



Analysis of the Government's Role for Promoting The Green Industrial Park Development in Indonesia

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ABSTRACT: This paper aims to analyze and describe the role of the government in seeking the development of green industrial park in North Kalimantan. This paper uses a qualitative research method with a descriptive approach. primary and secondary data sources are obtained through literature study, observation, and interviews. Based on the results of the research, it can be said that the government has carried out its duties quite effectively, both in the preparation and implementation stages of development, as evidenced by the development of the industrial area which has developed quite rapidly. Nevertheless, the development of green industrial estates in North Kalimantan still has several problems and obstacles that need to be resolved, especially related to land expansion plans, and supporting infrastructure for industrial estates. In conclusion, the development of green industrial estates in North Kalimantan is the largest green industrial estate development project in the world that will have a major impact on the Indonesian economic sector, but the development of these green industrial estates still needs special attention from the government to deal with several unresolved issues.

KEYWORDS: government's role, green industrial park, development

INTRODUCTION

Industrial activities have an important role in economic growth, but over time industrial activities can cause damage to the environmental sector. This makes the world realize the importance of changing the industrial system into a green industry, as evidenced by the tendency of the world community at this time who prefer environmentally friendly or green-labeled products (Prayogo, 2021). Environmental awareness is on the rise around the world, encouraging industries to innovate in order to remain competitive in the international market. The concept of minimizing environmental damage and linking economic growth with environmental sustainability is also known as "green industry". The concept of green industry is now also becoming an important issue around the world in response to the scarcity of resources and the decline in environmental quality, therefore several developed and developing countries have required the application of the concept of green industry (Nainggolan et al., 2020).

The related term 'Green Industry' is derived from the concept of a green economy as a pathway to sustainable development implemented by world organizations such as the World Bank and the United Nations Environment Program (UNEP) (Barbier, E., 2012). The United Nations Industrial Development Organization (UNIDO) defines Green Industry as a pathway to sustainable growth by implementing green public investment and encouraging environmentally responsible private investment (Budiyanto, 2017). And in its application is carried out using the 4R concept, Reduce (waste reduction), Reuse (waste reutilization), Recycle (recycling), and Recovery (waste separation) which is intended for a clean and effective production system (Kusumastuti et al., 2022).

Green development and environmentally friendly industrial operations are matters to be considered in multi-dimensional aspects, such as energy-efficient technologies, infrastructure sharing, and improvement of green development systems. The green industrial park can be understood as an industrial park that uses clean technology and production. This area uses electricity resources that no longer come from coal, but more environmentally friendly technologies, such as wind and water. In this area, each manager must treat the waste or garbage produced and is encouraged to be able to strive to reduce greenhouse gas emissions at its production site (Sutrisno, 2021). The application of green industry is also an industry that prioritizes efficiency and effectiveness with the use of resources in a sustainable manner, which is intended to prevent emissions and waste and implement an efficient industrial system in its production to convert waste into useful by-products. Furthermore, the transformation of the green industry is also a foundation for realizing sustainable development goals (Ministry of Industry, 2021).



Therefore, the transformation of an industrial area is something that needs to be done in supporting improvements in the industrial sector in accordance with the concept of sustainable development and to realize integrated technological innovation and efficient economic development without damaging the environment. By relying on the basic logical framework regarding the transformation of green industrial parks in order to build a quality green industrial park development system and prioritize the principles of green development, as well as sustainable development (Liang, 2021). The word transformation is a word derived from the English transform which is then interpreted as a form of change in the composition, structure, appearance, or character of a condition (Nasukah, 2021).

Transformation related to the development of green industrial parks has actually begun to occur in many developed countries, such as Brazil, China, the United States, the United Kingdom, and South Korea (Lyu et al., 2022). In Indonesia, the development of the green industry has been explained in Law No.3 of 2014 concerning Industry, in the law it is explained that the green industry is an industry that in the production process prioritizes efforts to make efficient and effective use of resources in a sustainable manner to harmonize industrial development with the preservation of environmental functions and can provide benefits to society. And based on data from 2017 to 2021, many developments related to the green industry have been carried out, this is evidenced by the awarding of green industry certificates to several industrial companies in Indonesia as a form of appreciation for supporting government programs (Ministry of Industry, 2021).

And in continuing this, the Indonesian government in 2021 has carried out the groundbreaking of the construction of the Indonesian Industrial Park as a green industrial park in North Kalimantan which is the beginning of the green development. President Joko Widodo at that time said that this was also a concrete form of Indonesia's economic transformation to be able to manage natural resources from upstream to downstream. The president explained that the green industrial park in North Kalimantan will provide great benefits to the community, both in terms of opening up new jobs and making a major contribution to state revenue (Rachev, 2021). Furthermore, President Joko Widodo said that the green industrial park built in North Kalimantan Province will be able to support Indonesia's future which can be an attraction for industries in green production. The green industrial park in North Kalimantan is also believed to be the largest in the world with an area of 13 thousand hectares prepared to produce EV batteries, petrochemicals, and aluminum supported by green energy such as renewable energy and hydropower from Mentarang and Kayan rivers in North Kalimantan (CNN, 2023).

The Indonesian government based on the Roadmap 4.0 has also committed to reducing carbon emissions by 29% by 2030, which makes the industrial sector in Indonesia must immediately transform to support the government's target by adhering to sustainable principles and green industry. However, in transforming the green industry, the biggest obstacle is the cost, especially if you want to generate large foreign exchange from the industrial sector based on green economic principles, of course, it requires a lot of investment costs and the use of advanced technology is also another challenge related to large costs. And if you look at the data on Indonesia's state budget allocation in 2022 in the field of research and technology, it is only 0.003%, this is very far compared to China, whose state budget allocation reaches 2% every year, making China very massive in developing research and technology (Syahputra, 2022). Therefore, the role of the government as an implementer in allocating the budget and the strategies applied will be very decisive in the success of the transformation of the development of green industrial zones in North Kalimantan. Furthermore, the role of policy actors in the implementation and control of policy implementation will also be an important factor in determining the success and effectiveness of the development policy (Junaedi, 2017).

The paper related to the green industrial park has been done quite a lot before considering that green industrial development has been intensively carried out, especially by developed countries in the world. In Indonesia, the development of the green industry also continues to be carried out by the government and the private sector as a form of support for the Indonesian government's commitment to reducing carbon emissions and realizing sustainable development. There are several previous papers related to efforts to transform green industrial development, such as those conducted by (Nainggolan et al., 2020) which describe in this paper that the factors that can drive the success of a green industrial park development are not only determined by one factor but must also fulfill several equally important factors, such as an adequate operational standard system, legal certainty, energy availability, infrastructure, technology, and security as supporting factors. In this case, the government as an implementer certainly has a very strategic role and strategic position to implement programs, manage, and provide infrastructure (Soares, 2015).

Furthermore, the previous paper conducted (Lyu et al, 2022) explains that China as a country with the largest industrial area in the world prioritizes green development with the aim of achieving an increase in carbon dioxide emissions by 2030 and achieving



carbon neutrality by 2060, therefore, China applies an economic transformation model that can improve welfare and can maintain the sustainability of the environment and resources. then in its implementation, the Chinese government implemented several green development programs that were promoted using the top paradigm, Then in its implementation, the Chinese government implemented several green development programs that were promoted using a top-down paradigm facilitated by the Ministry of Ecology and Environment, the Ministry of Science and Technology, and the Ministry of Commerce of the central government in China starting with the planning, construction, performance assessment, and review stages every three years. Even so, in the process of implementing green industrial development in China, there are still several challenges, including:

- 1) Inadequate knowledge of green development concepts in practice,
- 2) Heterogeneity of interest in green development,
- 3) Sub-optimal assessment and guidance to the community on green development,
- 4) Unsuitable management system.

This proves that transformation in green industrial development is not an easy thing to realize, because in the process it will certainly experience cons and take a long time to adjust. Therefore, the role of actors in the implementation of appropriate management systems, laws, regulations, and policies will be the determining factor for the success of green development (Zhu et al., 2014). Green development requires a top-down concept in its implementation with effective and systematic actions, as well as the application of compatible policies with comprehensive regulations related to the subsystems of society, environment, and economy (Zhao et al., 2008).

Then the paper was conducted by (Reza et, al 2017), the study explains that the green industry is the main driving factor in carrying out sustainable industrial development. And in implementing the green industry in Bangladesh, the government adopted the Leadership in Energy and Environmental Design (LEED) green building system developed by the US Green Building Council (USGBC), this is evidenced by the existence of several green developments in Bangladesh as a form of the government's desire to minimize degradation to the environment. And related things that need to be considered in the development of green industries are the selection of strategic locations and the provision of convenient facilities, such as the availability of roads and easy access.

Furthermore, the implementation of the green industry, especially in Indonesia, has also become the concern of researchers, such as the paper conducted by (Damayanti, 2016) entitled "Implementation of Green Industry Policy Based on Sustainable Development (Study at PT Semen Indonesia (Persero) Tbk, Tuban). In this study, it is explained that PT Semen Indonesia can be said to be quite good in its implementation which generally provides positive output, this is measured using the theory of Policy Implementation by Nugroho and Edward III. However, the paper also explains that there are still shortcomings in some of the implementation of Corporate Social Responsibility programs and activities that need to be improved by PT Semen Indonesia. Then as a supporting element in the implementation of green industry development in Indonesia, it is also supported by various policies that have been made by the government. As in the paper conducted by (Kusumastuti et al., 2022) entitled "Green Industry Policy In Indonesia". In the text, it is known that the Indonesian government in an effort to reduce the impact of industrial activities has explained the concept of sustainable development in Law Number 32 of 2009 concerning environmental protection and management. This is also supported by Government Regulation Number 59 of 2017 concerning the implementation of achieving sustainable development goals as a form of support for sustainable development stated in the document Transforming Our World: The Agenda 2030. The application of the concept of sustainable development has also been used as the basis for development and development in the industrial sector, this is outlined in the National Industrial Policy, and the vision of the Ministry of Industry to make Indonesia a resilient country with the largest industrial power by 2025.

Based on some previous research, it appears that development related to the green industry is a development that is being intensively carried out by the world at this time. However, regarding the implementation of green industry development, there are often still problems and obstacles, especially by the role of implementing actors who are less than optimal in running the program, providing infrastructure, costs, and understanding related to the green industry that is lacking by implementers. Therefore, with the limitations in previous papers and the many problems, especially related to the role of implementing actors in green industrial development that require further analysis in order to get better results, the paper conducted will be different from previous papers, where in this paper the researcher will discuss in more detail to provide understanding to readers related to the role of government as a stakeholder that can be the key to the successful transformation of green industrial park development in North Kalimantan which is the largest green industrial park development project in the world.



This paper intends to analyze the government's overall role in green industry development efforts in North Kalimantan and to describe efforts to address problems and obstacles in green industry development. This paper will focus on three main points, namely: first, to analyze the role of the government in the implementation of green industrial development in North Kalimantan, second, the problems/obstacles in the implementation of green industrial development in North Kalimantan, and third, on the strategies undertaken by the government in dealing with problems/obstacles to the implementation of green industrial development in North Kalimantan.

METHOD

The focus of research in this paper is on the role of the government in the implementation of green industrial estate development in North Kalimantan which is researched using qualitative methods with a descriptive approach. (Creswell, 2018) explains qualitative methods as procedures that produce descriptive data in the form of oral, written, and behavioral data obtained from informants. Then qualitative descriptive can be interpreted as a script that moves on a qualitative approach with inductive flow, inductive flow is intended as a script that begins with an explanatory process/event to be able to draw a generalization related to the conclusion of the process/event (Yuliani, 2018).

Interviews were conducted with key informants at the Office of Industry, Trade and Cooperatives of North Kalimantan Province, consisting of the Head of the Office of Industry, Trade, and Cooperatives, the Head of the Planning Subdivision, the Head of the Industrial Division, the Head of the Small and Medium Industry Section, the Head of the Argo and Chemical Industry Section, the Head of the Metal, Machinery, Transportation Equipment and Electronics Industry Section, the Industrial Division contract staff and also several staff. Furthermore, field research was conducted for seven months, from June to December 2022. Through the observations made, researchers can re-examine or complement the data and information obtained from interviews conducted as well as the study of documents and archives to obtain further information and an overview of the conditions that occur in the field.

Data analysis in this paper uses several steps based on the theory of (Miles, Huberman, and Saldana, 2014) which says in qualitative data analysis there are three lines of activity, Data Condensation, Data Display, and Conclusion Drawing/Verifications. To verify the validity of the data in this study, a triangulation process was carried out. Triangulation is a technique for checking the validity of data by examining evidence derived from those sources and using them to build a coherent justification for the theme (Creswell, 2018). Furthermore, Creswell suggests that there are three types of triangulation, consisting of source triangulation, technique triangulation, and time triangulation. In this study, researchers used source triangulation to test the credibility of the data by checking the data regarding the role of the government in encouraging green industry development obtained from several sources and then described.

RESULTS AND DISCUSSION

I. Site Overview

North Kalimantan Province consists of five administrative regions with four regencies and one municipality, namely Bulungan Regency, Malinau Regency, Nunukan Regency, Tana Tidung Regency, and Tarakan City. The capital of North Kalimantan Province is located in Tanjung Selor, which is currently in Bulungan Regency. Bulungan Regency. North Kalimantan Province which has an area of $\pm 75,467.70$ km², is located in a position between 114° 35'22" - 118° 03'00" East Longitude and between 1° 02'13" - 4° 24'55" North latitude. In addition, based on the boundaries of provincial authority, North Kalimantan Province is known to have an ocean area of 11,579 Km² (13% of the total area). By administratively, North Kalimantan Province borders with Malaysia, precisely with the states of Sabah and Sarawak, Malaysia. There are about 1,038 km of land borders between North Kalimantan Province and Malaysia. North Kalimantan Province with Malaysia. The development of industrial parks in North Kalimantan Province is also contained in several policies, as follows; North Kalimantan Regional Regulation Number 10 of 2018 concerning the Industrial Development Plan of North Kalimantan Province 2018-2038. Bulungan District Regional Regulation No. 4 of 2013 concerning the Regional Spatial Plan of Bulungan District Year 2012 - 2032. North Kalimantan Provincial Regulation No. 1 of 2017 concerning the Regional Spatial Plan of North Kalimantan Province stipulates the delineation of an Industrial park of 10,100 Ha. North Kalimantan Province is included in the industrial development area in the National Industrial Development Master Plan 2015-2035 with a target plan of 70% market towards North Asia and America.

By looking at the strategic location map of North Kalimantan and the support through government regulations, development related to the green Industrial park in North Kalimantan has begun, namely in December 2021. This was preceded by the groundbreaking process for the construction of the green industrial park by President Joko Widodo. The development of the green industrial park is also said to be the largest green industrial park in the world that will be built by Indonesia, precisely in Bulungan Regency, Tanah Kuning District, North Kalimantan Province with a draft area of 16,400 hectares which will then be expanded to 30,000 hectares which includes industrial buildings, international ports, offices, and other supporting infrastructure. The green industrial park development mega project has an investment value of US\$132 billion or equivalent to IDR 1,848 trillion which is targeted for completion of construction in 2024 and gradual operation starting in 2023, this development is also believed to have a multiplier effect, such as absorption of thousands of workers and rapid growth of the economic sector (TV, 2023)



Figure 1. Location Map of Green Industry Area

Source: (Industry, Trade And Cooperative Agency, 2021)

Based on these figure, it can be seen that the development of green industrial parks in North Kalimantan has a very strategic location, with the location of development on the coast so that it makes access to the location easier, which is then supported by the planned construction of the Kayan 1 to 5 hydropower plant with a capacity of 9,000 Mw with an investment value of Rp. 170 trillion aimed at supplying electricity to Kalimantan Island including the green industrial park in Tanah Kuning - Mangkupadi. The selection of the right location in an industrial area is one of the important factors that can support the successful operation of the industrial area in the future (Maulana, 2018). The development of a green industrial park in North Kalimantan or better known as the Indonesian Industrial Park has been determined by the government in the North Kalimantan Provincial Spatial Plan, with the following objectives;

- a) Become a driver of the border region's economy.
- b) Attract investors to North Kalimantan
- c) Open employment opportunities for approximately 180,000 workers.
- d) Agromina tourism-based investment area
- e) Renewable resource in improving the region's economy.



Figure 2. Mockup of the green industrial park development plan

Source: <https://korankaltim.com/>

The development of this area is also the government's effort to transform the economy from raw material producers to produce semi-finished/finished products (downstream industry) which is expected to grow new economic points, create jobs, and bring in investment (Thenniarti, 2022). Based on its concept as a green industry, the area will be able to produce various green products, such as; petrochemicals, electronic alumina, steel, new energy batteries, industrial silicon, polycrystalline silicon, and solar panels. With the development of Indonesia's ability to produce green products, it will provide great added value for Indonesia (Ministry of Industry, 2021). Then to analyze the role of the government in the development of this green industrial park, researchers conducted interviews with related parties, such as the Regional Development Planning Agency of North Kalimantan Province, and the Office of Industry, Trade and Cooperatives of North Kalimantan Province as the leading implementer of green industrial park development in North Kalimantan.

II. The Government's Role in the Green Industrial Park Development

Based on the results of interviews with related parties, the development of industrial parks in North Kalimantan is based on several policies that have been set by the government as the basis for its implementation, as follows;

1. The North Kalimantan industrial park is designated as a National Strategic Project in Presidential Regulation Number 3 of 2016 concerning the Acceleration of the Implementation of National Strategic Projects.
2. The North Kalimantan industrial park is designated as a National Strategic Project in Presidential Regulation No.58/2017 on the Amendment to Presidential Regulation No.3/2016 on the Acceleration of the Implementation of National Strategic Projects.
3. The North Kalimantan industrial park is designated as a National Strategic Project in Presidential Regulation No. 56 of 2018, concerning the Second Amendment to Presidential Regulation No. 3 of 2016, concerning the Acceleration of the Implementation of National Strategic Projects.
4. The North Kalimantan Industrial park is included in the provincial industrial development plan contained in the North Kalimantan Provincial Regulation No. 10 of 2018 concerning the Provincial Industrial Development Plan.

From a green economy perspective, the idea of a green industrial park can fit into an economic concept that results in increased human well-being and social equity, while significantly reducing environmental risks and ecological scarcity (UNEP 2011). A key aspect of the green economy is its emphasis on sustaining natural resources to ensure green growth and long-term prosperity. The following diagram shows the essential components of a green economy (World Wide Fund, 2012). Figure 3, explains that in order to generate a green economy that simultaneously utilizes and protects natural resources, governments must find efficient mechanisms to utilize

natural resources. This process can start with developing an inventory of natural resource potential, and then using the Landscape Approach to develop land use and management plans for stakeholders who want to access natural resources.



Figure 3. Inventory of Natural Resource Potential

Source: <https://globallandusechange.org>

Furthermore, in the development of this green industrial park in North Kalimantan, a business-to-business (B2B) is used to facilitate the acceleration of development and acceleration of licensing so that this development becomes a conducive and investor-friendly area. Then in the implementation of this development, the government has collaborated with several private investors both from within the country and abroad such as China and the United Arab Emirates. Until now, it has been recorded that a total of 15 companies have joined the green industrial park development project in North Kalimantan, with an investment value of Rp. 300 billion. With a large enough investment value, it proves that the form of cooperation between the government and the private / business entity is possible to be implemented in providing the government budget for infrastructure development. Public Social Private Partnership activities are important in order to overcome the limited government budget in providing infrastructure (Setiawan and Warsa, 2018).

Then related to the preparation of human resources in supporting this industrial area, it certainly requires human resources who have good qualifications and sufficient understanding of the green industry concept itself so that there is no misappropriation in the green development goals and human resources are an important instrument that can increase the success of a development policy, and the availability of sufficient human resources will optimize the implementation of a development policy (Agustina, and Megawati, 2022). Therefore, in the development of this green industrial park, the management has employed approximately 100 thousand workers, most of whom come from various countries with sufficient understanding of the green industry, such as China, the United States, and the United Arab Emirates. Then the government explained that the number of workers will continue to grow to 200 thousand workers when the industrial area is operational.

The aspects that need to be considered in the development of this industrial area are related to the impact that will be given to the environment, environmental damage caused by development will affect the sustainability of human life. Therefore, planning related to development requires an environmental impact analysis. The process is intended so that development activities do not have a negative impact on the environment and surrounding communities, and to provide great benefits without having to cause negative impacts. This is because every activity related to natural resource management will cause changes to the environment. Related to this, in the development of green industrial parks in North Kalimantan, an environmental impact analysis has been carried out as a form of effort to minimize the negative impacts of the development, and in the implementation of the development of this industrial area,



the government also involves the role of the surrounding community in development as a form of concern for the surrounding communities who are affected and must move to another place.

As government support in the development of green industrial parks in North Kalimantan, it is noted that since 2015 the government has made efforts in building supporting infrastructure for the industrial park, such as the construction of 23.25 Km of approach roads, and the construction of 84.13 Km of roads within the industrial park area.

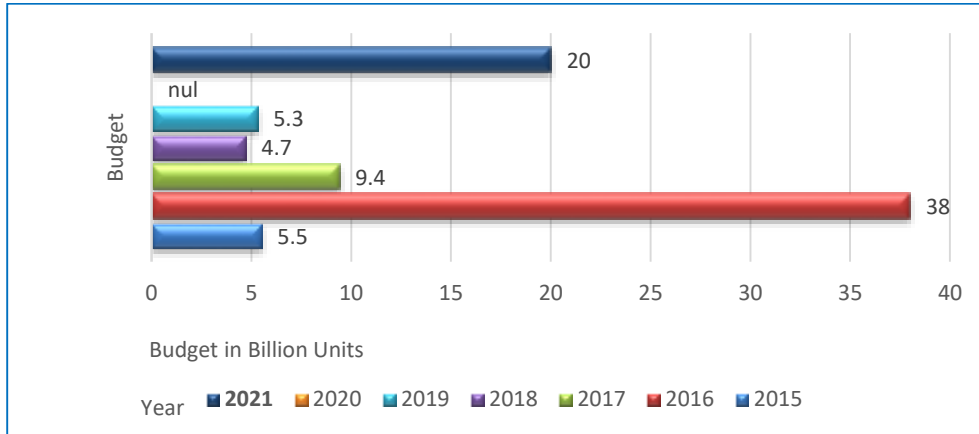


Figure 4. Budget for Connecting Road Construction
Source: Research Finding, 2022

Then since the start of the industrial park development in North Kalimantan, there are four main focus areas of the industrial park that are under construction, including;

1. Petrochem Special Terminal, which is in the process of preparing for advanced material unloading, Basecamp Area View, construction material delivery, Soil test port area, and construction progress of basecamp office. construction materials, the progress of basecamp office construction, Soil test of the port area, and the progress of Land Clearing.
2. Aluminum Smelter, which is being carried out the construction of a platform (± 500 m) to accelerate phase 1 jetty work, land clearing area for Steam Power Plant, temporary camp, and smelter. The fabrication of the Steam Power Plant equipment that will enter through the jetty including: semi-finished blanks, boiler steel structure production part 1, generator stator frame, boiler steel structure production part 2 completed, and boiler anchor bolts production completed.
3. Area Infrastructure, which is in the process of land maturation, construction of area management buildings and water treatment plants (for the initial stage of fulfilling tenant construction, PT Kalimantan Industrial Park Indonesia (KIPI) will build a 2x100lps of Water Treatment Plant (WTP).).
4. Jetty, the construction of a Jetty has been carried out with a rock and sand arrangement along ± 50-70m from the beach to the sea.

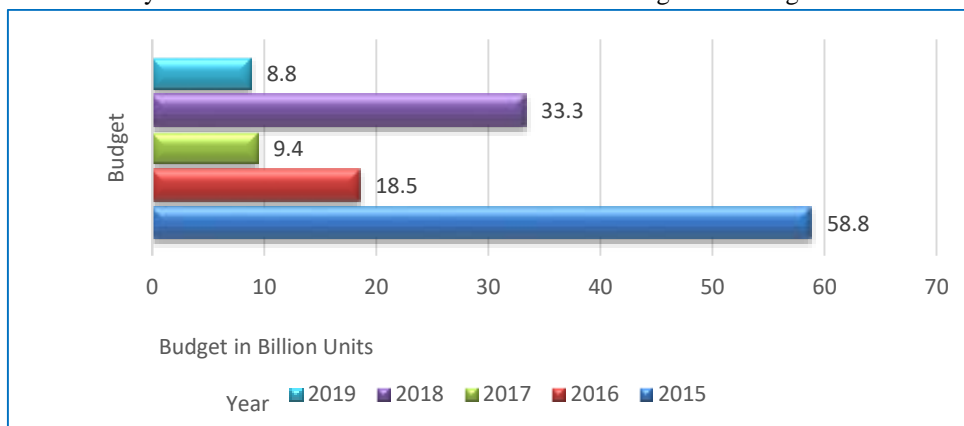


Figure 5. Road Construction Budget in the Industrial Park Area
Source: Research Finding, 2022



And related to the progress of the development of green industrial parks in North Kalimantan, the relevant parties explained that the development had experienced considerable development so that it needed to be followed up immediately so that everything could run effectively and support each other in the overall construction development process. Although it is said that the development progress has experienced great development, the relevant parties also explained that in the process of developing the industrial park, it also experienced several obstacles/problems that were quite diverse, for which special attention was needed from the government in dealing with the obstacles to the development of the industrial park.

III. The Green Industrial Park Development Constraints

Based on the results of interviews with the North Kalimantan Provincial Regional Development Planning Agency and the North Kalimantan Provincial Industry and Trade Office, it was explained that in the effort to develop the green industrial park, several obstacles were quite diverse in their implementation. Then to respond to this, the relevant parties have also made several efforts or strategies in dealing with the problems of developing green industrial parks in North Kalimantan. The application of strategies in dealing with a problem is indispensable to accelerate development, therefore the role of government is very important as a driver and improves development (Siwu and Djohar, 2017). Furthermore, related to obstacles and government strategies in the development of green industrial parks in North Kalimantan, as follows;

- 1) The plan to expand the industrial area to 30,000 hectares by President Joko Widodo's statement during the groundbreaking, in this regard the North Kalimantan provincial government continues to strive for the expansion of industrial area land so that it can be by the initial design of 30,000 hectares. This is done by establishing cooperation between the province of North Kalimantan and Bulungan Regency, to carry out land acquisition which until now the green industrial park in North Kalimantan has covered 3 sub-districts, namely Tanah Kuning, Mangkupadi, and Binai. And currently, it is said that the land acquisition of the industrial area has been completed, but the results of interviews obtained by researchers from the community show that there are problems related to the value of land compensation that is not suitable for the community and it is said that until now there are still some people who do not accept the cost of land compensation.
- 2) Commitment to the completion of the project according to the PSN target and the sustainability of post-groundbreaking development, which is caused by a lack of synchronization in accelerating the completion of licensing for Conformity of Space Utilization Activities regarding this matter, the North Kalimantan provincial government continues to strive to continue carrying out the development of the green industrial park so that it can be by the initial development target, This is evidenced by the government's efforts in preparing licensing applications in the form of Online Single Submission (OSS), North Kalimantan Online System Licensing and Investment Data Management Information System to facilitate investment service activities and the development of green industrial parks in North Kalimantan can run effectively.
- 3) The lack of investment budget in the development of green industrial parks in North Kalimantan, as it is known that in the development of green industrial parks in North Kalimantan, the investment value is targeted to reach Rp. 1.848 Trillion, but until now the investment value has only reached Rp. 300 billion. For this reason, the government has made several efforts to increase this investment, including;
- 4) Conducting investment promotion activities through national and international media so that potential investors can find out the potential and investment opportunities in North Kalimantan quickly, accurately, and precisely.
- 5) Building a promotional network through the Regional Investment Potential application platform provided by the Investment Coordinating Board of the Republic of Indonesia and also through representatives of the Indonesia Investment Promotion Center (IIPC) in 8 major countries in the world, such as Japan, Australia, New York, United Arab Emirates (UAE), Dubai, South Korea, London, and Taiwan.
- 6) Provide assistance and services to potential investors who want to see firsthand the situation and conditions in the field, such as basic infrastructure, connectivity, strategic location, and market.
- 7) Infrastructure outside the area is inadequate, especially the road to the area, related to the construction of roads to the area, actually, the government has built 23.25 km of roads, but this amount still does not meet the development target targeted at 53.40 km. This is due to the low budget allocation of the North Kalimantan provincial budget for the development of the green industrial park which only reaches 40%. In solving the problem of road construction to the industrial area, the government continues to strive to increase the amount of budget allocation intended for road construction to the industrial area (Research Finding, 2022).



There are several other challenges in the development of green industrial parks in North Kalimantan, such as improving the quality and quantity of human resources, the low level of budget support such as the State Budget and the Special Allocation Fund, and the realization of the construction of the Kayan Hydropower Plant. Thus, it can be said that the development of green industrial parks in North Kalimantan has quite complex problems, and although the government has made several efforts to deal with these problems, there are still some unresolved problems. Therefore, more extra efforts are needed by the government in dealing with the problem of developing the green industrial park so that it can run more effectively.

CONCLUSION

Based on the results of the study and discussion, it can be concluded that the development of the green industrial park is the largest green industrial park development project in the world which will have a major impact on the Indonesian economic sector. And related to the role of the government in the development of green industrial parks in North Kalimantan has been quite good, as seen from the preparation of human resources and the implementation of its development which has developed quite rapidly. However, the development of the green industrial park also experienced several obstacles in its implementation, such as the area's land expansion plan, project completion commitment, lack of investment, and inadequate infrastructure outside the area. As for some of the efforts and strategies made by the government in dealing with these development barriers, in reality, they have not been able to fully solve the problems that occur in the development of green industrial parks in North Kalimantan.

The development of this green industrial park, still needs special attention from the government to deal with several unresolved issues. Especially related to the problem of developing supporting infrastructure for industrial parks and land acquisition, which until now still receives protests from the community regarding the value of land compensation and the slow provision of incentives to the community.

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