ENHANCING RESILIENCE IN BALIKPAPAN AS BUFFER ZONE FOR THE NEW CAPITAL CITY OF INDONESIA

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List of Abbreviations

Bappenas : *Kementerian Perencanaan Pembangunan Nasional Republik Indonesia*: Ministry of National Development Planning

BPBD : *Badan Penanggulangan Bencana Daerah*: Regional Disaster Management Agency

BPS : *Badan Pusat Statistik*: Statistics Indonesia
CSR : Corporate Social Responsibility
DAU : Dana Alokasi Umum: General Financial Assistance
DAK : Dana Alokasi Khusus: Special Financial Assistance
DPRD **:** Dewan Perwakilan Rakyat Daerah: Regional House of Representatives

EWS : Early Warning System
FKCSR : Forum Komunikasi CSR: CSR Communition Forum
GABAN : Gerakan Bersih Saluran: Drainage Clean Action Movement
GDP : Gross Domestic Product
IAP : *Ikatan Ahli Perencanaan*: Indonesian Planner Association
IKN : *Ibukota Negara*: New Capital City
IOM : International Organization for Migration
ITF : Intermediate Treatment Facility
MBR : *Masyarakat Berpenghasilan Rendah*: Low-income Communities
MRF : Material Recovery Facility

Musrenbang : *Musyawarah Rencana Pembangunan:* Regional Development Plan Participation Forum

PDU : Pusat Daur Ulang: Recycling Center
PPU : Penajam Paser Utara
RPJMD : *Rencana Pembangunan Jangka Menengah Daerah*: Regional Medium-Term Development Plan

RPJMN : *Rencana Pembangunan Jangka Menengah Nasional:* National Medium-Term Development Plan

RTRW : *Rencana Tata Ruang Wilayah*: Regional Spatial Plan Document
TPA : *Tempat Pembuangan Akhir*: Final Processing Site for Waste
TNI : Tentara Nasional Indonesia: Indonesian Army
WEF : World Economic Forum
WFH : Work from Home
WTP : Water Treatment Plan

Abstracts

There will be an influx of migration due to the new capital city (Ibukota Negara or IKN) relocation to East Kalimantan Province. From the estimated migrating number of 1.5 million people, several people tend to dwell in the big city near to IKN as Balikpapan. The IKN relocation will indirectly impact Balikpapan, which is expected to be a buffer zone for the IKN. Therefore, the migration will increase the vulnerability of Balikpapan. Several sectors expected to receive the migration impact are the housing provision and slum areas, waste management, disasters, and infrastructure provision. This thesis uses resilience lens in discussing Balikpapan City concerning the urban life impacts caused by migration due to IKN relocation. This thesis uses a qualitative case study approach which is supported by analysis documents and semi-structured interviews. The result shows that two RPJMD documents still lack initiative action related to collaboration with other stakeholders, such as the higher government level. In the implementation of resilience, Balikpapan already has three resilience aspect at a certain level. However, there are considerable challenges in the context of a resilient city in Balikpapan including 1) Land availability, 2) overlapping responsibility and lack of coordination among government stakeholders, 3) insufficient public awareness, standout communities, and government distrust, 4) local human resources capability, and 5) city financial capability. This thesis offers strategies in 1) establishing the Regional Development Cooperation Agency to Support IKN and 2) the Establishment of Resilience Sub-District to enhance resilience in Balikpapan as Buffer zone for the new IKN.

Keywords: resilience, urban resilience, migration, adaptive governance, resilience strategy

1. Introduction

The intention to relocate the Indonesian capital city began in 2019 during the presidency of Joko Widodo. On April 29, 2019, Joko Widodo decided to move its capital outside Java Island (Ihsanudin, 2019a). This capital city's relocation has been integrated into the 2020-2024 National Medium-Term Development Plan (Bappenas, 2019). The new capital city (*Ibukota Negara* – IKN) would be located in between Penajam Paser Utara (PPU) and Kutai Kartanegara Regency, East Kalimantan (Ihsanudin, 2019b).

Located nearly 70km from the new IKN location, one of the closest largest cities that stood around the future IKN is Balikpapan City (see **Figure 1-1**). Balikpapan will be the nearest city and the gateway for people, goods, and services to build the IKN. Based on Ministry of National Development Planning or *Kementerian Perencanaan Pembangunan Nasional Republik Indonesia* (abbreviation: Bappenas) (2020) data, around 185,000 civil servants and more than 50,000 army personnel and their families will be relocated. Together with economic actors, an estimated 1.5 million residents will occupy the IKN and its surrounding cities, including Balikpapan (Cahyani, 2019).

Figure 1-1. New Indonesia capital city Location
(Source: www.straitstimes.com)

Through Bappenas (2020), the central government has reviewed the importance of urban development plans to support the IKN. Therefore, the new IKN must be supported by the surrounding cities' preparedness, including Balikpapan. Balikpapan development as a supporting city for the IKN is considered necessary because a city cannot stand alone in its existence (Van Leynseele and Bontje, 2019). One reason is that the IKN infrastructure is not yet fully adequate (Damayanti, 2019). For example, airports and clean water systems' unavailability also relies on and expects support from more established neighbouring cities. Thus, in the early stages of IKN development, those systems are dependent on the nearest cities, such as Balikpapan and Samarinda.

Balikpapan Resilience and the need for Adaptive Governance

In the 2008-2028 National Spatial Plan, Balikpapan is the East Kalimantan National Activity Center. Balikpapan plays an essential role on a national scale as a national sea and air transportation hub and national oil production centre. Meanwhile, in the East Kalimantan Provincial Spatial Plan, Balikpapan is directed to become the centre of city-level government, regional trade and industrial centres, international air transportation and oil and gas processing. Furthermore, Balikpapan is well known for its oil industry. Oil companies established in Balikpapan have contributed to the increase Balikpapan population since 1970 (Balikpapan City Authority, 2013; Pratama, 2020; Tarigan *et al.*, 2017). Balikpapan has quite complete public facilities, and it is consistently ranked as one of the most livable cities in Indonesia by the Indonesian Planner Association (IAPI, 2017).

The rapid migration to the surrounding city near the IKN will trigger a new vulnerability in Balikpapan. This migration causes cannot be viewed only from internal factors but also from external aspects. Migration has social and physical system links. It has some unexpected interactions between cause and effect. According to Hossain *et al.* (2016), migration will affect the size and density of the population and include several processes that change how communities organize and interact. One of the reasons behind the migration is to find employment, education, and other livelihood opportunities. Additionally, migration affects vulnerability to the environment, including increased exposure to extreme weather, environmental degradation and geological events (Romero Lankao and Qin, 2011). Besides, increasing urban population concentration in developing countries lead to slum settlements expansion, deforestation, increased natural disasters risk, and reducing urban resilience due to poor governmental inadequate preparation, low stakeholder collaboration, and inappropriate use of resources (Romero-Lankao *et al.*, 2016). Furthermore, unplanned urban growth with large population densities exacerbates vulnerability by other exposure factors among the urban poor (Hossain *et al.*, 2016).

Patel *et al.*, (2016) characterize a resilient city as a city that can maintain and potentially enhance the delivery of its core functions before, during, and after exposure to shocks and stresses. The resilience concept can enhance traditional methods of dealing with urban migration problems, particularly in Balikpapan, in two ways: 1) accommodating change without disastrous loss; and 2) enable society to live and adapt in places disclosed to the stresses, in this case, the influx of migration (Eraydin and Taşan-Kok, 2013). According to Folke (2016), resilience is about the capacity to withstand and survive to thrive when faced with changing circumstances, as well as about how individuals, societies and cultures deal with processes of sudden change and gradual change that interact with each other and the capacity to accommodate and transform into new development paths in when dynamic changes occur.

The resilience study addresses the fact that cities are not just physical, social, and ecological. These aspects interact in a dynamic context, with continuous and changing feedback and processes affected all elements that impact the structure of activities and mobility outcomes influenced by the environment (Masnavi *et al.*, 2019). The migration to Balikpapan will be a valuable example to illustrate the need for understanding resilience

(Godschalk, 2003). Various benefits can be obtained from a resilience approach with a shift in policy initiatives to control change to increase the system's adaptive capacity (Eraydin and Taşan-Kok, 2013).

A key component in achieving resilience is through adaptive governance, which includes adapting and learning. Adaptive Governance is a collective action aimed at increasing the cities adaptive capacity. Cities can learn and become more resilient through the learning process (Restemeyer *et al.*, 2015). Khakee (2002) explained that effective governance is needed to build consensus and accommodate the different interests and needs of many actors interested in spatial planning strategies. Successful governance is highly dependent on the existence of stakeholder relationships in institutional arrangements that can promote adaptive capacity (Gupta *et al.*, 2010)

There is a gap in research and development knowledge between migration and its influence on urban resilience. In this case, relocating IKN to a new city will impact the nearby city that has been around for a long time. For this reason, it is necessary to understand and evaluate the resilience features of spatial structures and forms in urban systems at various levels. This deficit is most evident when finding operational tools to assess cities resilience (Gupta *et al.*, 2010; Masnavi *et al.*, 2019).

1.1 Research Problem and Questions

Based on the research background, the problem formulation in this study is related to the current resilience of Balikpapan. Migration due to IKN relocation to Balikpapan can trigger the emergence of new urban problems. In this case, there is a chance that the structure and function of Balikpapan will not be able to accommodate the migration influx. Balikpapan's resilience in facing migration pressures is still questionable. Therefore, it is necessary to know about Balikpapan's resilience in welcoming migration due to the IKN relocation. In this case, it is crucial to see how the resilience concept is operationalized to evaluate the city resilience concerning migration to Balikpapan. Then, it is necessary to look at the critical challenges of migration and develop a strategy to enhance the cities resilience to overcome the problems arising from migration. Thus, the research question for this research topic is

"Is Balikpapan resilient enough to embrace upcoming migration, and if not, what strategy is needed to improve this?"

Regarding the IKN relocation to East Kalimantan Province, which made Balikpapan one of the supporting cities for the new IKN, this research intends to answer three main questions:
1) *How to use the resilience concept in an operational framework to evaluate urban resilience?*
2) *How resilient is Balikpapan taking migration into account due to IKN relocation?*
3) *What challenges does Balikpapan face, and how to enhance the urban resilience in migration problems?*

1.2 Research Objectives and Significance

This thesis has two main objectives. The first objective is to see how resilient Balikpapan is in welcoming migration due to the IKN relocation. It can be achieved by answering the first and second questions of this thesis. The second objective is to look at challenges and develop strategies to embrace urban resilience in Balikpapan. This goal can be achieved by answering the third question of this thesis.

In social relevance, this study results can contribute to understanding urban resilience in developing countries and are excellent examples of how resilient cities are, key challenges and strategies for enhancing resilience with migration and urban resilience. Moreover, the research's results will be crucial for areas around the new IKN, such as Samarinda and Tenggarong, which also become a buffer zone for the IKN.

In planning practice, this thesis enhances the current planning by accommodating the resilience approach. This approach is beneficial in elevating the city capability, including Balikpapan, to mitigate future challenges and be more adaptive toward urban dynamics (Laeni *et al.*, 2019). In addition, this thesis also emphasizes the new strategy of adaptive governance to ensure all stakeholders are involved in the planning process. This process is essential to ensure the stakeholder's sense of belongings and commitment in planning implementation (Folke *et al.*, 2005).

1.3 Research Design and Reading Guide

The study's research design is based on the concern that rapid migration due to IKN relocation will impact Balikpapan resilience. Thus, it is crucial to understand and assess the resilience condition in Balikpapan. Based on the findings and current challenges, formulate the strategies to enhance city resilience (see **Figure 1-2**).

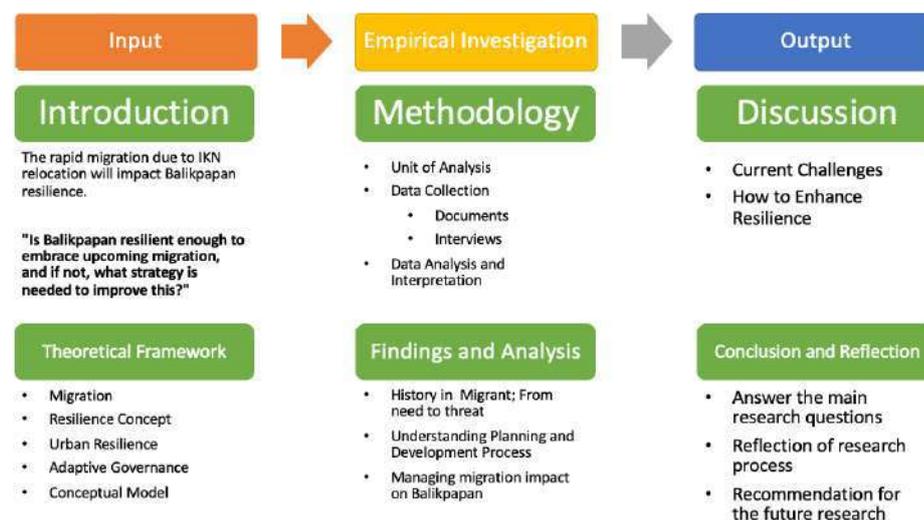
Figure 1-2. The Research Design
(Source: Author Analysis, 2021)

The outline of this thesis is as follows: **Chapter 1** discusses the research background, problem formulation, and reading guideline. **Chapter 2** will discuss the concepts of

migration, resilience, urban resilience, and adaptive governance. Next, **chapter 3** will discuss the literature review related to the thesis research design. It includes concepts and theories related to the thesis's criteria and the research methodology. The description of primary data and secondary data related to the research area existing conditions to answer how resilient Balikpapan is will be discussed in **Chapter 4.** Furthermore, **Chapter 5** will discuss the analysis of challenges and strategies to enhance city resilience. Finally, **Chapter 6** is the closing chapter, which will describe the conclusions and reflection of the research results based on the central thesis objectives.

2. Theoretical Framework

Chapter two explains the theory used in this thesis. The rationale for this research is that the IKN relocation in the East Kalimantan region will trigger a surge in migration to the East Kalimantan region. Because the new IKN is in the process of being developed, the migration flow that occurs will be accommodated in cities close to the prospective IKN, one of which is Balikpapan. Furthermore, cities' development around the IKN in dealing with migration problems affects cities' resilience. Different theories describe in this chapter are related to the migration concept in Indonesia, urban resilience, and adaptive governance.

2.1 Migration

Migration is one of the most challenging and complex problems of the twenty-first century. As a social phenomenon, the uncertainty and complexity of migration are noticeable from the contested and new migration concepts, the increasing number of migrations, and the unknown impacts and potentials of such migration (Bijak and Czaika, 2020). International Organization for Migration (IOM) (2018) defines migration as moving people away from their usual place of residence, either in a country or beyond international borders. Many factors underlie migration. The migration movements can be influenced by events in a particular place and within a certain period (Erdelen and Richardson, 2019). There are several types of migration: 1) political boundaries, 2) movement patterns, and 3) decision-making (World Economic Forum, 2017). Migration with political borders is migration that is identified with the place of origin and destination of migration. This migration's base is political boundaries and regional boundaries crossed, such as districts/cities, national and international boundaries. Koser (2007) defines migration based on movement patterns as a type of migration based on people's groupings according to social status, point of travel, and period. The third type of migration, the decision-making type, divide migration into voluntary and forced migration by considering certain socio-political factors or development factors. Voluntary migration is based on the desire, initiative and free will of a person to live in a better place and improve their financial status, among other factors. Forced migration is based on the pressure on the migrants to move out from the initial place due to the certain unfavourable environmental and political situations

In this thesis, the IKN relocation will cause the people migration in Indonesia because the migrants want to try new opportunities in the new economic growth centre in Indonesia (Moeldoko, 2019). The migration projection due to IKN's relocation will be dominated by non-government workers, namely in the economic sector. One of the IKN relocation goals

is to grow a new economic centre outside Java Island (Bappenas, 2020). Each person, or group, will move/live based on many different but related reasons. It adds to an element of uncertainty in migration (Barker and Bijak, 2020). Several migrants will migrate because of the change of work location to IKN, such as central government officials and their families. The necessity of these officials to migrate is the form of forced migration. Thus, this thesis discusses two types of migration: 1) the voluntary migration of the economic sectors' workers, and 2) the forced migration of the must move central government officials.

Cause and Impact of Migration

Migration has become an extraordinary phenomenon since it can significantly impact, both positive and negative, the economy, demographics, and society in various ways (Koser, 2007). City is under pressure to provide affordable and social housing for their residents; improved personnel and infrastructure of healthcare and education; enhance current services to fulfil higher resource consumption (such as electricity and water) (World Economic Forum, 2017).

Migrating people are determined by push and pull factors. These factors drive people's minds and convince them to leave their original place or get them captivated by more exciting situations in a new place (Singh, 2010; Thet, 2014). Push factors can force people to leave their origin and are linked to the country/city they are migrating to. The drivers of migration include insufficient living opportunities, population growth, increased access to accessible supplies, current poor conditions, hunger/drought, fear of political expulsion, poverty, and natural disasters (Singh, 2010). Moreover, the pull factor is precisely the push factor opposite. Instead, the pull factor will attract people to the specific location to which migration is to be made, for example, business opportunities and improved living quality, ease of land availability for housing and agriculture, politics, education, transportation and communication facilities, and improved health care systems (Crow, 2010). The IKN relocation undoubtedly is a pull factor for people from all over Indonesia to migrate to the area. IKN will become a new attraction for Indonesian people to migrate to the area by opening new business opportunities and improving the life quality for potential migrants.

Migration will have an impact on cities. Migration brings both challenges and opportunities. The significance of cities is apparent from several sides, including the economic and social sides (World Economic Forum, 2017). When viewed from the economic impact, migration helps increase the destination city's Gross Domestic Product (GDP) (Koser, 2007). The migration social impact is in the increasing number of ethnic pockets and the complexity in race diversity, religion, and culture in urban areas, emerging in middle-class migrants and the unified environment where migrants live. In other words, the existence of IKN in East Kalimantan will impact increasing GDP for cities around the new capital, including Balikpapan. However, the migration social needs further attention.

In providing urban infrastructure and services, migration has impacted at origin and destination city. Several sectors affected include demand in housing, health and education, transportation, clean water, and wastewater (Schoeller-Diaz *et al.*, 2012). Insufficient

infrastructure and inadequate essential services will add pressure on the destination city. It is argued that the existence of migration push factors and pull factors will provide opportunities and impacts for cities (World Economic Forum, 2017)

Migration in Balikpapan context

In recent times, the internal migration rate in developing countries has increased, leading to rapid urban expansion (World Economic Forum, 2017). In Indonesia, the most common migration is internal migration within one country's borders (Koser, 2007). This internal migration includes population movement from rural to urban areas and vice versa. Internal migration in Indonesia can be divided into two major types, urbanization and transmigration (Tirtosudarmo, 2018; Tjiptoherijanto, 2000). Indonesia's urbanization process is usually concentrated towards the Greater Jakarta area, as the capital city and economic centre (Roberts *et al.*, 2019). Moreover, transmigration is a national program to balance population distribution across the country, providing labour and enhancing economic development on Java and Bali islands since the mid-1980s to open agricultural land outside Java (Tirtosudarmo, 2018).

This thesis discusses the migration to Balikpapan due to the IKN relocation in internal migration. This internal migration, from an Indonesian perspective, is a combination of urbanization and transmigration. It is because one side of Balikpapan is a city that migration can be categorized as urbanization. While beside the other, the migration is also transmigration because it moves from a denser island (Java Island) to fewer inhabitants (Kalimantan Island). On the one hand, urbanization will positively impact increasing GDP and offering employment. However, on the other hand, it harms increasing social segregation and the cities liability to disasters (Firman and Dharmapatni, 1994).

Regarding transmigration, the negative impact is the increase in latent tensions between migrants and non-migrants, especially in urban areas, the feeling that migrants have stolen residents' economic opportunities with low human resource carrying capacity (Tirtosudarmo, 2018). The transmigration consequences are evident in the gap in human resource development between migrants and local communities. Increasing social pressure is inevitable, and a clear probability for open competition. On the other hand, the positive transmigration impact increases the destination areas' GDP due to the new labour provision.

It can be concluded that the IKN project will be one of the pull factors that attract people to migrate to the IKN area. However, not all the people migrating to IKN will live in the IKN area. Some migrants will live in areas that are IKN buffers, one of which is Balikpapan. The migration to the IKN area undoubtedly impacts the city that these migrants will inhabit. The resilience concept, which will be discussed in the next sub-chapter, explains the cities' capacity to face and adapt to shocks and disturbances and transform socio-ecological conditions. This case study is related to Balikpapan capacity in dealing with, adapting, and transforming to disturbances appearing as migration due to IKN relocation. It becomes crucial to understand the resilience of Balikpapan towards disturbances in the migration context, recognize the migration impact on urban life, and enhance Balikpapan resilience.

2.2 Understanding the Resilience Concept

Resilience

Resilience is a problematic, multi-interpreted, and contested concept. It means that it can be interpreted as the various attributes of scientific disciplines that give different meanings, emphasize the meaning of resilience and use different stability elements from the resilience concept. Davoudi et al. (2012) distinguish resilience into three different kinds: 1) Engineering Resilience, 2) Ecological Resilience, and 3) Socio-Ecological/ Evolutionary Resilience.

Engineering resilience is related to a system's capability to return to equilibrium or a steady-state after an interruption (Holling, 1973). In this respect, resistance to disruption and the momentum at which the system returns to a steady state are measures of resilience that can take the form of natural disasters or social upheaval. Engineering resilience emphasizes the qualities sought for "failure-safe" engineering designs that focus on "efficiency, robustness, and predictability." The more rapid the system rebound, the more challenging it is (Davoudi et al., 2012).

Ecological resilience is *"the amount of disturbance that can be absorbed before the system changes its structure"* (Holling, 1973). The resilience definition in this approach lies in the number of disturbances that occur, and the system can remain at a critical threshold, not just based on how long the system can bounce back after a shock. The ecological resilience focus is on "persistence and adaptability" (Davoudi et al., 2012). The two prior resilience come from different scientific disciplines and believe there is a balance in the system, whether it is a previous one where the system bounces back (engineering) or a new rebound (ecological) (Gunderson and Holling, 2001). However, the difference is that engineering resilience recognizes a stable equilibrium while ecological resilience recognizes several stabilities and the switching opportunity to a stability-domain preference (Folke, 2006).

Folke (2006) defines socio-ecological/evolutionary resilience as a response to shock and stress having the capability of complex socio-ecological systems to persist, adapt and transform where the system's essence can variate over time with or without independent disturbances. The resilience focus is "*complex, non-linear, and self-regulating, permeated with uncertainty and discontinuity."* This approach perceives that the steady-state can suddenly change with characteristics very different from the original and become very new (Davoudi *et al.*, 2012). The interpretation of evolutionary resilience is increasingly gaining a place in urban resilience thinking to increase the significance of vulnerability and the related *'unknown'* (Termeer and van den Brink, 2013). The resilience focus is a dynamic concept related to the complexity of navigation, uncertainty, and changes across scales and levels (Folke, 2016). In resilience, the capacity to continue learning, self-regulating, and thrive in a dynamic environment is exposed to genuine and unpredictable uncertainties. Resilience is about being able to withstand change, adapt, enhance, and innovate on today's development path (Folke, 2006).

Approach on Resilience

While resilience is currently one of the essential concepts in urban governance, there are three main criticisms of resilience (Laeni *et al.*, 2019; Restemeyer *et al.*, 2015). First, the diversity of interpretations, related to various efforts to adopt the concept of resilience in urban life, makes the operationalization of resilience, especially in the face of disturbances, still a challenge (Hegger *et al.*, 2016; Lu and Stead, 2013; Vale, 2014). The second relates to critical considerations in the process of building resilience in practice. This consideration relates to the authority division among stakeholders and the need to change the stakeholders' responsibilities (White and O'Hare, 2014). Third and lastly, being a *'resilient city'* is often used by policymakers as the outcome and city ultimate goal, while this concept is often misused to expose weaker groups who are more at risk (Davoudi *et al.*, 2012; Vale, 2014). Davoudi et al. (2012) and Restemeyer et al. (2015) try to introduce three aspects called robustness, adaptability, and transformability in the resilience concept to answer the critics toward resilience and operationalized it.

Robustness

Robustness is defined as the city's ability to cope with the significant vulnerability by constructing various technical and structural measures. In addition, robustness can be explained as the capacity to persist, absorb interruption or withstand shock (Davoudi *et al.*, 2012; Godschalk, 2003; Holling, 1973). An essential part of socio-ecological resilience is persistence, which helps turn surprises and change into opportunities (Folke, 2016). Concerning migration, robustness can be associated with the ability of a city to reduce the possibility of high migration to the city (Mukbar, 2009). Several steps have been taken, including constructing urban facilities to deal with the impacts of migration—for example, waste processing sites and making dams or reservoirs developments.

Adaptability

Adaptability is described as the actor's capacity to accommodate, readjust the system and be flexible to the vulnerabilities. Adaptability is not only a physical dimension but also a social dimension that will minimize the damage. Adaptability is related to make improvements within the system to make it less exposed (Folke *et al.*, 2010; Walker *et al.*, 2004). The capacity in systems to determine, incorporate understanding and perception, establish, and comply with responses and institutions into changeable external and internal processes is captured in the adaptability aspect in resilience thinking. Concerning migration, adaptability is associated with cities ability to reduce the impact that occurs due to the high number of migrations, for example, the housing provision for migrants and the slum dwellers, waste infrastructure and management to accommodate the migrants waste production, and disaster management due to the current Balikpapan's prone to flood.

Transformability

Transformability refers to the transition to fundamentally altering a system's nature (Walker *et al.*, 2004). It is characterized as an advanced system when ecological, economic, or social structures cause the current system unsupportable (Folke *et al.*, 2010; Walker *et al.*, 2004). It means delineating and shaping advanced establishment landscapes by proposing new fundamentals and approaches to building a living. It can be done by

changing the state variable and scale of the defining system. Transformations, ways of thinking, and new operations get new space when a crisis occurs. The revitalization and incorporation of experiences usually aid navigation from the transformative opportunities that arise into new things. Transformability emphasizes the capacity of cities to fundamentally change after facing specific hazards into new systems with the capacity for knowledge, creativity, and vision for an innovative solution that requires strength, resources, and public support for correct implementation. In this migration case, it can be mention that transformability is the capacity and cities ability to initiate opportunities during a disaster or vulnerability (Restemeyer *et al.*, 2015; Walker and Salt, 2006).

In resilience, the integrative and complex character of urban resilience studies is often overlooked. The term resilience is used in a limited sense and focuses on one or more factors contributing to urban resilience. It can exclude essential characteristics that affect city performance from a resilience perspective (Jabareen, 2013). In this sense, the setting of policymakers interprets urban resilience according to their expertise and interests. Hence, the application of resilience is tricky as a new paradigm because these experts replace the resilience term with other terms such as livable city or sustainable development (Lu and Stead, 2013).

2.3 Resilience in terms of Urban/City

Cities can be defined as a unique form of association of humans distinguished based on several characteristics in population size, the built environment shape, and economic function (Romero-Lankao *et al.*, 2016). In another definition, a city consists of several institutional sub-systems interaction and the environment with each other with an external system exhibits different behaviours when interacting together rather than individually (Mcmillan, 2019). The city is complex because the system's activity is nonlinear and uncertain, plus the human component as an individual and as a group adds to the confusion both rationally and irrationally (Walker and Salt, 2006).

Foster (2006) describes the use of the resilience concept on the regional scale. She divides resilience into two distinct stages: preparation resilience and performance resilience (see **figure 2-1**). The preparation resilience stage assesses and prepares for possible disruptions, while performance resilience described acts of resistance after a system failure. In this stage, the decision was based on assessment, for example, by monitoring the ongoing conditions. This assessment resulted in future reflections, exploring possible solutions for forthcoming risk, and ensuring the system is ready for risk management. At the second stage, performance resilience discusses how to react and maintain the city's essential functions, manage critical resources and develop a redevelopment approach for recovery.

The Rockefeller Foundation (2013) explains urban resilience as the cities capacity to endure, comply, and flourish against stress and shocks and even transform when conditions require it. Godschalk (2003) characterizes a resilient city as a network system consisting of natural and human society. The network system can survive and continue in extreme and unique pressure conditions. The physical network system consists of artificial

and natural components (such as muscle), and community networks become the city's brain. The resilience of these systems determine the city's vulnerability to disasters. Folke (2006) explained that disruption in a system is an opportunity for change, new possibilities, and continuous development of both existing and future infrastructure development.

However, the nonlinear relationship in the perspective of evolutionary resilience makes it difficult for transformations to change the system to the desired state after a disturbance due to dependence on the system's self-organizing capacity (Davoudi *et al.*, 2012; Folke, 2006). It means that imminent behaviour cannot be anticipated based on the system's prior behaviour under related precedence (Duit *et al.*, 2010). Nevertheless, the city can learn to adapt to the era of uncertainty in dealing with challenges by building resilience concepts to deal with urban disruption.
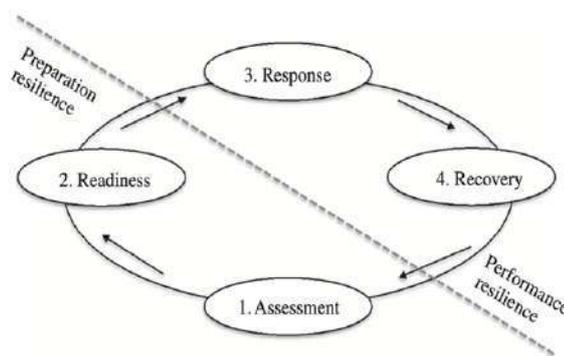

Figure 2-1. *Assessing Regional Resilience*
(Source: Foster, 2006)

2.4 Adaptive Governance

Folke et al. (2005) define adaptive governance as collective action among stakeholders to maintain and promote a particular regime or set off a transformation to a preferred regime to handle advance with current and forthcoming stresses without failing preference for the future. The use of adaptive governance in adapting and learning in a city is the key to achieving resilience. Adaptive governance is influenced by self-organising and recognising disturbances in a city that create processes of adaptability and transformability (Folke *et al.*, 2005; Walker *et al.*, 2004).

Adaptive governance provides a framework to maintain and increase the system's resilience to understand the governance characteristics that have the capacity and flexibility to adapt to changing socio-ecological conditions (Greenhill *et al.*, 2020). There are four main characteristics of adaptive governance. **First**, it promotes polycentricity or distributed decision making. Polycentricity emphasizes information in a local context supported by coordination with all stakeholders (Folke *et al.*, 2005). **Second**, inclusive collaboration and participation from stakeholders. In addition to supporting legitimacy and adaptation to disturbance, it also enables the system to learn (Walker *et al.*, 2004). **Third**, the system's gradual improvement is supported by assessment and reflection based on practical experience. It will increase the system flexibility (Brunner *et al.*, 2005). **Fourth**, self-organization is supported by vision, commitment from the network to change, consensus building, and leadership (Olsson *et al.*, 2006). Based on the characteristics,

adaptive governance promotes the importance of collaborative learning and decision-making processes (Wilkinson, 2012). Thus, an adaptive approach is needed for city resilience, and the role of governance is essential in targeting cities to become resilient (Hegger *et al.*, 2016; Restemeyer *et al.*, 2017).

Adaptive governance can be operationalized through a joint adaptive management system by emphasizing the context of social capital, with a focus on networks, leadership and trust (Folke *et al.*, 2005). These focuses are used in planning to evaluate a government's institutional capacity, and their linkages can be used to operationalize the concept of adaptive governance. It is essential to manage complexity and uncertainty with adaptive governance (Hegger *et al.*, 2016). A systematic process with automatic and continuous determination from the results of management approaches that have been achieved to enhance management policies and practices continuously is a reference for adaptive management (Pahl-Wostl, 2006). Thus, adaptive management can expand the adaptive system capacity.

One of the essential measurements in achieving adaptive governance is institutional capacity building. The efforts to increase knowledge and skills both individually and in groups are often understood as increasing the capacity for mobilization and relational resources to create effective institutions (Khakee, 2002). Some capacity-building examples can form open participation from participants in the decision-making practice and establish an applicable legal framework policy. Institutions can be understood as two components in structure and agency (Healey, 1997). Institutions are understood as part of system elements that help shape society and function as guides in the institution's routine. Structure and agency are dynamically linked, where the two can influence each other continuously. Therefore, this thesis will discuss how to increase the stakeholder's capacity to make institutional changes in achieving resilience. When the stakeholders involved consciously try to change, it will encourage creating a real transformative change toward a resilient city.

A broader understanding of which stakeholders can be involved and what types of capacity one needs to have is a general concept of resilience. Gupta et al. (2010) show that individual citizens and organizations' capacity to handle, prepare, restore, and extend themselves after a disturbance requires the community's adaptive capacity. Khakee (2002) defines institutional capacity as a form of social relationships and interactions in a particular place concerning the resources pool's overall quality. In complexity and interdependence between places, local actions in one place can affect places. There are three criteria in institutional capacity building: *intellectual capital, social capital, and political capital* (Healey, 1998; Khakee, 2002). The focus of the three capitals is not on persistence but on forming the three capitals.

Intellectual Capital
Intellectual capital refers to sources of knowledge that build on prior knowledge, scientific investigation, and understanding of people, places, and problems (Healey, 1998; Khakee, 2002). The involvement of social interactions based on experience, local wisdom, and

scientific inquiry is a combination of knowledge accumulation, which becomes a source of knowledge in intellectual capital. The involvement of all stakeholders from various social backgrounds and scientific disciplines is indispensable for building intellectual capital. Regarding migration, in *robustness*, intellectual capital includes finding technical new ways directly related to translate problems into obtaining widely supported decision-making in engineering and planning (Restemeyer *et al.*, 2015). *Adaptability* related to a wide range of knowledge from various stakeholders helps build resilience and adaptation to reduce migration impact on urban life. Intellectual capital includes finding new ways to translate problems into obtaining widely supported decision-making (ibid). In *transformability*, valuable local creativity helps generate new, innovative solutions, openness to testing new ideas, and learning skills. Several aspects are included in intellectual capital: education and training, exchange and diversity of knowledge, and innovation and creativity.

Social Capital

Khakee (2002) defines social capital as *"relational resources".* It is about a relationship of trust that allows collaboration between all stakeholders involved to achieve support and increase the capacity to coordinate all actions and decisions. Network resilience and good collaborative relations it is arranged in various ways, both formally and informally. In *adaptability*, it requires high local civil awareness and a willingness to participate in empowerment goals (Folke, 2006). Meanwhile, from *transformability*, a high sense of trust among all public and private stakeholders is needed to participate in and accept new interdisciplinary networks (Restemeyer *et al.*, 2015). Referring to migration, in *robustness*, the focus of capital is the general way of working and the relationships built between stakeholders at various sectors, levels, and scales. The *adaptability* emphasis is on shared values as a common need, purpose, and sense of the good (Parkhill *et al.*, 2015). Agreement between stakeholders will be quickly reached if shared values have been created. In *transformability*, social capital is observable in local participation from the community, which aims at empowerment, not just providing information in overcoming the impact of migration (Pahl-Wostl, 2006).

Political Capital

Political capital is defined by Khakee (2002) as "the ability to mobilize". This capital includes supporting commitment and willingness among all stakeholders to make policies and decisions for specific strategies to build consensus when shaping agendas, taking action and supporting resource mobilization, especially finance (Healey, 1997). Concerning migration, the focus of political capital is on providing financial resources to build resilient systems to mobilize resources and organizational leadership in managing migration and the migration impact. *Robustness* is related to the availability of resources to build infrastructure. In *adaptability*, it is related to the ability to mobilize and support cities to adapt. Financial support is needed to build and maintain primary systems for resilience, coupled with political aid for risk-based strategies and a society willing to invest in countermeasures as adaptability. *Transformability* is related to the leadership organization and the existence of financial support. Inclusive by all stakeholders. Financial support is needed in building formal, informal, and interdisciplinary networks as part of

transformability and helping broader actors collaborated when creating future visions with change agents and leadership (Gupta *et al.*, 2010).

2.5 Operationalize Resilience

Building a resilient city requires considering short-term and long-term planning with interventions that involve many sectors and stakeholders. In addition to using technical strategy steps such as urban infrastructure development, there is more participation from the community and the capacity building of various stakeholders involved in it, including the public and private sectors, for example, the importance of solid collaboration by various fields in spatial planning and development of urban areas. The resilient city requires more than a collection of structural and non-structural steps. A holistic approach is needed to see a broader perspective in operating the resilience of thinking in city development planning.

2.5.1 An assessable resilience framework in planning decision-making

Lu and Stead (2013) define six components of resilience concerning planning for urban resilience: (i) attention to the current situation; (ii) attention to trends and future threats; (iii) ability to learn from previous experience; (iv) ability to set goals; (v) ability to initiate actions; and (vi) ability to involve the public. **Table 2-1** explain the six characteristics of resilience. The main point of this framework is how the planning process in the city considers or handles the risks posed by an incoming threat. Therefore, the two primary analyses in this framework are about assessing and preparing for these threats.

Moreover, Lu and Stead (2013) emphasize that Foster's (2006) explanation may lead to the acceptance that regional preparation and performance resilience are interrelated, which is not perpetually the situation. The two stages do not naturally establish in parallel. Policymaking in one area may prepare for resilience to hinder possible disruption, while in other areas, it can emphasize resilience performance, or occasionally both.

Table 2-1 Six Resilience Components Concerning Planning for Urban Resilience

Characteristics	Remarks
1. Attention to the current situation	• refers to the ability to understand and maintain the environment's existing condition that emphasizes physical facilities and monitors and evaluates policy. • Various planning documents indicate that the concept of resilience has been addressed in planning policies to monitor the current condition.
2. Attention to trends and future threats	• indicates the prediction ability based on current information, for instance, scientific scenarios, models of future impacts, and the probability of risks in policymaking. • This characteristic relates to issues of trust and learning. It addresses the awareness of trends and the prediction of future threats. It includes predicting regional trends and patterns, identifying, and assessing the probability of risks and disturbances. At the local level, the prediction of regional trends is the basis for urban planning
3. Ability to learn from previous experience	• It relates to experiences from the past and requires the capacity to utilize the necessary knowledge to deal with similar conditions in the future. • In this characteristic, a city needs to be able to learn from past lessons to address the prior disturbances
4. Ability to set goals	• indicates the willingness (and power) to respond to climate change and flood risk management issues. • Visioning exercises involving multi-sectoral collaboration may be used to formulate goals. This ability emphasizes the ability to set up 'priorities' based on risk assessment and probabilities and propose new standards.

Characteristics	Remarks
5. Ability to initiate actions	• related to policymaking authority, including formal and informal forms of power. These involve different kinds of resources (e.g., experts, knowledge producers, projects) which allow actions to occur. • This characteristic can be seen in the capacity to invest in and develop scientific scenarios for risk assessment, collaborative decision-making between different levels of governance, authorize and mandate. In addition, infrastructural actions coordinate readiness actions, innovate and propose economic-benefits actions, and propose and elaborate actions.
6. Ability to involve public responses	• addresses the degree of public participation in policy decisions, informing the public and responding to concerns from the public. It relates to the capacity to communicate, build public awareness, and educate. This characteristic emphasises communicating findings (concepts, skills, actions) in planning policy and raising public awareness and preparation education.

(Source: Lu and Stead, 2013)

In this thesis, this resilience framework (see table **2-2**) help sees how Balikpapan makes decisions about urban development goals and sees the priorities of urban development as seen from the medium-term city planning documents concerning the impact migration urban problems occur there. This thesis is focused on the city assessment stage because the migration process itself is still in the early stages, so it is necessary to assess Balikpapan resilience preparation in welcoming the migration due to the IKN relocation. Therefore, this framework helps to see the awareness and understanding of decision-makers regarding urban planning and the IKN relocation decision significance on Balikpapan in the context of urban resilience.

Table 2-2 An assessable resilience framework in planning decision-making

	Assessment Stage	Readiness stage
1. Attention to the current situation	A1: Monitor current conditions	R1: Evaluate and maintain the conditions of infrastructure facilities
2. Attention to trends and future threats	A2: Predict regional trends and patterns A3: Identify and assess the probability of risks and disturbances	R2: Forecast
3. Ability to learn from previous experience	A4: Learn from past lessons	R3: Learn from past lessons (artificial reasons)
4. Ability to set goals	A5: Set up 'priorities' based on risk assessments and probabilities	R4: Propose new standards
5. Ability to initiate actions	A6: Invest in and develop scientific scenarios for risk assessments A7: Collaborate decision-making between different levels of governance	R5: Authorize and mandate infrastructural actions R6: Coordinate readiness actions R7: Innovate and propose economic-benefit actions R8: Propose and elaborate actions
6. Ability to involve public responses	A8: Communicate findings (concepts, skills, actions) in planning policy	R9: Raise public awareness and preparation education

(Source: Lu and Stead, 2013)

2.5.2 Structure Framework on Resilience

Building a resilient city by robustness, adaptability, and transformability be a challenging and complex task. Restemeyer et al. (2015) define a strategy-based framework on resilience, which will be utilized in this thesis framework structure. This framework consists of *content, context, and process* (see **table 2-3**).

Table 2-3 Strategy Based Framework for Assessing Resilience

	Robustness	Adaptability	Transformability
Content	Technical and Spatial Measures	Land use control and early warning system	Raise public awareness and preparation education
Context	Strong Collaboration among government stakeholders	Shared responsibility and all stakeholder's synergies	New Interdisciplinary Networks and social organizations
Process			
Intellectual Capital	Knowledge exchange in engineering and planning	Diverse Knowledge	Innovation and creativity toward new knowledge
Social Capital	Good Relational networks	Shared value	Community Participation and trust
Political Capital	Resource's availability for building infrastructure	Mobilization capacity to support for adaptation and risk-based approach	financial support for informal and interdisciplinary network

(Source: Author,2021 based on Restemeyer et al., 2015)

Content

Content is defined as the goals, aims, targets, and mix of strategic measures and policy instruments implemented to reduce migration risk (Restemeyer *et al.*, 2015). Hutter (2006) defines content as *'Deciding what to do'*. The strategies and instruments implemented in this content relate to three critical aspects of resilience: robustness, adaptability, and transformability, aimed at reducing hazards, vulnerability, and exposure to migration and its impacts. *Robustness* refers to reducing the possibility of technological hazards such as the equitable distribution of infrastructure development to meet basic needs or non-structural spatial (policy) strategies. *Adaptation* recognizes as an attempt to enhance the city's capabilities to adjust to dynamics. Adaptation can be achieved through an early warning system existence, the development and use of appropriate information systems, and land use adjustments concerning migration and its impacts. The *transformability* emphasizes the need to promote change in society in the short term, collective action, capacity to learn, and support from every stakeholder involved regarding the migration impacts. It includes undertaken activities to empower communities and raise awareness, such as brochures and outreach activities contributing to community transformation (Restemeyer *et al.*, 2015).

Context

The reasons why certain content or processes in the strategy-making process are picked can be explained in terms of contextual factors (Hutter, 2006). *Context* can be defined as all the external and internal factors that influence migration management and play a role in determining resilience strategies (Restemeyer *et al.*, 2015). In the migration case, the external context that influences the strategy from the outside can be in the form of political, economic, and social conditions. Meanwhile, the internal context influences the development and strategy making from within, and it can be appearing as politics, resources, responsibility, culture, and capabilities. In this thesis, contextual factors refer to how the responsibilities are divided between the government and other stakeholders from policy and decision making. The *robustness* aspect looks at the institutional setting that can mitigate the IKN relocation impact. It requires strong cooperation between levels of

government from national to city government levels (Restemeyer *et al.*, 2015). In *adaptability*, strong integration between sectors in Balikpapan is needed in dealing with the migration impact (Singh and Sing, 2019). It can take the form of the government regulations, which clarify that dealing with the migration impact to Balikpapan on various sectors is not the government's responsibility alone but also emphasizes the duty of private stakeholders. In *transformability* includes envisioning the long-term future and embedding the learning process in society (Hutter and Kuhlicke, 2013).

Process
The *process* can be explained as the city's resilient capacity to overcome, adapt to, restore, and rebuild after interference or '*how to do it*' (Hutter, 2006). It is described in the process of formulating strategies related to resilience and its implementation. Restemeyer et al. (2015) determined that the process dimensions use three main criteria in institutional capacity building: *intellectual capital, social capital, and political capital* to build city capacity (Healey, 1998; Khakee, 2002). In this case, stakeholder's capacity refers to institutions and stakeholders, including formal or informal organizations and individual actors, to overcome, adapt to, restore, and rebuild themselves.

2.6 The Conceptual Model for Assessing Urban Resilience – Balikpapan
In assessing whether Balikpapan is sufficiently resilient in welcoming the arrival of migrants due to IKN relocation, this thesis argues that it will be essential to look at Balikpapan from the urban planning perspective and from the practice of urban resilience in Balikpapan in the sectors that will receive the migration impact. The conceptual model offered in this study shows the relationship between sectors affected by surge population due to migration and urban planning documents and urban resilience implementation in Balikpapan (See **figure 2-2**).
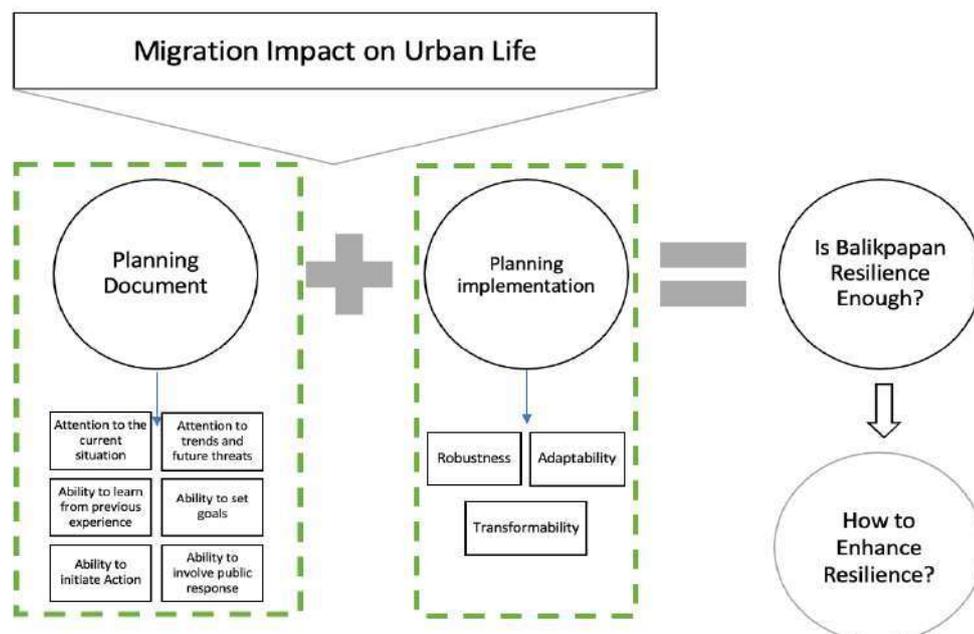

Figure 2-2. Conceptual Framework Assessing Urban Resilience
(Source: Author, 2021)

In summary, this thesis emphasizes the notion that the city needs to be resilient. Thus, adaptive governance is needed to achieve a resilient city. Two sides of planning will be concerned in this thesis: from the planning document side as argued by Lu & Stead (2013) and from the planning implementation side, as Restemeyer et al. (2015) argued to ensure comprehensiveness the resilience. From the perspective of urban planning documents, the current and future urban planning of Balikpapan should consider migration in its planning documents, and they are distinctive in the concept of urban resilience to mitigate the migration impact. Thus, it is necessary to see how the urban planning document accommodates the characteristics of a resilient city with six components, according to Lu and Stead (2013). This thesis intends to look at the resilience aspects as *robustness, adaptability,* and *transformability* in Balikpapan in the planning implementation. These aspects and then will be structured into a framework consists of *content, contest, and process*. Through elaborating these aspects, it recognizes the capability of Balikpapan in mitigating the migration impact in implementation. In the last part, this thesis proposes strategies according to the adaptive governance concept to enhance current resilience capability in overcoming migration challenges.

3. Methodology

Chapter three present the research methodology. The analytical framework based on scientific studies has been presented in the previous chapter. This empirical research uses a theoretical background to develop an analytical framework and study activities regarding urban resilience activities in Balikpapan. Cresswell (2014) emphasizes the importance of structured research designs to produce meaningful and convincing research results. Therefore, a well-structured methodology design is essential concerning data collection, methods, techniques, and data analysis.

3.1 Research Approach

This study uses a qualitative case study approach. In qualitative case studies, the researcher can explore a contemporary phenomenon in a real-world context (Yin, 2018). Cresswell (2014) defines qualitative research as the researcher interprets the data. The definition includes promoting a description of a person or setting, evaluate evidence for topics or categories, and lastly making an explanation or depicting conclusions about its personal and theoretical meaning, describe the lessons learned and provide a further challenge to be asked. It means that the researcher refines the evidence through a personal lens situated in a distinct moment of sociopolitical and history. The choice of this research type is situated on the desire to describe in detail and interpret the data or phenomena obtained. This study phenomenon is related to the arisen migration significance to Balikpapan due to the IKN relocation. The migration phenomenon and its influence are seen from urban resilience in three aspects: *robustness, adaptability,* and *transformability* and three dimensions: *the content, context,* and *processes* described in the previous chapter. In this research, it is hoped that the use of case studies will gain a better understanding of certain exciting phenomena.

Quality assurance is realized through the research validity to guarantee the data results and reliability. In this study, the form of validity was achieved by using triangulation

techniques (Yin, 2018). The triangulation technique is implemented by examining various data sources and source evidence to build justification in line with the examination theme. This approach is used to reduce the strong influence and result in minimal reliance on one research source. It means that this research uses multiple perspectives simultaneously approach. Therefore, determining the theme based on several data sources and perspectives increases the research's validity.

3.2 Unit of Analysis

The main essence of case study is in-depth description and analysis in a boundary system (Merriam and Tisdell, 2016). However, the process of carrying out a case study that is a combination of the unit study and the product of this investigation is part of the case study's confusion. Therefore, it is necessary to clarify the unit of analysis discussed in this study to eliminate ambiguity in the case study. The unit of analysis is determined by defining spatial boundary, time frame, and theoretical scope (Yin, 2018).

The research time frame needs to be clarified to raise the research's validity and reliability. This research took place from February to July 2021. Primary data and secondary data were collected between April and June 2021. Furthermore, the theoretical scope of this study was determined based on literature studies. The main concepts of this research are migration, urban resilience, and adaptive governance.

The spatial boundary of this case study is the definition of Balikpapan City. This case study chose Balikpapan for two reasons: 1) Balikpapan is the closest major city to the new capital city, and 2) migration to Balikpapan will put additional pressure on the Balikpapan resilience. Therefore, it is interesting to study how to enhance the resilience of Balikpapan regarding migration due to the IKN relocation. Furthermore, apart from the spatial definition, to have a deeper look at the city's resilience, several sectors estimated to have the most significant impact from migration to Balikpapan were selected. Several sectors include solid waste management, disaster, and housing provision. It is hoped that by looking into these several sectors, a more comprehensive picture will be obtained from Balikpapan's resilience.

3.3 Data Collection

This research uses two data collection methods based on Cresswell (2014): documents and semi-structured interviews. Concerning qualitative research, both methods have specific advantages and disadvantages. However, if the two methods are combined, a more holistic picture will be obtained about urban resilience in Balikpapan.

Documents

There are two objectives to be achieved in document data collection: developing a theoretical framework and understanding the problem and research questions. The first purpose was conducted by collecting existing data appearing as data and information from literature, such as academic books and research, journal collections, and statistical data, which are used in shaping theoretical concepts and thinking frameworks concerning the urban development phenomena and development within the scope of spatial planning and

general description of the study area existing conditions. The majority of information is obtained through scientific search engines such as *Smartcat*. Literature research is accomplished using specific keywords related to this study, such as migration, internal migration, impact migration, resilience, resilient cities, and adaptive governance. This literature review is forming an analytical framework to build a solid theoretical basis. Balikpapan planning documents are used as source documents in this study (see **Appendix A**). The analysis of planning documents, newspaper and internet news support evidence of the stakeholder's interview results.

Semi-Structured Interviews

Semi-structured interviews are a data collection strategy for asking for information based on a set of predetermined but open-ended questions. Open questions allow for further exploration of the answers given (Given, 2008). Semi-structured interviews were attended with government officials to gain a more far-reaching understanding of the conditions, the challenges and strategies to enhance urban resilience in Balikpapan. General and specific interview guides have been developed to achieve this understanding (See **Appendix B**).

The interview guide is divided into three parts, and to be effective in data collection and to obtain a level of analytical clarity, structuring questions are included in all three stages of the interview. The first part focuses on the planning process in Balikpapan, the migration impact from the IKN relocation to East Kalimantan and its relation to resilience. The second part emphasizes Balikpapan's policies and strategies concerning the migration impact and stakeholder involvement in urban resilience efforts. Finally, the third part focuses on funding and resource mobilization concerning increasing urban resilience and preparation to support the new national capital. The questions asked in the interview are open-ended. It allows interviewees to express views and opinions more openly and reflect and discuss policies and strategies related to urban resilience.

For interviews with government respondents, this study used purposive sampling. Government respondents were selected based on the sectors that would significantly impact migration to Balikpapan. Several respondents from the Balikpapan City Government included the Regional Development Planning Agency, the Environmental Department, the Public Works Department, the Housing and Settlement Department, and the Regional Disaster Management Agency (see **Appendix C**). There are two types of interviews conducted in this study, namely individual interviews and group interviews. Both types of interviews are conducted to support the respondent's comfort in answering the questions asked in the interview. This combination of resource persons provides several different views on the research topic. In addition, various stakeholders can provide an overview of coordination and cooperation between agencies in managing urban resilience. However, due to the limitations of Covid-19, interviews were conducted online via Zoom.

3.4 Data Analysis and Interpretation

The collected data need systematic analysis and clarification to obtain conclusive and meaningful results. There are several steps in analyzing the data. First, the semi-structured

interviews that have been conducted and recorded will be transcribed. Second, the interview transcripts documents were analyzed using the Atlas.ti software. Coding is a procedural function that assigns certain and sufficient values to the collected data elements (Cresswell, 2014). It is hoped that using Atlas.ti will make it easier to see the relationship between the theoretical concepts used in this study and the primary data obtained from interviews. Third, the collected data and information will be analyzed depending on the conceptual model (**figure 2-3**).

In this study, two types of analysis will be performed. The first is the analysis of planning documents. The purpose of this analysis is to determine the extent to which the concept of urban resilience is understood and used in planning documents in Balikpapan. The analysis is based on the six resilience characteristics listed in **table 2-1**. The second analysis concerns the implementation of resilience planning related to the migration impacts. The second analysis is based on a three-dimensional resilience structure: *content, context,* and *process* with three resilience aspects: *robustness, adaptability,* and *transformability* (see **table 2-3**). Those structures and aspects become the main descriptions and themes for the coding. The codes used in compiling and analyzing observations are based on operationalizing urban resilience. Some examples of codes used include technical measurement, relationships between stakeholders, and increasing awareness. In addition, the secondary data obtained were coded and used as supporting evidence from the interview results. Data interpretation is executed after the data coding process is complete. The code group tool has been used to set the codes used. Using the Atlas.ti software makes it easy to create code groups from each category. The code that has been generated during the analysis is essential in analyzing and interpreting qualitative research. In interpreting this research, there are several steps, namely summarizing findings and comparing findings with literature and theory, reflecting on findings with personal opinions, explaining research limitations, and the future research possibility.

3.5 Research Ethics
Research ethics is an essential issue in academic research. One of the primary considerations in this study of those involved is the possible disadvantages of this study. Therefore, any participant responses and recorded interviews will be kept confidential and protected from being private. Any attempts from outside parties to access the data will be made with consent. Ethical issues in this study are handled in various ways. First, the guarantee of the interviewee's privacy. Participants' names are made anonymous by stating the characteristics of the participants, namely the types of stakeholders. The interview's purpose was explained before the interview, and permission was asked to record the interview. Next, raw data processing is implemented carefully after data collection is finalize. Raw data appearing as records and transcripts are stored with limited access. All the points mentioned above increase the research validity and reduce ethical problems.

4. Findings

Chapter four discuss the findings of this study based on documents analysis and interviews. Balikpapan planning and practice in resilience terms and its relationship with migration due to the IKN relocation will be discussed. This chapter consists of two parts: the first part is an understanding of the planning process in Balikpapan. This subchapter will explain how an understanding of resilience has been incorporated into urban planning documents (Lu and Stead, 2013). The second part discusses the resilience implementation in Balikpapan in several sectors, namely housing provision, urban slum, environmental impact, disasters, and infrastructure service. These sectors are expected to receive the IKN relocation significance, and the city's resilience implementation will be observed based on the structural dimensions of *content, context,* and *process* in three resilience aspects: *robustness, adaptability,* and *transformability*.

4.1 Understanding Planning and Development Process in Balikpapan

Decentralization in government in Indonesia, characterized by regional autonomy, has been going on for more than two decades since 1999. With decentralization, regions can independently develop their regions according to their capabilities and potential for the welfare of their people. One form of decentralization is the authority to plan and implement development in the regions. However, it still needs to be guided and synergized with national planning and regional planning. It is stated in Law Number 25 of 2004 concerning the National Development Planning System. It requires the (regional) government to prepare development plans, both long-term (20 years), medium-term (5 years) and annual plans. It is hoped that there will be an integrated national planning system from the local to the central government.

Article 263 of Law Number 23 of 2014 concerning Regional Government mandates local governments to prepare regional development planning documents, one of which is *Rencana Pembangunan Jangka Menengah Daerah* (RPJMD) or Regional Medium-Term Development Plan. RPJMD elaborates the Regional Head's vision, mission, and programs for 5 (five) years in office. In preparing the RPJMD and paying attention to development plans at a higher level, it is necessary to notice other regional medium-term development plans and other regional spatial plans to create synchronization and synergy of medium-term development. Therefore, the Balikpapan RPJMD is an integral part of urban development planning. The linkages between documents, both in the hierarchy of development plans and spatial planning at all government levels, are illustrated in **Figures 4-1**. However, in its implementation, it still results in spatial fragmentation (Firman, 2014). It happened because every district keeps trying to maximize their respective local resources and potentials regardless of the other regency and provinces where they are located. The central government's neglect of this spatial fragmentation is evident in Indonesia's current practice of decentralization.

As a regional medium-term development planning document, the Balikpapan RPJMD guide all development stakeholders in implementing development. Preparing the RPJMD begins with a technical draft of the RPJMD and the Regional Development Plan Participation Forum or *Musyawarah Rencana Pembangunan* (Musrenbang). In *musrenbang*, the

community is invited to participate in the regional development planning process. After that, the RPJMD final draft will be prepared before being ratified by the Regional House of Representatives or *Dewan Perwakilan Rakyat Daerah* (DPRD), appearing as regional regulation. The Balikpapan planning document, which is still valid for 2016-2021 and the draft city planning document containing the IKN relocation, will be discussed in the next sub-chapter.
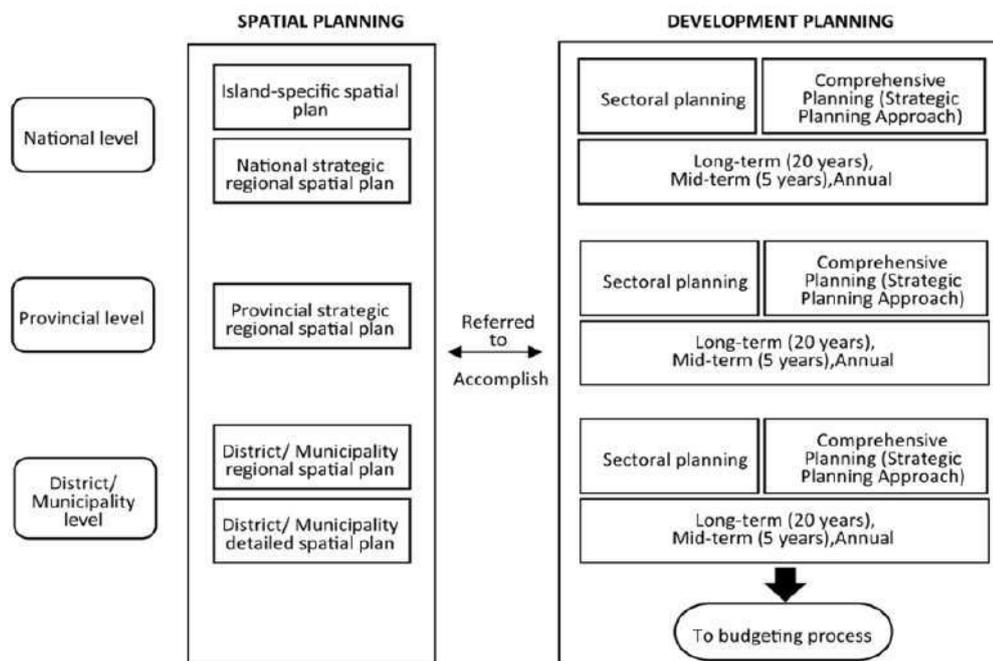

Figure 4-1. *Relationship Between Planning Documents in Indonesia*
(Source: Handayani et al., 2019)

4.2.1 Balikpapan Midterm Development Plan 2016-2021

In the case of Balikpapan, the current planning document is the RPJMD for 2016-2021. The document represents the elected mayor's vision, mission, and program for the 2016-2021 period. Balikpapan's vision for 2016-2021 is "Realizing Balikpapan as a well-known city that is comfortable to live in and sustainable towards *Madinatul Iman*". In the Balikpapan mayor's strategic issues on RPJMD 2016-2021, which can be said to be related to city resilience, are the second and third missions, namely "Sustainable and Adaptive Environmental Management to Climate Change and Disaster Resilience" and "Improving the Availability of Basic Service Infrastructures Oriented to Green Concepts (Green City)".

In RPJMD 2016-2021, several strategic issues have been considered, including international, national, and other municipality strategic issues for regional development located around Balikpapan. However, IKN relocation to East Kalimantan has not become a strategic issue in preparing the RPJMD 2016-2021. The IKN relocation has not been formalized into the 2015-2019 National Development Plan or *Rencana Pembangunan Jangka Menengah Nasional* (RPJMN). The plan to relocate IKN to East Kalimantan Province has just been included in the RPJMN 2020-2024.

From RPJMD 2016-2021, it can be concluded that this document does not yet contain IKN strategic issues in the planning. However, the Balikpapan city government planning and practice in managing the pressure on the city can be recognized through this document. So, the existence of this document is considered as one component to see the Balikpapan resilience. The resilience, unfortunately, is not yet accommodating the migration issues.

4.2.2 Balikpapan Midterm Development Plan 2021-2024 (Technocratic version)

The latest Balikpapan RPJMD will end in 2021. The process of drafting the new RPJMD has begun. Until completing the field research period in June 2021, the RPJMD design process has arrived at the 2021-2024 RPJMD draft. This document was prepared using a technocratic approach before the appointment of the new Balikpapan mayor. Therefore, the technocratic design of the 2021-2024 RPJMD has not been integrated with the elected mayor's vision, mission, and programs. Moreover, the resulting RPJMD draft does not have five years because, in 2024, there will be simultaneous direct regional head (or mayor) elections throughout Indonesia.

In this RPJMD, the strategic issue of relocating IKN to East Kalimantan Province has become one of the things discussed in the draft. Therefore, the Technocratic Draft RPJMD 2021–2024 is very important, especially preparing Balikpapan as a buffer for the State Capital (IKN) according to the direction of the Central Government, which will move IKN to East Kalimantan Province. In this 2021-2024 RPJMD draft, Balikpapan is prepared as a Buffer Zone for the new IKN. The IKN relocation plan will significantly increase the Balikpapan population. The construction of the IKN project is predicted to accelerate population growth and urbanization rates. Due to the high migration to Balikpapan, Balikpapan needs to take anticipatory actions. **Table 4-1** describe several sectors that will be affected by the IKN relocation.

Table 4-1 Several sectors and the possible IKN relocation impact

No	Sectors	Possible Impact
1	Poverty Alleviation	The emergence of new slums area
2	Land-use change	With the IKN, there will be the construction of new mega-projects that will change the designation of several land functions not to hinder investment.
3	Housing Provision	The IKN development project can absorb much land so that the construction and provision of housing in the long term will be affected, especially in the increase in the number of housing backlogs.
4	Permit to use State Land	increase in the demand for state land use permits accompanied by an increase in the problem of overlapping land ownership
5	Sport and Tourism	The need to increase the optimization of the sports and tourism sectors and improve the quality of local human resources in the tourism sector that is internationally competitive.
6	Infrastructure Service and Quality	The need for infrastructure development will increase to meet the needs of the community. It includes providing a comprehensive and integrated infrastructure as well as infrastructure accessibility to the community.
7	Disaster	an increase in population will increase the potential for disasters, including floods, landslides, and fires.
8	Health and Education	The increase in population will increase the need for health and education facilities and support human resources.

(Source: Draft RPJMD 2021-2024)

Based on the RPJMD draft document, six strategic issues are of concern, namely: 1) good governance, 2) sustainable environmental management, 3) provision of reliable and environmentally friendly infrastructure, 4) increasing economic growth, 5) poverty alleviation, and 6) improving the quality of Human Resources. The six strategic issues are interrelated or influence each other in several ways. However, the six strategic issues were shrouded in one issue that became the central strategic issue of Balikpapan, namely **Balikpapan as a buffer zone for IKN**.

Furthermore, the two strategic issues (strategy issues 2 and 3) are strategic issues in achieving one of the 2021-2024 city development goals of Balikpapan: "to create an environmentally friendly livable city". Two targets support efforts to achieve this goal, namely increasing integrated and quality infrastructure and improving the environmental quality. Several programs related to achieving these development goals include water resources management programs, housing development programs to reduce the area of slums, environmental pollution control programs, the number of uninhabitable houses, and disaster and fire management programs.

From this RPJMD, it can be mentioned that the issue of relocating IKN and the role of Balikpapan as a buffer for IKN is the principal strategic issue in the development of Balikpapan in the medium-term plan. However, the RPJMD document is still not finalized; there is still no integration of the RPJMD draft with the vision and mission of the elected mayor to do planning for Balikpapan in the future, especially in the future next five years, it is still not very clear. Therefore, this RPJMD draft can only provide an overview of the conditions and achievements of regional development performance in the last five years, provide guidelines in determining development policies and strategies, and provide input on strategic issues and regional development problems. This condition shows that this document still cannot say much about the resilience of Balikpapan to the migration impact on IKN relocation. However, the document can provide information that there is an effort from the government to accommodate the IKN issues. Although, it still will face the challenge that the final decision of the technocratic RPJMD rests with the elected mayor.

4.2.3 Analysis of Planning Documents
This thesis uses six resilience components on the planning document (Lu & stead, 2013) as the analysis benchmark. The analysis compares two existing Balikpapan planning documents through these components. First, the analysis starts from undermining the performance of Balikpapan to pay attention to the current situation, especially regarding migration (component 1). It can be indicated that the two documents already contain the concept of resilience in monitoring current conditions and make the concept of resilience one of the goals of development. Balikpapan uses *green city* jargon (RPJMD 2016-2021) and *livable city* jargon (RPJMD 2021-2024). According to Lu and Stead (2013), the jargon *'green city'* and *'livable city'* usage, although not directly mentioned *resilience*, indicate the government concerns about resilient issues. The jargon itself has indicated the concern of Balikpapan to a current condition related to *possible* migration impact in Balikpapan when preparing the planning document. In RPJMD 2016-2021, although the word *'migration'* was not mentioned, the migration impacts in environment settings have been coined as a

significant concern in Balikpapan through the *green city* concept. The migration concern has heightened in the technocratic RPJMD 2021-2024 document. The *livable city* jargon represents Balikpapan idea to mitigate the IKN impacts, such as the water resources provision, environmental pollution control, slum alleviation through housing provisions, and disaster mitigation programs.

Second, the comparison relates to future trends and threats (component 2). In the prior RPJMD 2016-2021, the initial issue was the environmental city issues in general, as mentioned before, and there were no migration threats due to IKN specifically mentioned. In the following RPJMD, Balikpapan realized the importance of addressing the IKN relocation as a future possible challenge. The shift in jargon indicated the capability of the government to harnessing future threats through refocusing RPJMD. It also depicted the ability of Balikpapan to be more aware of emerging trends, which is the migration impacts through assessing possible risk and disruptions (see **table 4-1**). In the RPJMD, the future trends and threats were accommodated in the strategic issues and problems section. Balikpapan has manifested the learning process by harnessing the IKN relocation challenges from central government policy, although the policy is not yet implemented.

Third, the ability to learn from previous experiences. Both documents contain the past learning results as one of the lessons learned to prepare planning documents in the next period. The lessons from the past are harnessed in the general region description, regional financial management, and development issues. One of the examples is the slum alleviation project, which can be identified in both documents. In RPJMD 2016-2021, the slum alleviation project was not practical due to the project definition. The 'slum' project was only focusing on the several slum areas which were in *legal* status. As a result, the *illegal* slum areas were untouched. RPJMD 2021-2024 has revisited the slum criteria to fix the past residual challenges. The illegal slum embracing has indicated Balikpapan capacity in using experiential learning from the past to reshape future slum alleviation projects.

Fourth, the ability to set goals analysis. In this analysis, this thesis elaborates on Balikpapan performance to prioritize the goals based on assessment and define a new standard. From both planning documents, it can be identified that there were goals prioritization according to assessment results conducted by the Balikpapan city government. As the follow-up from prior analysis, Balikpapan has harnessed and elaborated IKN-related challenges into the planning document, although the IKN project is still not yet implemented. Balikpapan has specifically addressed the IKN challenges into planning development goals in technocratic RPJMD 2021-2024. Overall, the Balikpapan city government response to include the IKN relocation into the planning development goals depicts the willingness and power in responding to future disturbances (Lu and Stead, 2013)

This thesis identifies that Balikpapan's ability to initiate action has not been fully implemented in the fifth component. On the one hand, the Balikpapan city government has involved all the related stakeholders in the planning process and considered all the higher-level government goals, including the central government. However, on the other

side, the differences in political interests at various levels of government cause the results of planning to be not as accommodative as the beginning. The political process in the planning document formulation shifted the comprehensive goal approach to be the more self-oriented approach. There was a sectoral ego to prioritize the several political actors rather than the common goals. As a result, there was a fragmented government condition without considering the surrounding area interest (Firman, 2014). In addition, this document does not contain an informal form of power, so different kinds of resources when implementing resilience do not necessarily refer to this RPJMD document.

The last one is related to the ability to involve public response. In the process of preparing the RPJMD, community involvement is present during the *Musrenbang*. It occurs in both RPJMN documents formulation processes. During the *Musrenbang* implementation, the community can convey their aspirations through a formal planning discussion forum. It shows that the component of resilience to involve the public's response in the policy-making process has been fulfilled. However, to be approved as an official city planning document, the draft RPJMD still needs to go through a political process in the DPRD. Thus, once again, the political process can influence the RPJMD outcome.

The following subchapter will look at implementing urban planning concerning urban resilience and managing the impact of migration in Balikpapan.

4.2 Managing Migration Impact on Balikpapan City Resilience

The problem of population migration to Balikpapan has not been resolved but is increasing from time to time (Pratama, 2020). Based on the analysis of existing policy documents in Balikpapan (See **Appendix A**), it was found that Balikpapan is still experiencing several urban problems. Moreover, with the plan of IKN relocation to East Kalimantan province, it is estimated that the problems in several sectors (see **table 4-2**) will be even worse for Balikpapan. **Table 4-2** describes several affected sectors and their problems. The problems and impacts will be discussed further as a form of resilience practice in managing the impact of migration and the growth of Balikpapan's population.

Table 4-2 Focus on several sectors affected and the problems faced

No	Sectors	Remarks
1	Housing provision	The increase in population due to relocation will increase the need for housing and increase the number of housing backlogs
2	increase in urban slums	The increase in migration will increase the number of poor people, which will lead to the potential for the development of slum areas in the city
3	Environment	The more people who live in the city, the more waste is produced, if not managed properly, it will have an impact on the urban environment
4	Disaster	The increase in population will increase the potential for disasters that occur in Balikpapan, such as flood and landslide
5	Infrastructure Service and Quality	The need for infrastructure development will increase to meet the community's needs, such as clean water and accessibility.

(Source: Author Analysis, 2021)

This subchapter discusses the resilience implementation to see how resilient Balikpapan deals with pressures due to migration, especially with the strategic issue of relocating IKN to East Kalimantan Province, which will add to the adverse impact of urban problems in Balikpapan (see **table 4-2**). The analysis for city resilience findings is divided into three types of analysis: content, context, and process. Each analyzes the city resilience based on *robustness, adaptability, and transformability*, which provide an overview of the Balikpapan resilience concerning the migration impact.

4.2.1 Content

The content dimension is defined as the goals, aims, targets, and mix of strategic measures and policy instruments implemented to reduce migration risk or 'to decide what to do' (Hutter, 2006; Restemeyer *et al.*, 2015). This part discusses Balikpapan's measures and policy instruments in dealing with the impact of migration on urban life.

Robustness: Technical and Spatial Measures

Based on policy documents and interviews, Balikpapan has implemented several activities related to population growth. One of the impacts that are the focus is on how to reduce the adverse effects of flooding. The flood is a chronic disaster that hit Balikpapan. The flood contributing factors are the drainage conditions and the lack of infiltration areas. Moreover, the residential areas in the Balikpapan area are generally located in basin areas to such an extent that flood will have an economic impact, significantly disrupting household activities (PD-09). Therefore, the flood control program is one of the priority programs of the Mayor of Balikpapan. In 2019, flood control activities in drainage construction were in 42 locations spread throughout the city.

The problem of waste and bulk water provision is also a significant issue. The increase in population and development in various sectors is directly corresponding to the increase in waste. For example, the increase in population by 1.58% in 2017 increased potential waste accumulation by around 450,000 kg/day (PD-09). In this regard, the Balikpapan city government has developed a Manggar Final Processing Site for Waste or *Tempat Pembuangan Akhir* (TPA). The Material Recovery Facility (MRF) and Intermediate Treatment Facility (ITF) operation is also expected to help accelerate integrated waste management (PD-08). TPA Manggar is a facility owned by the Balikpapan City Government, which stands on 49.89 hectares. To see the zone of the Manggar landfill area, see **Appendix D**. TPA Manggar is a relatively new infrastructure operated in 2019 with a spacious waste area containment (Basith, 2019). Thus, it can contain future waste productions by the upcoming IKN's migrants.

Meanwhile, on bulk water provision, Balikpapan has completed the construction of the Teritip Reservoir with a capacity of 250 liters/second (PD-05). In 2019, the construction of the Aji Raden Reservoir with a capacity of 150 liters/second began, and the bidding process for constructing the Sea Water Reverse Osmosis (SWRO) system (PD-07). The condition of water quality in Balikpapan is a problem that the people of Balikpapan often complain about (Rezagama and Tamlikha, 2016). The quality of groundwater has a high acidity level and exceeding the water quality standard (PD-09). The current condition of the bulk water

sources, the Balikpapan reservoirs, are strongly influenced by the season where during the dry season, the water volume capacity will drop drastically (PD-06). Therefore, it will be a challenge for Balikpapan to fulfil water demand from future migrants.

The flood control program will be an indicator for spatial measurement in Balikpapan, consisting of 1) the river normalization program, 2) the slum alleviation, and 3) flood prevention measures (PD-03). Balikpapan city government has initiated river normalization for ten years until 2021 (Anggraini, 2021). There are at least two projects in the normalization: 1) land clearing and 2) widening the drainage. In the land clearing process, there are slum areas involved. Thus, the second measurement is slum alleviation. This measurement covers two main activities: the construction of sanitation facilities and the construction of flats (ER, 07-06-2021). The Ampal River Basin area is a top priority of the slum alleviation measure (PD-07). The third measure is the flood protection measures, mainly in the residential areas. There is an obligation to provide 4% of the residential land area as the location of a detention pond or control dam with a depth of 3 meters (PD-08). However, the future migration trend will burden the flood control program due to increased people who require land for a living. It might reduce the detention pond area.

Despite the Balikpapan city Government effort, there are still obstacles in the aspect of robustness. The main obstacles are the availability of land and the clarity of land ownership, especially in the normalization of rivers and widening of drainage in the flood control program (PD-05, PD-09). For example, the river normalization program will require land acquisition owned by the Indonesian National Army or *Tentara Nasional Indonesia* (TNI) that might spark institutional disputes (EN, 14-06-2021). Lack of land for technical development in Balikpapan can make the city less resilient (Restemeyer *et al.*, 2015).

Adaptability: Land use Control and Integration of Spatial Planning
In the content dimension, adaptability relates to efforts to increase the city's ability to adjust to future vulnerabilities. This evidence is observable through the appropriate suitability of land use related to the impact of migration and the existence of an early warning system. In adaptability, the city's efforts are recognized in the Regional Spatial Plan document or *Rencana Tata Ruang Wilayah* (RTRW) Balikpapan 2012-2032 (see **Appendix E**). The document explains that of the total area of Balikpapan, which is 50,330 hectares, 52% of this total area is directed to environmental protection, while the remaining (48%) is used for cultivation areas (PD-01). On the one hand, the area division (52% and 48%) can help prevent disasters, but on the other hand, the area division is considered to limit the space for investment and housing provision, especially with the existence of IKN (ER, 07-06-2021).

Moreover, Balikpapan topography, which is 85% hilly, causes a very high potential for landslides (PD-08). Although it is still far from ideal in terms of disasters, Balikpapan has started to install an Early Warning System (EWS) to detect floods and landslides (PD-05). Additionally, Balikpapan already has a flood and landslide-prone map; however, the map was last updated in 2010 (SR, 25-05-2021).

Transformability: Raise Public Awareness and Preparation Education

In this Balikpapan case study, based on interview results, to overcome the impact of migration on urban life, the efforts that have been made by Balikpapan consist of technical and spatial approaches. However, these efforts felt to be lacking (Santoso and Moenek, 2019). Therefore, there is a need to raise public awareness to be involved in urban development to become a resilient city (Restemeyer *et al.*, 2015).

Two things that stand out can increase public awareness in settlement of slum areas and environmental control. First, in revamping the slum area, dissemination activities are performed to protect the environment, such as the rule not to throw garbage in the river (PD-03). This activity was realized because there are still many residents of Balikpapan, especially those living on the riverbank, throwing garbage into the river. In addition, one of the main activities in increasing public awareness is an appeal to manage public assets that the government has developed, such as clean water installations and drainage (PD-07). It is hoped that people who feel they have these assets will be more aware of assets and maintain them.

In environmental control activities, one of the activities achieves in instilling environmental care education. The activity is "Less Waste Briefing", the information delivery on waste reduction guidelines at every event to the public. The activity contained information on reducing single-use plastics, using eco offices, sorting waste by type, and recommending wise consumption (PD-08). From the migration impact's view, this becomes important considering that the increasing population will further increase the amount of waste produced by the population. It is hoped that with increased public awareness, more people will know and care about the environment and reduce the migration impact on urban life.

4.2.2 Context

The context dimension is defined as all external and internal factors that influence migration management. It plays a role in determining resilience strategies, including why certain content or processes in the strategy-making process are chosen can be explained in terms of contextual factors. In this case, contextual factors refer to how responsibilities are shared between the government and other stakeholders from a policy and decision-making perspective. Several things discussed in this subchapter are the collaboration between government agencies (starting from the city, provincial, and central government), collaboration between the city government and other stakeholders in Balikpapan, and the emergence of new interdisciplinary networks and societal change.

Robustness: Strong Collaboration Among Government Stakeholders

The robustness strategy on context dimension is recognized in the strong collaboration among government stakeholders. In overcoming the problem of reducing the impact of migration, of course, the Balikpapan city government cannot work alone. There must be clear responsibilities for addressing urban problems among all levels of government (Restemeyer *et al.*, 2015). Regarding the division of responsibilities with levels of government above Balikpapan City (provincial government and central government), there has been a task division and authorities based on the interview result. It is evident in the

flood control program and in constructing roads or pavements. Balikpapan is only responsible for waterways and roads on a city scale; for a larger scale, the higher level of government is responsible for the infrastructure development.

In the slum upgrading program, there is a clear division of responsibilities. The city government only handles slum areas with fewer than 10 hectares, the provincial government handles 10-15 hectares, and the central government will handle more than 15 hectares (ER, 07-06-2021). As a result, during the 2014-2019 period, 915 house units have been renovated, consisting of 435 units by the Central Government, 145 units by the East Kalimantan Provincial Government, and 335 units Balikpapan City Government (ER, 07-06-2021). In addition, there is also a program in the form of building flats for Low-Income Communities or *Masyarakat Berpenghasilan Rendah* (MBR) (Arfiansyah, 2018). In this multi-level government collaboration, the central government is responsible for building flats, and the city government is responsible for managing flats and providing certified land for development. However, the limited availability of land that has been certified from the city government side has hampered the construction of flats (ER,07-06-2021). Furthermore, the difference in area size that different levels of government can handle causes inflexibility in handling slum areas. This development inflexibility is a dilemma that occurs in Balikpapan. The city government has *limited funds*, but differences in handling priorities have caused the solution to the slum area problem not to be resolved quickly (ER, 07-06-2021).

Furthermore, there are still overlapping responsibilities and weak coordination between agencies problems at the Balikpapan city government level. First, the *overlapping responsibilities* between agencies lie with the infrastructure management authority between the Public Works Department and the Environment Agency in the waste management system. Due to changing regulations, both departments have the intersected authorities (PD-06). Second, the *weak coordination* between agencies within the City Government, such as handling the number of flood points. Although the leading authority in flood management lies with the Public Works Department, coordination with other agencies is still needed (PD-09). For example, coordination with the sub-district authorities prohibits throwing garbage in the canal or with the Environment Agency in issuing land clearing permits (IN, 14-06-2021). It means, in robustness, Balikpapan lacks resilience related to collaboration between government level stakeholders. Strong coordination between levels of government is needed to achieve resilience from the robustness aspect related to the migration impact (Restemeyer *et al.*, 2015).

Moreover, Indonesia has implemented development based on the decentralization approach. Supposedly, the main actor in regional development is the city/district government (Simanjuntak, 2015). However, due to the limited local/municipal governments' financial capacity, many megaproject developments are handled directly by the central government, including preparation for development related to IKN (IN, 14-06-2021). The city government's role in developing this mega-project is the land provision (ER, 07-06-2021). The central government will have more than the city government in the IKN relocation program, which means the local governments in the IKN's buffer area will have

limited authority to define their development policy, including the Balikpapan city government. Meanwhile, the IKN relocation will heavily impact local government development, especially in the IKN's buffer zone. In addition, the heavily sided central government authority will disrupt the decentralization ideals.

Adaptability: Shared responsibility and all stakeholder's synergies

In this context, adaptability is related to the division of responsibilities between the government and other stakeholders in Balikpapan. A cooperation model exists between the government and other stakeholders, such as the private sector and the community on the housing provision, slum areas alleviation, disaster mitigation, and waste management.

In Balikpapan, the new housing sector growth must be accompanied by the supervision of environmental management (PD-06). The crucial point in the emergence of environmental impacts in the housing business comes from land-use change. Land carrying capacity degradation due to housing development should be minimized as much as possible (TM, 19-05-2021). In housing provision, housing developers must provide their housing area with a 4% detention pool, or if the project does not require a detention pool, it must provide 14% of its location as green open space due to hilly areas (PD-08). In addition, most of the new housing estates must apply for permits to build deep wells to fulfil water demand. These deep wells should be equipped with a Water Treatment Plant (WTP) (PD-09). However, seeing the condition of environmental damage due to destruction and land clearing in the 2017-2018 period indicates that there is still a lack of awareness of real estate business actors on environmental management, which has an impact on land damage at housing construction sites. In addition, the weak supervision performs by the city government on land clearing is one of the causes of floods in Balikpapan, which is getting worse every year (Amir, 2016).

Moreover, a synergy implement between the government and the private sector is in the form of Corporate Social Responsibility (CSR). It has been stated in a communication forum called the CSR Communication Forum or *Forum Komunikasi* CSR (FKCSR) since 2010 (FKCSR, 2017). The FKCSR management is led by the mayor and consists of government and private elements. Unlike the other city CSR Forum, the Balikpapan City FKCSR does not manage CSR funds from the company. Instead, the City FKCSR can synergize development programs between the government and companies to create equitable development in various sectors (PD-08). Based on the latest data in 2017, 58 companies participated with a total CSR value of around 58 billion rupiahs (FKCSR, 2017). However, the nature of this CSR fund is still only to support the primary activities accomplish by the city government (ER, 07-16-2021). An example of what happened in 2019 was handling slum areas in the Baru Tengah Subdistrict. The city government is responsible for carrying out physical development to upgrade slum areas, such as constructing drainage channels and green open spaces. In this slum alleviation program, the private sector supports the urban farming activity following the slum alleviation program (Fendiana, 2019).

Furthermore, several synergies between the city government, the private sector, and the community are in regulations related to the environment. First, in the issuance of Mayor

Regulation number 8 of 2018 and reinforced by Regional Regulation number 1 of 2019 in commitment to reduce the amount of plastic waste of Balikpapan. Plastic waste is the most widely circulated type of waste and is one of the causes of flooding in Balikpapan because it will cause clogged waterways (PD-09). Next, related to regional strategic policies for household-scale waste management to reduce waste goes to TPA Manggar by sorting the waste before it is transported. Both regulations show the initial collaboration commitment between stakeholders in Balikpapan in achieving resilience from the migration impact on the waste and disaster side. In addition, it will directly affect the waste products, which will increase along with the population. Indirectly, this commitment is an effort to reduce the potential for flooding due to clogged waterways.

Transformability: New interdisciplinary network and societal change

Transformability is related to new ways of thinking to solve a problem. This context is related to envisioning a long-term future in embedding learning processes in society (Hutter, 2006). Here, the context is trying to see the community's initiation to overcome migration in urban areas. In Balikpapan, this is evident with the emergence of new institutions that can be formal or informal from community initiatives, such as disaster and waste management activities. First, with a high estimate of population migration, the potential for disasters, especially floods, will be even more significant in Balikpapan (PD-02). Several volunteer groups that care about disasters are formed (Januar, 2021). These voluntary groups assist the Regional Disaster Management Agency or BPBD, either as informants or directly helps on the field when a disaster occurs. The volunteer groups existence is beneficial for BPBD, especially in areas that are difficult to reach by BPBD (SR, 25-05-2021). BPBD also records the presence of volunteers, ranging from the number of members, expertise and equipment owned. In addition, the flood disaster also created a new network of private parties and other stakeholders in Balikpapan, for example, when a disaster occurs, such as Pertamina and the TNI (Hilmansyah, 2021).

Second, in waste management, the community takes the initiative to form a waste bank or *Bank Sampah*. It is one effort made by the community and the city government to reduce waste. The concept of a waste bank is to pile up dry waste and sort and manage it like a bank, but customers store the sorted waste instead of money. The waste bank is an approach to build public awareness to be involved in waste management by sorting the waste and selling the valuable waste to the waste bank centre. The valuable waste will be recycled into the various products in this centre. The government's role is to foster waste bank management and facilitate price stabilization by establishing a waste bank centre. However, even though in 2017 the Waste Banks reached 125 banks, it drops to 69 banks in 2019. Apart from the problem of the uneven location to reach the entire community, another problem is that public awareness and interest in sorting and managing waste is still *insufficient* (TM, 19-05-2021). In addition, the selling price of recycle-able waste to waste banks is still not competitive or is considered too low. The interviews with the Environment Agency revealed that prices are less competitive since the absence of *recycling tools*. The garbage must be transported by ship to Surabaya because Balikpapan does not yet have a Recycling Center or *Pusat Daur Ulang* (PDU) in the waste bank centre.

The absence of PDU causes the price that can be given to buyers to be lower because transportation costs still must be cut.

Moreover, the community's involvement, private sector, and TNI in disaster management and community initiation in waste management bring a new dimension to resolve disasters and waste in Balikpapan. It shows that the initiation of many stakeholders in disaster management shows that in Balikpapan, there is already a cross-disciplinary network that is useful as a basis for resolving the impact of migration (Restemeyer *et al.*, 2015). This evidence shows a pattern that solving urban problems cannot depend on government efforts and requires the initiation and involvement of all stakeholders in Balikpapan in solving them. This new system increases the city's capacity to produce innovative solutions and supports multiple stakeholders.

However, there are still obstacles in collaboration with many stakeholders in Balikpapan, especially with the community. Balikpapan has various social conditions. There are still volunteers who want to stand out and compete to be the best. It can disrupt the synergy in collaboration between stakeholders in Balikpapan. Strong collaboration between volunteers is needed with support from the government and other stakeholders in its implementation to achieve transformability in resilience (Restemeyer *et al.*, 2015).

4.2.3 Process

The process dimension defines the city's resilient capacity to overcome, adapt to, restore, and rebuild after interference or *'how to do it'* (Hutter, 2006). It can be described in the process of formulating strategies related to resilience and implementation. The following will discuss the institutional capacity building of Balikpapan about dealing with the impact of migration on urban resilience.

Intellectual Capital

Intellectual capital refers to sources of knowledge that build on prior knowledge, scientific investigation, and understanding of people, places, and problems (Healey, 1998; Khakee, 2002). The involvement of social interactions based on experience, local wisdom, and scientific inquiry is a combination of knowledge accumulation, which becomes a source of knowledge in intellectual capital. Therefore, the involvement of all stakeholders from various social backgrounds and scientific disciplines is indispensable for building intellectual capital.

In robustness, intellectual capital includes finding technical new ways directly related to translate problems into obtaining widely supported decision-making in–engineering and planning. The first example is the academics involved in Balikpapan as expert consultants in planning and implementing government projects. However, several experts used in infrastructure development still come from outside Balikpapan (Read: Java Island). This dependence shows that although many experts have participated in the development, the Balikpapan human resource's ability still needs to be upgraded to meet the need for experts who come from Balikpapan (IN, 14-06-2021). According to Tarigan et al. (2017), education was not a significant concern from Balikpapan until 2010, making this city lack

experts. The second example there is cooperation between agencies and making a landslide disaster-management contingency plan. This cooperation involved BPBD Balikpapan and the East Kalimantan Provincial BPBD (SR, 25-05-2021). The higher-level institution like Kalimantan Provincial BPBD can leverage the local institution capacity as BPBD Balikpapan. The higher-level institution involvement shows the inadequate local institutional capacity to tackle the issues in Balikpapan (Endarwati *et al.*, 2016).

In adaptability, a wide range of knowledge from various stakeholders helps build resilience and adaptation to reduce migration impacts on urban life (Restemeyer *et al.*, 2015). In the case of Balikpapan, the involvement of many stakeholders are manifested from the many studies made by researchers related to Balikpapan in dealing with urban problems such as environmental and industrial issues (Endarwati et al., 2016; Picasauw, 2019; Pratama, 2019; Raak, 2014; Tarigan et al., 2017).

Valuable local creativity helps generate new, innovative solutions, openness to testing new ideas, and learning skills in *transformability*. Several aspects include innovation and creativity. The first successfully implemented innovation in Balikpapan is the *"SiTanggap"* application innovation (Maulana, 2020). The *"siTanggap"* scope provides public complaints services, including complaints, questions, criticisms, and suggestions for implementing the Balikpapan government public services. The application is used to report potholes and dead-end canals that require handling from the city government (IN, 14-06-2021). The second innovation in the disaster area is innovations made by the community in developing flood detection tools with simple equipment. However, the development has not yet been accommodated by BPBD due to further testing in the tool's effectiveness (SR, 25-05-2021). This innovation shows that there has been an effort to innovate and be creative in achieving resilience from transformability that emphasizes local wisdom. However, for these efforts to be successful, support from the government and the community is needed in their implementation (Restemeyer *et al.*, 2015).

Social Capital

Khakee (2002) defines social capital as *"relational resources"*. It is about a relationship of trust that allows collaboration between all stakeholders involved to gain support and enhance the capability to coordinate all actions and decisions. Network resilience and good collaborative relations it is arranged in various ways, both formally and informally.

In robustness, social capital means having good network relations between stakeholders at various levels and scale sectors (Khakee, 2002). In Balikpapan, the relation is evident in an activity called *Gerakan Bersih Saluran* (GABAN) or Clean Action Movement. GABAN is a movement initiated by the Public Works Department by inviting the community to clean the canals together. There is a weekly schedule to conduct the cleaning action based on sub-district numbers in Balikpapan (Selvi, 2018). The communities are also expected to report the existing infrastructure condition, for example, potholes or clogged drains. Besides reducing the possibility of flooding due to clogged drains, this also helps foster a sense of community awareness of the conditions around their home environment (Gupta *et al.*, 2010). Furthermore, joint water channel cleaning activities between the government

and the community show an excellent relationship network among stakeholders in Balikpapan (Khakee, 2002).

In adaptability, social capital emphasizes shared values as shared needs, goals, and a sense of goodness. It also requires high local civic awareness and willingness to participate in resilience activities (Folke, 2006; Parkhill *et al.*, 2015). In Balikpapan, it is evident in collaboration between stakeholders in disaster management. The government has successfully embraced the high potential volunteers in Balikpapan to form highly dedicated and responsive volunteers in disaster. The formation of a disaster response volunteer network began with the city government initiation to gather volunteers in Balikpapan and share the vision of disaster between the government and volunteers. Volunteers can put more effort and initiative into implementing mitigation projects after the disaster vision is agreed upon. In addition, there is also a community called the *"Info Bencana"* community that helping to broadcast live and update the latest news about the incident or disasters in Balikpapan, such as wildfire and flood, through the YouTube channel and Instagram (Hendra, 2019). The collaboration between stakeholders who share the same values, such as needs, goals and a sense of goodness, shows Balikpapan's ability to adapt (Parkhill *et al.*, 2015). Concerning the migration impact, on the one hand, the more people there are, the greater the potential for disasters to occur, but on the other hand, the more people who can participate in resistance and adaptation activities and will enlarge and strengthen the network that is currently formed (Folke *et al.*, 2010).

In *transformability*, a high sense of trust among all public and private stakeholders is needed to participate in and accept new interdisciplinary networks (Restemeyer *et al.*, 2015). It emphasizes that the agreed vision should be followed by the community's trust towards the government to implement the program. In Balikpapan, the main issue is that not all communities trust the government's ability to implement the agreed vision. There are still groups of people distrusting the government efforts in solving the issues, for example, the potholes (IN, 14-06-2021). One community was formed on the community initiative because they wanted to take part in patching potholes. Here the government wants to invite the group to distribute rations and locations in the construction of potholes. Unfortunately, this group refused to collaborate with the city government because the infrastructure implementations distrust. The group argues that they should conduct solely in the implementation, not the government. The distrust problem resulting in the road patchwork of this group does not match the minimum service standards in urban road infrastructure (IN, 14-06-2021). Moreover, increasing migration could lead to more groups who do not trust or have a low level of trust in other stakeholders. If there are still groups who do not believe in the government, Balikpapan's efforts to achieve a resilient city are hampered.

Political Capital

Political capital is defined by Khakee (2002) as *"the ability to mobilize"*. This capital includes supporting commitment and willingness among all stakeholders to make policies and decisions for specific strategies to build consensus when shaping agendas, acting, and

supporting resource mobilization, especially finance. In this case, the political capital discussed is resource availability, mobilization capacity, and organizational leadership.

In robustness, it is related to resources available for building technical and spatial measurements. Thus, the political capital focuses on providing financial resources to build a resilient system (Healey, 1997). In Balikpapan, the city government focuses on cope with the adverse significance of migration on urban life as the priority program for flood management and waste management (PD-03). This focus is related to the primary goal of urban development in the 2016-2021 period towards a green city, covering five main challenges. In addition, the form of support in providing the budget for several programs identify with urban resilience are apparent in **Table 4-3.**

Table 4-3 City government priority programs and the budgets 2017-2021

No.	Program Name	2017*	2019*	2021*
1	Waste Management Performance Development Program	42.965	68.683	66.612
2	Bulk water supply and treatment program	41.396	22.921	18.500
3	Flood control program	26.703	27.422	15.300
4	construction of drainage channels/culverts	6.500	41.188	37.740
6	Drinking water and wastewater management performance development program	2.791	27.261	15.500
7	Residential Healthy Environment Program (Slum Upgrading)	6.885	5.518	5.807

*(Source: Author Analysis, 2021 based on City government performance report 2017-2019 and 2021 government service plan) *: in a billion Rupiahs*

Further explanation of **table 4-3** is as follows:
1) Several sectors receive large funding allocations because they align with the city issues in that fiscal year. For example, it is necessary to work on infrastructure for solid waste (TPA Manggar), clean water supply (Waduk Teritip) in 2017, and flood management program (construction of water channels (no.3 and 4)) in 2019.
2) Although it consists of several programs, the flood control program (no. 3 and 4) has the most significant portion in the 2019 and 2021 budgets because it is a city priority program.
3) The significant waste operational needs (no. 1) in Balikpapan make this program a significant portion in each fiscal year (TM, 05-19-2021); and
4) The decrease in the budget amount in 2021 was due to the Covid-19 pandemic. If viewed from the side of migration, it can be said that the city government has provided funding to overcome the impact of migration. However, there is no data on the allocation of funding for the coming years.

The primary constraint is related to waste management budgeting. Until now, Balikpapan has implemented a high waste budgeting policy. There has been a surge in the budget from

42 billion rupiahs in 2017 to around 65 billion rupiahs in 2021 (see **table 4-3**). It means that there is less waste that must be processed at government-owned waste processing facilities. However, on the other hand, operational waste costs are 15-17.5% higher than regional income through waste levies. It means that there is still a deficit in the budget balance through waste management. Therefore, other policies are still needed to cover the budget deficit, either from additional revenue from waste retribution or in the form of reducing operational costs (TM, 19-05-2021).

In adaptability, the political capital is related to mobilization capacity in supporting adaptation activities based on a risk-based approach (Restemeyer *et al.*, 2015). Apart from the Balikpapan city government fund source, there is also support from the central government and the provincial government. The first support is assistance appearing as Financial Aid. General Financial Assistance or *Dana Alokasi Umum* (DAU) is provided funds to increase the beneficiary's fiscal capacity. In addition, according to the regional government's authority, Special Financial Assistance or *Dana Alokasi Khusus* (DAK) can be budgeted to assist regional government priority programs in line with national priority programs (PD-05). Another financial support is project-based finance. It could be implemented by proposing a local government project to the central/provincial government. However, the central/provincial government will carry out the project later (IN, 14-06-2021). Besides financial assistance, the second assistance from the central government or the provinces can be in tools and training grants, such as received by BPBD for flood disaster management in rubber boats and land fires management in shelters, tents, and multipurpose cars (SR, 25-05-2021). If viewed from the side of migration, more than one funding source will support the city's capacity for adaptation activities to the impacts of migration (Restemeyer *et al.*, 2015).

In transformability, the political capital is related to organizational leadership in leading the system's transformation and the financial ability to support information and interdisciplinary networks. The community's active role contributes to social, economic, cultural, environmental, and infrastructure development in goods, services, and funds. During 2015-2018 the number of funds collected increased from around 90 billion Rupiahs in 2015 to 93 billion Rupiahs in 2018. The community self-funding is the financial capability evidence to support government efforts in developing Balikpapan (Restemeyer *et al.*, 2015). Therefore, it can also be the assurance for Balikpapan in welcoming IKN migration impacts in the future.

4.2.4 Summary of Resilience Implementation

Content

Content related to goals, aims, and targets of measuring strategies and policies to reduce migration impact. Based on the findings in 4.3.1, Balikpapan already has robustness, adaptability, and transformability aspect. In *robustness*, the TPA Manggar construction to overcome waste problems and the obligation to provide detention ponds in constructing new housing areas are examples of robustness in Balikpapan. However, the land issues, including clarity of land ownership and availability, are still obstacles to achieving full-scale

robustness. Land tenure will also affect Balikpapan city technical (infrastructure) capability to withstand the migration impact of IKN's relocation. This inadequate land provision depicts the fundamental need infrastructure absence in reducing the exposure (Restemeyer *et al.*, 2015), in this case, the migration. This absence also means the inadequate Balikpapan to challenge (Davoudi *et al.*, 2012).

The provision of 52% of land as protected areas and only 48% for built-up areas is one form of anticipation in land use for ***adaptability***. The provision of protected land areas above the minimum requirement shows Balikpapan's ability to mitigate to the possible impacts of migration, such as providing land for development without reducing the need for environmental protection. Another example in the existence of EWS in disaster mitigation shows the ability of Balikpapan to comply in overcoming the impact of migration on urban life. Both things show Balikpapan's ability to readjust where those improvements can make Balikpapan less exposed to the migration impact through land-use adjustment and appropriate early warning information system (Folke *et al.*, 2005; Restemeyer *et al.*, 2015)

In transformability, the emphasis is on the system's ability to make fundamental transitions that alter the system's nature. If it is related to the migration impacts, the current government's efforts are not enough; it is necessary to involve other stakeholders in handling the impacts of migration through enhancing public awareness (Restemeyer *et al.*, 2015). The efforts to enhance their awareness that have been implemented are maintaining environmental cleanliness dissemination, reducing plastic usage, and maintaining public facilities. These campaigns and dissemination are also beneficial for Balikpapan in facing migration issues. The more people migrate, the more likely it is that the city will have to deal with adverse impacts. Therefore, increasing public awareness is expected to delineate and shape advanced establishment landscapes by proposing new fundamentals and approaches to building a living (Walker and Salt, 2006).

In summary, two main points can be inferred in the content: 1) there are several government efforts in achieving technical side fulfilment in achieving all aspects of Balikpapan resilience, especially in withstanding future migration impacts. However, this city still has an inadequate technical provision regarding land tenure. 2) All efforts are made and prepared solely by the government in all aspects of resilience. Even in the aspect of transformability which aims to increase public awareness, the main actor who is the initiator is the city government. The main reason is Balikpapan government defines most in the urban development goals through RPJMD. Although the government applied the community participation approach through *Musrenbang* in RPJMD planning process, the final document should proceed through the political process. The political process has a significant impact on diverting the initial participation process. Hidayat (2013) argued that the RPJMD planning process is not comprehensively promoting democratization and community empowerment in the planning process.

Context
This notion can be defined as all the external and internal factors that influence migration management and play a role in determining resilience strategies (Restemeyer *et al.*, 2015).

In this thesis, *the context* refers to how resilience's responsibility is divided between the government and other stakeholders. It also refers to the collaboration among stakeholders and the emergence of new interdisciplinary networks and social organizations. In short, the context will cover all the Balikpapan city government's performance on involving all stakeholders to take part in resilience measurements of IKN's relocation impacts.

In the *robustness* aspect, it is evident in the collaboration of multilevel government stakeholders. In Balikpapan, there has been a task division and authorities within Balikpapan city government and with higher levels of government (provincial government and central government), especially in flood control and slum upgrading program. However, several obstacles are found in the resilience implementation. The First obstacle emerges within Balikpapan government agencies, closely related to overlapping authorities and lack of coordination. There are several cases identified, which occurs in the waste management system and flood control program. The second obstacle emerges in collaboration with higher levels of government. Although Indonesia has implemented decentralized development, in the current implementation, the central government in regional development is still massive. While the IKN relocation will affect the several cities/municipalities development in the IKN buffer zone, the central government directed the development initiation and development approach with a small space for local governments participation. Thus, the two obstacles above show the lack of resilience in Balikpapan regarding the robustness aspect in the context dimension. To be resilient, Balikpapan requires strong cooperation between levels of government, from the central government to the city government (Restemeyer *et al.*, 2015).

In *adaptability,* strong collaboration between the city government and other stakeholders such as the private and community sectors is needed (Singh and Sing, 2019). In Balikpapan, there is a collaboration between stakeholders in the housing provision, handling slum areas, disasters, and waste management. The stakeholders' ability to understand and adapt in responding to challenges, such as the issuance of regulations related to the environment, the provision of housing, and the FKCSR establishment, have indicated the initial commitment of collaboration between stakeholders in Balikpapan in achieving resilience from the impact of migration (Restemeyer *et al.*, 2015). However, the weak land clearing regulations' supervision by the government and the other stakeholder's inadequate involvement, only supporting the activity, can prevent the adaptability of Balikpapan's resilience. Therefore, in adapting, it is necessary to increase awareness and willingness to adapt from stakeholders. Thus, a flexible institutional regime is needed to develop rules and regulations to reduce the migration impact (Folke et al., 2010).

Transformability emphasizes envisioning a long-term future and embedding the learning process in society. Balikpapan's synergy in waste management includes establishing waste bank centre and integrated disaster management stakeholder shows Balikpapan capacity to initiate new opportunities during vulnerability (Walker and Salt, 2006). However, the unstable interest and the social status difference can disrupt the synergy between stakeholders in Balikpapan. The Balikpapan city. government requires strong collaboration

and full support from the community in order to achieve transformability in resilience (Restemeyer *et al.*, 2015)

In general, in the *context* dimension, Balikpapan shows the resilience achievement in its three aspects. However, there are still obstacles to establish a collaboration between stakeholders in Balikpapan. The obstacles in the context are barriers from the government side and the non-government side. Barriers from the government side are in the form of overlapping responsibilities, weak coordination between levels of government, and weak supervision of regulations that have been made. Meanwhile, from the non-government perspective, the obstacles include the lack of courage for private CSR to become a leading stakeholder in assisting development, unstable public interest, and high population heterogeneity. If not appropriately managed, these barriers will hamper Balikpapan's resilience in reducing the impact of migration.

Moreover, outside government involvement has begun to be noticeable in the *context* dimension, especially in the disaster sector and waste management. There has been a collaboration form between the Balikpapan city government and other stakeholders (e.g., the private sector and community). In these sectors, the community can be directly involved, and the impact will immediately be felt. Here the government takes the role of coordinator and provides support to other stakeholders. However, outside the two sectors, the current collaboration form is more inclined to cooperate between levels of government. The three sectors that have many collaboration forms between levels of government are the housing provision, slum alleviation, and infrastructure provision. All three tend to require high costs, so that capacity is needed to spend financial resources to handle them. More analysis of resources will be discussed in the following section. Furthermore, when viewed from the dominant government role in the three sectors, it appears that the essential measure to mitigate challenge is multi-level government collaboration to avoid inefficient resource spending, including in financial resources.

Process

In general, the process dimension is related to institutional capacity building. In this migration case, stakeholder's capacity refers to institutions and stakeholders, including formal or informal organizations and individual actors, to overcome, adapt to, restore, and rebuild themselves. The process emphasizes the stakeholders involved in urban resilience and the responsibilities and capacities of each stakeholder, and institutional capacity building is used by looking at every aspect of resilience. This thesis has three criteria in institutional capacity building: intellectual capital, social capital, and political capital (Healey, 1998; Khakee, 2002).

In *intellectual capital,* the broad knowledge of various stakeholders helps build resilience and adaptation to reduce vulnerability due to the impacts of migration. In this capital, the knowledge source in resilience is sourced from the government and its stakeholders (Healey, 1998). In Balikpapan, *the robustness* is obviously in the expert's involvement in infrastructure development and higher levels of institutions in helping the city's resilience. *The adaptability* is related to a wide range of stakeholders that help build urban adaptation to reduce migration. It is evident in the many studies conducted related to

Balikpapan to adapt to overcome urban problems, including environmental and industrial issues. In *transformability*, there is already local creativity that helps provide innovative solutions in achieving resilience. However, the lack of attention from the Balikpapan city government in education, particularly in higher education, has caused a very high Balikpapan dependence on knowledge sources from Java. According to Restemeyer et al. (2015), it is futile to depend on experts from a different area due to the lack of contextual understanding depicted in the high dependence on Java Island. It is essential to undermine the knowledge based on local wisdom.

From *social capital*, It is about a relationship of trust that allows collaboration between all stakeholders involved to achieve support and increase the capacity to coordinate all actions and decisions (Khakee, 2002). In Balikpapan, *robustness* is displayed in the GABAN movement. This movement shows good relations between stakeholders in Balikpapan in dealing with the impacts of migration. In *adaptability,* the shared values formed between the government and volunteer groups in disaster management. *The transformability* emphasizes the importance of trust in community participation. In Balikpapan, there are still groups who distrusted the government in solving urban problems and do not want to cooperate with the government disrupting Balikpapan's ability to be resilient (Folke *et al.*, 2005). If this problem cannot be solved, future people migration can increase the distrusted people/groups.

This thesis defines *political capital* as the ability to "mobilize". It can be displayed through stakeholders' commitments and the willingness to make policies and decisions for specific strategies and build consensus when shaping agendas, taking action, and supporting resource mobilization, especially finance (Healey, 1997). In *robustness*, the Balikpapan city government has provided funds to build technical and spatial measurements, including in the migration impacts mitigation. The technical and spatial provisions are recognizable in flood control programs and solid waste management. However, there is still a challenge on the budget deficit for waste management every year. Therefore, other policies are still needed to cover the budget deficit, either from additional revenue from waste retribution or in the form of reducing operational costs. In *adaptability*, funding support apart from city government funds, mainly from the provincial government and the central government, shows Balikpapan's adaptive capacity in dealing with the impacts of migration. In *transformability*, community self-funding is the financial capability evidence to support government efforts in developing Balikpapan. Therefore, it can also be the assurance for Balikpapan in welcoming migration impacts in the future. The results above depict on how the stakeholders' capacity and responsibilities in supporting Balikpapan resilience.

5. Discussion

Chapter five discuss how Balikpapan can enhance resilience to the impact of migration due to IKN relocation to the East Kalimantan area. Based on the findings and analysis in chapter 4, Balikpapan resilience challenges can be summarized in **table 5-1**.

Table 5-1 Resilience Challenges in Balikpapan

Resilience	Challenges	Remarks
Planning Documents	A challenge occurs in the planning document's fifth component. Both RPJMD documents still lack in implementation of inter stakeholder collaboration as well as the multi governance settings.	Initiate action
Content		
Robustness	there are still obstacles in land availability to implement infrastructure and spatial projects, such as flood control programs.	Land availability
Adaptability	the map is outdating, such as disaster-prone maps	Weak awareness
Context		
Robustness	there are three weaknesses: 1) different priorities in solving problems at different government sectors and levels. The authority issues can aggravate the migration impacts in future. ; 2) overlapping responsibilities and weak coordination between agencies in Balikpapan, and 3) the heavily sided central government authority will hinder the Balikpapan government authority on defining their development policy, especially in sectors affected by migration.	Different priorities. Overlapping responsibilities, Weak coordination
Adaptability	the weak awareness of private stakeholders and weak supervision from the government in land clearing ill weaken the resilience in adaptation.	Weak awareness
Transformability	there are two obstacles: 1) insufficient public awareness and interest in sorting, recycling, and managing waste, and 2) the standout communities who want to be the best can disrupt the synergy in collaboration among stakeholders	Weak awareness Standout communities
Process		
	There is a shortage in Balikpapan's **intellectual capital side,** mainly on the adequate human resources. This shortage causes dependence on outside intellectual capital resources.	Lack of local knowledge
	On the **social capital side,** there is still distrust between the community and the city government of Balikpapan.	Distrust to Government
	Additional policies related to funding management in the waste sector in Balikpapan are still needed on the **political capital side**. In addition, the financial weakness of the regional government will make the regional government's dependence on financial assistance from higher levels of government increase.	Funding Capability

(Source: Author Analysis, 2021)

5.1 Enhancing Resilience in Balikpapan

As depicted in the Balikpapan case, urban planning has tremendous challenges and vast possibilities of change trajectories due to the citizens' complex needs as individuals and the relations/networks (Skrimizea *et al.*, 2019). Based on the problems above, it can be explained about efforts to enhance resilience as follows:

1. *Land availability for development*

   The problem of land availability in Balikpapan for development is caused by 1) the reluctance of landowners to donate land for development and 2) the availability of certified land from the Balikpapan city government. The absence of land for development can delay development. This obstacle will undoubtedly affect Balikpapan's ability to be resilient, especially in the provision of infrastructure to overcome problems in dealing with the impact of migration. One possible measure to mitigate this issue is enhancing

the land certification mechanism through a single database. Thus, there will be clarity on the land ownership. The most critical institution to be involved in is BPN due to its authority in land certification. In supporting BPN's authority, the government should prepare additional funds to prepare the land certification.

2. *Overlapping responsibility and lack of coordination among government stakeholders*
The mandatory regulation multi-interpretations cause the different perspectives on who will implement the development initiative in Balikpapan. The different causes of these overlapping responsibilities are differences in interests and abilities between levels of government, lack of communication, and the shared vision of development. The result is ineffectiveness in achieving development goals, including in dealing with the impact of migration. Thus, the main activities needed in achieving resilience are responsible clarity between stakeholders and strong coordination.

3. *Insufficient public awareness, stand out communities and lack of trust in government*
This problem is caused by the absence of synergy in collaborating on concern, vision, and trust between stakeholders in Balikpapan. Therefore, it is necessary to increase the synergy between stakeholders and to have clear leadership. According to Olsson et al. (2006), it is necessary to support a shared vision, commitment to change, and leadership as also should exist in Balikpapan.

4. *Local human resources capabilities*
This problem emerges because the government has not prioritized the education sector, notably higher education in urban planning. In addition, local knowledge also has fewer opportunities to support Balikpapan resilience due to inadequate capacity to connect them. As a result, decision-making and policy implementation still use expert sources from other islands which do not necessarily match the local context of Balikpapan. Therefore, it is necessary to increase the number of universities in Balikpapan. The Balikpapan city government has established the Kalimantan Institute of Technology (ITK) to address the gap. In addition, it can also be done by giving a stage to local community leaders in knowledge enhancement efforts on a smaller scale, for example, at the subdistrict level.

5. *City Financial Capabilities*
This problem is caused by the region's limited financial capacity, causing not all activities to be planned and executed by the regional government. The limited capacity results in unfulfillment resilience supporting activities, particularly in both adaptive and robustness. Therefore, it is necessary to increase collaboration with higher-level governance and other stakeholders in ensuring all stakeholders involved in development funding. Collaboration means commitments and willingness among all stakeholders to make policies and decisions for specific strategies to build consensus when shaping agendas, taking action and supporting resource mobilization, especially finance (Healey, 1997)

Furthermore, the five recommendations for enhancing resilience from Balikpapan above can resolve challenges regarding resilience based on the current conditions in Balikpapan.

How about enhancing resilience to deal with the impact of migration due to IKN relocation? Population migration due to IKN will add the complexity and uncertainty of existing urban problems in Balikpapan. Thus, this thesis proposes two strategies based on the adaptive governance approach to be implemented in Balikpapan, namely: (1) the establishment of the Regional Development Cooperation Agency to Support IKN and (2) the establishment of resilience Sub-District. The relationship between the challenges and its adaptive governance strategy is in **figure 5-1**.
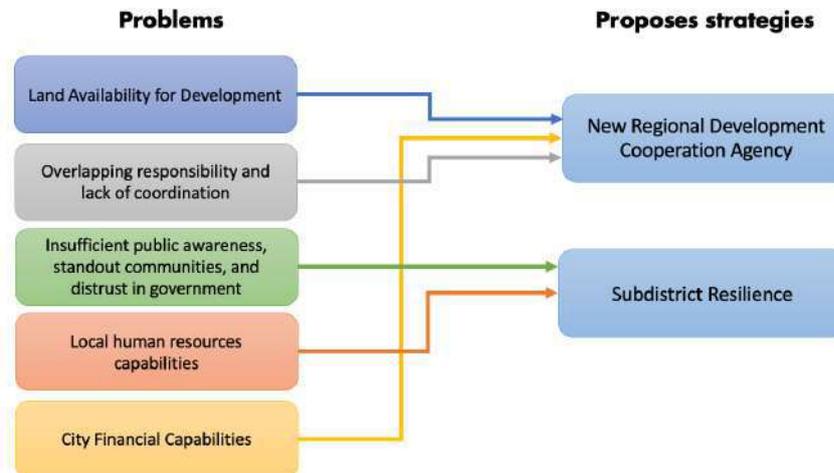

Figure 5-1. Relationship between the challenges and the strategies
(Source: Author Analysis, 2021)

The use of adaptive governance in adapting and learning in a city is the key to achieving resilience (Folke *et al.*, 2005). Khakee (2002) explained that in achieving adaptive governance, it is necessary to increase institutional capacity by involving all stakeholders in Balikpapan to increase knowledge and skills both individually and in groups to create effective institutions, in this case, involve all stakeholders in Balikpapan, both from the government (vertical and horizontal) and non-government (private, academic, and community). The relationship between each stakeholder in the proposed strategy can be seen in **Figure 5-2**. The explanation of the strategies is as follows.
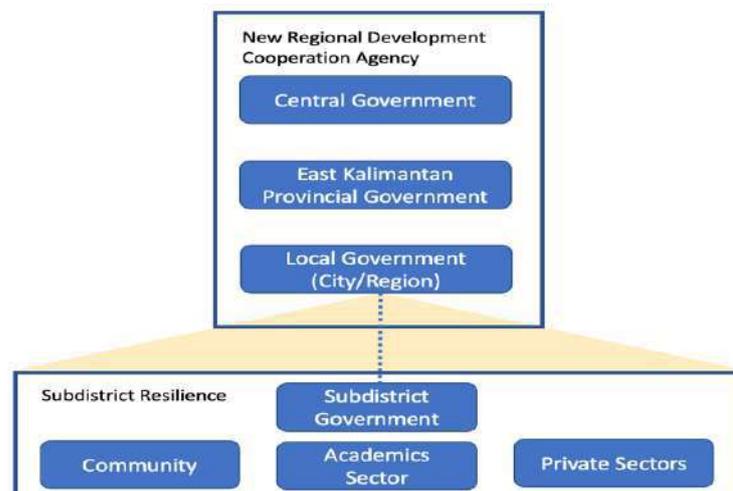

Figure 5-2. Relationship between each stakeholder in the proposed strategy
(Source: Author Analysis, 2021)

5.1.1 New Regional Development Cooperation Agency

The effort in the form of establishing this new Agency is to solve the challenges in providing land for development (1), weak coordination within the government (2) and funding problems (5). For Balikpapan to survive the impacts of migration, it requires inter-local government coordination between Balikpapan agencies and other local (city/regency) governments (such as Samarinda and Tenggarong). Hudalah et al. (2014) define inter-local government coordination and provincial government and central government to harmonize development towards a resilient city. A coordinating institution between the Balikpapan city government and other local governments around the IKN is needed to coordinate handling problems and alignment between resources and policy objectives. This institution could have treated the IKN area and its buffer zone with the term metropolitan. A metropolitan area allows the central, provincial, and city/district governments to manage the area together, and the division of authority to manage the area becomes crystal clear. However, the term metropolitan in Indonesia has not been included in the official government structure. There is no metropolitan leaders or metropolitan government. Indonesia government handles metropolitan through a collaboration form of city government. (Mardianta *et al.*, 2016; Roberts *et al.*, 2019). A new agency called IKN Regional Development Cooperation Agency is an alternative way to have a coordination agency. It allows for cross-focus area analysis to avoid overlap in urban resilience strategies, both between sectors and between levels of government (Setiadi and Wulandari, 2016). Moreover, it will also help overcome funding problems using a cost-sharing scheme (Roberts *et al.*, 2019).

However, several things still need to be considered. On the one hand, the legal agency is an effort to increase the government to increase resilience, not only for Balikpapan but also for IKN and its buffer zones. On the other hand, on the IKN relocation project, the central authority will make the central government's power in determining IKN and its buffer areas significant, while the direct impact of IKN relocation will be on population migration to the IKN buffer areas. Moreover, cynicism in local government that will priorities its region's interests also deserves attention (Lemos and Agrawal, 2006). Tension is observed between ensuring flexibility to adapt while preserving necessary stability in governance, and a balance is needed (Greenhill *et al.*, 2020). Therefore, in this new agency, one actor is needed to bridge the desires of the central government and local governments, namely the actor who will be the coordinator. The Provincial Government of East Kalimantan can hold the coordinator of the new agency. The East Kalimantan provincial government can act as a facilitator, mediator, and leader for all participating local governments and the central government. The leadership factor is one of the crucial factors in achieving resilience in adaptive governance (Folke *et al.*, 2005).

5.1.2 Subdistrict Resilience

Burby (2003) emphasizes that good planning requires a healthy kind of engagement among its stakeholders. The second effort that can be done is from the non-government side. This effort seeks to overcome challenges in Balikpapan's resilience in insufficient public awareness, standout communities, government distrust (3), and local human resources capability (4). To further increase the involvement of the private sector and the

community, which are currently still separated, it can be done by proactively building integration in the socio-economic and environmental fields by creating opportunities at the local level supported by innovation and increasing synergy between (de Boer and Zuidema, 2015). For this reason, Balikpapan should form a resilience group at the lower level of government available, such as at the Subdistrict level in the form of *Kelurahan Tangguh* or Resilience Subdistrict. The role of each stakeholder can be explained as follows. Community involvement here can help provide information according to the local context to solve problems from the impacts of migration, such as waste and flood management (Lemos and Agrawal, 2006). Apart from being experts, the role of academics is that they can also be an opportunity in Community Service or *Pengabdian Masyarakat* in assisting the planning and implementation of *Kelurahan Tangguh.* (Purbadi *et al.*, 2020). It will help overcome knowledge gaps and possible social problems in public regarding how to create a resilient subdistrict. The private sector and the city government role are a source of funding for subdistrict-level resilience practices, both in government funding and CSR.

Kelurahan Tangguh existence will assist urban resilience implementation from a bottom-up level. This strategy is concerned with providing a robust set of structures for long-term progress while promoting community inclusiveness in the face of the difficulty of establishing a process of improvement towards self-organization and coevolution (Rauws and De Roo, 2016). For example, with the involvement of local communities through local wisdom and the government through the subdistrict. This strategy will indirectly accommodate challenges (1) because community involvement means increasing awareness from the community and increasing trust in the government. Besides that, the use of local wisdom in solving problems will overcome challenges (4).

However, one of the factors that can hinder the becoming of a resilient city is in one of the discussions of resilience itself, namely *"resilience for whom?"* (White and O'Hare, 2014). When viewed from a political perspective with lots of uncertainty and allowing social and political resistance to emerge, value judgments about priorities and compromises on resilience can become a win-lose game, resulting in a complex decision-making process about who should be resilient (Berkes and Ross, 2016; de Bruijn *et al.*, 2015). What needs to be considered here is how to ensure resilience in the face of migration impacts is the resilience for all stakeholders, not just one sector such as the private sector (Laeni *et al.*, 2019). Moreover, problems regarding standout communities can still arise here. Therefore, an active role of the city government is needed here to initiate a shared vision among its stakeholders so that, in the end, trust can be created (Winarso *et al.*, 2015). The Subdistrict government official can have the role of a facilitator and mediator for problem-solving. In addition, the subdistricts government official can act as *"scale-crossing brokers"*, which will increase flexibility and responsiveness of subdistrict level resilience where all actors involved will gather to innovate and enable *"broader collective action"* (Mcmillan, 2019).

5.2 Summary

Based on the two strategies above, enhancing urban resilience, especially concerning the impact of migration, demand not only government participation but also the responsibility of all stakeholders. It is hoped that those two strategies can complement each other and provide adaptive governance to deal with unexpected shocks without sacrificing performance in slow change situations. Moreover, these strategies will help create development conditions, enhancing urban adaptability (Rauws and De Roo, 2016). It fits into the urban resilience definition. The pursuit of resilience requires adaptive governance, which is collective action among stakeholders to maintain and advance a particular regime and trigger a transition to a better regime to confront current and imminent stresses without losing options for the future (Folke et al., 2005; Hegger et al., 2016; Ostrom, 2014; Restemeyer et al., 2017).

Moreover, the two strategies above have met the characteristics of adaptive governance. First, it promotes polycentricity or distributed decision making. The evidence is in the use of information in a local context supported by coordination at all levels of stakeholders (Folke *et al.*, 2005). Second, inclusive collaboration and participation from stakeholders. This collaboration is seen in all stakeholder's involvement, both government and non-government in Balikpapan, in both strategies. The involvement of all stakeholders will increase support for legitimacy and adaptation to disturbance (Walker *et al.*, 2004). Third, the system's gradual improvement is supported by assessment and reflection based on practical experience. This improvement will increase the system's flexibility (Brunner *et al.*, 2005). This advancement is evident in how the enhancements generated due to the disturbance will increasingly use local contexts and reflect practical experience results. Fourth, self-organization is supported by vision, commitment from the network to change, consensus building, and leadership (Olsson *et al.*, 2006). These characteristics are apparent in the two strategies that enhance the shared vision and commitment of all stakeholders involved in implementing resilience in Balikpapan.

6. Conclusion and Reflection

This study uses a resilience lens in discussing Balikpapan concerning the impact on urban life caused by migration due to IKN relocation. This thesis looks at the planning document and implementation of resilience in Balikpapan to find out how Balikpapan deals with the impact of migration. There are five main challenges in achieving the resilience conditions in Balikpapan. This thesis proposes two strategies to enhance the city's resilience capacity using an adaptive governance approach. This study begins with the argument that there will be an influx of population migration due to IKN relocation to East Kalimantan Province. From the estimated migration of 1.5 million people, several people tend to dwell in the big city near IKN as Balikpapan. Therefore, the migrants will increase the vulnerability of Balikpapan. Several sectors expected to receive the migration are housing, waste management, disasters, and infrastructure provision.

6.1 Conclusion

This subchapter will revisit the findings of this research and attempt to answer the research questions, namely: **"Is Balikpapan resilient enough to embrace upcoming migration, and if not, what strategy is needed to improve this?"** This case study produces empirical outputs regarding several issues related to the IKN relocation to the province of East Kalimantan, which makes Balikpapan one of the supporting cities for the new capital city by answering three main questions:

1) How to use the resilience concept in an operational framework to evaluate urban resilience?

The first research question accomplishes by studying the literature on resilience and in an urban context. Because the resilience concept itself is a buzzword in urban planning and resilience is not an end-state goal, it is to operationalize resilience within a framework. The resilient city requires more than a collection of structural and non-structural steps. A holistic approach is needed to see a broader perspective in operating the resilience of thinking in city development planning. The framework used in this research is seen from the city planning documents (RPJMD) through Lu and Stead (2013) concept and the implementation of resilience aspects*: robustness, adaptability,* and *transformability* in dimensions of *content, context*, and *process* (Restemeyer *et al.*, 2015)*. It is done to get a comprehensive picture of Balikpapan in the resilient city context.

2) How resilient is Balikpapan taking migration into account due to IKN relocation?

This question can be answered by analyzing the Balikpapan city planning document and implementing a resilient city in Balikpapan. Five of the six indicators of resilience components in the planning document have been fulfilled. Only the fifth component, the ability to initiate action is failed. The two RPJMD documents still lack initiative action related to collaboration with other stakeholders, such as the higher government level. In the implementation of resilience, From the three aspects of resilience seen in three dimensions, it is known that Balikpapan already has a good initial practice in resilience to deal with the impact of migration. However, there are still some challenges in implementing resilience in Balikpapan that need attention.

3) What challenges does Balikpapan face, and how to enhance the urban resilience in migration problems?

Based on the results, there are considerable challenges of a resilient city in Balikpapan. These problems include 1) Land availability for development, 2) overlapping responsibility and lack of coordination among government stakeholders, 3) insufficient public awareness, standout communities, and government distrust, 4) local human resources capability, and 5) city financial capability. Therefore, the recommendation to enhance Balikpapan resilience includes 1) establishing the Regional Development Cooperation Agency to Support IKN and 2) the Establishment of Resilience Sub-District. These recommendations are based on four elements of adaptive governance to improve management policies and practices in Balikpapan City in coping with the impact of migration due to IKN relocation, namely 1) promoting polycentricity, 2) inclusive collaboration and participation from stakeholders, 3) the system's gradual improvement

and 4) self-organization. The efforts to maintain resilience involve all stakeholders in Balikpapan, both from the government (vertical and horizontal) and non-government (private, academic, and community).

6.2 Reflection

In doing this thesis, there are several limitations. These limitations include the sensitivity of the IKN issue in Indonesia, research timing, and the Covid-19 pandemic. First, the IKN issue is one of Indonesia's hot and most sensitive issues when this research was conducted. Therefore, not all the informants were contacted and willing to give their opinion on this IKN issue. The fear that misinformation conveyed will make the IKN issue misused by people or groups who do not like the IKN relocation. It is especially true for stakeholders at the central government level, in this case, who have more roles related to the IKN relocation compared to stakeholders at the local government level.

The second is related to the research time. This research was conducted in early to mid-2021. At the same time, Balikpapan is undergoing a transitional period of local government leadership. It impacts the lack of a clear development direction from the Balikpapan leadership because when the research was conducted, formulating the regional medium-term development plan was underway. Fortunately, the technocratic version of the plan has already been obtained by researchers. However, this has not been able to reflect more clearly what will be planned by the Balikpapan because it does not contain the vision and mission of the newly elected leader and his plans regarding the existence of IKN and its impact on the city development.

The last limitation is related to comprehending the Covid-19 pandemic. This covid-19 pandemic significance the boundaries of the flexibility of researchers in searching for data, both secondary data and primary data, in the form of interviews because the sources of this research are mostly government employees. Therefore, researchers can only do via online. Moreover, this causes the time that can be used to communicate to be shorter because these government employees undergo Work from Home (WFH), and the time difference between Balikpapan and Groningen is between 5-6 hours.

6.3 Recommendation for Further Research

A recommendation can be made for further research based on the thesis result. The relocation of IKN to the Kalimantan area is still in the early stages. Until April 2021, the government has just determined the groundbreaking location for IKN. The construction itself is in 2022, and the employees' relocation will be carried out in stages starting from 2024. It is necessary to conduct more in-depth research regarding the impact of migration due to IKN relocation on the resilience of other cities located around IKN, such as Samarinda and Tenggarong, when there will be a gradual relocation of employees in 2024. The impact of migration on resilience in other sectors is interesting to further research to do. It will bring a more all-inclusive picture of the migration impact due to IKN relocation, both on a city scale and regionally.

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Appendices

Appendix A

List of Policy Documents

No	List of policy documents	Code
1.	Balikpapan City Spatial Plan 2012-2032	PD-01
2.	Balikpapan City Long-term Regional Development Plan 2005-2025	PD-02
3.	Balikpapan Midterm Regional Development Plan 2016-2021	PD-03
4.	Balikpapan Midterm Regional Development Plan 2021-2024	PD-04
5.	Balikpapan Government Agency Performance Report 2017 - 2019	PD-05
6.	Balikpapan Regional Environmental Management Performance Information Document 2018	PD-06
7.	Balikpapan Local Government Work Plan For 2017 - 2021	PD-07
8.	Strategic Environmental Assessment for Balikpapan Midterm Regional Development Plan 2021-2024	PD-08
9.	Draft Climate Vulnerability and Risk Assessment for the City of Balikpapan's Integrated Climate Action Initiative 2020	PD-09

Appendix B
Interview Guide
A. Urban Resilience Planning Process
1. What are the critical components in Balikpapan city resilience planning? Have you considered urban resilience as the main challenge in urban planning?
2. What is the planning process related to these critical components?
3. Talking about the resilience of cities in Balikpapan, how is urban Resilience in general in Balikpapan? (For example, related to economic, social and ecological aspects?)
4. What is the inhibiting and supporting factors in making policies and laws and regulations related to Balikpapan's resilience?

B. Related to migration to Balikpapan due to relocation of the capital and the impact on city resilience
1. What is the impact of moving the national capital to East Kalimantan to prepare the Balikpapan resilience planning? What sectors will be most affected?
2. Has the assumed aspect of population growth due to migration been included in the planning for Balikpapan's resilience? If so, in what form?
3. What is the cooperation between the Balikpapan city government and the provincial and central government regarding Balikpapan City planning concerning relocating the capital? (For example, in the provision of supporting infrastructure for the new capital)

C. Efforts on Policies and Strategies in migration-related planning

1. Can you explain the strategy prepared by Balikpapan to prevent large migration numbers due to the relocation of the capital? (Technically and spatially)
2. What strategies has Balikpapan prepared in adapting to migration due to IKN relocation to reduce the adverse effects of migration? (For example, in the field of solid waste and housing provision)
3. How does Balikpapan take advantage of the momentum of migration because of moving the new capital to increase the city's resilience?
4. What challenges does the City Balikpapan face in utilizing this wave of migration?

D. Stakeholder involvement in urban resilience

1. Is it necessary to involve other stakeholders in increasing resilience in Balikpapan? Whom are the stakeholders involved?
2. What are the forms of cooperation with the private sector, society, and academia in increasing Balikpapan's resilience?
3. Of all the stakeholders involved, who are usually the initiators in activities related to urban resilience?
4. What are the things that hinder collaboration with other stakeholders in planning and activities in the resilience of the city development of Balikpapan City?

E. Regarding funding and resource mobilization

1. Where are the sources of funding/budget related to planning and activities to increase Balikpapan's resilience? (For example, local funding, grants, or other funding?)
2. Is there any additional funding provided by the central government and the provincial government of East Kalimantan related to specific development programs that the Balikpapan City Government must prepare to become a supporting city for the new nation's capital?
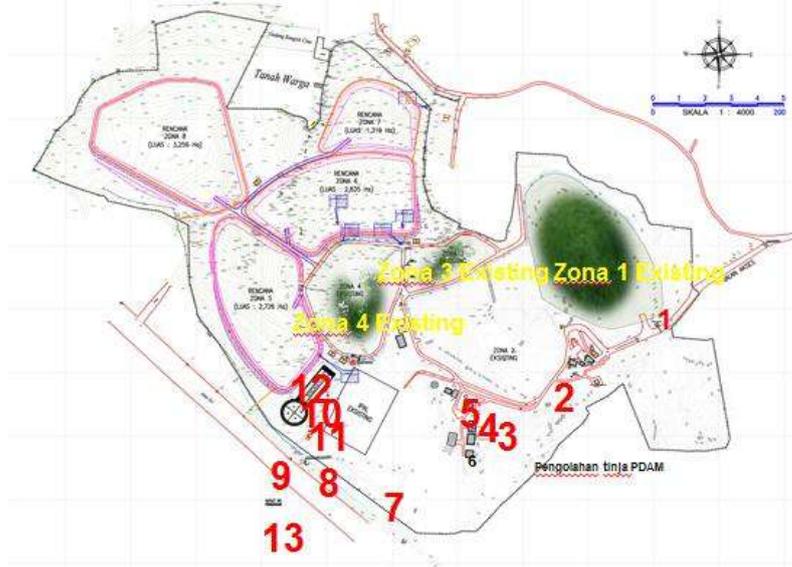
Appendix C

List of government agencies involved in interviews

No	Initial/ Code	Agency	Date of Interview
1.	TM	Secretary of the Balikpapan Environmental Service	19-05-2021
2.	SR	Head of Program Subdivision at the Regional Disaster Management Agency Balikpapan	25-05-2021
3.	ER	Secretary of the Department of Housing and Settlements Balikpapan	07-06-2021
4.	IN	Head of Program Subdivision at the Public Works Service	14-06-2021

Appendix D

Existing zone and development of TPA Manggar

Appendix E
Balikpapan City Spatial Planning Map 2012-2032