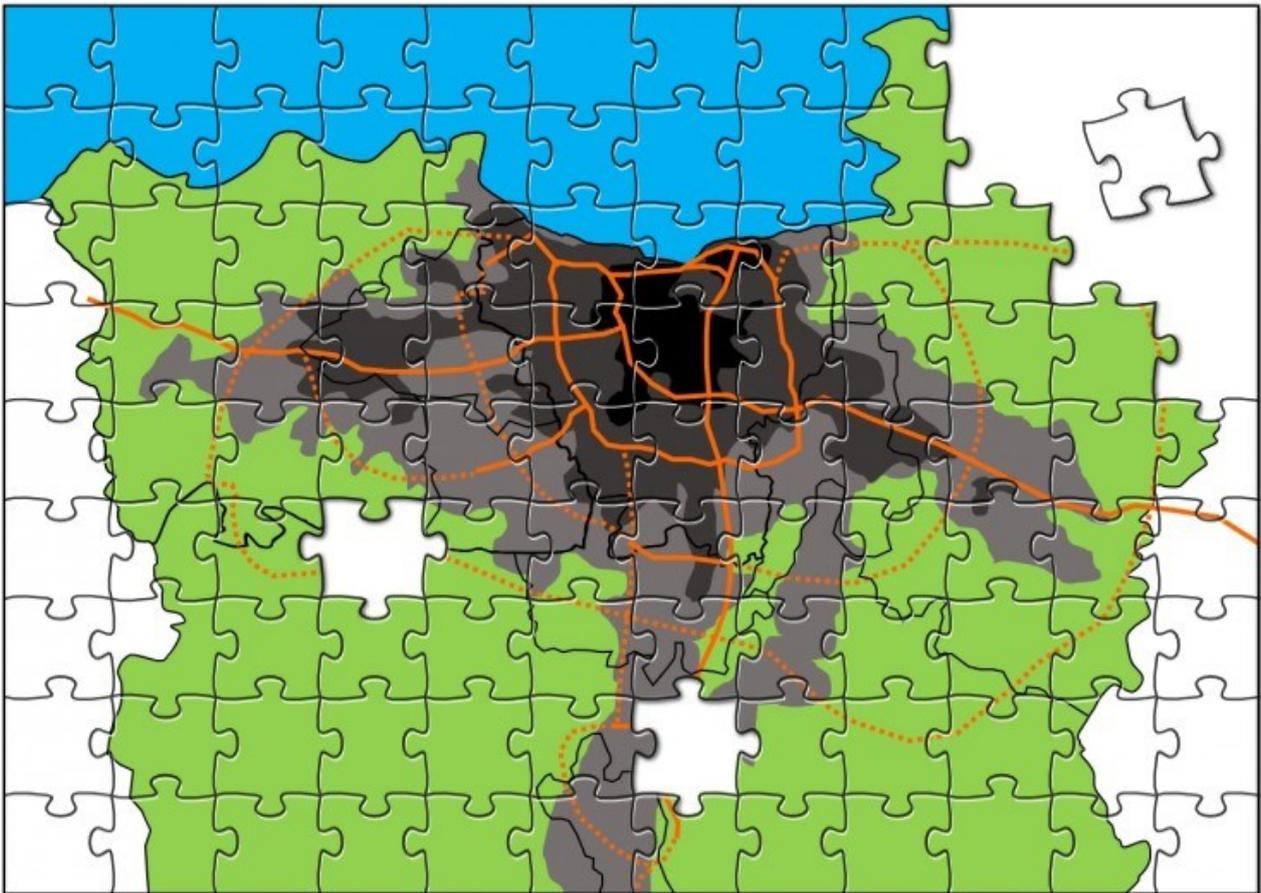


# URBAN GROWTH MANAGEMENT THROUGH ZONING REGULATION SYNCHRONIZATION IN JAKARTA METROPOLITAN AREA



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In Jakarta Metropolitan Area**

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## SUMMARY

Urban sprawl in Jakarta Metropolitan Area (JMA) happens due to the rapid urbanisation which resulted inefficient and unsustainable growth in JMA. This condition exacerbates by absence of integrated spatial plan and fragmented local government priorities. Indonesia's decentralized system and promulgation on new spatial planning law 26/2007 mandated all local government to formulate and implement their own spatial plans. Nevertheless JMA's urban growth management vision is still unclear despite the availability of JMA spatial plans since 2008.

This research examines the extent to which synchronization of zoning regulation in JMA can be used as means to managing JMA urban growth and thus reducing the negative effect on urban sprawl. The synchronization process itself is part of an effort to integrate JMA spatial planning policy, and in doing that this research identified several factors that supporting and hindering the integration process. To make sure that synchronisation of zoning regulation is the right measure to deal with urban sprawl, this research also learned from Portland-Vancouver and Hong Kong, experiences.

The research reveals the willingness of local government in JMA to cooperate and Indonesia standardization of planning system in Indonesia is able to support spatial plan integration. However, budget gap and diverse priorities become the main factors that hindering spatial plan integration. Learning from other metropolitans, local government in JMA needs to have common vision related to JMA urban areas development. To ensure the achievement of these common goals, local governments in JMA also needs to escalate its inclusivity towards all stakeholders in Jakarta. As part of spatial plan integration in managing urban sprawl, local government in JMA also needs to provide supporting arrangements of spatial plans which are public transportation and housing provision. It can be concluded that apart from relying on cooperation, local government in JMA also needs to improve its coordination in order to integrating spatial plan policy.



## ACKNOWLEDGEMENT

*.....you choose the difficult way by coming here, but it is your voyage of discovery.*

*Bon voyage*

*(Prof Gregory J. Ashworth, RUG international student opening ceremony, 27 August 2015,)*

Those words still ringing in my ears after spend my time in Groningen for a year. Indeed this words is true. There's a mix feeling during my stay, sad, tired and disappointed often come to minds. However new experiences, different life environment and new friends made me realise all of this is worth. My voyage of discovery also bring me new perspective about managing urban system. Studying regional and city planning in Bandung followed by environmental and infrastructure planning in Groningen amplifies my understanding about there is so much diverse in the world, nevertheless there are also many similarities. I tried to capture that diverse and similarities into a writing in an academic way. Again believe me it was hard but in the end at least I'm able to satisfying my curiosity regarding how metropolitan spatial management works. My thesis is not a world-class masterpiece, I admitted that. But this is my small token to my home country. And I really hope for you the reader able to extracting the positive message of my writing.

First, I praise my Lord, Allah SWT, for His grace and love. I would like to express my gratitude to all of the people which I have met during the course of my study both in ITB, Bandung and RUG, Groningen for their generosity to spare their time for exchanging ideas or just listening my bubbling. It was such an intellectual joy to know all of you.

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*Bayu Wirawan*



## TABLE OF CONTENTS

Title Page .....	i
Summary .....	iii
Acknowledgement .....	v
Table of Contents .....	vii
List of Tables .....	ix
List of Figures .....	x
1 Introduction.....	1
1.1 Background.....	1
1.1.1 World Urban Eras .....	1
1.1.2 Indonesia Urban Growth .....	2
1.2 Objective and Research Question.....	4
1.3 Structure of the Thesis .....	5
2 Theoretical Review .....	7
2.1 Introduction.....	7
2.2 Urban Sprawl.....	7
2.2.1 Definition and Concept of Urban Sprawl .....	7
2.2.2 Challenges in Urban Sprawl .....	8
2.3 Urban Development Control .....	9
2.4 Policy Integration .....	9
2.5 Facilitators and Barriers for Policy Integration in Metropolitan Governance.....	11
2.6 Conclusion: The Conceptual Model .....	12
3 Research Methodology.....	13
3.1 Introduction.....	13
3.2 Comparative Cases Selection .....	13
3.3 Literature Review .....	14
3.4 Data Collection on the Cases .....	16
3.4.1 Desk Study .....	16
3.4.2 Interview.....	18
3.5 Analysis of the Data.....	18
3.6 Conclusion: Research Design .....	19
4 Planning and Development in Jakarta Metropolitan Area .....	21
4.1 Introduction.....	21

4.2	Indonesia Spatial Planning System.....	21
4.2.1	Spatial Plan Hierarchy .....	21
4.2.2	Spatial Plan Formulation .....	23
4.2.3	Linking Metropolitan Spatial Plan and Zoning Regulation.....	24
4.3	Spatial Planning in Jakarta Metropolitan Area.....	25
4.4	Spatial Development in Jakarta Metropolitan Area .....	28
4.5	Conclusion.....	33
5	Comparative Cases.....	35
5.1	Introduction.....	35
5.2	Portland-Vancouver Metropolitan Area .....	35
5.2.1	Portland-Vancouver Metropolitan Area Spatial Planning System .....	35
5.2.2	Portland-Vancouver Metropolitan Area Development.....	38
5.3	Hong Kong Special Administrative Region .....	40
5.3.1	Hong Kong Special Administrative Region Planning System .....	40
5.3.2	Hong Kong Special Administrative Region Area Development.....	43
5.4	Conclusion: Lesson Learned of Urban Growth Management .....	45
6	Integrating Spatial Plan for Urban Growth Management .....	47
6.1	Introduction.....	47
6.2	Learning from Other Metropolitan Areas .....	47
6.2.1	Spatial Planning Integration and Administrative Government Fragmentation.....	48
6.2.2	Supporting Elements .....	49
6.3	Conclusion: Utilizing Facilitators and Overcoming Barriers on Policy Integration for Jakarta Metropolitan Area's Urban Growth Management.....	50
6.3.1	Utilizing Facilitator Factors .....	51
6.3.2	Overcoming Barrier Factors .....	51
7	Conclusion: Synchronising Zoning Regulation as a Spatial Policy Integration .....	53
7.1	Conclusions.....	53
7.2	Reflection on the Research .....	54
	References .....	55
	Glossary .....	63
	Appendix .....	64

## LIST OF TABLES

Table 3.1 Linkages of Sub Research Question and Data Collection .....	17
Table 4.1 Time Frame on Spatial Plan Formulation Process.....	23
Table 4.2 Timeline on Policies Related to JMA Spatial Plan.....	25
Table 4.3 Local Government Budget Allocation 2015.....	29
Table 4.4 Spatial Direction of Jakarta Population Growth.....	30
Table 5.1 District Planning in HKSAR.....	41
Table 6.1 Characteristics of Metropolitan Areas .....	47

## LIST OF FIGURES

Figure 1.1 Jakarta Metropolitan Area .....	3
Figure 2.1 Correlation Between Policy Making, Coordination and Cooperation .....	10
Figure 2.2 Conceptual Model of Research .....	12
Figure 3.1 Research Design .....	20
Figure 4.1 Spatial Plan Classification in Indonesia .....	22
Figure 4.2 Relation between Metropolitan Spatial Plan and Zoning Regulation in Indonesia .....	25
Figure 4.3 JMA Structure and Land Use Plan.....	27
Figure 4.4 Distribution of Local Government Revenue .....	30
Figure 4.5 Change of Population Density in JMA .....	31
Figure 4.6 Illustration on JMA Spatial Development 1972-2013 .....	32
Figure 5.1 Portland-Vancouver Metropolitan Area Spatial Planning System .....	36
Figure 5.2 Portland Metro 2040 Growth Concept.....	36
Figure 5.3 Vancouver City Growth Concept .....	37
Figure 5.4 Portland-Vancouver Metropolitan Area .....	38
Figure 5.5 Dynamics of Portland-Vancouver Metropolitan Area Urban Expansion .....	39
Figure 5.6 Hong Kong Spatial Planning System .....	41
Figure 5.7 Hong Kong 2030 Concept Development .....	42
Figure 5.8 Map of Hong Kong Special Area Region Administrative.....	43
Figure 5.9 Hong Kong Topographic Situation and Reclamation Areas .....	44
Figure 5.10 Hong Kong Built Up Areas Development.....	45

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

#### 1.1.1 World Urban Eras

The beginning of the 21<sup>st</sup> century was marked as turning point for the world to literally enter what is called urban eras. United Nations Department of Economic and Social Affairs (UN-DESA) reported in 2008 that half of the world population lived in urban areas whereas a half century before in 1960 it was less than one-third (UN-DESA, 2008). Furthermore, UN-DESA predicts that two-thirds of world population are expected to live in urban areas by 2050 (UN-DESA, 2015). At the moment, half of those urban dwellers lived in Asia, followed by 14% in Europe, then 13% in Latin America-Caribbean. However, according to the later report, the composition is likely to change as majority of urban dwellers will be in Asia (52%) and Africa (21%) by 2030 due to the rapid population growth in both regions (ibid). The report estimates quadrupled figure of 2,225 cities by 2030 where most of these new cities will be located in Asian and African Regions. Increasing number of urban population will inflict the need of more space to accommodate all of its activities. Using population data by UN and Angel et al (2010) medium assumption it was estimated by 2030 the world will need more than 1.3 million km<sup>2</sup> of new spaces for urban areas spreading in all continents, of which nearly two-third of it located in less developed regions such as 37.5% in Asia and Pacific, 9.9% in Africa, and 14.5% in Latin America-Caribbean. These projections show that Asia Region is the most prominent place for urban area development in the future.

Cities become more important due to their influence over the world economy. As a centre of populations assemble, city becomes the place of production and consumption at once. Thus they become the centre of economic activities as well. Several studies (Florida, et al, 2009; UN-Habitat, 2011; Oxford Economics, 2014) affirm that nearly two-third of world economic activities hosted by cities and this trend will continue and enlarge upon the year of 2030 mainly hosted by Asia, Europe and North America regions (Oxford Economics, 2014). Combined with the facts previously discussed, it can be assumed that urbanisation has a substantial influences on spatial development in Asia region.

In line with rapid urbanisation, growth of metropolitan cities also increased dramatically. In 1950 there were only three urban areas with around ten million inhabitants. In 2014 however, there were thirty metropolitan cities and more than half of them were located in Asia (UN-DESA, 2015). Again, these numbers suggest a rapid urbanisation phenomenon in Asia (Ginkel and Marcotullio, 2004; ADB, 2006; Teriman, et al, 2009).

Despite its promising future that urbanisation could create better opportunities for the world economic, it also poses several risks to the sustainability of urban areas. In terms of environment aspect, rapid urbanisation could accelerate depletion of natural resources degradation of environmental quality such as worsening air pollution that contributes to climate change. In terms of social aspect, rapid urbanisation could stimulate unplanned growth which creates inefficiency to the infrastructure provision, the emergence of slums areas, and social segregation between the poor and rich.

### 1.1.2 Indonesia Urban Growth

According to Indonesia Law No 26 Year 2007 on Spatial Planning, metropolitan area is defined as areas that consist of core urban areas and outskirts urban areas; that have functional linkages; that are connected with integrated regional infrastructure; that are inhabited by more than one million inhabitants. Metropolitan area is [usually] created through the transformation of close range or administratively adjacent cities that lead to conurbation (Winarso, 2006). In the last decade, Indonesia experienced a rapid growth of metropolitan areas. In 2005, there were five metropolitan areas in Indonesia metropolitan areas in Indonesia (Winarso, 2006). The number changed into seven in 2008 (Indonesia, 2008) and by the time this thesis is being written there are fourteen metropolitan areas in Indonesia (Demographia, 2016).

Jakarta Metropolitan Area (JMA<sup>1</sup>) as one of the major urban areas in Indonesia is experiencing a darting development growth of urbanizing areas, population, economic and so forth during last two decades (Rustiadi and Panuju, 1999; Firman, 2012; Firman 2014). JMA comprises of nine local government units at various levels, which make JMA as the largest urban areas in Indonesia. They include Special Capital Region of Jakarta (DKI Jakarta) as a province; five municipalities/*kota* including Bogor, Depok, Bekasi, Tangerang, and Tangerang Selatan; and three regencies/*kabupaten* covering Bogor, Tangerang, and Bekasi. Based on this administrative and spatial location, Cox (2011) divides JMA into three layers, namely: the first is called the core layer which is Jakarta City; the second layer is inner suburbs that consist of Depok, Bekasi, Bogor, Tangerang, and Tangerang Selatan municipalities; the third layer is outer suburbs and exurbs that consist of Bogor, Bekasi and Tangerang regencies (see figure 1).

The fast growth in JMA can be describing based on evidence of the establishment of several municipalities within JMA. In the past 25 years there were several municipalities which were proliferated from their parent administrative region. They include Tangerang City (proliferate from Tangerang Regency in 1993); Bekasi City (proliferate from Bekasi Regency in 1996); Depok City (proliferate from Bogor Regency in 1999); and Tangerang Selatan City (proliferate from Tangerang Regency in 2008). JMA population also experienced very high growth of population, from about 11.5 million inhabitants in 1980 to approximately 27.9 million inhabitants in 2010 (Abidin, 2011). JMA population growth contributed to the changed in built-up areas from merely 11.2% in 1992 to 35.6% of total JMA in 2009 (Arifien, 2012). Some causes are put forward, mainly related to poor enforcement of spatial plan (Firman, 2012; Rukmana, 2015) and high pressure from market (Sudianto, 2008; Firman, 2012).

Whilst the population of Jakarta City were increases, its population shared among JMA is decreasing. Firman (2014) elucidated that from 1990 to 2010 the population of Jakarta City were waning from from 54.6% to 35.5% and followed by high population growth in the Jakarta City suburban areas (Vioya, 2010). The limitation of land availability in Jakarta City becomes the main reason of this decreasing. At the same time the facts show that municipalities adjacent to Jakarta

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<sup>1</sup>Jakarta Metropolitan Area concept in this research is different with Jakarta Metropolitan Region (JMR) or Jabodetabekjur concept. JMA focus about urban-suburban connection while JMR focus on ecoregion concepts which used watershed as its basic consideration.

City are experiencing high population growth. This condition has led to explosive development of urban areas surrounding Jakarta City thus resulting urban sprawl in JMA.

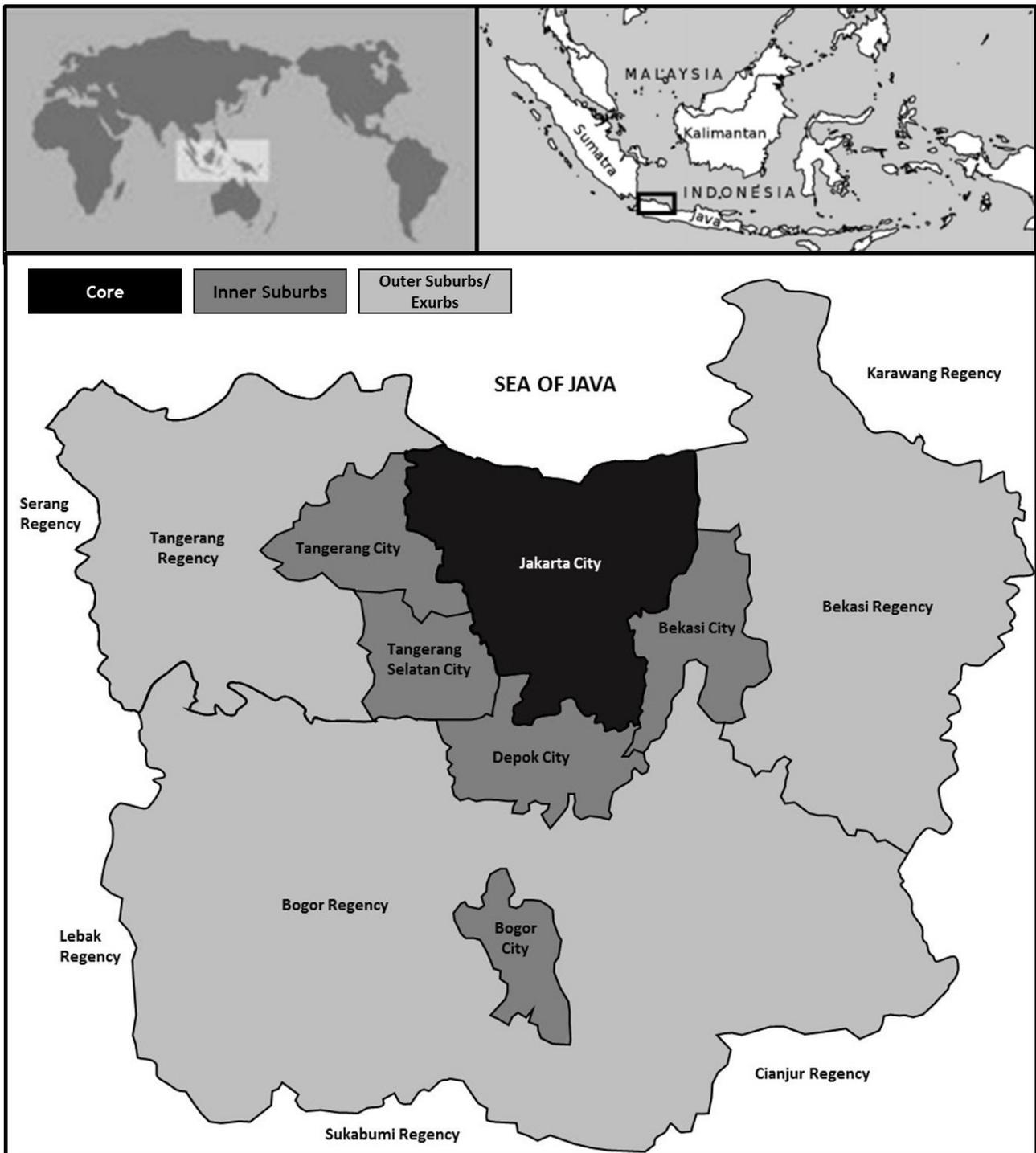


Figure 1.1 Jakarta Metropolitan Area (Source: Author, 2016)

Growth in the Jakarta City outskirts has created vast and fast urban sprawl that has caused inefficiency and wastefulness of urban land use. The absence of effective spatial plans complemented with other instruments that gave direction and control of new development activities has allowed JMA urban periphery to extend uncontrolled leading to random and scattered development centres (Soegijoko, 2011). Hudalah (2010) stated that the greatest challenge is the fact that the fringe area is a transition zone that is regulated by a complex

institutional structure and exacerbated by autonomy, vision, style of government, and different capacity. In addition, some spatial plans in parts of Jakarta Metropolitan Area are still commandeered by central government due to its function as national strategic areas (Rukmana, 2015). This power dispersal caused local government unable to well implement its spatial plans (Rahmawati, 2014; Rukmana, 2015).

To avoid sprawling condition that already happened worsening, JMA needs to manage their urban growth by establishing urban growth boundaries of municipality by synchronising their development control. Based on Law No. 26/2007, there were four tools of development control in Indonesia, namely: zoning regulation, permit provision, incentive and disincentive provision, and sanction provision. By this law, zoning regulation is formally mandated as a tool of development control in Indonesia spatial planning system. This law also specifies that each municipality is required to formulate its own zoning regulation and stipulated it as their local law. Consequently, JMA will have nine different local laws about zoning regulation. However, the synchronization of zoning regulation between municipalities still has not found its format in Indonesia planning system (Pratama et al, 2012; Wirawan, 2015; Zhu and Simarmata, 2015). This situation is also exacerbated by local government's lack of readiness in implementation their zoning regulation (Fanani, 2014; Rukmana, 2015). To make those local laws performing better this thesis tries to understand about how synchronization of zoning regulation between all municipalities in JMA can be used as a tool for JMA growth control.

As a reference to develop and manage appropriate strategies for urban growth control, learning from the others successful metropolitan can be used, and Portland-Vancouver Metropolitan Area and Hong Kong Special Administrative Region are considered as two best practices metropolitan areas which success to manage its urban growth. Both metropolitans are chosen as comparative case in this research because to some extent they have similarity with JMA. In Portland-Vancouver case for instance, the metropolitan consist of several municipalities within different states/provinces. The case of Hong Kong shows some degree of similarities with JMA in terms of having high population density. In the development process, both Portland-Vancouver and Hong Kong have enacted their urban growth boundaries and became one of the success story of urban growth management in the world (Abbott & Margheim, 2008; Portland Metro Authority, 2015).

## **1.2 Objective and Research Question**

### **1.2.1 Objective**

The main objective of this thesis is to identify how synchronization of zoning regulation among different municipalities in JMA could become a main tool for the urban growth control strategy in order to mitigate urban sprawl in JMA. This objective will be achieved by applying comparative urbanism approach using two established metropolitans i.e. Portland-Vancouver and Hong Kong as case study. Specifically this thesis will thoroughly analyse the implementation of urban growth control strategy in Portland-Vancouver and Hong Kong to draw some learning out of both cases and to identify the possible barriers and facilitators in adopting it.

### **1.2.2 Research Questions**

Based on problems and objective described above, the research question is:

*“How can the synchronization of development control policies in Jakarta Metropolitan Area can contribute to reducing the negative effect of urban sprawl?”*

Sub research questions are:

1. How is rapid urbanisation affecting the liveability in metropolitan area?
2. How institutional design aimed at the integration of spatial plan can support planning contributions to deal with rapid urbanisation?
3. What are drivers behind rapid urbanisation in Jakarta Metropolitan Area? To what extend zoning regulation able to guide urban development and what factors that inhibited zoning regulation integration in Jakarta Metropolitan Area?
4. How do the metropolitans of Portland-Vancouver and Hong Kong spatial plan integration contributes in managing their urban growth? To what extend metropolitans of Portland-Vancouver and Hong Kong developed their spatial plan integration?
5. What lesson learned from Portland-Vancouver and Hong Kong could be implemented in order to support zoning regulation synchronization in Jakarta Metropolitan Area?

### **1.3 Structure of the Thesis**

This thesis consists of two main parts. The first part represents the ideas of the research, which are includes in chapter 1, chapter 2 and chapter 3. The first chapter will briefly explain about the background of this research, research objective and research questions, and structure of the thesis. The second chapter will present the theoretical review of urban sprawl, urban development control, policy integration, and barriers and opportunity for spatial plan integration from the academic point of view. The third chapter will craft a research design that will used in this thesis.

The second part is about the analytical section of this research, which are includes in chapter 4 through chapter 7. The next two chapter will elaborate about the cases studied in this thesis, which are Jakarta Metropolitan Area in chapter 4 and Portland-Vancouver and Hong Kong in chapter 5. Chapter 4 and 5 will discuss about spatial planning system and urban development situation in all Jakarta Metropolitan Area as the case study and both metropolitan Portland-Vancouver and Hong Kong metropolitan areas as comparison cases.

Chapter 6 will discuss about linking the comparative cases experience with barriers and facilitators factors of JMA urban growth management situation. By Linking these aspect hopefully this research able to reveal what needs to be done by JMA to control its urban development and manage its urban sprawl.

All explanation and analysis summarized in Chapter 7, furthermore a reflection about strengths and limitation of this research will be given to provide recommendation which can be useful for future research in urban growth control management, particularly in zoning regulation synchronization issues.



# CHAPTER 2

## THEORETICAL REVIEW

### 2.1 Introduction

The previous chapter given us a brief description and motivation about the topic of this research. In answering the research questions which are presented on the previous chapter a deep understanding about the urban land use management and policy integration is needed for this research through examining the literatures that pertinent to this research. Therefore this chapter will conducted a literature review on urban land use management and spatial plan policy integration. The discussion will be focused first on urban land use management specifically on the urban sprawl phenomenon and then directly followed by urban development control as a strategy to manage urban sprawl. The second part is about policy integration which focused on the spatial plan integration and then followed by identifying some key factors in implementing spatial plan policy integration.

### 2.2 Urban Sprawl

#### 2.2.1 Definition and Concept of Urban Sprawl

There are several definitions regarding of urban sprawl. Bruegmann (2006) stated that sprawl is low density and dispersed urban development supported by unsystematic regional public spatial planning. Meanwhile, Staley (1998) in Hidayat (2014) considered sprawl as urban physical appearance propagation process to the outer part of cities. Urban sprawl is also defined as a situation when rate of urban land consumption is faster than its population growth (Fulton, et al, 2001; Jaeger and Schwik, 2014).

The urban sprawl leads to the dynamics of land use that is quite high and fast, both for the volume and for the frequency. Urban sprawl is often viewed negatively by urban planners as it often result in adverse and poor conditions in those city outskirts areas. Uncontrolled urban sprawl have negative effects on the overall function of cities and surrounding regions. In the literature, there are three kinds of urban sprawl:

- 1) Concentric development urban sprawl. This type is the slowest urban sprawling and the condition limited only on some parts of city outskirts and usually involve only the whole urban exterior physical features. Due to uneven nature of sprawling in the next stage it will form a relatively compact morphological appearance of the city. The role of transportation in this sprawl is not so great.
- 2) Ribbon development urban sprawl. This type shows inequality urban sprawl in all parts of fringes and on the main city area. The most rapid sprawl is seen along existing transportation lines, especially within radial structure from the city centre
- 3) Leap frog development urban sprawl. This type considered the worst urban sprawl by environmentalists due to several aspects such as: inefficiency in economic terms, no or little aesthetic values, and unattractive patterns. Urban land development occurs sporadically with dispersed locations allowing enclave built areas in the middle of farmland.

Urban sprawl usually happened along with peri-urbanisation process. Rustiadi and Panuju (1999) stated that formation and change of land in peri-urban areas caused by the peri-urbanisation process in which the occurrence of rapid but irregular and unplanned physical growth has caused inefficiency and wastefulness (the phenomenon of urban sprawl). Peri-urbanisation is defined as a process of formation of new settlements and industrial zones in peri-urban areas mainly triggered by the displacement of urban city dwellers that need places to settle for industrial activities. Furthermore peri-urbanisation is a suburb growth process that is systematically faster than the city centre, and characterized by different lifestyle that affect day-to-day activities such as commuting to the central city.

### 2.2.2 Challenges in Urban Sprawl

Hardin (1968) in Jaegger and Schwick (2014) elucidated that urban sprawl is an example of tragedy of the commons whereas benefits of the landscape as common resource goes to individuals however the detrimental effects are affects the society. The expansion of the urban areas could reduce land as source of food and water (Boggart, 2006). On another aspect, urban expansion could induce high motorization which resulted in more high pollution. It is believed that urban sprawl had negative effect on the environment sustainability (Arellano and Loca, 2012; Jaegger and Schwick, 2014)

Hudalah (2010) stated that the greatest challenge of urban sprawl is its locations in a transition zone which are regulated by a complex institutional structure and overlapped with different autonomy, vision, style, and capacity of government. In addition, some planning tasks are divided by central government responsible for coordinating between local planning issues. These conditions resulted in incoordination between private and local initiatives thus exacerbated the physical and institutional fragmentation in peri-urban areas.

Previously viewed as a trend in developed countries, nowadays urban sprawl is also a common situation in developing countries. UN Habitat (2011) reported that urban areas grew faster than population by 1.5 times. UN Habitat also reported that two kinds of urban sprawl which are core city sprawl and suburban sprawl happened on many cities in developing countries such as in China, Mexico, India, and several major city in Africa Regions. In most cities, urban sprawl usually dominated by the need for residential area combined with road-based infrastructure development. Indonesia metropolitan also face the same situation.

The using for residential area became the main reason of farmland loss in many Indonesia Metropolitan. World Bank reported that annual land conversion rate into built environment in several Indonesia's metropolitans is more than 100 per cent between the year 2000-2005. The development of toll road in Indonesia's metropolitans (Jakarta, Bandung, and Semarang) also encourage people to live in suburbs area especially due to its lower land price and using private motorization as a mean of mode of transportation (Silver, 2008; Ardiwijaya et al, 2014; Buchori and Sugiri, 2016). This situation is exacerbated by stagnant development of public transportation in most Indonesia metropolitan. Intrans, A NGO in Indonesia (2011) reported that daily travel time in Jakarta is significantly increases whereas by 2005 it takes about 45 minutes to transverse 30 km distance, and by 2011 it takes at least 90 minutes for the same path. All of those situation which mentioned above emphasized how deeply Indonesia controlled its urban areas development.

### 2.3 Urban Development Control

Rapid urbanisation has resulted in expansion of urban growth, and to avoid the negative impacts of this urban growth metropolitan managers need to have development control strategy in their hands. Development control is an effort in shaping the transformation of built environment in urban areas by regulating market sector in order to achieve particular social objectives (Tang and Tang, 1998). As explained by Eskilsson (1997) there is clear connection between built environment in urban area with development control on several cities in developed countries, whereas cities with strong public authorities control for the development is more structured whilst cities with strong market sectors are usually being more dispersed due to the car oriented transport system. In broader definition, development control also covers on issues about consent, exempted development, enforcement and others matter that related to the development of built environment.

There were many kinds of development control, but basically it can be categorized into two main category, which are planning regulations and building regulations. Due to the aims of this research, this thesis will focus on planning regulation as development control. Learning from developed countries experience, planning regulation itself also diverse in each metropolitan because it will based on what types of planning approach the metropolitan used. For statutory planning approach, zoning is the most prominent development control tools (for example: in most US metropolitan areas, France, Netherland, and Singapore). Whilst for discretionary planning approach, development permit based on public consensus is the most prominent development control tools (e.g. United Kingdom). Many developed countries then followed by developing countries uses statutory planning approach because at some point it gives clarity on how to manage the effective functioning of the built environment.

Indonesia planning approach nowadays also using statutory planning approach marked with 2007 Law's on Spatial Planning. Learning from past experience where the discretionary approach is failed to manage urban growth, the Spatial Planning Law which also accommodated the decentralization of governance is mandated that each municipal needs to have municipal spatial plan as a guidance for spatial development and zoning regulation as a development control tools to manage the development of built environment (Winarso, 2006). However, Indonesia is still haunted by the capability of government apparatus as the key actors both in formulating the zoning regulation, and implement and enforce the zoning regulation (Rukmana, 2015; Wirawan, 2015). As March 2016 there are only 3 out of 514 municipalities in Indonesia whom had zoning regulation law as their development control tools (Sekretariat BKPRN, 2016).

Decentralization process in Indonesia which was started in 1999 has enhanced by spatial planning law by giving local government more authority to formulate their own spatial plans. At one side, this is a good thing especially in optimising local spatial resource, nevertheless it may resulted in diverse spatial plans which may contradict between one to each other. In the end, it may inhibited regional spatial development as a whole (Firman, 2009a). Looking to this situation, it is necessary for adjacent municipalities to integrate their spatial plans to ensure the sustainability of the regional system (Firman, 2014a).

### 2.4 Policy Integration

In the wake of the more fragmented, multi-dimensional, and sectoral view of urban areas development, policy makers need to integrated spatial plan that available to them to answer

future problems or challenges in urban areas development especially urban sprawl in metropolitan areas which involved multi local governments. Various spatial plans which need to involve various actors with different backgrounds may result in impasse situations which then could hinder urban development process. In this kind of situation, the notion of policy integration on spatial plan matter. Earlier, a policy qualified as integrated if it has three criteria, namely comprehensiveness, consistency and aggregation (Underdal, 1980). Meanwhile, Stead and Meijers (2004a) stated that policy integration is about manage the overlapping proposition that beyond available policy bounds, which could connected to integration on horizontal, vertical, or both manners. Policy integration also defined as amalgamation of particular policy goals which immaterial to policy domain for existing sectoral policies (Giesen, 2011).

Policy integration is different from policy coordination and policy cooperation. Cooperation can be seen as an effort of different parties to achieve common goals, whereas coordination is more focusing on the outcomes which could result in differing than preferred previous one. Meanwhile, policy integration is beyond both coordination and cooperation although it still on the same dimension (Stead and Meijers, 2004a). Figure 2.1 will depict the connection between policy integration, coordination and cooperation.

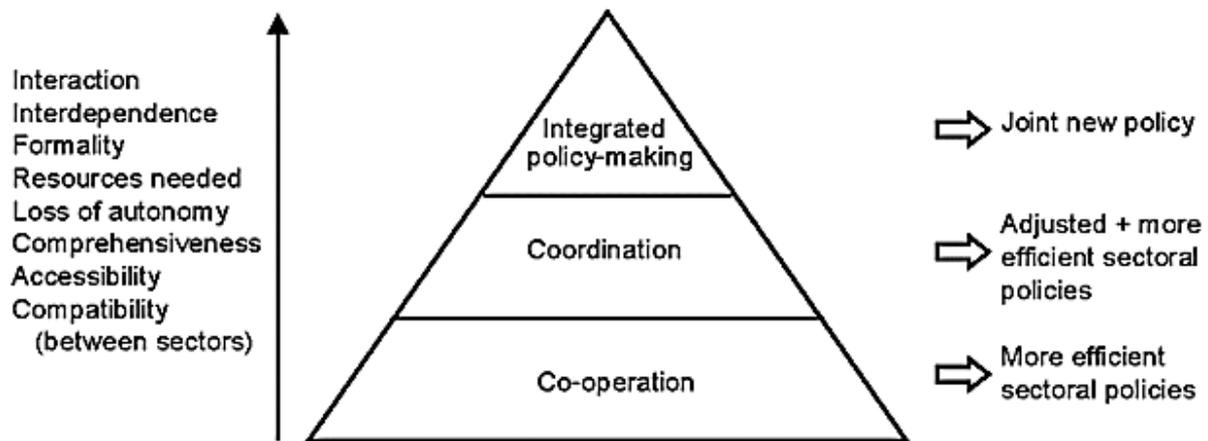


Figure 2.1 Correlation between policy making, coordination and cooperation  
(Source: Stead and Meijers, 2004a)

Policy integration on spatial plan cannot be taken for granted because it will always need to balance barriers and facilitator of the policy making without forgetting its benefit and cost. There are several factors that need to consider in spatial plan integration, namely: political; institutional and organizational; economic and financial; behavioural, cultural and personal factors; process, management and instrumental (Stead and Meijers, 2004a; Stead and Meijers, 2009). Giesen (2011) also elucidated there are two factor that may obstruct policy integration. First, policy integration is not in accordance with specialized/autonomous designed type of government which usually avoided overlapping of tasks. Second, policy integration is not in line with economic concerns from involved actors in this autonomous system.

Many stakeholders believe that policy integration is a good notion in dealing with complexity of the problems, however in the practice there is still a fuzziness regarding how to conduct policy integration. Methods of policy integration are combinations of several different approaches or different setting of its related factors (Stead and Meijers, 2004b). Based on England, Denmark and Germany experiences, there are three methods in policy integration, which are impact

assessment techniques, targets and indicators based techniques, and public participation techniques (Stead and Meijers, 2004b).

Policy integration for urban development and management can be served through various tools, and spatial planning is one of the prominent tool. There are two roles of spatial planning for policy integration which are (1) as integrating tools between sectors, and (2) channel of communication between sectors (Stead and Meijers, 2009). Spatial planning which involves multi actors (government, public and private) and multi processes will strengthen the policy integration for urban development and management, so both of them need to coexist within one and others. In the Indonesia planning system, the effectuation of spatial planning also tries to fulfilled those two roles, through the ample discussion among sectors and increased participatory and public hearing to the community (PP No. 15/2010; Rukmana, 2015)

## **2.5 Facilitators and Barriers for Policy Integration in Metropolitan Governance**

There were many efforts to created parameter for a sound policy integration, dates back from Underdal (1980) concept of “comprehensiveness, aggregation and consistency”, then by OECD (1996) through its “coherent policy making”, and Shannon and Schmid (2002) concept of “inter-sectoral linkages”. Nevertheless Stead and Meijers (2009) already stated that there are no specific parameters that could become facilitators and barriers for policy integration. Later they said that the parameters will be based on the context of the object of research. Basically there are 6 basic factors (see chapter 2.4) and Stead and Meijers (2004a; 2009) also created a sub-parameter list on the each basic factors.

For metropolitan governance in JMA context, this research limited the analysis on two most important parameters for each facilitators and barriers. The decision to choose those parameters based on author personal experience in spatial planning practices in Indonesia. Explication about each parameters in the next section also supported by others research in order to guarantees their worthiness.

For facilitator’s parameters of policy integration on spatial plan in metropolitan governance, this research will used ‘procedure standardization’ and ‘willingness to cooperate’ parameters. These parameters were chosen because some studies said that governance in East-Asia metropolitans have a strong connection between coordinated guidance and strong informal relationship among the actors (Legates and Hudalah, 2014). Procedure standardization is chosen due the hierarchical system of spatial plan in Indonesia which has resulted in uniformity of the spatial plan product across local government in Indonesia (Legates and Hudalah, 2014; Zhu and Simarmata, 2015). Willingness to cooperate is also been chosen because Indonesia has strong cultural roots on cooperation among its community, especially for those whose lives in the Java Island (Hudalah and Woltjer, 2007; Hudalah, Firman, and Woltjer, 2014). Harnessing this strong cultural cooperation among the actors could be smoothen the integration of spatial plan in JMA. Willingness to cooperation also may lead to the inclusiveness of the spatial plan whereas Laquian (2008) mentions that inclusive development on metropolitan development can be achieved through five measures: (a) integrating rural-urban areas with metropolitan regions; (b) including all multi-level government stakeholder related to the metropolitan areas; (c) including all stakeholders, private and public sectors, especially the marginally stakeholders; (d) integrating metropolitan infrastructure and service networks; and (e) making metropolitan development as an instrument to gain sustainability in all sectors.

For barrier's parameters of policy integration on spatial plan in metropolitan governance, this research will use 'budget allocation' and 'divergent priorities' parameters. The budget allocation becomes the barriers due to the most of Indonesia local government still rely on central government for their income (Setiadi and Adi, 2007; Firman, 2012) that limit their freedom in utilizing their own budget for spatial planning (Ritonga, Clark, and Wickremasinghe, 2012). Under this circumstance local government have obligation to focus their effort in health, education and public infrastructure (Law 32/2004 on Local Government). The divergent priorities parameter also chose because in the decentralization system, local government have fragmented opinion related the most important programmes which need to be realised (Firman, 2008; 2009a; 2014c).

## 2.6 Conclusion: The Conceptual Model

Based on explanation above, I conclude that there is a silver lining between three aspects which are urban sprawl, development control, and policy integration in dealing with urban growth. Regarding Jakarta Metropolitan Area urban growth, these three aspects become relevant due to the contextual situation in Jakarta Metropolitan Area. Combining these three aspects considered as an alternative approach in dealing with Jakarta Metropolitan Area growth. In conclusion, interaction between urban sprawl, development control, and policy integration enable us to create comprehensive concept which connect the empirical situation and the future transformation which need to be done in dealing with managing Jakarta Metropolitan Area urban growth based on those theoretical views.



Figure 2.2 Conceptual Model of Research (Source: Author, 2016)

## CHAPTER 3

# RESEARCH METHODOLOGY

### 3.1 Introduction

The research will analyse the correlation between synchronization of development tools to support metropolitan urban growth management. In order to achieve this goal, it was necessary to understand process of the research and this chapter will provide that. This chapter will connect the research question theories which already put into first and second chapter of the thesis with finding and relevance which will put in the second half of the thesis. The connection will explain through methods that will be used by author of reviewing the literature, data collection and analysis process.

The main idea of this research is about policy evaluation. Crabbe and Leroy (2008) stated:

*Policy evaluation is a scientific analysis of a certain policy area, the policies of which are assessed for certain criteria, and on the basis of which recommendations are formulated (Crabbe and Leroy, 2008, p. 1).*

Based above definition of policy evaluation, this research attempts to evaluate the spatial planning process in metropolitan areas as their policy in managing urban growth, using JMA as the case study. The analysis of the study is also supported by a comparative analysis based on cases from other metropolitan areas on how they manage their urban growth.

Though I have three cases study for this research which is JMA as the locus of research and 2 metropolitan areas as the comparative case, I will not fully reviewed all of them. I only doing full review on Jakarta case study, while the comparison cases study only used to get an illustration how proposed urban growth management tools worked in comparative cases situation. Based on the illustration hopefully lesson learned can be drawn as a recommendation to improve JMA urban growth management in my effort to give an evaluation for JMA spatial plan policy.

### 3.2 Comparative Cases Selection

The main contribution of performing a comparative study is to uncover structural and cultural differences in planning across nations, including its strength and weakness (Nadin, 2012). A comparative study will demonstrate how other metropolitan areas dealing with their urban strategies and management in handling urban sprawl. In this study, we used two cases from western and eastern countries. A western metropolitan area is selected in the study since this established region has experienced a post suburbia metropolitan development, which marked by chaotically polycentric structures combined with decline of population in core/old area of the metropolitan (Soja, 2000; Borsdorf, 2004 cited in Firman, 2012). For eastern countries, it is known by its extended metropolitan region (EMR) which is characterized by the rapid development on built-up areas, dispersed into all directions in suburbs and surpassed city/metropolitan administrative boundary, especially due to the high population growth (Firman, 2012).

To select the two cases, three parameters are used:

- First, both cases must be recognised as metropolitan areas for obvious reason that JMA is a metropolitan areas.
- Second, as in Indonesia planning system is driven by statutory planning, the two cases must utilise statutory planning as its urban development approach.
- Third, utilising statutory planning enabled both cases to manage negative impacts of their urban sprawl

For the case from eastern country, the parameter for selecting a metropolitan area are: (1) having more than 1 million inhabitants; (2) higher HDI index<sup>2</sup> than JMA; (3) its function as economic centre in their own country and/or world; and (4) acknowledge by international agencies due to their successfulness in managing urban development. Based on parameter (1) and (2) there were 127 metropolitan areas in eastern countries selected. Using parameter (3) which based on Florida et al (2010) there were 12 out of 127 metropolitan areas in Asian countries which have big share on global economic activities. Related to parameter (4), EIU (2012) reported that based on their sprawl index there are 3 out of 12 metropolitans which have sprawl index better than Jakarta which is Hong Kong and Nagoya<sup>3</sup>. Hong Kong exceled itself for its liveability and in 2012 Hong Kong was measured as one of the best cities in dealt with sprawl (EIU, 2012). Based on the selection process, this research decided Hong Kong as comparison case study representing Eastern country.

For western country, the specific parameter would be (1) land areas of the metropolitan which should be more than 1,000 square kilometres with reason so it has the same complexity with JMA; (2) similarity situation with JMA which is multiple government involvement at local and provincial level; (3) time of exercised the statutory planning as main strategy to manage urban growth; and (4) acknowledge from international agencies about their successfulness in managing urban development. By parameter (1) there are 66 metropolitan areas in western countries which has land areas more than 1,000 square kilometres. Using parameter (2), there are 15 out of 66 metropolitan areas which involve multiple government at provincial level whereas majority of these metropolitan areas located in the US. Portland is the most prominent example from all 15 metropolitan areas which have long experience in using statutory planning in its planning system. Hence, Portland has been chosen in this study as a case from western countries.

### 3.3 Literature Review

In my efforts to develop conceptual thinking to answer the research questions, I need to review several of the theories that have closed linkage with the base idea of the research. This reviewing

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<sup>2</sup>Based on UNDP's latest human development index (HDI) report, whereas divided countries into 4 basic categories which are countries with very high, high, medium and, low human development. This report place Indonesia at medium level (See: UNDP, 2015. Human Development Report 2015, Work for Human Development).

<sup>3</sup>Hong Kong graded with 1.0, Singapore graded with 2.0, and Nagoya graded with 2.3 from scale 1 to 5 which 1 is for the best and 5 is for the worst. Jakarta graded with 2.7 in this report (see: EIU, 2012. Best cities ranking and report)

process begun by collecting the theories related to the keywords: urban sprawl, development control, policy integration and institutional design. There are two kinds of main goals for literature review. First is to get the general ideas of the concepts and second the implementation of the concepts in general places and then focused on the Indonesia contextual.

Sources of these theories will be based on reputable publication such as scientific journal or books which authored by reputable researcher which specialized in their own fields of expertise. Utilize Google Scholar as my primary search engine based on those keywords will give me quick results from related theories. My next moved then is to narrowing which publication that I will use for my research. The narrowing process carried out by considering several joining factors, first is by the novelty or the research by looking the year of the publications whereas my priority will be for publications which published by the year 2000 onwards in order to get the latest information on the related subject. The second consideration is by looking the author's publication history to find the prominent researcher on the topics. To make sure that the publication is well received by other researcher, I will look from how many researchers citing the publications. By using those three considerations (year of publication, authors history, and number of cites), I believe could reduce my subjectivity on the related matters.

For Indonesia contextual situation, this part also supported by review of government agency's report that has responsibility for Indonesia spatial planning, this agency as Directorate General Spatial Planning (*Direktorat Jenderal Penataan Ruang*) of Ministry Agrarian and Spatial Planning; Directorate of Agrarian and Spatial Planning, Bappenas (National Planning and Development Agency); and Office of BKPRN Secretariat. Website of these agencies listed in the appendix 4.

The process of literature review of each theoretical aspects are:

- The review of the urban sprawl looked it as the main issues of the urban growth, how it changed world metropolitan landscape, and how the metropolitan areas manage their urban growth. This part gave a brief description of the situation of urban sprawl in the world and Indonesia's urban areas.
- The next review was development control. The review started to look at the correlation between development controls as an effort to support urban growth management. Then, followed by looking deeply at theories about kinds of development control for urban development. These theories will be tested with contextual situation which is how world metropolitans managed their urban development by using development control. It also analyses Indonesia policies on urban development control for Indonesia metropolitan areas.
- Policy integration theory will be reviewed due to the reason that metropolitan usually consisted of several administrative municipalities which in the decentralization era has their own autonomy in governing urban growth. Looking at this situation, it is necessary to understand the idea of policy integration, especially related to the integration of spatial planning across municipalities. This reviewed attempts to describe practical aspect of spatial plan policy integration in the world, and how the contextual situation of spatial plan policy integration in Indonesia.
- The next part is about how spatial plan policy integration can be utilized as an institutional design to managing metropolitan area's spatial development. By using the idea of spatial plan integration as an effort to renew rule of the game for metropolitan development control new discourse towards managing JMA development was discussed. This part also summarized kind of factors that may arise as barriers and opportunities in the policy integration process.

The final part, a conclusion about the conceptual model that will be used as a guidance for this entire research.

### **3.4 Data Collection on the Cases**

The analysis of this study is based on two data resources. First is desk study. We review JMA governance of spatial planning and cases from Portland and Hong Kong based on past studies, official reports and other scientific literatures. Second is based on a number of interviews with JMA stakeholders, especially those who deeply understand JMA governance on spatial planning.

By combining those two source of datas, this research hopefully can maintain its objectivity. The secondary data is important to minimize the bias that might be resulted from the interpretation of the primary data, and vice versa the primary data is also useful to check out the currentness of the information. The detail of linkages between sub research question and data collection can be seen on the table 3.1.

#### **3.4.1 Desk Study**

With desk study, basically I used the same methods as the literature review, which is trying to find related publication that able to support my research through several stage processes of selection. However, to support the novelty of the contextual situation, information from government report, unpublished thesis and mass media also will be used to extend the view of existing conditions in all case study areas (Jakarta, Portland and Hong Kong). All of the selected material then analysed by using qualitative content analysis.

As the focus on this research is about guiding urban development in JMA, a secondary collection data onto desk study become relevant. This secondary data collection is necessary to provide more contextual material for this research especially to give profound information about the case studies. For JMA case, national level data also will be collected. The Indonesia data focuses on implementation of urban growth management in Indonesia; kind of support given by central government to the local government; and policies use by Indonesia government to dealt with issues on urban growth. Data and information also focus after the enactment of new Indonesia Spatial Planning Law in 2007. Meanwhile for the comparison case studies, the data and information will be needed to give clear understanding about the circumstances in the comparison case studies.

I understand that there is a limitation on using secondary data collection for desk study process. One main issue is the various sources that available which might result inflexibility for me to customize it. To overcome this situation, my experience in following and involved with metropolitan and/or local government spatial plan formulation and implementation will supported me to be able to stay focus on the context of the research is needed, especially to choose the right information that will be used in this research.

Table 3.1 Linkages of Sub Research Question and Data Collection

Sub Research Question	Kind of Data	Sources of Data	Method of Data Collection	Goals
How is rapid urbanisation affecting the liveability in metropolitan area?	<ul style="list-style-type: none"> <li>• Urbanisation situation on metropolitan</li> <li>• Impact of urbanisation for metropolitan</li> </ul>	Past studies and publications on urbanisation and metropolitan development	Document and literature review	Understanding the current situation of the urbanisation and it consequences especially for the metropolitan area
How institutional design aimed at the integration of spatial plan can support planning contributions to deal with rapid urbanisation?	<ul style="list-style-type: none"> <li>• Opportunities and barriers factors that may affected spatial plan policy integration</li> </ul>	Past studies and publications on urban growth management and spatial plan integration	Literature review	Understanding factors which affecting the process of policy integration for metropolitan spatial planning
What are drivers behind rapid urbanisation in Jakarta Metropolitan Area (JMA)? To what extend zoning regulation able to guide urban development and what factors that inhibited zoning regulation integration in Jakarta Metropolitan Area?	<ul style="list-style-type: none"> <li>• History of JMA urban development and planning.</li> <li>• Current situation on JMA development control and planning process</li> <li>• Stakeholder perception on JMA urban development control</li> </ul>	Past studies and publication; Policy Document; Laws; Government archive; Scientific Publication; Stakeholders Perspectives	<ul style="list-style-type: none"> <li>• Document and literature review</li> <li>• Desk Study</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding the current situation on JMA development and what hindrances that they face especially in the planning process.</li> <li>• Understanding stakeholders perspective about JMA development and how the planning performance in guiding JMA development</li> </ul>
How do the metropolitans of Portland-Vancouver and Hong Kong spatial plan integration contributes in managing their urban growth? To what extend metropolitans of Portland-Vancouver and Hong Kong developed their spatial plan integration?	<ul style="list-style-type: none"> <li>• Spatial planning system that have been use by Portland and Hong Kong.</li> <li>• Current situation on Portland and Hong Kong development control and planning process</li> </ul>	Past studies and publication; Policy Document; Government archive	Desk Study	Understanding case studies situation and what they strategies to deal with rapid urbanisation in their metropolitan areas.
What lesson learned from other metropolitans could be implemented in order to support zoning regulation synchronization in Jakarta Metropolitan Area?	<ul style="list-style-type: none"> <li>• Possibilities of lesson learn for the JMA development control.</li> <li>• Possibilities of new institutional design by using inter-municipal zoning regulation synchronization for managing JMA development.</li> </ul>	Policy Document; Laws; Government archive; Scientific Publication	Desk Study	<ul style="list-style-type: none"> <li>• Understanding strategies that can be used for JMA context learned from the case studies</li> <li>• Formulating recommendations as part of new institutional design to guiding JMA development.</li> </ul>

### **3.4.2 Interview**

To understand the current circumstance regarding JMA planning process in-depth interviews with Jakarta Metropolitan Area planning stakeholders were carried out. The purpose is to gain insights about stakeholder's perception and experiences in daily planning process, coordination, opportunities and barriers among them. A set of interviews was conducted through a semi structure interview approach, considering several points of open question (see appendix 1 for the interview guidance). The key informants were picked based on the snowball method, meaning that the next interviewees were selected based on recommendation from other previous interviewees. For the national level, apparatuses from Ministry of Agrarian and Spatial Plan are, which are responsible for coordinating spatial plan in Indonesia, were selected. On this ministry, the interviews search the respondents which are responsible on the policy level (related to the national strategy of urban areas development) and at the practitioner level (related to the coordinating metropolitan development). Getting the whole pictures at national level, this research also interviewed representative from Indonesia Association of Planners, which have deep knowledge related to the empirical implementation on the spatial plan in Indonesia.

For local level, this interview targeted local government apparatuses that involved directly with the formulation and/or coordination of the spatial plan. Base on the recommendation from national level government apparatuses combined with researcher network, 3 representatives from local government were selected.

### **3.5 Analysis of the Data**

This research use document analysis as its main research reviews as well as the interviews as a complement to support the analysis. As explained by Bowen (2009) document analysis is a systematic procedure -which are finding, selecting, appraising, and synthesising of data in the documents- for reviewing or evaluating documents. Bowen also explained that with document analysis empirical knowledge can be produced and furthermore understanding is developed.

The analysis processes starts with the theoretical review of several theories that related to the urban sprawl, urban development control, policy integration and institutional design. Based on those theories, the notions of urban growth management will be structured and use for the next step of analysis.

Secondly, the research used qualitative content analysis which includes (i) summarising, an effort to summarize and narrowing overlapping statement; (ii) explicating, an effort to define different or unclear passages; and (iii) structuring, an effort to connect and amalgamation the materials (Flick, 2006) to analyse existing condition of JMA urban growth which have been structured through data collection process. Information based on theoretical review is based on past research that reviewed the growth of JMA urban areas and this is the first key on this phase. Then to bolster the supposition, population and economic data from scientific or government documents are used. Impact on the JMA development on its liveability are studied, based on several resources, such as scientific publication from recognizable researchers that focus on JMA development, then combined with unpublished research or organization paper/report from reputable institutions (United Nations, World Bank, UNDP, Indonesia's NGO) or using unpublished theses which came from reputable universities. As to understanding the planning process this research will analyse information from desk study and cross-checked it with information from interviews.

Thirdly, comparison analysis is carried out. It focuses on the analysis regarding how other metropolitans in the world have faced the same situation with JMA, which demonstrate rapid urbanisation. Not just facing it, they also able to come up and succeeded in their strategies to deal with their rapid urbanisation problems. How other metropolitans utilize development control tools of facing urban sprawl will be compared. Those comparisons look deeply for the kinds of urban sprawl that each city faced, what kinds of development control tools that they used for in dealing with their urban growth, and at what extend they have done their horizontal policy integration. Again, document analysis will be used to explain the comparison. This method is used because it can systematically and accurately describe a particular issue and then linkage the issue with the theoretical aspect. To help understanding the comparison, the comparison table will included.

Lastly, formulation of lesson learned based on comparison result is conducted. Using empirical analysis, lesson learned from other metropolitan related to urban development control and spatial plan integration are utilized to support synchronization of zoning regulation as an institutional design to guiding Jakarta Metropolitan Area urban growth.

### **3.6 Conclusion: Research Design**

This research uses a qualitative research to evaluate spatial plan policy in JMA. This evaluation process combination between theory and practice. The theory as the foundation of this research explained in Chapter 2. Meanwhile the practical aspect of this research explained on Chapter 4 and Chapter 5. Chapter 4 discussed on JMA as case study which discussed about spatial planning system and spatial development in JMA and how those two aspects lead to urban sprawl in JMA. Chapter 5 discussed about spatial planning and spatial development on comparative case metropolitan areas, also this chapter discussed how comparative metropolitan areas manage their urban growth.

Chapter 6 synthesises the case study analysis and comparison analysis. It focuses on understanding and learning about urban development control for JMA through integrating spatial plan based on the factors which may supported or inhibited the process.

The research structure design of this analysis is presented as follow.

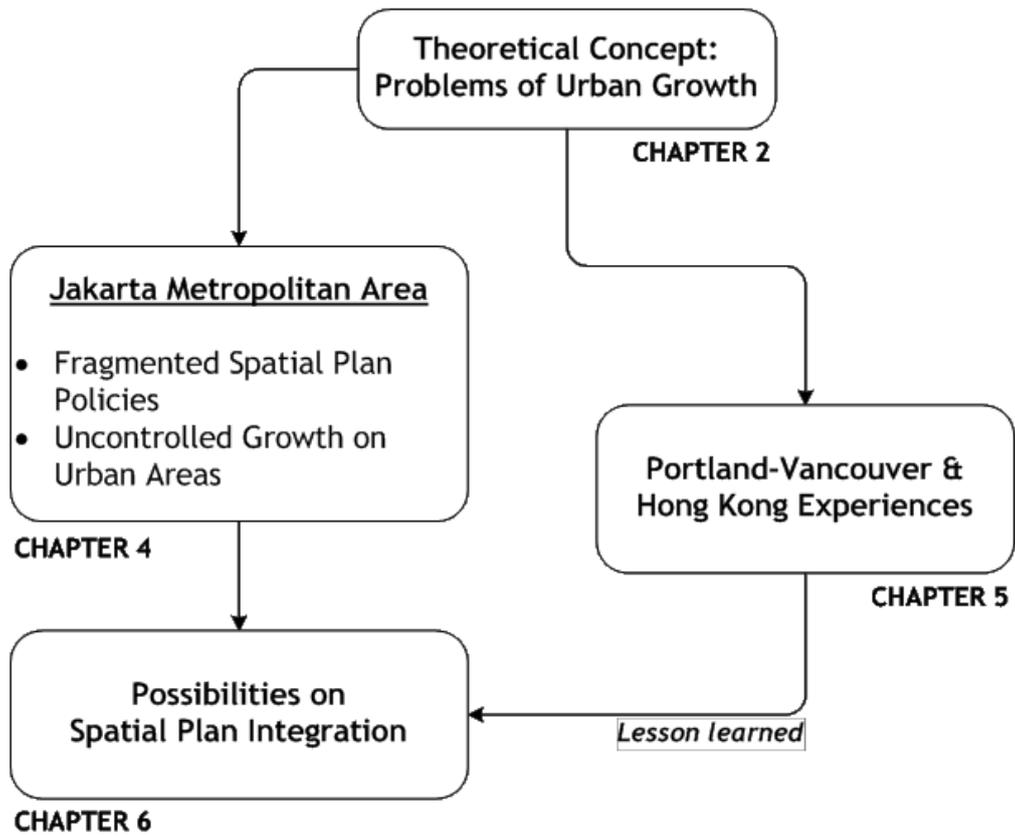


Figure 3.1 Research Design (Source: Author, 2016)

# CHAPTER 4

## PLANNING AND DEVELOPMENT IN JAKARTA METROPOLITAN AREA

### 4.1 Introduction

This chapter will explain about spatial planning in Jakarta Metropolitan Area and how it is actually being implemented. The chapter will begin with brief discussion about the planning system in Indonesia. This part is crucial, especially in providing insight on spatial planning system that currently being practiced in Indonesia. This research will not discuss about the history of Indonesia planning system or why Indonesia have chosen the current system. Therefore part of the discussion will based solely on the planning system that stipulated in Indonesia's current spatial planning law (Law No. 26/2007). The second part of this chapter will discuss about the current spatial plan that is exercised in JMA. Again this part will only discuss about spatial plan which is in accordance with Law No. 26/2007. Meanwhile, the third part of the chapter will discuss about JMA spatial development. To give better insight, the discussion will also include JMA development prior the enactment of Law No. 26/2007. At the end of the chapter, a conclusion which will try to link the spatial planning system in Indonesia and spatial development in JMA will be provided.

### 4.2 Indonesia Spatial Planning System

Considering the contextual situation in JMA is important in order to understand about Indonesia's spatial planning system. The first part of this sub-chapter will try to explain about Indonesia planning system based on Law No. 26/2007. This part will explain about hierarchy and process of spatial plan (*rencana tata ruang wilayah/RTRW*) formulation. The second part will explain about process of making the spatial plan in Indonesia, which mainly consists of formulation stage and legislation stage. The final part of this sub-chapter will try to link the metropolitan spatial plan with zoning regulation in Indonesia context as this is the main idea of the research, which is the integration of zoning regulation on metropolitan level.

#### 4.2.1 Spatial Plan Hierarchy

According to the Spatial Planning Law (Law 26/2007), Indonesia uses hierarchical spatial plan as an effort to harmonize the nature protection and development of built up environment. This law superseded the previous spatial planning law (Law 24/1992) due to its failure in managing land use control and due the needs of accommodating the then newly implemented decentralization system in 1999 (Rukmana, 2015). Hierarchically, spatial plan of Indonesia consisted of national, provincial and local spatial plan. At local level, there are also two kinds of category which were municipal (*kota*) spatial plan and regency (*kabupaten*) spatial plan.

Each of those spatial plans then classified into two major groups, which are general plan and detail plan. The General plan is formulate based on administrative level (such as national spatial plan or *RTRWN*, provincial spatial plan or *RTRW Provinsi*, and local spatial plan or *RTRW*

*Kota/Kabupaten*) while detail spatial plan is more specific based on activities or strategic interest of an area which part of the general plan (*RTR Kawasan Rinci*) or as zoning regulation (RDTR dan PZ) for urban areas. Based on its function, the general plan is a guidance of an administrative area in regards for spatial structure and pattern plan while the detail plan explicate in more precise about on spatial pattern plan. Therefore, the detail plan is a basic requirements for the certitude of zoning regulation. The Detail plan is required to be in coherence with general plan, therefore detail plan usually formulated after the general plan. All of the spatial plan has 20 years of planning periods.

As an instrument, Indonesia spatial management combines three policies which are spatial planning process (*perencanaan tata ruang*), space utilisation (*pemanfaatan ruang*), and control over space utilisation (*pengendalian pemanfaatan ruang*) (Law No. 26/2007). By definition, the spatial planning is a process to determine spatial structure and pattern that comprised of preparing and formulating the spatial plan. Space utilization is an effort in materializing the spatial structure and pattern based on the spatial plan programmes that is formulated and executed and supported with funding. Control over space utilization is an effort to monitor, evaluate and control on development of the space.

In Indonesia planning system, metropolitan areas considered as strategic area. Due to the economic interest, most metropolitan areas noted as national’s urban strategic areas (*kawasan strategis nasional perkotaan*) although there are several metropolitan areas which stated as province strategic area. The formulation of metropolitan area spatial plan is also intended as an effort to coordinate and integrate municipals’ regional development. Meanwhile, the metropolitan area spatial plan functioned as guidance for land use and infrastructure development and at the same time also act as joint spatial plan for several municipals.

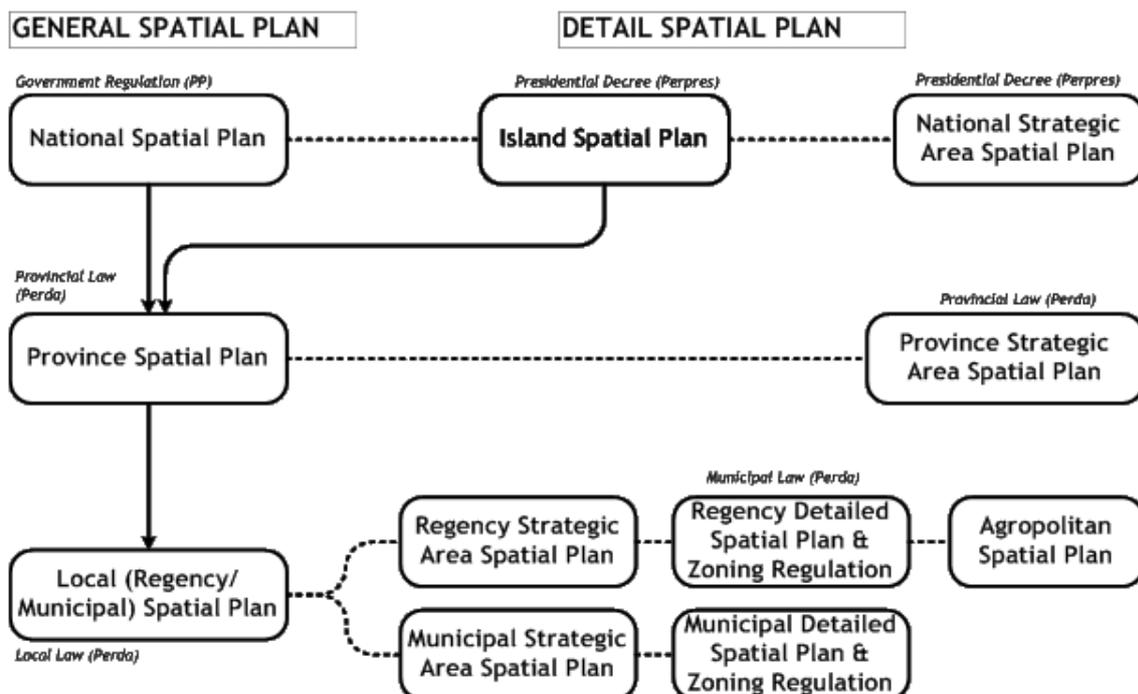


Figure 4.1 Spatial Plan Classification in Indonesia (Source: Law No. 26/2007)

The local’s detailed spatial plan and zoning regulation are new tools introduced in Law No.26/2007 for spatial development control. Zoning regulation become necessary because the previous detailed spatial plan (based on old spatial planning law) only regulate about building envelope

(such as building height, floor area ratio, floor coverage coefficient) and does not oversee the activities in the building. By adding the zoning regulation on the detailed spatial plan, it is expected that it will be able to overcome the lack of thoroughness of the old detailed spatial plan models.

#### 4.2.2 Spatial Plan Formulation

Formulation process of spatial plan in Indonesia consisted of two main phased. First is the formulation of academic papers and legal drafting of the regulation, and second, is the legislation process. Several handbooks from the Ministry of Public Works (*Kementerian Pekerjaan Umum*<sup>4</sup>) mentioned the first process takes up to 18 months for municipal/province level spatial plan and 24 months for national level spatial plan (see table 4.1). The formulation process consist of 5 phased, which are preparation, data collection/gathering, data analysis, creation of spatial plan concept, and drafting for the regulation. During the formulation, integration with other sectors/stakeholders was part of the consideration. This process is committed by public hearing and discussion with all local government stakeholders either within the local administrative area and/or with the neighbour areas through the Local Spatial Planning Coordination Board (*Badan Koordinasi Penataan Ruang Daerah/BKPRD*) meeting. This process is applied for both types of general plans and detail plans.

Table 4.1 Time Frame on Spatial Plan Formulation Process

Type of Spatial Plan	Process (months)					Total Time Required (months)
	Preparation	Data Collection	Analysis	Spatial Plan Concept	Legal Drafting	
Province General Spatial Plan <sup>1</sup>	1	2-3	2-6	2-7	1	8-18
Regency General Spatial Plan <sup>2</sup>	1	2-3	2-6	2-7	1	8-18
Municipal General Spatial Plan <sup>3</sup>	1	2-3	2-6	2-7	1	8-18
Metropolitan Spatial Plan <sup>4</sup>	1	2-3	2-6	2-7	2-6	9-24
City Detailed Spatial Plan <sup>5</sup>	1	2-3	2-3	2-3	3	10-13

Source:<sup>1</sup>*Peraturan Menteri Pekerjaan Umum* (Ministry of Public Works Decree) No. 15/PRT/M/2009

<sup>2</sup>*Peraturan Menteri Pekerjaan Umum* No. 16/PRT/M/2009

<sup>3</sup>*Peraturan Menteri Pekerjaan Umum* No. 17/PRT/M/2009

<sup>4</sup>*Peraturan Menteri Pekerjaan Umum* No. 15/PRT/M/2012

<sup>5</sup>*Peraturan Menteri Pekerjaan Umum* No. 20/PRT/M/2011

The second process, which is legislation process, was necessary in order to bind the whole society. The legislation process involved discussion with many stakeholders such as: all community through public hearing, local government, provincial government, national government, and local legislative assembly (*Dewan Perwakilan Rakyat Daerah/DPRD*). The general and detail spatial plan are required to be discussed at local and provincial level marked with Local and Province's BKPRD meeting, then followed by national level discussion through National Spatial Planning Coordination Board (BKPRN) meeting (see appendix 3). In order to accommodate sectoral needs

<sup>4</sup> transformed to Ministry of Agrarian and Spatial Planning (*Kementerian Agraria dan Penataan Ruang*) by 2015

which may overlap and/or contradict among each other's, the Province BKPRD and BKPRN meeting could be held for multiple time to resolve it. Due to this long process, there are around 13% of 508 municipal's general spatial plan that still have not finished the legislation process (Ditjen Tata Ruang, 2016), whereas it was six years deviated from intended target time<sup>5</sup>. For detail plan, only about 0.2% of total 1,625 proposed municipal and province detail spatial plan that are being legalized by local government (Sekretariat BKPRN, 2016).

The complicated process of formulation and legalization the general spatial then followed by detailed spatial plan for municipalities/regencies which is standardized by the central government, is an effort to integrate multi-level spatial plans. Nevertheless, this long process of integration effort resulted into unclear status of spatial development especially at the local level. Although many local government already have had their general spatial plan, Spatial Planning Law specifically stated that the general plan cannot be use as a base on issuance of land use development permit, and it must be completed with the detail spatial plan. As there were many local government who have not completed with the detailed spatial plan, they used their own comprehension on the implementation of land use development control and this may resulted in the fragmented land use on local level. Looking back on the data which only 0.2% detailed spatial plan that available in Indonesia, the potential of spatial development fragmentation is still high despite that it is now almost a decade after the implementation of the Spatial Planning Law (Law No.26/2007).

#### **4.2.3 Linking Metropolitan Spatial Plan and Zoning Regulation**

Both of metropolitan spatial plan and local detailed spatial plan and zoning regulation are derivatives from their own general plan. Metropolitan spatial plan is a derivate from national spatial plan (RTRWN) or province spatial plan (RTRWP) which then also need to adopt or being adopted with local spatial plan (whichever comes first). Meanwhile, the local detailed spatial plan and zoning regulation is a derivate from local spatial plan. With vast difference of planning scale, it seems local detailed spatial plan and zoning regulation do not have direct linkage with the metropolitan spatial plan.

However, the guidance of metropolitan spatial plan formulation (Permen PU No. 15/PRT/M/2012) already stated that the metropolitan spatial plan need to be equipped with several general guidance of zoning regulation, which consist of permitted type of activities, the intensity of the spatial use, minimum requirement of infrastructure, and others related regulation. The local detailed spatial plan and zoning regulation are oblige to adopt this general guidance which is provided by the metropolitan spatial plan. If local detailed spatial plan and zoning regulation did not adopted the zoning regulation guidance without proper reason, the national or province government have the right not to give their recommendation for local detailed spatial plan and zoning regulation legalization process. Relationship between metropolitan spatial plan, local detailed spatial plan and zoning regulation, and others spatial plan depicted in figure 4.2.

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<sup>5</sup> Law No. 26/2007 mandated that by 2010, all local governments must finished with general spatial plan legislation process

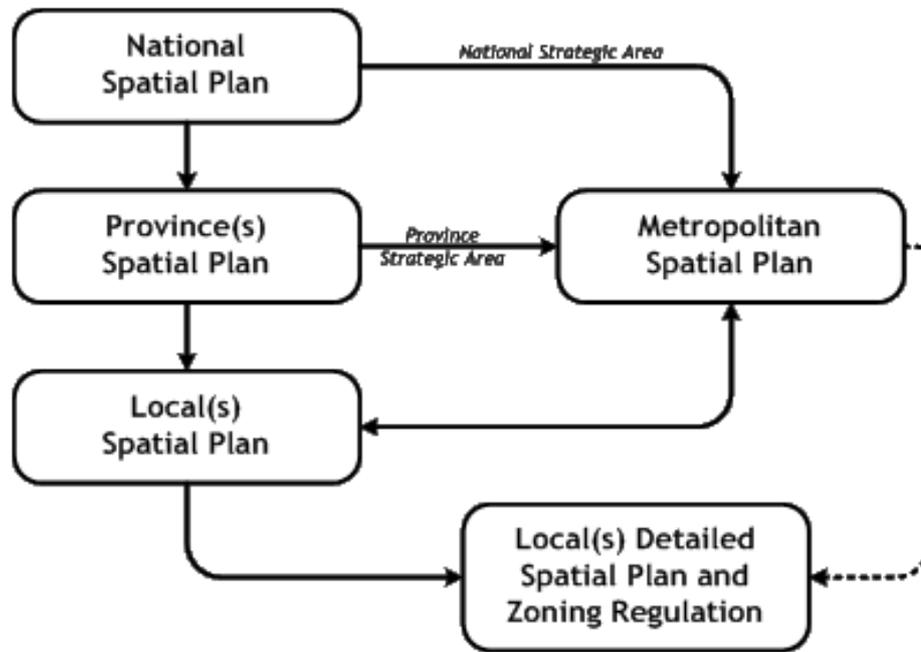


Figure 4.2 Relation between Metropolitan Spatial Plan and Zoning Regulation in Indonesia  
(Source: Author, 2016)

### 4.3 Spatial Planning in Jakarta Metropolitan Area

Spatial planning in JMA is based and included several general spatial plans and detailed spatial plans on multi hierarchy, which are national, province and local level. On national level, there were several regulations which need to be adopted or use by JMA spatial planning such as National Spatial Plan, Jawa and Bali Islands Spatial Plan, and other guidance related to spatial plan making and coordination. At local level, all local government in JMA already legalized their own spatial plan which Bogor Regency was the earliest and Depok City was the latest. For detailed spatial plan and zoning regulation only Jakarta City that already have, while the other municipals/regencies still on the formulation or legalization process (see Table 4.2).

On positive side, this multi hierarchical spatial plans is able to ensure that each spatial plans have a common vision and guidance, thus all spatial plans should be integrated. However, this multi hierarchy spatial plans also means that drastic change in one spatial plans vision may nullified the vision on other spatial plans which may resulted in chain effect of great effort to revised multi spatial plans. Revising process on spatial plans is a time consuming effort, and during the process may create fuzziness in the spatial development legal status. In a metropolitan area with the need of high economic activities, fuzzy arrangement on spatial development may cause unwanted outcomes such as self-organizing development or worst, illegal spatial development.

JMA spatial planning is based on Jabodetabekjur Spatial Plan (Perpres No. 54/2008). In this spatial plan, JMA using radial national activity centres concept which centred on Jakarta City. There were nine national activity centres located surrounding Jakarta City plus one centre on the southern region of JMA. In order to create connectivity among those national activity centres, JMA spatial plan focus on the development of toll road. The location around the national activity centres whereas located in the inner and suburbs of JMA proposed to become medium to high density development of built up areas for many functions such as residential, industrial and services (see Figure 4.3).

Table 4.2 Timeline on Policies Related to JMA Spatial Plan

Year	National Level	Province/Local Level
2007	Law 26/2007 Spatial Planning	-
2008	<ul style="list-style-type: none"> <li>• Government Regulation 26/2008 National Spatial Plan</li> <li>• Presidential Regulation 54/2008 JMA Spatial Plan</li> </ul>	Bogor Regency Spatial Plan
2009	<ul style="list-style-type: none"> <li>• Ministry of Public Works Regulation 11/2009 Guidelines for Process of Ministry Approval on Spatial Plan</li> <li>• Ministry of Public Works Regulation 15,16, and 17/2009 Guidance of Province, Regency and Municipal Spatial Plan Making</li> <li>• Ministry on Home Affair Regulation 50/2009 Guidance of Local Spatial Planning Coordination</li> </ul>	-
2010	Government Regulation 15/2015 Implementation of Spatial Planning	Jawa Barat Province Spatial Plan
2011	Ministry of Public Works Regulation 20/2011 Guidelines for formulation of Detailed Spatial Plan and Zoning Regulation.	<ul style="list-style-type: none"> <li>• Banten Province Spatial Plan</li> <li>• Bekasi City Spatial Plan</li> <li>• Bekasi Regency Spatial Plan</li> <li>• Bogor City Spatial Plan</li> <li>• Tangerang Regency Spatial Plan</li> <li>• Tangerang Selatan City Spatial Plan</li> </ul>
2012	<ul style="list-style-type: none"> <li>• Presidential Regulation 28/2012 Jawa and Bali Islands Spatial Plan</li> <li>• Ministry of Public Works Regulation No. 15/2012 on Guidelines for formulation of National Strategic Areas Spatial Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Jakarta Province Special Capital Region Spatial Plan</li> <li>• Tangerang City Spatial Plan</li> </ul>
2013	Government Regulation 8/2013 Spatial Plan's Level of Accuracy Map	-
2014	-	Jakarta City Detailed Spatial Plan and Zoning Regulation
2015	-	Depok City Spatial Plan

Source: Author, 2015

The creation of multi sub-centres in JMA is the effort of central government in dispersing the activities and reducing the burden of the core metropolitan areas. However, after almost a decade of implementing this spatial plan, the activities are still centred on core areas and the multi sub-centres have become the stage areas for the next JMA urban expansions. During the formulation, this spatial plan also does not consider the existing situation, thus some local government has difficulties in integrating their spatial plans with the JMA spatial plans (interviewee: Arief, Depok City; and Yulia, Tangerang Selatan City, 2016) which furthermore delayed the local government in legalizing their spatial plans. As JMA spatial plan did not give clear arrangement about limit of urbanise areas, the local government uses JMA spatial plans as justification to encourage the development of their urban area, especially in the areas which are transverse by toll road. The common reason of this situation is to accommodate Jakarta City built-up area (ibid).

Basically, JMA spatial plan should be used as guidance and adopted by local government spatial plan (for all general and detailed spatial plan). However, due to the dynamics of JMA, there was

a concern that JMA Spatial Plan is not up to date with latest development and newest regulation and with that reasons, the national government deem it as necessary to revise the JMA Spatial Plan (Ditjen Tata Ruang, 2013). Interview with Tangerang Selatan City revealed that at some point local government have to follow the JMA planning although in the reality those planning already obsolete, and because of this reason, local government felt that they deliberately have to create an improper spatial plan (Interviewee: Yulia, Tangerang Selatan City, 2016).

Regarding zoning regulation, JMA Spatial Plan also lacks general guidance for local spatial plan. JMA Spatial Plan only stated that zoning regulation will be regulated by local government, this is not coherent with other newest Indonesia's metropolitan spatial plans (Medan, Makassar and Denpasar) whereas they already have general guidance of zoning regulation (Ditjen Tata Ruang, 2013). All Interviewees in this research agreed that JMA spatial plan was unable to be used as source of zoning regulation due to absence of this arrangements in the spatial plan documents. Therefore it can be said that although there is an effort to create integrated spatial plan, however there is still missing several arrangements related to synchronization of the zoning regulation between JMA spatial plan and local detailed spatial plans.

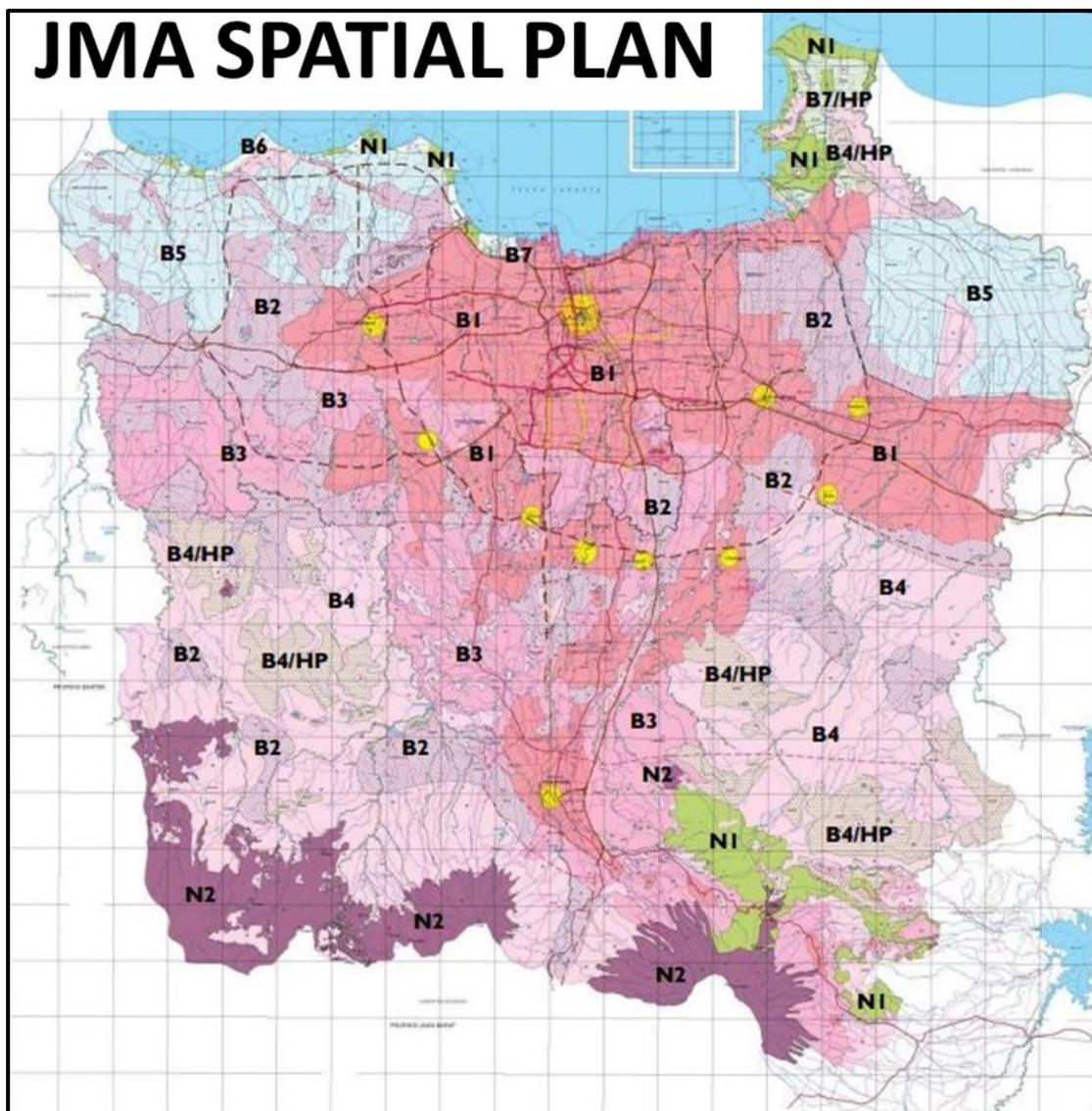


Figure 4.3 JMA Structure and Land Use Plan (Source: Perpres No. 54/2008)  
Notes: Classification on Land Use Plan see in Appendix 5

Indonesia's Spatial Planning Law also mandates that each spatial plan needs to involve multi stakeholders during all process, from the formulation, legalization, implementation and evaluation. Based on author experience in following local general spatial plan formulation and legalization process, public sectors involvement happened only by sub-district public hearing and local government level public-hearing, after that the involvement would be on sector consultation discussion. Several local government in JMA has cognition to put their legalized complete general spatial plan document in their official website (Jakarta City, Bogor City, Tangerang City, Bogor Regency) however the majority of local government still not utilize this powerful media to disseminate their spatial plan, therefore it still hard for public users to attain the information about planning several municipal/regency. For detailed spatial plan the situation is not better. By 2016, most of the local government already formulate the detailed spatial plans, however public users still have limited access to read and understand those plans. Despite some local government already use their website to disseminate their spatial plan, another problems that encountered by author is the quality of downloadable file. Most of the important downloadable file (map, graphics, and so forth) is in low resolution, therefore it's hard to get full information from those downloaded file. Authors found that only Jakarta City and Bogor City that seriously utilizing their website to disseminate their spatial plan.

Jakarta Metropolitan Area Spatial Planning which legalized since 2008 already gave designation for the land use, however as a statutory planning it did not give clear indication related to the urban areas containment, such as what is high, medium, and low density built-up areas. Several of the land use designation also based on administrative boundary without physical barriers which may become the source of the problems. Example of the problem is the designation of high density areas and low density areas between Depok-Jakarta City and between the sub-districts in the Tangerang City or different land use designation for medium density areas that adjacent to wetland agriculture areas in Bekasi and Tangerang Regencies (see Figure 4.3). Without making clear urban expansion boundary, fragmented local government will accepted it as an opportunities to develop the built-up areas on their own needs by using their own local spatial plans. This situation also ensure that JMA urban growth become more expanse and sprawling towards all direction from the JMA metropolitan core city.

#### **4.4 Spatial Development in Jakarta Metropolitan Area**

This part will discussed about spatial development in JMA. The historical of population growth and change on urban land use is used to give the ideas how JMA is developed which resulted in the current sprawled situation with the absence of integrated spatial plan.

Jakarta Metropolitan Area, which also called Jabodetabek an acronym which stands for Jakarta-Bogor-Depok-Tangerang-Bekasi, is the most populous metropolitan area in the Southeast Asia region. The Central Bureau of Statistics (*Badan Pusat Statistik/BPS*) reported that JMA is inhabited by around 28 million people by 2010, this number was growing 3.5 times than year in 1970. The dramatically increased of the population in JMA is due to its attractiveness for investment and migrants because of its better infrastructure, good accessibility to market, numbers of high skilled labour and close proximity to decision makers (Abidin, 2011). With its function as national capital, many major urban infrastructure development in Indonesia is prioritize in JMA such as busiest international airport (Soekarno Hatta International Airport), biggest port (Tanjung Priok Port), the longest interconnecting toll road in single metropolitan, first underground train based mass rapid transportation, biggest industrial areas, and so forth. It

was estimated that around IDR 382 trillion<sup>6</sup> of infrastructure investment cost in JMA until the year of 2025 (Perpres No. 11/2011). For metropolitan areas, JMA will receive the biggest national investment compared to other metropolitan areas such as Surabaya (IDR 13.4 trillion), Bandung (IDR 1.9 trillion) and Denpasar (IDR 21 trillion) (ibid).

As an economic centre, JMA holds many prominent functions. 85% of Indonesia financial decisions and around 60% of national import and export activities happened in Jakarta (Perpres No. 11/2011). Rustiadi (2007, in Firman, 2009) elucidated that JMA contributed almost a quarter of Indonesia's Gross Domestic Product (GDP), and it was still going on whereas between the years of 2012-2014, around 20% to 24% of Indonesia's GDP contributed by JMA. For JMA itself, almost 70% of its Gross Regional Domestic Product contributed by Jakarta City (see appendix 5). Learning from latest data of all local government budget, there were also wide gap of disparity on the budgeting capability of each local governments. Reviewing 2015 budget allocation, Jakarta City held 67.68% proportion of total government budget in JMA while the rest 32.32% spread to the others local government (see table 4.3). Due to this situation, it was no wonder Jakarta City become more powerful than the other local government (Sihite, 2012). Comparing to allocation per capita, Jakarta City boasted 4-5 times than others local government (see table 4.3). Almost 67% of Jakarta income came from their own locally generated revenue and only around 21% came from central government. The situation is reversed for other local government whereas they mostly depend on central government funds to support their budget (see Figure 6.1). This situation might resulted in power imbalance among the local governments and also enable central government to "dictate" a little bit to the local government. This number suggest that Jakarta City still being JMA economic centre and thus also for Indonesia (Firman, 2012).

Table 4.3 Local Government Budget Allocation 2015

Local Government	Total Budget Allocation (IDR)	% from JMA	Per Capita (IDR)
DKI Jakarta	63,650,105,000,000.00	67.68	6,317,433.91
Bekasi City	4,188,655,800,274.00	4.45	1,757,953.22
Bekasi Regency	4,356,924,347,613.00	4.63	1,395,243.58
Bogor City	2,299,205,976,052.00	2.44	1,030,168.85
Bogor Regency	5,491,983,648,000.00	5.84	1,395,243.58
Depok City	2,534,771,028,583.64	2.70	1,246,501.63
Tangerang City	3,838,435,826,042.64	4.08	1,919,319.64
Tangerang Selatan City	3,310,112,505,939.00	3.52	2,217,098.57
Tangerang Regency	4,372,254,830,601.00	4.65	1,339,220.46
<b>JMA</b>	<b>94,042,448,963,105.30</b>	<b>100.00</b>	<b>3,059,908.74</b>

Source: Author, 2016

The increase of the economic value of JMA also parallel with its population growth. In the year of 1980, JMA is inhabited by 11 million inhabitants and by 2010 JMA population multiplied to almost 28 million (see appendix 5). During the period of 1980-1990 the population growth of JMA

<sup>6</sup> Approximately around €30.56 billion with 2011 exchange rate at IDR 12500 per €1.

was 4.12%, decreased in the period of 1990-2000 to 2.53% due to the economic crises (Firman, 2009) and increased again to 3.7% in the period of 2000-2010 (see appendix 5). Jakarta City is still the most populous area in JMA, however shared on Jakarta City towards JMA population have decreased due to the scarce of land availability in Jakarta City (Firman, 2014). The need to live near national economic centre resulted into high population growth in the Jakarta City suburb and exurb area (Vioya, 2010). At the period of 1980-1990 the suburbanisation process mostly happened in southern part of JMA followed then by western part due to the development of the JMA ring road and its first toll road which connected Jakarta City to Bogor City (Silver, 2008). However during period 1990-2000 high population concentration was shared in eastern part of JMA, especially due to the completion of the Jakarta-Bandung toll road which transverse the eastern part of JMA. During the period of 2000-2010, along with recovery of economic crises JMA population growth to all three direction (see table 4.4).

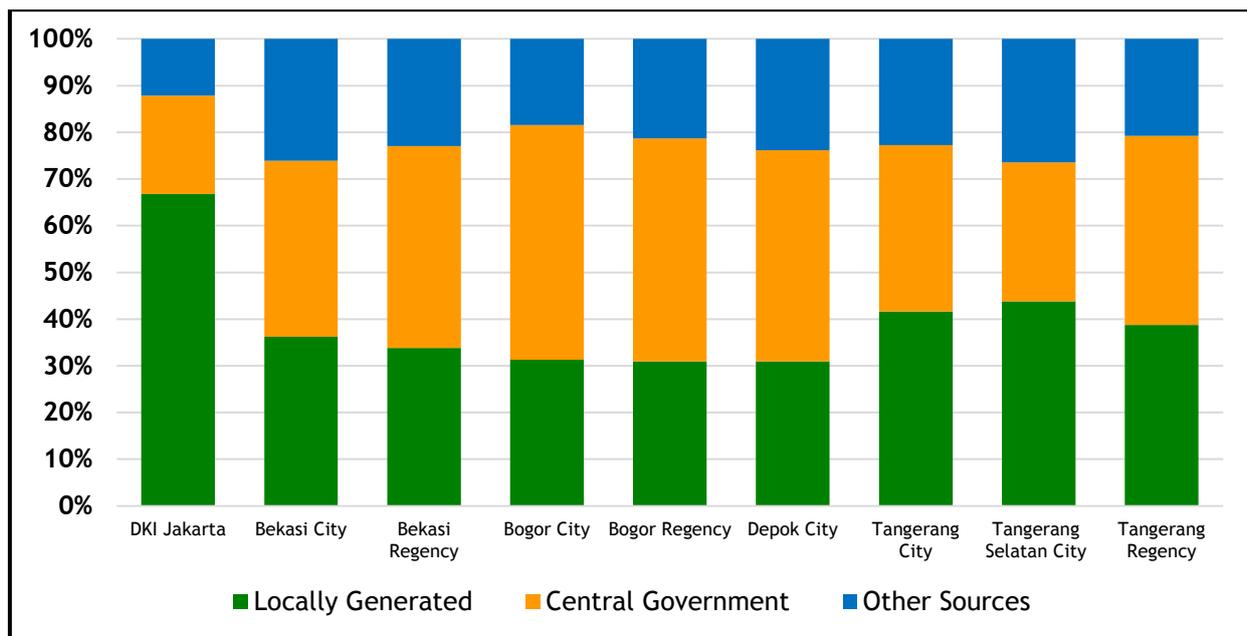


Figure 4.4 Distribution of Local Government Revenue (Source: Author, 2016)

Table 4.4 Spatial Direction of Jakarta Population Growth

Local Government	Shared on JMA Population (%)			
	1980	1990	2000	2010
Core Area (Jakarta City)	56.40	50.71	41.10	34.37
Western Side (Tangerang City, Tangerang Selatan City, and Tangerang Regency)	9.91	16.98	20.07	21.18
Eastern Side (Bekasi City and Bekasi Regency)	9.92	7.80	15.18	17.76
Southern Side (Depok City, Bogor City and Bogor Regency)	23.77	24.51	23.65	26.68
Jakarta Metropolitan Area	100.00	100.00	100.00	100.00

Source: Author, 2016

Based on population density, there were also increase on the number of sub-districts (*kecamatan*) with more than 100 people per hectare. By 2000, concentration of high density population mostly located in sub-district on central part of Jakarta, Bekasi, Bogor and Tangerang City. By 2010, high density population expanse towards most of all sub-district in Jakarta City and sub-district on

other municipals which located closely to Jakarta City (Salim, 2013). This show how during a decade JMA population increased and spread towards all direction from the core metropolitan which also decrease density in the core city.

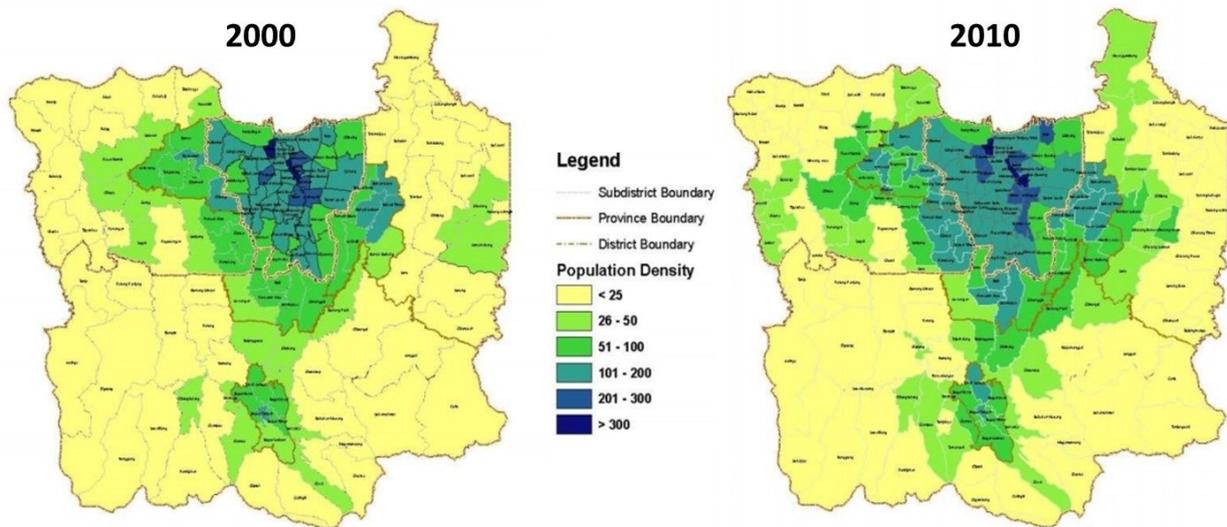


Figure 4.5 Change of Population Density in JMA (Source: Salim, 2013)

Development of economic activities and population in JMA also resulted into extensive conversion of land, especially from farmland to built-up areas and other non-agricultural function (Firman, 2012). With around 6,000 km<sup>2</sup> areas of land, many of JMA areas converted into built-up area in the last three decades. Using land cover analysis, Arifien (2012) found that there was dramatically an increase of built-up areas in JMA, which is from 8.9% by 1983 to 35.6% by 2009. By using land cover data and population growth, he concluded that every increase of 1000 person in JMA will also increase development of around 13 hectare built-up areas (ibid). Ditjen Tata Ruang (2013) projected by 2030 there were 52.88 million inhabitants in Jakarta Metropolitan Region whereas for JMA it was around 52 million<sup>7</sup>. Based on DJPR projection there will be 24 million more inhabitants that will live in JMA, therefore by using Arifien (2012) assumption there will be demand for 312.000 hectares of new built-up areas in JMA or almost half of existed JMA land areas. Without proper spatial management, by 2030 more than 80% of JMA land areas will become built-up areas.

Besides population growth, toll road development in JMA will also induce more land conversion, especially in suburbs and exurbs area. Northern and southern corridor is developed along with development of Jagorawi toll road, western part developed along with Serpong and Tangerang-Merak toll road, and eastern part developed along with Bekasi-Cikampek-Padalarang toll road (see next figure). The situation of the land conversion also exacerbated by violations of spatial plan due to pressure of market forces, political interest, and insufficient local government capability to deal with land conversion process, poor coordination among institutions, and absence of zoning regulation (Firman, 2012; Hidayat et al, 2013; Trimarmanti, 2014). The next phase of toll road development (marked with dotted line in next figure) will connected the outer ring of JMA exurbs

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<sup>7</sup> Jakarta Metropolitan Region concept is including Cianjur Regency as, whereas JMA concept in this research do not include Cianjur Regency.

especially on the western and eastern part (see figure 4.6), based on past experience and without better spatial plan implementation the next urban sprawl in JMA is definitely being happened again.

One of the main problems within JMA urban management is the different priorities among its actors. Transportation management in JMA is one example. Jakarta City now is heavily burdened by congestion due to the high private motorization by commuters, which is more than one million daily trips per day (JUTPI Study, 2012 cited in Putra, 2014). The effort of Jakarta City in integrating its public transportation by creating TransJakarta was not meet with same enthusiasm of other local government because there were none public transportation authority manage by local government on outside Jakarta City. Local government entrusted its regional public transportation to private companies (usually bus companies) and/or to state owned company (Indonesia Railway Company). Due to the limited choice of public transportation mode choice resulted most commuters using private vehicle for their daily trips toward Jakarta City.

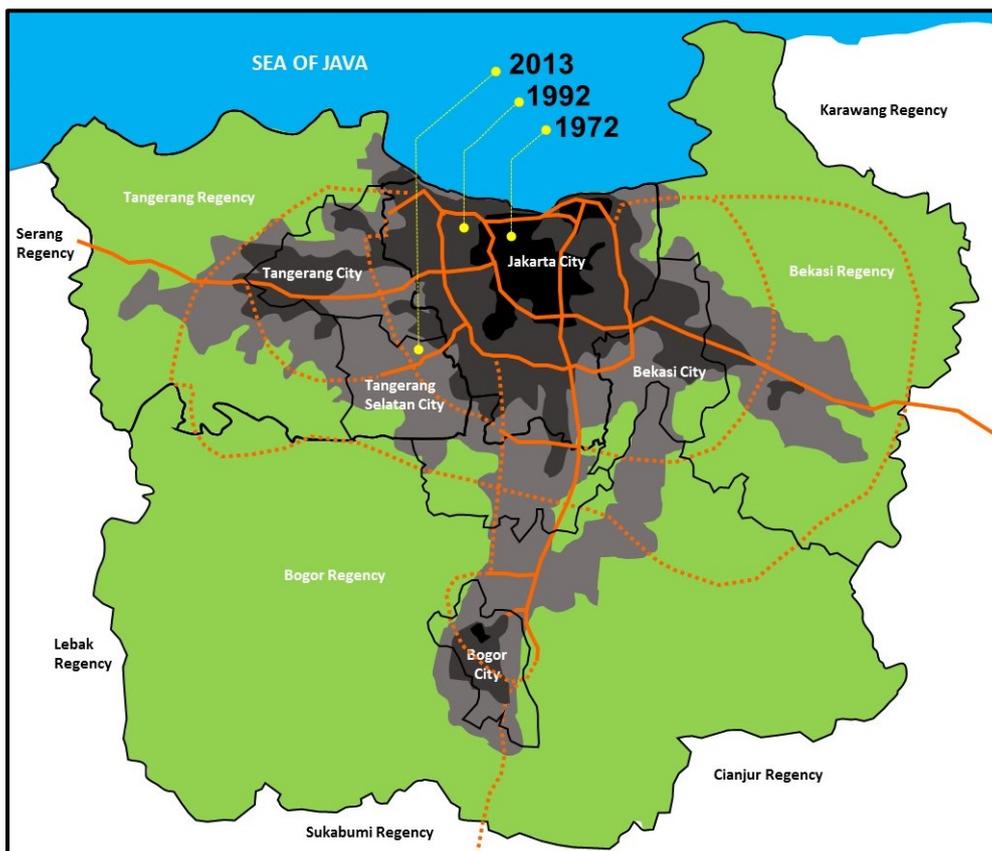


Figure 4.6 Illustration on JMA Spatial Development 1972-2013 (Source: Author, 2016)

Another example is flood management. Jakarta as downstream areas relies heavily for its riparian flood management to others upstream municipals or regencies to conserve their watershed areas. However, most local government outside Jakarta City do not put river conservation as their urgent priorities due to the budget limitation and river management authority. For budget allocation, most local government focus their spending on basic needs such as education or health. The other reason is river management in JMA comes under the responsibility of Ministry of Public Works, which resulted local government perceived major rivers conservation is central government responsibility not theirs. Those two examples showed that without unifying aspect to hold on, local government will always pursue its own priority. Without common goals, it will hard to create coordination or cooperation on spatial plan, therefore policy integration will become far to reach.

There are formal process to avoid this divergent priorities lock-in situation, which is through BKPRD, BKPRN, and BKSP discussion. However those forums consisted by only government representations and there are almost none of public representation therefore the discourse will bounce back between local governments and central government fragmented priorities (Interviewee: Anni, Jakarta City, 2016). It is also revealed that BKSP which aims as coordinating agency is only focus on infrastructure development and not on spatial planning and the connection between BKPRD and/or BKPRN with BKSP is non-existent (Interviewee: Yulia, Tangerang Selatan City; and Arief, Depok City, 2016). It is unfortunate whereas BKSP proposed as the main agency to integrating development policy in JMA (Firman, 2009; 2014) the BKSP itself do not have authority to deal with spatial plan formulation and/or integration.

#### 4.5 Conclusion

We have seen in that JMA experienced a rapid urbanisation in the past decades. High economic activities attract peoples to JMA, and then those peoples create more economic activities and this process is still going on. The circular between economic activities and human mobility resulted for the need of land to accommodate on both occurrences. In Jakarta, the need of land created sprawled situation which converted almost 27% of its farmland into built-up between the years 1983-2009. With the current rate of expansion in 2030 it was simulated that more than 80% of JMA land areas will become built-up areas. Based on the result of the simulation, JMA really needs to make sure its spatial plan able to face future development.

Based on description in the previous section, JMA has a several factors that related to its urban development management. First is about the hierarchical spatial planning system which allowed the promulgation of standardized spatial plan. Second is about cooperation culture in Indonesia society which enabled JMA actors to working together. Third, as national economic centre JMA has big resources on budget, this is a privilege that may not occurred in other regions. Fourth, due to the many local government related in the JMA may resulted in the different priorities among them especially in the Indonesia's decentralization system.

The case study indicated the availability of standardized guidance and willingness to cooperation which lead to inclusivity of spatial plans are supporting factors to manage urban growth. Utilizing both factors may enables JMA to integrate their spatial plan through the finding and agreeing the common visions. However JMA still not utilising these factors optimally and resulted in the fuzzy and fragmented development control among its local government.

JMA case study also indicated that there is budgeting and priorities factors that may inhibits their policy integration. As mentioned in the previous chapter not all local government has 'strong' budget allocation therefore most of them still trapped for basic infrastructure provision and have little allocation to integrating spatial plans. This situation exacerbated by different priorities of development, whereas Jakarta City aware of their lack of sustainability but limited by availability of land resource. On the other hand, local government with vast land availability more concern to pursue their economic growth. JMA needs to be aware on the existence of this factors thus able to exploit it by integrating their policies. However, for spatial plan aspect the system is still fragile, therefore JMA needs to learn from other metropolitan which already had a robust integrated planning system.



# CHAPTER 5

## COMPARATIVE CASES

### 5.1 Introduction

This chapter describes about selected comparison case studies as a source of lesson to a better urban growth management for JMA. As have been stated in chapter 3, there are two metropolitan areas that is selected as case studies which are Greater Portland-Vancouver Metropolitan Area in USA and Hong Kong Special Administrative Region in PRC. This chapter will describe both metropolitan areas on 3 aspects, first is about description of spatial planning system in the case study. Second part is about description of metropolitan development which mainly focuses on the population development and its connection with urban land use growth. The last part of each case study is about a policy lesson learned from each case which can be transferred to JMA case.

### 5.2 Portland-Vancouver Metropolitan Area

#### 5.2.1 Portland-Vancouver Metropolitan Area Spatial Planning System

The US planning system does not recognize national spatial planning system, the spatial planning have been given to the level of the State<sup>8</sup> (Schmidt and Buehler, 2007). The national government (federal government) only curtailed on oblique aspect such as: environmental regulation, housing grant, management of national owned lands, transportation infrastructure's investment, and technical assistances (ibid). As for Portland-Vancouver Metropolitan Area (PVMA) which is one of the metropolitan area located in north-western part of the United States, the spatial planning become the responsibility for their own states.

Basically, Portland-Vancouver Metropolitan Area consisted of two different state's spatial planning systems which are Oregon State spatial planning system and Washington State planning system. The Oregon State spatial planning came first in 1973 with Oregon Land Use Act while the Washington State spatial planning came later in 1991 with Growth Management Act (Kline et al, 2014). After the state level, there are county and/or city level of spatial planning which needs to be in accordance with the state level.

Counties and city in Portland Metro mostly created their first comprehensive plan on early 1980's. These comprehensive plans follow one of the most important goal in Oregon Land Use Act which is required all counties and cities in Oregon State to create their own urban growth boundaries in order to accommodate 20 years period of growth. In 1979, the Oregon State created Portland Metro for coordination of spatial planning and management through the functional plans that address regional issues in the Portland Metropolitan Areas. By creating Portland Metro, Oregon show their serious intentions in integrating urban development in Portland Metropolitan Areas.

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<sup>8</sup> State in US is may also considered as province in many other countries.

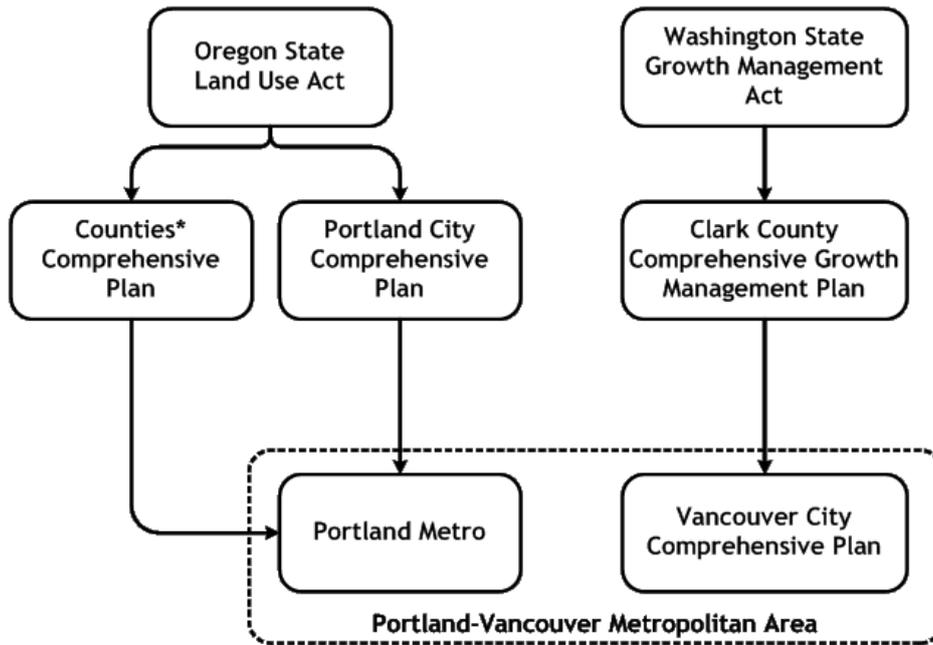


Figure 5.1 Portland-Vancouver Metropolitan Area Spatial Planning System (Source: Author, 2016)  
 Notes: \*Multnomah, Clackamas and Washington Counties

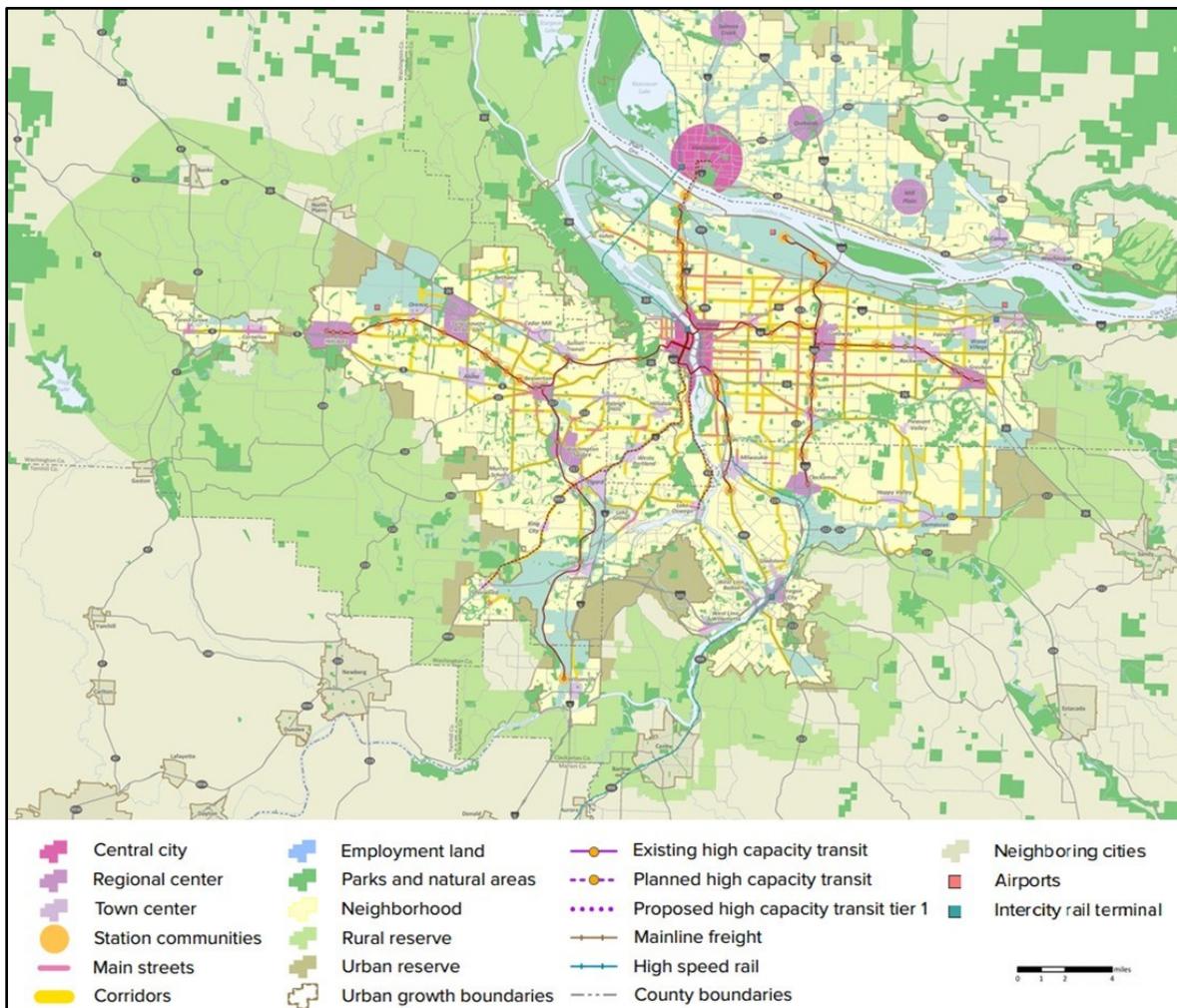


Figure 5.2 Portland Metro 2040 Growth Concept  
 (Source: <http://www.oregonmetro.gov/2040-growth-concept>)

Meanwhile in Washington State, most of its spatial planning just for local needs. Learning from Oregon effort to manage urban growth, in 1991 Washington State with its Growth Management Act also mandates all of its counties to establish their urban growth boundaries. Nevertheless, Washington State is still relying on decentralize system which left for local government in Washington State to promulgate their own comprehensive plans (Settle and Gavigan, 1993 cited in Kline et al, 2014). Clark County first developed their comprehensive plan in 1979, way ahead before the Washington State in order to deal with their urban growth. Though Clark County did not create the urban growth boundary, its comprehensive plan already mentioned the allocation of built-up areas and farmland areas (Clark County, 2010). In more detailed, Vancouver City development also plans to manage its urban growth on their urban growth area (UGA) almost similar as its counterparts in Oregon. By creating UGA earlier than its own state, Clark County showed some initiatives to learn from Oregon and shared the same interest with Oregon to manage and maintain urban growth.

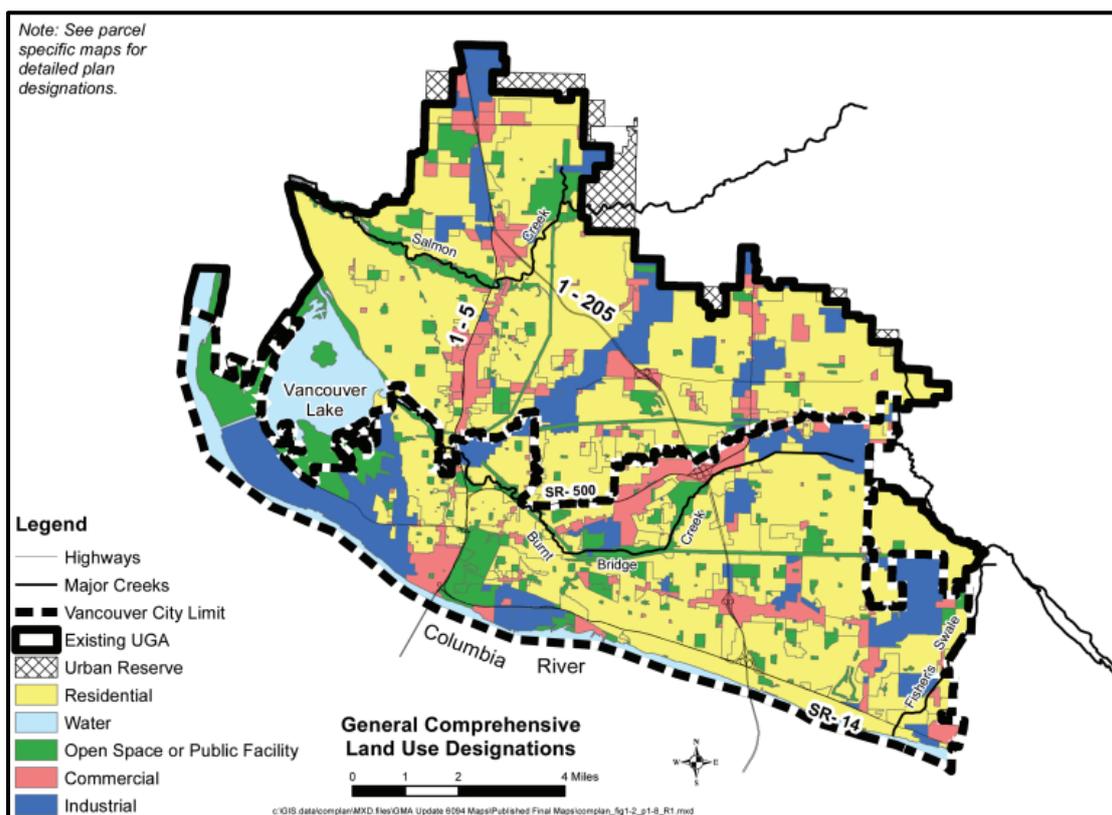


Figure 5.3 Vancouver City Growth Concept (Source: City of Vancouver WA, 2011)

The key planning concept of both states is by using Urban Growth Boundary (UGB) to manage their urban growth. UGB is basically a zoning regulation supported by land purchased and conservation easements measure with aim to maintain high density built up areas inside the boundary and use areas outside the boundary as farmland or rural density areas. Although UGB is statutory plan, nevertheless it's positive aspect is its flexibility to periodically expand the boundaries when the need of growth arise.

The responsibility for managing UGB in Oregon State is under legal authority on the Metro Portland (Kline, 2014). As a coordinating organization, there are three duties related to land use: developing areas inside the UGB, restrict development outside UGB, and create flexibility of the UGB borderline (Daniels, 1999 cited in Jun, 2004). To ensure it openness and public participation,

Portland Metro organises a body which is called the Metro Council comprises of elected officials as representation of six individual districts (Seltzer, 2008; Kline, 2014). For Washington State there is no metro authority body like in the Oregon State. Responsibility for managing metro comes to the city of Vancouver which following guidance from Clark County comprehensive plans. To my knowledge there were no coordinating agency between Oregon and Washington States related to Portland-Vancouver Metropolitan Areas spatial plan.

Looking at Portland-Vancouver Metropolitan Area spatial planning system, there are similarities and differences with JMA. The most visible aspect is JMA and Portland-Vancouver consist of different autonomous local government which have own agendas and budgeting related to urban growth management. Both metropolitan also created an agency to support the metropolitan governance. The other similarity is both metropolitans also created a common vision for urban development supported by multi-tiers spatial plans. However, those similarities only at the macro level, looking at meso and micro level both metropolitans had different kind of mechanism with implementation of their common vision, multi-tiers spatial plan system and also institutional governance whereas JMA is more to the hierarchical cooperation and top-down system while Portland-Vancouver is more to the horizontal coordination.

### 5.2.2 Portland-Vancouver Metropolitan Area Development

Portland-Vancouver Metropolitan Area located in States of Washington and Oregon and consisted from four counties (Multnomah, Clackamas, Washington, and Clark). With total area 9,573 km<sup>2</sup> and inhabited by 2.1 million in the year of 2010 makes Portland-Vancouver Metropolitan Area as one of largest metropolitan areas in north-western part of the US (US Census Bureau, n.d; Greater Portland, 2011; Kline et al, 2014). Strategically located in the western coast of USA and have direct access to Pacific Ocean, makes Portland-Vancouver Metropolitan Area become one of the biggest exporting region in the USA and one of economically top metropolitan (Florida, 2010; Greater Portland, 2011; Greater Portland Pulse, 2015).

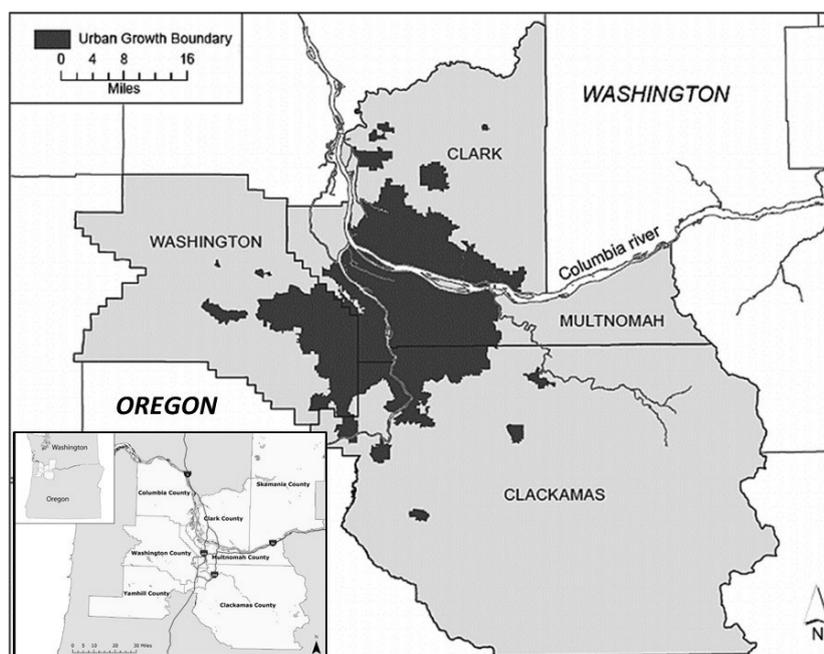


Figure 5.4 Portland-Vancouver Metropolitan Area  
(Source: Klein et al, 2014; [www.portlandweird.weebly.com](http://www.portlandweird.weebly.com))

By 1980, most of the population lives in the Oregon part of the metropolitan, especially in the Multnomah and Washington counties, however by 2010 percentage of inhabitants in Clark and Washington counties were doubled (see Appendix 7). Increase population then followed by change of the land use. Kline et al (2014) elucidated between 1974-2005 periods, the built up areas increased about 10% of total Portland-Vancouver Metropolitan Area land area. The ability from Portland-Vancouver Metropolitan Area to manage its urban growth due to their urban development control tools which called urban growth boundary (Jun, 2004; Kline, 2014; Portland Metro Authority, 2015), and Portland-Vancouver Metropolitan Area urban growth management become one of metropolitan success story in managing urban growth (Schmidt and Buehrer, 2007).

Despite its successfulness, there were also some drawbacks of UGB implementation in Portland-Vancouver Metropolitan Area. Jun (2004) elucidated that although UGB encourage compact development it did not succeeded in reducing motorization in the areas. Later he also stated that Clark County in Washington State became ideal place for urban expanses due to the different government and late adaptation of UGB by Washington State government. Figure 5.5 showed development in Portland-Vancouver Metropolitan Area between the years 1980-2000.

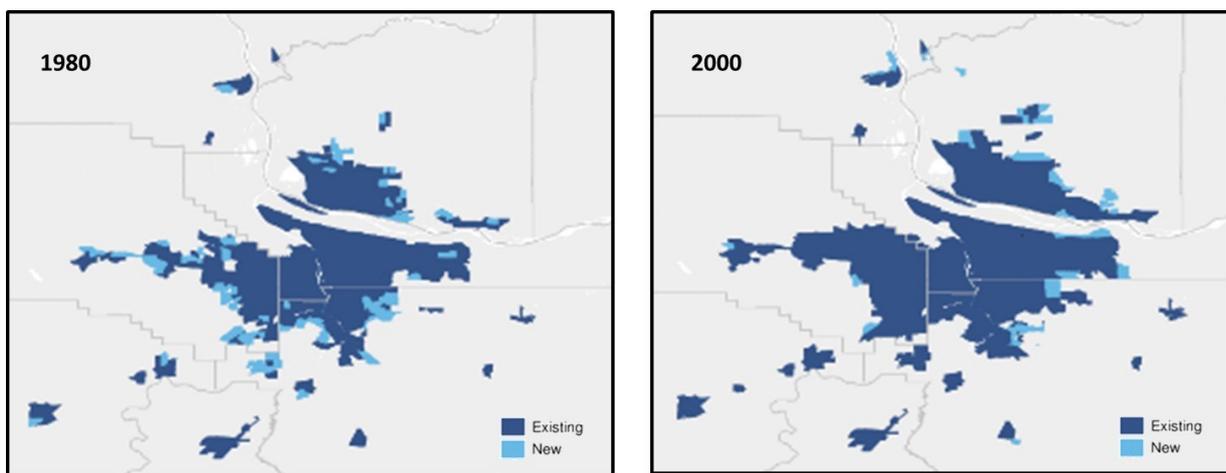


Figure 5.5 Dynamics of Portland-Vancouver Metropolitan Area Urban Expansion  
(Source: <https://www.buildzoom.com/blog/cities-expansion-slowing#top40maps>)

As the metropolitan areas become more developed, there are several concerns about its sustainability and mainly on congestion and housing supply. Jun (2004) stated that increased development inside UGB areas resulted increasing of congestion and travel times which caused by population growth, household activities and bottleneck in the Columbia River crossing that connecting Clark County with Portland Metropolitan Area. Aware of the congestion, Metro Council formulate regional transportation plan (Margerum et al, 2011) which include the creation public mass transport system that combining bus, light rail train and commuter train services under the organizing body of Tri-County Metropolitan District of Oregon/TriMet (TriMet, 2010). Oregon side of transportation system also connected with Washington side transportation system. Realizing that public transportation system should be a continuous system, Clark County also developing its owned mass public transportation which called Clark County Public Transportation Benefit Area Corporation/C-Tran. Coordination among both public transportation companies although comes with imperfect and hard discussion at the end enables Portland-Vancouver Metropolitan Areas inhabitants to continuously using and changing between different transportation services at designated transferred place (TriMet, 2015). Began by coordination on public transportation system, both states are able to integrate their public transportation policy which have great impact in supporting their urban growth control.

Limited availability of vacant land due to the UGB implementation also resulted in the competition of housing development which made Portland Metropolitan Area as one of the least affordable places for housing in US (Staley and Mildner, 1999). Scarcity of vacant lots resulted dramatic difference of price for land inside the UGB than outside the UGB (Cox, 2011a), however Phillips and Goldstein (2000) argued that the increase was not solely by UGB but also from market sector's speculation. Still the increase of housing price burdened the low income family in the Portland-Vancouver Metropolitan Area. Dealing with this situation, government in Portland-Vancouver Metropolitan Area employs several strategies such as allowing more than one family living in the single family plot, giving subsidize for housing own or rent, and other public housing initiatives which supported by federal government (Metro, 2016).

Portland-Vancouver Metropolitan Area urban growth management is good example of implementing a statutory planning system. Despite the different States, Portland-Vancouver is able to come up with single vision which is limiting their urban expansion. Both Oregon and Washington States utilize zoning regulation as main development control tools in implementing their vision. However they also still flexible in their zoning regulation when met with locked-in situation. Counties or cities may have different kinds of zoning regulation, however state government have important roles to make sure that those zoning regulation still in accordance with states vision. By integrating state policy to the local policy, Portland-Vancouver succeeded to limiting their urban growth. Nevertheless, strict zoning also come with its difficulties. Limited availability of land resulted compact development thus increasing movement inside urban boundary. Scarce of vacant land also affected housing supply in Portland-Vancouver either its numbers and/or its prices. Dealing with negative effect of growth boundary, Portland-Vancouver developed integrated public transportation and amended their zoning regulation inside the urban boundary.

### **5.3 Hong Kong Special Administrative Region**

#### **5.3.1 Hong Kong Special Administrative Region Planning System**

Hong Kong which officially known as Hong Kong Special Administrative Region (HKSAR) of the People's Republic of China (PRC) is one of two Special Administrative Regions in China and located on the south-eastern part of the PRC. Under 2005 Town Planning Ordinance, Hong Kong has two tiers system of planning, consisted of Territorial Development Strategy and District Plan (UrbanHK, 2016). The Territorial Development Strategy (TDS) is a long term planning strategy to connect future development with economic growth and infrastructure provision in order to achieved government policy on spatial aspect. The current TDS known as HK2030, promulgated in 2007, it is the sixth version since its first formulation in 1970, and HK2030 have vision of Hong Kong to become one of the world cosmopolitan city (HK Planning Department, 2015). While for districts they use statutory plans and departmental plans (Government of Hong Kong, 2016). Statutory plans consisted of Outline Zoning Plan and Development Permission Area while departmental plans consisted of Outline Development Plans and Layout Plans.

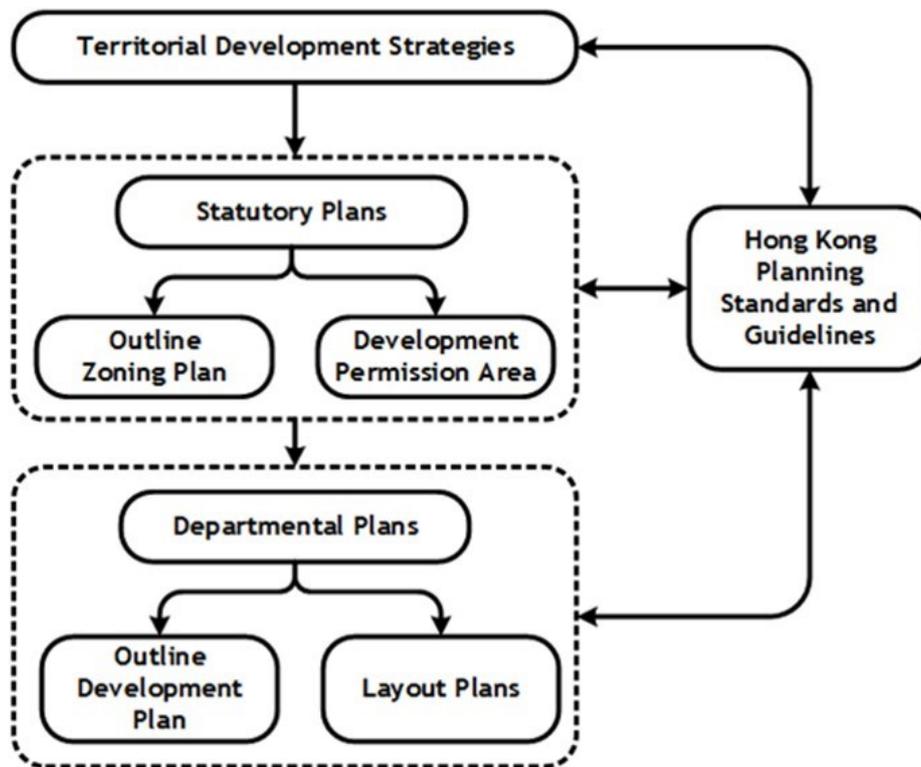


Figure 5.6 Hong Kong Spatial Planning System (Source: Author, 2016)

Table 5.1 District Planning in HKSAR

Plans		Remarks
Statutory Plan	Outline Zoning Plan	Displays roads, land use zones, and development borders for designated uses (residential, commercial, industrial government, and open spaces or green belts)
	Development Permission Area	<ul style="list-style-type: none"> <li>• Giving initial guidance and control over planning in new areas as an interim planning until an Outline Zoning Plan is ready</li> <li>• Effective for 3 years</li> </ul>
Departmental Plan	Outline Development Plan	<ul style="list-style-type: none"> <li>• Provide more detailed planning such as the boundaries of a prepared site or the specific placements of access points.</li> </ul>
	Layout Plan	<ul style="list-style-type: none"> <li>• The planning process incorporated involvement of the public through exhibitions, forums and workshops</li> </ul>

Source: Government of Hong Kong, 2016

Hong Kong ideas of spatial planning are by dispersing its city centre and created multi-centres which can meet several requisites, such as balancing residential areas provision with infrastructure, employment and other needs of developments, creating higher linkage with Mainland of PRC, and creating higher segregation of antipodal spatial uses (HK Planning Department, 2015). The connection with Mainland also big consideration for Hong Kong development due to the Mainland is the biggest source of Hong Kong workforce. Creating multi-centres also ease the burden of core areas which now focused on Kowloon and Island of Hong Kong areas, and distributed it activity centres on the other areas of Hong Kong. With this consideration, Hong Kong concept development will divide Hong Kong into four area/axes, which are:

- Metro Development Core, located in the old centre of Hong Kong (Kowloon and northern part of Hong Kong Island). Its function are intensive commercial/business zones and housing for urban-style living;
- Central Development Axis, connected Metro Core with northern part of Hong Kong SAR. Its function are community-type housing and education/knowledge-building facilities;
- Southern Development Axis, connected Metro Core with western part of Hong Kong SAR (Lantau Island.) Its function are logistics and major tourism facilities; and
- Northern Development Axis, located in northern part of Hong Kong SAR which also border area with Shenzhen Metropolitan Areas. Its function are non-intensive technology and commercial zones and other uses that capitalise on the strategic advantage of the border location.

For area outside those four areas/axes, it was proposed to develop as conservation areas and/or low density development (ibid). To support this general strategies, Hong Kong then divided into 7 district planning offices which have responsibility to enforce the statutory and departmental plans (UrbanHK, 2016). With its spatial plan, Hong Kong is trying to managing its urban development by using HK2030 as the foundation, then backed by statutory planning in order to accomplished sustainable compact city with high densities (Teriman, 2008).

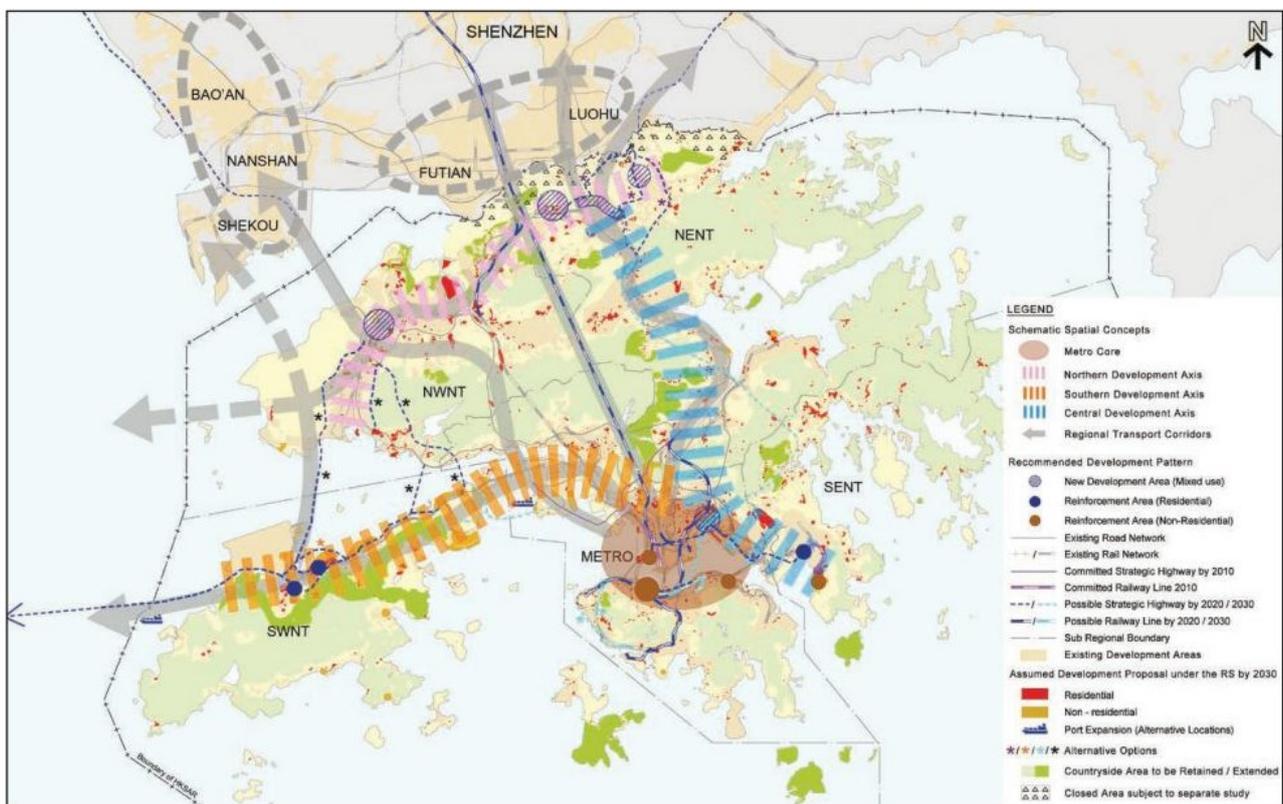


Figure 5.7 Hong Kong 2030 Concept Development (Source: HK Planning Department, 2015)

Based on Hong Kong's spatial planning system, there are similarities and differences with JMA. The most visible aspect is JMA and Hong Kong have the same model of hierarchical planning; where higher level tier spatial plan/guidance must be adopted by lower tier spatial plan. Both metropolitan also primary economic centre in their country which attract more people come to that resulted the high needs of infrastructure provision to support mobility and accommodation. JMA and Hong Kong at macro level have similarity in creating the metropolitan vision, however

unified government structure in Hong Kong is able to provide better coordination and integration for spatial plans than JMA decentralized system. For spatial plans, there is a similarity in using polycentric development as their metropolitan urban structure.

There are also dissimilarity especially related to their spatial plan implementation. While JMA do not have constraints developable land areas, development in JMA is dispersed towards all direction and unsupported by efficient public transportation system thus the sprawled is happened in JMA. Meanwhile, Hong Kong due to its physical landscape able to wisely develop its area. Hong Kong utilize zoning regulation to make sure the conservation area (which around 80% of Hong Kong land areas) is protected, and efficiently developed its built up area through vertical based development. As a result, Hong Kong able to create a compact and high density metropolitan area. Hong Kong metropolitan centres also connected with efficient mass public transportation that enables Hong Kong to limits its metropolitan centres expansion.

### 5.3.2 Hong Kong Special Administrative Region Area Development

Hong Kong SAR is one of two Special Administrative Regions in China which ruled “One Country Two System<sup>9</sup>” policy. Hong Kong consisted of three regions namely Hong Kong Island, Kowloon, and New Territories which then divided into 18 districts. With its 1,104 km<sup>2</sup> of land areas, Hong Kong only able to developed around 20% of its land due to its geographical constraints (Teriman, 2009). Nevertheless Hong Kong have big role in economic activity, not just for China but for the world whereas (Florida, 2015; A.T. Kearney, 2016).

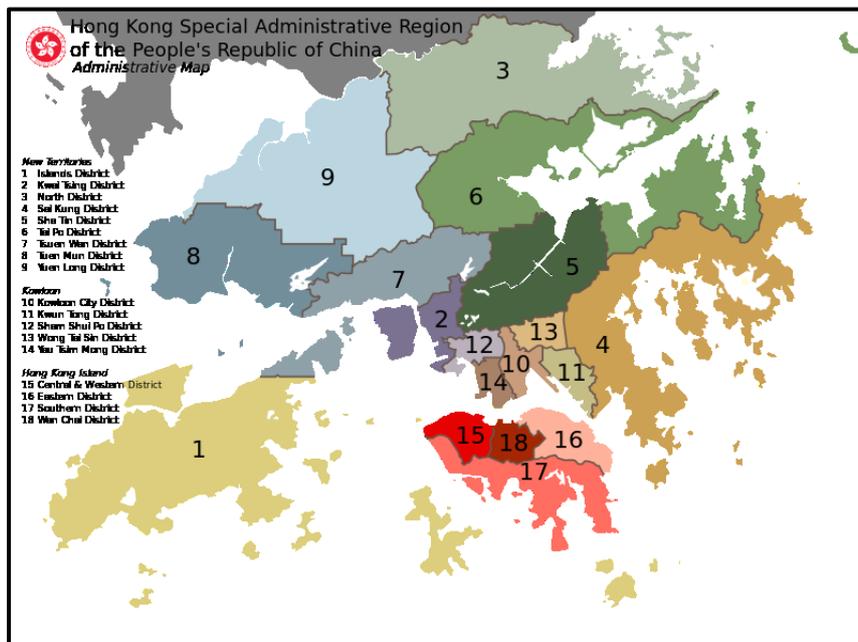


Figure 5.8 Map of Hong Kong Special Area Region Administrative  
(Source: [https://commons.wikimedia.org/wiki/File:Map\\_of\\_Hong\\_Kong\\_18\\_Districts\\_zh.svg](https://commons.wikimedia.org/wiki/File:Map_of_Hong_Kong_18_Districts_zh.svg))

<sup>9</sup> Main ideas of the "one country, two systems" policy are while Hong Kong government is under PRC government however Hong Kong permitted to maintain its capitalist system while the PRC using socialist system. This policy aims to achieve peaceful reunification and maintain stability and prosperity between the PRC as motherland and Hong Kong as the new protectorate regions.

Dramatic economic growth attracts peoples to come to Hong Kong which doubled its population from 3.96 million in 1970 to 7.19 million in 2010 and all of them lived in urban areas (UN-DESA, 2015). With only 20% of developable areas, Hong Kong density is around 6,690 person per square kilometers and the core centre reached 57,250 people per square kilometers (Government of Hong Kong, 2015), making Hong Kong as one of the densest metropolitan in the world. In the last quarter century, most inhabitants lived in the New Territories Region (HK Census and Statistics, 2016) and the number is still increasing to the next decade (HK Planning Department, 2015a). Kowloon is still the densest region whereas with only 4.3% of the areas, Kowloon inhabited by 30.22% of the population (see Appendix 8). This population concentration on Kowloon happened especially due to the supporting topographical factors of this area as flattened areas and by others pull factors such as centre of economic activity, urban infrastructure availability, and concentration of land reclamation project in this relatively small areas (CEDD, 2009). The reclaimed area in the whole Hong Kong is able to gain 6% more of onshore areas for Hong Kong development to accommodate 20% of population’s housing (Ibid).

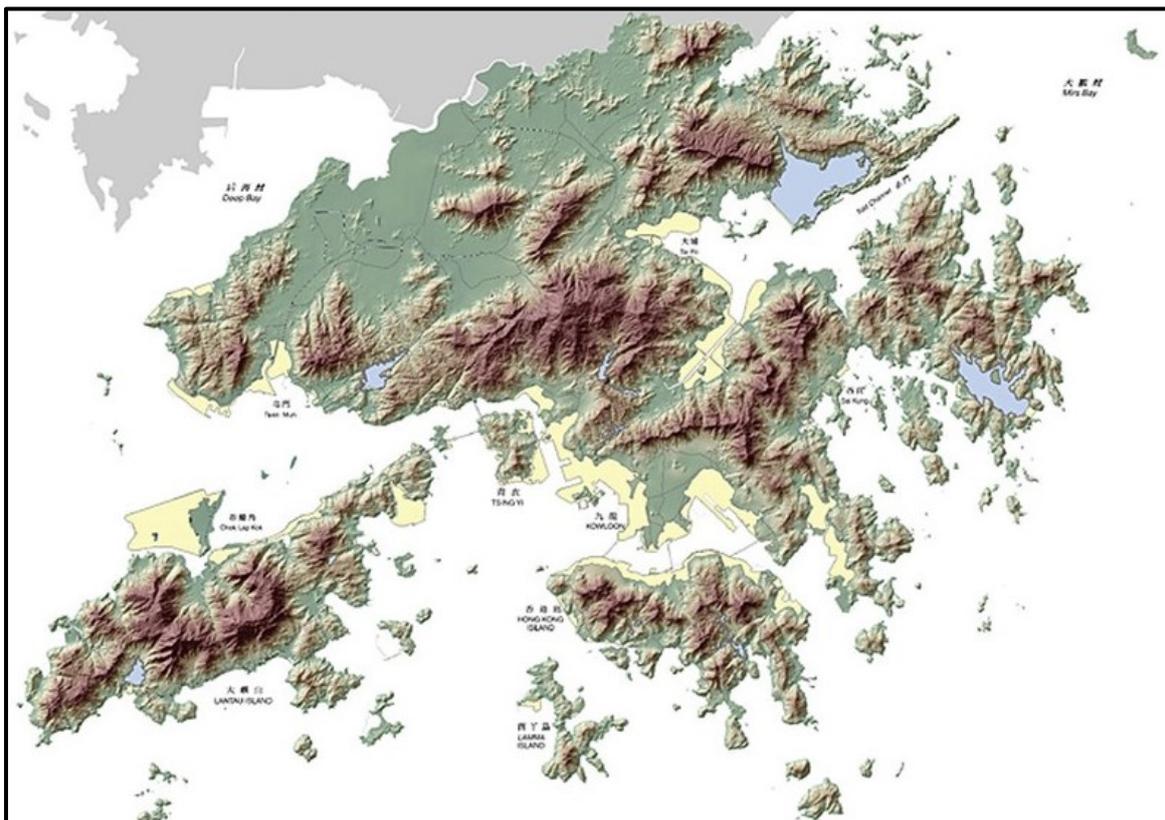


Figure 5.9 Hong Kong Topographic Situation and Reclamation Areas (Source: CEDD, 2009)

Change in the number of population also had impact on the land utilization in Hong Kong. The dramatic change of land utilization from non-built up to built-up areas happened between the years 1996-2000, especially after the change of Hong Kong “ownership” from United Kingdom to PRC. With the addition of around 400 thousands inhabitants resulted in the decreasing of almost 5% of total non-built up areas in Hong Kong. Nevertheless non-built up areas is still dominated Hong Kong land utilization whereas by 2014 there were around 76% (HK Planning Department, 2015b). The creation and enforcement statutory plans which protected the hilly areas around Hong Kong are the main reason behind this situation, combined with the development of compact city in Hong Kong built up areas (Teriman, 2008).

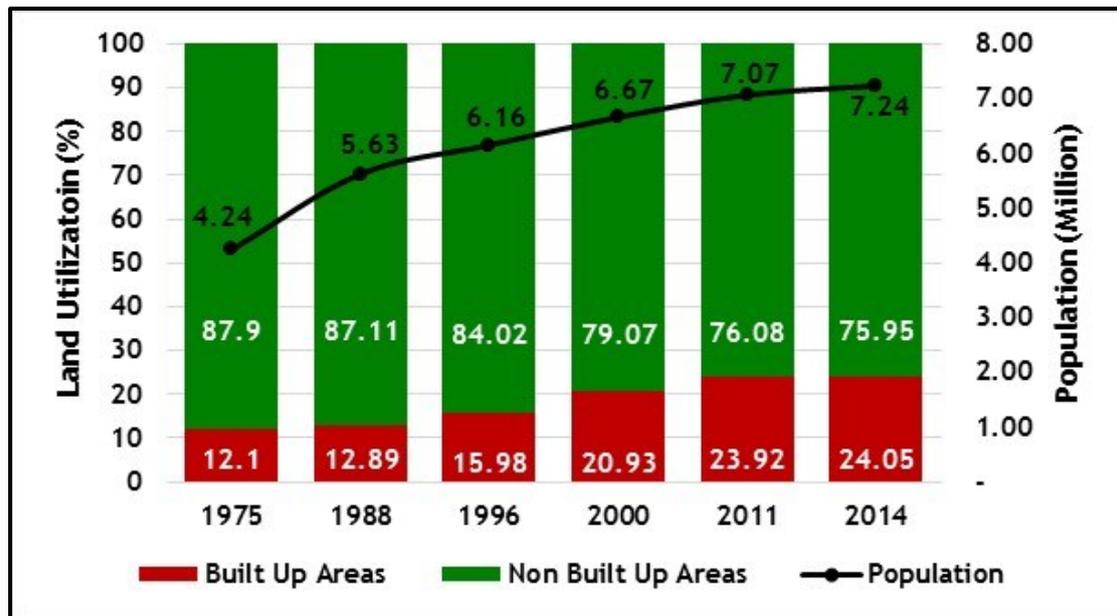


Figure 5.10 Hong Kong Built Up Areas Development (Source: Sudianto, 2008; HK Planning Department, 2001; HK Planning Department, 2015b; World Bank, 2016)

#### 5.4 Conclusion: Lesson Learned of Urban Growth Management

Looking from Portland-Vancouver Metropolitan Area and Hong Kong Special Administrative Region, there is similarity in how they manage their urban growth. By using statutory planning, both metropolitan employed zoning regulation tools to control their spatial development. Both metropolitans have strong commitment to protecting non-built up designated areas, whereas Portland-Vancouver Metropolitan Area using their Urban Growth Boundary and Hong Kong Special Administrative Region using designated conservation areas. In order to increase sustainability of metropolitan areas, both metropolitans chose compact city development as their main strategy. By using compact city development, both city able to efficiently manage their designated built-up area.

In order to make sure their urban growth control is worked, Portland-Vancouver and Hong Kong employs zoning regulation as their main development control tools. Not just employ, both metropolitan also synchronise their zoning regulation though each metropolitan has different methods. For Hong Kong, their unified system facilitate synchronisation of zoning regulation by using hierarchical spatial plan that combined with standardized arrangements. By doing this Hong Kong is able to make sure that their multi urban centres development following the same procedure and standard. With the standardized zoning regulation, they also able to avert encroachment in the protected areas. As for Portland, they have different situation. With decentralization system, all counties and cities in Portland-Vancouver has their own zoning regulation. Nevertheless single aims to contain urban areas expansion are able to bringing them together to synchronise their zoning regulation. Despite different detail on arrangements, they follows their states guidance which strictly limited their urban areas and left the farmland areas undeveloped until further amend is necessary.

Another point of view is both metropolitans utilize their statutory planning in the long run and avoided of digressing from the original plan through consistent implementation and monitoring combined with periodically evaluation. Oregon State started their statutory planning since 1974

then followed by Clark County, Washington in 1979 (the whole Washington State takes longer time to follow Clark County). Since late 70's, Portland-Vancouver consequently use this zoning system, therefore in almost three decades 'only' 6% of their total area converted from farmland to urban built-up areas. Hong Kong story also almost the same. They officially started using statutory planning in 1991, and with their strong willed effort they still have almost 80% of their areas as non-built-up areas. Both facts showed that to accept good result on the enactment of strict zoning regulation needs long time frame and consistency from involved actors.

Related to JMA situation, there are specific lesson learned that can be taken from Portland-Vancouver experiences. They are:

- First, JMA must realise that different local government does not mean they cannot learn from each other's. The process may take a long time, nevertheless in the end local government able to come up with their own version of urban growth containment.
- Second, realizing the common goals which is contained urban growth will enable JMA to adopt similar system of urban development control despite there is different kinds of zoning regulations arrangements which used by each local government.
- Third, in order to develop compact city development, JMA need to provide integrated public mass transportation and other arrangements to divert private motorization.
- Fourth, Jakarta City as the core metropolitan must have willingness to embroil other local government spatial plan concept despite Jakarta City excellence in budgeting.
- Fifth, the needs to create of coordinating agency on the based on inclusiveness. This organization needs to include multi stakeholders, not merely just government representatives or appointees.

From Hong Kong experiences, lesson learned that can be taken by Jakarta are:

- First, while JMA do not have limited developable land like Hong Kong, however focuses on vertical development may enables JMA to efficiently use their available land areas and offers chance in conserve JMA non-built up areas.
- Second, JMA needs to realise that high population growth accompanied with high economic activities do not justify to encroaching the protected or farmland areas.
- Third, as national strategic area JMA need to maximize its privilege to exert their own spatial plan although it did not means they completely cut away central government guidance.
- Fourth, JMA needs to utilize its hierarchical and standardized spatial plan as a guidance to integrate fragmented and diverse zoning regulation.
- Fifth, JMA needs to learn how Hong Kong development of new metropolitan centre always consider the carrying capacity and outer regional centre, not just focused on existed activity centres.

# CHAPTER 6

## INTEGRATING SPATIAL PLAN FOR URBAN GROWTH MANAGEMENT

### 6.1 Introduction

This chapter will combine results from JMA case study analysis with Portland-Vancouver and Hong Kong analysis. This combination intended to get possibilities and strategies on how to synchronising zoning regulation as an effort to achieved JMA's spatial plan integration JMA. This chapter consisted two parts. The first part tries to digest the results of comparison cases study on urban growth management and highlights some of its supporting element. This part also includes the analysis of feasibility for transferring what have been learnt from the case study into JMA context. The second part is about how to utilize the facilitators that have been recognized and at the same time to overcome the potential barriers in crafting strategies for policy integration.

### 6.2 Learning from Other Metropolitan Areas

Spaans and Louw (2009) state that there are shared of ideologies or philosophies among planners despite they live in different cities or countries. This statement serves as a foundation to this research about the importance to learn from a different system that exhibits similar characteristics in one way or the other. Metropolitan areas may have different planning system, especially in managing urban sprawl. Nevertheless shared ideas and objectives become the main driven from different system to learning among each other's. Portland-Vancouver Metropolitan Area and HKSAR urban development management are proven to be well exercised from which lesson can be drawn to improve JMA urban growth management. It is important to note that understanding about the planning system adopted by each metropolitan area under study is the key to ensure the effectiveness of lesson drawing that can be applied for the improvement of JMA urban growth management. For that purpose, the next table offers some brief descriptions and comparison of the three metropolitan areas.

Table 6.1 Characteristics of Metropolitan Areas

Characteristics	JMA	Portland-Vancouver	Hong Kong
Country	Indonesia	USA	PRC
Population			
- 1980	11,532,000	1,341,491	5,063,000
- 2010	27,954,000	2,226,009	7,204,000
Avg. Population Growth	4.75% per years	2.19% per years	1.41% per years
Land Area (km <sup>2</sup> )	6,027	9,573	1,100
Administrative Government	3 Provinces, 8 local government	2 states, 4 counties	1 administrative region, 18 Districts
Planning Level	4 tiers	3 tiers	2 tiers
Planning System			

Characteristics	JMA	Portland-Vancouver	Hong Kong
- National Plan	Statutory Plan	--	--
- Regional Plan	Statutory Plan	Guidance	Strategic Plan
- Metropolitan Plan	Statutory Plan	Strategic Plan	--
- Local Plan	Statutory Plan	Statutory	Statutory Plan
Built-up area	2,145 km <sup>2</sup> /35.6% (2009)	1,560.5 km <sup>2</sup> /16% (2005)	264.55 km <sup>2</sup> /24.05% (2011)
Built-up area expansion	26,70% (1983-2009)	6,00% (1974-2005)	11,03% (1988-2011)
Officially Implementing Statutory Plan	2007	1974	1991
Urban Sprawl	Problematic	Controlled	Controlled

Source: Author, 2016

### 6.2.1 Spatial Planning Integration and Administrative Government Fragmentation

Jakarta, Portland-Vancouver, and Hong Kong metropolitan areas due to the different political system had different level of tiers in governing and planning. In terms of administrative government, Jakarta has similar situation with Portland-Vancouver of which both consist of several local governments, whereas Hong Kong is composed by single administrative metropolitan government. In many experiences, metropolitan areas with multiple administrative governments may result in fragmented institutional landscapes, whereas individual administrative government that formed the metropolitan areas may have its own priorities on their urban development and management (Sellers and Martinot, 2009). In terms of spatial planning system, Jakarta has the most hierarchical spatial plan tiers than the others. Jakarta has national-province-metropolitan-local spatial plan that their accordance needs to be maintained on to the others, especially at the lowest tier. Due to its function as national capital, all of those spatial plan should be taken into account in the formulation of zoning regulation. One can imagine the complexity and messiness in formulating zoning regulation. In contrast, Hong Kong zoning regulation is much easier to formulate as its only reference is its regional spatial guidance. Even Portland-Vancouver which is formed from different states only has regional and metropolitan plans as guidance to formulate its zoning regulation.

Jakarta could learn from Portland-Vancouver case how two different states (Oregon and Washington States) which have different kinds of government system are willing to realize the need to have same goals in managing their metropolitan growth. Oregon and Washington understand that urban expansion will spread beyond their administrative boundaries despite the existence of Columbia River as natural divider. This awareness enabled both states to look beyond their own hidebound vision and strategy, and make an effort to concede and accommodate the pivotal urban spill over occurred between them. The efforts of Oregon State to implement its UGB in Portland Metropolitan inspired Washington State to do the same thing and both states finally manage to integrate their policies to maintain urban expansion. In summarize Portland-Vancouver experience shows common vision can enable diverse zoning regulation to achieve same goals.

In terms of land designation, Hong Kong experience in rigorously protected its conservation and limitation development areas offers useful insights to be learned. Instead of trying to occupy the

mountainous and hilly areas area, Hong Kong government is prone to use vertical development in their flattened urban designate area, especially in the core and metropolitan centre areas, furthermore, they also prefer to reclaimed the sea for Kowloon expansion and Chek Lap Kok Airport (see figure 5.9). As unified single planning body, Hong Kong is able to create integrated zoning regulation on all its districts. Inclination and willingness on vertical development based on integrated spatial plan allow Hong Kong to become compact city and at the same time avoids urban sprawling. In sum, JMA could learn how to employ strict urban areas containment combined with standardized zoning regulation as the primary key of spatial plan integration.

Bengston, et al (2004) elucidate that in order to make public policy as the main tool in managing urban growth it needs to get national level guidance and voluntary participation from all related actors. JMA has the national level guidance in place, however the voluntary participation especially from local government still become the major challenge that needs to be overcome. Horizontal coordination as exemplified by Portland-Vancouver is important for JMA. Part of the coordination is in creating JMA urban growth extension that is acknowledged by all local governments. Something that Portland-Vancouver and Hong Kong that successfully done.

Lastly, it is also important for the integrated spatial plans accessible to all actors in order to guarantee their inclusivity. JMA needs to learn from local government in Portland-Vancouver and Hong Kong in utilizing the internet as powerful tools to disseminate their spatial plans. Both metropolitan do not only put the legalized spatial plan, they also put the draft of amended plan in order to reassure that all stakeholder able to gain access to the latest update/version of spatial plan documents. Willingness to open all access to the spatial plan is not only a crucial element if inclusive development, but it is also a vital auxiliary to achieve good metropolitan governance.

Learning from comparative case studies, there are three important nuances to integrate spatial plan in the fragmented institutional landscape of JMA. First, JMA need to establish a single vision to contain urban built-up development. Second, the use of standardized procedure as guidance is beneficial to incorporate the single vision into diverse zoning regulation created by various local governments. Third, inclusiveness and voluntary engagement of all different stakeholders are essential to manage the integration of spatial plan through a coordinating institution, not just merely a cooperating institution.

### **6.2.2 Supporting Elements**

Establishing sustainable metropolitan also need support from other aspects. As learning from Portland-Vancouver and Hong Kong, both metropolitan not only manage to contain their urban expansion resulting in compact cities, but are also supported by the development of good and integrated public transportation and the availability of housing for their inhabitants.

With regard to transportation, JMA really needs to learn from Portland-Vancouver and Hong Kong in managing its urban mobility. Both metropolitan areas aware that public transportations system need to be coordinated and integrated under a single authority to ensure that the entire system will work properly. In Portland-Vancouver case although there are two transport authorities (TriMet and C-Tran), they manage to coordinate so there are no overlapping routes and the users are able to use public transportation in smooth and efficient ways. Hong Kong is better example on utilizing public transportation. With single transport authority, Hong Kong is able to expand its public transportation network and service to cover all developed areas in Hong Kong. Due to this expanded network supported by reliable service, Hong Kong public transportations are able

to accommodate 12 million daily journeys in during 2012-2014, almost twice the number of population in Hong Kong (HK Transport Department, 2015).

Learning from Portland-Vancouver and Hong Kong about public transportation development to support metropolitan compact development is an important measures for Jakarta. Putra, Woltjer and Tan (2015) state that there are two important step for Jakarta in developing public transportation. The first is by improving its transport institutional design at meso-level (inter local governmental). The second is by enhancing coordination and cooperation among key actors, which are local governments, regional agencies, national government, and private sectors.

Regarding the housing availability, we need to understand about people's behaviour in utilize personal space by looking for the parameter of land consumption per capita within the cities. Bertraud (2010) reported that Jakarta City land consumption is about 79 m<sup>2</sup> per capita, almost three times higher than Hong Kong which is 27 m<sup>2</sup> per capita. However both metropolitans are still far below Portland which is 722 m<sup>2</sup> per capita. Both Portland-Vancouver and Hong Kong shows that with that level of consumption and scarcity of vacant lands has forced them to develop vertical housing and to intensify their residential areas. Portland with its vast need of land consumption per capita come with intensify its residential areas by allowing single family lot to be divided for two and/or three families and by developing vertical public housing. Meanwhile, aware of its limitation of land availability Hong Kong goes forward with three main strategies which are (1) building more public rental housing; (2) providing more subsidy for vertical housing ownership; and (3) stabilizing property market through demand management measures (Government of Hong Kong, 2015).

Housing in JMA is built by both formal and informal sectors. Previous planning system (prior 2007) which relied on discretionary system made both sectors to use its own self organization in developing residential areas (Rahmawati, 2014; Rukmana, 2015). Dealing with this situation, Indonesia's Government is aware the necessity of vertical development in metropolitan areas. Ministry of Public Housing (now Ministry of Public Works) has set target to develop around 500 vertical housing building blocks for low income people in the JMA (Ministry of Public Housing, 2014). This target will be achieved in cooperation with private sectors. However this program faces several constraints, such as difficulties in land acquisition in the core metropolitan areas, available vacant land in non-high density designate areas, low connectivity to the basic infrastructure such as water and electrical, and so forth. Jakarta vertical housing situation shows that development of built up areas need to integrated by utilizing spatial plan. Learning from Portland-Vancouver and Hong Kong reveals that by designating and limiting built-up areas in their spatial plan, they have been able to concentrate urban development along with its infrastructures in the specified place.

### **6.3 Conclusion: Utilizing Facilitators and Overcoming Barriers on Policy Integration for Jakarta Metropolitan Area's Urban Growth Management**

Previous part in this chapter has shown that spatial plan is an important key factor for integrating JMA urban growth policies. This key factor has its own facilitators and barriers for supporting policy integration. In chapter 2.4, I already identified several important parameters for integrating spatial plan in JMA which are (i) procedure standardization and (ii) willingness to cooperate for facilitator's parameters and (iii) budget allocation and (iv) divergent priorities for barrier's parameters.

### **6.3.1 Utilizing Facilitator Factors**

Interview with representatives of Directorate General Spatial Plan-Ministry of Agrarian and Spatial Planning and representatives from Tangerang Selatan City has revealed that standardized procedure in formulating spatial plan really helpful as method for integrating the spatial planning. The established procedure of Local BKPRD discussion and then followed by BKPRD Province's discussion have ensured both general and detailed spatial plans are always in accordance with adjacent local government needs. For JMA, due to its national strategic function there are also BKPRN discussion for their spatial plans (see appendix 3). In my view this standardized procedure for creating a common vision is a helpful means to synchronise diverse zoning regulation. However, there are still some shortfall on this system. First, the available standardized procedures mainly focus on the formulation process of spatial plan, but lacking on the implementation stages. Second, this synchronisation procedure is relies heavily on government representatives and it lack inclusivity especially stakeholders from civic societies. In my opinion Central Government should develop additional standardize procedures related to the implementation and evaluation of spatial plans. The standardized procedure should also more incorporate more non-governmental representatives, such as from planning association, academic and universities, people representatives, and so forth. Learning from Hong Kong, this standardized procedure will able to bring all stakeholder to focus more on the content of the plan than the trivialities of the procedures, especially for the fragmented local government in JMA.

For the willingness to cooperate, Tangerang Selatan City representatives elaborated that the discussion forum in JMA BKSP (Development Cooperation Agency) is really helpful for all JMA stakeholders to share their needs and agendas. BKSP members consist of all JMA heads of provincial and local government, however for daily activities of this organization is administered by Ministry of Home Affairs through its appointed executive secretary. BKSP performed well for its coordination role, however BKSP is still poor at the monitoring and evaluation role (Firman, 2012; Sihite, 2013). Moreover BKSP also does not have authority to implementing JMA development program (Firman, 2012). IAP (Indonesia Association of Planner) representatives corroborated that although willingness to cooperate is high among local government, however the fragmented mindsets are still overshadowing the local governments (Interviewee: IAP representatives, 2016). Reflecting from Portland Metro Council, BKSP need to reform itself from merely a cooperation agency towards a coordinating agency. This reform is a good leap for BKSP to become an integrated policy making institutions (see figure 2.1). This transformation is highly plausible especially due to the willingness to cooperate attitude among stakeholders in JMA.

### **6.3.2 Overcoming Barrier Factors**

There is different opinion regarding budget allocation as barriers of policy integration. Interviewees from central government, IAP and Depok City agreed that local government budget is the main barriers to implementing spatial plan integration while interviewees from Jakarta and Tangerang Selatan City did not see budget allocation as its problem. For local government with strong local revenues sources such as Jakarta City and Tangerang Selatan City, their concern is mainly related to how the higher level spatial plan is able to resonate with their needs to improve compact development. In this instance, the availability of integrated JMA spatial plan become necessary. The situation is different for local government that relied heavily on central government funds. Despite the amendment of local government law has included spatial planning

as one of the priorities program, interview with Depok City representatives revealed that at certain point they felt envy to other local governments' capability to allocate more budget to supporting spatial planning process. In overcoming this kind of barriers, central government representatives said that they have allocated specific budget for local governments to improve their spatial plan, either in the form of technical assistance or through capacity building of local government through workshop or training. However, Depok City and Tangerang Selatan City interviewees' reveals that they did not received technical assistance in formulating zoning regulation because those assistance are prioritized for regions in more remote areas. In terms of capacity building, local government interviewees' also revealed that in the last couple years they did not receive capacity building support from central government, especially after organisational restructuration which moved Directorate General Spatial Planning from Ministry of Public Works into Ministry of Agrarian and Spatial Planning. Learning from Portland-Vancouver, JMA needs to combine both sources of central and local funds to enhance their cooperation agency (BKSP) into coordination agency that includes the whole process of spatial planning, i.e. formulation, implementation, and controlling as its responsibilities.

One of the problem with decentralization is the presence of divergent priorities in the development among local governments. All local governments believe that by using JMA spatial plan as their guidance for their spatial plans is sufficient to bridge their diverse land use development. However due to the unclear definition related to the arrangements of urban growth containment, many local governments believed that at micro level they are allowed to adjust their zoning regulation with the current dynamics of urban expansion. Thus, micro level planning becomes the supporters of urban sprawl. My own observation over built-up areas development on inner suburbs and exurbs parts of JMA especially between adjacent cities/regencies such as Tangerang Selatan City-Bogor Regency, Bogor City-Bogor Regency, and Depok City-Bogor Regency confirmed this phenomenon. Central government has proposed to use local BKPRD and province BKPRD discussion to overcome these diverse priorities. However, due to the lack of authority of the BKRPD members, most of the discussion are restricted to only local spatial problems. Furthermore, as BKPRD is just a cooperation institution with very limited authorities, no clear solutions or binding decisions for the cross border problems have been produced so far. Learning from Hong Kong, JMA needs a strong integrated institution which has responsibilities to manage the implementations and evaluation of spatial plans. By having this institution in place it is expected that the implementation on micro level spatial plan (aka zoning regulation) between different local governments can be synchronised and well monitored.

## CHAPTER 7

# CONCLUSION: SYNCHRONISING ZONING REGULATION AS A SPATIAL PLAN POLICY INTEGRATION

Last chapter of this research provides conclusion on synchronising zoning regulation that contributes to the spatial plan policy integration. This chapter will directly answer the research questions posed at the outset of this thesis. Also this chapter will offer a reflection regarding the limitation of this research that could be useful for related researches in the future in spatial plan integration particularly on integration at zoning regulation level.

### 7.1 Conclusions

Rapid urbanisation in JMA is marked by high population growth and massive expansion of built-up areas, leading to a sprawled condition in JMA urban landscape. Inability of local governments to quickly promulgated zoning regulation as development control tools combined with fragmented institutional landscape among local governments exacerbate the situation. JMA case presented in this research provides an example of how poor metropolitan governance in spatial planning might contribute to severe urban sprawl.

This research has found that there is a mismatch between macro and micro level of JMA spatial plan. Integration of spatial plan as an effort to deal with this mismatch also is confronted with several supporting and hindering factors. The hierarchical spatial planning system equipped with standardized procedure still unable to overcome JMA urban sprawl. At macro level, JMA spatial plan as the strategic guidance has its own fragility in spatial pattern designation and development controls arrangement. Meanwhile at micro level, local governments' diverse priorities become the main reason and justification to their tardiness in making and implementing their zoning regulation. Culture of willingness to cooperate in most JMA stakeholders also hindered by differences in budgeting power, which confirms the fragmented local governments in JMA.

In answering those supporting and hindering factors that already mention above a comparative analysis is used. Comparing JMA with Portland-Vancouver and Hong Kong reveals that in managing urban sprawl there are several important aspects that JMA needs to learn. First, local governments in JMA need to recognize the importance of establishing single consent on JMA urban growth strategy. Second, local governments in JMA need to synchronise their zoning regulation so they could steer clear of fragmented development arrangements. Third, local governments in JMA need to enhance its coordination agency to become a strong and inclusive coordinating agency that has authority to monitor and evaluate the implementation of spatial plan both at metropolitan and local government levels.

Taken together, all these three aspects, I believed, are able to contribute to the integration of spatial planning policy in JMA. Focusing on the synchronization on zoning regulation among local government will enhance JMA capacity to manage their urban sprawl. Thus, JMA will able to guide its urban development in order to achieve better and sustainable future.

## 7.2 Reflection on the Research

One of the main concern of this research is about data collection regarding the comparison of metropolitan areas. All of the information regarding Portland-Vancouver Metropolitan Area and Hong Kong Special Administrative Region come from secondary data that despite my effort to find the most current information it cannot be avoided that several information is more than a decade ago. In order to improve the quality of the research, I implore the future research able to come up with more up to date data on both comparison metropolitan areas, especially on data about land use and location of built-up areas. I also need to remind that for Portland-Vancouver Metropolitan Area, there are some references which only describe about the Portland Metro side and not mention about the Vancouver side, this situation as Kline et al (2014) say, is unavoidable situation.

Different context about planning system in Indonesia, USA and PRC have given a broad understanding on different context of zoning regulation implementation. I understand that planning practice is a contextual situation, therefore the lesson learned from this research are only effective to be used in other metropolitan areas in Indonesia that have similar conditions and issues with JMA.

This research also focus on “only” four parameters on facilitators and barriers of policy integration. In my view those parameters are the closest measure/indicator to explain the JMA situation. Nevertheless future research which apply more complete parameters which stated by Stead and Meijers (2004) should give more detailed explanation about spatial plan integration through zoning regulation as tools to manage JMA urban growth.

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### **Laws and Regulation**

Law No. 26/2007 about Spatial Planning.

Law No. 32/2004 about Local Government

Law No. 23/2014 about Amandment of Law No. 32/2004

Government Regulation No. 26/2008 on National Spatial Plan (RTRWN).

Government Regulation No. 15/2010 on Spatial Planning Implementation.

Presidential Decree No. 54/2008 on Jabodetabekpunjur Spatial Plan.

Presidential Decree No. 32/2011 on The Masterplan for Acceleration and Expansion of Indonesia's Economic Development.

Ministry of Public Works Decree No. 15/PRT/M/2009 on Guidelines for formulation of Province Spatial Plan.

Ministry of Public Works Decree No. 16/PRT/M/2009 on Guidelines for formulation of Regency Spatial Plan.

Ministry of Public Works Decree No. 17/PRT/M/2009 on Guidelines for formulation of City Spatial Plan.

Ministry of Public Works Decree No. 15/PRT/M/2012 on Guidelines for formulation of Strategic National Area Spatial Plan.

Ministry of Public Works Decree No. 20/PRT/M/2011 on Guidelines for formulation of Detailed Spatial Plan and Zoning Regulation.

## GLOSSARY

Bappenas	: <i>Badan Perencanaan Pembangunan Nasional</i> ; State Ministry of National Development Planning
BKPRD	: <i>Badan Koordinasi Penataan Ruang Daerah</i> ; Local Spatial Planning Coordination Board
BKPRN	: <i>Badan Koordinasi Penataan Ruang Nasional</i> ; National Spatial Planning Coordination Board
BKSP	: <i>Badan Kerja Sama Pembangunan</i> ; Development Cooperation Agency
BPS	: <i>Badan Pusat Statistik</i> ; Central Bureau of Statistics
DKI	: <i>Daerah Khusus Ibukota</i> ; Special Capital Region
DPRD	: <i>Dewan Perwakilan Rakyat Daerah</i> ; Local House of Representatives
EMR	: Extended Metropolitan Region
GDP	: Gross Domestic Product
HK	: Hong Kong
HKSAR	: Hong Kong Special Administrative Region
JMA	: Jakarta Metropolitan Area
NGO	: Non-Governmental Organisation
Pergub	: <i>Peraturan Gubernur</i> ; Governor Decree
Permen	: <i>Peraturan Menteri</i> ; Minister Decree
Perpres	: <i>Peraturan Presiden</i> ; Presidential Decree
PP	: <i>Peraturan Pemerintah</i> ; Government Regulation
PRC	: People Republic of China
PU	: <i>Pekerjaan Umum</i> ; Public Works
PVMA	: Portland-Vancouver Metropolitan Area
RTRW	: <i>Rencana Tata Ruang Wilayah</i> ; Spatial Plan
RTRWN	: <i>Rencana Tata Ruang Wilayah Nasional</i> ; National Spatial Plan
SAR	: Special Administrative Region
UGA	: Urban Growth Areas
UGB	: Urban Growth Boundary
US	: United States (of America)



# APPENDIX

## Appendix 1 Research Interview Guide

### Interview Guide

#### Urban Growth Management through Synchronization of Zoning Regulation in Jakarta Metropolitan Area

Interviewee: National Government

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Groningen, July 2016.

Dear Sir or Madam,

For completing my studies at the University of Groningen, hereby I request your permission to have an interview with you. This interview is about how metropolitan governance in Jakarta Metropolitan Area (JMA) using zoning regulation integration to manage urban sprawl. This research is about two primary topics:

1. First, understanding whether spatial planning policies in JMA able to answer the urban sprawl challenges;
2. Second, Law No. 26/2007 stated zoning regulation is the main instrument to control urban spatial development. However among municipals in metropolitan, the zoning regulation not yet integrated. Therefore this research try to find what effort have been done to integrate the zoning regulation, and what opportunities and challenges that arise in the integration process.

This interview will takes 30-45 minutes of your time. I also ask your permission to recording this interview. Thank you in advance for any help.

Kind Regards,

Bayu Wirawan

Master Student of Environmental and Infrastructure Planning

Faculty of Spatial Sciences - University of Groningen

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#### Part 1 Spatial Planning Policy

1. Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas due to its fast growing. How national government perception about this condition?
2. What kind of spatial plan policies that national government already had or wanted to dealt with urban sprawl?
3. Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend this spatial plan able to manage JMA spatial development?
4. Are there any specify policy which regulate metropolitan development control?
5. National policy also mandated for all municipal to have zoning regulation. What roles of national government to support/push this policy? What are main barriers or challenges from local government to actualizing this policy?
6. What kind of incentives from national government in supporting local government to formulate and/or harness their zoning regulation

#### Part 2 Spatial Plan Integration

1. Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind of mechanism from national government to push local government in materializing the interregional spatial plan integration?
2. To what extend national government involved in the interregional spatial plan integration? Do this spatial integration also included at the detail level which are zoning regulation integration?
3. Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism used by national government to support zoning integration among municipals in metropolitan areas?
4. What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?
5. There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what national government position in this situation?

**Part 3 Actors Coordination**

1. What kinds of role of national government for coordination and integration among actors in metropolitan area? What is the example?
2. JMA is a national strategic area (PP No. 26/2008). What is the role of national government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government gave? And to what extent did this input an impact on the plan?
3. Are there any examples of successful inter-municipals zoning regulation integration in Indonesia?
4. In case there is a conflict on zoning regulation in adjacent municipals, what national government role/action in this conflict? Who has the responsibility to manage the dispute?
5. JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?
6. Stead & Meiers (2009) stated several factor that influence the policy integration process. Please give an assessment for each of this factor related to zoning regulation integration in JMA (put check mark on table below)

Parameters	National Government		Local Government	
	Facilitators	Barriers	Facilitators	Barriers
Procedure standardization				
Willingness to cooperate				
Budget allocation				
Divergent priorities				

*-End of question-*

---

These were the questions I had prepared. Do you have any additional information that could be relevant for my research?

Are there particular persons you would recommend me to speak to? Or any specific documentation to read?

Thank you for this interview.

## Interview Guide

### Urban Growth Management through Synchronization of Zoning Regulation in Jakarta Metropolitan Area

Interviewee: Local Government

---

Groningen, July 2016.

Dear Sir or Madam,

For completing my studies at the University of Groningen, hereby I request your permission to have an interview with you. This interview is about how metropolitan governance in Jakarta Metropolitan Area (JMA) using zoning regulation integration to manage urban sprawl. This research is about two primary topics:

1. First, understanding whether spatial planning policies in JMA able to answer the urban sprawl challenges;
2. Second, Law No. 26/2007 stated zoning regulation is the main instrument to control urban spatial development. However among municipals in metropolitan, the zoning regulation not yet integrated. Therefore this research try to find what effort have been done to integrate the zoning regulation, and what opportunities and challenges that arise in the integration process.

This interview will takes 30-45 minutes of your time. I also ask your permission to recording this interview. Thank you in advance for any help.

Kind Regards,

Bayu Wirawan

Master Student of Environmental and Infrastructure Planning

Faculty of Spatial Sciences - University of Groningen

---

#### Part 1 Spatial Planning Policy

1. Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas. What is your government view related to this phenomenon?
2. To what extend your spatial plan (RTRW) able to accommodate urban sprawl issue?
3. Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend your RTRW accommodate the JMA spatial plan? Do the JMA spatial plan still able to catch up with dynamics of spatial land use in JMA?
4. Are there any national policy which supported metropolitan spatial plan cooperation? To what extend this policy able to support harmonization on municipals spatial land use management?
5. National policy also mandated for all municipal to have zoning regulation. What roles of your government to support this policy? What are main barriers or challenges on your government to actualizing this policy?
6. To what extend your government have the zoning regulation (formulation or legalization or legalized)? How long have it takes in your zoning regulation process? If your government still have not legalized the zoning regulation, when is your target?
7. What kind of incentives given by national and/or province government in supporting your government to formulate and/or harness the zoning regulation?

#### Part 2 Spatial Plan Integration

1. Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind those process? What mechanism from your government in materializing the interregional spatial plan integration?
2. To what extend your government involved in the interregional spatial plan integration process? Do this spatial integration also included at the level of zoning regulation?
3. Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism need to do by local government to support zoning integration among municipals in metropolitan areas?
4. Did your government also had discussion and public hearing with other municipals during on zoning regulation? In what phase did this process is being done?
5. What kind of incentives received by your government for integrate your zoning regulation with national/province policies (vertical integration) and adjacent municipals zoning regulation (horizontal integration)?
6. There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what your government do in this situation?

**Part 3 Actors Coordination**

1. To what extend do you think national and province government has supported the coordination and integration of spatial planning?
2. What kinds the role of your government for coordination and integration among actors in metropolitan area? What is the example?
3. JMA is a national strategic area (PP No. 26/2008). What is the role of your government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government and other municipal governments gave? And to what extent did this input an impact on your plan?
4. In case there is a conflict on zoning regulation in adjacent municipals, what is your government role/action in this conflict? Who has the responsibility to manage the dispute?
5. JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?
6. Stead & Meiers (2009) stated several factor that influence the policy integration process. Please give an assessment for each of this factor related to zoning regulation integration in JMA (put check mark on table below)

Parameters	National Government		Local Government	
	Facilitators	Barriers	Facilitators	Barriers
Procedure standardization				
Willingness to cooperate				
Budget allocation				
Divergent priorities				

**-End of question-**

These were the questions I had prepared. Do you have any additional information that could be relevant for my research?

Are there particular persons you would recommend me to speak to? Or any specific documentation to read?

Thank you for this interview.

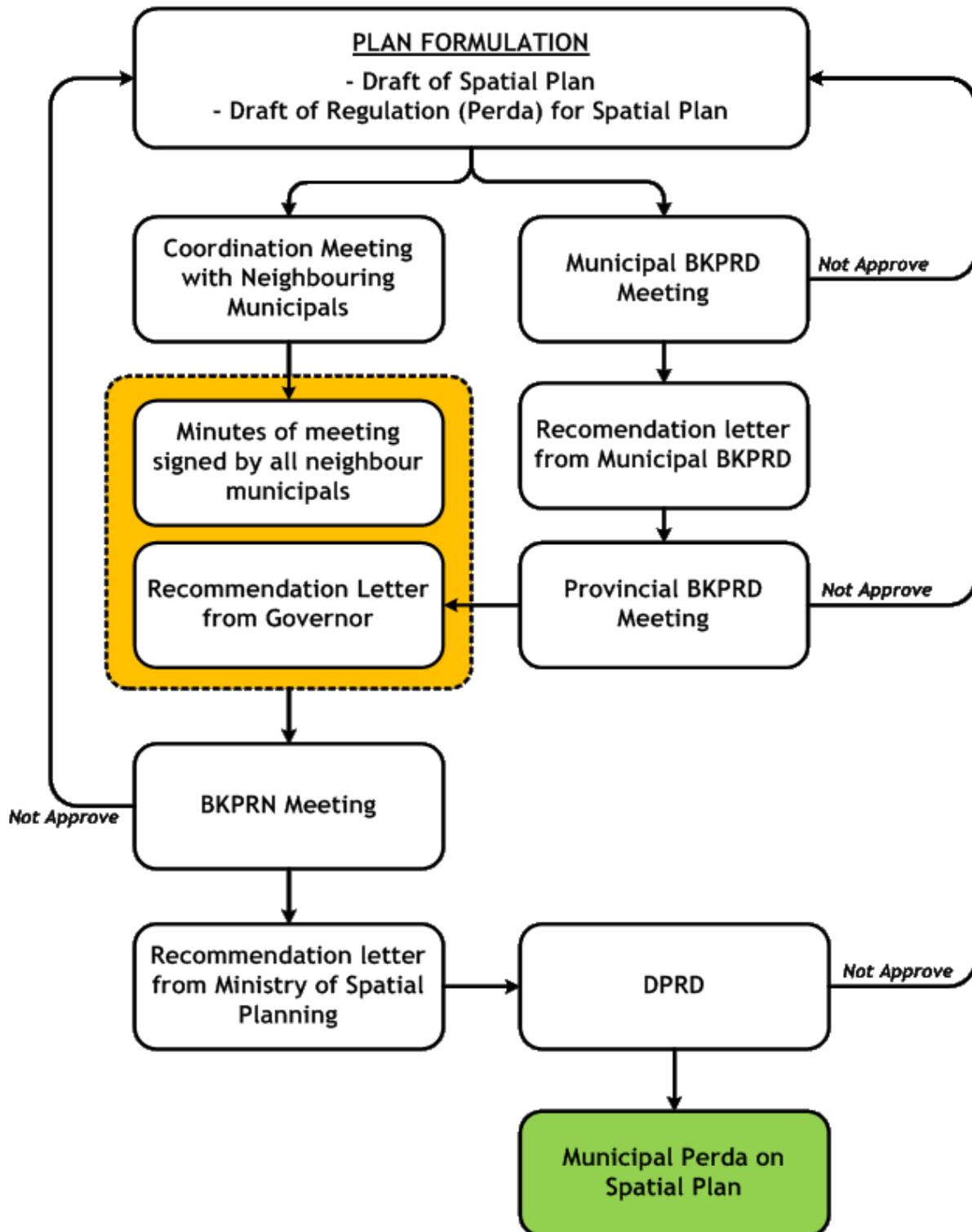
## Appendix 2 Interviewees

### Overview of the interviewees

1	Name	Marcia Tamba
	Institution	Directorate General Spatial Planning, Ministry of Agrarian and Spatial Planning
	Date of Interview	20 July 2016
2	Name	Anni Maryam Siregar
	Institution	Planning and Development Agency, Jakarta Special Capital Region
	Date of Interview	22 July 2016
3	Name	Maulana Prayoga and Yulia Rahmawati
	Occupation	Planning and Development Agency, City of Tangerang Selatan
	Date of Interview	30 July 2016 and 31 July 2016
4	Name	Hendricus Andi Simarmata
	Occupation	Secretary General - Indonesia Association of Planners
	Date of Interview	25 July 2016
5	Name	Ika Pancawati
	Occupation	Directorate General Spatial Planning, Ministry of Agrarian and Spatial Planning
	Date of Interview	4 August 2016
6	Name	Arief Panuju
	Occupation	Planning and Development Agency, City of Depok
	Date of Interview	5 August 2016

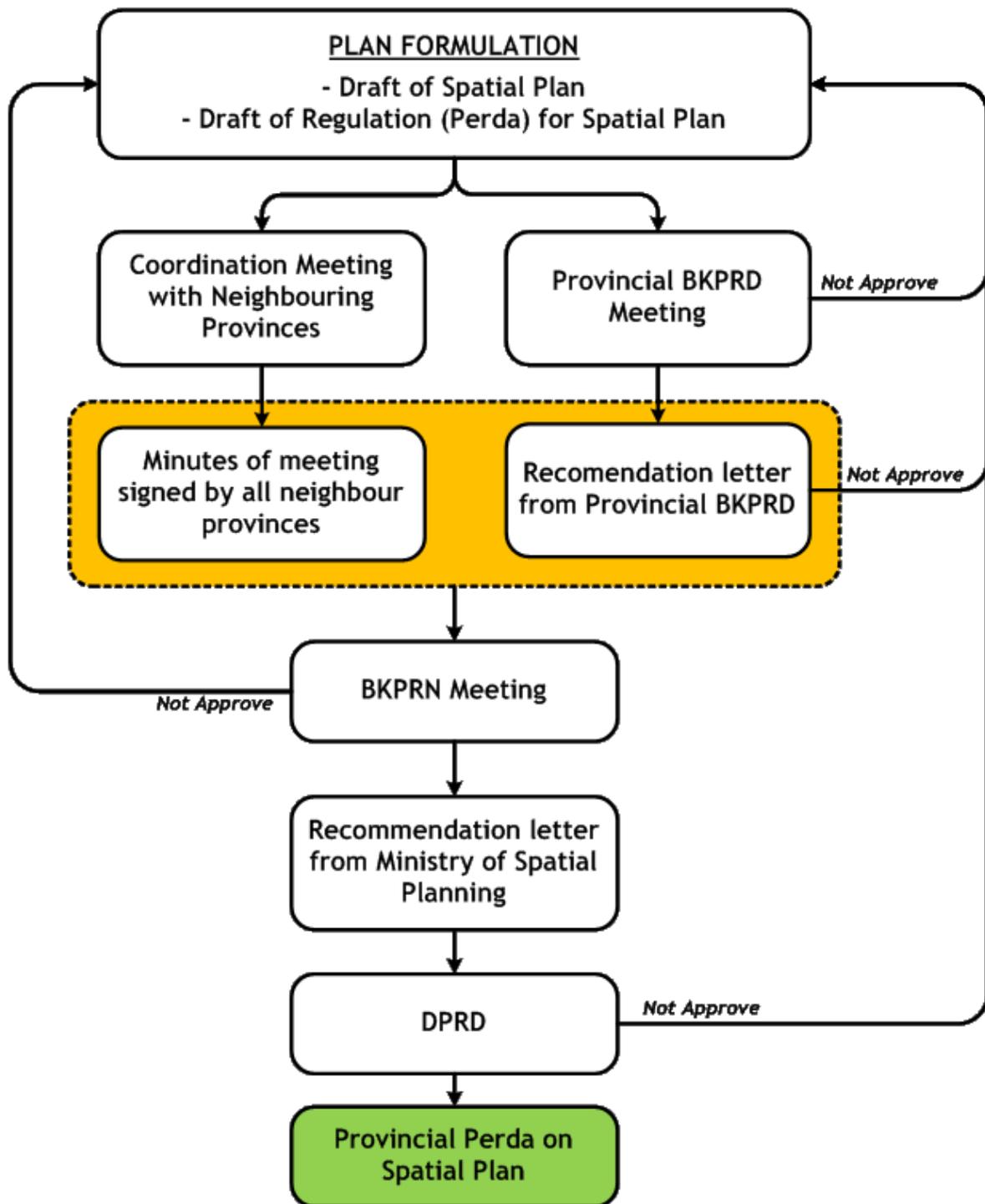
Appendix 3 Legislation Process Of Spatial Plan

A. Municipal Spatial Plan



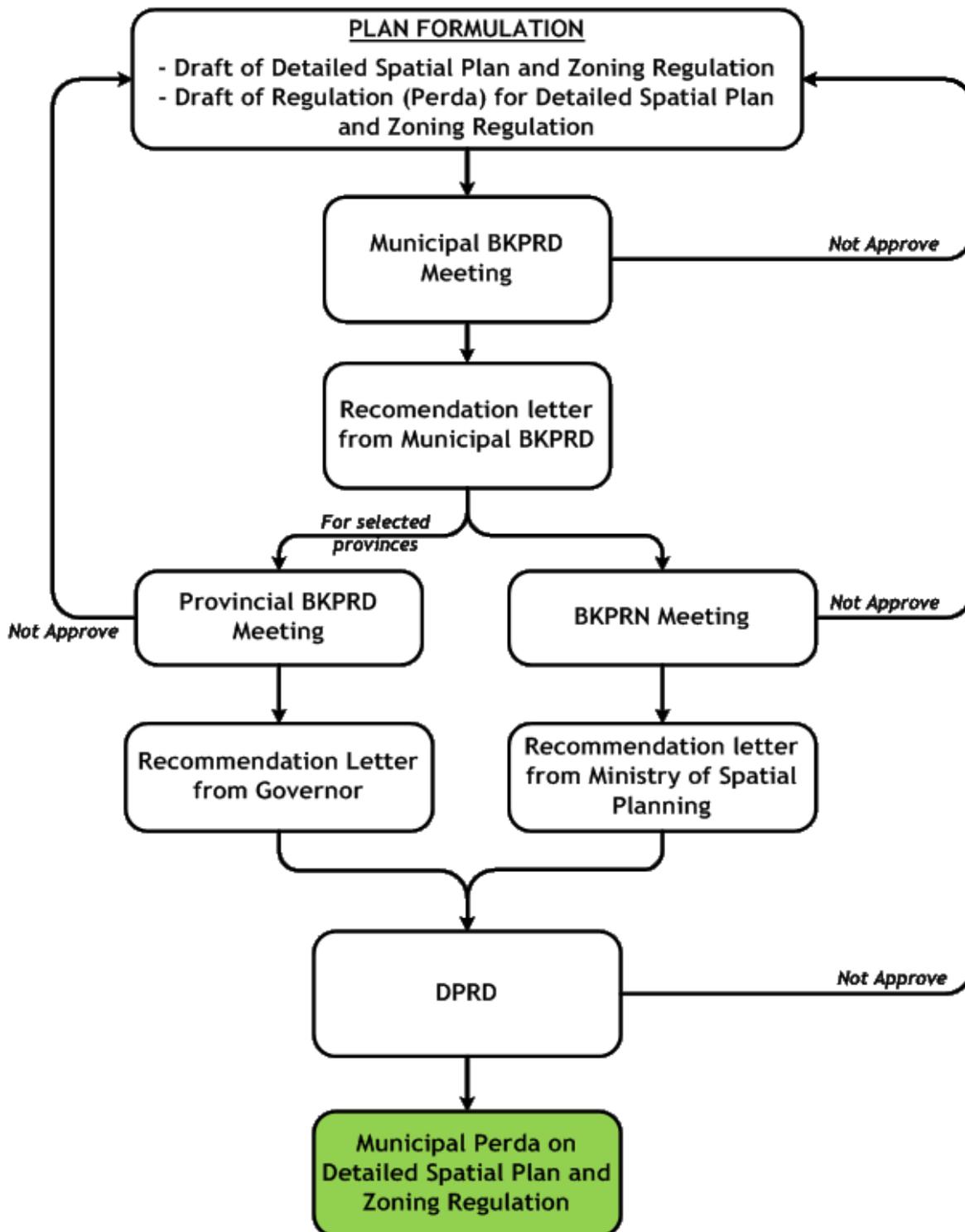
Source: PP No. 15/2010 and Permen PU No. 11/2009

B. Provincial Spatial Plan



Source: PP No. 15/2010 and Permen PU No. 11/2009

C. Detailed Spatial Plan and Zoning Regulation



Source: PP No. 15/2010; Permen PU No. 11/PRT/M/2009; Permen PU No. 01/PRT/M/2013; and Pergub Jawa Barat No. 3/2014.

#### Appendix 4 Website List of Indonesia Government Agencies

No.	Name of Agency	Website
1	Bappeda DKI Jakarta	- <a href="http://bappedajakarta.go.id/">http://bappedajakarta.go.id/</a> - <a href="http://www.sosialisasirdtrdkijakarta.com/index.php">http://www.sosialisasirdtrdkijakarta.com/index.php</a>
2	BKPRN	<a href="http://www.bkprn.org">http://www.bkprn.org</a>
3	BPS	<a href="http://bps.go.id/">http://bps.go.id/</a>
4	BPS Bekasi City	<a href="https://bekasikota.bps.go.id">https://bekasikota.bps.go.id</a>
5	BPS Bekasi Regency	<a href="https://bekasikab.bps.go.id">https://bekasikab.bps.go.id</a>
6	BPS Bogor City	<a href="https://bogorkota.bps.go.id">https://bogorkota.bps.go.id</a>
7	BPS Bogor Regency	<a href="https://bogorkab.bps.go.id">https://bogorkab.bps.go.id</a>
8	BPS Depok City	<a href="https://depokkota.bps.go.id">https://depokkota.bps.go.id</a>
9	BPS DKI Jakarta	<a href="http://jakarta.bps.go.id/">http://jakarta.bps.go.id/</a>
10	BPS Tangerang City	<a href="https://tangerangkota.bps.go.id">https://tangerangkota.bps.go.id</a>
11	BPS Tangerang Regency	<a href="https://tangerangkab.bps.go.id">https://tangerangkab.bps.go.id</a>
12	BPS Tangerang Selatan City	<a href="https://tangseltkota.bps.go.id">https://tangseltkota.bps.go.id</a>
13	Directorate General Spatial Planning, Ministry of Agrarian and Spatial Plan	<a href="http://tataruang.bpn.go.id/">http://tataruang.bpn.go.id/</a>
14	Directorate Agrarian and Spatial Plan	<a href="http://tataruangpertanahan.com/">http://tataruangpertanahan.com/</a>
15	Ministry of Public Works	<a href="http://www.pu.go.id/">http://www.pu.go.id/</a>

## Appendix 5 Jakarta Metropolitan Area Statistics

Local Administration Area Gross Regional Domestic Product Contribution for JMA (IDR Billion)

Local Government	2014		2013		2012	
	GRDP	% of JMA	GRDP	% of JMA	GRDP	% of JMA
DKI Jakarta	1,760,217.25	69.85	1,546,876.49	69.54	1,103,738.00	64.56
Jawa Barat Province						
- Depok City	43,675.17	1.73	38,517.10	1.73	33,283.56	1.95
- Bekasi City	64,126.99	2.54	57,715.00	2.59	51,699.22	3.02
- Bogor City	19,535.00	0.78	19,535.00	0.88	17,323.34	1.01
- Bogor Regency	151,285.11	6.00	136,134.83	6.12	120,328.73	7.04
- Bekasi Regency	227,469.49	9.03	206,362.68	9.28	188,175.43	11.01
Banten Province						
- Tangerang City	110,772.32	4.40	94,241.19	4.24	83,648.13	4.89
- Tangerang Selatan City	51,230.27	2.03	44,611.13	2.01	39,071.49	2.29
- Tangerang Regency	91,692.76	3.64	80,570.55	3.62	72,303.65	4.23
<b>JMA</b>	<b>2,520,004.35</b>	<b>100.00</b>	<b>2,224,563.96</b>	<b>100.00</b>	<b>1,709,571.55</b>	<b>100.00</b>

Source: Statistic bureau on each municipals in JMA

JMA Gross Regional Domestic Product Contribution for Indonesia (IDR Billion)

	2014	2013	2012
JMA	2,520,004.35	2,224,563.96	1,709,571.55
Indonesia	10,542,693.50	9,524,736.50	8,615,704.50
<b>JMA contribution to Indonesia (%)</b>	<b>23.90</b>	<b>23.36</b>	<b>19.84</b>

Source: Author, Processed from CBS data, 2016

JMA Population

Local Government	Population (thousands)				Proportion on JMA (%)			
	1980	1990	2000	2010	1980	1990	2000	2010
DKI Jakarta	6,504	8,259	8,384	9,608	56.40	50.71	41.10	34.37
Bekasi City	-	-	1,471	2,336	-	-	7.21	8.36
Bekasi Regency	1,144	1,270	1,625	2,630	9.92	7.80	7.97	9.41
Bogor City	247	255	751	950	2.14	1.57	3.68	3.40
Bogor Regency	2,494	3,737	3,100	4,772	21.63	22.95	15.20	17.07
Depok City	-	-	973	1,736	-	-	4.77	6.21
Tangerang City	-	-	1,312	1,798	-	-	6.43	6.43
Tangerang Selatan City	-	-	-	1,290	-	-	-	4.61
Tangerang Regency	1,143	2,765	2,783	2,834	9.91	16.98	13.64	10.14
<b>JMA</b>	<b>11,532</b>	<b>16,286</b>	<b>20,399</b>	<b>27,954</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Growth Rate (% per yr)</b>		<b>4.12</b>	<b>2.52</b>	<b>3.71</b>				

Source: Sedyawati et al, 1987; Statistical Board from each Municipals in JMA, 2016

Note: Kota Tangerang established in 1993

Kota Bekasi established in 1996

Kota Depok established in 1999

Kota Tangerang Selatan established in 2008

JMA Local Government Revenue Budget in 2015

Government	Local Revenues (1)	Central Gov't Transfers (2)	Other Sources (3)	Financing Revenue (4)	Total	% of Revenue Budget			
						(1)	(2)	(3)	(4)
Jakarta City	40,355,853.09	12,760,465.93	7,326,419.77	8,843,683.22	69,286,422.00	58.24	18.42	10.57	12.76
Depok City	669,967.43	977,223.33	515,464.13	386,816.14	2,549,471.03	26.28	38.33	20.22	15.17
Bogor City	541,062.16	869,535.05	318,337.57	150,936.05	1,879,870.82	28.78	46.26	16.93	8.03
Bogor Regency	1,605,209.70	2,471,188.91	1,103,158.37	343,334.67	5,522,891.65	29.06	44.74	19.97	6.22
Bekasi Regency	1,325,077.67	1,693,546.60	897,939.80	440,360.28	4,356,924.35	30.41	38.87	20.61	10.11
Bekasi City	1,325,896.80	1,380,334.29	956,436.72	550,518.36	4,213,186.17	31.47	32.76	22.70	13.07
Tangerang City	1,313,553.70	1,126,190.13	717,731.38	680,960.61	3,838,435.83	34.22	29.34	18.70	17.74
Tangerang Regency	1,428,990.55	1,493,169.53	765,724.61	684,370.14	4,372,254.83	32.68	34.15	17.51	15.65
Tangerang Selatan City	1,120,064.01	759,320.31	676,203.91	754,524.24	3,310,112.48	33.84	22.94	20.43	22.79
<b>JMA</b>	<b>49,685,675.11</b>	<b>23,530,974.06</b>	<b>13,277,416.27</b>	<b>12,835,503.70</b>	<b>99,329,569.15</b>	<b>50.02</b>	<b>23.69</b>	<b>13.37</b>	<b>12.92</b>

Source: Statistic bureau on each municipals in JMA

## Appendix 6 Classification of Land Use Function in Regional Spatial Plan of JMA

The spatial zone in JMA divided into three categories which are protection, cultivation, and buffer zone. The direction for each zone is explained bellow.

No.	Code	Remarks
<b>Protection Area (<i>Kawasan Lindung</i>)</b>		
1.	N1	Non-cultivation (in case there are cultivation areas in this zone, those should be removed immediately), protected forest, research activities, forest streams, lakes, seas and slopes, forest retention and mangrove.
2.	N2	Non-cultivation, nature tourism, preservation and conservation areas for culture, flora and fauna, and research activities
<b>Cultivation Area (<i>Kawasan Budidaya</i>)</b>		
3.	B1	high density of urban settlement, business and services, and small, non-polluting, and market orientation industries
4.	B2	medium density of rural settlement, agriculture, labour orientation industries
5.	B3	low density of settlement (low-intensity for built up with technical engineering intervention) and agriculture
6.	B4	low density of settlement, dry/wet crop, fishery, plantation, agro farms, and production forest
7.	B4/HP	B4 zone that has been issued as permanent production forest or limited production forest as in accordance with regulations and laws
8.	B5	wetland agriculture (technical irrigation)
9.	B6	low density of settlement (with 50% maximum of building zone coefficient), low environmental carrying capacity, and any other development activities that have been approved by national planning coordination board
10.	B7	low density of settlement (with 40% maximum of building zone coefficient), low environmental carrying capacity, production of forest, and any other development activities that have been approved by national planning coordination board
11.	B7/HP	B7 zone that has been issued as permanent production of forest or limited production of forest as in accordance with regulations and laws
<b>Buffer Zone Area (<i>Kawasan Penyangga</i>)</b>		
12.	P1	a land use zone that is functioned to protect from abrasion, seawater intrusion, pollution, and other damaging forces from sea, and also any other land uses aiming to protect and support N1 zone
13.	P2	a land use zone that is functioned as flood prone and protection from abrasion, intrusion, pollution and other damaging forces from sea, and any other land uses aiming to protect N1 and P5
14.	P3	a land use zone that is functioned as buffer zone for high density activities and accessibilities and any other land uses aiming to protect and support B1
15.	P4	a land use zone that is functioned as low environmental carrying capacity aiming to support B2 and B4
16.	P5	a land use zone that is functioned to protect abrasion, retention, seawater intrusion, mangrove conversion, and low environmental carrying capacity zone, and any other land uses aiming to support N1 and B1

## Appendix 7 Comparative Metropolitan Cases Statistics

### Portland-Vancouver Metropolitan Area Population Growth

County - State	Land Areas (km <sup>2</sup> )	Population ('000)			
		1980	1990	2000	2010
Clark - Washington	1,699	192,227	238,053	345,238	425,363
Multnomah - Oregon	1,127	562,640	583,887	660,486	735,334
Clackamas - Oregon	4,867	241,919	278,850	338,391	375,992
Washington - Oregon	1,880	245,808	311,554	445,342	529,710
<b>Portland-Vancouver Metropolitan Area</b>	<b>9,573</b>	<b>1,242,594</b>	<b>1,412,344</b>	<b>1,789,457</b>	<b>2,066,399</b>

Source: US Census Bureau, n.d.

### Portland-Vancouver Metropolitan Area Population Distribution

County - State	Population Density (people/km <sup>2</sup> )				Shared on Population (%)			
	1980	1990	2000	2010	1980	1990	2000	2010
Clark - Washington	113.14	140.11	203.20	250.36	15.47	16.86	19.29	20.58
Multnomah - Oregon	499.40	518.26	586.24	652.68	45.28	41.34	36.91	35.59
Clackamas - Oregon	49.71	57.30	69.53	77.26	19.47	19.74	18.91	18.20
Washington - Oregon	130.73	165.69	236.84	281.71	19.78	22.06	24.89	25.63
<b>Portland-Vancouver Metropolitan Area</b>	<b>129.81</b>	<b>147.54</b>	<b>186.94</b>	<b>215.87</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Author, 2016

### Portland-Vancouver Metropolitan Area Built Up Areas Development (in %)

County	Urban Area		Low density residential		Total	
	1974	2005	1974	2005	1974	2005
Clark - Washington	7	15	12	21	19	36
Multnomah - Oregon	41	49	9	10	50	59
Clackamas - Oregon	5	8	14	21	19	29
Washington - Oregon	7	15	3	5	10	20
<b>Portland-Vancouver Metropolitan Area</b>	<b>10</b>	<b>16</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>31</b>

Source: Kline, 2014

### Population Dynamics and Distribution in Hong Kong

Region	Land Area (%)	Population (%)			Density (people / km <sup>2</sup> )		
		2000	2015	2024	2000	2015	2024
Hong Kong Island	7.30	20.25	17.19	15.36	17,098	15,438	14,816
Kowloon	4.26	30.62	30.22	30.01	44,322	46,514	49,620
New Territories	88.44	49.14	52.99	54.63	3,426	3,899	4,531
Hong Kong SAR	100.00	100.00	100.00	100.00	6,167	6,557	7,044

Source: HK Planning Department, 2015a; HK Census and Statistics, 2016

## Appendix 8 Interview Transcripts

### Interview 1

Interviewee : Marcia Tamba, ST, MT, MSc.

Institution : Directorate General Spatial Planning - Ministry of Agrarian and Spatial Planning

Represent : National Sector

#### Part 1 Spatial Planning Policy

**Q:** Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas due to its fast growing. How national government perception about this condition?

**A:** National government believe it is urgent to manage all metropolitan areas development so their development able to controlled. One of the managing process is by designating metropolitan areas as national strategic areas on RTRWN, followed with formulation of metropolitan area spatial plan as a guidance for metropolitan areas development

**Q:** What kind of spatial plan policies that national government already had or wanted to dealt with urban sprawl?

**A:** As for now, there are President's Decrees which legalised metropolitan area spatial plans In several metropolitan area. There are also several metropolitan spatial plans still in the process of legalisation.

**Q:** Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend this spatial plan able to manage JMA spatial development?

**A:** I can only say that Jabodetabekjur spatial plan recently is in evaluation and revised process. So far we believe there are several matter that needs to be update with recent development.

**Q:** Are there any specify policy which regulate metropolitan development control?

**A:** Metropolitan spatial plans now is already incorporated development control arrangements

**Q:** National policy also mandated for all municipal to have zoning regulation. What roles of national government to support/push this policy? What are main barriers or challenges from local government to actualizing this policy?

**A:** National government always encourage local government to have their detailed spatial plans and zoning regulation. There are several measure in doing this encouragement such as: giving authority to provincial government to give recommendation on spatial plans to shorten the procedure on formulation of zoning regulation, giving technical assistance for zoning regulation promulgation, workshop and capacity building to local government, provision on appropriate map for zoning regulation, etc.

The main challenges are the lack of human resources capacity to promulgate zoning regulation, difficulties on creating detailed map which correspondence with spatial agency requirements, etc.

**Q:** What kind of incentives from national government in supporting local government to formulate and/or harness their zoning regulation

**A:** There are none for now, or at least not yet.

#### Part 2 Spatial Plan Integration

- Q:** Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind of mechanism from national government to push local government in materializing the interregional spatial plan integration?
- A:** We used intensive discussion along with related provincial and local government during spatial plan formulation.
- Q:** To what extent national government involved in the interregional spatial plan integration? Do this spatial integration also included at the detail level which are zoning regulation integration?
- A:** Yes, on zoning regulation promulgation, the zoning regulation needs to in accordance with metropolitan spatial plan and also spatial plans of adjacent municipalities
- Q:** Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism used by national government to support zoning integration among municipals in metropolitan areas?
- A:** In substantial approval process, one of the main requirements is the availability on memorandum of understanding among adjacent municipalities. We believe this system able to create integration among adjacent municipalities.
- Q:** What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?
- A:** Again, there are none for now, or at least not yet.
- Q:** There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what national government position in this situation?
- A:** By looking the guidance on detailed spatial plan and zoning regulation formulation, it already established general standard thus we hope there is a coherence in the general nomenclature. This aspect also become the main concern of examination during substantial approval process, whether at national level or at provincial level. I would also like to informed that there are several provinces that authorized in granting substantial approval.

### **Part 3 Actors Coordination**

- Q:** What kinds of role of national government for coordination and integration among actors in metropolitan area? What is the example?
- A:** Metropolitan spatial plan mandated that metropolitan area need to establish an institution consists of all multi-level stakeholders from national, provincial, and local municipalities/regencies within the metropolitan areas. For Jakarta case, they already have BKSP Jabodetabekjur.
- Q:** JMA is a national strategic area (PP No. 26/2008). What is the role of national government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government gave? And to what extent did this input an impact on the plan?
- A:** On substantial approval process, central government will check to what extent the detailed spatial plan and zoning regulation is synchronized with metropolitan spatial plans. Central government also check the agreement among the adjacent local government. Those two efforts is essential due to the importance of zoning regulation which in accordance with metropolitan spatial plan and synchronised with adjacent municipalities/regencies spatial plan.
- Q:** Are there any examples of successful inter-municipals zoning regulation integration in Indonesia?

- A:** All zoning regulation which already have substantial approval we believe already passes through the synchronisation and integration process with metropolitan spatial plan and local spatial plans
- Q:** In case there is a conflict on zoning regulation in adjacent municipalities, what national government role/action in this conflict? Who has the responsibility to manage the dispute?
- A:** In case there is un-synchronise spatial plan, we will look upon the higher tier spatial plan. Such as for metropolitan area, we will use metropolitan area spatial plan. If the conflict is persists, the institution in those national strategic area will discussed and giving the solution.
- Q:** JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?
- A:** I'm not qualified to answer this question, you may ask Ika, my colleagues for this question.

## Interview Transcript 2

Interviewee : Ika Pancawati, ST, MT.

Institution : Directorate General Spatial Planning - Ministry of Agrarian and Spatial Planning

Represent : National Sector

### Part 1 Spatial Planning Policy

**Q:** Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas due to its fast growing. How national government perception about this condition?

**A:** For metropolitan areas, we utilize metropolitan spatial planning to managing urban sprawl. The concept of metropolitan development in our views is a combination between rural and urban integration in specified areas based on eco region and administrative boundary consideration.

**Q:** What kind of spatial plan policies that national government already had or wanted to dealt with urban sprawl?

**A:** We already have metropolitan spatial plans for JMA, Medan, Denpasar, and Makassar which already legalized through presidential regulation (*Perpres*). Now, we also in the process of final phase of Surabaya, Bandung, Semarang and Yogyakarta spatial plan formulation. The availability of Ministry Regulation on guidance on formulation of national strategic area spatial plan also helps us to standardize the metropolitan spatial planning.

The standardize spatial plan is necessary because those spatial plan also equipped with program indications that states all central government programmes which will implemented on the metropolitan areas.

By using metropolitan, we have clear guidance and able to formulate the medium term integrated infrastructure development plan which contains list of all development plan from all central government sectors in the related metropolitan areas. This document, also our way to incorporating sectors plans to support spatial plan implementation

**Q:** Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend this spatial plan able to manage JMA spatial development?

**A:** For JMA spatial plan case, we admitted that there are several aspects in JMA spatial plan which already outdate and need to be revised. For example, JMA spatial plan is not incorporated the development of MRT in Jakarta City, and also Jakarta City BRT system and its connection with Jakarta City hinterland

**Q:** Are there any specify policy which regulate metropolitan development control?

**A:** The new metropolitan spatial plan is more comprehensive than JMA metropolitan plans. We plan to revised and upgrade JMA spatial plan towards that level. There are also guidance for formulating metropolitan spatial plans which states what kind development control tools that will be used and more detailing about zoning residential guidance.

**Q:** National policy also mandated for all municipal to have zoning regulation. What roles of national government to support/push this policy? What are main barriers or challenges from local government to actualizing this policy?

**A:** National government become a place for local government to giving advice and counsel. We encourage all local government to rapidly formulating and legalising their zoning regulation. I believed that main barriers which hindered zoning regulation formulation process is the number of local government budget, knowledge and experiences of the local government apparatus, .

- Q:** What kind of incentives from national government in supporting local government to formulate and/or harness their zoning regulation
- A:** Central government giving technical assistance for the municipals or giving an help for BKPRD province for the substantial approval process.

## **Part 2 Spatial Plan Integration**

- Q:** Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind of mechanism from national government to push local government in materializing the interregional spatial plan integration?
- A:** First, the mechanism is through the agreement among adjacent municipal on spatial planning. Second, the agreement must be signed by all adjacent municipals. Lastly, central government also analysed the content of the local government spatial plan to understand the consistency of their zoning regulation with JMA spatial plan and other related guidance.
- Q:** To what extend national government involved in the interregional spatial plan integration? Do this spatial integration also included at the detail level which are zoning regulation integration?
- A:** We involved in the process of evaluating the result of the zoning regulation. At some point, we also giving an example by creating a zoning regulation for some parts of the metropolitan areas as part of our technical assistance programmes. Yes, like with the making of general spatial plans we also enacted the same arrangements for zoning regulation which is the plans must be discussed and agreed by neighbouring municipals.
- Q:** Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism used by national government to support zoning integration among municipals in metropolitan areas?
- A:** I think the guidance already include that. It said that local government needs to have a signed agreement with other municipals that their spatial plans is in accordance with their neighbouring spatial plans.
- Q:** What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?
- A:** By facilitating them through the BKPRN discussions. At some level, we also allowed province governance to giving substantial process to reduce the red tape.
- Q:** There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what national government position in this situation?
- A:** Yes, unfortunately this situation may happened with so many zoning regulation that will available in Indonesia. Our guidance of zoning regulation promulgation is tried to avoid that by giving example of land use designate standardization. However, if the problem is still persisted, we will use the metropolitan spatial plans as the main source of answers.

## **Part 3 Actors Coordination**

- Q:** What kinds of role of national government for coordination and integration among actors in metropolitan area? What is the example?
- A:** We involved in multi-function capacity. At some point, we become the initiator for encouraging local government in metropolitan areas to coordinating their spatial plan. We also become the evaluator regarding whether the zoning regulation is acceptable or not. For example, zoning

regulation must have detailed information on the scale of map in 1:5000 scale. National government, especially geospatial agency always making sure that the map is in accordance with the requirement. We also evaluate *perda* (local laws) of the zoning regulation.

**Q:** JMA is a national strategic area (PP No. 26/2008). What is the role of national government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government gave? And to what extent did this input an impact on the plan?

**A:** Our role is by creating a guidance aspect for metropolitan development, in this instance we must able to provide with metropolitan spatial plan. This metropolitan spatial plan needs to adopted by general local spatial plans and zoning regulation.

**Q:** Are there any examples of successful inter-municipals zoning regulation integration in Indonesia?

**A:** Unfortunately, for zoning regulation is not yet available. Our efforts is still focus at the general spatial plan level right now.

**Q:** In case there is a conflict on zoning regulation in adjacent municipals, what national government role/action in this conflict? Who has the responsibility to manage the dispute?

**A:** It was BKPRN and BKPRD functions as the mediator. We give recommendation for local government if the problem is arise. Of course, with decentralization the local government may have their own priorities. In this instance, we can use the substantial approval process as our chance to manage this dispute or inconsistency of planning.

**Q:** JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?

**A:** We aware of BKSP, however they only focus on the development, not in the spatial plan.

### Interview Transcript 3

Interviewee : Hendricus Andi Simarmata, ST, MSi, PhD.

Institution : Indonesia Association of Planner.

Represent : National Sector

#### Part 1 Spatial Planning Policy

**Q:** Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas due to its fast growing. How national government perception about this condition?

**A:** I think central government already aware about this situation. As far as I know, several ministry have a document reports about this. Like DG Spatial Planning with their JMA spatial plan. Of course JMA spatial planning is not solely DG Spatial Planning document's because have consensus with many stakeholder, however in this example let's just say that JMA Spatial planning is DG Spatial Planning document. Other report is Bappenas with Urban Development Strategy. For integrated infrastructure development there is Urban Settlement Infrastructure Development Plan (RP2KP) from DG Human Settlements.

Are of my example shows that central government already aware of the urban sprawl, however those caring is become fragmented in different central government sectors.

**Q:** What kind of spatial plan policies that national government already had or wanted to dealt with urban sprawl?

**A:** For specifically spatial plan, there are RTRWN followed by Island spatial plans such as Java-Bali Island Spatial Plan for JMA case. And there also JMA Spatial Plan. RTRWN is the main guidance for metropolitan development because in this document national government stated the name and location of the national metropolitan areas. There are I think 9 metropolitan areas which become central government concern, which are Jakarta, Bandung, Surabaya, Semarang, Medan, Makassar, Denpasar, and Banjar Baru.

Some of the spatial plan were already legalised through Presidential Regulation, while the others is still in the process either in the formulation or legalisation.

**Q:** Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend this spatial plan able to manage JMA spatial development?

**A:** I would say that for spatia structure development, such as toll road, rail track and other infrastructure, JMA is good enough to provide guidance. However for spatial patter, which is land use designation arrangement, JMA spatial plan still needs more elaboration. I understand that JMA spatial plan also has other flaw such as no program indication, no zoning regulation arrangements, land use mismatch between the plan and reality after 8 years being legalised, etc. Those flaws happened because JMA Spatial Plan in my opinion little bit rushed for its legalisation. Created in the era of old spatial planning law (Law No. 14/1992) and then come the new one (Law No. 26/2007), JMA spatial plan tried to in accordance with the new law in a very short time. Nevertheless there are many details still not mention in the Law 26/2007 about metropolitan spatial plan, the details come later by Government Regulation No. 15/2010 and Guidance of National Strategic Area's Spatial Plan formulation (Permen PU No. 15/2012).

Thus if compare JMA spatial plan with Medan or Makassar or Denpasar spatial plans, many of JMA spatial plan content is still "minimalize".

**Q:** Are there any specify policy which regulate metropolitan development control?

**A:** Besides metropolitan spatial plans and local government zoning regulations, there are no policy about metropolitan development control.

**Q:** National policy also mandated for all municipal to have zoning regulation. What roles of national government to support/push this policy? What are main barriers or challenges from local government to actualizing this policy?

**A:** In previous years, there are several program from central government to support municipal to have zoning regulation. Such as technical assistance for zoning regulation formulation, workshop and training for local government apparatus, and seminar on zoning regulation importance and implementation.

Those central government aims is to elevate local government capacity building, which is the primary reason behind local government lagging in zoning regulation formulation. Several local government also have problems with their budget for planning since most of their funding is come from central government fund. Prior to 2014, based on local government laws, most of funds must allocated to the basic human needs priorities such as education, health and infrastructure. Fortunately the amendment of local government law in 2014 include spatial plan as local government priority.

At local level, there are also different priorities between local governments. Some wants to boost its economic development, the others focus on basic infrastructure development, and some still juggling with how to balanced their budget. Those different priorities sometimes makes local government put spatial planning on low priorities.

**Q:** What kind of incentives from national government in supporting local government to formulate and/or harness their zoning regulation

**A:** Intensive workshop or training is the key. It is just those effort only held by government. We from Indonesia Association of Planners also have the similar program, however there is no cooperation between our institution and government institution. Yes, some of our management members is the one whom become the trainer or assistance in the workshop or training, however that is in personal or contractual arrangement not in inter institution collaboration arrangement.

## **Part 2 Spatial Plan Integration**

**Q:** Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind of mechanism from national government to push local government in materializing the interregional spatial plan integration?

**A:** There are BKPRN and BKPRD meeting/discussion for integration of spatial planning. However those discussion is a limited forum. It is only involved government sector representation. Towards more communicative planning, I would recommended that BKPRN and BKPRD discussion need to inclusive more broad representatives. In development planning, there is an inclusive effort called *musyawarah perencanaan pembangunan/musrenbang* (development planning discussion) which incorporated representatives from various actors not just government actors. It's a pity spatial planning discussion is not using the same model.

**Q:** To what extend national government involved in the interregional spatial plan integration? Do this spatial integration also included at the detail level which are zoning regulation integration?

**A:** National government only focus on the national strategic areas, that is way they trying hard to finished all of national strategic areas spatial plan. There is more than 100 of them, so it takes lot of time and effort to finish the target.

And yes, those spatial plan integration also in zoning regulation level. At some point, central government also creates zoning regulation arrangement for the specific national strategic areas

which has small size land area such are for Borobudur Temple areas or Komodo Island. They integrating national plan into local plan. For other general zoning regulation, the BKPRN and BKPRD is the national government effort to ensure that local zoning regulation is in accordance with national policies.

**Q:** Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism used by national government to support zoning integration among municipals in metropolitan areas?

**A:** Yes, this handbook not giving much details about zoning regulation integration. I think this concern is not arise yet because this handbook only focus on quickly make local government has their own zoning regulations. This handbook believes as long as the general planning is already integrated and there is an agreement among adjacent municipals so it was enough.

**Q:** What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?

**A:** Not much, perhaps just appreciation and making the local government as lesson learned for others. There is a discourse to put more funds for local government who already fulfil their duties in finishing zoning regulation, however there is no recent news about this suggestion.

**Q:** There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what national government position in this situation?

**A:** This situation actually already happened. If we take a look on zoning regulation in JMA areas, Jakarta City have different category of land designation with Bekasi and Depok City. I really hope BKPRN discussion is aware about this situation, because if not there will be overlapping or mismatch on physical development in JMA.

### **Part 3 Actors Coordination**

**Q:** What kinds of role of national government for coordination and integration among actors in metropolitan area? What is the example?

**A:** Central government must act as mediator which enabled multi actors to have same degree of position. This function will allows no hierarchical boundary among involved actors. Yogyakarta is one of good example for this. Their provincial government creates joint secretary with municipal government to discuss their problems. Each member on this joint secretary is regarded as equal, and due to that they able to easily gain consensus for solution of their problems.

**Q:** JMA is a national strategic area (PP No. 26/2008). What is the role of national government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government gave? And to what extent did this input an impact on the plan?

**A:** I think my answer by using Yogyakarta examples is good enough to answer the question about coordination. Off course, central government is benefits with lots of expert pools in their reach, therefore they must utilize this resources to produce positive input to improve municipals zoning regulation. Then, whether or not this input able to change the municipals zoning regulation is need to discussed as equal partners not as sub-ordinate.

**Q:** Are there any examples of successful inter-municipals zoning regulation integration in Indonesia?

**A:** For zoning regulation, in my knowledge there is none inter municipals zoning regulation because only few of municipals which already have legalised zoning regulation.

- Q:** In case there is a conflict on zoning regulation in adjacent municipals, what national government role/action in this conflict? Who has the responsibility to manage the dispute?
- A:** Again, national government should be a mediator. Responsibility of this dispute is need to put under equal joint committee in order to ensure inclusiveness. However, this is not one for all panacea, the national government also need to be able to put different position such as leader or initiators when the need is arise.
- Q:** JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?
- A:** Fortunately, BKSP not being used to coordinating spatial plan. It focus is only development planning for infrastructure. There are many research shows that BKSP need to enhance its role not just about development institution but also an inclusive planning institution with strong power to monitor and evaluating the implementation of JMA spatial plan and JMA's local government spatial plans.

#### Interview Transcript 4

Interviewee : Anni Maryam Siregar, ST, MT.

Institution : Planning and Development Agency - Jakarta Special Capital Region

Represent : Local Government

#### Part 1 Spatial Planning Policy

**Q:** Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas. What is your government view related to this phenomenon?

**A:** Jakarta Special Capital Region is very aware of the situation. As the densest area in Indonesia, we are really concern about urban sprawl. In our latest spatial plan and zoning regulation, we encourage new development in the vertical dimension.

**Q:** To what extend your spatial plan (RTRW) able to accommodate urban sprawl issue?

**A:** As I said before, by encouraging of vertical development. To support this development, we also enabled the mixed use development. The mixed use is between residential-commercial, residential-services, and commercial=services.

**Q:** Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend your RTRW accommodate the JMA spatial plan? Do the JMA spatial plan still able to catch up with dynamics of spatial land use in JMA?

**A:** Our RTRW is based on JMA spatial plan, however we have difficulties to really adopting JMA spatial plan because JMA spatial plan is already outdated. Several national strategic project is not yet regulate by JMA spatial plan, such as our new MRT project, new development of fast train supported infrastructure, and so on.

**Q:** Are there any national policy which supported metropolitan spatial plan cooperation? To what extend this policy able to support harmonization on municipals spatial land use management?

**A:** There is national policy related to development cooperation, however for spatial plan cooperation is only through metropolitan spatial plan.

**Q:** National policy also mandated for all municipal to have zoning regulation. What roles of your government to support this policy? What are main barriers or challenges on your government to actualizing this policy?

**A:** Jakarta City as 2015 already have legalized zoning regulation. We may say that we are the pioneer in Indonesia. Our main barriers is to made consensus from our stakeholders. Jakarta is consists of to many various actors with different priority. In order to made sure zoning regulation able to accommodate many differences we put an extra time in dissemination and public hearing process.

**Q:** To what extend your government have the zoning regulation (formulation or legalization or legalized)? How long have it takes in your zoning regulation process? If your government still have not legalized the zoning regulation, when is your target?

**A:** Our zoning regulation is already legalized. We officially started the process in 2011, so it takes almost 4 years to complete the formulation process.

**Q:** What kind of incentives given by national and/or province government in supporting your government to formulate and/or harness the zoning regulation?

**A:** The national government giving workshop or training on the content of zoning regulation. As this arrangement is new in Indonesia, we also have many discussions related how bring zoning regulation in the practical aspect in Indonesia

## **Part 2 Spatial Plan Integration**

**Q:** Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind those process? What mechanism from your government in materializing the interregional spatial plan integration?

**A:** For spatial plan, the availability on metropolitan spatial plans in my opinion able to enhance spatial plan integration. By using JMA spatial plan as guidance, each local government already know their function and role in the JMA spatial development.

**Q:** To what extend your government involved in the interregional spatial plan integration process? Do this spatial integration also included at the level of zoning regulation?

**A:** As the core of JMA, we expressed our hope related interregional spatial plan. By using BKPRN forum, we always giving our concern how development in JMA is not sustainable. For example, there is no integrated transportation system among us. Jakarta City already giving our concept, however the cooperation is not yet established. Rail transportation is helping us to reducing motorization, however its network is still limited. And the rail transportation is managed by state owned company which responsible to central government. Therefore, some of their plan is central government plan, not local government plan.

Yes, the spatial integration is also for zoning regulation. Fortunately, our outskirts is designate as residential areas which in accordance with Jakarta City neighbourhood. So there is not much problem. Probably the problem that may arise is in Jakarta City southern parts. We planned to develop low density development in those areas with its function as catchment area. However, we afraid Depok City will encourage medium to high density development in the border areas. If yes, that could be threaten us in the practice.

**Q:** Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism need to do by local government to support zoning integration among municipals in metropolitan areas?

**A:** No, I think the agreement among local government which states on that guidance is rather enough.

**Q:** Did your government also had discussion and public hearing with other municipals during on zoning regulation? In what phase did this process is being done?

**A:** Yes we have public hearing with other municipals during our zoning regulation formulation process. As I said earlier, there are not many differences with other local government that adjacent to us, which are Tangerang City, Tangerang Selatan City, Depok City and Bekasi City. Our long process is happened in internal Jakarta City. We have to accommodate various aspirations from our various stakeholders.

**Q:** What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?

**A:** Only in the terms of workshop or seminar.

**Q:** There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what your government do in this situation?

**A:** We believe that our spatial plan is an answer to our crowded and uncontrolled situation. We just hope that other municipals just follow our leads in the zoning regulation.

### Part 3 Actors Coordination

- Q:** To what extent do you think national and province government has supported the coordination and integration of spatial planning
- A:** National government supported us through its BKPRN procedure. With those procedure, central government able to binding other municipals to always in accordance with JMA spatial plan.
- Q:** What kinds the role of your government for coordination and integration among actors in metropolitan area? What is the example?
- A:** As the biggest in the terms of land area on JMA, we really hope we can be the example for other government. For example, our zoning regulation can be used as inspiration for other municipals zoning regulation. Our transportation authority also could be example on how to organize integrate public transportation which previously come from many private sectors. Of course it's not perfect, but it's better than just rely on uncoordinated private sectors to organize it.
- Q:** JMA is a national strategic area (PP No. 26/2008). What is the role of your government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government and other municipal governments gave? And to what extent did this input an impact on your plan?
- A:** As strategic area, especially in Jakarta City, there are many national interest that will developed in Jakarta City. Sometimes, those interest is not accommodated in our spatial plan. Therefore, although we use statutory plan with zoning regulation, we also must employ flexibility when there is major national infrastructure happened in us. The case of Jakarta-Bandung high speed train is one example. Our spatial plan is not contain about this project, fortunately development of the train infrastructure is happened in Halim areas, which is also transportation hub, so this won't change much in our zoning regulation. However, I can't imagine how other areas deal with this situation.
- Q:** In case there is a conflict on zoning regulation in adjacent municipals, what is your government role/action in this conflict? Who has the responsibility to manage the dispute?
- A:** The responsibility of managing the conflict is on the central government. Jakarta City with its budget power may become the leader, but in order to honoured other local government we prefer central government as the one who have responsibility as mediator and bring all local government in JMA to come up with agreement.
- Q:** JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?
- A:** We are using BKSP mainly for infrastructure development coordination. For example is the creation of water flood infrastructure which involved multi government. And then final disposal cooperation, and soon. Jakarta City would like to use BKSP in spatial plan coordination, however we see that BKSP is manage by central government appointee. What we really like is BKSP is an institution which equally represents all local government.

## Interview Transcript 5

Interviewee : Maulana Prayoga (1) and Yulia Rachmawati (2)  
Institution : Planning and Development Agency, City of Tangerang Selatan  
Represent : Local Government

### Part 1 Spatial Planning Policy

**Q:** Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas. What is your government view related to this phenomenon?

**A:** (1): First, I would like to explain that for spatial plan, as for now Tangerang Selatan already have RTRW. It was legalized in 2011. The RTRW is the legal based for development permit in our cities, of course it is not ideal due to scale of planning. However, Tangerang Selatan City is a new city. We proliferated from Tangerang Regency in 2008. After become autonomous, there are lots that need to consolidate. But in the end we able to legalized our RTRW in 2011.

(2): Our RTRW is our interpretation of JMA spatial plan to our local needs. And in dealing with urban sprawl, our RTRW already designated space in our city for high, medium and low density development. The location is based on the proximity to Jakarta City and our surrounding cities or activity centres.

**Q:** To what extend your spatial plan (RTRW) able to accommodate urban sprawl issue?

**A:** (1) Our RTRW as development control guidance is not detailed enough, therefore our spatial plan agency is already formulate zoning regulation, it's not legalized yet. But we used major decree for our development permit based on spatial agency recommendation. Their recommendation is based on our draft of zoning regulation. Therefore yes I can say we still use hybrid of discretionary and statutory system now, not fully statutory system. As for whether or not our system now enabled us to manage urban sprawl, at some point we could say we are lucky. As a dormitory areas most of our place is already developed by big developer such as Bintaro Jaya, Bumi Serpong Damai, Alam Sutera, etc. We utilize their master plan and then combined it with ours. For those areas, we could say we can manage with urban sprawl. Our concern now is on the *kampung* (urban village) or self-organising development areas which developed by small developer or the people itself. Those areas was spontaneous growth and existed before our proliferation, therefore we need to take extra efforts to manage those areas.

**Q:** Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend your RTRW accommodate the JMA spatial plan? Do the JMA spatial plan still able to catch up with dynamics of spatial land use in JMA?

**A:** (1) I'm not really know about this, but my colleague Yulia will able to answer this question.

(2) Our spatial plan must in accordance with JMA spatial plan. That is the main requirement from central government to give approval for our spatial plan during the BKPRN discussion.

**Q:** Are there any national policy which supported metropolitan spatial plan cooperation? To what extend this policy able to support harmonization on municipals spatial land use management?

**A:** (1) and (2): JMA is the main policy.

(1) I think we don't have any problem with our neighbouring municipalities. Our focuses is for residential development and some commercial areas in the main corridor. Our neighbour, Jakarta City, Depok City, Tangerang City, Bogor Regency, and Tangerang Regency also develop their border area with us for residential area. Also the gradation of development is almost the same, high density development in the eastern areas which adjacent with Jakarta City and Depok City.

Medium density in centre of our administrative area and then low density development in our western and southern area which adjacent with Tangerang and Bogor Regency.

(2) The JMA spatial plan is one of the primary guidance in formulating our RTRW. For its binding guidance, Tangerang Selatan cannot do anything if our plan is different with JMA spatial plan. Such as, several of our areas designated as B3 and B2 while in the reality they are already B2 and B1. Also, we understand that JMA spatial plan formulated while Tangerang Selatan still under Tangerang Regency, and by that time there are several areas designated as industrial areas. However, now Tangerang Selatan City is more focus on development for commercial and residential areas. There will be no new development for industrial areas. They are some examples which happened in our City.

**Q:** National policy also mandated for all municipal to have zoning regulation. What roles of your government to support this policy? What are main barriers or challenges on your government to actualizing this policy?

**A:** (1) We still don't have zoning regulation now, however we used draft of the zoning regulation as our based on development permit.

(2) Now we are still in the process of formulating zoning regulation. Next year we are going to begin legalizing proses. Mainly our challenges is we are new city in term of administrative government. At first 3 years after our city officially seceded from Tangerang, most of our efforts is for internal consolidation. It's have been better now, that's why we can more focus on the spatial planning. And we also one of the new administrative region in Indonesia which do not have problems with budgeting because our local revenues is very good.

**Q:** To what extend your government have the zoning regulation (formulation or legalization or legalized)? How long have it takes in your zoning regulation process? If your government still have not legalized the zoning regulation, when is your target?

**A:** (2) As I answered in previous question, we still on the formulation phased. We actually already have the zoning regulation, however recent dynamics such as new toll road development and new railway development make us to revise our zoning regulation.

**Q:** What kind of incentives given by national and/or province government in supporting your government to formulate and/or harness the zoning regulation?

**A:** There is not much, it is us who often ask for guidance and consultation with DG spatial planning. And they always willing to help us when we come to them.

## **Part 2 Spatial Plan Integration**

**Q:** Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind those process? What mechanism from your government in materializing the interregional spatial plan integration?

**A:** (1) and (2): BKPRN discussion is the process of creating integrated interregional spatial plan.

**Q:** To what extend your government involved in the interregional spatial plan integration process? Do this spatial integration also included at the level of zoning regulation?

**A:** (2) Our involvement is in the form of participated in each discussion held by central government. Yes this spatial integration is on zoning regulation. Previously I forgot to mention that in zoning regulation formulation, we also must conducted an agreement proses with neighbouring municipals. This process is also a requirement from national government in order to get their substantial approval.

- Q:** Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipals. What kind of mechanism need to do by local government to support zoning integration among municipals in metropolitan areas?
- A:** (2) I think with its procedure which required local government to have agreement with neighbouring municipals already considered as integration effort. So that's enough.
- Q:** Did your government also had discussion and public hearing with other municipals during on zoning regulation? In what phase did this process is being done?
- A:** (2) Yes, like I said before. We meet and discuss it with our adjacent municipals and then created and agreement about our zoning regulation. This happened in our formulation process, we are not yet in the legislation process.
- Q:** What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?
- A:** (2) Again, not much. I think by we often come to central government to ask for counsel, they already believed we realise our needs, and they don't have to "push" us anymore in creating zoning regulation.
- Q:** There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what your government do in this situation?
- A:** (1) and (2) concurs that the neighboring areas agreement is enough for this situation

### Part 3 Actors Coordination

- Q:** To what extend do you think national and province government has supported the coordination and integration of spatial planning
- A:** (1) I will leave Yulia explain about this part.  
(2) National government is very supporting us. Now is almost five years after we promulgated our RTRW. By definition of law, we able to evaluate and revise our spatial plan every five years. On this occasion, we also asked for counsel for central government. At the same time, we also suggest our recommendation for JMA spatial plan revision related development in our areas. They gladly accept our suggestion, and put it in their reports on progress of JMA spatial plan revision.
- Q:** What kinds the role of your government for coordination and integration among actors in metropolitan area? What is the example
- A:** (2) By following the guidance from the JMA spatial plan, and actively come to BKPRN discussion, I believed we already involved with coordination and integration.
- Q:** JMA is a national strategic area (PP No. 26/2008). What is the role of your government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government and other municipal governments gave? And to what extent did this input an impact on your plan?
- A:** (2) Our contribution is only in our part creating our zoning regulation which then counselled with central government and neighbouring municipals. National government inputs mostly about national newly plan of infrastructure development which would located or transverse Tangerang Selatan City. I admit, this new dynamics also the reason why our zoning regulation still not finished is formulation process.
- Q:** In case there is a conflict on zoning regulation in adjacent municipals, what is your government role/action in this conflict? Who has the responsibility to manage the dispute?

**A:** (2) I think we need to hold off our development and asking central government counsel or meditating through BKPRN discussion.

**Q:** JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?

**A:** (2) Your question actually makes me realized. I knew there is BKSP forum, however as far as I know we never have or I never joining any discussion about spatial planning in BKSP forum.

## Interview Transcript 6

Interviewee : Arief Panuju  
Institution : Spatial Planning Agency, City of Depok  
Represent : Local Government

### Part 1 Spatial Planning Policy

**Q:** Urban sprawl is the main issue and challenge for Indonesia's metropolitan areas. What is your government view related to this phenomenon?

**A:** In dealing with urban sprawl, by the end of 2015 we (Depok City) already have and legalized our RTRW Kota (city general spatial plan). This RTRW mainly based on the JMA spatial plan although there were some differences in the content of our RTRW. However, this differences already discussed with province and central government through Provincial BKPRD and BKPRN discussion. For your information, the substantial approval for Depok City is given by West Java Province. West Java Province is selected as one of several provinces in Indonesia which given authority by central government for giving approval in the substantial approval process.

**Q:** To what extend your spatial plan (RTRW) able to accommodate urban sprawl issue?

**A:** Our RTRW is the adoption of JMA spatial plan in detailed scale. We believe, despite there are several things that need to be revised, the JMA spatial plan is already consider about urban sprawl. Therefore, by adopting JMA spatial plan, our RTRW already accommodating urban sprawl issue. JMA spatial plan designated Depok City as B1, B2, and B3 which is basically for built-up area development. Our spatial tries to put those designated land use into more detail scale.

**Q:** Jakarta Metropolitan Area (JMA) national policy now based on JMA Spatial Plan (Perpres No. 58/2008). To what extend your RTRW accommodate the JMA spatial plan? Do the JMA spatial plan still able to catch up with dynamics of spatial land use in JMA?

**A:** Yes, we see that there is some discrepancies with condition in reality. Actually, when JMA spatial plans being legalized back in 2008, the discrepancies is already exit. Depok City already giving their opinions regarding those discrepancies and noted by central government. However, the current JMA spatial plans is just the way it is.

Example of discrepancies is the gap for designated of land in southern Jakarta City as B3 which adjacent to northern part of Depok City which is B1. In our spatial plan, we designated those area as B2 to avoid those "leap".

We realised that central government are in the process of revised the JMA spatial plan. Some of Directorate General of Spatial Planning representatives also come to us to gain new information on Depok current situation. They also comes and ask our help in updating their data/

**Q:** Are there any national policy which supported metropolitan spatial plan cooperation? To what extend this policy able to support harmonization on municipals spatial land use management?

**A:** I think it is the function of BKPRN meeting. Of course for West Java Province now we have BKPRD province meeting.

**Q:** National policy also mandated for all municipal to have zoning regulation. What roles of your government to support this policy? What are main barriers or challenges on your government to actualizing this policy?

**A:** Yes, we currently already have our draft of zoning regulation. Actually, after the draft of RTRW is completed but not yet legalized, we started the process of formulating our zoning regulation.

Now our zoning regulation is in the process of legalization, and the process is already started in this year. However we can't be certain when the zoning regulation is going to be legalized because the process now is a political process. What I mean by political process is, the process is not just about a technical or optimization of land use, it's about bringing the plan to be accepted by public entities, which in this situation is represented by our house of representatives (DPRD) members.

**Q:** To what extent does your government have the zoning regulation (formulation or legalization or legalized)? How long does it take in your zoning regulation process? If your government still has not legalized the zoning regulation, when is your target?

**A:** *(previous explanation by interviewees already explain the answer)*

**Q:** What kind of incentives given by national and/or province government in supporting your government to formulate and/or harness the zoning regulation?

**A:** There are some training and workshop as an effort to increase our capacity building related to zoning regulation, both from central government and provincial government. Nevertheless, your question makes me realize that last time central government giving those capacity building is about two years ago. If my memory serves better, those capacity building happened when DG Spatial Planning still under Ministry of Public Works. In my opinion, looks DG Spatial Planning now in consolidating phase, especially with the creation of Ministry of Agrarian and Spatial Planning which amalgamated the DG Spatial Planning with national land agency.

## **Part 2 Spatial Plan Integration**

**Q:** Main issue of metropolitan spatial planning is interregional spatial plan integration. Are there any kind of those processes? What mechanism from your government in materializing the interregional spatial plan integration?

**A:** For interregional spatial plan integration, we exercised a process which called agreement with neighbouring areas. This process is enabled through a discussion between Depok City and other neighbouring municipalities about our spatial plan. For this occasion, we support each other's. What I meant is, when Bogor Regency needs to discuss their spatial plan, they invite us to have a discussion. The result of the discussion is an agreement or kinds of memorandum of understanding that there is a synchronization of our land use planning. These MoU then used by us when we submit for substantial approval to Provincial BKPRD or BKPRN. We also do the same thing with our other neighbouring area such as Jakarta City, Tangerang Selatan City and Bekasi City.

**Q:** To what extent does your government involved in the interregional spatial plan integration process? Does this spatial integration also included at the level of zoning regulation?

**A:** I think, my explanation above already answers the first question. For the next question, my answer is yes. Likely with general spatial plan, zoning regulation also need to have MoU with neighbouring areas.

**Q:** Handbook of zoning regulation formulation not specifically regulate on zoning regulation integration among adjacent municipalities. What kind of mechanism need to do by local government to support zoning integration among municipalities in metropolitan areas?

**A:** Yes, I agree if we talk about specific or matter of detail. The guidance only says that we need to be in accordance and have agreement with neighbouring areas. However, the BKPRD and BKPRN forum/arrangements is enough to bridge this undetailed/unspecific matters.

**Q:** Did your government also had discussion and public hearing with other municipalities on zoning regulation? In what phase did this process is being done?

- A:** Yes, I think I already said that we have discussion and public hearing with neighbouring municipals on zoning regulation. This process is executed after we have finished creating zoning regulation draft, but before going to legalize it. I think PP 15/2010 on Spatial Planning implementation is already explain the procedure.
- Q:** What kind of incentives given by national government for local governments which has tried to integrate their zoning regulation?
- A:** Like I said before, it comes in training and workshop. There are no technical assistance from central government to Depok City related to formulation of zoning regulation. Those training or workshop usually about formulation of zoning regulation, the process of integration is assumed under the process of agreement among neighbouring municipals.
- Q:** There are chances that in adjacent area between municipals some different of zoning may arise. If this zoning was contradict on each other, what your government do in this situation?
- A:** Yes, we aware of that. Honestly, our draft on zoning regulation have different with Jakarta City zoning regulation. For example, Jakarta City using administrative boundary of *kecamatan* (sub-district) as their smallest planning hierarchy. We in Depok City using *kelurahan* (urban village or sub sub-district, *author*) for our smallest planning hierarchy. We using *kelurahan* level because we are much smaller than JMA. Another reason is the guidance did not say anything about level of administrative for zoning plan. We choose using administrative as boundary of zoning planning because our statistics data is based on administrative hierarchy. Actually, at first we tried to use functional consideration, however we faced difficulties on the analysis phased because level of data availability. Therefore in the end we decided using the *kelurahan* administrative boundary is our best option.

### Part 3 Actors Coordination

- Q:** To what extend do you think national and province government has supported the coordination and integration of spatial planning
- A:** With BKPRD and BKPRN forum, they already created a good procedure to integrating spatial plan.
- Q:** What kinds the role of your government for coordination and integration among actors in metropolitan area? What is the example?
- A:** Not really much, because we just following the procedure which already published by central government. Perhaps the specific role that I can mention is our notes to central government related to JMA revision.
- Q:** JMA is a national strategic area (PP No. 26/2008). What is the role of your government for coordination and integration on formulation and legalization of municipal zoning regulation? What kind of input did the national government and other municipal governments gave? And to what extent did this input an impact on your plan?
- A:** All of higher government input is based on JMA spatial plan. Thus our spatial plan must to be in accordance with the JMA spatial plan. It was realised by all actor that the JMA spatial plan is already outdated. Therefore if there's a different designate between JMA and local spatial plan, there is must be some kinds of agreement in the BKPRN discussion.
- Q:** In case there is a conflict on zoning regulation in adjacent municipals, what is your government role/action in this conflict? Who has the responsibility to manage the dispute?
- A:** I believe this is the role of BKPRD province and/or BKPRN

**Q:** JMA have institution called BKSP, for coordinating metropolitan development. To what extend coordinating function from this agency able to support spatial plan integration? Do this coordination also included zoning regulation integration?

**A:** BKSP only focuses on the metropolitan development, especially in the infrastructure development. There are no discussion at all regarding spatial plans in BKSP forum.