SUSTAINABILITY CHALLENGES
IN THE DEVELOPMENT OF NUSANTARA
THE NEW CAPITAL OF INDONESIA

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PUSTAKA PELAJAR

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LIST OF GLOSSARIES OF TERMS AND ABBREVIATIONS

Glossary (Quoted definition means a direct quotation from the resource(s))

Nusantara	:	The name of new capital city of Indonesia
Nusantara Capital City Zone/IKN Zone	:	Nusantara Capital City Development Area with an area of approximately 199,962 hectares
Development Zone	:	Nusantara Capital City area with an area of approximately 56, 180 hectares
The Central Government Core Area	:	Part of the Nusantara Capital City area, covers an area of approximately 6,671 hectares
Outside the Zone	:	Area beyond the capital city area
Urbanization	:	the process wherein urban living patterns supersede rural living patterns" (Murayama & Estoque, 2020); "the transformation of lightly populated open-country or rural areas into dense concentrations of people, characterized by the expansion of population from central

		cities and the migration of people from other areas (Grolier, 1987)
Spatial planning	:	a public sector function with the purpose of influencing future spatial distribution of activities. The aim is to create a more rational territorial organization of land use and the linkages between them, to balance demands for development with the need to protect the environment, and to achieve social and economic objectives (Yamagata & Yang, 2020)
Transmigration	:	the transfer of population in Indonesia from the central islands of Java, Madura, Bali, and Lombok to the outer islands under government sponsorship (MacAndrew, 1978)
Inclusive city	:	Inclusive city is a city which without prejudice to economic status, gender, race, ethnicity, or religion provides equal access to social, economic, and political opportunities for a wide variety of urban residents (Elias, P., 2020)
Impact (environment):		changes in the natural or built environment, resulting directly from an activity, that can have adverse effects on the air, land, water, fish, and wildlife or the inhabitants of the ecosystem." (Abdallah, 2017)
Marginalization	:	to define them (people) as falling short of the norm and so disempower people and exclude them (people) from the mainstream of society (Abbot & Sapsford, 2019)
Actors	:	individuals who have obtained at least some measure of political power and/or authority in a particular society who engage in activities that can have a significant influence on decisions, policies, media coverage, and

		outcomes associated with a given conflict (Wolfsfeld, 2015)
Frontier	:	transitional spaces where political authorities and social and environmental relations of the recent past are currently being challenged by new enclosures, territorializations and property regimes (Peluso and Lund, 2011) (Hein et al., 2016)

Abbreviations

BAPPENAS	:	Badan Perencanaan Nasional (the Ministry of National Development Planning / National Development Planning Agency)
IKN	:	Ibu Kota Negara (The National Capital City)
SDGs	:	Sustainable Development Goals

PREFACE

The relocation of the national capital in Indonesia has been an old discourse initiated by the late President Soekarno since the early era of independence. However, subsequent leaders also discussed moving the national capital, but this has never been followed up with concrete actions. From a national perspective, the problems of inter-regional disparities in Indonesia have long been felt and considered imperative. Still, there had been no significant concrete action to implement them until 2019. The government's decision made by President Joko Widodo to relocate the country's capital to the East Kalimantan region became a new milestone in the lives of the Indonesian people in the future. Major decisions made in this pandemic situation are also being followed with tangible steps, such as making a law to move the country's capital and preparing the designated location for developing the new capital.

This decision immediately invites debate in the public sphere, including on various social media platforms. Various factors encouraging relocation of the capital, such as Jakarta, is no longer worthy of being the capital city due to challenging problems to solve, such as flooding, subsidence, traffic congestion, environmental quality degradation, widening social inequality, and other urban social problems. Meanwhile, there are positive factors in the destination area for relocating the state capital, such as having available state-owned

land, being relatively safe from the threat of disaster, being safe from social conflict, and having a fairly complete basic infrastructure as the state capital.

In addition, there was also sharp criticism of the government, which was considered to have no sense of crisis because it had decided to relocate the capital city amid a pandemic atmosphere and debt that continued to increase, partly due to the pandemic. The parties who agree argue that in the long run, the relocation of the national capital will be an instrument to correct the gap between provinces, which tends to get worse from time to time. Various conventional methods to fix the existing disparities are deemed insufficient, so relocating the national capital will become a catalyst to correct the already severe gap. With the relocation of the national capital, the orientation of the population movement would change, and gradually regional development in eastern Indonesia will occur.

Other sharp criticisms focus on ecological safety because the location chosen by the government is East Kalimantan, which is the lungs of the world ecologically sensitive and in which indigenous peoples live, who depend on nature for their livelihoods. The construction of a new capital will change the existing natural landscape and marginalize local people whose livelihoods depend significantly on the forest. Likewise, the development of the nation's capital, as a form of New Town development (Provoost, 2010) which was born by political decisions, will be followed by high in-migration as happened elsewhere. East Kalimantan Province is one of the areas in Indonesia which is the primary migration destination. However, the answer to the problem adopted by the government is the concept of the modern city called a forest city and a smart city that will run based on technology and restore the natural landscape of the forest and its biodiversity while guaranteeing the livelihoods of the local community.

The most important question is about the sustainability guaranteed in every development effort. The construction of the new nation's capital, as with other development efforts, must be carried

out following sustainability principles. In this discourse on the development of the nation's capital, the issue of sustainability must be an essential key in fulfilling economic, environmental and social justice interests. In the condition of weak government capacity in managing urban development, as in many developing countries, the principles of sustainable urbanization must also be an essential consideration. Moreover, the location of the new capital is the leading destination of migration in Indonesia at this time.

This book attempts to present information about sustainability challenges in developing the nation's capital at various levels of observation. The discussion begins with a conceptual framework for moving the nation's capital and sustainability in development, followed by a review of sustainable development practices and their achievements at the provincial and district levels. The discussion proceeds with material on knowledge, attitudes, and sustainability practices at the micro-household level. At the same level, an assessment of the practices of achieving sustainable development goals at the household level is carried out. The book closes with a conclusion that attempts to describe the synthesis of findings at various levels of observation.

1

INTRODUCTION

The relocation of the capital city of the Republic of Indonesia was intended to minimize regional disparities in Indonesia and reduce the burden on Jakarta, which has experienced severe environmental degradation, as illustrated by the annual flooding, inundation, and irreversible subsidence along the coast. As the capital city, Jakarta is under the threat of multiple disasters that lead to permanent inundation due to regular floods and gradually expanding land subsidence (Cao, et al, 2021 and de Vuurst and Escobar, 2020). The new capital city was designed to avoid disaster risks triggered by climate change and, at the same time, was expected to be a catalyst for the spread of development activities to grow Eastern Indonesia in the long term. The problem arose because the location of the selected capital city was part of the island of Kalimantan, which became part of the lungs of the world which could be ecologically vulnerable, so environmental damage might occur if massive urbanization follows it without control.

The Nusantara Capital City could be described as a smart city, green, environmentally friendly, and inclusive of immigrant communities and local culture. However, the weak capacity of city management to control urbanization, the tendency of significant in-migration to this area, and the threat of environmental damage due to urbanization have raised doubts about the realization of a city with such

an ideal image. The concept of sustainable urbanization theoretically promised a high priority on sustainability and inclusion in urban development. However, sustainable urbanization at the concept level and global city management practice still show a gap that needs to be connected to an in-depth study, including sustainability in Nusantara Capital City development (Otsuki, 2021).

The decision of the government of the Republic of Indonesia to relocate the national capital city to the province of East Kalimantan opened up new opportunities to minimize regional disparities and reduce environmental problems in the city of Jakarta, such as ecological quality degradation (annual flooding and subsidence). Moving the center of government to East Kalimantan Province in the long term might reduce regional disparities and strengthen national integration in Indonesia (Muta'ali and Sahamony, 2019). Still, at the same time, there were concerns about environmental degradation in the selected locations and their back areas as frontier areas becoming tropical forest areas of the world's lungs.

The relocation of the central government to the frontier area in conditions of weak city management capacity (Saroha, 2016) can confront local communities directly with city life as a new environment that has the potential to threaten the sustainability of their lives, for example, through the process of marginalization. The concept of sustainable urbanization is an idea that seeks to give priority to various critical issues of urban development, such as energy availability, water consumption and production, biodiversity, disaster preparedness, and adaptation to climate change. In the context of Kalimantan as a frontier area, biodiversity aspects are directly related to the sustainability of the livelihoods of local communities, so the operationalization of the concept of sustainable urbanization needs to include the sustainability of the livelihoods of local communities, including those who are behind the state capital area but are still part of a watershed system. Thus, the concept of sustainable urbanization in the context of the development of the new capital city must also be spatially and structurally inclusive to

accommodate the interests of residents who are potentially threatened by a systematic process of marginalization due to the implementation of a policy (Samadhi et al, 2019).

It is difficult to deny the hazards of relocating the new capital to East Kalimantan. This is due to the area's proximity to Mahakam Lake's peatlands. Smoke from peatland fires can contaminate the air, destroy the habitat of protected and endangered species, and make people sick with respiratory conditions. Peatland fires may become more likely in response to population growth and the clearing of new land for residents (Theresia, 2020).

The contrasting situation between the livelihoods of local people who are very strongly dependent on nature and urban life depending on the modern sector in the new capital city area and its surroundings also becomes an opportunity for the development of a learning lab on sustainable urbanization that will be useful to facilitate meaningful learning about sustainability in development for the broader community including local community members, migrant residents, students, researchers, development planners, bureaucrats, and entrepreneurs. Exploration of the concept of sustainable urbanization and its operationalization through the development of a learning lab can be used to develop models and build a set of indicators and information systems for the benefit of learning and development in the context of large-scale development in frontier areas.

Nusantara Capital City development as an idea faced a big challenge, namely sustainability due to the choice of location in East Kalimantan Province, becoming part of Kalimantan as the world's lungs. In addition, the local indigenous people of Kalimantan also have the potential to be marginalized socio-culturally because urbanization that follows the development of Nusantara Capital City will directly invite competitors in the struggle for various opportunities to improve welfare. Nusantara Capital City development plan, owned by the government, was prepared to face such challenges by rolling out the concepts of forest cities and smart cities on the one hand, but

other questions also arise, namely about sustainable urbanization. Conceptually relationship between various concepts that are relevant in studying Nusantara Capital City development can be summarized in Figure 1 as follows.

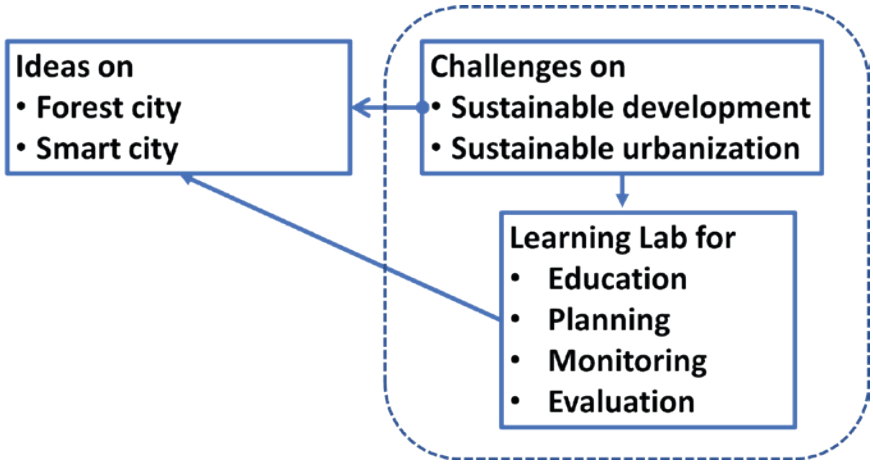

Figure 1.
Relation of Relevant Concepts in Studying Nusantara Capital City Development

If the idea of a forest city and smart city is considered necessary, then this book specifically intends to describe the challenges of sustainable development faced by multiple stakeholders at various levels of regional administration and local communities. Meanwhile, the challenges of realizing sustainable urbanization and the development of learning labs for sustainability will be presented in the next book. These three concepts are essential to be tested empirically in community settings affected by Nusantara Capital City development. Thus accumulatively, there will be knowledge about the challenges of sustainability in Nusantara Capital City development seen through the achievements of sustainable development and the practices of achieving sustainable development goals at the community level. In addition, in the next stage, a book on sustainable urbanization in the context of Nusantara Capital City development will also be published. Moreover, a book on developing a learning lab for learning and planning, monitoring, and

evaluation in dealing with urbanization that will follow the Nusantara Capital City development will also be written. This first edition of the book discusses the challenges of sustainable development faced by the community and various affected stakeholders in the locations around Nusantara Capital City.

This book was written to provide information on various aspects of sustainability in Nusantara Capital City development. The conceptual model was built based on the results of the exploration of different concepts related to new city development and sustainable urbanization through a literature review to discuss sustainability constraints in Nusantara Capital City development. The theory and practice of sustainable urban development from international literature were employed to develop a conceptual model of new capital city development to examine the knowledge, attitudes, and practices of sustainable development at the community level to assess their capacity to face the challenges of sustainable urbanization due to Nusantara Capital City development. Previous research has shown that community readiness and public interest in participating in Nusantara Capital City development process were relatively low (Dewi, et al., 2020, and Syafitri, et al., 2021). The emergence of apathy and low readiness occurred because socialization activities were not done much, even though the announcement of the relocation of the capital had been made in 2019. Therefore, this book presents comprehensive information from knowledge, attitudes, and practices about sustainability in facing Nusantara Capital City development. The practice of achieving SDGs at the household level could be presented as a complement to the knowledge, attitudes, and practices of sustainable development at the grassroots level.

2

CONCEPTUAL FRAMEWORK

1. The Relocation of Capital Cities: Historical Aspects

The relocation of the Indonesian capital city to the province of East Kalimantan made a new history in development in Indonesia today. Compared to the relocation of the capitals of countries that occurred previously in international experience, the decision-making process of moving the capital city of Indonesia was very fast. Even if it was calculated since the first idea was issued by President Soekarno, this idea had also been around for a very long time. There are several push and pull factors in relocating the national capital in Indonesia, which is currently underway.

The province of East Kalimantan was chosen with considerations that were claimed to be the most proper one based on previous studies. Some of the surplus values owned by this province have at least 5 items. First, East Kalimantan Province is the area with the least disaster risk. Disasters such as floods, earthquakes, tsunamis, forest fires, volcanic eruptions, and landslides are few or far in East Kalimantan. Second, the location of the designated Nusantara Capital City in East Kalimantan Province is very close to the centroid of Indonesia, so access from all corners of Indonesia will be fair in the physical and spatial context.

Then the third, at the designated location, is close to two cities that existed and developed formerly, namely Balikpapan and Samarinda. The proximity to these two cities means that various types of services in the provision of goods, services, and personnel in the short term can collaborate with the two existing autonomous towns. Fourth, East Kalimantan has also been equipped with various basic infrastructure facilities of larger city size. Fifth, there is land that is controlled by the government. The land used for Nusantara Capital City development is state-owned land whose size reaches 180 thousand hectares.

The relocation of the national capital was theoretically related to five main driving factors, namely: (1) nation-building, (2) the spread of development throughout the country, (3) problems faced by the existing capital, (4) security/safety threats, and (5) decisions from state leaders (Illman, 2015). The relocation of the state capital being implemented in Indonesia seems to be related to at least three main factors, namely: (1) as part of nation-building efforts (nation building) by realizing the nation's capital as a collective pride, (2) as part of efforts to spread development throughout the country. throughout the country, as well as to reduce disparities between regions, and (3) to avoid more significant losses if they are not moved from the current state capital. Meanwhile, for the third and fourth reasons, the urgency is not too significant in the contemporary Indonesian context.

The development of the national capital is an effort to strengthen the identity and development of the nation as a form of national identity. This cannot be separated from the function of the capital as the center of state life both in the political-administrative context (Okunev, 2021) and as an identity and symbol of power (Theborn & Ko, 2009). In modern history, capital relocations have been carried out in several countries such as Australia (Beer, 2009), Brazil (Gottman, 1983 and Grimes, 2017), Tanzania (Gellar, 1967 and Kessy, 2022), Nigeria (Nwafor, 1980), Malaysia (Moser, 2010), Kazakhstan (Arslan, 2014). In addition, many developing countries have also relocated their national capitals to correct the gap between their inter-regional imbalances, such

as Tanzania (Rachmawati, et al., 2021), Malawi (Potts, 1985, Taylor, 1993 and Mustafa & Reeder, 2009) and South Korea (Taylor, 1993). The relocation of the nation's capital to Kalimantan also became part of efforts to avoid the worsening problems facing the existing capital today. If not avoided, there will be long-term losses in the future. Belize has used a similar motive to prevent the threat of hurricanes (Taylor, 1993), while Indonesia intends to avoid multiple meteorological disasters and irreversible subsidence. Moving the country's capital has been a discourse for a very long time in Indonesia, although its implementation can only be executed at this time.

Indonesia is likely to be the first to relocate based on a multi-disaster motive driven by climate change. Considering that many big cities, including national capitals, around the world are located in coastal areas, it is estimated that there will be more and more relocations of national capitals based on reasons to avoid the adverse effects of climate change. In addition, the relocation of the capital was also carried out to create a new growth pole considering that when Jakarta was the epicenter of activities and national identity (Salim & Kombaitan, 2009).

Table 1.
List of Countries Moving Their Capitals After World War I

Country	From	To	Year	Distance (Km)	Population (From)	Population (To)
Russia	St. Petersburg	Moscow	1918	633	2.3 million (1917)	1.8 million (1915)
Turkiye	Istanbul	Ankara	1923	351	680K (1927)	75K (1927)
Australia	Melbourne	Canberra	1927	472	670K (1914)	-
China	Nanjing	Beijing	1949	1219	2.8 million (1955)	2.8 million (1953)
Mauritania	-	Nouakchott	1957	-	-	200 (1957)
Brazil	Rio de Janeiro	Brasilia	1960	754	3.1 million (1960)	
Rwanda	Butare	Kigali	1962	80	n.a.	6K (1962)
North Yemen	Ta'izz	Sana'a	1962	198	87K (1975)	135K (1975)
Pakistan	Karachi	Islamabad	1966	1,144	1.9 million (1961)	-
Malawi	Zomba	Lilongwe	1974	227	24K (1977)	99K (1977)
Cote d'Ivoire	Abidjan	Yamoussoukro	1983	228	1.2 million (1978)	200K (2005)
Chile*	Santiago	Valparaiso	1990	98	4.6 million (1990)	800K (2002)
Nigeria	Lagos	Abuja	1991	541	5.7 million (1991)	-
Tanzania*	Dar-es-Salaam	Dodoma	1996	571	2.3 million (2002)	213K (2002)
Kazakhstan	Almaty	Astana	1997	974	1.1 million (1999)	281K (1999)
Malaysia**	Kuala Lumpur	Putra Jaya	1999	47	1.7 million (2000)	70K (2000)
Myanmar (Burma)	Yangon	Naypidaw	2005	330	4.1 million (2007)	-
Indonesia	Jakarta	Nusantara	2022	1,300	11 million (2020)	170K (2020)

* Legislative only, ** Executive only

The experience of moving the capital city has been carried out by several countries since 1918. The relocation of the capital city of the country can move the central office of legislative activity, such as in Chile and Tanzania, or only the central office of the executive as is done by Malaysia. Such displacements are highly dependent on the goals of a country and may be due to political, economic, or environmental objectives. Some examples are presented in Table 1, showing that the relocation of the capital city is carried out in the same metropolitan area, and not included. Such as the Philippines (1975) and Sri Lanka (1982), in which the transfer distance was less than 10 Km. The state of Mauritania had a different capital city at the time of independence from the colonial period. West Germany (1990) and Albania (1920) were not included in the list because the former regime had retained the capital at the time of reunification and completed the independence process.

Indonesia became the last country to move the nation's capital, namely, the announcement was made in 2019, and the law on the movement of the capital was passed in 2022. Problems in the previous capital that had not been resolved and were relatively difficult to improve, became one of the reasons for the relocation of the capital city, in addition to the purpose development, politics, and equity. Compared to other countries, Indonesia moved its capital city the longest distance, reaching almost 1300 km (Figure 2). The difference in the islands also shows that the capital city is not directly connected (land access) with Jakarta. This condition may lead to different constellations in the spatial structure that will later form on the island of Borneo. In addition, the relatively small population in the destination location presents its challenges. The presence of a large number of Civil Governments as the first group to enter Nusantara Capital City and followed by spontaneous migration, will immediately change the local demographic structure. The proportion of the population will be dominated by migrants who usually have better human resource capacity. Anticipation is needed to ensure that those who were present before the construction of Nusantara Capital City also benefit from the construction of Nusantara

Capital City. The quality of human resources in the local area, which is not adequately empowered, is feared to become a community that has the potential to experience marginalization in the future.

Furthermore, the location becoming the capital city is an urban area built from scratch. The term "build" is considered appropriate because the capital city area that will be built will be carried out from scratch in an area that has inadequate access and infrastructure. In the international literature, there is a group of literature on urban studies known as new town studies, a segment that studies cities built on political decisions and carefully designed (Provoost, 2010). The development of Nusantara Capital City area can be appropriately categorized as a new city development because its construction is based on the government's political decision, which is then ratified by law. The field conditions initially in the form of production forests and plantations also indicate that Nusantara Capital City development is included in the category of new town development, like Brasilia and several other country capitals.

New urban planning, such as in Nusantara Capital City development, which is a socio-spatial decision, should ideally be carried out by involving various international, national, and local stakeholders. Following the previous experiences of new cities, it takes time for reflection and public consultation to avoid gaps. Every capital is not just a symbol, the city must also be comfortable to live in where all city residents can achieve a quality of life, and national and international visitors are also satisfied when visiting it (de Vries, 2021).

Following the experiences of other cities, a gradual process with regular moments of reflexivity and close consultation with local and regional authorities is possible to avoid regional disparities and inequalities. Of course, the new capital will be more than just symbolic. It also needs to be a liveable city where all kinds of citizens can enjoy their quality of life and where national and international travelers will be happy to travel.

Although the construction of Nusantara Capital City was hampered by the Covid-19 pandemic, it has now continued with

construction in the central government building section, and the transfer of Civil Governments to Nusantara Capital City will begin at the end of 2023 (CNN Indonesia, 2021a). Furthermore, the ceremony to celebrate the proclamation of Indonesia's independence on August 17, 2024, will be held in the Nusantara Capital City location (CNN Indonesia, 2021b).

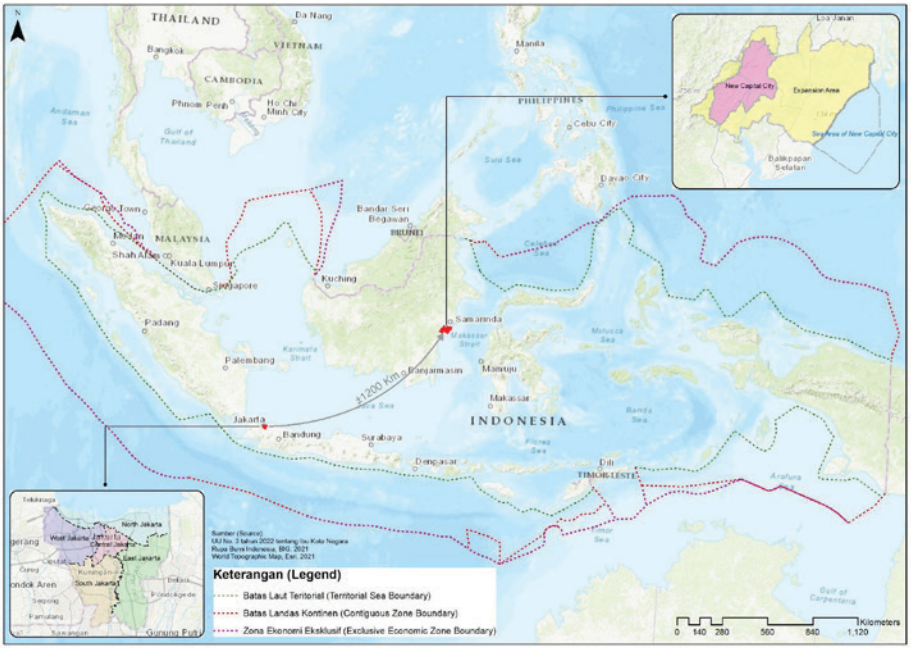

Figure 2.
Relocation Map Moving the Capital City of Indonesia from Jakarta to Nusantara

2. The Challenges of Nusantara Capital City Development

The dimension of sustainability in development is a discourse that is still relatively new in the literature on development theories that are still developing today. However, sustainability is not a new concept in human life in various cultures, the values and practices of sustainability in natural resource management and saving the environment have become part of local wisdom practiced from generation to generation. Even in various regional languages, some terms mean sustainability.

Likewise, in Javanese, the terms *lestari*, *sempulur* and *ngrembaka* have the meaning of sustainable. Sustainability is found in the Indonesian Dictionary, which is equated with continuous.

The idea of sustainable development has emerged since the 18th century and has been revived through the publication of what is widely known as the Bruntland Report, (WCED, 1987) entitled Our Common Future and the Report of the United Nations Conference on Development and the Environment in 1992 (Michelsen, 2016). Sustainable development has become an essential part of standard thinking and practice in global development. Sustainable development is defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their needs. The concept of sustainable development is a process of optimizing the benefits of natural resources and human resources through efforts to harmonize various interests.

In the urban development literature, the idea of sustainable urbanism appears or also known as sustainable urbanization, which is understood as the learning and practice of urban development that focuses on the promotion of long-term sustainability (viability) through reducing consumption and reducing hazardous waste for humans and their places of life as well as at the same time to promote the realization of welfare for the community and the place where they live. Sustainable urbanization can be defined at two different levels, namely as a sustainable city condition and a sustainable urban process (Rasoolimanesh, et al., 2012). Sustainable urbanization is a condition of a city in terms of environmental protection, reasonable use of resources, good welfare of city residents, and ability to meet the basic needs of its citizens at a particular time (Shen, et al., 2011). While in another sense, sustainable urbanization describes the dynamics of economic space in which it often shows contradictions between social, economic, and ecological dimensions that can be managed and resolved properly (Whitehead, 2003). Sustainable urban development is a dynamic process that includes social, economic, environmental,

and sustainability aspects that are given equal attention (Shen, et al., 2011). Sustainable urbanization is one of the further developments of the idea of sustainable development that focuses on urban areas (Liu, et al., 2018)

The idea of sustainable urbanization as a process of realizing sustainability in a city is usually operationalized through several specific interventions such as sustainable urban transportation systems, nature-based problem solutions, community networks that support disaster resilience, smart solutions to improve livelihoods in cities, and need for collaboration among cities, countries and various international institutions (UNU-EHS, 2021). The implementation of multiple interventions to encourage the achievement of sustainability in development with these different instruments does not always seem easy because achievements in one dimension of sustainability can be corrected by failures in other dimensions. An example of Indonesia's accomplishment in achieving the SDGs in the economic and social aspects, which was relatively high, was corrected by failures in the ecological dimension so that the aggregate achievement was lower (Fauzi and Oxtavianus, 2014).

Considering the high complexity of the problems faced by most cities and the difficulty of achieving sustainable development goals simultaneously on all dimensions, the idea of using a learning lab for city management to achieve sustainable urbanization needs to be tested for its relevance in new Nusantara Capital City locations. The weak capacity of the government to manage the city to perform can be compensated by the participation of the city community, as shown in the works of Arrighi et al., (2016), Harteveld (2017), and Hassan (2014). The concept of a city learning lab is based on the principle of social laboratory learning, namely as a process that involves various stakeholders in finding solutions to particular problems that are collectively considered essential and urgent by the community.

The process in the learning lab includes the exploration of knowledge about the complexity of urban problems, the process of

producing knowledge in cities, and the principles of social learning for adults (Ison, et al., 2015). This core idea encourages participants to share their views, needs, aspirations, and observations about a problem or passionate questions from other parties. While sharing their thoughts, all participants are expected to listen and review their views. Therefore, to achieve sustainable urbanization, optimization is needed to attain various dimensions of sustainable development goals, not maximizing them. To implement sustainable development, three main pillars must be realized simultaneously through compromise because all three represent interests that have the potential to negate one another, namely: saving the environment, developing the economy, and realizing social justice. These three pillars of sustainable development must be pursued through various development activities covering environmentally friendly, economically viable, and simultaneously meeting the principles of social justice.

This research on sustainable urbanization and learning labs are supported by a set of research experiences gained over the last 10 years in various relevant fields, namely: sustainability (Rijanta, 2021), large-scale infrastructure development (Rijanta, et al, 2018, 2018a), disaster management (Rijanta, et al, 2014), urban farming (Rijanta et al, 2017), urban land use (Rijanta, 2015, 2015a), smart city (Rachmawati & Rijanta, 2015), and sustainable livelihoods (Amin, et al, 2021).

Sustainability in Nusantara Capital City development is a challenge because the decision to determine the location of Nusantara Capital City in East Kalimantan Province directly raises the issue of sustainability. Kalimantan's position as the world's lungs with a very high diversity of biodiversity and the uniqueness of the livelihoods of local people who depend on tropical forests raises many concerns about sustainability. To understand sustainability challenges in Nusantara Capital City development, research covering the area around the Nusantara Capital City location has been carried out using several methods. An understanding of the macro and micro levels of observation needs to be obtained as a whole so that an overview of sustainability

challenges can capture the multidimensionality of sustainability issues. Since it is generally believed that sustainability will be achieved if there is harmony among the various parties working at the policy level and its implementation, such as government organizations at multiple levels, non-governmental organizations, the business world, and the general public, observations on various units be important.

Spatial mapping was carried out to understand the macro constellation of the Nusantara Capital City area in the context of East Kalimantan and Kalimantan. The site and situation mapping of the Nusantara Capital City location and its surroundings were carried out to fully understand the regional setting. Through this mapping, the relative position of the area will be able to be assessed accurately in its functional relationship with other sites in a comprehensive manner. Likewise, efforts to achieve sustainability are carried out by various stakeholders and can be evaluated in their actual context.

In addition, the location of Nusantara Capital City in the constellation of the watershed system has also received special attention because experience has shown that disaster problems in certain cities, such as Jakarta, have similar roots in other places in different provinces; they are located in one watershed unit. Failure to understand the functioning of watersheds in water resource management is an essential part of the problem that prompted the relocation of the capital to East Kalimantan.

Observations were also made at the district level to understand the spatial structure of district areas directly affected by Nusantara Capital City development. Analysis was carried out at this level to understand the dynamics of the system and the existing spatial structure of the area. This analysis produced a description of the function of local service centers from the village, sub-district, and district levels and identified spatial constraints that made it difficult for population mobility to obtain various types of goods and services at the nearest service centers. The presence of Nusantara Capital City will change the spatial structure in the hinterland area because the influx of residents

who enter as migrants will require various services that are not just local and low orders. The more migrants enter, the higher the aspirations for acquiring high-order goods and services, usually only met at high-order service centers.

Observations were also made on a smaller unit, namely the household level. The household level consists of individuals who have beliefs, attitudes, and preferences to act within the framework of achieving sustainability so the achievement of sustainability practices can be measured. One way to measure the achievement of sustainability at the individual level was to measure the indicators of course and achievement of the SDGs. A set of questions on sustainability practices at the household level was developed to measure the behavior of achieving SDGs at the household level.

The household survey was conducted in the villages of Sepaku and Pemaluan (as representatives of villages in Nusantara Capital City core zone), Teluk Dalam (as village representatives in the extension zone), and Babulu Darat and Babulu Laut (as village representatives in the outer zone of Nusantara Capital City). In the law of Nusantara Capital City, there is a change in the zoning of the planning area. Nusantara Capital City planning was divided into three planning areas, namely as follows: a. Nusantara Capital City Development Area with an area of approximately 199,962 hectares; b. Nusantara Capital City area with about 56,180 hectares; and c. The Central Government Core Area, which is part of the Nusantara Capital City, covers an area of approximately 6,671 hectares.

Head of household respondents was taken proportionally and randomly for all selected villages (Figure 3). Interviews with respondents were conducted by a joint team of enumerators from Universitas Gadjah Mada, Lambung Mangkurat University, and the Kalimantan Institute of Technology. The field data collection team did not only collect data through household surveys but also measured the bio-physical aspects of the research area that were useful for understanding the local constellation in which various socio-economic, spatial, and ecological

research variables at the household level work. The biophysical data collected was mainly helpful for describing the biophysical condition of the area and assessing the probability of a disaster occurring in its various forms.

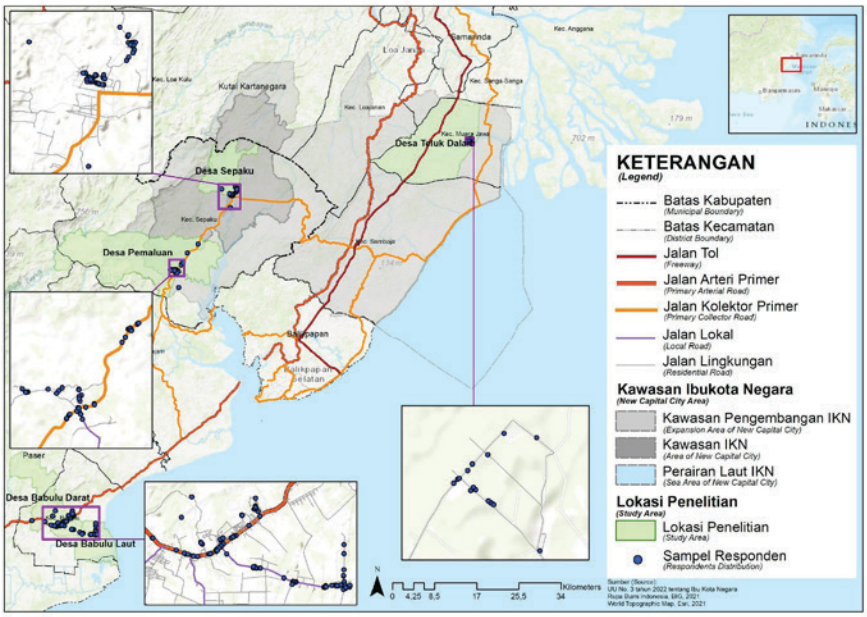

Figure 3.
Map of Distribution of Respondents in Sample Locations

Descriptive analysis was conducted to describe variations in knowledge, attitudes, practices, or behavior in implementing sustainable development at the household level. Variations that arise among zones were explained by relating them to specific locality contexts understood from the same questionnaire set as well as various theories and the results of other previous studies. The presentation of the analysis outcomes was done by making tables, diagrams, and maps that facilitate visual communication in writing.

To see the sustainability aspect, analysis was needed in different units of observation because several dimensions of sustainability operational measures and practices for achieving SDGs indicators

were carried out at varying levels of analysis. Several phenomena and symptoms related to knowledge, attitudes, and behavior of adopting sustainability principles can be measured at the level of government administration such as province, district/city, sub-district, village, or other units. However, the practice of achieving the SDGs as a measure of community readiness to face changes due to urbanization was also critical. The study's conclusion was formulated through a synthesis process that considered the information obtained from various levels of analysis.

3

GEOGRAPHICAL SETTING OF NUSANTARA

1. Macro Level Context of East Kalimantan

The geographical setting is one of the considerations in moving the Indonesian capital city from Jakarta to East Kalimantan Province. Geographically, East Kalimantan Province is located on the island of Borneo, situated in the middle of Indonesia and adjacent to neighboring Malaysia. The east side of this region is also bordering to the Makassar Strait and the Sulawesi Sea. This condition, from a geostrategic point of view, has the potential for growth and development, especially in international trade, because it has sea transportation routes that are part of the Indonesian Archipelagic Sea Lane II (Figure 4). Administratively, East Kalimantan Province is the province with the 4th most significant size in Indonesia, with seven regencies consisting of Paser, Kutai Kartanegara, Kutai Timur, Kutai Barat, Berau, Penajam Paser Utara, Mahakam Ulu, and three municipalities namely Balikpapan, Samarinda, and Bontang.

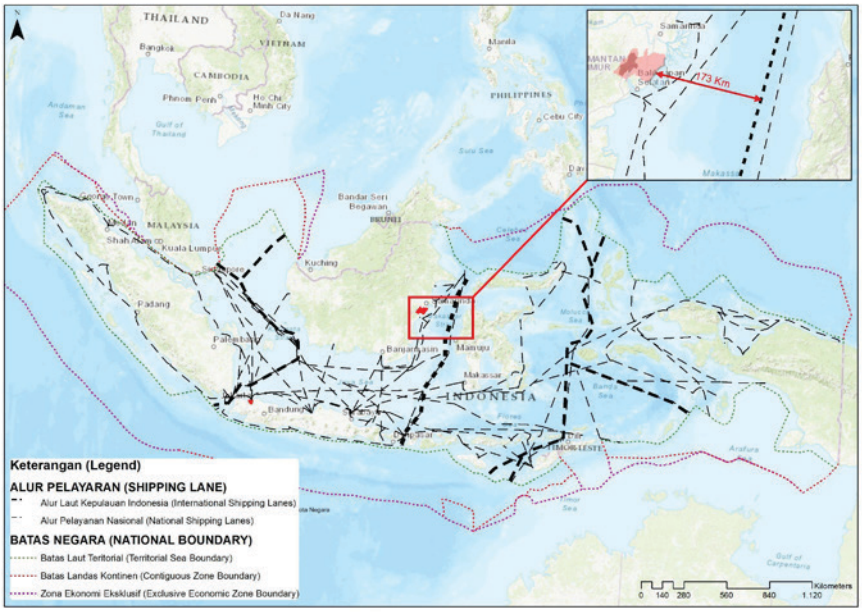

Figure 4.
Map of the position of the Nusantara Capital City area on the shipping route

Balikpapan and Samarinda are the centers of geographic orientation for the mobility of residents from their hinterland areas, including the Nusantara Capital City area, for the acquisition of various types of goods and services. Thus, the position of Nusantara Capital City locations is systemically in the hinterland part of the system of big cities in East Kalimantan Province. As a hinterland, the Nusantara Capital City area is dominated by rural landscapes with a relatively low population density.

The position of Nusantara Capital City, which consists of 4 parts as regulated in Law Number 3 of 2022 concerning the National Capital, is administratively located in the Penajam Paser Utara Regency (Penjam and Sepaku Districts) and Kutai Kartanegara Regency (Loa Kulu District, Loa Janan, Muara Jawa, and Samboja). The territory of Nusantara Capital City consists of approximately 256,142 ha in the form of land and 68,189 ha in the form of water areas which are part of the Makassar Strait. In terms of location, Nusantara Capital City

is located between 2 primary city centers with the first order, namely Balikpapan City and Samarinda City which has a function as a National Activity Center. These two cities will later support the development of Nusantara Capital City. In planning, the position of Nusantara Capital City between the 2 cities is likened to the anatomy of the body in which Samarinda City is the heart with the historical center of East Kalimantan and the rejuvenated energy sector, while Balikpapan City is the muscle for downstream oil and gas and logistics nodes, and Nusantara Capital City itself as the nerve center consisting of from the center of government and green innovation and technology. This position is expected to maintain the role of East Kalimantan as the lungs of the world with the development of upstream agriculture that is connected to the downstream sector of agro-industry and nature tourism, and can become an economic driver for Indonesia in the future.

Based on the Spatial Plans of East Kalimantan Province in 2016-2036 which was ratified in Regional Regulation Number 1 of 2016, the position of Nusantara Capital City area is surrounded by 4 areas, namely the trade and service industrial area in Samarinda City, Kariangau and Buluminung manufacturing industrial area in Balikpapan City and Penajam Paser Utara Regency in the North, as well as the Agricultural Industry area in West Kutai Regency and the Agricultural Industry area in Paser Regency. Nusantara Capital City area, which is mostly located in Sepaku District, is in the Balikpapan Bay Area (Sepaku-Penajam-Balikpapan), which in the Spatial Plans of East Kalimantan Province is a strategic area from the point of view of the importance of function and environmental carrying capacity. While Nusantara Capital City development area is in National Strategic Area and Integrated Economic Development Zone of Samarinda - Loa Janan - Samboja - Sanga-sanga - Muara Jawa - Balikpapan (SASAMBA) (Figure 5).

Meanwhile, when viewed from the Spatial Plans of Penajam Paser Utara Regency in 2013-2033 which was ratified in Regional Regulation Number 3 of 2014, in Sepaku District there is a protected area in the form of a Grand Forest Park covering an area of 9,472 Ha. The location

of Nusantara Capital City in other areas in the Spatial Plans of Kutai Kartanegara Regency in 2013-2033 which was ratified in Regional Regulation Number 9 of 2013, is also in the Bukit Soeharto Grand Forest Park area (covering the Districts of Loa Janan, Loa Kulu, Muara Jawa, and Samboja) which is included in the protected area. Therefore, in the development of Nusantara Capital City, the concept of "Forest City" is carried out. This is reinforced in Presidential Decree Number 64 of 2022 concerning National Strategic Spatial Plan of Nusantara Capital City, which has the goal of realizing Nusantara Capital City as a sustainable, safe, modern, and productive city as well as becoming a symbol of the identity of the Indonesian nation.

Based on data from the Spatial Plans of Nort Penajam Paser, Sepaku 4 Village located in Sepaku District has a high level of vulnerability as a landslide-prone area. Thus, it seems that some of Nusantara Capital City buffer areas are still disaster-prone areas. Thus, the claim of a disaster-free Nusantara Capital City area can only be understood in the context of in-depth information. The more detailed the map used, the clearer the threats and potential disasters such as landslides will be. In addition, from Penajam Paser Utara Regency, there are flood-prone areas located in Bukit Harapan Village and Bukit Raya Village in Sepaku District.

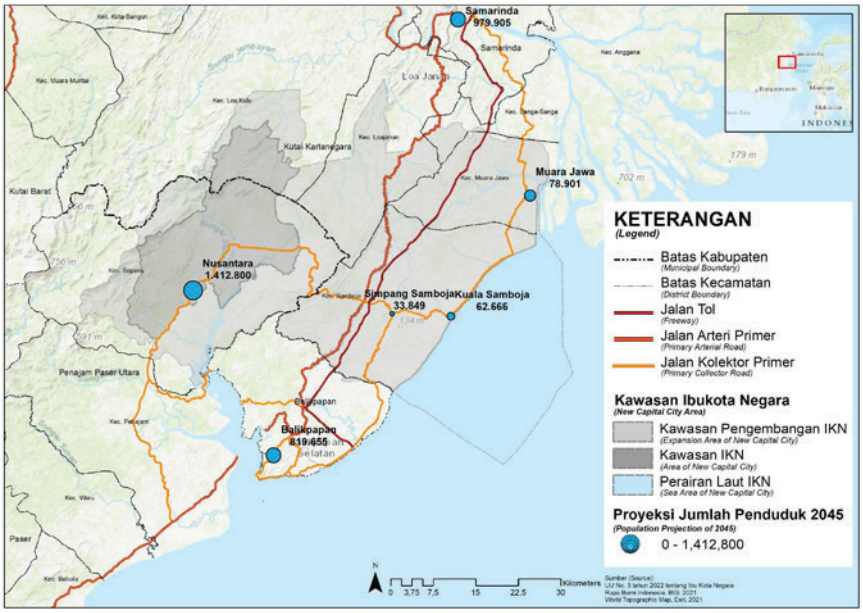

Figure 5.
Map of the Hierarchical Constellation Projection of Cities in East Kalimantan

Nusantara Capital City hinterland area is spatially postulated to develop following the structure formed by movements, networks, nodes, hierarchies and forming a development surface in the form of a metropolitan area as the highest level in the long term. Starting from the existence of traditional communities who regularly travel in order to meet the needs of their lives which initially formed a path. Next, the more complex the direction of travel and the number of travellers, then the travel trajectory becomes increasingly complex in the form of a network. In the meeting between network segments, new points develop as service centers in the form of nodes. The various nodes then undergo various developments, so that a node hierarchy and network hierarchy are formed. A small number of nodes that have a high hierarchy develop further into a metropolitan city with very complex network conditions, thus forming a development surface.

This kind of process has been going on for hundreds to thousands of years since the start of human civilization to build permanent

settlements, build agriculture, domesticate animals, generate surplus agricultural production, and finally build urban settlements either spontaneously (organic) or planned. Nusantara Capital City development process will accelerate spatial transformation which organically will take hundreds of years.

The formation of an advanced area with a city center in it from the beginning of a small traditional community turned out to be much contributed by the role of road infrastructure as the main factor in its formation through the development of its spatial structure which worked gradually from the simplest conditions to more complex levels. There are two theories describing in detail the development of the region through the contribution of transportation infrastructure in it, namely: Friedman's Core & Periphery Theory (1966) and the Corridor Development Theory of Taaffe, Morrill and Gould (1963). These two theories are indeed very old, but their contents can still relevantly describe the current condition of regions in Indonesia such as areas in Nusantara Capital City hinterland.

The theory of Core & Periphery Friedman (1966) divides the region on the earth's surface into four categories namely: (1) the central region (core regions) is an area that has a high level of technological development, large amounts of capital and labor, complex economic infrastructure and rapid growth; (2) upward transition regions are regions located between peripheral and core regions and are characterized by high intensity of resource use, in-migration and constant economic growth; (3) leading regions with natural resources (resource frontier regions) are areas located outside the transitional regions that are moving forward, characterized by new settlements and the opening of virgin areas; and (4) downward transition regions that have the characteristics of stagnation or the decline of the rural economy with low agricultural productivity.

Areas in Nusantara Capital City hinterland can currently be grouped into leading areas with natural resources (Type 3) awaiting utilization through development. For the next development, if the

development of Nusantara Capital City and its hinterland has been successful, the area will be included in the category of a transitional area that is moving towards progress (Type 2) with different speeds of achievement according to the capacity and shade of the resources owned by each region.

2. Geographical Setting of Nusantara Capital City and its Vicinity

Administratively, the area designated as Nusantara Capital City is in Penajam Paser Utara and Kutai Kartanegara Regencies. Penajam Paser Utara Regency is located southwest of Samarinda City, the capital city of East Kalimantan Province. The area has a strategic position because it is directly opposite the Bay of Balikpapan and is the entrance to East Kalimantan through which the provincial road connects the provinces of East Kalimantan, South Kalimantan and Central Kalimantan. In general, the Penajam Paser Utara Regency is located on a plain with an elevation of 0 to 500 meters above sea level. The lowland and hilly areas have the potential to develop as a hinterland of Nusantara Capital City. The area which becomes Nusantara Capital City hinterland, both located in Penajam Paser Utara Regency and in Kutai Kartanegara, has a high degree of regional openness physically, socially and culturally. Socio-cultural openness is the basic assets for the community to develop as a city community.

Accessibility to Nusantara Capital City location is very high and can be reached from various directions using a combination of various modes of transportation. If accessed by air, from Sultan Aji Muhammad Sulaiman Sepinggan Airport in Balikpapan, Nusantara Capital City location can be reached via the Balikpapan-Samarinda land route, namely via Jalan Silkar Samboja. The location of Nusantara Capital City can also be reached by land in combination with the Balikpapan Bay crossing through Penajam District with various choices of crossing modes in the form of speedboats, *klotok* boats, and ferries. Meanwhile, from South Kalimantan, Nusantara Capital City location can be reached

by land via the Trans South Kalimantan-East Kalimantan Road. This route becomes the main road for the mobility of goods and people from Banjarmasin to Nusantara Capital City. The location of Nusantara Capital City can also be reached by land from the east from the direction of Bontang and Tenggarong. The choice of various routes and modes of transportation indicates a good degree of regional openness.

Regional openness is an important precondition for the development of areas in the hinterland of a city such as Nusantara Capital City, especially for interacting with the outside world that allows population mobility, exchange of goods and traffic flow of information. The openness of the area which is relatively lagging behind in the buffer and expansion areas is mostly in a relatively developed condition even though the number and density of the population is still low. For a small part of the hinterland area which is still relatively isolated, the low degree of openness is illustrated by its remote location with access to land transportation infrastructure that does not allow interaction with other areas (interregional interaction). Interaction with other regions in the context of development will provide opportunities for a hinterland area to send and receive migrants, export and import commodities to and from other regions through trade and transportation.

In addition, the openness to interact with other regions has the potential to facilitate the acquisition and exchange of information about other places that can become a reference for the community to interact according to their aspirations which has the opportunity to encourage the movement of people, labor, materials and commodities. The smooth movement of people, labor, materials and commodities among regions is one of the important keys to achieving progress in regional development. Likewise, the interaction among parts within a hinterland area itself is still quite limited at this time. This situation becomes a very big obstacle for efforts to generate internal interactions that allow development from within.

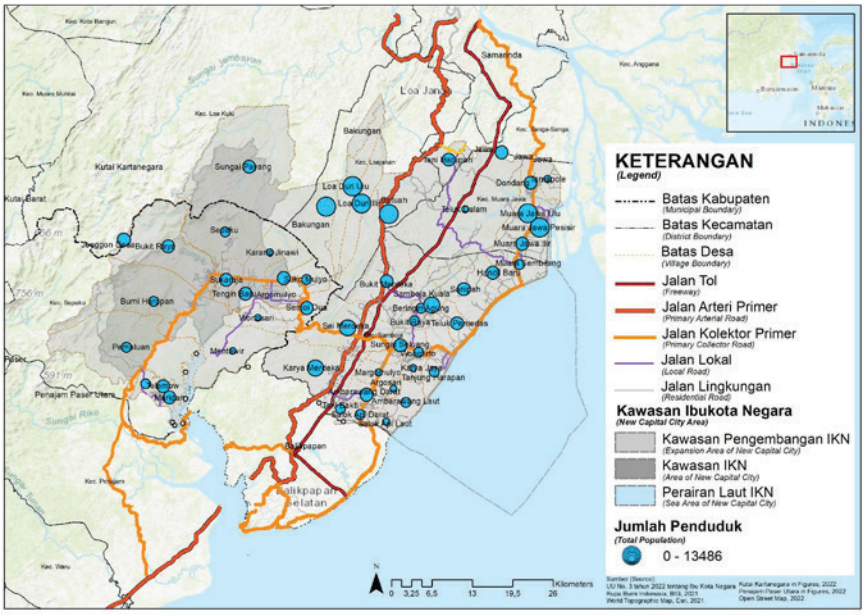

Figure 6.
Distribution Map and Number of Villagers in Nusantara Capital City Area

One of the important components as a trigger for regional development from within is the number and agglomeration of the population. East Kalimantan itself as a province that receives many migrants from all over Indonesia still has a relatively small population, which is less than 4 million people. Of this number, the population living in the cities of Samarinda and Balikpapan itself has reached almost 2 million people, so the number of residents in the districts is certainly relatively smaller. The small population in an area rich in natural resources, such as East Kalimantan, shows that there are still opportunities for intensification of the use of natural resources, although at the same time, attention to sustainability must always be well guarded. Figure 6 above shows the distribution of the population by village settlement units as an administrative unit.

Penajam Paser Utara Regency and Kutai Kartanegara Regency as the two regencies in which Nusantara Capital City are located, respectively, have a population of less than 200 thousand and around

700 thousand inhabitants. Given the size of the district, both have not shown a significant agglomeration phenomenon. Such a low level of population agglomeration will still provide various difficulties in providing socio-economic services to the community, even though the normative calculation of the ratio of service adequacy to the total population is decent. Likewise, the community will find it difficult to access certain types of services. Data from village potentials shows that several villages in Nusantara Capital City locations have difficulty accessing certain types of socio-economic services, partly because the distances are too far. However, this cannot be solved by bringing services closer to the community, because a small population will make certain types of services inefficient.

The currently available road infrastructure network appears to be relatively limited, so that the connectivity of areas around Nusantara Capital City locations is relatively low. Between Balikpapan City and Penajam Paser Utara Regency, there is actually a toll road construction plan, but so far it has not been fully realized. Nusantara Capital City development is actually expected to accelerate the realization of better connectivity between the two, because the connection between the two regions through the toll road will have a broad impact on boosting the economy of various surrounding areas. This low connectivity is often exacerbated by the damage that occurs as a result of carrying a load that exceeds its capacity. The following Figure 7 shows the limited road network in Nusantara Capital City construction site.

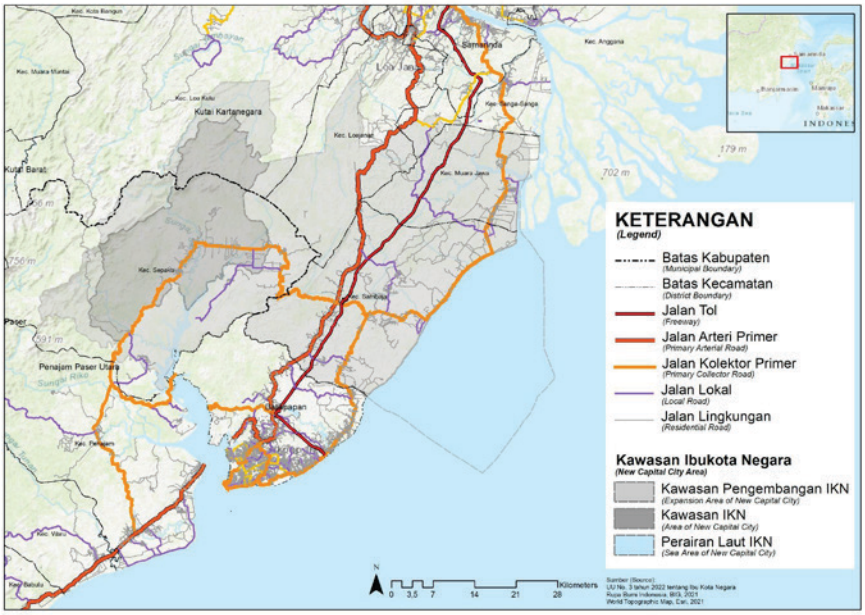

Figure 7.
Map of the Road Network in Nusantara Capital City and Surrounding Areas

Data on the number of residents in the hinterland villages selected for the survey location (Figure 8) showed that the agglomeration was still very small. The population range of the villages in the area was between 1,000-10,000 residents. Villages that did not become regional service centers generally only had a population of 1,000-2,000 people, but villages that were also regional service centers had a population of more than 10,000. Babulu Darat Village, as a regional service center, had a service reach far beyond village boundaries but covered most of the western part of Penajam Paser Utara Regency, accompanying Penajam's role as a district-level service center (Table 2). In the west region, there was also Babulu Laut Village, of which population agglomeration was quite large, mainly inhabited by migrants from outside the area who had a livelihood as fishermen.

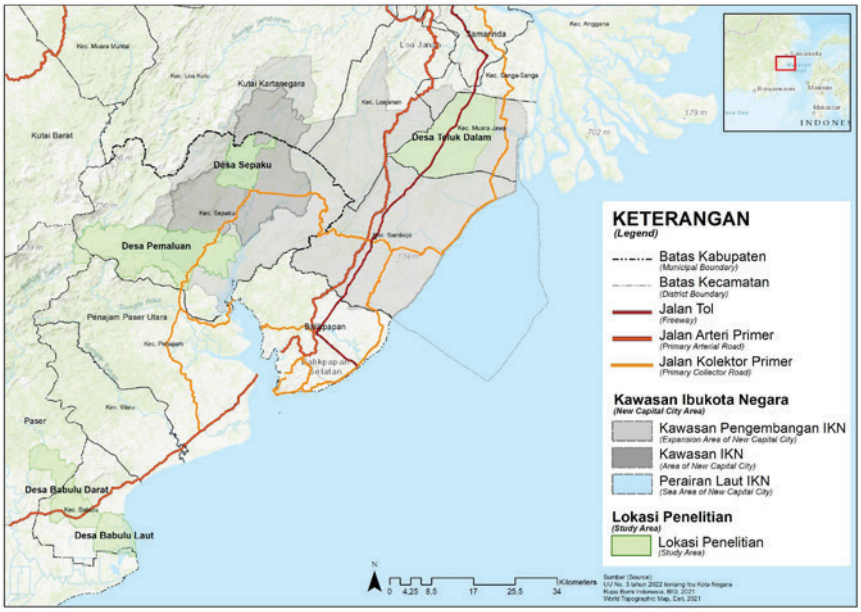

Figure 8.
Village Sample Location Map

Table 2.
Population in Sample Location Villages, 2022

Village	Total	Source
Sepaku	1,913	Central Bureau of Statistics of Sepaku District in Figures for 2022
Pemaluan	1,716	Central Bureau of Statistics of Sepaku District in Figures for 2022
Teluk Dalam	1,137	Central Bureau of Statistics of Muara Jawa District in Figures for 2022
Babulu Darat	10,886	Central Bureau of Statistics of Babulu District in Figures for 2022
Babulu Laut	4,122	Central Bureau of Statistics of Babulu District in Figures for 2022

Source: Central Bureau of Statistics

Many residents in an area describe the access and convenience of providing services for them. In the provision of services, the small population size makes the threshold for various types of services unable to be met. As a result, if various types of basic social services

must be provided for the sake of humanity, then resource inefficiency is inevitable, or various types of basic social services are not provided on the grounds that the threshold has not been reached. Thus, achieving a certain level of education or health in such an area would require much more energy, cost, and time than in the regions that do not have similar physical constraints.

In the context of Nusantara Capital City development, these hinterland areas need special attention because the process of change will occur quickly, and various types of services need to be prepared to anticipate the arrival of the migrant population. The province of East Kalimantan, which has acted as the province receiving the highest inter-provincial migration in Indonesia, will be increasingly attractive with the presence of Nusantara Capital City. If current development and construction preparations are still mostly focused on the core areas of Nusantara Capital City by the central government, anticipatory steps are also needed in supporting areas, mainly by regions of which sites are directly adjacent to Nusantara Capital City.

Various types of basic service activities, such as education, health, and the economy, need to be recalculated by projecting the needs that will arise from the arrival of migrants. The private sector seems to be more anticipatory of this development, for example, by making advertisements to anticipate the arrival of the migrant population (Figure 9).

Figure 9.
Response of the Property Business World to Nusantara Capital City Development

Source: Documentation of the Writing Team of Advertisements at Sultan Aji Muhammad Sulaiman Airport (Sepinggan), 2022

3. Demographic, Socio-economic, and Cultural Profile

Residents in the researched villages generally described the demographic conditions of the frontier areas that experienced a high influx of in-migration. This was consistent with the macro picture at the provincial level, which shows high migration flows to this area. Although the population of the studied villages was relatively small, the composition of the population by sex was very different from that of rural areas in general. Currently, the villages studied had a sex ratio of more than 100 percent. This means that in the villages studied, the male population was always greater than the female population (Table 3).

Table 3.
Population Composition by Gender and Sex Ratio in Research Villages, 2022

Village	Male	Female	Total	Sex Ratio	Source
Sepaku	979	934	1,913	105	Central Bureau of Statistics of Sepaku District in Figures for 2022
Pemaluan	935	781	1,716	120	Central Bureau of Statistics of Sepaku District in Figures for 2022
Teluk Dalam	620	517	1,137	120	Central Bureau of Statistics of Muara Jawa District in Figures for 2022
Babulu Darat	5,606	5,280	10,886	106	Central Bureau of Statistics of Babulu District in Figures for 2022
Babulu Laut	2,139	1,983	4,122	108	Central Bureau of Statistics of Babulu District in Figures for 2022

Source: Central Bureau of Statistics

Villages with a high sex ratio are generally part of the residences of the migrant population associated with extractive economic activities and corporate-scale agriculture. The male population of productive age naturally became employed in extractive industries, large-scale agricultural/plantation production, and forestry-related industries. The selectivity of in-migration into the East Kalimantan region seems to occur by placing age and gender as the primary filters. The various economic sectors developing in this area were indeed more dominated by the needs of male workers than female workers. The high influx of migration into the East Kalimantan region, as was the case in the study area, in turn, created a diversity of population structures according to ethnicity. The more diverse the ethnic composition in one region, the more intercultural interactions must be managed so that conflicts do not arise that are detrimental to the sustainability of life in the future.

Data at the district level were not consistent across all age groups. Only in the oldest age group (>64 years) the sex ratio of the population was >100. This indicates that there are certain parts of the two districts where the population composition is still dominated by indigenous people, so the population pyramid is regular. The next interpretation is that the male population, who became more dominant

in old age, indicates the influx of male migrant populations from the past who have obtained a high socio-economic status, thus having a higher life expectancy. In the adult and young groups, as in other areas, the female population was higher than the male population, which means there was a possibility that the current migration was no longer filtered by gender. This means that male and female migrants had the same opportunity to enter East Kalimantan. Likewise, the population movement that followed the development of Nusantara Capital City may not be selected by age or type of sex (Table 4). Selection of migrants by sex usually occurs in extractive economic sectors that require many male workers. Meanwhile, the location of Nusantara Capital City and its expansion was built as a city that would rely on the economy of the city service sector so that there would be no dominant migration selection according to gender. Migration into this area was also driven by the absence of a history of ethnic conflict.

Table 4.
Population Composition by Gender and Sex Ratio in Penajam Paser Utara and Kutai Kartanegara Regencies, 2022

Regency	Age Group	Male	Female	Total
Penajam Paser Utara	0-14	26.2	26.6	26.4
	15-64	68.6	68.5	68.5
	>64	5.2	4.9	5.1
	Total (percent)	100	100	100
	Total (N)	92,506.00	86,175.00	178,681.00
Kutai Kartanegara	0-14	26.7	26.1	27.1
	15-59	65.5	66.9	65.3
	>59	7.8	7.0	7.6
	Total (percent)	100	100	100
	Total (N)	380,560.00	367,036.00	729,742.00

Sources: Central Bureau of Statistics, Penajam Paser Utara in Figures and Kutai Kartanegara in Figures

Incoming migration that will follow the development of Nusantara Capital City is expected to occur immediately and follows the investment made by the government and the private sector. The location of Nusantara Capital City was chosen partly because there is no history of ethnic conflict in the past because heterogeneous communities in East Kalimantan can coexist peacefully. The potential costs of disputes arising from ethnic diversity are clear from the literature available. Conflicts of preference, racism, and prejudice against other ethnic groups often bring very uncomfortable policies and, at the same time, are counterproductive to the sustainability of society as a whole.

The unfair treatment of minorities is very likely to result in political discontent, even mass disobedience or civil war. However, ethnic mixing also has the potential to bring diversity in human capacities, skills, experience, and culture in a broad sense that can be productive for society as a whole and, at the same time, bring innovation and creativity. The following sections will discuss examples and empirical experiences of the relationship between ethnic diversity and economic development at the local level.

The relationship between ethnic heterogeneity and regional development through regional development and economic growth is actually very complex. Analysis of the data between countries shows a negative or statistically insignificant relationship. However, in smaller spatial aggregates such as cities or districts, the relationship between ethnic heterogeneity and economic variables such as wage levels or productivity tends to be strong, positive, and significant. Therefore, inter-ethnic diversity is an important thing to consider in the development of Nusantara Capital City. In a case study in Africa, a positive, strong, and significant relationship between ethnic and economic diversity occurs through increased trade in border areas among ethnic groups due to inter-ethnic specialization (Montalvo and Reynal-Querol, 2017). Thus, because ethnic groups produce different goods and services, the increased interaction among ethnicities will simultaneously increase the volume of economic transactions, as illustrated by the larger number

and types of goods traded. This means that ethnic diversity encourages inter-ethnic trade activities in relatively underdeveloped communities such as those in Africa.

The previous research of the two authors above examines the relationship between ethnic diversity and religious diversity on the one hand and economic development on the other. Religious polarization has proven to have a solid potential to increase the occurrence of horizontal conflicts in society. However, many previous studies have shown a negative relationship between ethnic diversity and economic development. Proponents of this perspective consider ethnic fractionalization to open up higher opportunities for conflict, which adversely affects investment opportunities and increases rent-seeking activities. In general, it is found that ethnolinguistic fractionalization hinders economic growth. The social polarization has resulted in a decrease in the rate of investment, increased government spending, and opportunities for horizontal conflict (Montalvo & Reynal-Querol, 2005). Thus, the evidence shows that ethnic diversity harms economic development.

The effect of ethnic diversity on people's productivity has also been shown to be very bad, although the relationship mechanism is very complex. Although it is easy to point out the economic failure of an extremely fractionalized society, this is not a general picture. In a modern, democratic, and not lagging society like the USA, for example, ethnic diversity can work well in determining growth and productivity. Even in developing countries, similar levels of ethnic diversity are associated with very different levels of inter-ethnic conflict and cooperation. Issues like this are often complicated and politically possible to trigger conflict in a country. However, they are very relevant to be discussed in two crucial aspects of development in underdeveloped areas, namely migration policy and local politics regarding ethnic integration.

Promoting ethnic homogeneity is likely to be unattractive in the long and short term. In a short time, inter-ethnic cooperation is essential to encourage development in areas that are being developed and

requires the support of the supply of workers with various skills from other regions so that regional development acceleration can be obtained. Meanwhile, in the long term, inter-ethnic cooperation will strengthen the national building built through the well-shaped cultural diversity of each ethnic group in the area, as the ideals of Nusantara Capital City development. An open migration policy and accommodative local politics towards migrants with various ethnic diversity will help the economic development of Nusantara Capital City hinterland areas through increasing primary production and economic transformation from an economy dominated by the direct financial sector to a modern economic sector.

Culturally, the local community in the buffer zone and the extension of Nusantara Capital City is a society that is very open to migrants. This openness facilitated the process of interaction between local communities and migrants so that historically there was no record of significant inter-ethnic conflict in this area. The cultural characteristics of the people in this area represented a very diverse Indonesian society. Indonesian society socio-culturally can be described with six dimensions built by Hofstede (2017), with the following details: (1) power distance, (2) individualism, (3) masculinity, (4) uncertainty avoidance, (5) long-term orientation and (6) indulgence. The six dimensions are explained in detail in the following sections.

Power distance shows a person's attitude toward the differences and gaps that occur between members of the community. Distance is the extent to which less empowered members of society or institutions can expect and accept when power is distributed unequally in society. Indonesian society scores are very high for this dimension (78) which indicates high dependence on hierarchy, a wide gap between rulers and non-rulers, untouchable superior positions, leaders with directive character, management control, and delegation. Power tends to be centralized, and leaders demand assurance of obedience from their subordinates. Workers expect to be told what to do and when to do it, control is desired and leaders are respected for their position, not their

performance. Communication is carried out indirectly, and negative feedback is carried out unobtrusively.

Individualism describes the degree of interdependence held together by the members of a community. This is shown by self-images defined by each person, me or us. In an individualist society, everyone is expected to only care about himself and his family. On the other hand, in a collective community, everyone is part of a group of people who care about them in return for loyalty to the group. Indonesia has an individualism score of 14, which shows the characteristics of a collective society. This means that there is a high preference for each individual to fulfill the role of idealism desired by the community or group. For example, children in Indonesia are taught to be obedient to their parents as their parents used to be obedient to their parents throughout their lives. This intention was to make his parents' life easier in the future.

Masculinity indicates that society is controlled by competition, achievement, and success. Success is defined as winning the best in their field, a value system that starts in school and continues throughout the organization's life. Indonesia's score for this dimension is 46, which means a low level of masculinity. Status and symbols of success appear to have essential meanings in Indonesian society but are not always material achievements that can bring achievement motivation. The social position occupied by a person is often more important than material achievements, which is why Indonesian people recognize the concept of prestige. It is vital to maintain prestige because it emits a different outward appearance with the aim of giving an impression and forming an aura of certain social status.

Uncertainty Avoidance is a way for people to deal with the fact that the future is never known, whether the end must be controlled or let it happen and pass. This uncertainty about the future leads to doubt, and every culture has learned to deal with uncertainty differently. The number of community members who feel threatened by uncertainty or an unknown situation now and are willing to try to avoid this uncertainty is illustrated by the uncertainty avoidance score.

The Indonesian people's score for the uncertainty avoidance dimension is 48, which means they are in a low position of preference to avoid uncertainty.

Long-term orientation describes how society must maintain its relationship with the past while facing present and future challenges, and the organization prioritizes these two existential goals differently. In the long-term orientation dimension, Indonesian people achieve a high score, which is (62) points. In a society that has a high score in the measurement of long-term orientation, it means that the community is very pragmatic; they appreciate efforts to achieve education to prepare for the future. Pragmatists believe that truth depends on the situation, context, and time. They show the capacity to adapt traditions quickly to face changing circumstances, a strong will to save and invest, carefully manage money, and remain consistently focused on achieving a specific outcome from particular efforts.

Indulgence describes the ability of humans to control their desires and impulses according to how they are educated and raised in their families. One of the challenges in human life from the past until now is the extent to which children socialize. Without socialization, children are not human. Weak control is called indulgence, and substantial control is called restraint. Therefore culture can be described as either indulgent or restrained. A low score (38) on the indulgence dimension indicates that the Indonesian people have a culture of restraint. People with low indulgence scores tend to have intense cynicism and pessimism. Restraint societies do not prioritize leisure time to relax and try to control the urge to achieve their desires. People with this restrained orientation perceive that their actions are constantly hampered by social norms and feel that liberating personal desires are a mistake.

Briefly, the recapitulation of scores on the six cultural dimensions of Indonesian society is presented in the following figure 10:

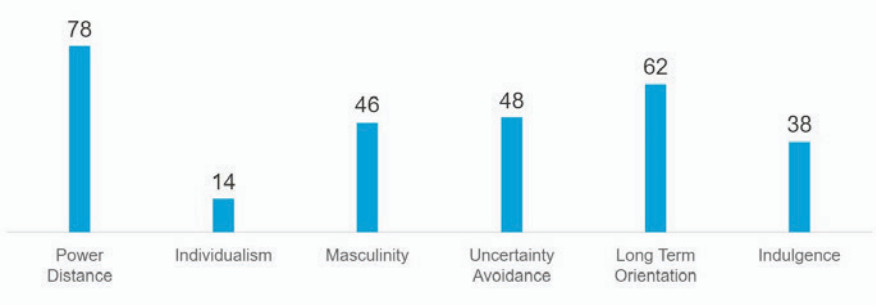

Figure 10.
Score Details of the Cultural Dimensions of Indonesian Society According to Hofstede's Model (2017).

Based on the details of this model briefly, the community around Nusantara Capital City location has the characteristics of being able to accept differences in the unequal distribution of power, relying on various decisions on the surrounding community, respecting status achievements rather than substantive achievements, avoiding uncertainty, having a long time ahead orientation, and believe that there are external norms that limit the individual to act. More in-depth research on the relationship between various dimensions of culture for Nusantara Capital City development is still very much needed in the future, mainly to test the cultural readiness of the community to face a new culture, namely urban culture.

The results of the research by Syarifuddin et al. (2020) show that indigenous peoples focus on the sustainability of their cultural norms. Customary regulations encourage people to place nature as part of them and make the nature a cultural model. This relates to the rights of indigenous peoples to manage their customary rights. The management of customary rights by local communities is a form of sovereignty. Traditional leaders have hope that the government will recognize it. If there is a guarantee from the government, the rights and location of where the indigenous people live will not be extinct.

4.

SUSTAINABLE DEVELOPMENT IN INDONESIA

1. Sustainability at the Macro Level: Political Will

Sustainable Development Goals (SDGs) or in Indonesian known as *Tujuan Pembangunan Berkelanjutan* (TPB), are development programs determined by the United Nations (UN) as the world's development agenda until 2030 for the benefit of humans and the earth. Indonesia is one of the members of the United Nations that is strongly committed to implementing the SDGs. The SDGs consist of 17 goals with 169 measurable achievements that the United Nations determined in 2015. The Government of the Republic of Indonesia becomes one of 193 heads of state and government who agreed to this global development agenda. The government issued a Presidential Regulation on SDGs, namely Presidential Regulation No. 59 of 2017, as proof of political commitment so that it can become a legal basis for implementing the SDGs.

Panuluh and Fitri (2016) reported that Civil Society Organizations (CSOs) have participated in dissemination and various preparatory activities, among others, by forming a Civil Society Coalition for the SDGs. Several local governments have started implementing the

SDGs by providing technical and regulatory support (among others, in Bojonegoro Regency, Pangkep Regency, as well as East Lampung and Wonosobo). Apart from CSOs and local governments, initiatives also came from universities that have stated their commitment to implementing the SDGs and have implemented them in learning activities, including Gadjah Mada University Yogyakarta, Catholic University Widya Mandira Kupang, Hasanuddin University Makassar, Sunan Kalijaga State Islamic University Yogyakarta, Soegijapranata Catholic University Semarang and Sebelas Maret State University Surakarta.

The presidential regulation is a follow-up to the agreement in Transforming Our World: The 2030 Agenda for Sustainable Development to end poverty, improve public health, promote education, and combat climate change. This Presidential Regulation sets 17 goals and 169 targets and is in line with the 2015-2019 National Medium Term Development Plan targets. The elaboration provides a road map, National Action Plan, and Regional Action Plan for Sustainable Development Goals (SDGs). In addition, the appendix to the presidential regulation contains SDGs targets for 2017 to 2030, which is an integral part of this Presidential Regulation (Setkab, July 14th 2017). The SDGs is a document that contains global goals and targets from 2016 to 2030. SDGs aim to maintain a sustainable improvement in the community's economic welfare, the sustainability of community social life, environmental quality, and inclusive development. Furthermore, implementing SDGs through good governance can maintain the quality of life from one country to another, from one generation to the next.

Progress in achieving Indonesia's 17 Sustainable Development Goals is still in the low progress category. This achievement in 2022 decreased compared to the previous year, which was in the medium progress category. Overall, progress in achieving the 17 SDGs goals in Indonesia got a score of 39 or in the Low Progress category. This achievement is lower when compared to the 2021 People's Scorecard assessment, in which Indonesia was in the Medium Progress category

with a score of 47.2. The low achievement of the SDGs was due to the Covid-19 pandemic. Among the progressive achievements were Goal 4 (Education) and Goal 5 (Gender Equality), with scores of 46 and 45, respectively. Meanwhile, SDG Goal 7 (Energy) and SDG Goal 10 (Reduction of Inequality) were considered less than optimal among all Goals, with scores of 34 and 31. There should be a collective understanding of the SDGs. The knowledge of the public, CSOs, and ministries/agencies towards the SDGs was still fragmented, and this needed to be self-criticizing for all of us, whether our SDGs delivery has been sufficient or was still something that needed to be improved (Napitupulu, 2022).

Indonesia is one of the countries that is also committed to achieving the SDGs. Based on the 2021 Sustainable Development Report, countries were ranked based on their overall score and measured progress toward achieving the SDGs. In 2021, Indonesia ranked 82 out of 163 with 69.16 points (Sustainable Development Report, 2021). This position was relatively low from the target point of 100, and most countries in Southeast Asia were above Indonesia's ranking. There were 17 main goals of the SDGs to achieve. Thus it was necessary to review the achievement of every indicator to determine whether Indonesia had achieved the indicators. It is interesting to discuss further because Indonesia was a country that had a pretty good performance in economic development but was still low in achieving the SDGs.

Indonesia experienced an increase in ranking and points every year, but the increase in value was relatively small. In 2016, Indonesia recorded 65.19 points; in 2017, it increased to 66.94. In 2018, Indonesia achieved 68.13 points; in 2019, the points rose again to 68.42. In 2020, Indonesia experienced quite a slight increase, with 68.48 points. Then in 2021, it was 69.1 points. Thus it can be said that this became a significant challenge for Indonesia over the years (Oktaviani, 2022).

At the beginning of 2020, the world was facing the COVID-19 pandemic; the health crisis that followed quickly became a humanita-

rian, social and economic crisis, which impacted countries' progress in achieving the SDGs. However, Indonesia had reasonably good economic growth that increased yearly. Even in 2020, when the Indonesian economy was declining due to the COVID-19 pandemic, it could regain similar growth in 2021 and 2022. This economic performance deserved appreciation, although, in reality, the economic improvement of a country was meaningless without reducing poverty, hunger, and inequality (Oktaviani, 2022).

2. Sustainable Development Practices in Indonesia

Sustainable development practices in Indonesia were regulated by the central government in Presidential Regulation Number 59 of 2017 concerning the Implementation of the Achievement of Sustainable Development Goals, which was later updated using Presidential Regulation Number 111 of 2022 to accelerate target achievement by all actors at the central and regional levels. In its efforts to achieve the sustainable development goals of 2017 to 2030, a National Roadmap for SDGs was prepared to contain global goals and objectives and national development targets. The Minister of National Development Planning Agency (*Bappenas*) becomes the implementing coordinator for achieving SDGs in Indonesia.

Various policy documents, such as the National and Regional Action Plans, contained the programs and activities of the SDGs work plans of ministries/agencies and provincial and district governments, following the medium-term development plans that are currently in effect at the regional level. In addition to the government, their contribution to the achievement of SDGs goals was also measured, such as community organizations, academics, philanthropy, and business actors. Local government support for the achievement of SDGs had a significant impact. It was explicitly contained in regional planning documents, one of which was the Regional Medium-Term Development Plan. SDGs became an instrument of regional development used in maintaining aspects of sustainable development as mandated in

Government Regulation Number 46 of 2016 concerning the implementation of Strategic Environmental Studies. The creation and implementation of Strategic Environmental Studies in the preparation of the Regional Medium-Term Development Plan, was carried out in the context of the implementation of the SDGs to integrate sustainable development goals into the Regional Medium-Term Development Plan document.

One of the efforts to integrate sustainable development in Indonesia at the micro level was the Village SDGs. This concept was intertwined with development efforts that prioritized the village as an area known as the periphery to become the spearhead of development. In its implementation, village development was carried out through Law Number 23 of 2014 concerning Villages and through one of President Joko Widodo's development visions, also known as *Nawacita* or Nine Priorities Agenda. The Nawacita comprises the following items:

1. To renew the state's obligation to protect all people and provide security to all citizens through free and active foreign policy, national security, and the development of reliable national resilience based on integrated national interests, and strengthening national identity as a maritime nation.
2. To make the government's presence felt through reliable governance by giving priority and efforts to restore public confidence in democratic institutions and to continue the consolidation of democracy through the reform in the political party system, general elections, and representative institutions.
3. To build Indonesia from its peripheries; to strengthen the rural areas within the framework of a unitary state of Indonesia.
4. To reject a weak state by reforming the law system through corruption-free, dignified, and reliable law enforcement.
5. To improve the quality of Indonesians by enhancing the quality of education and training through the Smart Indonesia *(Indonesia Pintar)* program and by increasing public welfare through the Working Indonesia *(Indonesia Kerja)* and Prosperous Indonesia

(Indonesia Sejahtera) programs. To encourage land reform and land ownership and to provide low-cost housing and apartments and social insurance for the people by 2019.

6. To improve people's productivity and competitiveness in the international market so that Indonesia can move forward and stand up with other Asian nations.
7. To achieve economic independence by moving the strategic sectors to the domestic economy.
8. To revolutionize the nation's character through a policy of restructuring the national education curriculum with advanced civic education; to teach the history of the nation, the values of patriotism, and to love the country, as well as to build the passion and character to defend the state through national education.
9. To strengthen diversity and social restoration of Indonesia by highlighting the policy of education for diversity and creating rooms for dialogue among citizens. (https://devtest.wapresri.go.id/en/nawa-cita/)

The implementation of the Village SDGs was adjusted to the units and characteristics of villages in Indonesia. It is hoped that with the implementation of the SDGs at the village level, the process of integrating the SDGs into development and people's daily lives can be realized.

3. Achievements of Sustainable Development Goals

A decade of implementing sustainable development goals was passed along with the Covid-19 pandemic, which caused various development setbacks in all corners of the world. Based on the 2021 Sustainable Development Report, the SDGs index score in 2021 decreased from the previous year. The decline was primarily due to the increase in poverty and unemployment rates following the Covid-19 Pandemic. Sustainable development was challenging to implement during an escalating pandemic.

Indonesia was ranked 97th out of 165 countries measured by

its SGDs achievement. The index value achieved was 66.3, with a regional average value of 65.7. Indonesia's sustainable development achievements based on sustainable development goals can be presented in Table 5. The level shows the level of sustainable development achievement achieved, while the trend shows a pattern of development trends compared to the previous year's accomplishments.

Table 5.
Levels and Trends of Sustainable Development Goals Achievement in Indonesia 2021

No.	Sustainable Development Goals	Indonesia		East and Southeast Asia	
		Level	Trend	Level	Trend
1.	No Poverty	Significant challenges remain	Moderately increasing	Significant challenges remain	Moderately increasing
2.	Zero Hunger	Major challenges remain	Moderately increasing	Major challenges remain	Stagnating
3.	Good Health and Well-being	Major challenges remain	Moderately increasing	Major challenges remain	Moderately increasing
4.	Quality Education	Challenges remain	On track	Challenges remain	On track
5.	Gender Equality	Significant challenges remain	Moderately increasing	Significant challenges remain	Stagnating
6.	Clean Water and Sanitation	Major challenges remain	On track	Major challenges remain	On track
7.	Affordable and Clean Energy	Significant challenges remain	Moderately increasing	Significant challenges remain	Moderately increasing
8.	Decent Work and Economic Growth	Significant challenges remain	On track	Significant challenges remain	Moderately increasing
9.	Industry, Innovation and Infrastructure	Major challenges remain	Moderately increasing	Significant challenges remain	Moderately increasing

No.	Sustainable Development Goals	Indonesia		East and Southeast Asia	
		Level	Trend	Level	Trend
10.	Reduced Inequality	Major challenges remain	Data not available	Major challenges remain	Data not available
11.	Sustainable Cities and Communities	Major challenges remain	Stagnating	Major challenges remain	Stagnating
12.	Responsible Consumption and Production	Challenges remain	Data not available	SDGs	Data not available
13.	Climate Action	Challenges remain	Stagnating	Challenges remain	Moderately increasing
14.	Life Below Water	Major challenges remain	Stagnating	Major challenges remain	Stagnating
15.	Life on Land	Major challenges remain	Stagnating	Major challenges remain	Decreasing
16.	Peace, Justice, and Strong Institutions	Major challenges remain	Moderately increasing	Major challenges remain	Moderately increasing
17.	Partnerships for the Goals	Significant challenges remain	Stagnating	Major challenges remain	Stagnating

Source: Sustainable Development Report 2021

The achievements of most of the Regional Medium-Term Development Plan in East Kalimantan Province in 2020 were relatively good compared to the national level and the provincial average in Indonesia. The data presented by Central Bureau of Statistics (2020) shows that there were 13 out of 17 SDGs measured, almost all of which were above the national figure and the inter-provincial average (Table 6). This shows that there was a relatively good SDGs achievement in East Kalimantan Province. However, of the 13 SDGs measured, East Kalimantan Province achieved a very low score in terms of climate action. As one of the richest provinces in Indonesia, this was

somewhat ironic. The proportion of the primary economic sector which traditionally consisted of mining and agriculture (especially forestry) was still very significant.

Table 6.
Sustainable Development Goals Achievement in East Kalimantan Province

No.	Sustainable Development Goals	Indonesia	Interprovincial Average	East Kalimantan	Remarks
1.	No Poverty	79.4	71.9	86.3	
2.	Zero Hunger	79.0	70.2	86.4	
3.	Good Health and Well-being	83.9	60.2	70.8	
4.	Quality Education	76.3	70.4	83.3	
5.	Gender Equality	83.5	71.1	91.2	
6.	Clean Water and Sanitation	63.7	59.6	68.5	
7.	Affordable and Clean Energy	92.6	83.2	100.0	
8.	Decent Work and Economic Growth	59.3	49.3	62.6	
9.	Industry, Innovation and Infrastructure	73.6	55.5	94.7	
10.	Reduced Inequality	67.2	77.5	100.0	
11.	Sustainable Cities and Communities	41.5	39.3	43.3	
12.	Responsible Consumption and Production	57.5	n.a.	n.a.	n.a.
13.	Climate Action	29.8	38.8	20.0	
14.	Life Below Water	100.0	n.a.	n.a.	n.a.
15.	Life on Land	28.8	n.a.	n.a.	n.a.
16.	Peace, Justice, and Strong Institutions	85.5	77.2	86.7	
17.	Partnerships for the Goals	87.9	26.2	37.7	

In the context of Nusantara Capital City development, the low achievement of East Kalimantan Province in the field of climate action was in stark contrast to the big mission of Nusantara Capital City as a smart urban forest. Although many activities were carried out as part of action efforts to deal with climate change, the achievements achieved by other provinces appear to be much higher. In detail, the achievements of each SDG in East Kalimantan Province are presented in the following sections.

SDGs Achievement in East Kalimantan Province

The achievement of the Sustainable Development Goals of East Kalimantan Province included 17 goals in the SDGs, but what has been described in this book are goals relevant to sustainable urban development, including SDG 7: Clean and Affordable Energy, SDG 11: Sustainable Cities and Settlements, SDG 12: Responsible Food and Consumption, SDG 13: Addressing Climate Change, SDG 14: Marine Ecosystems, SDG 15: Land Ecosystems.

1. SDG 7: CLEAN AND AFFORDABLE ENERGY

Inclusive economic development is the most effective way to reduce poverty and increase prosperity. However, most economic activities are impossible without the availability of modern energy that is sufficient, reliable, and has competitive prices. Energy and how it is used must be efficient, sustainable, and renewable as much as possible. In the last 20 years, several countries have made great strides in reducing energy intensity. If all currently available energy efficiency technologies are applied, energy consumption could be reduced to around one-third. However, only a tiny part of this potential is realized. Through a combination of several energy efficiency technologies, good building design, and new renewable roof technologies, a zero net energy building can be built. In many cases, these buildings generate solar energy fed into the grid for use by others. Of course, apart from energy efficiency, policy reform, and the elimination of subsidies, it

is also necessary to ensure that countries switch from fossil fuels to renewable energy. The electrification ratio is obtained by dividing the number of household customers from State Electricity Companies and non- State Electricity Companies by the total number of households multiplied by 100 percent. The ratio of household gas use is a valuable indicator to see the proportion of households that have used gas as a fuel for cooking compared to the total household as a whole. In the 2018-2020 period, the electrification ratio in East Kalimantan increased from 85.75 percent in 2018, rising to 88.93 percent in 2019 and in 2020, reaching 90.21 percent. Meanwhile, the proportion of household gas used in East Kalimantan in 2020 (95.07 percent) decreased compared to 2019 (95.27 percent) but was still higher than the conditions in 2018 (94.11 percent) (Figure 11).

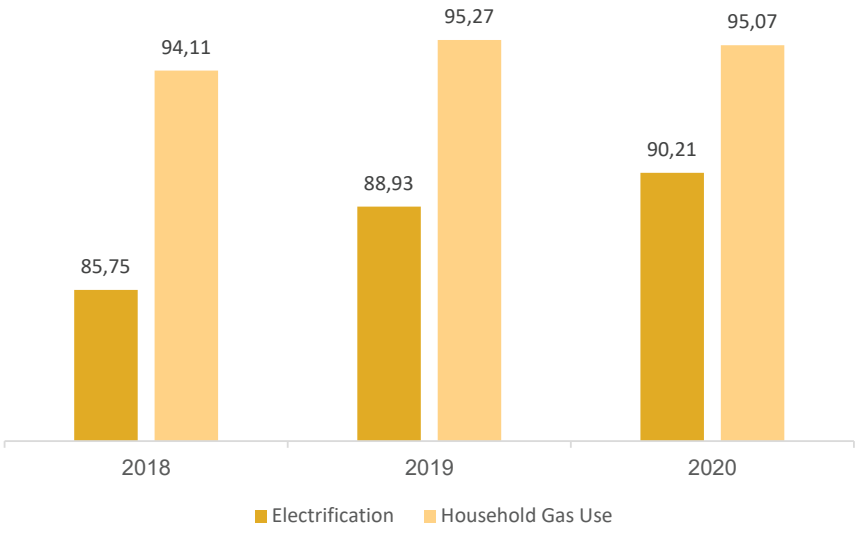

Figure 11.
Ratio of Electrification and Household Gas Use in East Kalimantan in 2018-2020
Source: Central Bureau of Statistics and Ministry of Energy and Mineral Resources

2. SDG 11: SUSTAINABLE CITIES AND SETTLEMENTS

Today, more than half of the world's population lives in cities. By 2030, it is projected that 6 out of 10 people will be urban dwellers.

Despite many planning challenges, cities offer more efficient economies of scale, providing goods, services, and transportation. With well-informed planning and risk management, cities can become incubators for innovation, growth, and drivers of sustainable development. In 2020, at least 1 in 3 households in East Kalimantan still did not have access to decent and affordable housing (Figure 12). Habitable housing is defined as a house/residential that meets the requirements for safety, building, and the minimum adequacy of the building area and the health of its occupants. The degree of the feasibility of a residential house is measured from two aspects, namely (1) the physical quality of the house and (2) the quality of the housing facilities. The physical quality of a residential house is measured by 3 variables, namely: the broadest type of roof, the most expansive type of wall, and the broadest type of floor; while the quality of home facilities is measured by three variables, namely: floor area per capita, sources of lighting and availability of toilet facilities.

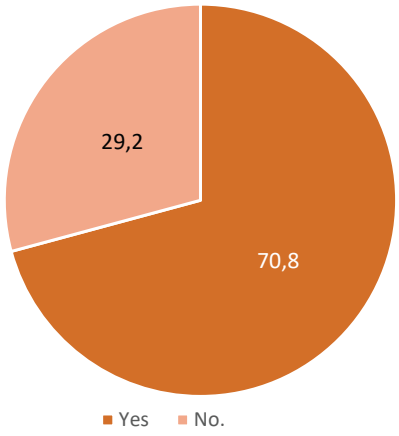

Figure 12.
Proportion of households with access to decent and affordable housing in East Kalimantan Province, 2020 (percent)

Source: *Bappeda* of East Kalimantan Province 2022

Convenient access to public transportation is one of the needs and conditions for inclusive urban development. Until 2020, only 53.59

percent of households had convenient access to public transportation (Figure 13), namely households with the furthest distance of 0.5 km to public transportation. The reach of access to the public transportation system continued to be pursued. In 2020, only 3.56 percent of the population aged 10 years and over used public transportation with particular routes (Figure 14).

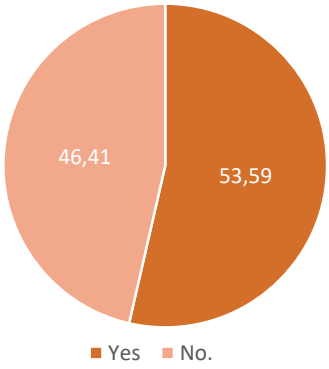

Figure 13.
Proportion of population with convenient access to public transportation in East Kalimantan Province, 2020 (percent)

Source: *Bappeda* of East Kalimantan Province, 2022

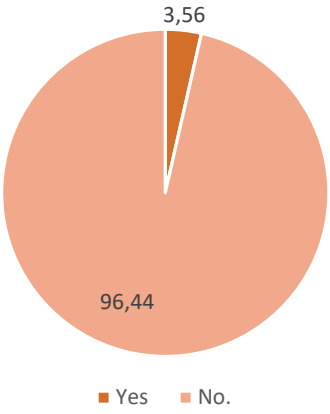

Figure 14.
Proportion of the population served by public transportation in East Kalimantan Province, 2020 (percent).

Source: *Bappeda* of East Kalimantan Province,2022

3. SDG 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Environmental problems emerging today are inseparable from irresponsible production and consumption patterns. For this reason, a commitment to change is needed for producers and consumers through the efficient use of resources. Sustainable production and consumption patterns are an effort to realize changes in an integrated and systematic way from the previous patterns that are not environmentally friendly and unsustainable by all stakeholders. It is also hoped that sustainable production and consumption patterns can provide essential multi-benefits in the form of changes in people's consumption patterns that are responsible, efficient, and environmentally friendly.

4. SDG 13: CLIMATE ACTION

Indonesia, as an archipelagic country, is very vulnerable to disasters related to climate change. Considering that climate change has an impact on many sectors, comprehensive handling and good coordination between industries are needed. With conditions as a developing country, Indonesia's ability to adapt to climate change was not as good as developed countries. It is feared that the development being carried out by the government could be hampered due to the impact of climate change. For this purpose, it is expected that the government will take rapid action to overcome climate change and its impacts by strengthening resilience and adaptation capacity to climate-related hazards into national policies, strategies, and planning and increasing education, awareness raising, and human and institutional capabilities related to mitigation, adaptation, impact reduction and early warning of climate change.

East Kalimantan has a development target to become a Green Province. Included in this target was a contribution to Indonesia's national emission reduction target of 26 percent by 2020. The vision of a Green East Kalimantan also included building sustainable, renewable, environmentally friendly economic sectors, which was also equitable

following the vision of the Long Term Plan Regional Development of East Kalimantan Province 2005 – 2025 within "The Realization of an Evan and Prosperous Society in Sustainable Development" with one of the missions of realizing an integrated and harmonious development with an economic and ecological-based regional development approach.

Based on this vision and mission, the development of East Kalimantan Province in the future will not only focus on the management of non-renewable natural resources but rather on renewable natural resources that are in favor of the environment and the welfare of the community in the long term. The realization of this balance is through a green economic development model with critical dimensions, including sustainable economic growth, maintained productive ecosystems as providers of environmental services, fair and equitable growth (inclusive), and social, economic, and ecological resilience.

Emission reductions spawned in Five major initiatives contributed to 75 percent of the CO2e decrease in the province. Of the five initiatives that required different approaches, all of these efforts had one thing in common, namely increasing land use efficiency. Some of the policies in the five carbon emission reduction initiatives include:

1. One of the most critical steps that can be taken to reduce emissions is to implement a zero-burning policy. This policy can reduce emissions in East Kalimantan by 47 MtCO2e by 2030 at a cost of USD 0.40 per tonne;
2. Reduced impact logging, overall the second largest abatement opportunity, with the potential to prevent 34 MtCO2e of emissions at a cost of USD 1.10 per tonne;
3. Reforestation and rehabilitation of partially damaged forests will restore ecosystem functions and also absorb carbon, thereby reducing emissions by 12 MtCO2e for USD 2.60 per ton;
4. Rehabilitation and water management of previously cleared peatlands, offering a possible reduction of 18 MtCO2e at an average cost of USD 0.50 per tonne;

5. Using of degraded land for future expansion of oil palm plantations, forest plantations, and agriculture will help us develop these essential industries and, at the same time, result in reduced emissions of 24 MtCO2e at a cost of USD 5.50 per tonne.

5. SDG 14: MARINE ECOSYSTEMS

The world's oceans—their temperature, chemistry, currents, and life—are driving the global system that makes the Earth habitable for humans. How people manage, this vital resource is critical to human life as a whole and to offset the effects of climate change. More than 3 billion people depend on marine and coastal biodiversity for their livelihoods. However, today we see that 30 percent of the world's fish stocks are overexploited, well below the level at which they can produce sustainable yields. The oceans also absorb about 30 percent of the carbon dioxide that humans produce, and we are seeing a 26 percent increase in ocean acidification since the start of the industrial revolution. Marine pollution, mainly from land, has reached alarming levels, with an average of 13,000 pieces of plastic waste found in every square kilometer of the ocean. The SDGs create a sustainable framework to regulate and protect marine and coastal ecosystems from land-based pollution, as well as to raise awareness about the effects of ocean acidification. Strengthening the protection and sustainable use of marine resources through international law will also help address the challenges facing our oceans. Based on data from the Regional Medium Term Development Plan of East Kalimantan Province for 2019-2023, the achievement of marine space conservation areas is 64.14 percent of the target. This is the commitment of the East Kalimantan provincial government in marine and coastal spatial planning (Table 7).

Table 7.
Achievements of the Regional Medium Term Development Plan of East Kalimantan 2019-2023 Related to Marine and Fisheries Programs

No	Program Priorities	Performance Indicator (outcome)	Pre-condition (End of 2019)	The target of Medium Plan (2020)	Realization Medium Plan (2020)	Realization of Performance Indicator (2020) Trimester IV		Agency in charge
						Achievement	percent	
1	Strengthening the Compe-titiveness of Fishery Products	Fish Consumption Rate (Kg/Capita)	393,243	52	399,141			
2	Capture Fisheries Development Program	Total Capture Fishery Production (Tons)	152,233	155,516	235,641	44.37	48.88	
3	Program to Increase the Provision of Leading Fish and Shrimp Seeds	Total Production Availability of Seawater Shrimp/Fish Seeds (Item)	2.5 Billion	2.7 Billion	2.53 Billion	69.86	60.42	Department of Marine Affairs and Fisheries
4	Marine Spatial Management Program	Number of conservation areas designated for effective management (Area)	1 (4 Ha)	1	2	64.14	93.51	Department of Marine Affairs and Fisheries (Implementation Unit of Central Brackish Water and Seawater Shrimp Seed Center of Manggar)

Source: *Bappeda* of East Kalimantan Province,2022

6. SDG 15: LAND ECOSYSTEM

Human life depends on the land just as we rely on the sea for food and livelihood. Plants provide 80 percent of human nutrition, and we depend on agriculture as an essential source of our economy and a tool for development. Forests cover 30 percent of the earth's surface, are a habitat for millions of species, as well as a source of clean water and air, and are also critical to resisting climate change. Never before have we seen such a decline in soil quality and the loss of arable land at 30 to 35 times the historical average. Long-term droughts and desertification are also increasing yearly, reaching 12 million hectares and affecting poor communities worldwide. Of the 8,300 known animals, 8 percent are extinct, and 22 percent are on the verge of extinction. The SDGs seek to protect and improve the use of terrestrial ecosystems such as forests, swamps, lands, and mountains by 2020. Promoting sustainable forest management and halting deforestation is also critical to halting the impacts of climate change. Urgent action must be taken to reduce the loss of natural habitats and biodiversity that are part of our common heritage.

The achievements of the East Kalimantan Provincial Government program in protecting, restoring, and increasing the sustainable use of terrestrial ecosystems, managing forests sustainably, stopping desertification, restoring land degradation, and stopping the loss of biodiversity are shown in the following Table 8.

Table 8.
Achievements of Regional Medium-Term Development Plan of East Kalimantan 2019-2023 Related to Forestry and Environment Sector Programs

No	Priority Program	Performance Indicators (outcomes)	Initial Condition (End of 2019)	The target of Medium Term Plan (2020)	Realization of Medium Term Plan (2020)	Realization of Performance Achievement (2020) Trimester IV		Agency in Charge
						Achievement	percent	
1	Forest Planning and Utilization Program	Realization of non-tax revenues from the forestry sector (IDR billion)	121.9	165	109.004	60.34	60.49	Forestry Department
2	Protection Program and Conservation of Ecosystem Natural Resources	Percentage of forest damage within forest area (percent)	≤2	1.75	0.01	90.63	81.87	Forestry Department
3	Watershed Management Program and Forest and Land Rehabilitation	Percentage of land cover increase (percent)	5.66	13.98	13.98	98.85	93.96	Forestry Department
4	Extension Program, empowerment of forest communities and social forestry	Community-managed forest area (Ha)	31,368	32,000	28,620	99.30	99.30	Forestry Department

Source: Bappeda of East Kalimantan Province, 2022

The achievement of terrestrial ecosystem management was above 60 percent, indicating that the East Kalimantan provincial government program had progressed close to the target to be achieved.

SDGs Achievements in Penajam Paser Utara Regency

Penajam Paser Utara Regency has several programs for the achievement of the SDGs until 2030 with the following details and achievements, namely:

1. Achieve universal and equitable access to safe and affordable drinking water for all, with indicators of the percentage of households having access to adequate drinking water sources reaching 78.86 percent in 2020, and 30.08 percent in 2021
2. Achieve access to adequate and equitable sanitation and hygiene for all, and stop the practice of open defecation, paying particular attention to the needs of women and vulnerable community groups with the indicator Proportion of the population having hand washing facilities with soap and water.
3. Ensure that all men and women, in particular the poor and vulnerable, had equal rights to economic resources, as well as access to essential services, ownership and control over land and other forms of property, inheritance, natural resources, new technologies, and appropriate financial services, including microfinance, with indicators the percentage of households that had access to adequate and sustainable drinking water sources in 2020 reached 78.86 percent. In 2021 it could reach 30.08 percent.
4. Achieve access to adequate and equitable sanitation and hygiene for all and stop the practice of open defecation, paying particular attention to the needs of women and vulnerable groups of people with indicators of the percentage of households that had access to proper sanitation services by 74.3 percent achievement in 2021, Number of villages that implemented Community-Based Total Sanitation reached 23.15 percent in 2020; Number of villages that became Open Defecation Free (ODF) / Stop Open Defecation

obtained achievement of 27.78 percent in 2021; the proportion of households served by a centralized wastewater management system had the achievement of 0.2 percent in 2021.

5. Improve water quality by reducing pollution, eliminating discharge and minimizing the release of hazardous materials and chemicals, halving the proportion of untreated wastewater, and significantly increasing the recycling and safe reuse of recycled goods globally, with indicators of the proportion of households served by the sewage management system with an achievement of 0.4 percent in 2021.
6. Ensure access for all to decent, safe, affordable housing and essential services, as well as manage slum areas with indicators of the proportion of households having access to decent and affordable housing reaching 59.69 percent in 2021.
7. Ensure universal access to affordable, reliable, and modern energy services with an electrification ratio indicator of 82.11 percent by 2021.
8. Substantially increase the share of renewable energy in the global energy mix with renewable energy mix indicators.
9. Improve water quality by reducing pollution, eliminating discharge and minimizing the release of hazardous materials and chemicals, halving the proportion of untreated wastewater, and significantly increasing the recycling and safe reuse of recycled goods globally with indicators of lake water quality, river water quality as a raw water source, and incentives for saving water for agriculture, plantations and industry
10. Implement integrated water resources management at all levels, including through appropriate cross-border cooperation with indicators of water resources institutional arrangement activities
11. Reduce the per capita adverse impact of the urban environment by paying particular attention to air quality, including the handling of municipal waste, with the indicator that the percentage of urban waste handled could reach 50.14 percent.

12. Provide public spaces and green open spaces that are safe, inclusive, and easily accessible, especially for women and children, seniors, and persons with disabilities, with an indicator of the number of green cities that provide green open spaces in urban areas and towns.
13. Achieve environmentally friendly management of chemicals and all types of waste, throughout their life cycle, following agreed international frameworks and significantly reduce the pollution of these chemicals and refuse to air, water and soil to minimize adverse impacts on human health and the environment with indicators of the amount of hazardous and toxic materials waste being managed and the proportion of dangerous and poisonous materials waste being processed according to laws and regulations (industrial sector) reaching 1,025,066 Tons in 2021.
14. Substantially reduce waste production through prevention, reduction, recycling, and reuse with an indicator of the amount of waste generated being recycled reaching 19.64 percent by 2021
15. Ensure that people everywhere have relevant information and awareness of sustainable development and lifestyle in harmony with nature with the number of public facilities that apply the Community Service Standards and were registered.
16. Ensure the sustainability, restoration, and sustainable use of terrestrial and inland water ecosystems and their environmental services, particularly forest ecosystems, wetlands, mountains, and drylands, in line with obligations under international agreements with indicators of the proportion of forest cover to the total land area.
17. Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies, and budgeting with indicators of biodiversity utilization plan documents
18. Improve infrastructure and industrial retrofits to be sustainable by increasing the efficiency of resource use and better adoption of

clean and environmentally friendly industrial technologies and processes, which were carried out by all countries according to their respective capabilities with indicators of CO2 Emissions/ Greenhouse Gas Emissions Ratio indicators with added value in the manufacturing industry sector, and Percentage Change in CO2 Emissions/Greenhouse Gas Emissions.

At the district level, no documentation allowed inter-regional analysis that could be used to compare the achievements of Penajam Paser Utara Regency compared to other districts in Indonesia. Likewise, the climate action aspect at the provincial level had a low score, and was not explicitly detailed in the achievement indicators at the regency level.

SDGs Achievements in Kutai Kartanegara Regency

The SDGs of Kutai Kartanegara Regency focused on 3 goals, namely Goal 1 (Eliminating Poverty), Goal 3 (Good Health and Welfare), and Goal 4 (Quality Education). Some of the achievements of the Sustainable Development Goals (SDGs) of Kutai Kartanegara Regency are as follows:

Goal 1 (Eliminating Poverty)

In 2019, the trend of the number of poor people both nationally and at the level of East Kalimantan Province in the last five years decreased (Figure 15). Meanwhile, the status of the number of poor people in Kutai Kartanegara Regency was lower when compared to the national status. However, it was still higher than the average number of poor people in East Kalimantan.

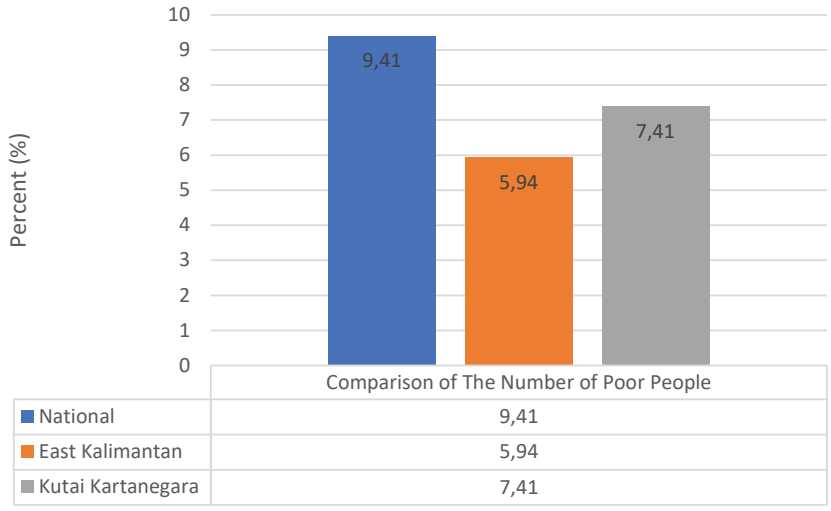

Figure 15.
Comparison of the Number of Poor People (percent) at the National Level, East Kalimantan Province, and Kutai Kartanegara Regency in 2019

(Source: Central Bureau of Statistics, 2019 and Central Bureau of Statistics of Kutai Kartanegara, 2019).

Goal 3 (Good health and well-being)

The quality of human resources one of the determining factors is the health status of the community. The public health indicator currently receiving attention from the government and the public is stunting. Statistical data in 2019 shows that the stunting status in Kutai Kartanegara Regency was still higher than the status at the East Kalimantan provincial level and the national level (Table 9).

Table 9.
Status of Health Sector Performance Achievements in Kutai Kartanegara Regency in Year 2019

No.	Health Indicator	Achievement Status 2019		
		National	East Kalimantan	Kutai Kartanegara
1	Incidence of stunting (0 percent)	26.67	30.00	30.09
2	Maternal Mortality Rate (MMR) (deaths per 100,000 live births)	306	-	22
3	Infant Mortality Rate (IMR) (deaths per 1000 live births)	24	-	63
4	Coverage of National Health Insurance (JKN) (percent)	85	-	99.78
5	Percentage of availability of drugs and vaccines at *Puskesmas* – Primary Health Centers (percent)	90	-	90
6	Life expectancy (years)	71.06	73.96	71.93

Goal 4 (quality education)

Quality education is a significant development capital to produce quality and superior human resources. Based on statistical data (Table 10), the education indicators of Kutai Kartanegara Regency were still not encouraging because most of their achievements were still below the level of East Kalimantan Province.

Table 10.
Status of Educational Performance Achievements in Kutai Kartanegara Regency in Year 2019

No.	Education Indicator	Achievement Status		
		National	East Kalimantan	Kutai Kartanegara
1	Gross Enrollment Rate (GER) for Primary Schools (*SD/ MI*) / Equivalent	114.09	108.02	105.83
2	Gross Enrollment Rate for Junior High School (*SMP/ MTs*) / Equivalent	106.94	92.57	99.80
3	Gross Enrollment Rate for Senior High School (*SMA/MA*) / Equivalent	91.63	96.08	94.60
4	The average length of schooling of the population aged 15 years	8.8	9.48	8.97

The reported coverage of the SDGs' achievements was limited to four priorities, so the overall achievements were not reflected in the available data sources. Regarding the four priorities described above, Kutai Kartanegara Regency has achieved its focus on SDGs. However, no further information was available for the SDGs beyond the priorities above. In addition, no documentation was available that allowed inter-regional analysis that could be used to compare the achievements of Kutai Kartanegara Regency compared to other districts in Indonesia.

5

SUSTAINABILITY CHALLENGES IN THE DEVELOPMENT OF THE NEW CAPITAL CITY

1. Sustainability at the Micro Level

Sustainable development is the goal of relocating the capital city. In addition to having a forest city concept, the capital city will also be built to become the most sustainable city in the world. Various other development concepts, such as making the capital *superhub*[1], using technology, and low carbon emission cities, have been planned as a form of government commitment and seriousness in relocating the nation's capital city. The preparation of various policies, plans, and studies has been carried out in the success of this activity. On the other hand, the government's bottom-up approach is deemed necessary because to realize sustainable urbanization, participation and co-design processes with various stakeholders are also needed. So far, the policies that have been launched are strategic in nature and do not involve a representative community in their preparation.

[1] https://www.ikn.go.id/ikn-nusantara-akan-jadi-superhub-ekonomi-nasional

Sustainable development practices are very likely to have been carried out at the household and community scale in the capital city development sites. Local wisdom in utilizing natural resources is a manifestation of the local community in protecting nature. The concept of developing a capital city to become a symbol of the most sustainable city in the world, of course, must also be able to preserve various practices that have been carried out by the community. In addition to its relation to the use of resources, how the government can develop an area somewhat is also an implementation of sustainable development.

Developing a new capital city needs to identify various potential disturbances, from misunderstandings to changes in people's behavior. The knowledge, attitudes, and behavior of the community can show how the gap between the statements and what the community does in dealing with the development of the capital city. Surveys on community knowledge, attitudes, and practices are mainly carried out in the health sector (Andrade et al, 2022; Raina, 2013; Gupta et al, 2015; Khaerunnisa et al, 2022; Wen et al 2020; Park, 2021) because they can produce information which is very useful in planning, implementation, and evaluation. In addition, this technique is also widely used in the field of construction and evaluation of public service facilities (Jahan, 2021; USAID, 2013).

The knowledge, attitudes, and practices of the local community will show how prepared they are to face the development of the capital city. The survey was conducted by asking for information on the development of the national capital within the Nusantara Capital City zone, development zone, and outside the area as a comparison.

2. Knowledge

The relocation of Nusantara Capital City was first announced by President Joko Widodo during his state speech at the House of Representatives building. After that, it was continued with various further studies with the formulation of the Nusantara Capital City Law. There were various plan documents published by the government in

multiple ways, such as public consultations and socialization at both the local and local government levels. General knowledge about the relocation of the capital city is fundamental, considering the location where they live will be built into the new central government area. Various spatial, social, and economic dynamics can affect multiple aspects, such as livelihoods. Knowledge of the plan to the impact that may be caused becomes an important topic.

Table 11 presents the knowledge of the people inside and outside the Nusantara Capital City zone. Different zones can indicate other responses to capital city development. Locations within the area will undoubtedly receive direct and massive intervention from the government, while locations outside the zone will not be directly affected by development policies. Based on the Law of the State Capital, there are two zones within the Nusantara Capital City area consisting of the Nusantara Capital City Zone and the Development Zone. In the previous discussion draft, there were three-zone divisions comprised of core, buffer, and expansion zones. However, in the law that was passed, there were only two zones, plus an explanation of the Central Government Core Area, which was planned to be located in Pemaluan Village, Bumi Harapan Village, and Bukit Raya Village (Sepaku District).

The government plan of capital relocation was known by more than 90 percent of the household sample in each survey location. The relocation of the capital city becomes essential information, especially for the people of Penajam Paser Utara and Kutai Kartanegara, which are the relocation locations. Television and word of mouth became the primary sources of information on the relocation of the capital city. If we return to the time when the President of Indonesia first announced the transfer plan, various televisions covered the news, and it became a hot news topic for some time to come. In addition, social media timelines were also filled with news related to the president's speech regarding the relocation of the capital city to East Kalimantan. However, only a few respondents were aware of the news of the relocation of the capital through social media.

Table 11.
Percentage of Public Knowledge about Relocation of the National Capital

Knowledge	Within the Capital City		Beyond the Capital City
	Nusantara Capital City Zone (n=86)	Development Zone (n=42)	Beyond the City (n=134)
Knowledge of Nusantara Capital City relocation	89.5%	88.1%	88.1%
Source of information on the relocation of Nusantara Capital City	Television: 32.6 % Socialization: 11.6 % Social Media: 9.3 % Community: 30.2 %	Television: - Socialization: - Social Media: - Community: -	Television: 62.0 % Sosialization: 0.8 % Social Media: 9.7 % Community: 6.7 %
Knowledge of Nusantara Capital City transfer locations	64.0 %	35.5 %	35.5 %
Knowledge of Nusantara Capital City zoning	76.7 %	28.6 %	28.6 %
Knowledge of the impact that will arise on the community from the transfer of Nusantara Capital City	82.6 %	59.5 %	59.5 %

Sumber: Primary Data Collection, 2022

The location and zoning of the planned national capital city were known by more than 60 percent of respondents in the Nusantara Capital City zone (Sepaku Village and Pemaluan Village). This differed from the survey results in the development zone (Teluk Dalam Village), and outside Nusantara Capital City outer zone (Babulu Darat Village). This condition shows that the closer to the central government zone, the better public knowledge. This knowledge was also due to the intervention carried out by the government, which had been running more massively in the Nusantara Capital City zone compared to other

zones. Knowledge of the impacts of relocating the capital city showed that people inside and outside the area were aware of the effects, such as urbanization, physical development, employment opportunities, and other sociocultural developments. Like other knowledge, the closer the location of the community's residence to the core zone, the broader and more detailed the knowledge.

The demonstration effect of Nusantara Capital City development preparatory work involving various consultants as well as central and local governments, such as field surveys, field measurements, and coordination meetings conducted in locations around Nusantara Capital City. All these activities also took place in collaboration with the local community because various facilities to stay in the field were also provided in partnership with the local community to provide them. Because there was a need for multiple services for migrants who worked during the preparation process for Nusantara Capital City development, many community members then seized it as a business opportunity while anticipating the same need in the future when Nusantara Capital City is already operating as expected. Throughout the provincial road space in the villages surveyed in this study, it was found that many new buildings were built in the context of investment to capture business opportunities that would come with the construction of Nusantara Capital City.

3. Attitude

The community's attitude in responding to the relocation of the capital city will affect the response or practice that will be carried out. Attitude is a response or response to a particular stimulus based on what people feel and believe. Some questions included attitudes about the relocation of the capital city, the implementation of socialization, and the impacts that would arise from the relocation. The attitude of the respondents showed that more than 80 percent of the respondents had an attitude that agreed with moving the capital city and moving the capital to East Kalimantan. Likewise, among respondents in the

development zone and outside the area, more than 50 percent of the respondents stated that they agreed. Most of them agreed with the relocation because they had positive expectations for Nusantara Capital City development.

The community's attitude towards the implementation of socialization carried out by the government in local communities was still not good. This attitude was shown by most of the respondents in various locations. The socialization carried out by the government so far has not involved local people from different aspects of life.

Table 12.
Percentage of Public Attitudes About Transferring Nusantara Capital City

Attitude	Nusantara Capital City Zone (n=86)	Development Zone (n=42)	Beyond the City (n=134)
People's Attitude (agree) About Transferring Nusantara Capital City	85.0 %	61.9 %	61.9 %
People's Attitude (agree) About Moving Nusantara Capital City to East Kalimantan	87.2 %	59.5 %	59.5 %
Good assessment of the implementation of socialization by the government	26.7 %	33.3 %	33.3 %
Community Assessment About the Good Impact That Will Be Generated for Local Communities	Population Density Increase: 27.1 % Economic Improvement: 14.1 % Employment Increase: 22.4 % Infrastructure Development: 18.8 %	Population Density Increase: 35.7 % Economic Improvement: 7.1 % Employment Increase: 16.7 % Infrastructure Development: 2.4 %	Population Density Increase: 15.7 % Economic Improvement: 44.0 % Employment Increase: 7.6 % Infrastructure Development: 11.9 %

Attitude	Nusantara Capital City Zone (n=86)	Development Zone (n=42)	Beyond the City (n=134)
Community Assessment About the Bad Impact That Will Be Caused for Local Communities	Crime Increase: 33.0 % Environmental damage: 18.18 % Land Acquisition: 14.8 % conversion of agricultural land: 9.1 % Marginalized Indigenous People: 23.9 %	Crime Increase: 5.0 % Environmental damage: 5.0 % Land Acquisition: 0.0 % conversion of agricultural land: 5.0 % Marginalized Indigenous People: 77.5 %	Increased Crime: 12.7 % Environmental damage: 0.0 % Land Acquisition: 2.2 % conversion of agricultural land: 18.7 % Marginalized Indigenous People: 31.3 %

Sumber: Primary Data Collection, 2022

Based on the data in Table 12 above, it is known that the percentage of people who judge that the socialization was carried out well was relatively small, both in the Nusantara Capital City zone, buffer zone, and beyond the zone. This was inversely proportional to the attitude of the people who supported Nusantara Capital City in the three zones.

The impact of development was unavoidable for the local community. The story of the capital city can have positive but also negative consequences. Some of the effects that had been successfully recapitulated from the survey showed that only a small number of respondents could explain the impacts that might arise, whether positive or negative results. This condition could be caused by the ongoing development process so that the effects of the activities of the capital city were not yet felt. Some information regarding the positive impact of capital city development from the survey results was an increase in population, an increase in the economy, an increase in employment opportunities, and infrastructure development. The negative impacts that had been successfully recapitulated, namely increased crime, land acquisition, conversion of agricultural land, and marginalized local or indigenous communities.

4. Practices

The practice of moving to the capital city was related to what the community had done after the news was announced. The exercises carried out were related to participation in government socialization and preparation for the relocation of the capital city. Communities in the Nusantara Capital City zone had a more significant percentage of involvement in socialization activities and public consultations than in other zones. However, the rate was still relatively small compared to those who did not participate.

Investment becomes one way to deal with the relocation of the capital city. Various opportunities can be captured to participate in enjoying the positive impact (Table 13). From the survey results, only respondents in the Nusantara Capital City zone had made or had investment plans. In other zones, there were no respondents who did not do so. In terms of development, until now, new construction has been carried out in the Nusantara Capital City zone. In addition, the impact of the building has not been felt in the development zone or outside the area.

Table 13.
Percentage of Community Practices in Facing Nusantara Capital City Transfer

Practice	Nusantara Capital City Zone (n=86)	Development Zone (n=42)	Beyond the City (n=134)
Community Participation in Local Government Socialization	15.1 %	4.76 %	4.8 %
Community Participation in Public Consultation Activities	12.8 %	2.38 %	2.4 %
Community Investment Plans or Activities	62.4 %	0.0 %	0.0 %

Sumber: Primary Data Collection, 2022

6

PRACTICES OF ACHIEVING SDGs AT THE MICRO LEVEL

Activities anticipating the development of the new capital remained very low in the extension zone (Teluk Dalam Village), much lower than those in the area beyond the capital city (Babulu Darat). This was because Teluk Dalam was about 113 kilometers from ground zero of the new capital. The village belongs to Kutai Kartanegara District, which is expected to be the foodstuff supplier to the new capital city. Our respondents in the village reported no extraordinary anticipation of the development of the new capital, as their present economic activities were not directly related to the capital city. The primary source of income for the community at Teluk Dalam is mining and excavation (Figure 16).

Figure 16.
Mining and Excavation Activities at Teluk Dalam

(a) Main economic activities at Teluk Dalam (b) Trunk-Line Road Crossing for Pertamina activities

(Photo Credit: Ikrima Barrorotul Farikhiyah)

Babulu Darat and Babulu Laut villages are located 80 kilometers from ground zero of the new capital; the village also hosts the capital of Babulu Subdistrict as the most critical service center in the southwestern part of the district. An arterial road connects the village to the ground zero of the capital city. It has relatively closer proximity and excellent connections to the capital city, generating optimism for the people of this area beyond the capital city. The village was designated as the primary food production area of the district (Figure 17). The regency government heavily subsidized farmers to produce various commodities to cater to the existing cities in East Kalimantan. It was notable that many farmers in the surrounding villages also prepared their production of inland fish (Figure 18) to anticipate the emerging opportunities in the new capital city.

Figure 17.
Agricultural Landscape at Babulu Darat

(Photo Credit: Dhia Aufa Salsabila and Ikrima Barrorotul Farikhiyah)

Figure 18. Fisheries Activities in Babulu Laut

(a) Fishing activity at Babulu Laut (b) Pond Land at Babulu Laut
(Photo Credit: Ikrima Barrorotul Farikhiyah)

Knowledge of the local people on sustainable development and urbanization was very limited or even negligible. However, their sustainable development attitudes and practices evolved with local wisdom in resource management and environmental protection (Table 14). Most respondents in research areas of the capital city knew that their places of residence could be affected by the relocation to the Indonesian capital. They commonly supported the idea of relocating to the capital city and were expecting new development that could improve their

livelihood. At the community level, there were no activities related to the relocation of the capital involving the residents and participation in the preparation stage. Many of the local residents did not understand the meaning of the terms sustainable development and sustainable urbanization as keywords when discussing relocation. However, many local practices of sustainable development principles could be identified as they aligned with their essential wisdom in natural resource management, environmental protection, and interaction with various groups of people from different parts of Indonesia. East Kalimantan has been the third most important destination of interprovincial migration after Jakarta and Riau Provinces for many decades. A more intense migration to East Kalimantan province would follow the relocation of the new capital.

Table 14.
Achievement of Practices in Dimension of Sustainable Development in the Selected Villages, 2021

Dimensions of Sustainable Development	Nusantara Capital City Zone (n=91)	Development Zone (n=15)	Beyond the City (n= 129)
1. Participation in decision making (village level)	31.87 %	13.33 %	24.81 %
2. Involvement of women in community social activities	91.21 %	100.00 %	96.90 %
3. Involvement of women in government	67.03 %	100.00 %	97.67 %
4. Equal opportunity for men and women	46.15 %	100.00 %	86.82 %
5. Use of gas energy in cooking	95.12 %	100.00 %	98.45 %
6. Have a toilet at home	93.41 %	100.00 %	95.35 %
7. Behaviour of the community to use own bags for shopping	41.76 %	0.00 %	6.98 %
8. Behaviour to save water	58.24 %	100.00 %	50.39 %

Dimensions of Sustainable Development	Nusantara Capital City Zone (n=91)	Development Zone (n=15)	Beyond the City (n= 129)
9. Behavior of attending regular check-up at the integrated health post	36.26 %	13.33 %	20.93 %
10. Involvement in local social organizations	37.36 %	26.67 %	32.56 %
11. Involvement in local social activities	83.52 %	53.33 %	66.67 %
12. Manage the distance between the well and the septic tank	72.53 %	86.67 %	59.69 %

Source: Primary Data Collection, 2021

The table shows that many items of knowledge and sustainability activities have been practiced by the respondents in all locations. There was a sign that although knowledge of the concept of sustainable development might not be well understood by all respondents in all zones, they practiced a lot of activities and behavior that suited the mission of sustainable development. Respondents in all zones scored low and very low on items related to urban life, such as knowledge of sustainable development, participation in the socialization of sustainable development, recycling behavior, using their bags to go shopping, and saving water. In contrast to this situation, respondents scored high and very high on knowledge of the impact of excessive use of natural resources, understanding of the impact of education on sustainable development, and knowledge of the importance of environmental protection, economic growth, and social equity. Respondents in all zones also scored high in attitude towards the attention of the people to ecological issues, attitude toward attention of the people to the sustainability aspects in every political decision, attitude in the perception of the role of research institutions in sustainable development, attitude towards the perception of the respect of community members for cultural differences, and attitude towards the perception of the community to a sustainable lifestyle.

The sustainability practices of the people at the location of Nusantara Capital City would be a critical aspect of achieving sustainable urbanization. Sustainable urbanization became the reaction to modern city problems, it stood on several dimensions, including environmental, social, and economic. It aimed to create a livable city that increased the life quality of its dwellers.

From the environmental dimension, sustainable urbanization concerns responsible consumption, decreasing waste, and energy efficiency. In this case, people in the three zones of Nusantara Capital City moderately habituated the sustainable practice. Less than 50 percent of people brought their bags for groceries related to waste production. In the energy efficiency aspect, the number of people who used gas as the primary source for cooking was very high, with almost all of the people. In the environmental health issues, especially in the sanitation element, many people have conducted good practices. Around 70 percent of the respondents managed to retain the water cleanliness by maintaining the distance of septic tanks and, in addition, skimping the water usage. Water frugal became mainly driven by the hydrological characteristic, which is that the location of Nusantara Capital City has a limited water source. The people and residents mostly used water from the rainfall as the water source. Nevertheless, only a few people regularly check their health at medical facilities.

The social dimension of sustainable development encompassed a high-quality interrelationship between the settlers and the well beingness of them. In terms of social interaction and institution, gender issues and women's involvement were included in the matters highlighted. Women's participation in social and community activities was considerably high in all of three Nusantara Capital City zones. However, equal opportunity for different genders fell below 50 percent. It can concur that the women only had access to the activities solely designed for women, such as *Pemberdayaan Kesejahteraan Keluarga - PKK* (Empowerment for the Welfare of Family) or *Arisan* (saving club) while for others, an opportunity gap prevails. In government, especially local

authority, many political figures are women, enhancing the number of women participating in the government. This discrepancy can be read as a difference in the cultural and structural arena. Social activities that are built on the cultural side have fewer women participation, while on the contrary, the structural ones provide more opportunities for women to be involved. Gender issues crucially matter in the sustainability of urbanization. To achieve a just and inclusive city, gender disparity has to be addressed and overcome. In the case of the Nusantara Capital City location, it could be done by intervening the cultural elements with structural ones.

7

CONCLUSION AND POLICY IMPLICATIONS

The three dimensions of sustainability which include ecological, economic, and social aspects, must be achieved in a balanced manner. The failures of achieving one dimension will result in an imbalance in the other elements because all three are related systemically. However, in studying the challenges of sustainability in Nusantara Capital City development and assessing sustainability, it is necessary to pay attention to differences in the level and aggregate of data measurements in the field. Because every element in a dimension in a certain sustainability is not necessarily enough to be measured comprehensively in one level of unit of analysis. Furthermore, some sub-elements of the sustainability dimension are sometimes only measured in specific units, but cannot be measured in other units of study. Therefore, measurements that rely on only one unit of analysis must ignore various other elements that actually work but are only measured in specific different units of analysis. Complications are compounded if temporal dynamics are included in the study, as each dimension of sustainability can change, and a new balance will be established.

Implementation of sustainable development through SDGs achievement in the province of East Kalimantan showed success far above the national average and the provincial average. Sustainability

achievements at the regional level also covered most of the elements of the SDGs. There was one thing that required extra attention in the context of achieving sustainability in the SDGs regarding climate action. The achievement of the Province of East Kalimantan in the SDGs was meager compared to the national achievement and the inter-provincial average. This was very ironic because the development of Nusantara Capital City in this province became an implementation of a sustainability mission by giving proportional attention to climate change. Nusantara Capital City development was also expected to be an example of how sustainable development could be realized in a planned manner in the construction of new cities.

The achievements of the SDGs at the district level showed insufficient quantity and quality when viewed from the achievements in the quantitative figures of the raw data. Data scarcity occurred at the regency level, so inter-regional comparisons were not possible to assess the relative position of a regency's achievements compared to other communities throughout Indonesia. The absence of national measurement data with regency/city units also did not allow comparisons across administrative levels. Achievements at the provincial level, broadly above the national average, seemed to be absent from the aggregate unit below, namely at the regency or municipality level. The difference in measurement time and the operationalization of the concept into different variables/parameters were very likely to distort the measurement results.

On the other hand, at the micro level, households generally had good knowledge, practice, and behavior regarding sustainable development. This seemed to occur as a form of progress in the distribution of development information that was going relatively well. The public's openness to various development ideas seemed to be conveyed well, including delivering messages about sustainable development. At the micro-household level, the practices for achieving the SDGs were excellent. This also happened because of public openness and the delivery of appropriate information to the public. The

ethnic heterogeneity around Nusantara Capital City seemed to provide opportunities for mutually reinforcing interactions for all residents.

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His passionate interest in issues of human geography, development, and planning means that working only on campus is not

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MAULIDIA SAVIRA CHAIRANI

Maulidia Savira Chairani was born in Mojokerto, August 23, 2000. She is a student of Study Program of Regional Development, Faculty of Geography, Universitas Gadjah Mada. She has an interest in research topics of community empowerment and

gender in regional development. She also participated in the Smart City, Village, and Region Summer Course in 2021. Until now, she is still actively involved in various student organizational activities, community service, and interdisciplinary collaboration.

ARI SUSANTI

Ari Susanti is a lecturer and researcher in the Faculty of Forestry, Universitas Gadjah Mada, Indonesia. She is a forester by training and her research interest stems from my curiosity to understand the linkages between natural and human systems that include the relationships between human and their environments. She studied these relationships using a system approach, mixed methods (qualitative and quantitative), and tools which allow us to understand the broader context of forestry. As a forester, she focuses on the relationships between forest ecosystems, livelihoods, and governance systems to understand the process of achieving sustainable forest management in particular and sustainable development in general.

ROSALINA KUMALAWATI

Rosalina Kumalawati was born in Bantul Regency on May 4, 1981. She graduated in 2003 from the Faculty of Geography, Regional Development Planning Study Program. He obtained a Master's degree from Physical Geography, Faculty of Geography, UGM in 2005. Education at the Doctoral level in Regional Development Planning for Disaster Mitigation was completed in 2014 from the Faculty of Geography UGM. Research in the area of Regional Development Planning has been actively carried out since 2002 through BPKS UGM and PSBA UGM. In 2015 until now, he is still actively writing about disasters. In 2016 cooperation with several

agencies related to disaster mapping. Since 2017, he has been actively involved in research and community service with the Peat Restoration Agency and the Environment Agency. Until now, Rosalina Kumalawati is still active as a lecturer at the Geography Study Program, FISIP ULM Banjarmasin, South Kalimantan. The works that have been written are *Bunga Rampai Penginderaan Jauh* (ITB, 2012), *Pengelolaan Bencana Lahar Gunung Api Merapi* (Ombak, 2014), *Penginderaan Jauh Pemetaan Daerah Rawan Bencana Lahar Gunung Api Merapi* (Ombak, 2014), *Modul Pelatihan Pembangunan Infrastruktur Pembasahan Gambut Sumur Bor Berbasis Masyarakat* (BRG, 2017) and many written books will be produced until 2022. From 2021 to 2022 there will be collaborative research with the South Asian-European Joint Funding and Cooperation Indonesia-The Netherlands, BPN and Word Bank. Author can be contacted via email rosalina.kumalawati@ulm.ac.id

RAHMAT ARIS PRATOMO

Aris is a lecturer and a researcher in the Department of Urban and Regional Planning at Institut Teknologi Kalimantan, Balikpapan – Indonesia. He did his first master's program in Urban and regional development at Diponegoro University with a focus on land use and planning information systems and his second master in applied sciences at ITC-University of Twente with a specialization in natural hazards and disaster risk management. He has been involved in many research projects on sustainable urban development, disaster risk assessment, risk management, and planning support systems. His current research focuses on developing a pro-poor land development model for improving the quality of life of local communities. Aris has been involved in many organizations: IAP (Indonesian Association of Urban and Regional Planners), IABI (Indonesian Disaster Experts Association), and APDI (Indonesian Drone Pilots Association).

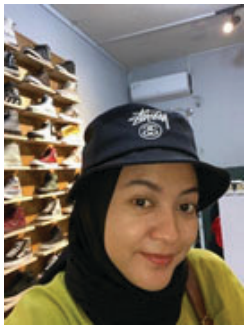
JANY TRI RAHARJO

Jany was born on 13 January 1982 in Grobogan, Central Java Province, Indonesia. He completed his bachelor degree from Faculty of Forestry, Universitas Gadjah Mada for Bachelor of Forestry. He also completed his master degree from Faculty of Economics and Business, Universitas Gadjah Mada for Master of Economics of Development and National Graduate Institutes for Policy Studies for Master of Public Policy. He works at the Indonesian Peatland and Mangrove Restoration Agency since 2017 and now serves as Head of Working Group on Peatland Restoration in Kalimantan and Papua. Previously he worked at the Ministry of Environment and Forestry. His research interest covers natural resources and environment such as peatland, mangrove, and forest. The combination of his position, work experience, and educational background enables him to formulate various policies and programs to restore peatland from an environmental and socio-economic perspective.

BEKTI LARASATI

Bekti Larasati (born 1990) studied forestry at Faculty of Forestry, Universitas Gadjah Mada, Indonesia and Graduate School of Agriculture, Kyoto University, Japan. She has been working as lecturer at Faculty of Forestry, Universitas Gadjah Mada (UGM), since 2017. She is belonging to Laboratory of Spatial Information System and Forest Mapping, Department of Forest Management, Faculty of Forestry, UGM. Her main research interests are in forest monitoring, land surveying, remote sensing, and geographic information system. Currently, she is a Ph.D. candidate at Faculty of Geo-Information Science and Earth Observation, University of Twente, the Netherland. Her research topic is to use various multi-scale remote sensing data to

enhance forest inventory techniques.



WADATUTTOYYIBAH

Wardatutthoyyibah was born in Pontianak, April 14, 1993. She currently works as a Knowledge Coordinator at PT. Ekosistem Khatulistiwa Lestari, a private forestry company in West Kalimantan. She finished her bachelor degree at Faculty of Forestry, Tanjungpura University, Pontianak, in 2010. Then She continued her master and doctoral degree at Gadjah Mada University on the acceleration scholarship program of the Ministry of Research, Technology and Higher Education PMDSU (Program Magister Menuju Doktor Sarjana Unggul) in 2015-2021. She has an interest in wildlife conservation, especially the proboscis monkey. She has made a publication related to the prediction of the distribution of proboscis monkey in Kalimantan. She was a trainer in training program "Species Distribution Modeling using an open-source software" which held by Wildlife Laboratory, Faculty of Forestry, UGM.

ASTINANA YULIARTI

Astinana Yuliarti, a Sulawesi's woman who was born in Ujung Pandang on July 30, 1989, she has completed her undergraduate education at Hasanuddin University in Makassar City, then resumed her Masters education at the same campus by taking a specific field of Communication Science and graduated in 2016, the author joined as a lecturer in the study program communication studies, faculty of social and political science, Universitas Lambung Mangkurat since the middle of 2019. Author can be contacted via email astinana.yuliarti@ulm.ac.id or Instagram; astinanayuliarti.

INU KENCANA HADI

Inu Kencana Hadi is a lecturer and researcher in the Faculty of Social and Political Sciences, Lambung Mangkurat University. He is a young geographer with research interest in the study of geographic information systems and remote sensing. As a young geographer, he is focus on the geography of disasters, especially forest and land fires. On the other side, he is also part of several environmental communities in Banjarmasin.