

Research Report
Analysis of Public Environmental Expenditure:
The Case Study of Jakarta Province

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Abbreviations and Acronyms

APBN	:	<i>Anggaran Pendapatan dan Belanja Negara</i> (Indonesian State Budget)
APBD	:	<i>Anggaran Pendapatan dan Belanja Daerah</i> (Provincial Budget)
BAPPEDA	:	<i>Badan Perencanaan Pembangunan Daerah</i> (Local Development Planning Agency)
BPS	:	<i>Badan Pusat Statistik</i> (Central Bureau of Statistics)
CBT	:	Climate Budget Tagging
COFOG	:	Classification of the Functions of Government
DKI Jakarta	:	Special Capital Region of Jakarta Province
GHG	:	Greenhouse Gas
GDP	:	Gross Domestic Products
GOS	:	Green Open Space
GPB	:	Green Planning and Budgeting
IDR	:	Indonesia Rupiah (currency unit)
INDC	:	Intended Nationally Determined Contribution
IPCC	:	Intergovernmental Panel on Climate Change
OECD	:	Organisation for Economic Co-operation and Development
OPD	:	<i>Organisasi Perangkat Daerah</i> (Local Government Organization/LGO)
RAN-GRK	:	<i>Rencana Aksi Nasional-Gas Rumah Kaca</i> (National Action Plan for Green House Gas Emission Reduction)
RAD-GRK	:	<i>Rencana Aksi Daerah-Gas Rumah Kaca</i> (Regional Action Plan for Green House Gas Emission Reduction)
RPJMD	:	<i>Rencana Pembangunan Jangka Menengah Daerah</i> (Regional Medium-term Development Plan)
UNDP	:	United Nation Development Programme

Certification Page

I, DIDI Prabowo Putra (Student ID 51217628) hereby declare that the contents of this Research Report are original and true, and have not been submitted at any other university or educational institution for the award of degree or diploma. All the information derived from other published or unpublished sources has been cited and acknowledged appropriately.

DIDI Prabowo Putra
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Abstract

Interactions between economic, social, political and environmental interests have yielded a new paradigm of sustainable development in developing countries. Thus, the Indonesian Government have implemented a sustainable development policy that aims to shifts from a 'greedy' to a 'green' economy. This influenced the sub-national governments level in composing their policy directions, including the Government of Special Capital Region of Jakarta Province, especially public budget policy that has a significant impact on the economy and the environment.

Nonetheless, although the environmental protection function is important, it tends to be marginalized in the national budgetary debates. This study, therefore, attempts to analyse the 'green budget' allocation and utilization within the Regional Medium-term Development Plan 2013 – 2017 of Jakarta Province. The methodology draws on descriptive analysis of derived data (quantitative approach) from annual provincial budget documents, including the six municipalities. In addition, in-depth interview analysis (qualitative approach) explored potential barriers and drivers give rise to gaps in budget between the allocation and realization stage.

Results show that the allocated 'green budget' posture of Jakarta Province was 6.1% in the five years average, significantly higher when compared to the national level at 0.8 – 1 percent. However, the realization was low with average actual spending at 47.1% of the total allocated budget. On the other hand, budget allocation and realization in the municipal level was varied, which hardly indicates the resemblance with the provincial level. In addition, findings were examined using the international practice of Classification of the Function of Government (COFOG), the biggest function/purpose supported by the environmental affairs budget was biodiversity and land protection which are responsible for green open space provision in Jakarta Province.

To investigate the gap that emerged as much as 52.9% between allocated budget and the realization, this research further scrutinized barriers and drivers by interviewing key actors. The interviews point to the collaboration aspect among the profound drivers to support environmental affairs policy. On the other hand, the aspect of political leadership is moderately weighted between barriers and drivers, in which contrary results emerge from respondents' arguments. Meanwhile, the aspects of staff capacity, public awareness, and policy alignment are believed to be significant barriers that the government is recommended to take into consideration. In sum, misalignment between procurement policy and the purchasing mechanism of LGOs, therefore creates significant gaps in budget policy implementation in provincial government of Jakarta in 2013 – 2017. Our findings have implication for future research on specific budgeted program in climate change policies, for instance, to gain clearer figure of environmental related function in other sectors such as energy and transportation. This study recommends for governments to strengthen the public participation and political leader involvement in formulating environmental management policies, as well as comprehensive and coherent guideline within the organization.

Keywords: *Sustainability, Environmental Affairs, Provincial Budget, Budget Allocation, Budget Realization, COFOG*

Chapter I: Introduction

1.1 Background

The success of Indonesia's economic development has brought the country from a low-income nation into the middle-income bracket in the early 1980s to 1990s (The World Bank, 2019). Central government policies brought back the power of the market mechanism and invited lots of investment in several industrial sectors. Fortunately, new exploration of oil resources combined with the rocketing price of world petrol in 1973 became a fruitful moment for Indonesian development as the highest economic growth recorded to increase GDP growth by 9.9 percent in 1980 (Yusuf, 2018). By that time, Indonesia had an abundance of newly-discovered resources and successfully created the extractive economy as the major growth factors. However, this rapid growth gave a bad impact on society as it created negative externalities into the environment. For instance, increased depletion of forest area, polluted air and water, and environmental degradation were main problems in achieving sustainable development.

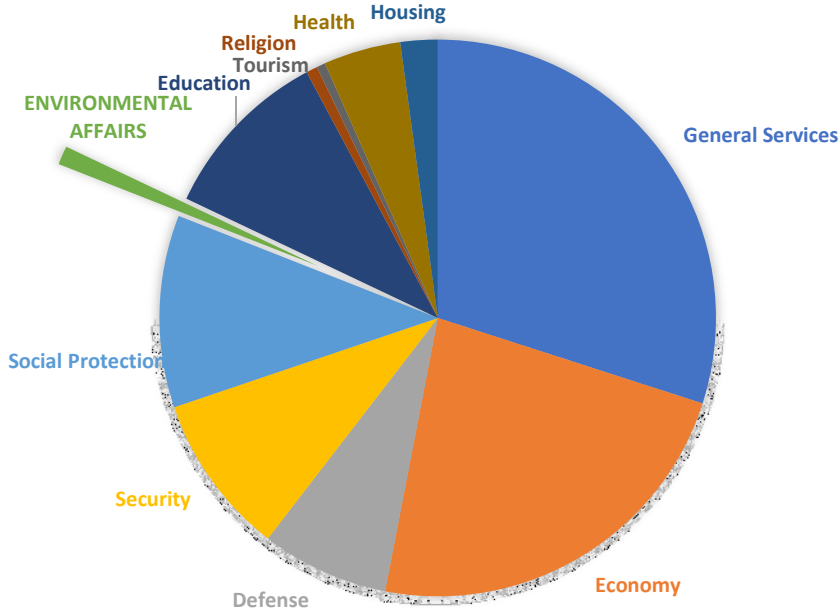
Moreover, Indonesia is also one of the world's largest emitters of greenhouse gases (GHG). According to the Intergovernmental Panel on Climate Change (IPCC), Indonesia is ranked 14th above France and below Iran with emissions of 524 million metric tons of gas in 2013 that reflected the consumption of oil, coal, and gas related activity only. Most of Indonesia's GHG emissions come from forestry and peat land activities; but as the economy continues to grow, emissions from fossil-fuel energy are also rising rapidly and causing greater concern in the long term as it associated to climate change as the bigger problem to cope.

Due to the climate change issue, in 2009, President of the Republic of Indonesia agreed to implement a sustainable development policy that shifts from ‘greedy’ to a ‘green’ economy. Some focuses on green economy initiatives, for instance, are government support in renewable and low carbon energy usage, forest management improvement, ocean ecosystem protection, and eco-tourism destination development across the country. One strategy to achieve green economy is; Indonesia’s Intended Nationally Determined Contribution (INDC), created in 2014 committing the government to an unconditional reduction in GHG emissions by 29 percent compared with ‘business as usual’ benchmarks by 2030. With additional support, Indonesia committed to complying with an additional GHG reduction as much as 41% at the end of 2030. The regulation, therefore, is constructed to manage the commitment in form of National Action Plan for Green House Gas Emission Reduction (RAN-GRK) that provides a framework for central and local governments, as well as other stakeholders, for the implementation of GHG emission reduction.

Considering the important role of local government to bolster the sustainable development, Presidential Decree (*Keputusan Presiden Republik Indonesia Nomor 61 Tahun 2011*) mandated provincial governments to develop a Regional Action Plan for Greenhouse Gas Emission Reduction (RAD-GRK) in accordance with the potential and capabilities of each region. Moreover, the Indonesian Law Number 32 Year 2009 about environmental protection and management (*Undang-undang Nomor 32 Tahun 2009*) particular made mandatory requirements of environmental functions for provincial government levels. Considering those regulations, it can be concluded that environmental management and protection are now affairs that must be implemented by the regional government of Jakarta Province.

In short, the role of local or regional government has become very important in combating climate change issue through carbon reduction. The supporting research stated that local governments can strongly influence greenhouse gas emissions, particularly those related to the daily activities of households for instances the spatial planning and zoning ordinances influence the amount of travel that occurs, the modes used, the energy efficiency of buildings, and the energy embodied in building materials and used in construction (Salon et al., 2010).

Figure 1.1 Budget Allocation Posture in Indonesia’s State Budget 2016



Source: Indonesian Ministry of Finance, 2017

The local government organization’s commitment to environmental protection can be identified in the planning process and budget allocated for this sector. In general, for many countries, the function of environmental protection is the responsibility of the Ministry of Environmental, or the Environmental Office at the provincial level. This body is responsible for the development of the system information for environmental

protection, formulating a regulation, monitoring the environmental indicators, and so on. For these embedded responsibilities, amount of financial support is surely required. Meanwhile, at the national level of Indonesia, Ministry of Environment and Forestry was not the main spender and tend to be marginalized in key budgetary debates (Haryanto & Nurkholis, 2014).

The portion of environmental affairs acquired less than one percent of the total national state budget allocation, as presented in **Figure 1.1**, in 2016 (*Direktorat Jenderal Anggaran*, 2017). This reality is still far from ideal in regard with what has been planned on the first scenario of Green Planning and Budgeting Strategy Indonesia's Sustainable Development in which to elevate the allocation budget share of national expenditure that is devoted to green priorities, from current level of 1.0% to 3.8% by 2035 (Ministry of Finance, 2015).

1.2 Problem Definition

DKI Jakarta is one of the most polluted cities in Indonesia due to industrial and transport emissions and high population density. Moreover, its geographical characteristic put Jakarta into a high-risk potential impact of climate change. Many islands in Seribu Islands Regency and some districts in North Jakarta Municipality would be affected by the increasing ocean temperature and raising of sea water level with the vulnerability index of 41,76 and 31,28 respectively (Firman et al., 2011) by which the higher number meant the more vulnerable the municipality to climate change effects. As Yoo, Kim, & Hadi, (2014) cited in their research (from Yusuf and Fransisco, 2009) that referred to coastal cities of nations on Southeast Asia region, Jakarta was one of the most vulnerable nations due to climate change.

The role of sub national governance in achieving national roadmap of sustainable development is vital. In line with the sustainable development ideas, the increasing public expenditure for environmental protection becomes important pillars for greening the regional economy. For that reason, the Provincial Government of Jakarta composes the 'green budget' in accordance with the regional economic potential and environmental quality. The ability to self-evaluated and measure the effectiveness of public expenditure for local government is very important. Therefore, the capability to conduct Green Planning and Budgeting becomes crucial for public administrator, since it is the most effective tools for government intervention in order to achieve a certain objective. Nevertheless, according to the previous study among six provinces in Indonesia, most regional-level governances were not yet ready to implement green budgeting due to lack of commitment from their leaders and officials' capabilities (Lumbanraja, 2017).

1.3 Research Objectives

Drawing on an aforementioned background of research and problem definition above, therefore the purpose of this study is to investigate the commitment of municipal government to environmental sustainability in Jakarta via:

1. Trend analysis in the allocated and implemented annual public expenditure on environmental affairs from 2013 – 2017.
2. Gap analysis between allocation and implementation in annual public expenditure on environmental affairs using the barriers and drivers framework.

1.4 Research Questions

According to the research objective, there are two research questions defined as:

1. What are the trends in Jakarta's allocated and implemented annual public expenditure on environmental affairs from 2013 - 2017?
2. How big is the gap between the allocation and implementation of budget in environmental affairs? What are the plausible barriers and drivers?

1.5 Significance of Study

This study will bring new research in regard to green budget allocation and implementation analysis that employ more specific scope at the sub national level. Given the background and research objectives of this study, some findings are expected to contribute to broaden knowledge related to the study of environmental budgeting.

Practically, the findings obtained from this study will be valuable information for Provincial Government of Jakarta as a contribution of ideas and concepts in managing budget spending related to environmental management.

1.6 Summary

According to the past economic development failures and the needs to support global climate change initiatives, Indonesian government emphasizes concern to sustainability development by declaring its commitment on green economy policy. The commitment is shown by allocating budget in environmental management function, either in national and regional governance level. However, budgetary debates in national level left environmental affairs marginalized that it takes only small portion, about one percent, of total state budget. This study attempts to investigate the

commitment of Provincial Government of Jakarta in terms of environmental management function by analyzing the budget trends. Also, it aims to explore the plausible barriers and drivers regarding gaps between allocation budget and realization budget in fiscal year of 2013 – 2017.

Chapter II: Literature Review

2.1 Environmental Sustainability

Since the 1970s, human has grown their environmental and social awakening through a long journey that ultimately realized the finite nature of the earth, that the extensive human existence leaves significant footprints, such as pollutants, and water and land exploitation, and affects the environment at several levels. This realization has brought to widespread in a global manner of the concept of sustainability as a fundamental core principle in the minds and moralities of major governments, International Corporations, NGOs, and other organizations. The indication is there in public policy, political leader rhetoric, corporate sustainability policies and reports, and the booming of thousands of environmental societies, organizations, and think tanks around the globe (Hardisty, 2010).

In Indonesia, there has always been a conflict of interest between commercial use and environmental preservation, and various problems of natural resource management that Indonesia has experienced. The Indonesian success in economic development brought the country from a low-income nation into the middle-income bracket in the early 1980s to 1990s, but, with profound consequences for the environment. In the early 1970s, the oil boom was a significant driver for Indonesian economic development and was taking part of up to 80 percent of national export value. Consequently, the oil and gas reserve were depleted due to high exploitation, and worse, the national economy was severely shocked when the petroleum price has plummeted.

Moreover, the Indonesian Ministry of Environment and Forestry (2014) reported that the extensive agriculture activity in the late 1970s affected the degradation of land

and water quality due to continuously unregulated fertilizer and pesticide utilization. Several pieces of evidence were found which among others is indicated by the status of river quality in Indonesia. At present, around 75 percent of the total monitoring points from 411 rivers in Indonesia have a heavily polluted status. Deforestation and forest fire disaster has tarnished the economic development during the period of first Indonesia's Long-Term Development Plan 1969 – 1974 (REPELITA I).

Unsustainable and non-environmentally friendly exploitation of mineral and marine resources also occurred. Coastal and marine areas that are densely populated or have high development intensity, such as regions of the Malacca Strait, North Java Coast, Ujung Pandang, and Timika coast, have experienced environmental pressures in the form of pollution; overfishing; physical degradation of habitat. Of the extensive coral reefs in Indonesia, it is estimated that only 7 percent of coral reefs are in perfect condition, 33 percent are good, 46 percent are damaged, and 15 percent are in critical condition (Murniningtyas, 2014).

The development of cities across the Indonesian archipelago also results in serious ecological and environmental problems, as the urbanisation and intensive human activities are keep increasing. Urban areas, such as Jakarta, with their high urbanization rate and accelerated pace of modern industrialization have largely increased contrariety between economic development and the ecological environment. The development requires materials and energy for urban metabolism and generates metabolites (such as pollutant or waste) that cannot be easily neutralized by the environment. This problem was emphasized by Brunner in Zhang (2013) as an urban metabolic disorder that has vast potential for sustainable development of cities.

2.2 Public Environmental Expenditure: Green Budget

The need for public expenditure management in country environmental analysis has main accepted objective, those are (i) maintaining sustainable fiscal discipline; (ii) promoting efficiency and equity in expenditure strategy; and (iii) encouraging effectiveness in resource utilization (Swanson & Lundethors, 2003).

As stated by Vincent et al., (2002), the free market mechanisms tend to undersupply public goods, such as environmental quality in many forms, and oversupply goods whose causes negative externalities, including pollution that harm humans and reduce the productivity of environmentally sensitive sectors. This reasoning justifies public expenditure by the government to ensure the better conditions of environmental management, related to the provision of public goods and reducing negative environmental externalities.

Budget draws an enormous influence on the economy. At about 50 percent of the total Gross Domestic Product (GDP) of industrialized countries ran through public budgets (Wilkinson, Benson, & Jordan, 2008). Empirical view on public spending analysis conducted by Ortiz-Ospina & Roser, (2016) showed in the 21st century the government expenditure exceeds 50% in many European countries. On the revenue side, they directed the allocation of production factors by taxing them to different extents, on the expenditure side (including tax expenditures), they determined what infrastructure is built up, which industries, manufacturers, small and medium scale companies shall benefit and those which shall not. Also, they mainly determined how the various production factors of capital, labour, and natural resources are used. The price and tax signal are very crucial in this regard.

According to Cimpoeru (2012), medium-term budgets can be described as sequential frames or predictions of revenues and expenditures for a period of 3 or 5

years. They are considered as means of budget management, which are regularly updated, rather than financial instruments with legal values and lead to institutional change. The last five years (2013 - 2017) is the period for Medium-term Regional Development Plan of Jakarta Province, with a vision for “Jakarta: The Capital of Republic of Indonesia that is Safe, Comfortable, Prosperous, Productive, Sustainable and Global Competitiveness” (*Badan Perencanaan Pembangunan Daerah DKI Jakarta*, 2013). Following this vision, there is one mission that strongly related to environmental sustainability that is “Improving the carrying capacity and environmental capacity and efficient use of natural resources” (*Badan Perencanaan Pembangunan Daerah DKI Jakarta*, 2013, page 146).

Given the scale of the mentioned challenges, one of some strategies that the provincial government can take to boost RAD-GRK is by implementing Green Planning and Budgeting (GPB) to define a more sustainable set of policies. The GPB strategy aims to ensure that Indonesia can become a high-income country by 2033, despite the need to reduce emissions and threats posed by climate change and natural resource degradation. According to Bretschger (2017), climate policies have a positive growth effect, in which avoiding the negative impact on capital depletion when climate policy is effective on a global scale.

Nevertheless, from the experienced in studying budget climate change in state level of USA, Gilmore & St.Clair (2018) explicitly suggested for other researchers to employs special tools, developed by the UNDP to assess budget using Climate Public Expenditure and Institutional Review (CPEIR) that is designated for developing countries.

To support and to give a contribution to Sustainability Development Goals, Indonesian Government attempt to implement the Green Economy concepts, which

encompass the green planning and budgeting process. This Green Planning and Budgeting (GPB) Strategy reflects growing concerns about Indonesia's impressive record on economic growth which is vulnerable to environmental risks associated with climate change and the losses and degradation of its abundant natural resources. The GPB Strategy adopts a green economy approach with a primary focus on mitigation of, and adaptation to, climate change and on the environmental and long-term growth.

Green Budget itself is defined as a reform which comprises all fiscal provisions, either on the revenue or the expenditure side and which is adjusted according to the criteria of sustainability. Still, this is undoubtedly a long-term process and should not be expected to materialize results within the short-term.

Wilkinson, Benson, & Jordan, (2008) liken green budgeting as a big agenda for countries on the effort for integrating environmental considerations into budgetary process. Moreover, as explained in Schlegelmilch's book, some significant reasons for implementing green budgeting and environmental taxes are (Schlegelmilch, 1999):

1. Internalizing external environmental costs is the main reason for using environmental taxes instead of regulations. They incorporate the costs of environmental services and affects directly into the prices of the goods, services or activities that give rise to them. The green budget also helps to implement the Polluter Pays Principle and to integrate economic, fiscal and environmental policies.
2. Green budgeting creates incentives for producers and consumers to shift away from environmentally-damaging behaviour; it thus helps reinforcing controls and other elements of a policy package.
3. In terms of producers, the green budget may encourage them to create innovation subject to the tax occupied in energy, water, and raw materials, as

well as solid, fluid or volatile emissions. Producers as the taxpayer will develop new methods for more efficient production, transportation, housing, energy usage in reducing their tax responsibility. This promotes more eco-efficiency to implement the precautionary principle; and to improve both sustainability and international competitiveness, where tomorrow's products depend on today's innovations.

4. Ability to raise revenues which can be used directly to improve the environment; to give other incentives to do so; or to reduce other, more costly taxes. Such as labor taxes, to increase employment and overall welfare.

One empirical study about potential benefits from occupying sustainable green budget studied over in 178 countries in 2008 showed undeniable evidence between health expenditure per capita and determinant factors, those are carbon dioxide emission and Gross National Income (Cimpoeru, 2012). Revenues and carbon dioxide emissions were statistically significant - both positively draw effect on health expenditure level in examined countries. The reasons behind the introduction of a sustainable perspective for budgeting in any country are vital since they will dictate the way the medium budgeting will be institutionalized.

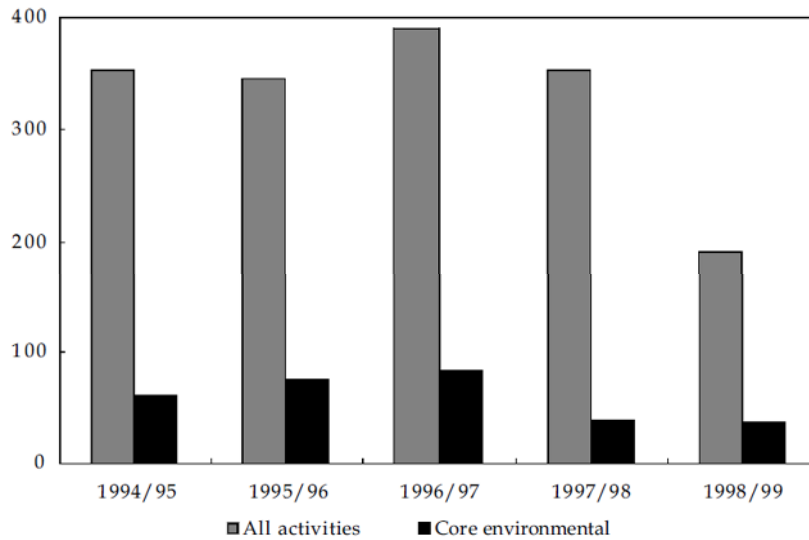
In Bekasi City, one of the prominent satellite cities of Jakarta Province, the green budget was examined through the green open space (GOS) program for the urban area due to national regulation for its provision of 20 percent of total city land use. The study found that over the year of 1989 – 2009, there is a fluctuating trend of land use in Bekasi City and the transition from green open space into built land area of about 65%. According to Suwarli, et al. (2012), the total GOS area in Bekasi city is 771 ha (3.7% of entire region). The performance of the green budget was relatively small, 0.07 percent,

and the city was projected to lose its vegetated green open space to remain as small as 6 percent of the total area (Suwarli, et al. 2012). Accordingly, the green open space in urban area is giving positive impact in controlling air pollution in such a low economic cost (López, Galinato, & Islam, 2011)

Implementing and assessing the green budgeting as a policy in national or regional expenditure has drawn some empirical researches along countries. Evidence in a developed country, at the state level in the US, showed that it was difficult to categorize and benchmark the current level of state spending on climate mitigation and adaptation. State expenditure currently provides little detail on climate change-related activities (Gilmore & St.Clair, 2018). Their analysis result revealed that the majority of the states currently divide expenditure proportion at about under 0.5% of the total state budget on mitigation and adaptation plan. Eventually, the study finds that these longer-term fiscal outlays may remain chronically underfunded in favour of more near-term spending priorities, since the guidelines are not well provided.

Deeper analysis on environmental expenditure in Indonesia during fiscal year 1994/95 until 1998/99 yielded on fact that the core environmental (encompass a range of principal environmental management roles) spending was one-fifth (20 percent) of total in sector 10 (environmental affairs budget) (Vincent et al., 2002), as shown in **Figure 2.2.**

Figure 2.1 Core Environmental Expenditure on Environmental Affairs of the Indonesian State Budget (billion Rupiah)



Source: Vincent et al., 2002

At the national level, one of the commitments of Indonesia Government towards environmental protection is reflected in Presidential Decree No. 61 the Year 2011 especially in handling issues on climate change combat, and also protection of the environment. The primary fund source for these functions mainly comes from the state budget, local budget, private sector, and other sources legalized by regulations, however, they, most of the time, become a significant constraint in implementation (Haryanto & Nurkholis, 2014). Therefore, in their research, they suggested that governments collaborate with the private subsidizing in leveraging the capacity of green budget. To be significant, the climate change and environment protection-based budgeting needs to have at least 3.0 – 5.0 percent of the total annual state budget.

Separately, Salon et al., (2010) divided the cost of carbon reduction expenditure into three categories; those are institutional costs, implementation costs, and societal costs and co-benefits. Institutional costs consist of start-up cost (standard emissions assignment, measurement, and data collection methodologies, and a large-scale public

education campaign program) and on-going cost of emissions monitoring. Implementation costs are financial outlays necessary for local emissions reduction initiatives, while societal costs and co-benefits are viewed as the perception of constrained choices in communities (Salon et al., 2010). The city carbon policy needs significant political effort and requires accompanying investments in data collection and tool development, as well as creates incentives, such as revamped transport funding formulas based on attaining greenhouse gas targets.

2.3 Categorization of Environmental Expenditure

The COFOG, developed by the Organisation for Economic Co-operation and Development (OECD), enables local government organizations (LGOs) to analyse the economic effects of government expenditures in terms of cash transfers, purchases of goods and services, production of goods and services, and investment in nonfinancial assets. This classification method divides general government expenditure into ten main spending categories that correspond to specific government activities, such as general public services, health; economic affairs, environmental protection, defence, culture and religion, education, social protection (Swanson & Lundethors, 2003).

Division 05 of COFOG, it deals with expenditures categories aimed at environmental protection, such as the prevention, reduction, and elimination of pollution and other forms of environmental degradation. Moreover, the classification can be broken down into six sub-divisions, as follows (International Monetary Fund, 2014):

- (i) Waste management; including collection, treatment, and disposal of waste, as well as operational activities.

- (ii) Wastewater management; covering sewerage system operation and wastewater treatment.
- (iii) Pollution abatement; programs related to ambient air, soil and groundwater protection, noise and vibration abatement, and protection against radiation, as well as operation of monitoring systems and stations.
- (iv) Protection of biodiversity and landscape; including protection program for flora and fauna species, habitats, the aesthetic value of landscapes.
- (v) Research and development on environmental protection; aiming in acquire new knowledge related in improving general public service or developing human capacity.
- (vi) Other environmental protection areas; covering general affairs and service in administration, regulation, production, and dissemination of public information.

2.4 Conceptual Framework: Implementation for Environmental Budget

The conceptual framework of the research is a relationship or link between one concept to other concepts of the problem to be investigated. The conceptual framework is useful to explain a topic to be discussed and an assumption of a research study force to address. It is expected to provide an overview and simply describes about various aspects associated with a phenomenon (Torraco, 2005).

This study employs the framework of green budgeting life cycle by Wilkinson, Benson, and Jordan (2008) wherein they provide interconnected stages of five general aspects of an integrated and adaptive fiscal process, planning expenditure priorities; formal adaptation of the budget; implementation of the budget; monitoring, evaluation, and reporting; and revenue rising. However, in this study, the analysis of regional

expenditure mainly focusses on the planning prioritizing and the implementation process to explore the budget policy of environmental management are undergone by the local government of Jakarta.

Implementation of the budget is considered to be the most important in the budgeting process since it can have a wide range of both beneficial and damaging environmental impacts (Wilkinson, Benson, & Jordan, 2008). Considered budget policy as a plan, the implementation is potentially succeeded subject to a variety of economic and political reasons, such as a lack of planning or political support (Laurian et al., 2004). Therefore, it is crucial to understand the determinants of effective implementation in order to improve better environmental expenditure.

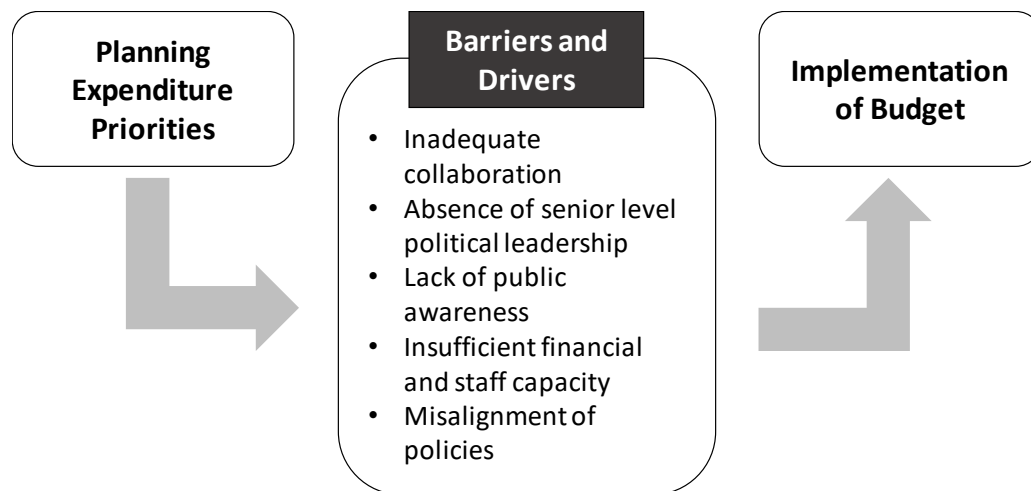
Laurian et al. (2004) formed a generalized theory and methodological base for systematic examination of plan implementation and the factors that drive implementation. Two main determinants that influencing the implementation of a plan explained by them are the quality of the plan itself (internal factor), and the capacity and commitment of the actors (external factor). The OECD (2015) describes that such actors as governments at all levels, parliamentarians, and civil society and organisations that are involved and/or influence in the process of formulating budget policy and implementation.

Uittenbroek (2016) came with a qualitative study on an organizational routine as a potential barrier in implementing climate adaptation policy. She argued that the stability in organizational routine could hamper the mainstreaming of a policy by emerging a self-reinforcing mechanism in the implementation process. On the other hand, Burch (2010) and Oulahen, Klein, Mortsch, O'Connell, & Harford, (2018) analysed the barriers on implementation of climate change adaptation policy, as well as giving insight in transforming barriers into drivers of action. A comprehensive in-depth

interview with numerous planners and other policy practitioners yielded five significant barriers to the mainstreaming of policy in response to global climate change, those are: inadequate collaboration, absence of senior-level political leadership, lack of public awareness, insufficient and staff capacity, and misalignment of policies in the government institutional level (Oulahen et al., 2018).

Referring to those frameworks, this study attempts to formulate a proper conceptual framework in regional budget analysis for environmental management as presented in **Figure 2.2**.

Figure 2.2 Conceptual Framework



Source: Modified from Wilkinson et al. (2008) and (Oulahen et al., 2018)

2.4.1 Planning expenditure priorities

In the strategic planning of expenditure priorities, there are two contrasting approaches that are commonly used in a well-established budgetary system. Wilkinson et al. (2008) stated that most of the European Union member states adopt the 'top-down' approach in which involves the prior establishment by the ministry

of finance policy. The agencies then must comply with fitting into the overarching framework, based on an assessment of future strategic policy priorities.

Contrary to the ‘top-down’ model, there is ‘bottom-up’ approach in which the budget allocation resemblances the relative political weight from every department/agency involved in budget spending. Ultimately, the total expenditure is based on actual results of a bilateral negotiation between departments and the central finance bureau (Wilkinson et al., 2008). Similarly to the ‘bottom-up’ model, Sintomer, Herzberg, & Röcke (2008) and (Cohen, 2012) used participatory budgeting terminology as an approach that enables all elements of stakeholders, both officially or unofficially, involved actively in the process of formulating budget policy.

2.4.2 Barriers and Drivers

The rationale for study on barriers in policy implementation of climate adaptation mainstream was necessary due to emerged difficulties during the translation process from planning document into practice (Uittenbroek, 2016). Align with that, Oulahen et al. (2018) formulated five key themes of barriers and drivers for plan implementation of climate change adaptation policy in Canada at various government levels.

This study employs the analysis method developed by Oulahen et al. (2018) in order to identify the potential barriers and drivers in Jakarta’s budget policy on environmental management. The five keys theme of barriers and drivers are stated as follows:

Inadequate Collaboration means that in the given organizational culture cannot be found such a mechanism for interdepartmental collaboration. The flexibility in

organization is believed to minimize the organizational routine that lead to policy implementation barrier (Uittenbroek, 2016). This study explores whether the rigid adherence within organization of Jakarta's provincial government occurs and potentially affect the budget performance.

Absence of Senior Level Political Leadership is believed to be responsible in early stage of decision making. The decision depends on politician perception of public requirement for services, in which political leaders have strong influence in driving the public opinion and mood (Uittenbroek, 2016). In this research, the government officials and social communities are explored by the way their action being influenced towards the political leadership.

Lack of Public Awareness are not expected to be occurred in environmental management policy, since the society is one of important aspect in sustainable development. However, the low public awareness of environmental issues might happens caused by the insufficient information and socialization from local government (Oulahen et al., 2018). In this study, public awareness is identified by conducting interview with villager organization to obtain its perspective in environment management.

Insufficient Financial and Staff Capacity become significant barrier for municipal level government. For instance, municipalities inabile to conduct local studies due to lack staff expertise and financial support (Oulahen et al., 2018). Moreover, Laurian et al. (2004) claim capacity and commitment to be the main key for the success of plan implementation. This study specifically explores the experience and perception from LGO officials that directly involved in managing resources for environmental management programs.

Misalignment of Policies, as stated by Oulahen et al. (2018), largely occurs within or between levels of organization, nevertheless in governance sector, and thus set barrier to policy implementation. This study attempts to identify whether conflicting policies from the national level might affecting the implementation of green budget policy in Jakarta. For that reason, key actor from provincial planning agency is interviewed to obtain information.

2.4.3 Implementation on the budget

Wilkinson et al. (2008) stated that the control of spending on environment programs is not entirely rely on the central government, but also put the role of local government organization in important position. This study employs budget realization analysis on environmental affairs budget allocation to measure the implementation. The data was obtained from the annual budget documents of Jakarta Province from 2013 to 2017. According to Vincent et al. (2002), the analysis of public environmental expenditure give baseline information for authority a beneficial starting point for proposing subsequent environmental expenditure in the country.

2.5 Summary

Indonesian government endeavor to achieve sustainable development has brought bigger concern in managing the environmental affairs budget. Previous studies confirmed that the ‘green budget’ gives positive impacts in some extents, such as ability to internalize economic externalities, giving incentive to pro-environment behavior, and promoting eco-efficiency competitiveness amongst producers. These rationales justify

public expenditure by the government to ensure the better conditions of environmental management, related to the provision of public goods and reducing negative environmental externalities. However, implementation of the budget is considered to be the most crucial in the budget policy since it can have a wide range of both beneficial and damaging environmental impacts. This study modifies a more suitable framework to analyse the plausible barriers and drivers in budget policy implementation, in which focus on aspects of collaboration, political leadership, public awareness, financial support and staff capacity, and misalignment of policies within the Provincial Government of Jakarta.

Chapter III: Research Methodology

In order to respond the problem statement, this study employs quantitative and qualitative approach comprise of data sources, data collection technique, and data analysis. The primary objective of this study is analysis of regional budget document that aims to illustrates the trends of budget allocation and realization on environmental management function and the purpose categorization of the budget expenditure in 2013 – 2017. For the secondary objective of identifying barriers and drivers on budget policy implementation, this research employs qualitative approach by conducting interview with key actors in budget planning and spending in Provincial Government of Jakarta. Interview methods able to fill gaps in research in order to complement the untouched side from document analysis (Burch, 2010) by acquiring new information and experience, as well as assessments and public opinion (Oulahen et al., 2018).

3.1 Data Source

3.1.1 Primary Data Source

Primary data sources in this research are the informants of in-depth interview within qualitative design. All selected informants for this study directly engaged in environmental management budget planning or worked in local office that utilize the environmental affairs budget in Provincial Government of Jakarta. Moreover, this study involves representative of community to acquire their experience and opinion about the environmental management policy in Jakarta Province in period of time 2013 – 2017. Oulahen et al. (2018) argued that in-depth interviews enrich

understanding to the findings by obtaining vast actor's opinion regarding the implementation of environmental policy, and indentifying barriers and drivers through experiences sharing.

All of informants gave consent to be interviewed, recorded and analysed for this research. The interview was undergone in Bahasa as the nationally approved language. The informant's description is shown in **Table 3.1** below:

Table 3.1 Informant Description

No.	Code	Age	Position	Working Experience	Date / Time
1	I-1	40s	Chief of Facility, Infrastructure and Environment Sub-section at Jakarta's Development Planning Agency	> 15 years	15-07-19 11.27 AM
2	I-2	30s	Chief of Programme and Budget Sub-section at Jakarta's Forestry Office	> 10 years	05-07-19 09.52 AM
3	I-3	40s	Chief of Programme and Budget Sub-section at Jakarta's Environment Office	> 15 years	10-07-19 05.02 PM
4	I-4	50s	Coordinator of Forum of Environmentalist Society at West Jakarta Municipality	> 25 years	12-07-19 04.01 PM

Source: Author

3.1.2 Secondary Data Source

As the research objective stated on the previous chapter, this study attempts to analyse the environmental expenditure within Jakarta's Provincial Budget. The data for this study was obtained from the Jakarta Open data publication website on URL of <http://data.jakarta.go.id> that openly accessible to public. The main data domain derived for analytical process was the public budget documents (*Anggaran Pendapatan dan Belanja Daerah/APBD*) of Jakarta Provincial Government within five years period of time, from 2013 until 2017. Furthermore, this study breaks

down aggregate provincial budget data into six administrative municipalities and regency in Jakarta.

3.2 Data Variables

The public budget documentation sheet contains around fifty thousand lines of data entries divided into 27 columns. At the first stage, this study focuses on four columns named Location ID, Affairs Name, Approved Budget, and Realization Budget which represent the allocation and spending aspect to be utilized in budget analysis. The column of Affairs Name categorizes expenditure data into several sectors in which the amount of money allocated for particular programs. The Location ID column was grouped into six items that represents the number of municipalities in Jakarta Province, those are:

1. 10000: Central Jakarta Municipal
2. 20000: North Jakarta Municipal
3. 30000: West Jakarta Municipal
4. 40000: South Jakarta Municipal
5. 50000: East Jakarta Municipal
6. 60000: Seribu Islands Regency

Meanwhile, the Affairs Name column contains a group of designated fields for each expenditure item. This study selected the Environment Protection Affairs for this column categorization. The other two columns were not to be categorized but to be summed since they contain monetary values. The column of Approved budget means the actual money that is provided by the government as the approval of complete legislation process, whereas column of Realization Budget is the final amount of fund

spent by the government working units. By combining these columns, this study attempts to analyse the environmental protection expenditure in an annual regional budget posture of Jakarta Province and the distribution over its municipalities.

In order to further explore the relative size of budget allocation for environmental protection and its composition, this study employed the international practice of Classification of the Functions of Government (COFOG). This classification method divides general government expenditure into ten main spending categories that correspond to specific government activities, such as general public services, health; economic affairs, environmental protection, defence, culture and religion; education; social protection (Swanson & Lundethors, 2003).

3.3 Case Study Sites

Jakarta, or The Special Capital Region of Jakarta Province for formal name, is a lowland area with an average altitude of +7 meter above sea level. Jakarta is located between 6° 12' South latitude and 106° 48' East longitude. The boundaries of Jakarta Province are defined as follows:

- In the North : The Java Sea
- In the West : Province of Banten
- In the South : Province of West Java
- In the East : Province of West Java

The area size of Jakarta is 662.33 km² with a sea area of 6,977.5 km². Jakarta has no less than 110 islands scattered in the Seribu Islands Regency, and there are about 27 river/waterway/canal which are used as a source of drinking water, farming, and urban businesses.

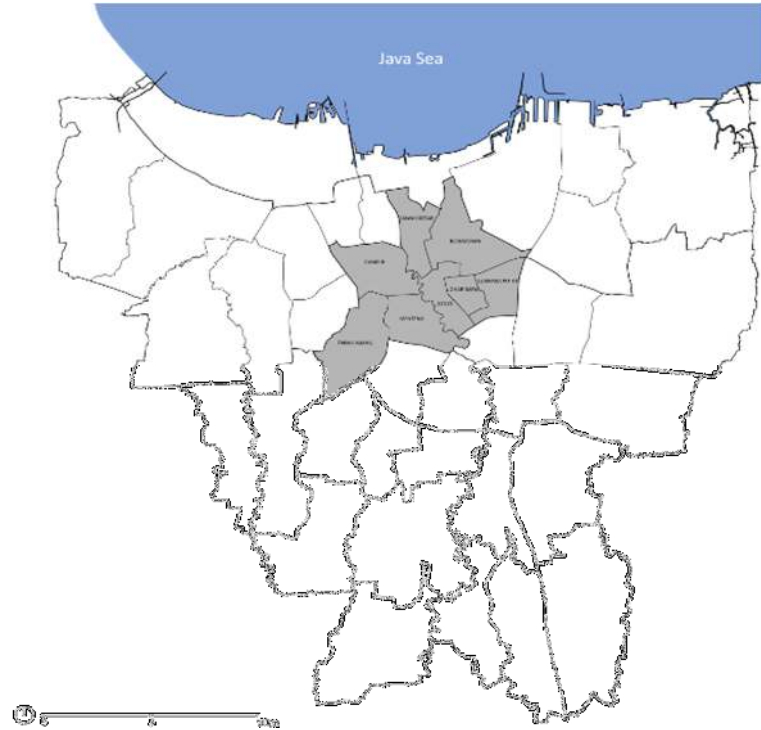
Jakarta's population in 2017 was around 10.37 million with a population density of 15,663 people in each kilometre square. Compared with The Greater Tokyo Area, the total area of Jakarta Province was equivalent to one-third, however it was two-and-a-half more density than Tokyo is (Tokyo Metropolitan Government, 2018). Along with Tokyo as the coastal city, Jakarta also known to its vulnerability issue due to climate-related disasters, especially the northern and east districts (Yoo et al., 2014).

The economic growth of Jakarta Province was ranged between 6.4 – 6.8 percent from 2012 until 2016, with the regional GDP recorded as much as 1.983 trillion rupiah in 2015 that was the biggest among any sub-national level in Indonesia (*BAPPEDA Provinsi DKI Jakarta*, 2018). From the expenditure side, the sector of GDP with highest in spending proportion was from household's consumption at around 56.2% of the whole regional expense. Not only the regional economic size, the amount of regional budget of Jakarta Provincial Government is always placed at the first position in provincial level (*Badan Perencanaan Pembangunan Daerah DKI Jakarta*, 2013).

3.3.1 Central Jakarta Municipality

Central Jakarta is the most highly developed and vital place within the city. In this administrative municipal area, many high-rise buildings, embassies, major landmarks, and Presidential Palace can be found. The area is 48.13 square kilometer with a total population of 921,334 in 2017 (population density was 19,143 people per square kilometer). In 2013, Central Jakarta contributed the highest portion of Jakarta Province's GDP as much as 26.87 percent, and the human development index was 80.49 percent in 2017. The administrative borderline of Central Jakarta Municipal is shown in **Figure 3.1**.

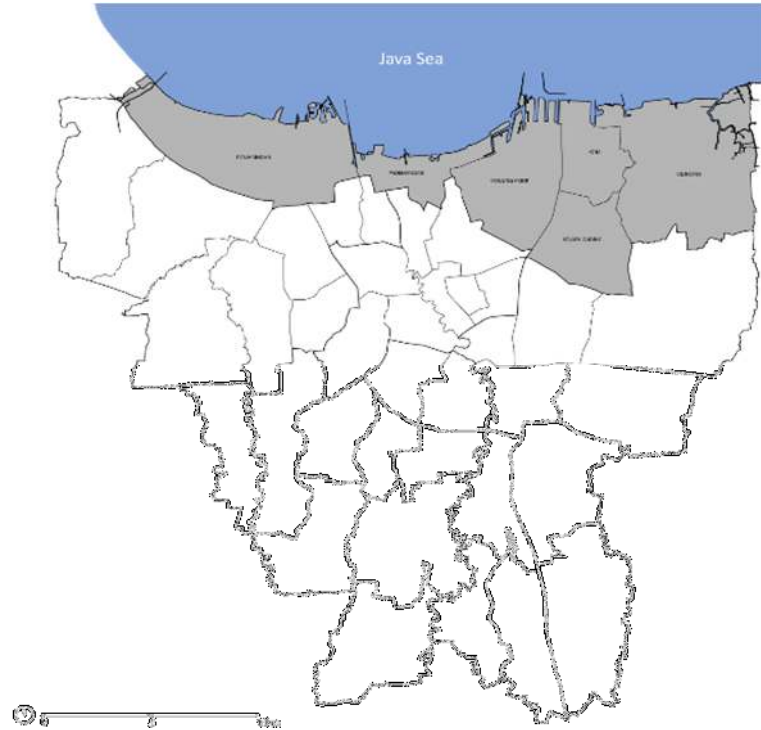
Figure 3.1 Map of Central Jakarta Municipality



3.3.2 North Jakarta Municipality

North Jakarta is the only municipal that comprise a coastal area in Jakarta Province territory. It covers an area as large as 146.66 square kilometers that directly adjacent to the Java Sea in its north side (shown in **Figure 3.2**), thus give advantageous in goods and passenger transportation. In 2017, this municipal is inhabited by 1,781,316 residents with density 12,146 people per square kilometer. The importance of North Jakarta in trading and business for Jakarta Province is the existence of Port of Tanjung Priok where the national-wide export import activities occurred and responsible to give support about 18.86 percent for regional GDP. The level of human development index in this northern part of Jakarta Province was 79.47 percent in 2017.

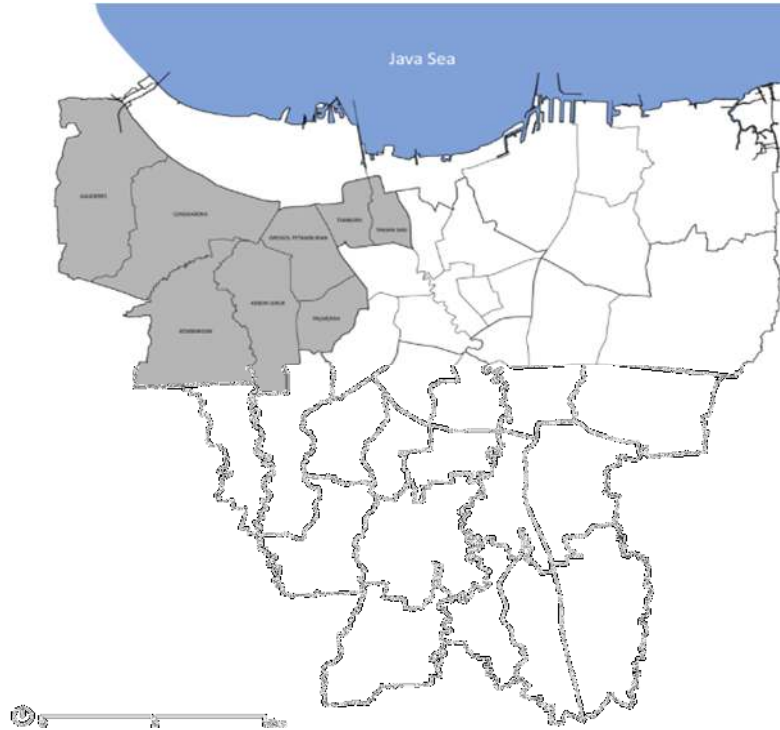
Figure 3.2 Map of North Jakarta Municipality



3.3.3 West Jakarta Municipality

Amongst the municipalities, West Jakarta is the most densely region in Jakarta Province that resided by 2,528,065 people living in an area of as large as 129.54 square kilometers scattered in eight sub-districts (presented in **Figure 3.3**). The population density was 19,515 people each square kilometer (BPS Jakarta, 2017) where it is highly concentrated in the slump area in the Subdistrict of Tambora. This municipal's economics activities contributed around 14.86 of regional GDP in 2013 that was the smallest among other mainland municipalities of Jakarta Province. However, the level of human development index for this municipality was not the smallest that resulted as high as 80.47 percent in 2017.

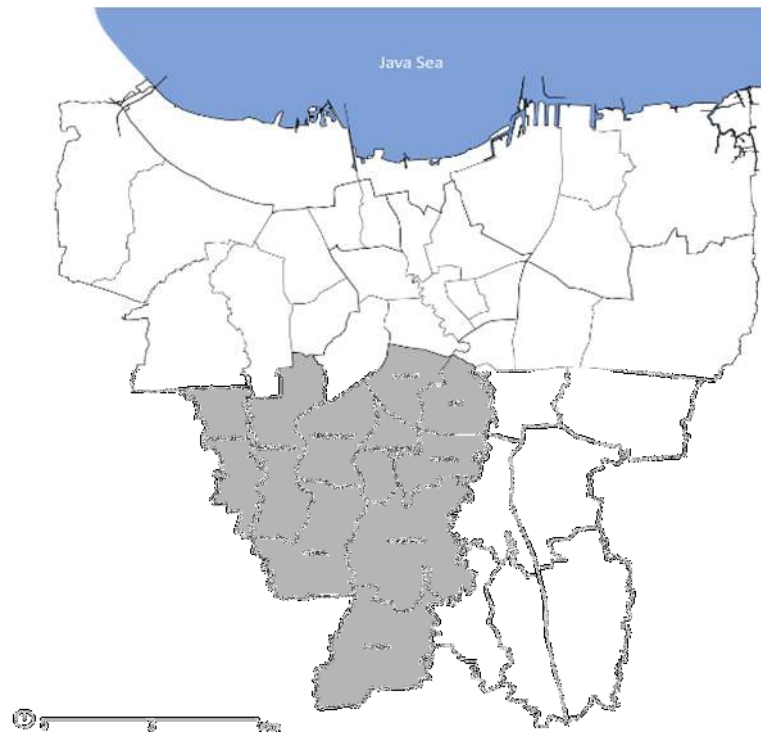
Figure 3.3 Map of West Jakarta Municipality



3.3.4 South Jakarta Municipality

The South Jakarta Municipal covers an area of 141.27 km² and consists of ten sub-districts, as presented in **Figure 3.4**. The population was 2,226,830 people with a population density of 15,763 per square kilometer. In term of human development, this municipality placed the first rank position with index as high as 84.13 percent in 2017 in Jakarta Province, even in national-wide level. Its GDP contribution to Jakarta Province was the second largest at the portion of 22 percent in 2013.

Figure 3.4 Map of West Jakarta Municipality



3.3.5 East Jakarta Municipality

The East Jakarta municipal is the number one both in the area and population size among other municipalities. There were 2,892,783 residents, in 2017, living in the ten sub-districts that totally cover an area of 188.03 square kilometres (presented in **Figure 3.5**). The economic size contribution of East Jakarta Municipality was 14.86 percent of total regional gross domestic products in 2017. Also, in the same year, the human development index was recorded as the second highest in provincial level at 81.61 percent.

Figure 3.5 Map of East Jakarta Municipality



3.3.6 Seribu Islands Regency

Seribu Islands Regency is located at the north side of Jakarta Gulf that is basically a formation of atoll clusters (shown in **Figure 3.6**). There are 110 isles with a total area of 8.8 square kilometers which are administratively managed into two sub-districts. These small isles formation is relatively low in contour which is one meter above sea level. In 2017, there are 23,897 people were living in the eleven habitable isles of Seribu Islands Regency. The primary economic source for the Islanders is fisheries and tourism sector, and it contributes for 0.48 percent on regional GDP. Compared to other municipalities, the human development index in this regency is the lowest at 70.11 percent.

Figure 3.6 Map of Seribu Islands Regency



3.4 Summary

Given the geographic and demographic characteristic, the Jakarta Province and its six municipalities have unique challenges and potentials towards sustainable development. As an emerging urban city in coastal area, Jakarta is prone to climate-related disasters, especially the northern and east districts, including the North Jakarta and East Jakarta Municipal, and Seribu Islands Regency (Yoo et al., 2014). While the West Jakarta Municipal faces the high population density and cramped slump area issues, the South Jakarta and Central Jakarta was gifted with relatively high economic size in term of regional gross domestic product (GDP), and the human development index. The summary is presented in **Table 3.2**.

Table 3.2 Summary of Case Study Sites

	Municipalities in Special Capital Region of Jakarta Province					
	Central (10000)	North (20000)	West (30000)	South (40000)	East (50000)	Islands (60000)
Area Size (km ²)	48.13	146.66	129.54	141.27	188.03	8.8
Population	921,334	1,781,316	2,528,065	2,226,830	2,892,783	23,897
Population Density (km ⁻²)	19,143	12,146	19,515	15,763	15,385	2,716
Regional GDP contribution (%)	26.87	18.86	14.86	22	14.86	0.48
Human Development Index (%)	80.49	79.47	80.47	84.13	81.61	70.11

Source: *Jakarta in Figures 2017, 2018*

Chapter IV: Results and Discussion

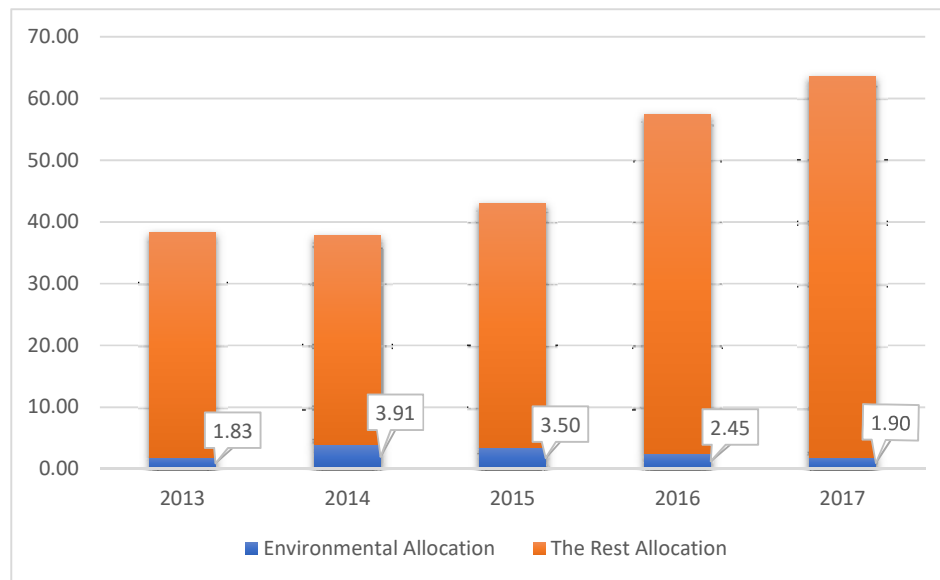
4.1 Analysis on Provincial Budget Posture

Provincial budget discretion is made to ensure the government achieve the medium-term and long-term objectives and to solve several existing problems in the region. Jakarta Government were prioritizing on related social issues as the primary program that expense a significant portion of the budget. Those three biggest sectors were education, transportation and traffic management, and health (BAPPEDA Provinsi DKI Jakarta, 2018). These three major sectors took portion as much as 27.5% (17.49 trillion IDR), 18,15% (12.73 trillion IDR), and 13.0% (8.27 trillion IDR) of total regional budget allocation.

As the research objective stated on the previous chapter, this study attempts to analyse the environmental expenditure within Jakarta's Provincial Budget. This research employs data analysis of annual budget documentation in 2013-2017, which is one period in Jakarta's Medium-term Development Plan (RPJMD 20013 - 2017). In order to attain this goal, aforementioned methods had been operated for collecting and data analysis.

Collected data were organized into categories and arranged from the function of Environmental Affairs to segregate with the other budget function. The result is presented in **Figure 1.1**. During the observed time between 2013 and 2015, the provincial budget was increasing from 38.3 to 43.01 trillion rupiahs, with an average growth by 10 percent occurred in 2015. However, in the following year, this number rose significantly at about 30% from the former fiscal year to reach 57.36 trillion rupiahs and recorded as the highest within the last Jakarta's RPJMD period.

Figure 4.1 Jakarta's Provincial Budget Posture
(trillion Rupiah)



On the other hand, environmental affairs portion took an only small part in Jakarta's budget posture. As shown in **Figure 4.1**, it easy to understand the small portion of the environmental protection budget that was allocated over the five years, which the five years average showed 6.1% of total provincial budget allocation. The percentage was always less than ten and experienced a negative trend since 2014 to the most recent recorded data. Refer to previous study in national level, Haryanto & Nurkholis (2014) argued that, to significantly yield outcomes, environmental and climate change based budgeting requires of at minimum 3.0 – 5.0 percent of the total APBN / APBD expenditure.

The similar findings also occurred in the national level of Indonesian budget, in which, the initial analysis of environmental expenditure between fiscal year of 1995 and 1999 showed the decreasing nominal of green budget occurred during the observation period. However, regarding the historical fact of economy crisis in 1997-1998 in

Indonesia, the overall budget in other sectors also fell sharply far below those in 1995 (Vincent et al., 2002).

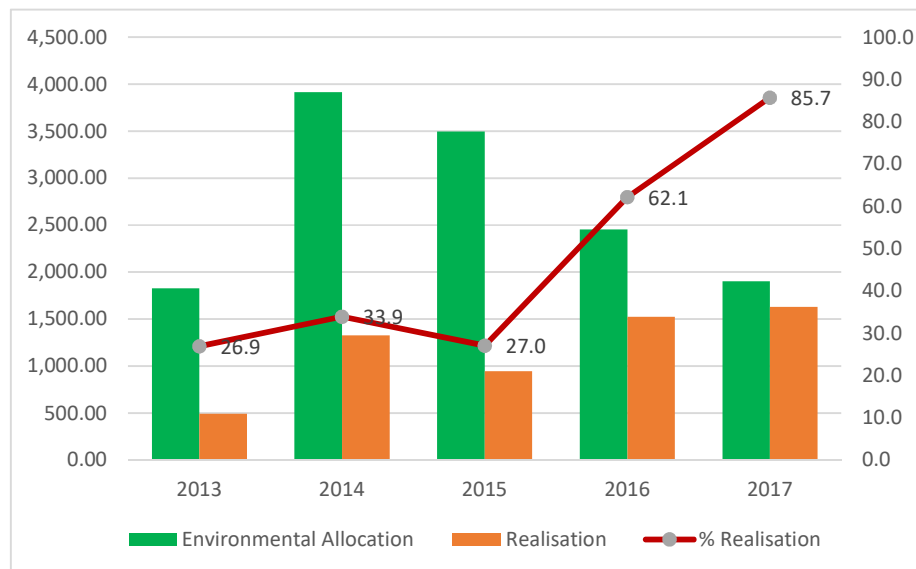
Furthermore, this study explores the real expenditure of allocated budget on environment affairs subject in Jakarta. The graph shown in **Figure 4.2** explains that only a small portion of the environmental allocated budget was utilized from 2013 to 2015, which the average of percentage realization is 29.3% within the observed years. The lowest budget absorption for this budget occurred in 2013, in which there were only as much as 491.05 billion IDR of total 1.825 trillion IDR spend (26.9%). The gap between allocated and utilized budget asserted the weakness of local government organization in budget policy implementation.

The Local Development Planning Agency of Jakarta Province (BAPPEDA Jakarta), in their report, stated that in a planning perspective, these phenomena indicated overly optimistic targeting from local government organizations in composing their budget plan. Even further, some LGO were suspected to improperly proposing bulk shape budget without inclosing the detailed budgeted activities (Badan Perencanaan Pembangunan Daerah DKI Jakarta, 2018). For instance, in 2014, the budget allocation in Agriculture and Forestry Office has one particular program for mangrove forest development that did not contain any specific activities and detailed expenditure plan on it. Thus, in the end of fiscal year 2014, the program did not utilize the allocated environmental affairs budget significantly, which is very necessary in improving coastal environment sustainability.

Another study focused on government institution budget utilization stated that low budget absorption in ministries and LGOs were caused by the lack of proper, clear, measurable in conceptual and planning process, therefore obviously affects in budget usage direction (Sinaga et al., 2016).

Moving forward from 2016 to 2017, from general sight, we can confirm that the percentage of the green budget actual spending was getting higher, as it touched the level of 62.1% and 85,7% respectively. The gaps between allocation and realization budget on environmental affairs in these years was showing a declining trend. Concluding the analysis, generally, the level of budget realization was at 47.1 percent within the observation year span.

Figure 4.2 Jakarta’s Provincial budget allocation and budget realization on environment affairs (billion Rupiah)



Source: Research analysis, 2019

One practical explanation for the step increasing percentage actual spending of environmental affairs allocated budget is the streamlining organizational structure in Jakarta Provincial Government that was legally signed in 2016 stated at the local regulation document (*Peraturan Daerah Provinsi DKI Jakarta Nomor 5 Tahun 2016*). The most significant cause for this phenomenon is when the Sanitary Office merged with the Environmental Management Agency under the budget of Environmental Affair. The Sanitary Office is known mainly for their routine tasks in city cleanliness

and waste management that frequently spends money on its labour-intensive works. The data analysis of 2016 shows the Sanitary Office itself recorded actual spending as much as 246.3 million IDR out of 264.3 million IDR, equivalent with 93% budget utilization, and ultimately give positive contribution by 17% to the total budget utilization of environmental affairs.

4.2 Main Purpose of Environmental Expenditure

The analysis for public environmental expenditure review draws a comprehensive and reliable statistics on environmental expenditures and revenues, and has a purpose to measure the effectiveness of environmental protection policy. A research in Brazil (Young, Rocha, Bakker, & Santoro, 2012) employed annual federal and budget documents in 2003 – 2010 period of time to examine the ‘green budget’ spending. Similar research by Beke-trivunac & Jovanovic (2014) studied the main purpose of environmental protection expenditure from a single year budget analysis based on Classification of the Functions of Government (COFOG).

The COFOG, developed by the Organisation for Economic Co-operation and Development (OECD), enables local government organizations (LGOs) to analyse the economic effects of government expenditures in terms of cash transfers, purchases of goods and services, production of goods and services, and investment in nonfinancial assets. Compared to previous research, Vincent et al., (2010) presented an initial analysis of environmental expenditures in the national budget of the Republic of Indonesia using the classification that they called as Core.

In deeper analysis, this study breaks down the Jakarta’s budget in category of environmental affairs by its main function/purpose based on the COFOG classification, as presented in **Table 4.1**.

**Table 4.1 Environmental Expenditure of Jakarta Province by main function/purpose
(million Rupiah)**

COFOG Classification	2013	2014	2015	2016	2017
Waste management	0.0	0.0	0.0	20,977.0	32,220.0
Wastewater management	0.0	0.0	0.0	0.0	0.0
Pollution abatement	30,273.2	29,222.7	33,925.8	7,674.7	5,055.1
Biodiversity and landscape protection	1,502,696.5	3,313,075.2	2,977,674.6	1,643,956.4	967,873.0
Environmental research and development	159,428.0	67,359.2	24,577.6	13,145.3	8,080.0
Environmental protection not elsewhere classified	133,062.3	548,870.9	461,837.9	767,866.4	890,579.7

Source: Research analysis, 2019

In **Table 4.1**, it is clearly presented that the biggest budget allocation is allocated for the function of biodiversity and landscape protection among any others, even though the figures are keep decreasing since the 2014. Similar to it, the budget function on pollution abatement, and environmental research and development has also experienced the down turn until to last observed data in 2017. However, the unspecified function on environmental affairs budget, in general, was keep increasing over the observed period. This non-specific fund is spent on general purpose and administrative activities in LGOs of Provincial Government of Jakarta Province, such activities as regulation synchronization, officials' service improvement, internal financial management, and many more.

Moreover, from the same processed data in Table 4.1, the environmental affairs budget for waste management appears in the table column of 2016 and 2017. It confirms the aforementioned analysis about the merger of the Sanitation Office, formerly categorized in Public Works Affairs, with the Environmental Management Agency, as the impact of provincial regulation implementation (*Peraturan Daerah Provinsi DKI Jakarta Nomor 5 Tahun 2016*) that in some extent alters the budget configuration. On the other hand, the funds for wastewater management are not found

in the COFOG classification because, until 2017, this budget function was still included outside the environmental affairs budget.

4.3 Environmental Affairs Budget in the Municipal Level

The budget of the environmental affairs is also distributed to the six municipalities of Jakarta Province, even though the portion is not equivalent one to another municipality. Each municipality has different challenges and problem-solving approaches in environment sector due to its area size, population and geography characteristic. The large area size and the high population number might become the primary reason for East Jakarta to allocate relatively big portion for environmental protection budget rather than others.

Previous study of potential climate-change related vulnerabilities in Jakarta provided the challenges and current status of environmental hazard, and socio-economic dimension that can be useful for municipal leader in preparing the budget needs. The regional vulnerability can also become one indicators for the environment problems and challenges, such as pollution, excessive extraction of groundwater, flood, landslide, that require extra treatment from LGOs (Firman et al., 2011).

In general, the five-year budget allocation on the environmental affair at the provincial level (shown in **Figure 4.2**) is not being portrayed in exactly similar proportion in every municipal budget posture. The diminishing trend of the environmental budget from 2014 onward in provincial level does not occur in the North Jakarta and the South Jakarta as shown in **Figure 3(c)** and **Figure 3 (e)**. However, the trend of percentage budget realization in most municipals show resemblance to the percentage budget realization in the provincial level where the line exhibits inclining movement from 2015 to 2017.

Figure 4.3 Budget allocation and budget realization on environment affairs in municipal level (million Rupiah)



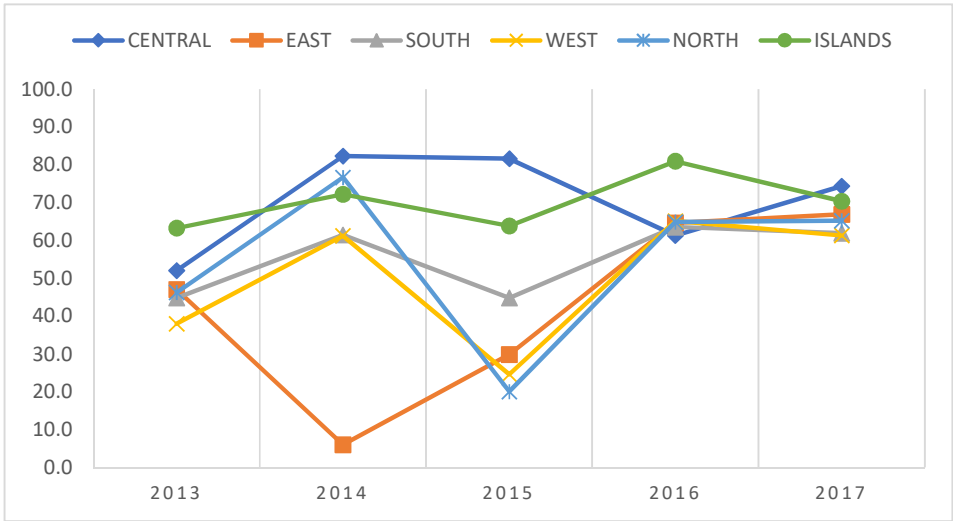
Source: Research analysis, 2019

The budget realization of the Central Jakarta Municipality and the Seribu Islands Regency were always higher than the overall budget realization in the provincial level at 47.1% (presented in **Figure 4.3 (a)** and **Figure 4.3 (f)**). However, the environmental affairs budget in the islands was relatively small compare to other municipalities.

The lowest budget absorption occurred in 2014 by the government of East Jakarta Municipality, that was only 6.1% budget (16.9 million IDR out of 280.3 million IDR) actually spend within the whole fiscal year (shown in **Figure 4.3 (b)**). Nevertheless, within the following 3 year, the performance was getting better as the budget realization line showing a positive trend.

To be able to analyse the general pattern in municipality budget utilization, the six data of green budget expenditure were combined into one scatter plot diagram, as presented in **Figure 4.4**. The graph gives illustration that in the earlier stage, 2013 until 2015, the capability of LGOs to properly utilize their budget was largely different in every municipality. However, since the 2015 to 2016, it can be observed that uniformity was formed in term of environmental affairs budget utilization. The government in municipality seems to be more accurate in planning their budget and better in managing the public expenditure.

Figure 4.4 Percentage of Budget Realization on Environmental Affairs Amongst the Six Municipalities



Source: Research analysis, 2019

4.4 Budgeted Activities on Environmental Affair

The Provincial Government of Jakarta, in development plan documents, clearly stated that the environment become one of their priorities in the city development. The present of public funding also portrayed their awareness and commitment to take into account the changing environment into consideration in Jakarta future urban development (Firman et al., 2011).

This study attempts to explore the activities underwent by the LGOs in utilizing the Environmental Affairs budget to bolster the city plan in environmental sustainability. The activities are arranged by the environmental expenditure main function/purposes using the COFOG classification, those are: waste management; pollution abatement; biodiversity and landscape protection; and environmental research and development.

4.4.1 Waste Management: Bantar Gebang Integrated Waste Disposal Site

Bantar Gebang started to receive solid municipal waste from Jakarta since 1989 with several expansion area operation along with the waste production in Jakarta that continues to rise and is now estimated at 6,000 tons per day (illustrated in **Figure 4.5**). In 2008, Jakarta Provincial Government signed cooperative contract with two waste management companies as the main operators of Bantar Gebang final disposal site. However, the collaboration work agreement was stated to be terminated since operators were failed to manage and to process waste in accordance to national regulation of waste management.

In addition, study of Mulyadin, Iqbal, & Ariawan (2018) confirmed the conflict between Jakarta Provincial Government and company of PT Godang Tua Jaya, as main contractor, culminated in contract termination of Bantar Gebang

Final Disposal Site Management. The inability to build intermediate treatment facility and to provide electricity from waste becomes the primary reason for the legislative and executive of Provincial Government of Jakarta in ending the collaborative work.

Figure 4.5 Bantar Gebang Integrated Waste Disposal Site



Source: Environmental Office of Jakarta Province

The situation forced the local government to take over municipal solid waste management and restructure the budget posture in 2016. The most significant taken step was merging between Sanitary Office, which is responsible for managing the final disposal site, and Environmental Management Agency into one body named Environmental Office, and later on, brought its annual expenditure from General Work Affairs into the Environmental Affairs.

From the analysed data, this study finds new expenditure items in Environmental Affairs category which are related to sanitation and waste handling routine work. These new merged items are relatively high in actual

spending number. In 2016, the sanitary office itself contributed as much as 17% out of 62% of environmental affair budget realization.

4.4.2 Pollution Abatement: Vehicle Emission Test

Since 2005, Provincial Government of Jakarta has enforced the regional regulation for Air Pollution Control (*Peraturan Daerah Nomor 2 Tahun 2005*) in order to improve the air quality. National Socio-Economic Survey (SUSENAS) in 2006 reported that health complaints related to respiratory problems in Jakarta were the highest (52,2%) among any other health issues (Zainuddin, 2010). In line with aforementioned finding, Firman et al., (2011) stated in their research that as many as 24 out of 44 localities (sub-districts) distributed across Jakarta were experiencing air pollution.

Air pollution in big cities, including Jakarta, is mostly caused by potential factor of the transportation sector, especially motorized vehicles. This phenomenon positively affects air quality and also the level of health of urban dwellers. Regular vehicle service and maintenance, and emission tests are believed as two most effective forms of transportation sector pollution control.

Periodically, Jakarta's Environmental Office holds the free emission test for vehicle owner registered in administrative region of Jakarta Province, especially in special occasion, such as Earth Day or the monthly Car Free Day event. The detailed public funding for these events can be obtained from the budget documents at Activities sub-level. The yearly expenditure for vehicle emission test is presented in **Table 4.2**.

**Table 4.2 Budget for vehicle emission test
(Million rupiah)**

Budget function/purpose	2013	2014	2015	2016	2017
Pollution abatement					
Vehicle emission test	1,180.0	600.0	0.0	801.4	697.5

Source: Research analysis, 2019

Over the five years, an inconsistent budget plan for this program can be observed by the absence of budget allocation in 2015, even though vehicle emission test was clearly stated in RPJMD 2013 – 2017 embodied in the details of policy directions.

4.4.3 Biodiversity and landscape protection: Provision of green open space

The essence of the problems that occurred in cities is the rapid conversion of land without the performance of budgeting for regional obligations to meet the city's 20% public green open space (GOS) (Suwarli et al., 2012). In addition, from an empirical quantitative study, public goods in the form urban open space are unexpectedly giving ease effect in reducing pollutant effort with lower cost than what is widely assumed (López et al., 2011).

Previous empirical study found that the expansion of government spending with greater emphasis in public goods may have an unexpected effect: it could make reducing pollution easier to achieve entailing much lower costs than what is usually assumed (López et al., 2011). This finding could strengthen rationale for policy plan in air quality improvement to take significant portion in environmental affairs budget.

Similarly, particular study on Jakarta's green open space (Setiowati, Hasibuan, & Koestoer, 2018) brought an important highlight, that Jakarta has

been loosed GOS by 23% from 1983 to 2013. Currently, the green zone size is only about 4.65% (3,080.89 ha), and notably small referred to the target at least 20% of the total provincial administrative area, as mandated on regional regulation (*Peraturan Daerah Nomor 26 Tahun 2007*).

However, Provincial Government of Jakarta has composed the planning of green open space provision as much as 11.7% (7,749.36 ha) of the total area, as it stated on Jakarta's Spatial Planning 2020. For this reason, significant amount of budget was allocated under particular program named the Improvement of Green Open Space Program inside the Environmental Affairs budget as presented in **Table 4.3**.

**Table 4.3 Budget for (program) Improvement of green open space
(million rupiah)**

Budget function/purpose	2013	2014	2015	2016	2017
Biodiversity and landscape protection					
Improvement of green open space	1,129,184.4	410,357.9	166,318.5	5,330.0	5,822.5

Source: Research analysis, 2019

From the above table it can be seen that the budget allocation was dwindling within the observation time, where the budget for improvement of green open space program in 2017 was only 0.5 percent of the budget in 2013 was. For this program, significant amount of money was spent for land acquisition activity that is the main issue in public area provision, since the land scarcity raise up its price. Limited non built-up land and the domination of private land ownership are, most of the time, obstacles in the provision of public open space for local governments (Firdaus, Sumabrata, Tampi, & Simanjuntak, 2019).

4.4.4 Environmental research and development: Climate change mitigation and adaptation

Climate change is one critical issue for Indonesia as a tropical country, and, especially, for Jakarta as a highly-populated urban coastal area. Rising sea levels threaten major part of tropical islands with flooding and storm surges. Moreover, it affects salination of coastal aquifers, as sea water intrusion is getting further, and destruction of coastal ecosystem (Hardisty, 2010). Climate change has also affected the pattern of rainfall each year, increasing surface temperatures and changing wind patterns. In addition, climate change will also increase the threat of hydro meteorological disasters in Jakarta including floods, tidal floods, and droughts.

Until 2011, Provincial Government of Jakarta has no particular agency or institution assigned to oversee account risk and vulnerability assessment, to promulgate the climate-related information to the public largely. Natural disaster like rising seawater levels and the occurrence of strong tropical storms are notably threats in which the city is virtually have no preparedness (Firman et al., 2011; Steinberg, 2007).

Regarding the aforementioned concerns, adaptation efforts are needed to increase community resilience in the face of climate change. In realizing this, this is done through improving institutional quality, human resources, and governance, including improving government and community capacity and preparedness, developing data and information related to climate conditions and redesigning all aspects of development programs so that they are adaptive and

responsive to climate change (Badan Perencanaan Pembangunan Daerah DKI Jakarta, 2013).

The budget arranged by Provincial Government of Jakarta in coping with climate change issue in the RPJMD 2013 – 2017 is presented in **Figure 4.3**. The program was named Climate change mitigation and adaptation program, which comprise activities that mainly focused adaptation sectors such as strengthening the community capacity and preparedness, coaching for pro-climate villagers, and improving information technology for greenhouse gas emission monitoring.

**Table 4.4 Budget for Climate change mitigation and adaptation program
(million rupiah)**

Budget function/purpose	2013	2014	2015	2016	2017
Environmental research and development					
Climate change mitigation and adaptation program	481.8	2,407.1	1,167.7	424.7	473.6

Source: Research analysis, 2019

From the table, it can be seen that the allocated budget for this program was rocketing from 2013 to 2014, similar trends with the environmental affairs budget in general perspective. Later, the budget was keep declining about to only remain one-fifth in the year of 2016, then slightly increased in the end of observation time. In addition, from the RPJMD 2018 – 2023, the government shows higher concern on climate change mitigation and adaptation program by articulating the pro-climate policy in the sixty list of Regional Strategic Action (*Kegiatan Strategis Daerah*) Jakarta Province.

4.5 Barriers and Drivers in Implementation

The interviews are intended to explore the understanding of key actors about their comprehension regarding environmental affairs budget policy implementation in Jakarta Province. From the interview results, the study reveals about the portion of budget prioritizing in planning process, as the informant from Jakarta's Development Planning Agency (I-1) pointed out *"..basically, there is no particular guideline in proposing the budget proportion for environmental affairs, we just combined the LGOs and community needs with the regional policy direction and national agendas. The predetermined budget portion is only for health affairs and educational affairs.."*

The informants admitted that many factors are influencing the policy implementation in the function of environment management. However, the representative of two offices (I-2 and I-3) failed to identify the trend of budget allocation in these affairs, but they confirmed about the improvement of budget realization, as the respondent from Jakarta's Environment Office argued *"..I am not sure about the trend of budget allocation, but, it might increase due to higher number of tasks and responsibilities being charged to our office recently. However, we achieved improvement in budget utilization throughout the last two years since it largely affecting our incentive reckoning.."* (I-3).

Therefore, in order to explore the influencing factors in policy budget gaps, in this case, the allocation and realization, this study conducted in-depth interview focus on five key themes, those are the collaboration, political leadership, social awareness, financial support and staff capacity, and misalignment policies as the analysis framework.

4.5.1 Collaboration

To explore the collaboration aspect in implementation of environmental affairs budget, respondents were asked about how do amongst offices manage communication and supportive effort in order to achieve common objectives in environmental management function? Did collaborative action between institutions usually occur while conducting tasks? From the interview result, it can be found that overall informants admitted well-managed collaboration throughout their working experience. In instance, the representative of Jakarta's Development Planning Agency argued that in the effort of combating climate change, the provincial government of Jakarta is coordinating the leading sectors in environmental management and transportation in order to boost up the implementation process, as he mentioned:

“in combating climate change, our actions focus on two sectors those are the waste management sector to reduce methane gas generation and transportation sector that significantly contribute to high carbon dioxide level in our city.” (I-1).

Similarly, the respondent from Jakarta's Forestry Office articulated collaborative works in their responsibility of mangrove forest protection with higher-level government and the private sector. As he pointed out in the interview session:

“We have conducted collaborative works between central government or even with privates' sector for a couple of years. For example, in the mangrove forest conservation program in the coastal area of North Jakarta Municipality, we work, hand in hand with the Indonesian Ministry

of Environment and Forestry. There is private sector collaboration work for this program, as well.” (I-3).

Collaboration in managing the environment in term to policy implementation is not only inter-government and intra-government institutions involvement but also the social organisation. The interview with environmentalist community representative revealed that for some projects and occasions, the collaboration between the community and the municipality often occur and lead to high achievement. The collaborative works are also meant to increase public participation and awareness toward environmental affairs. The informant statement as follows:

“Despite of our contribution in planning process, the municipality involves us in the execution of some program as well, especially those which come from our aspiration. For instance, for the ‘Program Kampung Iklim’ that recently draws significant attention from society to get involved. We join and help the government to educate the society about environment management and adaptation to climate change.” (I-4).

The interview results give a profound perspective about the collaboration aspect in environmental management, that involves multi-level governments and cross-sectoral organizations, apparently drives implementation of the policy and positively affects the outcomes. Aa Oulahen et al. (2018) stated that having good collaboration in regional and local government creates opportunities in policy implementation.

4.5.2 Senior Political Leadership

In exploring the aspect of political leadership, respondents were asked about how does the leader emphasize its policy priority on environmental function via vision and missions? In rendering the policy priority, does the leader express its partisanship in supporting environment quality improvement? From the interviews, this study reveals contradictory findings within the government officials regarding the political leadership aspect. The respondent from Jakarta's Forestry Office believed that political leaders, in this case, is the governor, indirectly shows their proponent side toward environmental management in several policies. As the chief of program and budget sub-section pointed out:

“From the former governor to the recent one, all of them show concern toward environment quality improvement in the form of policy and regulation. They approach in different methods but have similar main goal one way or another.” (I-2).

The respondent of Jakarta's Development Planning Agency expressed similar views during the interview. Regarding his argument, the governor believed that many urban emerging issues are related to missing management of environment sectors, such as flooding and air pollution. For instance, some funding for forest conservation in the neighbouring province was conducted in order to control water runoff towards Jakarta.

“The governor brings environmental sense approach to resolve several noticeable problems within our provinces, such as annual flooding disaster or air and water pollution. We concern about land transformation in the forest area of Bogor Regency that gives impact to runoff water volume towards Jakarta. Therefore, we build collaborative policies

between regional government to find out better solutions for both actors.”

(I-1).

The interview with the respondent from a community representative shows the contradictive result to government officials' views. She felt a lack of political leadership regarding environment concerns within the public space. She and his environmentalist society forum have long waited for a member from the house of representatives to bring meaningful sense in environmental quality improvement in the public. However, it has not happened yet. As she pointed out during the interview:

“To date, I cannot identify whether any political leader from our municipality that has a significant concern to environmental quality. This recent of legislative recess period, two parliament members showed up in our neighbour, both of them did not discuss anything much about environmental improvement though.” (I-4).

Support from the regional leader or council, as well as a political figure, are critical to advancing the policy agenda since they are able to influence political priorities (Oulahen et al., 2018). Interview results on the political leadership aspect show both barrier and driver in an equal sense for implementation of environmental affairs budget policy.

4.5.3 Public Awareness

In order to explore barrier and driver from public awareness aspects, respondents were asked about how the society shows concern toward environmental management agendas? Does the society willing to participate in supporting environmental policy addressed by the provincial government? From

the interview, the informant from Jakarta's Environment Office gives a statement about the lack of public awareness even since from the program planning process in the village level. He pointed out as follows:

"I can say that the Jakarta society, in general, is not completely aware of environmental quality. It can be seen from their aspiration during the participatory planning process within the neighbourhood or village level. Their demands on us are apparently only basic services that, basically, are our routine tasks." (I-3).

A similar finding is obtained from the respondent as a representative of society itself. She complained about the diminishing awareness in the neighbourhood regarding take care of its surrounding environment as the smallest responsibility. She also added that the society is likely to charge all responsibility toward the government. As she stated:

"The community awareness toward environmental is getting lower, especially since the government provides more public facility maintenance officers into our neighbourhood. Nowadays, our community are highly reliant on them to maintain everything. Lately, the number of community services in our neighbourhood is also getting fewer. Our society tends to give up everything toward government responsibility" (I-4).

According to Local Parliament Secretariat of Jakarta Province, there were no related environmental issues, such as sanitary or waste management, being reported by public delegation to the representative member within 2012 – 2016 (*Badan Pusat Statistik Provinsi DKI Jakarta, 2018*). During the period, problem type of governance and welfare became prominent aspiration from society. The finding asserts that environmental quality issues did not profoundly drew in

Jakarta's community consideration, thus become barriers in policy implementation of environmental management.

4.5.4 Financial Support and Staff Capacity

In exploring the aspect of financial support and staff capacity, respondents were asked about how do the organization manage given resources in conducting their tasks? Do staff number and capacity fulfil the office needs in order to achieve policy goals? The informant argued that the future challenge in environmental management function would be very complicated. Thus, the number of qualified employees is needed. He confirmed that the Jakarta's Environmental Office has sufficient manpower for fieldwork. However, he complained about the desk work support that getting fewer year by year as many of the staffs are entering retirement period. As stated by the chief of program and budget sub-section:

"In my opinion, the staff capacity is still inadequate, especially to meet the future challenge in an environmental management function. Moreover, there are many job positions for structural officials that are still empty for a long time because of retirement, therefore hamper our daily tasks." (I-3).

A similar finding was articulated from another respondent as a representative of Jakarta's Forestry Office. He confirmed that another issue in completing tasks in governance is the lack number of staffs since "...the last staff hiring was in 2015. In fact, we still need a more qualified employee to help us accomplish these challenging responsibilities." (I-2). From the content analysis, this study finds that the staff number in Jakarta's Forestry Office was decreasing

from 835 to 747 employee from 2015 to 2017 (*Badan Pusat Statistik Provinsi DKI Jakarta*, 2018).

This study explores society perspective by interviewing the presentative of environmentalist society who has vast experience in task collaboration with the government officials related in an environmental management function, such as Jakarta's Forestry Office and Jakarta's Environment Office. From this respondent, such a similar finding was confirmed about the inadequate quality of employees in these sectors. As pointed out by the coordinator from West Jakarta Municipality Environmentalist Society Forum:

“The government official's performance, I just can say, is decent, however, it is not exactly as good as I expected it should be. I experienced effective coordination with the West Jakarta's Forestry Office or Water Management Office in conducting our activities in the society, though, I believe that still their performance should be improved” (I-4).

According to the interview, both from the inside government organizational perspective and the society's perspective show a common opinion about the lack in staff number and officials' capacity in the sector of environmental governance of Jakarta province. The findings demonstrate that adequate staff capacity is one significant factor to be solved by the government to achieve better implementation in environmental management policy, or else it is potentially becoming a significant barrier.

4.5.5 Misalignment of Policies

In exploring the policies alignment, informants were asked about the guideline in implementation of environmental affairs policy within regional

government and between levels of government, in this case, the provincial government and central government. The aim is to identify whether in every level of provincial and local government knowing its primary task, responsibility and the national strategy embodiment in regional regulation. In general, the LGOs that directly utilize the budget does not have an adequate understanding of national strategy in environmental management policy due to minimum exposure in national level forums or strategic policy planning involvement. The interview resulted that the sub-section of planning and budgeting of Jakarta's Environmental Office was not experiencing clear emphasize of strategic policy from central government.

“Once again, from experience in our office, we feel that what the national level required for us in planning our programs and activity was too loose. So, we do our job and responsibility in environmental management as far as what we usually did before. Consequently, sometimes, we were asked about certain progress in environmental indicator that we never heard or were requested before in the planning process” (I-3).

Besides, the respondent from Jakarta's Forestry Office admitted that regulation in procurement system, most of the time, creates difficulties for his organization in executing specific programs. Newly adopted policy in the procurement process often appears not to be flexible enough with the organization needs. He also added that difficulties in GOS provision emerge from the process of land acquisition in which many of them associated with legal disputes. As the interview revealed:

“We have sufficient budget resources for green open space provision program. However, the procurement process often hampers us in utilizing

them. The system is too strict that small errors in the expenditure object description will affect procurement failure. This issue created ineffectivity in our expenditure side, thus widening gaps between the allocated budget and utilized budget until less than sixty percent in 2014. Moreover, there are lands with a legal dispute; for instance, it does not have legal documents, that makes complicated the acquisition process” (I-2).

This finding confirms that when the policies between the higher level of a governance body and the lower one are not adequately aligned, consequently, it leads to an imperfect planning process that was ultimately resulting in implementation deficit for environmental management policy. The misalignment regulation between newly adopted procurement system and the demands of flexibility purchasing mechanism results in significant gaps between budget allocation and realization.

The actors tend to take routine tasks from their organizational culture as a pragmatic solution to respond to unclear guidelines. Uittenbroek (2016) argued that organizational routine gives benefits by exhibit continuity in interaction and coordination between actors, however, paradoxically it also hampers the adaptation regarding new methods or objectives entering the existing order.

4.6 Summary

The average environmental affairs budget allocation in Jakarta was 6.1 percent of the total provincial budget during the fiscal period of 2013-2017 and showed a declining trend from 2014 onward, while the entire regional budget posture was kept increasing. This number is relatively more significant compared to the same budget allocation function at the national level at approximately 0.8-1.0 percent. However,

there was a gap between the allocated budget and the budget realization, in the five years observation, as much as 52.9 percent due to low average budget utilization within the five years (47.1%). Budget analysis in municipal level demonstrates a broad variation of budget realization trends over the five years, however since 2015 to 2017, it can be observed that the trends uniformity is established in a positive track. According to COFOG categorization, Biodiversity and landscape protection is the most allocated budget purposes/function in Jakarta's environmental affairs, in which most resources is assigned for Green open space provision program.

Moreover, the interview analysis with key actors in environmental budget policy points out that misalignment of policies in the form of procurement regulation primarily hampers its implementation, along with other discovered barriers namely public awareness and staff capacities. The aspect of collaboration demonstrates leverage for policy implementation in all respects, meanwhile, political leadership evinces a moderate signal in-between barrier and drivers sides.

Chapter V: Conclusion and Recommendation

5.1 Conclusion

Environmental sustainability, as an evolving paradigm resulted through a long journey of interactions between economic, social, political and environmental development, has also influenced the provincial government of Jakarta in composing its policy direction. National green economy initiatives as a guideline towards sustainability development, unfortunately, has not been able to push environment function into a higher position in the budgetary debates, thus the allocation for environmental affairs portion tend to be marginalized in national state budget documentation. This study, therefore, explores the existence of the 'green budget' and its utilization within the Jakarta's Provincial Budget during the Regional Medium-term Development Planning 2013 – 2017.

Analysis on collected data derived from Local Development Planning Agency showed that the increasing of total provincial budget was, unexpectedly, has a contrary pose to the allocation of environmental affairs budget over the five years observation. In average, the 'green budget' posture of Jakarta Province was 6.1 percent, and relatively higher compare to the national level at 0.8 – 1 percent in 2016 only. However, the realization was quite low which had an average actual spending at 47.1 percent within the five fiscal years.

Detailed analysis on budget function/purpose in environmental affairs using the COFOG classification showed that the biggest allocation was on Biodiversity and landscape protection. One program included in this function wan Green Open Space

(GOS) Provision, which most of the allocated budget was meant for land acquisition and city park improvement.

Budget allocation and realization for environmental function in the municipal level was vary, which are hardly to indicate the resemblance with what was occurred to the provincial level. The East Jakarta Municipality experienced the biggest 'green budget' allocation in 2014, although, utilized it at the lowest level at the same time. On the other hand, The Seribu Islands Regency relatively comprised low budget allocation, yet, can be equalized with The Central Jakarta Municipality and The South Jakarta Municipality in regards actual budget utilization. Generally, the five municipalities performed better environmental affairs budget utilization in 2016 and 2017 which was at about 60 percent.

According to aforementioned summaries, there is averagely 52.9 percent budget gaps emerged between allocation and realization during 2013 to 2017. To investigate the results of budget analysist deeper, this study further explores potential barriers and drivers in the implementation of environmental affairs budget policy in the regional government of Jakarta Province. There are five key aspects in policy implementation that become a focus for the interview process with key actors in environmental governance; those are collaboration, political leadership, public awareness, financial and staff capacity, and misalignment of policies. From the in-depth interviews, collaboration is the only aspect that appraised to be a significant driver in policy implementation in which all actors confirmed to have adequate experiences in collaborative works. On the other hand, the political leadership aspect is equally judged as both barriers and drivers for implementation of environmental management policy by which respondents had contradictory arguments. Meanwhile, aspects of financial and staff capacity, public awareness, and misalignment of policies are believed to hamper

the policy implementation the most. Misalignment of procurement policy and the purchasing mechanism of LGOs, therefore creates significant gaps between the allocation and realization budget in provincial government of Jakarta in 2013 – 2017.

5.2 Recommendation

Basically, environmental sustainability concerns were adequately clear stated in the Regional Medium-term Development Plan 2013 – 2014 as legal embodiment of Provincial Government of Jakarta's support towards national policy direction of green economy and sustainable development, furthermore, it reflected on the budget allocation for the public environmental expenditure. Good implementation is essential in regards the budget environmental affairs budget utilization, therefore, the expected good environmental quality for the urban city life of Jakarta can be achieved.

Strict control from Development Planning Agency towards the internal budgeting process within the LGOs and the openness for reinforcing public participation, such as NGOs and communities, are crucial to obtain different perspective from the policy target. Equally important, to promote transparency in budget utilization process to the public, as well as information dissemination networks in environmental management will improve local society awareness. On the other hand, to obviate the low budget realization, LGOs need to take into account the importance of providing a very high level of granular activity detail in designing environmental management program.

This research is a beginning, there are far more components to effective budgeting and reporting practices, in regard to environmental management that can be addressed here. For example, specific budgeted program in climate change policies, provided in budget functions other than environmental affairs, is estimated to draw bigger fiscal

resources as the global warming issues attracting even higher public attention time by time.

The provincial government of Jakarta have to overcome barriers that emerged in the policy implementation process and must maintain the drivers as the potential value in organization culture. According to barriers and drivers analysis, there is three central aspects that the government should address as follows:

1. Staff capacities. Not only the capacity, the sufficient number of capable staffs are also required in environmental management endeavours. There should be no more vacant position for a quite long time in the organization structure to avoid the 'brain drain' phenomenon. In this respect, the government have to conduct employee hiring for government official positions, as well as to improve the existing staff capacity.
2. Public Awareness. Community involvement in planning, formulating, and executing is crucial in order to foster awareness. Accordingly, the government should formulate more acceptable participatory action with the communities to the lower level. Besides, local governments should ensure every policy agenda is available and accessible for all stakeholders engaging the process as well as common public. In this global era, this attempt should be more feasible to carry out. The government could utilize various media, both traditional and digital, to publish every information about environmental management policies.
3. Policy Alignment. The central government should formulate a comprehensive guideline for regional government in an environmental management function. Also, the regional government should facilitate to pursue coordination improvement between working units to achieve coherent policy implementation.

This constructive organizational culture would urge local governments to implement its policy in more effectively and efficiently.

5.3 Limitation

Considering the fluctuation in macro-economic condition, one that cannot be ruled out is the inflation that occurred in the span of the observation period. The inflation is affecting the nominal of output from the economic activity at a certain time. Consequently, the money values and price of goods becomes relative in regard to the aggregate of economic size on that particular year.

This study extracted the current data of detailed regional budget documents from 2013 – 2017, which during this period the economic condition experienced the alteration in the inflation rate. Accordingly, the absence of using constant prices for budget analysis is realized as one limitation in conducting this research.

The interview was conducted via telephone conversation using the Voice over Internet Protocol (VoIP) service on WhatsApp mobile application in which reliance on mobile connection reliability. The author had tried to curtail misinterpretation during the interview process by taking notes and recording the conversation, however small deformity information possibly emerges during the transmission.

Finally, even though the provincial government admitted that several urban issues are related to environment quality degradation, the endeavours toward better environmental policies are required notably in form of budget allocation and implementation. According to a respondent “..*basically, there is no particular guideline in proposing the budget proportion for environmental affairs. The predetermined budget portion is only for health affairs and educational affairs..*” (I-1).

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Appendixes

Interview Guidance

1. Detailed self-presentation. Could you please present yourself (name, position, work experience, tasks and responsibilities)?
2. Do you know about the trends of environmental affairs budget in Jakarta Province?
3. Do you know about the gaps between allocation and realization of environmental affairs budget in your office?
4. What is the role of your office in planning the budget policy for environmental management function in Jakarta Province?
5. Opinion about aspect of collaboration in Regional Government of Jakarta Province?
 - How do amongst offices manage communication and supportive effort in order to achieve common objectives in environmental management function?
 - Did collaborative action between institutions usually occur during conducting tasks?
6. Opinion about aspect of political leadership in Regional Government of Jakarta Province?
 - How does leader emphasize its policy priority on environmental function via vision and missions?
 - In rendering the policy priority, does the leader express its partisanship in supporting environment quality improvement?
7. Opinion about aspect of social awareness in Jakarta Province?
 - How the society shows concern toward environmental management agendas?
 - Does the society willing to participate in supporting environmental policy addressed by the provincial government?
8. Opinion about aspect of financial support and staff capacity in Regional Government of Jakarta Province?
 - How do the organization manage given resources in conducting their tasks?
 - Do staff number and capacity fulfil the office needs in order to achieve policy goals?

9. Opinion about aspect of misalignment policies in Regional Government of Jakarta Province?
- Does guideline in implementation of environmental affairs policy available for regional government and between levels of government?
 - Did you experience any contradictive or unsynchronized regulation during conducting tasks or responsibilities?