows for the city:

1. The operation of RRC facilities via contractual agreement (facilities are owned by the local government)
2. Waste collection
3. Purchase and collection of high-value recyclable goods such as metal, e-waste and glass (less valuable recyclable goods such as plastic are often handled by the government)

For other cities in Asia Pacific, both initial capital investment for constructing facilities and securing constant stream of operation cost may not be readily available. In such case innovative cost sharing mechanism may be necessary by involving private sector as well as enforcing tariffs while official development assistance fund may play critical role for those cities that can tap into them.





Source : Jaemin Song, University of Seoul

KEY SUCCESS FACTORS TO BE CONSIDERED FOR SUCCESSFUL SWM

Seoul achieved remarkable results on managing the city's solid waste through applying innovative measures that worked well for the city. The same system, however, may not be suitable for all cities looking to solve their waste problems. It is, therefore, imperative for the cities with SWM problems to solve to ask some critical questions as follows:

1. What is/are the main/urgent problem(s) on solid waste management that your city would like to tackle?
2. What are the reasons for ineffective or lack of proper waste management in your city?
3. What is legally allowed in your city/ country? Landfill, incinerators or both?
4. Does your city/country have legal and regulatory framework conducive for the solution?
5. What is the financial capacity of your city? How will your city finance the effort?
6. How will your citizens react to "producers pay" scheme?
7. How can private sector take part in solving the issue?

Additionally following are some recommendations to consider:

1. Ensure you have a system in place that will win the heart of your citizens.
2. Develop a plan that will work for your city and implement them in increments.
3. Have an effective change management plan ready.
4. Ensure a sustainable financial stream to keep the system going.

AN ARTICLE BY SUNGHOON KRIS MOON

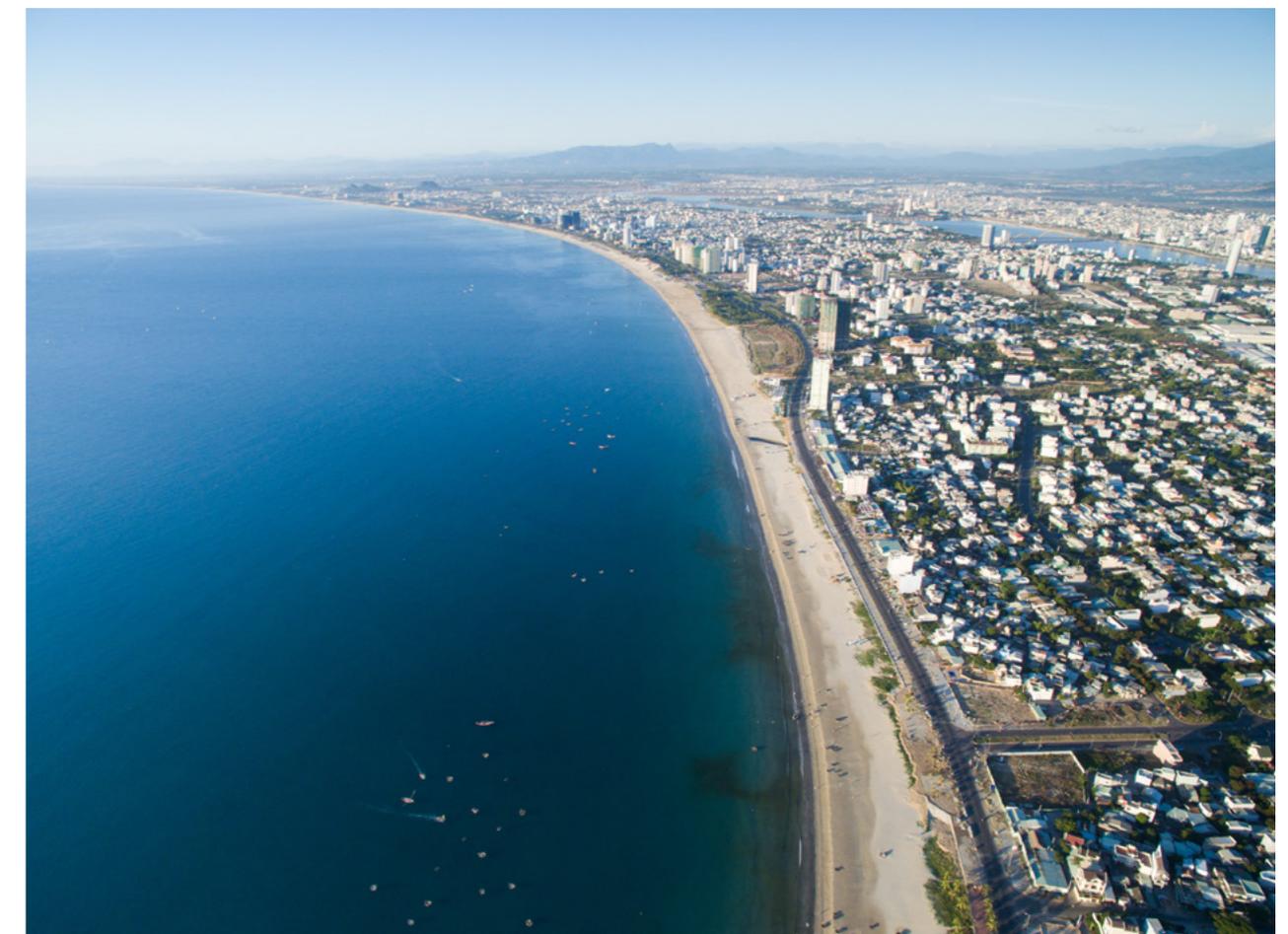
Team Lead and Project Advisor, Strategic Planning & Communication
Seoul Urban Solutions Agency

Endnotes:

- 1 Household and business waste only. Construction waste which comprises 71% of all waste produced in Seoul is omitted.
- 2 Nowon RRC with 800 tons/day cost USD 68 million in 1997, Gangnam RRC with 900 tons/day cost USD 90 million in 2001 and Mapo RRC with 750 tons/day cost USD 150 million in 2005. Mapo RRC was substantially high in cost due to its more advanced technology and the cost for building the foundation since it was built on former landfill site.

Da Nang Sustainable City Development Project (SCDP)

Remarkably developed to be a sustainable and integrated city: Da Nang's Sustainable City Development Project is reaching its completion in 2019, and looking forward to begin next transformation to the largest green & livable city in Vietnam by 2025. From 1998 Da Nang has embarked on several urban development projects under the umbrella of World Bank partnership.



My Khe beach
Photo by Jimmy Tran, Shutterstock

DA NANG: THE SOCIO-ECONOMIC HUB OF CENTRAL VIETNAM

Da Nang is located at the central region of Vietnam. As the fourth largest city in Vietnam, following Ho Chi Minh, Hanoi, and Haiphong, and one of the five biggest cities under the direct administration of the central government, Da Nang plays as a critical gateway domestically and internationally. The city is 1,285 square kilometers consisting of 6 districts. The population is over 1 million with a population density of 828 inhabitants per square kilometer as of 2017.¹ It is approximately 1% of total Vietnam population. Average population of Da Nang has been consistently increasing with its natural population growth rate of 1.2%.

Taking the advantages of being located at South Central Coast, middle of Vietnam, it drives Da Nang to be the most strategic economic city in Vietnam. It is serving as a key socio-economic city, a center of services, transports hub in Central Vietnam and Western Highlands, and a link to other countries. From 2013-2016, Da Nang was listed as the most competitive city among 63 provinces in Vietnam in the Province Competitive Index (PCI).² The city's annual urban growth rate is 3.5%, and considering the future population growth, securing infrastructure will determine the quality of life of its residents. Infrastructures, such as transportation system, had to be reformed in order to meet citizens' needs.

BASIC INFRASTRUCTURE DEVELOPMENT: THREE CITIES SANITATION PROJECTS

Da Nang has undergone an innovative revolution with more sustainable approaches of urban development. In 1999, Da Nang took an action to change the city and since then Da Nang experienced huge change of basic infrastructure through their partnership with the World Bank. The initial project aimed to sustain improvements to public health and to increase economic development together with the other two cities; Haiphong and Quang Ninh.³ Considering the fact that Da Nang is in a tropical monsoon zone with 2.5 millimeters of rainfall per year, reducing the incidence of flooding is directly related to its residents' safety and public health.

By upgrading the urban environment and developing more efficient and financially sustainable drainage companies, Da Nang have secured public

health and improved lacking infrastructure. It gained huge success and benefits. The three cities, including Da Nang, have successfully improved the drainage, sewerage and solid waste management throughout the city and also increased its institutional support.

Over 738,000 citizens have benefited by the improved reliable drainage and sewage systems, solid waste management and on-plot sanitation. Reducing the vulnerability to flooding and other environmental risks including diseases, eventually upgraded the quality of life living in Da Nang. This project, spanning between 1999 and 2008, has provided the foundation for the following projects with the World Bank.

SUSTAINABLE CITY DEVELOPMENT PROJECT

Over the last two decades, under the World Bank partnership, Da Nang has developed as the greenest city in Vietnam.⁴ Da Nang has undergone 3-step of innovative revolution and taken sustainable approaches of urban development. The Three Cities Sanitation Project was then followed by the Da Nang Priority Infrastructure Investment Project (PIIP) in 2008-2013 and Da Nang Sustainable City Development Project (SCDP).

SCDP is a scaled up project of the PIIP with US\$272.20 million financing from IDA. This investment will contribute to Da Nang's urban environment and increase urban mobility in a clean, safe, inclusive, and energy efficient manner. The goal is to establish Da Nang as the first city in the country that has a separate municipal wastewater collection and treatment and sewers systems.

SCDP is in progress for more than 5 years since 2013, and it consists of five components through a number of projects:⁵ (*Doi Moi: Vietnam's economic reformation policy)

1. Drainage and wastewater improvement
2. Bus Rapid Transit development
3. Urban strategic roads, comprising: improvement of the connectivity of the urban arterial system, including construction of two new east-west connecting roads to the north-south bypass of Da Nang and the national expressway network; and construction of resettlement sites
4. Technical assistance and capacity building

5. Transferred activities of Da Nang Priority Infrastructure Investment Project (PIIP)

<Financing Plan (US\$) in 2013>⁶

Financier	Commitments
International Development Association (IDA)	202,500,000
Borrower	69,700,000

In May 2017, the World Bank approved an additional financing that aims to support the scaling up of the project by helping develop a separate sewer/house connection system and minimize pollution risks – for coastal tourism area of My An–My Khe.

<Additional Financing approved in May 2017>

Financier	Commitments
International Development Association (IDA)	72,520,000
Borrower	13,600,000

With the additional financing that was approved in 2017 the project breakdown is as follows:⁷

1. Drainage and Wastewater Improvement - Wastewater Collection and Treatment: development of a separate sewer/house connection system in the coastal tourism area of My An - My Khe: (US\$143.60 million)
2. Bus Rapid Transit Development - establishment of an integrated fare collection and Intelligent Transport Systems (ITS) for public transport, including the BRT system (US\$70.22 million)
3. Urban Strategic Roads - and the improvement of DH2 (Hoa Nhon - Hoa Son) Road (US\$94.70 million)
4. Technical Assistance and Capacity Building (US\$19.20 million)
5. Transferred activities from Da Nang Priority Infrastructure Investment Project: (US\$30.60 million)

SCDP has given several positive impacts, according to statistics of the World Bank by May 2018, they include:

- Transportation
Compared to 2013, the number of passengers using the bus has doubled to 44,000 in 2017.

Nguyen Tat Thanh extension road, which is 3.4 km long, was opened to public by March 2018, reducing travel time by half.

- Flood protection (Water drainage)
New drainages which can cover 283 hectare were built, and more are under construction.
- Community capacity building
Percentage of target citizens who participated in capacity building consultation program is 67%

ARTICLE SOURCE

Various World Bank's Project & Operations information including Danang Sustainable City Development Project (SCDP) (<http://projects.worldbank.org/P123384/danang-sustainable-city-development-project-scdp?lang=en&tab=overview>)

Endnotes:

- 1 Area data as of 31/12/2016 according to Decision No. 2311/QĐ-BTNMT dated September 28th 2017 of Minister of Natural Resources and Environment.
- 2 Vietnam Briefing. (2018). *Vietnam's Provincial Competitiveness Index 2017: Improvement in the Quality of Economic Governance*. Retrieved from <http://www.vietnam-briefing.com/news/vietnams-provincial-competitiveness-index-2017-improvement-quality-economic-governance.html/>
- 3 The World Bank. (November 9, 2017) *Da Nang City and The World Bank: Partners in Innovative Urban Transformation*. Retrieved from <https://www.worldbank.org/en/country/vietnam/brief/da-nang-city-the-world-bank-partners-in-innovative-urban-transformation>
- 4 Da Nang voted as Vietnam's Greenest City (July 13, 2018), *DTI News*. Retrieved from <http://dtinews.vn/en/news/021/57376/danang-voted-as-vietnam-s-greenest-city>.
- 5 The World Bank. (November 9, 2017) *Da Nang City and The World Bank: Partners in Innovative Urban Transformation*. Retrieved from <https://www.worldbank.org/en/country/vietnam/brief/da-nang-city-the-world-bank-partners-in-innovative-urban-transformation>
- 6 Da Nang Sustainable City Development Project (SCDP). Retrieved October 18, 2018, from The World Bank website: <http://projects.worldbank.org/P123384/danang-sustainable-city-development-project-scdp?lang=en&tab=financial>
- 7 The World Bank. (May 31, 2018). *Danang Sustainable City Development Project (SCDP) (P123384): Implementation Status & Results Report*. Retrieved from <http://documents.worldbank.org/curated/en/432211527816999831/pdf/Disclosable-Version-of-the-ISR-Danang-Sustainable-City-Development-Project-SCDP-P123384-Sequence-No-11.pdf>

Development Plan for the West Sidoarjo Regional Public Hospital with PPP Scheme

The national government is currently intensely working towards infrastructure development because it is one of the keys to achieving sustainable economic growth. Infrastructure development is carried out by the government gradually as it requires a lot of funds, moreover Indonesia's infrastructure is still lagging behind other countries. Efforts to build infrastructure are not only carried out by the central government, but also by local governments. This has been realized by the Sidoarjo Regency Government, which also contributes to the development of its infrastructure in various fields, one of which is in the field of health services. In order to improve health services for the people of Sidoarjo, the Regency took the initiative to build a hospital in west Sidoarjo.



The Sidoarjo Regional Public Hospital is located in Central Sidoarjo.



The in-patient building for the first class wards

Health quality is one of the important factors in the development of an area. Without a guarantee of a good health quality, that area will not have competent human resources to sustain the quality growth of the area. Factors that affect the health quality of an area include the following: 1. Access to health facilities; 2. Quality of health services; 3. Economic factors.

Based on the analysis of Sidoarjo Regency health profile data between 2014-2016, it can be seen that the hospital performance indicators (Bed Occupancy Rate ("BOR") and Average Length of Stay ("ALOS")) are still below the ideal standard of the Ministry of Health, except for Turn Over Indicator ("TOI"). As for the Net Death Rate ("NDR") and Gross Death Rate ("GDR") values, it appears to increase every year. This shows that the level of hospital utilization in Sidoarjo Regency is relatively low which can be caused by the difficulty for the community in accessing the hospital or the community's low purchasing power to obtain services in the hospital.

There are currently 26 hospitals in Sidoarjo Regency. However, there is only one Regional Public Hospital ("RSUD") in Sidoarjo Regency, namely Sidoarjo Regional Public Hospital located in central of Sidoarjo and is about 1-1.5 hours drive from the

farthest sub-district in the west part. Nevertheless, quite a lot of people from west Sidoarjo visit the Sidoarjo Regional Public Hospital because it is able to provide high standard services but still affordable for the community. By considering the accessibility of the western Sidoarjo community to health services of similar quality, presenting a hospital in west part of Sidoarjo with services equivalent to Sidoarjo Public Hospital is important.

Sidoarjo Regency Government has conducted an in-depth and comprehensive study with the assistance of PT. Sarana Multi Infrastruktur-SMI (Persero) through the Project Development Facility obtained from the Ministry of Finance. In conducting a final study of the Pre-Feasibility Study (Final Business Case-FBC) Development Project of West Sidoarjo Regional Public Hospital with PPP scheme, PT. SMI (Persero) is assisted by PricewaterhouseCoopers (PWC), an international financial consultant who have conducted thousands of PPP studies worldwide.

Based on the Indonesia's Law No. 44 of 2009 concerning hospitals, the government is obliged and responsible in providing health services in its working area. Hospital is a health service institution that carries out complete individual health services that



The integrated Intensive Care Unit

provide inpatient, outpatient and emergency services. Furthermore, the Regional Public Hospital (RSUD) is a hospital founded and organized by the Local Government.

PPP IS NOT PRIVATIZATION

In the final phase of the Pre-Feasibility Study, the construction of the West Sidoarjo hospital explained clearly that this scheme was not a “privatization” because the founder and organizer of the RSUD is the local government with duties and responsibilities of leading, directing, fostering, implementing, controlling and evaluating the implementation of health services, particularly under the leadership of the hospital director as the head of the Regional Technical Implementation Unit under the direct administration of the Regent of Sidoarjo. Which means the Regent has the full authority in the preparation and pricing of health services. In this scheme there is also no transfer of asset ownership during the term of the agreement and the hospital director is overall responsible for the quality of service provided to the community at the West Sidoarjo Regional Public Hospital.

HOSPITAL IS NOT A WORKSHOP

To take as an example, there are some similarities between hospitals and motorcycle workshops, among others, in the form of services provided to customers, there is the ability of individual skills to serve customers and require service guidelines. The difference is that the workshop faces inanimate objects but the hospital takes care of living humans who demand excellent service quality. Building a hospital is not the same as building a road; hospitals must meet the requirements of location, building, infrastructure, human resources, pharmacy, and equipment. For this reason, when building a hospital, there will be many risks that must be mitigated, not just building a building.

PPP PROVIDES OPPORTUNITIES TO BUY QUALITY SERVICES

The PPP contract for the West Sidoarjo Regional Public Hospital will specify a number of generally applicable output specifications that must be met by the Implementing Business Entity (BUP) which will win the auction later, including that the BUP is obliged to obtain a minimum level



The in-patient building for the second class wards

of accreditation at the latest in the second year of operation based on National Standards for Hospital Accreditation. In addition, the BUP is also obliged to achieve a level of patient satisfaction with a minimum index of four (1-5 scale) in the second year of operation and implementation of construction, hospital operations and maintenance must always refer to Environmental Impact Assessment documents and other related documents. BUP is also obliged to provide full and adequate access for Sidoarjo Regency Government to conduct a fair examination and not interfere with the activities of health services to patients.

PPP IS MORE EFFICIENT

To compare the most efficient financial impacts generated between the project using PPP Schemes and regional budgets, the team conducted the most commonly carried out analysis in the world, namely the Value for Money Analysis (“VfM”).

With the regional budget scheme, the regency government has responsibilities that cover the construction, operation, and governance of public services. The regency government must carry out the construction of all necessary facilities and infrastructure, as well as operations related to the facilities and infrastructure of the related services.

With the PPP scheme, the BUP is responsible for building health facilities, supplying medical devices, ensuring the availability of health services for patients, and covering operational and maintenance costs for the entire hospital during the agreed contract period.

With the regional budget scheme, the regency government must bear all costs of all the risks

mentioned above. Risks are calculated based on the probability of risk and impact of the risk. These risks use the following assumptions: (i) Increase in construction costs: Calculated based on a 65% probability and 15% impact, (ii) Increase in O & M costs: Calculated based on a 65% probability and 15% impact.

Whereas with PPP scheme, payment of service availability to BUP by Sidoarjo Regency Government for the provision of health services and project operational activities, will not increase construction costs and risk of delays or risk of O & M costs, because these risks have been calculated in the risk premium for funding financed by Availability Payment to BUP.

Finally, the PPP scheme has a cost reduction benefit for the Sidoarjo Regency Government of IDR 25.96 billion or 9.7% (NPV difference between project costs and PPP and with the regional budget) when compared to the regional budget scheme. This result is obtained from the government’s budget savings, which are only used to pay the Availability Payment (AP) to BUP each year compared to spending capital expenditures and operational costs and the risk of increased construction costs, provision of human resource and O & M. So it is quite clear that choosing a PPP scheme will provide far greater benefits to the West Sidoarjo community.

AN ARTICLE BY ARI SURYONO, S. SOS. M. SI.
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Endnotes:

- 1 PT Sarana Multi Infrastruktur (Persero) (“PT SMI”) is an infrastructure financing company which was established on 26 February 2009, as a State Owned Enterprises with 100% shares owned by the Government of Indonesia through the Minister of Finance Republic of Indonesia. PT SMI plays active role in facilitating infrastructure financing as well as preparing project and serving advisory for infrastructure projects in Indonesia. (Retrieved from: <https://www.ptsmi.co.id/about-us/who-we-are/>)

New Ferry Terminal Complex Enhances the Travel Experience of Passengers in Iloilo City

At least 3,500 daily passengers between Iloilo City and the Island Province of Guimaras in the Philippines are now enjoying a better way to travel with the opening of the Parola Terminal Complex that Cities Development Initiative for Asia (CDIA) helped to plan and implement via a public-private partnership (PPP) mechanism.



Façade of the new Parola Ferry Terminal in Iloilo

“The new terminal is very nice. We can relax comfortably before boarding the ferry because it is air-conditioned and has clean comfort rooms. We no longer get wet when it rains because we can stay at the lobby,” said Junnelyn Cobrador, a regular passenger of Iloilo-Buenavista route.

What used to be a mere dock for loading and unloading passengers has now been transformed into a modern terminal complex with air-conditioned terminal lobby, ticketing area, canopied loading arcades, clean public toilets, and designated parking areas and drop-off points. It is also equipped with CCTV cameras, baggage scanning machines and metal detectors for the safety of the passengers. Best of all, these amenities are available to all travelers for free.

Next to the terminal is a community mall where passengers and nearby residents can shop, dine, or get their groceries conveniently.

THE BLUEPRINT OF PAROLA FERRY TERMINAL COMPLEX

Iloilo City, located in the center of the Philippines is a gateway to other provinces in the Visayas group of islands. Specifically, it is connected to the touristy Province of Guimaras through a ferry system, which extensively transports tourists, employees, students and traders.

Like many other terminals in the region, the ones in Iloilo and Guimaras were previously in bad shape. There were only cramped spaces for queuing and waiting passengers, insufficient or total absence of protective cover from the sun and rain, poorly maintained toilets, and even inefficient and unsafe docking areas.

Resolved to drastically improve these conditions and spur economic activities in the areas, the Iloilo City government submitted an application to CDIA in 2008. The intent was to develop a pre-feasibility study towards a three-port system servicing the City, and the towns of Buenavista and Jordan in the Guimaras Province. CDIA’s technical assistance further included, among others, capacity building on infrastructure development, and financing via PPP.

SETTING THE PLAN IN MOTION

The initial key strategy was for the port system to be developed, managed and operated

by a joint venture corporation owned by the four local government units comprising the Metro Iloilo Guimaras Economic Development Council (MIGEDC). However, the integrated ferry terminals did not materialize as planned owing to several reasons such as the delay in securing ownership rights over the Parola property by the Iloilo City; and the change in local administration, which deterred the signing of memorandum of agreement for the joint venture.

Eventually, the local governments of Buenavista and Jordan started to gradually redevelop their respective ports, disregarding the planned institutional arrangements for the three-port system.

The Iloilo City government on the other hand, decided to independently develop the Parola landing station after it was granted ownership of the 1.6-hectare property by the national government. Specifically, it accepted the proposal of a private investor, Double Dragon Properties Corporation to develop the Parola Ferry Terminal into a mixed-use commercial complex under a Joint Venture Agreement (JVA).

Prior to the forging of the JVA and upon the advice of CDIA consultants, the City Council passed an ordinance allowing the City Mayor to enter into a JVA on behalf of the city; and he in turn, created a Joint Venture Selection Committee (JVSC) to oversee the PPP tendering processes. The JVSC together with CDIA reviewed the investment proposal of Double Dragon and suggested revisions to the draft agreement.

The JVA was signed in 2012 with effectivity of 25 years, renewable for another 25 years depending on both parties. The agreement further stipulated for Iloilo City to collect a specific amount annually from Double Dragon, on top of business tax and other local fees.

After taking considerable time, in 2017, the Parola Ferry Terminal finally opened to the public. It now caters to at least 3,500 daily commuters between Iloilo City and the towns of Buenavista and Jordan.

Aside from the much-improved terminal complex and community mall which was its trademark development in the area, the project further enabled the relocation of informal settlers which used to proliferate within the Parola area. In recognition of the value of open spaces, the City government and Double Dragon further incorporated a mini-park in the project.



Front berthing of ferry boats, which makes it safer and more convenient for passengers to embark and disembark the ferry.



Front berthing of ferry boats



Before: Sideways berthing which is very unsafe and inconvenient.

The city government provided the land, while the Double Dragon infused a total of Php 125 million or US\$ 2.4 million for the development of the Parola Terminal Complex.

To recover its investment on the ferry terminal, Double Dragon could impose user fees to be shouldered by the passengers. However, as there have been opposing views on the imposition of terminal fees, out of good will and a way to encourage the use of the modern terminal, Double Dragon has decided to postpone the imposition of fees for 10 years from the start of operation. Furthermore, during typhoons, the ferry terminal shall be open 24 hours in order to provide temporary shelter to stranded passengers.

IMPACTS OF THE PROJECT

Aside from providing safe and convenient transport facilities for commuters, the Parola Ferry Terminal development project is expected to bring about positive impacts on the environment, climate change mitigation and adaptation, pro-poor and socially inclusive development, and urban governance.

With regard to the environment, the terminal seeks to improve air quality due to the green urban space component and improved traffic of motorized vehicles in the area, improve air quality resulting from reduced emissions from pump boats, and cleaner water quality contributed by effluents discharged by the facility's wastewater treatment plants.

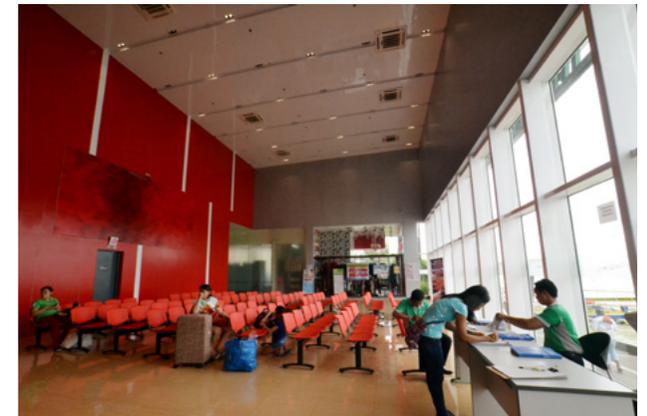
In terms of climate change mitigation and adaptation, the terminal hopes to reduce urban heat due to green space, improve safety and security of stranded sea travelers during typhoons; and eliminate exposure of coastal population from storm surge, sea level rise and typhoons due to resettlement of informal settlers.

The project has further paved the way for the resettled population to have a safer and more secured living environment; and increased job opportunities and livelihood as created by the commercial complex.

Finally, as what the city government has greatly appreciated from their partnership with CDIA, in terms of good governance, the project has helped improve inclusive urban development planning; and enhanced their in-house capacities on sustainable



More organized ticketing area for passengers



Waiting area, where passengers can sit and relax while waiting to board. The terminal is fully air-conditioned with well-maintained toilets for the convenience of passengers.

resource management and optimization, innovative project financing, and improving revenues.

The project has likewise widened their understanding of the PPP guidelines and enhanced their skills in managing public consultations. These improved skills proved valuable in their succeeding PPP projects such as the septage management and waste-to-energy projects, which the city government has successfully entered into with the private sector.

“One key result of our engagement with CDIA is raising the capacity and improving the capabilities of city planners to bridge the gap between planning and implementation,” said Mr. Jose Roni Peñalosa, Iloilo City Planning and Development Officer. “This is by improving our skills in accessing financing and convincing [financiers] to come and invest. CDIA’s guidance made us fearless in doing innovations in this part of the region,” he added.

KEY TAKEAWAYS FROM THE ILOILO FERRY TERMINAL PROJECT, THE FIRST PPP PROJECT OF THE CITY

- Implementing PPP at the local level takes time and does not happen overnight. When the City embarked on their first PPP project in 2009, there was still no clear roadmap on PPPs at the local level. This prompted the city government with support from CDIA to study the legal implications of various PPP options and seek opinions from various stakeholders.
- Political will of the city mayor and the city council helped speed up project implementation after attempts were made to derail the project by some sectors with vested interest in the project. Having a PPP champion at the local level, in this case, the City Mayor was a key facilitating factor, as he was very involved with the project.
- wider and more inclusive approach to stakeholder consultations could have avoided some of the negative perceptions on the planned infrastructure project from some sectors who were apparently left out in the consultation process.
- The city government has capitalized effectively on the opportunity to avail of technical assistance provided by CDIA on infrastructure development and financing. Even if the three-port system through a joint venture corporation did not materialize, some activities recommended by the pre-feasibility study were carried out which resulted in the redevelopment of the Parola complex.
- Investor familiarity with local conditions has been reflected in the final design of the project. For instance, Double Dragon has proposed the community mall within the complex as they are aware that passengers

from Guimaras can save time and money by shopping immediately on-site, rather than go to other malls in the city, which would require them at least 6 kilometers of travel. Furthermore, meeting the needs of the passengers has greatly influenced the design of the complex, which keeps the terminal complex attractive.

- Building the local capacity on various PPP processes has paved the way not only for the financial closure of the Parola Ferry Terminal Complex, but also for succeeding local PPP projects.
- Benchmarking with other cities and local government units that have successfully implemented PPP projects was instrumental, as they have challenges and lessons worth considering.

AN ARTICLE BY AN F. RUBENECIA
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CDIA is a regional initiative that works closely with medium-sized cities in Asia and the Pacific to address gaps in infrastructure development and financing. It is currently implemented by the Asian Development Bank (ADB), the German government through GIZ, and Agence Française de Développement. It receives funding support from the governments of Austria, Sweden, Switzerland, the United Kingdom and the United States of America, as well as European Union and The Rockefeller Foundation. It was established in 2007 by the ADB and the German government with the intent of improving the lives of people in Asia and the Pacific.



Scanning machines and metal detectors installed in the two entrances of the terminal as a key safety feature of the terminal.



Façade of the community mall incorporated in the new terminal complex.



The new terminal has canopied loading arcades, as an added protection from the sun or rain when boarding the ferry.



Passengers get to pay only the fare for the ferry, as the terminal fee for the passengers has been waived for the next 10 years.



Location of Iloilo relative to the entire Philippines



The revitalized Buenavista Terminal in Guimaras Province, which was gradually developed using public resources.



Area map of Metro Iloilo and Guimaras



The revitalized Jordan Terminal in Guimaras Province, which was gradually developed using public resources.

Greening the Infrastructure Gap

That a majority of the region's cities face considerable infrastructure gaps is beyond question. Future projected population growth will ensure this remains a challenge – compounded by a lack of effective planning frameworks, as well as significant and enduring finance gaps. Though much of the debate focusses on 'catching up', it is clear from a sustainability perspective that cities can no longer afford to develop through 'business-as-usual' approaches. Instead, cities must strive to 'green' their infrastructure gaps. Far from being a further impediment, looking towards innovative and green solutions will help ensure the region's urban future is more resilient and sustainable.



Kathmandu, Nepal.

URBANIZATION, ECONOMIC TRANSFORMATION & INFRASTRUCTURE GAPS

Asia is currently home to 54 per cent of the world's urban inhabitants (UNDESA, 2017) and as a staggering 120,000 people arrive in Asia's cities each day, the continent's share of the world's urban population is projected to grow. Significantly, between 2018 to 2050, India and China alone are projected to contribute about one-third of the global urban population increase, adding 416 million and 255 million people to their cities respectively. Such rapid spatial and population growth has resulted in a series of economic, social and environmental challenges, manifested in part by infrastructure backlogs in housing, water and sanitation, solid waste disposal, electricity generation and distribution, and transportation (UNESCAP/UN-Habitat, 2015).

INFRASTRUCTURE AND EQUITY GAPS

Despite the storyline of an economically successful and transformative recent history, the most basic infrastructure is still lacking in many parts of Asia and the Pacific. Water and sanitation needs have yet to be met, with 300 million lacking safe drinking water and 1.5 billion without access to sanitation (ADB, 2017). Globally, nearly 1.3 billion people still do not have access to electricity – two-thirds of whom live in Asia, the majority in South Asia and South-east Asia: Bangladesh, India, Indonesia and Pakistan sustaining large off-grid populations (UNESCAP/UN-Habitat, 2015). With less than 400 Kwh per person, annual energy consumption in Asia is still the second lowest globally, after Africa. This is a persistent issue in rural areas of South-Asia.

The region's infrastructure provision – and gaps – are exacerbated by issues of accessibility and affordability. The spatial projection of this "gap" is clearly manifested in the housing and sanitation challenges in slums. Over half of the world's slum population lives in Asia and the Pacific; this constitutes on average 30 per cent of the urban population in the region, although actual proportion varies from country to country. Unmet needs of the poor in the region's cities provide though an enormous opportunity to 'build better'. At the more immediate level, poor quality low-cost housing has detrimental impacts on health and quality of life. Good quality and healthy

shelter transforms lives. Yet while the role of the built environment is recognized, the contribution of transformative actions to meet low cost housing needs through low-carbon solutions is not yet widely understood or advanced.

To date, where public and private investment has occurred, the focus has been on 'quick fix' and 'business-as-usual' provision. It remains a sobering statistic that, between 2011-2013 alone, China poured 6.4 gigatons of concrete to fuel its infrastructure development – more concrete than the United States used in its entire 20th Century transformation to an economic superpower (Washington Post, 2015). Infrastructure developments, if implemented in the right way, could enable or even consolidate continued high growth, but still maintain lower per capita energy use while addressing equity issues. Innovations, to 'green' slum upgrading including through low-cost (and local) green building materials, have been applied in Thailand's celebrated Baan Mankong program with the support of community architects (CODI, 2018). Likewise, India has launched a 'Mainstreaming Sustainable Social Housing in India' project, MaS-SHIP, which is examining what the impacts of housing production at a massive scale could be on India's environment, economy, and communities in support of a greener and less resource intensive Housing for All 2022 goal (MaS-SHIP, 2017).

WHY IS THE GREENING OF INFRASTRUCTURE SO IMPORTANT?

While cities contribute greatly to the Asia-Pacific region's economic transformation, the corollary of economic and urban growth is that urban areas are the principal sources of Greenhouse Gas (GHG) emissions (70 per cent of global emissions in 2013) (IEA, 2016). While emission figures vary greatly between countries due to climate and pre-existing infrastructure, there are significant opportunities through innovation in infrastructure provision to address sustainability challenges that alter both the way cities consume and produce energy (UNEP, 2013). The built environment, and notably housing, remains an important contributor to climate change actions. It is estimated that in 2010, about 19% of global GHGs derive from buildings/housing, accounting for both direct and indirect emissions arising from heating



Fiji Housing



Hoi An Public Transport

and cooling (IPCC, 2014). In one assessment Bai et.al (2018) have estimated that, through orthodox approaches, building infrastructure for fast-growing cities in developing countries could release 226 gigatonnes (Gt) of carbon dioxide by 2050 — more than four times the amount used to build existing developed-world infrastructure. The implications for our planet of such an approach would be extremely damaging. To curb emissions, cities redouble efforts to focus on low-carbon construction, alternative transport and better planning and design.

In the region, GGGI has worked with governments in Nepal, Viet Nam and Fiji to develop green growth strategies to reduce national GHG emissions while meeting economic development targets. Infrastructure investments, in particular in the housing or transport sectors, constitute important

potential for economic multiplier effects as these together account for the more than half of urban GHG emissions. GGGI is supporting the governments of Mongolia and Rwanda in reducing energy consumption through improving building design. In several other countries, GGGI is promoting the greening of public transportation, and infrastructure to facilitate/support NMT options.

Efforts to close gaps in infrastructure investment have been ongoing for decades, as many infrastructure types not only involve significant initial investment, but also long-term maintenance costs. Investment in infrastructure has been a mainstay of international development cooperation, particularly through the international and regional development banks since the 1960s. Economic and urban growth in the region has since outpaced this investment, with increasing

numbers living in urban areas without access to adequate infrastructure. While more is required from the private sector, this must go beyond business-as-usual approaches.

Although investing in new green infrastructure may appear to be potentially expensive and technically challenging they represent potential “quick wins” that could create low carbon outcomes and inclusive built environments. These provide an opportunity to rethink infrastructure outside of an ‘infrastructure think box’; taking into account the co-benefits that can accrue to cities through solutions which focus on synergies with the natural environment, through decentred/ community-based solutions, and through lower-carbon and ‘smarter’ climate resilient infrastructure. Rethinking infrastructure in this way helps us to challenge all the processes related to infrastructure,

questioning not only what infrastructure is built, how we build it, and where the funding sources are. This shifting of paradigm in infrastructure delivery provides the opportunity for innovations enabling countries to meet national obligations under the Paris Agreement, as well as stimulate innovation and new investment into sustainable and creative infrastructure design and solutions.

WHAT IS THE INFRASTRUCTURE FINANCING “GAP” AND HOW CAN IT BE CLOSED?

Infrastructure refers to a vast variety of sectors and implies a daunting array of investments for national and municipal governments, private companies, individual investors and the international donor community. On one hand infrastructure must promote sustainable development; on the other,

it must guarantee basic welfare. There are widely varying estimates as to the extent of the infrastructure financing “gap” in Asia. In 2015, the world spent 9.5 trillion USD, 14 per cent of GDP, on infrastructure (McKinsey, 2017). The Asian Development Bank estimates that infrastructure investment needs in Asia and the Pacific at US \$1.5 trillion each year through to 2030 (ADB, 2017). This level of infrastructure investment is required to sustain economic growth, eradicate poverty and adapt to climate change. Current investment levels reflect a gap of 2.4 per cent projected GDP for the period of 2016–2020. The Global Infrastructure Outlook finds that over half the global infrastructure investment needs are in Asia, with over 30 per cent in China (Global Infrastructure Hub, 2017).

The economic viability of different infrastructure types varies considerably, with financing by private sector and governments often biased towards ‘lucrative’ roads, railways and telecommunications projects, at the expense of basic service provision. Across the member countries, GGGI works with governments, development banks and private sector partners to develop innovative financing mechanisms to strengthen basic infrastructure provision, demonstrating the ‘bankability’ of such projects, and their potential to support green city development.

The institutional and financial (“soft” infrastructure) vehicles for leveraging financing vary, and there are divergent opinions regarding the best solutions for resource allocation and revenue raising as commercial banks have become reticent to finance these long-term initiatives since the financial crisis. A key question is: could other investors plug the gap? A solution that is cited by many, mostly private sector actors is the raising of financing through enhanced and more effective regional capital markets, mobilizing untapped corporate, sovereign and private savings that recent economic boom has brought to the region. The capacity for innovative financing as well as the governance challenges to support this are as equally daunting as the physical infrastructure gaps.

Many cities in the region, and beyond, continue to face critical finance gaps compounded by legal barriers to borrowing on financial markets and developing a bonds market. Tax collection also

remains a significant hurdle for revenue availability for infrastructure spending; although many Asia-Pacific economies have boomed over recent decades, many nations fail to capture sufficient tax revenues. In short, this manifests itself in rapidly growing cities with clear infrastructure gaps, but which are seen as ‘unbankable’. Such impediments must be overcome, including through stronger partnerships between central and local government, with local and international finance through blended and other financial mechanisms (GGGI, 2016). In recent years new financial instruments have emerged more closely linking infrastructure, green city development and climate change targets. In 2018, for example, the Green Bond Pledge was launched; bonds that finance long-term infrastructure and capital projects needed to address environmental impact and climate risk in industry, energy, water, waste, buildings, transport and land use (Green Bond Pledge, 2018). ‘Green Muni Bonds’ are one example of future financial mechanisms set to emerge, which cities make take future advantage of.

The interest that many international firms such as Siemens, McKinsey, Booz Allen Hamilton have taken in estimating and costing the “Urban Infrastructure Gap” indicates that stakes are potentially high – as is the potential to be transformative. But successful investment cannot exist in a policy or regulatory vacuum. Innovative approaches to greening the region’s future infrastructure needs will also depend upon effective “soft infrastructure”, or economic and institutional frameworks – which are as equally crucial to resolving gaps as the “hard” infrastructure innovation and design. As much of the infrastructure is yet to be built in Asia, past and existing models must be re-examined, if we are to turn our current challenges into potential ‘win-win’ solutions for cities, their people, and the planet.

AN ARTICLE BY DONOVAN STOREY & CHRISTINA CHEONG
Green Cities, Global Green Growth Institute

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Autumn/Winter Highlights

Several innovative programs were organized by CityNet for the second half of 2018 with the highlights being National Chapter Optimization Meeting, BRT Workshop, Clusters Strategic Meeting, KLRTC Workshop, and Suwon Forum on Human City Concept.

National Chapter Optimization Meeting



The workshop utilize the SWOT and PDM sessions for the National Chapter representatives.



National Chapter representatives in Makati

Representatives from some NC leaders – Sidoarjo, Makati, and Colombo – gathered on 25-26 June for a strategy workshop hosted by Makati City Government. This NC Strategy Workshop was designed for NC leaders and focal points aiming to build capacity in organizational management, project management, and fundraising.

The National Chapters (NCs) are part of CityNet's decentralization strategy to support the Secretariat to reach out to its members and potentially expand the network. Currently, there are six NCs: Bangladesh, India, Indonesia, Nepal, the Philippines and Sri Lanka.

NC leaders developed a strategy that is tailored to the specific needs of respective NC. To better arrive at key decision points, the workshop utilized CityNet tried and tested processes like Strength, Weaknesses, Opportunities and Threats (SWOT), and Project Development Matrix sessions for the participants.

The Workshop also aimed to foster exchange of good practices on how to best organize NCs in the country. The session mostly consisted of focus group discussion, open interaction and reflection session. In addition, the workshop featured various focus areas that include developing effective association management, project development and opportunities for NCs. CityNet worked with partner organization, Cities Development Initiative for Asia in delivering the content.

Transportation Strategy for Asian Cities: BRT

Building on a similar workshop held in 2016, this year's Transportation Strategy Workshop put a focus on Bus Rapid Transit (BRT) which was staged by CityNet in collaboration with the Seoul Human Resource Development Center (SHRDC) and the World Bank from 9-15 July 2018.

The workshop connected urban transport professionals from Bogor, Jakarta, Kuala Lumpur, Hanoi, Ho Chi Minh, and Da Nang to discuss BRT best practices and transportation problems in the Asia Pacific region. Participants had the opportunity to exchange innovative practices and explore potential solutions of the problems arose. The sessions included the Transport History of Seoul, Introduction to the Seoul's BRT system, BRT Planning System, BRT System Implementation, and problem solving.

During this training program, each participant was expected to share an insight into their city's policies or specific plans on their BRT system to find feasible solutions for the existing problems. The purpose of this session is to give each participant an opportunity to share their experiences (including successes, failures and future strategies) with other participants from different cities.

Based on each city's current situation, participants worked on feasible 'Action Plan' to address the issues they're facing particularly reflecting on the learning experience and knowledge gained throughout the workshop.

This workshop also reflects the collaboration between CityNet and the World Bank in the recently established 'thematic sub-network' of cities that possess operating BRT systems, as well as interested cities that are currently planning or implementing BRT projects. Similar to CityNet Clusters, the sub-network will be a support network for knowledge sharing and cooperation for cities with BRT networks to enhance the quality of BRT networks in the Asia Pacific, post-installation.



This workshop is held in collaboration with the World Bank and SHRDC.



Urban transport professionals share their city's challenges at the workshop.

CityNet Clusters Establish Concrete Plans for 2019

CityNet organised a clusters strategic meeting on 23 July 2018 in Kuala Lumpur attended by leaders and co-leaders of the four CityNet clusters that build the foundation of the network's activities – climate change, infrastructure, disaster, and SDGs. The main purpose of this meeting is for each cluster to present their plans and programs for 2018-2019.

Representatives from Jakarta, HELP-O, Seoul, Kuala Lumpur, Yokohama, Barisal, League of Cities of the Philippines, and HUDCO convened in Kuala Lumpur for a full day brainstorming session through SWOT analysis discussion, presentation of each cluster's plans, and building feasible PDM.

CityNet envisions CityNet clusters as thematic hubs for showcasing peer learning and city-to-city cooperation in Asia. The CityNet Cluster system is meant to de-centralize CityNet work by allowing subsets of CityNet members with a common interest to organize independently. Over the years, CityNet clusters have helped the Secretariat implement key programs and projects for our members.

In order to do this, CityNet Secretariat supports all clusters with communication channels, administrative support, promotional support, and a grant contribution. Secretariat will continue to support to CityNet clusters in enabling more local champions in the region and in investing in more institutional partnerships for city-to-city support at the regional level.

Over time, the clusters have had mixed results with some of them being active, doing results-oriented programs for its members with transformations on the ground according to CityNet mission, and getting resources way beyond the Secretariat contribution; while other clusters seem to be dependent on the Secretariat initiative to support and encourage them to do activities.

At the end of this strategic meeting each cluster came up with feasible and tangible action plans to be executed by the end of 2019 for more productive clusters activities.



Kuala Lumpur hosts the Clusters' Strategic Meeting

Infrastructure Cluster Meeting and XXXII KLRTC Workshop on Urban Transport

The CityNet Infrastructure Cluster co-leader, Kuala Lumpur City Hall hosted the 2018 CityNet Infrastructure Cluster Meeting and the XXXII session of the Kuala Lumpur Regional Training Center (KLRTC) workshop focusing on “Sustainable Urban Transportation for the New Urban Agenda” from July 24-26.

Kuala Lumpur is the current infrastructure cluster co-leader, elected at the 2017 CityNet Congress

The Infrastructure Cluster meeting is held for all Infrastructure Cluster members to prepare a set of strategic actions, which include the draft plan of cluster activities that is in line with the four year strategic direction of the cluster and CityNet. The main goals of the meeting were:

- To construct cooperative relationships among Infrastructure Cluster members by sharing information, knowledge, and technologies
- To exchange knowledge and ideas of infrastructure challenges and development among CityNet members
- To build the cluster's plans and program activities for the rest of this year and 2019



Urban transport experts and practitioners enrich the lively discussion with the audience.



In conjunction, through the KLRTC workshop, participants were able to learn successful examples of the policies, challenges, and solutions for urban mobility implemented by CityNet members particularly Seoul and Kuala Lumpur as the infrastructure cluster leader and co-leader. Participants had a chance to hop on the recently expanded MRT – SBK Line.

This year's KLRTC workshop is the XXXII session and the idea of selecting urban transportation as the focus area in this year's workshop is that developing, supporting and promoting sustainable mobility solutions in dense urban areas is a key challenge for cities worldwide especially in the developing countries.

The rapid convergence of information technology and transportation systems offer unique opportunities for innovation, while promising to reduce costs and to increase the convenience, attractiveness, and diversification mode of public transport in rapid urbanization. It is also in line with the CityNet Medium Term Plan approved at the 2017 Congress in Colombo.

Asian City Leaders and Think-Tanks Convene to Promote Human City Concept in Suwon

The 2018 Suwon Forum on Asian Human City was held from 17 to 18 September 2018 in the City of Suwon, South Korea. The Forum was hosted by Suwon City government in collaboration with Suwon Research Institute, Suwon Council for Sustainable Development, ICLEI Korea, Suwon Sustainable City Foundation, and CityNet. Asian municipal leaders, academics, think-tanks and international organizations got together in Suwon to discuss urban challenges, participatory planning approaches and solutions focused with human prosperity.

With an overarching theme of “Human City for All”, this comprehensive Forum explored areas such as residential and urban regeneration, urban resilience and recovery, and citizen democracy. This forum served as a platform to share policy experiences in fostering human cities and to illuminate active

participation and cooperation of multi-stockholders, aiming to build the foundation for the Asian Human City Network and to promote the concept of the Human City to city leaders, experts and citizens.

With increasing demand for the sustainable society, the United Nations adopted the Sustainable Development Goals (SDGs) in 2015, and participants of Habitat III agreed upon the New Urban Agenda in 2016. The importance of cities and local governments is bigger than ever in global efforts towards achieving sustainable human-centric society. This year is Suwon’s third year to host the Suwon Forum on Asian Human City with a focus on new urban progress and sustainable development for the Asia-Pacific cities.

In addition to a Mayors’ Dialogue that opened the discussion by providing chances to show the determination and share efforts of Asian City leaders to promote human-centered city, there were three sessions in this Forum. The first session was dedicated to the theme of building happier cities through urban regeneration and housing welfare, while the second and the third session provided a platform to share ideas and policy experiences in achieving urban resilience and civic democracy respectively.

The Forum concluded with a round table discussion for youth, where young students from the local schools brainstormed solutions to ensure prosperous and fulfilling lives for all. During the closing ceremony, the students delivered their ideas to the participating city leaders, which included a city where people pay more attention when recycling, a city which is greener and a city that responds more attentively to its citizens’ requests.



City leaders participate in the Mayors’ Dialogue on the Human City Concept.