



Factors Influencing the Development of Basic Infrastructure in Remote Areas (Case Study of Kampung Baru Village, Concong District, Indragiri Hilir Regency)

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Abstract

Basic infrastructure development in remote areas faces unique challenges due to geographic constraints, limited budgets, and institutional dynamics. This study aims to analyze the factors influencing basic infrastructure development in Kampung Baru Village, Concong District, Indragiri Hilir Regency. Kampung Baru Village is a remote coastal village situated in a tidal area where public accessibility heavily relies on water transportation. A descriptive qualitative method was employed in this research. Primary data were gathered through field observations, questionnaires administered to 92 respondents, and in-depth interviews with key informants, including the Village Head, Village Secretary, and Head of Hamlet. Secondary data were obtained from village profile documents and relevant official reports. The analysis evaluated four main factors based on World Bank indicators: governance and institutional capacity, financing and budget allocation, geographical conditions and population density, and private sector participation. The findings reveal that governance and institutional capacity are running fairly well through participatory planning (Musrenbang Desa) and RPJMDes, although technical execution remains constrained. Financing and budget allocation encounter severe limitations due to cuts in Village Funds and heavy reliance on government budgets. Geographical conditions and accessibility emerge as the most dominant factors hindering development, as tidal fluctuations, soft alluvial/peat soil, and complete reliance on water transport increase logistics costs and delay execution. Furthermore, private sector participation remains very minimal, leaving development heavily dependent on public funding. The study concludes that accelerating infrastructure development in remote coastal areas requires enhanced inter-institutional synergy, innovative alternative funding, and adaptive construction strategies tailored to local geographical characteristics.

Keywords: Basic infrastructure, remote area, coastal region, policy implementation, Indragiri Hilir.

Introduction

Infrastructure is the main foundation in driving the wheels of development of a region. According to Grigg (1988), infrastructure is defined as a physical asset designed in a system to provide public services and support the social and economic activities of the community. The existence of adequate basic facilities and infrastructure automatically facilitates the movement of citizens' mobility and the distribution of goods, which ultimately encourages regional economic growth. In accordance with the mandate of Law No. 25 of 2004 concerning the National Development Planning System (SPPN), the government is committed that development should not be concentrated in urban areas only, but must reach all corners of the region equally.

In remote areas, the existence of basic infrastructure such as roads, bridges, clean water, electricity, and communication networks has a very crucial role as the main driver of community welfare. Kuncoro (2004) emphasized that basic infrastructure is social capital that provides a multiplier effect for the progress of a region. However, the reality on the ground shows that infrastructure development in remote areas is often lagging behind. Sirojuzilam (2008) explained that infrastructure underdevelopment in remote areas is generally caused by extreme natural conditions (such as swamp areas and waters), limited regional budgets, high material transportation costs, and development policies that often prioritize urban areas. Research by Putra & Sari (2022) also shows that Riau's coastal areas are often hampered by high logistics costs due to regional isolation. In addition, the BPS report for Indragiri Hilir Regency (2024) noted that the infrastructure development index in several villages in Concong District is still below the district average.

Kampung Baru Village in Concong District, Indragiri Hilir Regency, is one of the regions that face serious challenges related to the provision of basic infrastructure. As a coastal village located in a tidal area, transportation access to this village fully relies on waterways. The condition of the village roads is mostly still in the form of soil and has been damaged. The connecting bridge began to deteriorate and endanger the safety of residents. The need for clean water is difficult to meet because groundwater feels salty and colored due to the influence of tides, so residents have to rely on rainwater. In addition, the availability of electricity is often blackout, and residents' sanitation facilities are still limited.

Although this problem has a direct impact on his daily life, scientific studies that specifically analyze the factors causing development underdevelopment in Kampung Baru Village have

not been carried out before. Remote geographical conditions and difficult accessibility are the main reasons for the lack of attention for researchers in this region. Therefore, this study is important to provide a factual picture and analyze the factors that affect the development of basic infrastructure in Kampung Baru Village by referring to World Bank indicators (World Development Indicators & Infrastructure Strategy Update). This research is expected to be an input for local governments in formulating more adaptive and sustainable development policies.

Metode Penelitian

Penelitian ini menggunakan metode deskriptif dengan pendekatan kualitatif. Pendekatan kualitatif dipilih agar peneliti dapat memahami secara mendalam fenomena di lapangan, mendeskripsikan kondisi infrastruktur dasar secara faktual, serta menggali kendala internal maupun eksternal yang dihadapi pemerintah desa dan masyarakat.

Lokasi penelitian berada di Desa Kampung Baru, Kecamatan Concong, Kabupaten Indragiri Hilir, Provinsi Riau. Penentuan lokasi didasarkan pada pertimbangan bahwa Desa Kampung Baru merupakan daerah pesisir terpencil yang mengalami

Research Methods

This study uses a descriptive method with a qualitative approach. The qualitative approach was chosen so that the researcher could deeply understand the phenomenon in the field, describe the condition of the basic infrastructure factually, and explore the internal and external obstacles faced by the village government and the community.

The location of the research is in Kampung Baru Village, Concong District, Indragiri Hilir Regency, Riau Province. The determination of the location is based on the consideration that Kampung Baru Village is a remote coastal area that experiences The gap in basic infrastructure is quite significant. The research was carried out for three months, starting from the issuance of the research permit to the preparation of the study results.

The research data consists of primary data and secondary data. Primary data was obtained through direct observation in the field, questionnaires, and in-depth interviews. The determination of key informants was carried out deliberately (purposive sampling) consisting of 3 people, namely the Village Head, the Village Secretary, and the Hamlet Head. The selection of key informants is based on their authority and understanding of village policies and budgeting. In addition, to see the impact at the community level, this study sampled 92 respondents from a total population of 1,094 people aged 17–60 years. The determination of the number of samples is calculated using the Slovin

formula with a margin of error of 10%:

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{1,094}{1 + 1,094(0,12)} = 91.62 \text{ rounded up to } 92 \text{ people}$$

The sample was divided stratified into 6 groups of professions and social roles (Farmers/Fishermen, Traders, Housewives/KK, Educators, and Youth Leaders) to ensure that all social strata were represented. Secondary data was obtained from the 2025 Kampung Baru Village Profile Document, RPJMDes 2025–2031, BPS Indragiri Hilir Regency, and relevant government regulations.

The data analysis technique refers to the interactive model of Miles and Huberman (2014) which includes three stages: data reduction, data presentation, and conclusion drawn. The data obtained are categorized based on World Bank indicator variables, namely:

1. Governance and Institutional Capacity
2. Financing and Budget Allocation
3. Geographical Conditions and Population Density
4. Private Sector Participation

Results and Discussion

1. Overview of Kampung Baru Village

Kampung Baru Village is located in the northern part of Indragiri Hilir Regency with an area of ± 59 km² (5,075 Ha). This village was established since the expansion of Concong Dalam Village in 1980. The name "Kampung Baru" has the philosophical acronym "We are Malay Children Settlers for the Glorious State" and the word "Baru" which symbolizes renewal which never fades by time. Topographically, this village is a coastal lowland dominated by coconut, oil palm, and mangrove forests. In 2025, the population of Kampung Baru Village will be recorded at 1,822 people (509 heads of families). The social life of the community is harmoniously intertwined in the midst of the diversity of Malay, Javanese, and Banjar tribes.

2. Factors Affecting Basic Infrastructure Development

1. Governance and Institutional Capacity Factors

Governance and institutional capacity play an important role in ensuring the sustainability of development. In Kampung Baru Village, the main person in charge of development is the Village Government supported by the Village Consultative Body (BPD), RT/RW, Community Empowerment Institution (LPM), and village

economic institutions.

Development planning in this village refers to the 2022–2027 Village Medium-Term Development Plan (RPJMDes) and the annual Village Government Work Plan (RKPDDes). Community involvement is accommodated through the Village Development Planning Deliberation Forum (Musrenbang Desa) on a regular basis.

Table 4.15 Institutions Playing a Role in the Management of Kampung Baru Village Infrastructure

No.	Institutions	Main Role
1.	Village Government	Develop plans, manage budgets, implement and overseeing development
2.	BPD	Accommodating the aspirations of residents, agreeing on programs, and carrying out Supervision
3.	RT/RW	Identify and submit proposed environmental needs Local
4.	LPM	Assisting in the preparation of development plans and <u>Community Empowerment</u>

Source: Kampung Baru Village Profile Document (2025)

Based on the results of the questionnaire of 92 respondents, the majority of residents assessed that institutional governance had run quite well. As many as 72.8% of respondents considered the village government to actively pay attention to infrastructure, 77.2% stated that development was as needed, and 97.8% felt that the community was involved in discussions. Results interviews with the Village Head and Village Secretary reinforce the fact that participatory planning is already underway. However, the main obstacle at the institutional level is the limited ability to execute due to the lack of technical experts at the village level.

1. Financing Factors and Budget Allocation

The availability of funds is the main determining factor in executing physical development programs. The source of funding for Kampung Baru Village comes from the Village Fund (DD), Village Fund Allocation (ADD), and financial assistance from the Regency Government. The ADD received is around IDR 450,000,000 per year, but most of it is allocated for government operations, fixed income (Siltap), and institutional development. Meanwhile, the Village Fund (DD), which is the physical backing, has experienced a budget cut of Rp500,000,000 in the current year. Assistance from the Regency Government is also non-permanent (around IDR 250,000,000 per activity).

Table 4.17. Public Perception and Informants on

Infrastructure Development

Evaluation Indicators	Respondent Results (n=92)	Synthesis of Informant Interviews Key
Budget Adequacy	52% stating sufficient	Only enough for small-scale physicals; Large Scale <u>Very limited</u>
Equitable Development	64,1% declare uneven	Development must be rotated <u>Gradual</u>
Impact of Limited Funds	77,2% Influencing the Hi Builder n	Physical allocation is switched to scale Top Priorities
Budget Utilization	92,4% is considered good	Delay in disbursement of funds becomes an obstacle <u>Operational</u>

Source: Research Study Results (2026)

Limited fiscal conditions forced the Village Government to implement a strict priority scale. The main priority of the budget is allocated for the construction and maintenance of embankments to protect residents' coconut gardens from tidal floods. Construction of roads and clean water facilities. Finally, it must be postponed or done gradually.

1. Factors of Geographical Conditions and Population Density

Geographical conditions and accessibility are the factors that have the most dominant influence and hinder development in Kampung Baru Village. As a coastal village, the location of the village is very isolated from the center of the district (Tembilahan).

There are three main geographical barriers:

1. Tides of Sea Water

The distribution of materials such as cement, sand, and stone from Tembilahan is fully dependent on ship/pompong transportation. The tide time of the sea tide which has shifted by about 1 hour every day makes it difficult to schedule transportation. When the tide recedes, transport ships are often stranded in the estuary.

2. Characteristics of Soft Soil

The dominance of alluvial and peat soils has a very low carrying capacity. This requires stronger and

thicker road/embankment construction specifications, thereby increasing construction costs.

3. Single Accessibility of Waters

The unavailability of land access causes the cost of transporting materials to be very expensive beyond the standard price of the mainland area

The results of the questionnaire showed that 85.9% of respondents considered geographical conditions to be very difficult to develop, 93.5% considered the tides as the main obstacle, and 87.0% confirmed that natural conditions made the work process very slow. Key informants emphasized that it is this natural factor that makes it very difficult to achieve equitable infrastructure in a short period of time.

1. Private Sector Participation Factors

Support from the private sector (Corporate Social Responsibility / CSR) and external parties can ideally overcome the government's budget limitations. However, in Kampung Baru Village, private sector participation proved to be very minimal.

The results of observations show that there are no CSR programs from surrounding companies that target the development of basic village infrastructure. In terms of digital infrastructure, the provision of mobile networks is still limited and citizens independently subscribe to local paid WiFi (BT LINK).

The physical assistance from outside parties that has been recorded is only in the form of the construction of a small part of the hamlet road from the aspiration funds of DPRD members.

As many as 82.6% of the public stated that the involvement of the private sector is actually needed. Nevertheless, 48.9% of residents confirmed that they had never seen any real private assistance. The lack of private involvement makes the burden of infrastructure development completely pile up on the village and regional income.

1. General Discussion

The synergy between the four factors above shows that the main obstacle to basic infrastructure development in Kampung Baru Village lies in the interaction between budget limitations and extreme geographical challenges. Although village institutional governance is classified as adaptive and participatory, the space for movement of the village government is limited by a minimal budget and very high material logistics costs due to tidal water conditions.

The generic infrastructure development model that the central government has mandated is often not suitable for application in tidal coastal areas. The unit cost of infrastructure in this region is relatively much higher

than in the mainland area. Without a special formula for coastal geographically based budget allocation and incentives to attract private participation, the gap in basic infrastructure in remote areas such as Kampung Baru Village will be difficult to overcome quickly.

Conclusion

Based on the results of the analysis and discussion, it can be concluded that the development of basic infrastructure in Kampung Baru Village, Concong District, Indragiri Hilir Regency, has not been running optimally and is still facing severe challenges. Of the four factors studied, geographical conditions and accessibility were the most dominant inhibiting factors. Tidal regions, soft peat/alluvial soil structures, and reliance on water transportation significantly increase logistics costs, slow down material distribution, and hinder equitable development distribution.

Financing factors and budget allocation are also serious obstacles due to the reduction of Village Funds and the inadequate ADD for large-scale physical development. On the other hand, governance factors and institutional capacity have been running quite well through participatory planning mechanisms (Musrenbang Desa) and RPJMDes, although constrained by technical supervision. Meanwhile, the private sector participation factor is still very minimal so that it has not been able to provide real support for the acceleration of physical development in villages

Suggestions

The Indragiri Hilir Regency Government is expected to provide a special (asymmetric) financial assistance allocation by considering the geographical difficulty index of coastal areas, especially for solutions for the availability of clean water and the repair of roads and bridges.

The Kampung Baru Village Government is advised to continue to strengthen priority planning based on the resilience of the tidal environment structure and maintain a culture of mutual cooperation of residents in caring for existing public facilities. The private sector and BUMD need to be encouraged through regional policy schemes in order to be able to distribute CSR programs in a targeted manner to support vital infrastructure in remote areas.

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References

- [1] BPS Kabupaten Indragiri Hilir. (2024). *Kecamatan Concong Dalam Angka 2024*. Tembilahan: BPS Kabupaten Indragiri Hilir.
- [2] Grigg, N. S. (1988). *Infrastructure Engineering and Management*. New York: John Wiley & Sons.
- [3] Kuncoro, M. (2004). *Otonomi dan Pembangunan Daerah: Reformasi, Perencanaan, Strategi, dan Peluang*. Jakarta: Erlangga.
- [4] Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook (3rd ed.)*. Thousand Oaks, CA: SAGE Publications.
- [5] Pemerintah Desa Kampung Baru. (2025). *Profil Desa Kampung Baru Tahun 2025*. Indragiri Hilir: Pemerintah Desa Kampung Baru.
- [6] Pemerintah Desa Kampung Baru. (2025). *Rencana Pembangunan Jangka Menengah Desa (RPJMDes) Desa Kampung Baru Tahun 2025–2031*. Indragiri Hilir: Pemerintah Desa Kampung Baru.
- [7] Putra, A., & Sari, M. (2022). *Analisis Pembangunan Wilayah Pesisir dan Biaya Logistik di Provinsi Riau*. *Jurnal Pembangunan Wilayah & Kota*, 18(2), 101–112.
- [8] Republik Indonesia. (2004). *Undang-Undang Nomor 25 Tahun 2004 tentang Sistem Perencanaan Pembangunan Nasional (SPPN)*. Jakarta: Lembaran Negara RI.
- [9] Sirojuzilam. (2008). *Disparitas Pembangunan Wilayah dan Perencanaan Pembangunan Pesisir*. Medan: USU Press.
- [10] Sugiyono. (2015). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- [11] World Bank. (2012). *Transformation through Infrastructure: World Bank Group Infrastructure Strategy Update FY2012–2015*. Washington, DC: The World Bank.