

# Considerations for the Development of the Capital Region Based on Public Opinion on Environmental Issues

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**Abstract**— Environmental issues will certainly accompany development in all places. Currently, the development of new infrastructure is dominantly demanding land clearing, especially for the road network. The road network often encounters many obstacles related to nature due to the many aspects that need to be considered in planning the route of the road. This road route often has to cut through watersheds, forest areas, mountains, valleys, swamps, and productive land areas. With the disruption of the natural ecosystem around the development area, environmental issues arise and cause environmental stakeholders to confront development. Therefore, the involvement of stakeholders related to the environment in planning and design needs to be prioritized in order to avoid confrontation during development. This study underlines the importance of stakeholder opinions related to the environment in the planning of the capital city area, especially in the development of the road network. The method used in this study is a quantitative and qualitative assessment through a questionnaire given to stakeholders, who, in this case, are environmental organizations and related government agencies. The survey results in this study prove that environmental impacts will certainly occur with development. However, several alternatives can be recommended, taking into account the long-term environmental effects that can be caused. In this way, the confrontation with development related to environmental issues can be prevented, even eliminated.

**Keywords**— Capital Region, Environment, Public Opinion, Road Network.

## I. INTRODUCTION

The transfer of IKN (Capital City) is inseparable from the development strategy to respond to social, economic, and environmental conditions as well as future development challenges.

There are four main motivations for moving IKN, namely achieving the Indonesia Vision 2045 target, including the need to build IKN with a national perspective, the desire to balance development from Java-centric to Indonesia-centric, and accelerating the recovery and transformation of the national economy after COVID-19.

IKN development will become a national identity. Therefore, IKN development must pay attention to environmental aspects. According to the Capital City master plan, 75 percent of the land area at the construction site will be set aside for environmental improvements. An environmental impact analysis is needed in the master plan for IKN development in order to minimize the impact of environmental risks.

Some environmental activists argue that the physical development of IKN Nusantara (Capital City) will have an impact on flora and fauna, flooding, garbage, waste, social, economic, and cultural aspects that must also be considered [1].

## II. LITERATURE STUDY

### A. Overview of Borneo Ecosystem and IKN Design

The prospective IKN area is located in East Kalimantan Province, precisely in North Penajam Paser Regency and Kutai Kartanegara Regency. The position of this IKN is in a strategic area of biodiversity protection located in East Kalimantan Province, which is part of the island of Kalimantan. This island, also known as Borneo, is designated as the "Lung of the World" because it has forests with a large amount of biodiversity and plays an important role in sequestering carbon and providing oxygen. The direction of the spatial planning of the island of Kalimantan is to realize the preservation of biodiversity conservation areas and protected areas with wet tropical forest vegetation of at least 45 percent of the island of Kalimantan as the "Lungs of the World," in accordance with Presidential Regulation No. 3 of 2012 concerning the spatial planning of the island of Kalimantan [2].

According to the regulation, the world's lungs are a vegetated area of wet tropical forests in a vast expanse that has the function of being a carbon dioxide absorber, an oxygen producer, and a global climate balancer. The policy of the island of Kalimantan as the Lungs of the World includes the preservation of areas with endemic plant and animal biodiversity, the development of ecosystem corridors between conservation areas, stabilization and rehabilitation of protected areas, and control of cultivation activities that have the potential to disrupt protected areas [3].



is often mentioned that the paradigm of sustainable development is accepted as a political development agenda for all countries in the world ([15], [16]).

### III. METHODOLOGY

The data collection for the design of the IKN road network is sourced from the East Kalimantan National Road Implementation Center (BBPJK), the Central Statistics Agency for East Kalimantan and related references, while the primary data is based on observations, field interviews and focus group discussions with relevant stakeholders either directly or indirectly, indirectly related to the development of the IKN road network. The sample size is 92 people using a confidence level of 90%-95%. Stakeholders who become respondents consist of; Community Organizations, Environment Service, Forestry Service and community leaders.

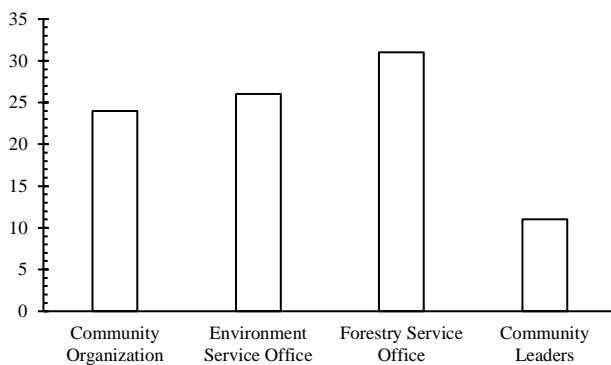


Fig. 2 Distribution of respondents

The analytical method used is descriptive quantitative. Measurements were made using a Likert scale with criteria of evaluation;

- 5 = very influential,
- 4 = influential,
- 3 = moderately influential,
- 2 = less influential,
- 1 = not influential.

Measurement of perception through the stages of making a contingency table to find out the frequency of answers from stakeholders.

The aspect that becomes the element of the assessment are the air quality, land function, conservatory forest area, nature source conservation, cultural reserves and natural reserves and borders of river and lake.

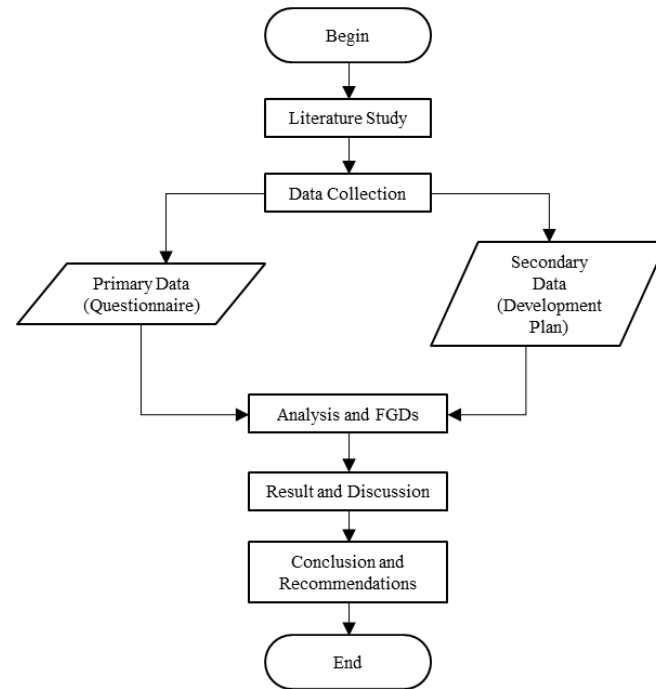


Fig. 3 Flowchart of the study

### IV. RESULT AND DISCUSSION

#### A. Concept of Land Connectivity of IKN

The land connectivity plan will connect the Balikpapan - Tenggarong - Samarinda - Bontang Urban National Activity Center (PKN). An integrated regional transportation network will be planned through the KP-IKN, including through the primary arterial network and toll roads, the Trans Kalimantan double-track rail network, the planned development of the KKT port terminal, the IKN cross-urban MRT line network and towards Sepinggan Airport Balikpapan. The river shipping line network will connect the KP-IKN logistics system through integration with the Balikpapan Main Port. Several logistics points are placed between the shipping corridors.

The government targets trips in IKN to mostly use public transportation. Therefore, it is necessary to provide adequate public transportation facilities and infrastructure. In the draft Perpres, 80 percent of trips on IKN are targeted to use public transportation [17].

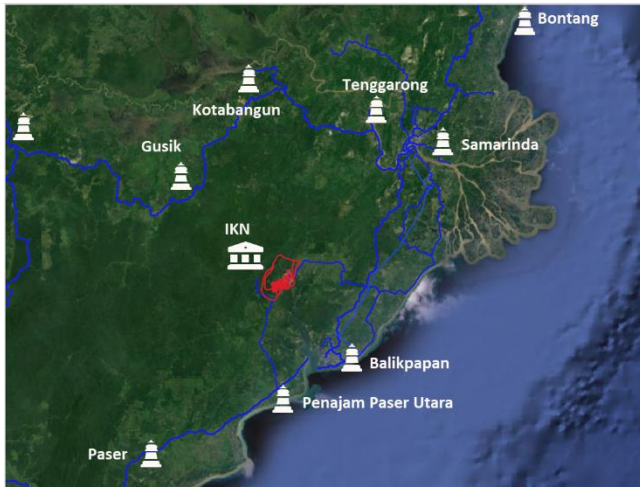


Fig. 4 IKN Road Network Plan

### B. Forest City Concept of IKN

The Ministry of Environment and Forestry (KLHK) said that logging in the national capital (IKN) of the Archipelago would be kept to a minimum. This will be done at the direction of the president so that the development of IKN is truly environment-based, it will even be called a forest city. The President also requested that the forest in IKN will be as much as 80-90% of the total area, larger than the master plan of The Ministry of National Development Planning (Bappenas) which targets 65% of the land to become forest. According to 2019 data [18], the forest in IKN Nusantara has reached 53%-54%.

### C. Rising Issues in the development of IKN

Based on Law 3/2022, it is known that the IKN area will annex parts of North Penajam Paser Regency and Kutai Kartanegara (Kukar) Regency. The coverage area of IKN Nusantara reaches 256,142 hectares, of which the Central Government Core Area (KIPP) in the Sepaku District will cover an area of 6,671 ha.

A number of residents in the Sepaku Village said that their village area could not be certified as property rights so far because it had not been converted into an Other Use Area (APL) or is still considered by the state as a Forestry Cultivation Area (KBK).

The Civil Society Coalition accused the new state capital (IKN) project as an oligarchic mega-project that threatens the safety of the people. The Civil Coalition consists of the East Kalimantan Mining Advocacy Network (JATAM), the Indonesian Legal Aid Foundation (YLBHI) and 17 legal entities, the Srikandi Lestari Foundation, the Sajogyo institute, and #BersihIndonesia Movement.

The determination of East Kalimantan as a new IKN area is judged to only "export" Jakarta's problems to the area. To remember, when announcing that he would move the capital city, Indonesian President Joko Widodo admitted that he would wait for a study to determine the IKN area. However, until now, the study intended by the President and claimed to

be the basis for determining the East Kalimantan region as the capital city is unknown, according to the Civil Society Coalition.

In other words, the determination of East Kalimantan as the capital city is not based on an in-depth study. The study published by the government is actually a quick Strategic Environmental Study (KLHS). This KLHS is a study that was made after the new capital city was established in East Kalimantan, not a study on why East Kalimantan, and not other regions, were chosen as the IKN area. Even in the fast KLHS, potential environmental problems in the IKN area will be revealed later, from threats to water systems, flora and fauna, and pollution [19].

### D. Public Perspective on Environmental Impact of IKN Road Network Development

The results of the survey and analysis using a Likert Scale are shown in Figure 5.

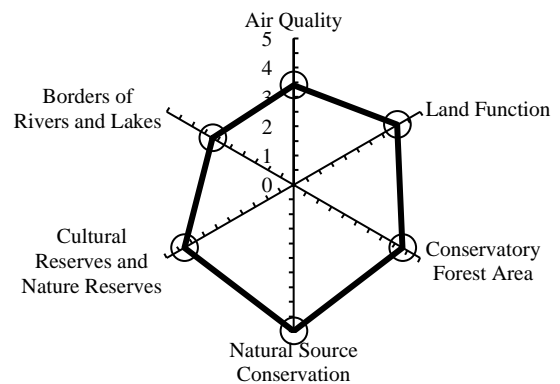


Fig. 5 Environmental Impact Probability Based on Public Opinion

The majority of respondents gave critical answers to the road network development plan in the IKN area. Based on the results of the analysis, a significant impact will occur in the Conservatory Forest Area, Natural Source Conservation, Cultural Reserves and Nature Reserves. This is because with the development of the road network, there will be a very significant increase in activities in the IKN area.

This increase in activity can be a big magnet for business actors to carry out their activities around IKN. As a result, even though IKN development itself has met the criteria for environmental sustainability, indirect impacts will be caused by the development and activities carried out by business actors. These activities can have a negative impact on the environment, because the standards adopted by government and non-government institutions are definitely different. So, the awareness of business actors on environmental issues will certainly be lower. When the environmental impact has occurred, it is likely that the party that will be the point of attention is the government, especially those in this new IKN.

Furthermore, the impact that may be caused to the decrease in air quality and changes in the boundaries of rivers and lakes is considered to have an effect even though it is not as significant as the other three parameters. This is because development activities tend to stay away from areas with abundant water deposits; because it affects the bearing capacity of the soil. However, water resources have the potential to become tourism and industrial centers. Of course, the role of the private sector will be more responsible for the developments that occur when it comes to tourism and industrial centers.

Indeed, IKN itself will later become the new center of government for Indonesia. However, various business activities will certainly develop in IKN. Because it is certain, IKN will become a new source of growth which will further accelerate economic growth and accelerate welfare in the area around IKN. In the short term, the development of the Nusantara IKN can encourage economic activity through infrastructure investment in the IKN and surrounding areas. In the medium and long term, IKN development can be a source of new economic growth for the IKN and surrounding areas. Because there is an increase in various economic activities and the development of new economic sectors [20].

#### E. Recommendations

By looking at respondents' responses, issues that arise and various indications of other existing issue opportunities, recommendations that can be given include:

- Policy on Environmental Impact Assessment for the private sector needs to be strengthened and monitored more closely
- Limiting the amount and scale of investment that will enter the area around IKN in order to prevent overly-rapid development
- Community and stakeholder involvement in every aspect of IKN development accompanied by information disclosure
- Mapping strategic sectoral areas to control the development of activities around IKN

#### V. CONCLUSION

Based on the results of the analysis, public perspectives, emerging issues and the design of the IKN, it can be concluded that the development of the IKN area, especially the road network, will provide a very significant economic impact in the surrounding area. Multi-sectoral development is also certain to occur quickly. Therefore, every aspect of development in the area around IKN needs to follow and implement the principles of environmental sustainability as stipulated in the constitution in force in Indonesia.

The steps taken in this research can be used as an illustration and reference in considering environmental sustainability over rapid development. It is hoped that this study will provide innovative preventive measures that can be carried out by involving stakeholders in the development of the capital city area.

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