Indonesia Green City Development Program: an Urban Reform

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1. Introduction

Indonesia has been entering an urban era, marked primarily with the real fact of growing high-speed level of people settled in cities. Similar phenomenon has happened in most of Asian countries in the postwar years, as consequence of a massive economic growth. One cannot deny the evidence that cities, no exclusion for Indonesia, are becoming primary destination for most people.

However, such fast urban transformation has not been simple to manage. In one hand, cities have long been considered as a leading catalyst of economic growth and symbol of civilization advancement. Cities are the ideal places for innovations, where rich ideas are not only flourishing, but also competing one to another in search of higher efficiency in urban life. Cities are also places where spatial conflicts occur, demanding more urban services for the sake of economic growth, but often at the expense of environmental degradation. The challenges for Indonesian cities will even be more serious due to climate change and finite resources.

The idea of no panacea and no shortcut for solving urban problems is widely accepted. However, the chief message of this paper is that the approach to answer the urban challenges should not be partial, but integrated under an adequate planning framework. This is first and foremost in line with few conclusions recently drew from the UN's Rio+20 Conference held in 2012 as it appears on the output document "*The Future We Want*" point 134:

> *"We recognize that, if well planned and developed including through integrated planning and management approaches, cities can promote economically, socially, and environmentally sustainable societies. In this regard, we recognize the need for a holistic approach to urban development and human settlements (...)."*

Planning must be compatible with the high pace of urbanization that occurs. A static conventional planning has no longer been adequate to effectively respond the challenges. In contrast, a dynamic action-oriented planning, translated into innovative programs and workable action plans is vital. In Indonesian cases, green cities approach may be considered as a breakthrough. It is not a national policy experiment as such. But as part of planning reform since the last 5 years, green city approach is a strong driver for a significant urban sustainability movement, transforming planning into concrete and positive actions. Urban planners, urban designers, and architects must work in close collaboration with local administration and communities to ensure that integrated planning and design thinking is performed, under the platform of green city.

2. Urbanization : High-Speed Transformation of Indonesian Cities

One of the valid indicators of rapid urbanization is a high number of populations settling in urban areas. In 2010, more than 112 million people reside in urban areas, equivalent to 52.03 percent of total Indonesian population. The annual growth rate is estimated at 1.49 percent. Data from UN Department of Economics and Social Affairs in 2009 revealed that Jakarta metropolitan area, as Indonesia's most populated urban agglomeration, was ranked

in 24th place of 30 world's biggest metropolitan's list.

In terms of urban demography, one must look back in time and compare the number of urban dwellers in Indonesia. As depicted in Figure 1 below, from 1970 to 2010 urban population has increased from 21 million to 123 million people, six times larger than it was 4 decades ago. It is constantly growing and by 2025 will reach about 180.2 million. Back in 1970, there were only 45 cities, but now Indonesia has 98 cities with an average population of 553.000 inhabitants per municipality.

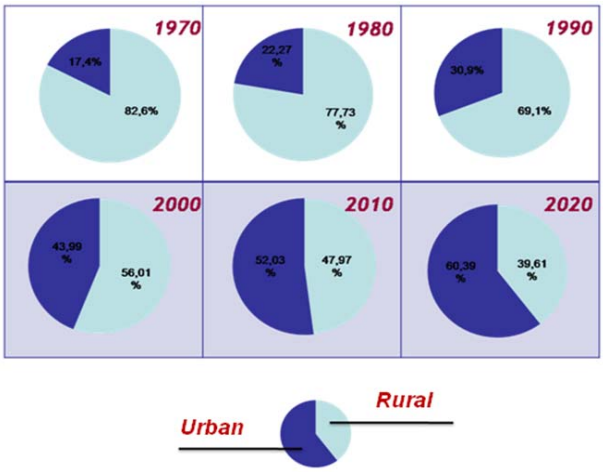

Figure 1: Urban Populations Growth Relative to Rural Populations Decrease

It is well understood that, as a continuous process, urbanization is inevitable. High-speed urbanization results from rational choice of the people towards a better life and better society. But regrettably, while Indonesian cities are changing into modern places, the quality of urban life has been degrading. Urbanization pressure has triggered a multiplication of urban issues. Acute congestion, frequent flooding, green open space elimination, undrinkable water supply, unhealthy levels of pollution, widespread of squatters and slum areas are common.

3. Urban Issues Related to Urbanization

Recent figures of National Statistical Agency (2010) reveals that within a period of 30 years (from 1980 to 2009), there has been a significant decrease in poverty level (see Figure 2), both in urban areas (from 29.04 percent to 10.72 percent) and in rural areas (from 28.42 percent to 17.35 percent). However, a more precise illustration should be based on an absolute quantity of poor people. Urban poor tends to increase from 9.5 million to 11.91 million people. This is not the case in rural areas, where the number of poor has declined from 32.8 million to 20.62 million by the end of 2009. In overall, with 32.53 million of the poor, the poverty level nationwide is still very high, equivalent to the fraction of vulnerable social groups to the impacts of climate change.

In many Indonesian cities, urban sprawl has been extremely difficult to contain due to attractive land market in periphery. As these cities spread horizontally, they are unfortunately not supported with good transport infrastructure and facilities. Therefore, commuting becomes a complicated-routine activity due to traffic congestion, given the fact that most of the population must rely on private vehicles. But, this practices does not merely belong to Indonesian cities (see also Graham & Marvin, 2001; Veron, 2006). In economic point of view, such practice generates a highly expensive transportation cost and it also emits significant amount of greenhouse gasses.

Figure 3 presents the phenomena of urban sprawling in Jabodetabek[i] Metropolitan, home of 22 million inhabitants, where the geographical distance from the periphery to the city of Jakarta – in the heart of gigantic agglomeration - can exceed 25 kilometres. The new urban settlements continue to flourish in the periphery. It accounts for about 27 "new dormitory towns" built since mid 80s by major private developers, primarily destined to meet the medium and high income people. Apart from that, hundreds of urban settlements in smaller scale flocked in Jakarta's surrounding to respond the needs of low and medium income society.

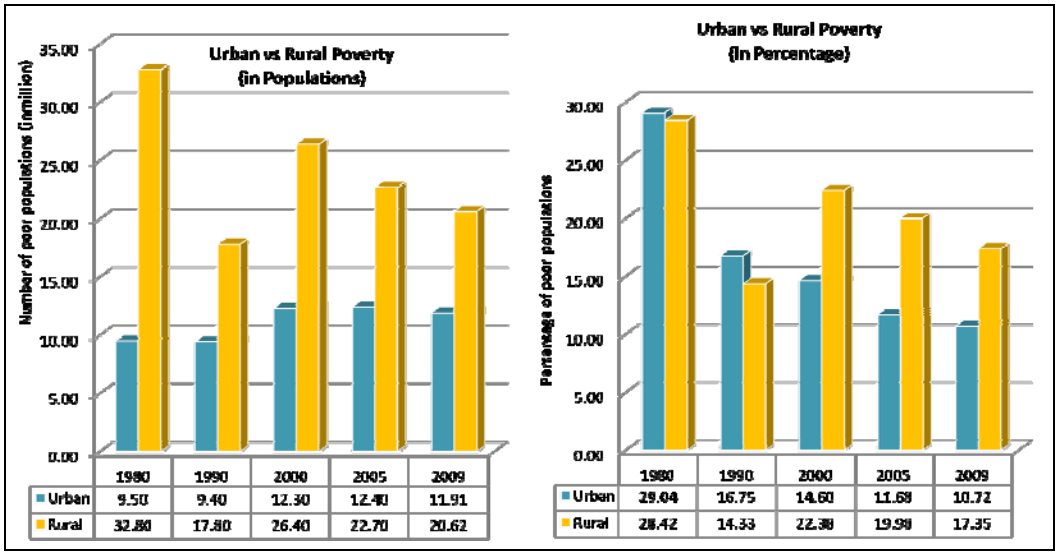

Figure 2: Urban vs Rural Poverty (in Populations and Percentage) Chart
Source: National Statistic Agency, 2010

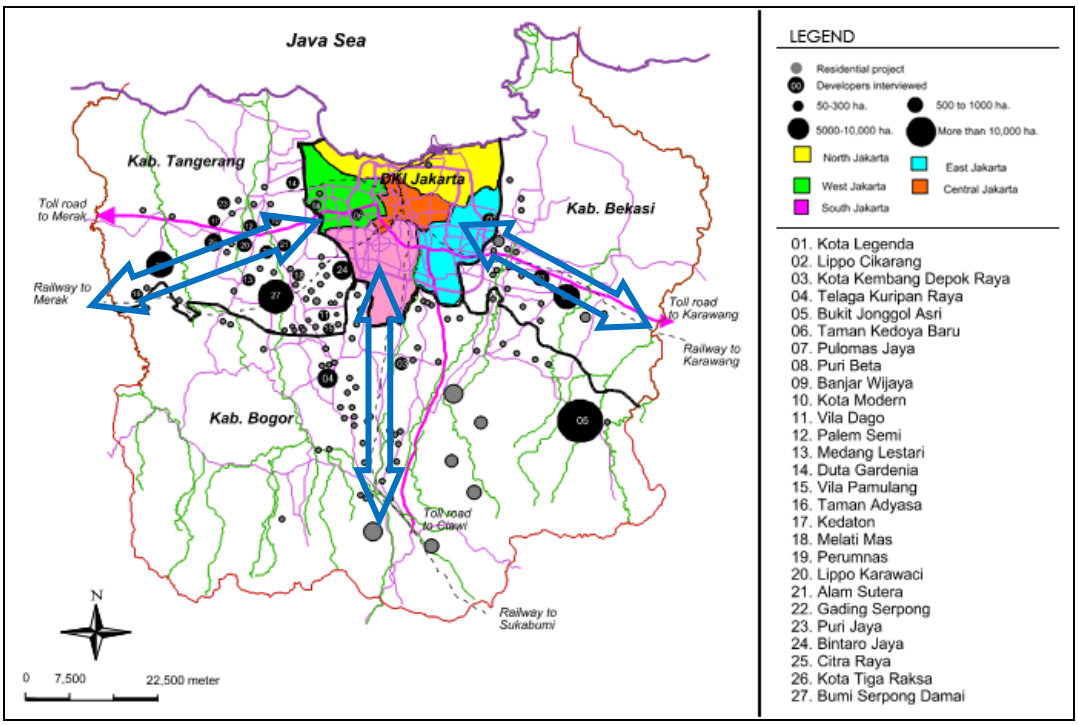

Figure 3: Urban Sprawl in Jabodetabek

Indonesian cities are prone to multiple disasters. From 1907 until 2007 there were 343 disasters, both natural and man-made, with around 60% related to climate change and

variability. Climate change adds more pressure and complexities to urban problems. Some impacts of climate change have already occurred, mostly in cities located in low-lying coastal areas, such as water crisis, tropical storms, sea level rise, and flooding in coastal areas. To give few illustrations, it is predicted that about 25 national growth centres and 84 regional growth centres are at high risk to coastal inundation. Furthermore, there are 18 national centres, including Semarang, Surabaya and Banjarmasin, are to be at high risk to flooding due to high intensity of rainfall combined with high social vulnerability. In some cities, water crisis remains a serious threat. It would worsen if climate change parameter is included.

Indonesian cities are suffering from lack of green open space (GOS). In the big cities like Jakarta, Surabaya, Bandung, and Medan, GOS has decreased from 35 percent on average into less than 10 percent of today's condition. Along with the rapid growing population, the area of GOS per capita in Indonesia big cities is very low. Jakarta, for example with only 9 percent, has merely 7.08 m^2 GOS per capita. In comparison, the figure is significantly lower than, for instance, that of Stockholm (80 m^2), New York and Berlin (about 30 m^2), and Paris (about 15 m^2). Besides that, the average of GOS ratio of Asian cities is 15 square meters per person and the world's average is 11-134 square meters per person.

As the GOS area reduced drastically, it gives serious impact to the air quality in cities. Massive urban activity augments level of pollution due to greenhouse emission which, in turn, requires more expensive health services or social cost. Such elimination of GOS has also increased average daily temperature and lowering natural capacity to retain excessive rain water.

Finally, according to an ecological footprint study undertaken by the Ministry of Public Works in 2010 (see Table 1), Java and Bali, two most populous islands where most of Indonesian cities located, have higher ecological footprint than their bio-capacity. In brief, ecological overshoot has occurred. It may be considered as alarming evident since ecological footprint in all major islands also continues to rise.

Main Island	Ecological Footprint (gha/person)	Bio capacity (gha/person)	Ecological Deficit (gha/person)	Category
Sumatera	1.56	1.96	0.40	Surplus
Java	**1.01**	**0.20**	**-0.81**	**Deficit**
Bali	**1.76**	**0.24**	**-1.52**	**Deficit**
Kalimantan	1.26	4.05	2.79	Surplus
Sulawesi	1.46	1.63	0.17	Surplus
Nusa Tenggara	0.45	0.47	0.02	Surplus
Maluku	1.20	1.25	0.05	Surplus
Papua	0.79	7.43	6.64	Surplus
Indonesia	1.07	1.12	0.05	Surplus

Table 1. Ecological footprint of major islands in Indonesia

At regional level, several metropolitan cities also bear the highest deficit ecological footprints. This is particularly the case for Jakarta, Bandung, and Surabaya Metropolitan Areas. It is a strong indication that our production and consumption patterns have not been efficient. Indonesian big cities need to be more prudent in utilizing the finite resources to maintain low ecological footprint and, in turn, to sustain economic growth in long-term perspective.

4. Green City Concept: New Paradigm for Sustainable Urban Development Objectives

The real facts of climate change and high-speed urban change have triggered the need for making planning practices more progressive, so called “fast-forward planning”, which is compatible to the pace of recent urban development. Planning must be reframed, to be capable to respond effectively the big challenges and issues encountered by Indonesian cities, through its translation into action-oriented approach that embraces sustainable urban development principles. It emphasizes on the balance between economy, social and environmental aspects, and attempts to transform knowledge into concrete and systematic steps. One of the emerging responses is by bringing the concept of green city to take place.

Tom Daniels (2008) evokes two principal arguments for the implementation of the greener cities: first, the needs to create a clean environment as prerequisite of a good quality of life considered as essential joys for the residents; second, the need to be more competitive in the global arena. Green element becomes the cities’ main economic asset to support vibrant cities, such as for tourism, garden and waterscape. Frederick Law Olmsted[ii] adds one more argument. For Olmsted, green city is not purely a technical issue, it is also political. The green city is a prerequisite for the development of a healthy climate of democracy. ”*If you want a healthy democracy, you must cultivate greener cities*” (see Gutmann, 2008). Such perspective seems very relevant to the actual context of Indonesia where democracy is nowadays in the process of maturation.

By its concise definition, *"green city is carbon neutral and fully sustainable"* (Birch & Wachter, 2008, p3). Since green city has all potentials to contribute in lessening carbon emission, then in a massive scale of its application, it can also be perceived as a “low carbon city”. Furthermore, one may describe it as an optimal use of scarce natural resources to ensure the sustainable life of urban population with certain characteristic as follows: green open space, use of renewable energy (solar, wind, and water), use of public transport, conservation of water and treatment of waste (reduce, reuse, and recycle). Under this concept, cities are challenged to convert environmental problems into new opportunities and appropriate solutions.

As for De Roo (2010), green city concept places green space at the centre of development and regeneration, on a par with “red, blue, and grey” on the master plan. It uses evidence-based arguments to highlight the importance of green elements and positions them as fundamental solutions and responds toward many of the challenges of contemporary life. He argues that investment in green infrastructure is repaid many times over in terms of the benefits it brings. De Roo (2010) also identifies four elements of green city: green planning, green economy, green open spaces, and green network. In principle, it focuses on creating equilibrium between natural and built environment for a better quality of life enjoyed by all people.

5. Praxis of Green City Development in Indonesia

5.1 Initial Implementation of GCDP

Affirmative policies for actions are needed, one of which is related to urban planning, urban design, and development management. For Indonesia, building a sustainable green city must be viewed as a long-term vision. Many success stories in other cities worldwide are encouraging. Indonesian cities should be able to find their own way, not to adopt the concept as it is, but to adapt the concept, suitable to local context and capacity. In this light, the birth of a new Law No 26/2007 concerning Spatial Planning and Development can be considered

as a great momentum and essential pillar for urban development reform[iii].

This law contains idea of "re-invented planning" which is not really new, if compared to international cases. Traditional planning has been a subject of debate and critics since the early of 1960s in North America and in Europe. The reframing of planning concept has been developed in conjunction with a growing concern of environmental issues because of the degradation of environmental carrying capacity and augmentation of ecological footprint. It refers to the need of responding climate change issues (Wilson & Piper, 2010). It is therefore not surprising to witness that the multiple green initiatives come into play, well-positioned in the mainstream of any urban planning, design, and management. Thus, green city concept becomes a new icon of contemporary sustainable urban development.

In our point of view, "green city" can be interpreted as a metaphor for the achievement of sustainable urban development goals. In short, the concept seeks at promoting an eco-friendly city that balances social, economic, and environmental dimensions, as well as good urban governance as its foundation.

In the last few years, the government of Indonesia has taken into consideration the concept of green city as an innovative measure to cope with the actual urban issues and in parallel to anticipate the unwanted impacts of high-speed urbanization. For that, in 2011 the Ministry of Public Works has launched a program design specifically in shifting cities orientation to become more liveable, while also responding to climate change threats. This program will gradually alter city development approach, being heavily oriented on economic growth toward a more balance orientation between economy efficiency, ecological preservation and social justice. This program is named the Green City Development Program (GCDP)[iv].

Referring to the planning cycle, GCDP is strategically placed, ensuring the continuity from planning, design to implementation. At the first place, it elaborates local action plans guided by objectives set in statutory local spatial plans approved with local act. Such action plans serve as a basis for implementation of GCDP. They are formulated to describe into certain details of eight green city attributes, namely green planning and design, green community, green open space, green water, green waste, green energy, green transportation, and green building (see Figure 4). These attributes cannot stand alone, but must be seen as an integral unity.

Figure 4: Eight Attributes of Green City

GCDP is first and foremost a collaborative program between the city/regional government with green communities, supported by the provincial government and

facilitated by the Central Government through technical assistance and incentive delivery. It makes sense since GCDP is implemented within the context of autonomy.

GDCP has reached an interesting milestone. Starting from 2011, there are 60 out of 491 regencies and municipalities' nation-wide, which have agreed in voluntary basis to join the program and signed the commitment to prepare and then implement their green city action plans. They gather in interactive learning programs, share experiences and practices, and finally, turn knowledge into positive actions.

These 60 participants are selected by the national independent team through self-assessment based approach. The selected participants are justified according to several criteria: first, having a visionary Mayors or Regents with strong leadership who concerns to take actions; second, having good performance in urban spatial planning, design, and management; and third, having strong commitment to improving local environmental quality, indicated by their willingness and readiness to share their local budget, to acquire land for pilot projects, and to establish strong public participation. Such mechanism reflects the real character of GCDP to be a participative and inclusive program.

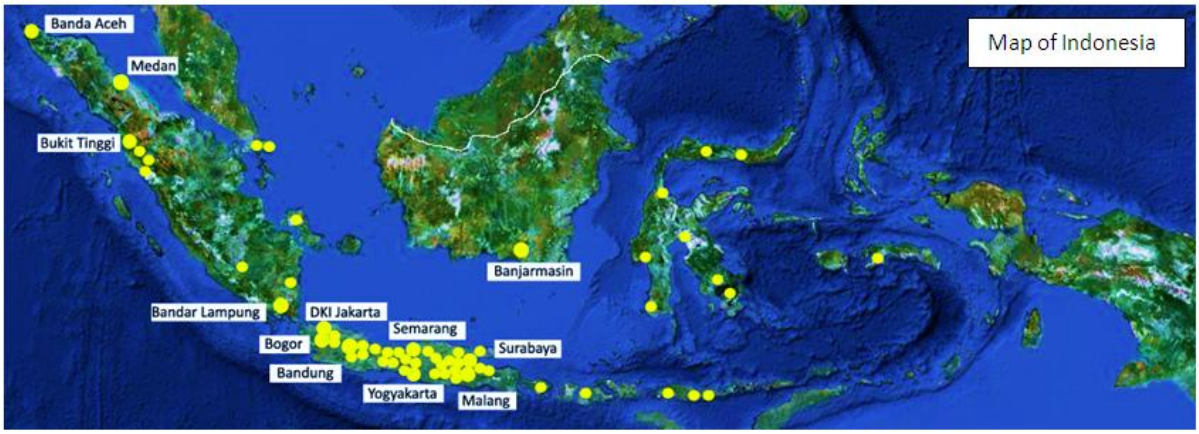

Figure 5.Distribution of 60 participants of GCDP

5.2 Scope of Green City Action Plan

To become an effective movement, under the umbrella of GCDP, interested local governments are facilitated by the Ministry of Public Works to prepare green city action plan, to establish master plan and detailed engineering design for developing green open space, to create green map, to work with green community in public campaign, and to implement pilot projects with full respect to local spatial plans. The GCDP initiative starts with drawing up a Green City Action Plan[v] in late 2011, to ensure the achievement of ecological and economic objectives for the cities in accordance with the principle of co-benefit.

5.2.1 Public campaign

It is critical at the first place to inform and improve awareness of the local residents about the importance of adopting green city approach. In most cases, green city is relatively a new concept both for local governments and residents. The message must then be carried out smoothly through some interactive and systematic ways, so that larger group of local residents can be covered and local aspirations can be taken into account. Therefore, green community is the important player to assist the respective local governments in order to deliver key messages. By establishing public, private, and community partnership, ownership of the program can also be built. It ensures sustainability of the program after completion of the pilot projects, where the role of local residents is expected to be more dominant.

As a main driver of local movement, green community may be defined as a group of influential people who have active role in creating networks and promoting green lifestyle, through certain activities contributing to the urban sustainability goals. To mention a few, Bike to Work, *Indonesia Berkebun*[vi], Bird Watching, and Green Map can be considered as green communities. This list can be further extended during the implementation of GCDP, since each participant has its socio-geographic characteristics that differ from one to another.

Public campaign aims to addressing specific targets, objectives, and methods. This implies that the choice of media vary accordingly. For the young active community, the method takes form as social media, public lecture, school visit, and urban festivity driven by dynamic youth leaders. For the older group, it is more appropriate to use a traditional media, such as newspapers, magazines, talk-shows, and public dialog. As for the women, public campaign is carried out through a learning-by-doing method, for example in city parks. All these methods function not only to relay instant messages, but more important than that, to allow a continuous learning and to empower local residents, since they are early adopters of green city concept.

5.2.2 Green map

Probably, one of the innovative aspects of GCDP implementation in Indonesia is the elaboration of green map by local communities. The objective is not strictly limited to provide complete information about green sites and infrastructure in technical sense, but also in wider sense, is to promote sustainable urban lifestyle, engaged by key urban stakeholders and people at large. Again, it is part of the urban greening movement inspired by global eco-cultural movement.

During the elaboration of green map, the universal framework and standard is applied, mostly in the form of icons. But it is of crucially importance to recognize specific icons based on local findings, as well as local wisdom practiced in Indonesian cities. In overall, the time required to put the complete information into green maps is relatively long, that may exceed the project duration depending on the size of the area surveyed. Therefore, green community in collaboration with local governments are in the first step focusing on providing information about existing green open space: places, functions, size, biodiversity, etc. In the next step, other essential information will be collected so that the green map can contain all green city attributes.

Figure 6. Example of Green Map Elaboration in Yogyakarta

Green map as an active document is a useful tool in helping urban planners, urban designers, and architects to better understand the eco-cultural assets, as well as the related urban issues. It helps them to find appropriate solutions accommodated in their city plans, creating a harmony of socio-economic and environmental interests. Moreover, it allows residents to actively participate in the planning and design process, and to describe the future they envision. Finally, it encourages local residents to give certain contribution according to their capacity in solving the collective problems.

Among the 60 participants of GCDP, Banda Aceh, Bukittinggi, and Yogyakarta can be named as few pioneers of green map movement in Indonesia. Supported by local universities, these cities have been able to publish green maps at different scales: from neighbourhood up to city level. These good examples may bring about positive impact and inspiration to other participants of GCDP.

5.2.3 Master plan and detailed engineering design: example for GOS

Mandated by Law 26/2007 on Spatial Planning and Development, each Indonesian city must allocate at least 30% of its territory to become green open space, 20% out of which must take form as public domain. This policy statement is included in local spatial plan[vii] as a legally binding document to attain within 20 years since its approval. In this regard, master plan is considered as derivate of local spatial plan. It consists of roadmap which elaborates measurable objectives set for 5-year stage of development. It identifies existing green open space, both public and private, establish local strategies to achieve realistic long-term and short-term objectives, and evaluate the priority areas of GOS implementation.

The task is anything but simple for urban planners, urban designers, and architects as well as for local officials. In most cases, GOS is highly sensitive to be converted into other purposes, particularly residential and commercial. It is common that urban expansion takes place at the expense of existing GOS. The effort to maintain the GOS is then extremely difficult, since the monetary value of land dedicated to GOS has rarely been assessed. These facts show the importance of master plan as a reference document to be followed by public and private actors, so that the trend of GOS suppression can be avoided. At the same time, the quantity of GOS can be increased and maintained in a positive trend.

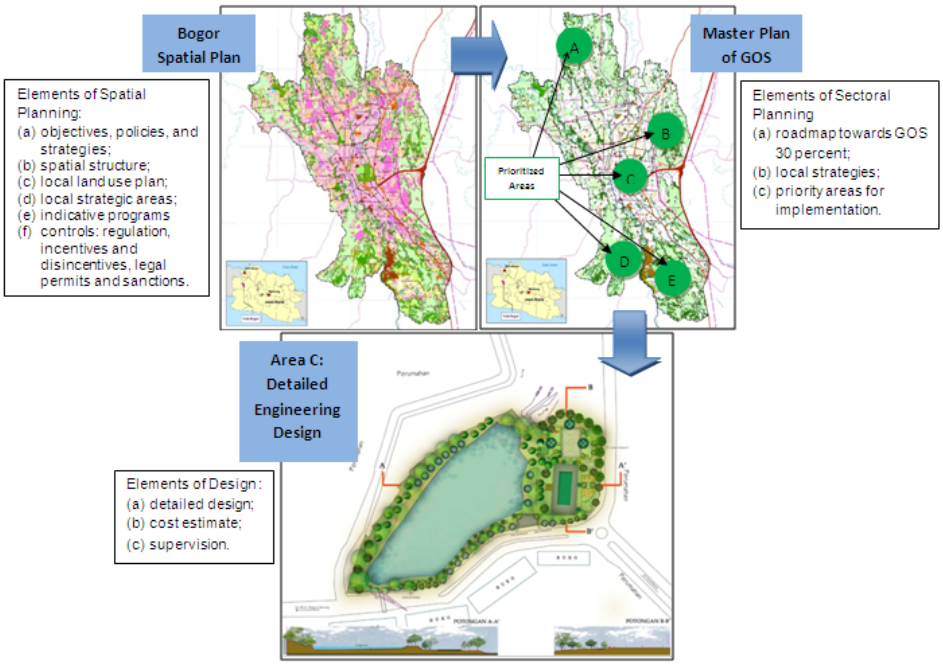

Figure 7. From planning to implementation. Example of GOS

Through GCDP, the participants are facilitated to elaborate the master plan. In addition, the participants are also assisted to add the quantity of GOS in prioritized areas. For that, the detailed engineering design must first be completed for a parcel of land of about 5,000 square metres strategically located, and dedicated by local governments for city parks. It is in this particular area that the physical implementation of urban parks is undertaken.

Bogor is an exemplary city for this action (see Figure 7). Bogor has composed a good master plan that consists of a realistic development plan for 20 years ahead, translated into clear programs with all necessary steps. This document consists of a map of existing green open space in a scale of 1: 25,000 and an in-depth analysis of future prioritized locations for physical implementation of GOS. To be one of Indonesian green cities, Bogor attempts to add green surface factor by creating thematic urban parks for better quality of life.

5.2.4 Few examples of good practices in promoting Indonesian green cities

Out of 60 participants of GCDP, Yogyakarta and Solo – two vibrant cultural heritage cities in the heart of Java - provide a good example of how to put in place an environmentally friendly public transportation system. Bus rapid transit fueled by gas is used both to moderate traffic congestion and to reduce CO_2 emission. Public appreciation to this facility is somewhat high, indicated by the increasing passengers since its launching in 2008. In other cities, Bandung, Denpasar, Malang and Yogyakarta, the initiative to dedicate special lanes for bicycle and pedestrian has emerged, partly due to local community support.

Concerning green waste attribute, good initiative can be found in the periphery of Yogyakarta city, where an integrated waste management, such as sorting, recycling, and composting are being carried out. The waste processing unit treats solid waste generated from residential, commercial, and public areas, first by sorting and composting activities conducted by the local residents, before transporting and separating waste according to its type. In the future, waste segregation will be expected to be part of a green urban lifestyle that brings direct economic benefits for local residents.

Figure 8 : Example of Green Transportation and Green Waste in Yogyakarta

As for green building, GCDP also encourages the implementation of environmental-friendly building in big cities, like Jakarta, Bandung, and Medan. The Ministry of Public Works has pioneered the construction of its new office building making the best use of green building concept, then certified by the Green Building Council Indonesia. Apart from that, some private initiatives in constructing green building are also worth to mention. Through this initiative, key urban stakeholders participate in positive actions related to energy efficiency, water conservation, material use, air pollution control, and good site development. Apparently, it is in line with overall goals to create greener cities.

5.3 Constraints in Implementation of GCDP

It is too early, perhaps, to identify the effectiveness of GCDP in addressing the urban challenges, since the program is still underway while key indicators to measure its performance and social impacts are not available. Nevertheless, some key constraints have been analyzed during the preparation and initial stage of implementation. First, a full-fledge approach of green city is not easily understood by key actors, whether at the national or local level. Second, integrating planning, design, and implementation is a difficult exercise that requires extra efforts for key actors (especially for urban planners, urban designers, and architects), and insofar is rare. Third, local commitment and capacity to undertake the program is still lacking in some cities, for example in local budget provision, land acquisition, and institutional settings.

6. Setting-up Public and Private Community Partnership in GCDP

In urban governance practices, the unique role of government will not be adequate. Therefore, the GCDP is principally set-up as a collaborative action involving public, private, and community. Especially at a local level, the program is also intended to become socially inclusive for various stakeholders. In short, all possible resources must be unified in order to make a fruitful result of such partnership. As aggregate, GCDP seeks to promote an urban greening movement at all levels across the country, and to attain stronger social impact through such synergy.

In particular, business and private sector are invited to participate in green city movement, at least through the scheme of corporate social responsibility (CSR) for three pre-eminence reasons: first, the availability of significant resources potentially mobilized for various programs; secondly, broad coverage of business network nation-wide, and third, positive experience during the last few years under the CSR program in improving urban environmental quality. As such, CSR can be a good exercise for private sector to play an active role in achieving the goals of sustainable green cities in Indonesia. GCDP is essentially intended to be as inclusive as possible where the role of public sector will diminish gradually, while the responsibility of private sector and local community will rise.

In fact, the role of private sector can take diverse forms, from simple to complex actions. In simpler action, the private sector can provide seeds and assist green communities' activities. While for the more complex forms, the CSR activities vary from construction and maintenance of nurseries and urban forest, construction of bus stops, and provision of green corridors for bicycle and pedestrian lanes. It must be underlined that private contribution must encourage the birth of creative innovation, and create large social impact, without being a green camouflage.

7. Closing

Since high-speed urbanization is naturally inevitable, it is unnecessary to stop the process. It is more realistic to adapt with such dynamic context. Nevertheless, planning alone is far from sufficient to tackle vast issues of urbanization. In this regard, GCDP is a manifestation of planning reform in Indonesia, not being a sterile approach, but dedicated to create a strong linkage from policy, planning, design to implementation. It can be considered as a form of adaptive intervention of planning, striving to control the negative externalities, propagated by potential destructive force of urbanization. As a responsive tool, GCDP ensures a pro-green place making.

It is timely for Indonesian cities to put into practice the concept of green cities, adapting it into the local contexts with specific tropical climate and eco-cultural diversity. GCDP is both

innovative and action-oriented program to achieve better quality of urban life. The accumulation of knowledge is not sufficient without capacity for actions. The challenge is now how to turn the vision of sustainability set by regulations into reality. Strong political will, clear and consistent programs as well as strong engagement of key stakeholders are essential to success. GCDP explores all the potentials of local government in achieving sustainability objectives and appreciates their local autonomy. It calls also for provincial and central government to take adequate coordinating and facilitating mission to ensure that socially inclusive program is in place.

There are some interesting lessons to be learned from the few exemplary actions. The initial results are promising, whereas the sustainability goals to make Indonesian greener cities respective spatial plans are not just a utopia. However, there is a need to accelerate, strengthen the local capacity and promote wide participation of actors. GCDP provides a good laboratory for urban planners, urban designers, and architects in practicing an integrated planning and design thinking for better understanding of interrelated urban problems, acquiring key information, analyzing knowledge, also proposing adequate and workable solutions with respect to emerging role of communities. Next few years are the era of local governments to show off results from GCDP, and of eight green city attributes to take place throughout all cities in Indonesia.

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[i] Jabodetabek is the abbreviation of Jakarta Bogor Depok Tangerang Bekasi, name of cities and districts forming Jakarta Metropolitan Area.

[ii] A landscape architect who designed New York's Central Park, Brooklyn's Prospect Park and Boston's Franklin Park in the 1850s.

[iii] Seven weaknesses in the practices of conventional planning in Indonesia can be listed as follows : (1) top-down and highly centralized system, (2) exclusive with dominant role of government entities, while neglecting the other stakeholders in its implementation, (3) emphasis more on promoting economic growth without sufficient respect to environmental quality, (4) limited integration with multi sectoral activities (especially urban design and detailed infrastructure design), (5) limited synchronization with programming activities (budget allocation), (6) little acknowledgement to local endogenous as vital assets of planning, and, last but not least, (7) planning activities are not sufficiently framed by adequate policies and geared by strong leadership to turn vision into reality.

[iv] GCDP is known as *Program Pengembangan Kota Hijau*, abbreviated as P2KH.

[v] Green City Local Action Plan in Indonesia is named *Rencana Aksi Kota Hijau,* abbreviated as RAKH.

[vi] *Indonesia Berkebun* represents community who takes initiative to develop urban agriculture and farming movement in several Indonesian cities.

[vii] The local spatial plan for 20 years life-span consist of six elements: (1) objectives, policies, and strategies of spatial development, (2) the local spatial structure plan (system of cities and the main infrastructure network spatial plan), (3) the local land use plan, (4) the local strategic and prioritized areas, (5) directions of spatial utilization which comprise main indicative sectoral and regional development programs, (6) directions for the local spatial planning controls which include regulations under the local zoning system, incentives and disincentives, legal permits, and sanctions.