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DRIVING PROGRESS TOGETHER: EMBRACING INCLUSIVE DEVELOPMENT FOR INFRASTRUCTURE IN EAST INDONESIA

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Abstract: This research aims to look at efforts of inclusive development in eastern Indonesia and what challenges occur in its development. Researchers see that inclusive and sustainable infrastructure development can be one of the answers or efforts to solve development problems in eastern Indonesia. Recent literature about infrastructure development in East Indonesia is used in this research. We grouping it with the core of SDG's to see is the development in Indonesia is paying attention to inclusive and sustainable aspect or not. This research found that inclusive development could have a significant impact on Eastern Indonesia in the future, where community participation could actually assist in improving other aspects such as the economy and environmental sustainability. However, some challenges such as awareness of education and gender equality still need to be addressed, while some literatures consider this to be the most important or common issue in infrastructure development, especially in eastern Indonesia.

Keywords: Inclusive Development, Infrastructure, Economic Growth, East Indonesia

Abstrak: Penelitian ini bertujuan untuk melihat dampak Pembangunan inklusif di Indonesia bagian timur dan tantangan apa saja yang terjadi dalam setiap prosesnya. Peneliti melihat pembangunan infrastruktur yang inklusif dan berkelanjutan dapat menjadi salah satu jawaban atau upaya menyelesaikan permasalahan pembangunan di Indonesia, khususnya wilayah timur. Literatur terkini tentang pembangunan infrastruktur di Indonesia Timur digunakan dalam penelitian ini. Penulis kemudian mengelompokkannya dengan tujuan SDG's untuk melihat apakah pembangunan di Indonesia memperhatikan aspek inklusif dan berkelanjutan atau justru sebaliknya. Penelitian ini menemukan bahwa pembangunan inklusif dapat memberikan dampak yang signifikan bagi Indonesia Timur di masa depan, dimana partisipasi masyarakat sebenarnya dapat membantu meningkatkan aspek lain seperti perekonomian dan kelestarian lingkungan. Namun demikian, beberapa tantangan seperti kesadaran akan pendidikan dan kesetaraan gender masih perlu diatasi, sementara beberapa literatur menganggap hal ini sebagai isu yang paling penting atau umum dalam pembangunan infrastruktur, khususnya di Indonesia bagian timur.

Kata Kunci: Pembangunan Inklusif, Infrastruktur, Pertumbuhan Ekonomi, Indonesia Timur

I. Introduction

In a world characterized by diversity, where each individual has unique talents, aspirations and potential, the concept of inclusive development constitutes a beacon of hope and progress (Asongu et al., 2021; Wijesinghe & Thorn, 2021). Inclusive development is not just a buzzword; This represents a fundamental change in the way we think and drive growth globally (Lister et al., 2021; Otun, 2021; Vela-Jiménez & Sianes, 2021). It transcends economic boundaries and goes deep into the heart of society to ensure that no one is left behind. As we approach the complexity of the 21st century, it becomes increasingly clear that traditional development models have limitations (Cao et al., 2021; Carrasco et al., 2017). Pursuing economic growth alone cannot solve the myriad challenges facing communities around the world. Income inequality, social disparity, environmental degradation and exclusion are problems that have always weighed heavily on our society (Asongu et al., 2020; El Achi et al., 2020; Retno Susilorini et al., 2021).

Development in Indonesia often faces various challenges due to changes occurring both domestically and abroad (Iradha & Pamungkas, 2021; Nope et al., 2020; Rahmanto et al., 2021). Basically, the government has tried to create various types of policies, programs or activities that support development activities. However, all these efforts did not bring absolute success. Up to now, there are still many different development problems and no optimal solution. Some of the fundamental problems of development in Indonesia are economic instability and weak political commitment (Arifin & Anwar, 2021; Dwi Riana et al., 2018; Ruwanpura et al., 2021). This has been observed since the New Order era, when Indonesia received an economic surplus from the oil boom, which actually helped the country (especially the island of Java) both economically, urban growth and demographics, but struggled when the economic crisis hit in the late 1990s (Busch & Amarjargal, 2020). Additionally, most regional developments outside of Java were only just beginning to develop with the emergence of postreform regional autonomy, which brought various freedoms to the areas to develop their territories. However, in reality, development is still not a top priority and has not brought real results in some areas, so development outside of Java is still considered unstable due to its dependence on the policies and vision of regional leaders (Djalante et al., 2020; Nerenberg, 2021).

The concept of inclusive development has emerged as a viable alternative in response to a myriad of adverse effects resulting from development-oriented policies, perceived as excessively fixated on economic expansion and catering primarily to the affluent segments rather than addressing the needs of the underprivileged, consequently exacerbating the escalating poverty rates, notably in Indonesia. Inclusive development, as elucidated by Ostapenko et al. (2021), denotes a developmental approach that caters to all societal strata, ensuring that no individual or group is marginalized or excluded from its benefits. It encapsulates a growth paradigm that not only generates novel economic prospects but also guarantees equitable access to these opportunities, particularly among the impoverished segments of society (Prasetyo & Gartika, 2021; Shamsuzzaman et al., 2022). Consequently, inclusive growth emerges as a substantial and integral component of sustainable economic progress, aligning harmoniously with the objectives outlined in the Sustainable Development Goals (SDGs). These goals underscore the significance of fostering economic growth that fosters parity, diminishes poverty and unemployment rates, and propels accelerated economic advancement (Azhari et al., 2021; Gamage, 2022).

This research then wants to show several examples of inclusive development in several regions that have succeeded in developing various potentials (social and economic) in the area. This article will also show the extent of the inclusive development challenges based on previous cases. The hope is that researchers can show the benefits and challenges of inclusive development holistically so as to provide an overview of the direction of development occurring in east Indonesia (known as *kawasan timur Indonesia*/KTI). This article explores the important field of inclusive development, shedding light on its principles, implications and the transformative power it holds.

Inclusive development become one of solutions to the development problems in several area, including infrastructure problems and human resources (De Mattos et al., 2021; Rofiah et al., 2021). In eastern Indonesia, this kind of problem is also occur in several regions (Rumahorbo et al., 2020; Wibawa et al., 2021), where inclusive development become one of the solutions that can be effective to solve it. The Researchers will explore how embracing inclusivity can break down barriers, advance equity, and create sustainable pathways toward a better or more equitable future for all in Eastern Indonesia. From the local to the global level, inclusive development is the foundation of a compassionate and prosperous world, where the potential of each individual is exploited and appreciated (Olutuase et al., 2020; Spuhler et al., 2020). This research then will give an comprehensive view about the effectiveness of inclusive development in Eastern Indonesia, where infrastructure development here is interpreted as physical and non-physical infrastructure.

II. Literature Review

Infrastructure Development

Infrastructure development is a multifaceted field that underpins economic growth and social welfare (Muralidharan et al., 2022; Sari & Rahman, 2021). Extensive research emphasizes the essential role of infrastructure in promoting economic progress, enhancing productivity, and attracting investment (Acosta & Curt, 2019; Rumbiak et al., 2021). However, financing infrastructure projects remains a major challenge with studies exploring various financing mechanisms, including public-private partnerships (PPP) and other financial models innovation itself (Fauzi & Kusumasari, 2020). The urgent need for sustainability and environmental impact has led to research into green technology, renewable energy sources, and sustainable urban planning (Junaidi et al., 2021; Novaglio et al., 2022; Yasin et al., 2021). Additionally, the resilience of infrastructure to natural disasters and climate change is a growing concern, with research focusing on strategies to improve adaptation and resilience (Gelfi et al., 2021; Han et al., 2021). In low- and middle-income countries, infrastructure development poses a particular challenge with studies examining access to basic services, the role of foreign aid, and the impact of poverty reduction (Fauzi et al., 2019; Fauzi & Kusumasari, 2020).

Infrastructure development is one of the important and essential aspects that can be achieved to accelerate national development. In addition, infrastructure also plays an important role as a driver of economic growth (Howell & Duckett, 2019; Lockwood, 2020). Indeed, there is a continuum between a country's economic growth and speed and the availability of infrastructure such as transportation and telecommunication. In other words, infrastructure development can promote the economic development of a country because it can reduce poverty levels and increase per capita income (Čábelková et al., 2022; Heimerl et al., 2013). This can happen because infrastructure growth can create new jobs, increasing employment opportunities for people. In this case, infrastructure development can also improve the efficiency of goods and services delivery, which in turn can increase the added value of the economy (Al-Qaicy & Breesam, 2021; Bashlakova & Bashlakov, 2021). Recent trends highlight the emergence of digital infrastructure, including broadband networks, data centers and smart cities, along with research exploring their transformative potential (Sarker et al., 2020). Furthermore, climate change poses a direct threat to infrastructure systems, stimulating research on climate adaptation strategies and risk assessment (Esfandabadi et al., 2022; Matti & Ögmundardóttir, 2021). Effective governance is essential to the success of infrastructure projects, with literature focusing on governance models, corruption risks, and regulatory

frameworks (Cisneros-Montemayor et al., 2021). As infrastructure development continues to evolve and adapt to the challenges of the modern world, researchers and policymakers must remain vigilant and learn from this multifaceted document to ensuring that investments in infrastructure promote sustainability, inclusivity and resilience in our ever-changing societies.

Sustainable and Inclusive Development

In its essence, inclusive development aims to foster cities or regions that ensure prosperity for all inhabitants (Li et al., 2021; Malik et al., 2020). Moreover, it strives to enhance the quality of life by facilitating citizen freedoms, particularly in engaging with developmental policies and planning initiatives (Baba et al., 2021; Brockhaus et al., 2014). The nexus between inclusive development and sustainable progress remains robust (Azhari et al., 2021; Vela-Jiménez & Sianes, 2021). This association stems from the implementation of sustainable development, which systematically addresses three fundamental dimensions: economic, social, and environmental (Bebbington et al., 2020; Labonté et al., 2022). Although the concept of sustainable development might appear straightforward, its practical implementation poses considerable challenges. While some issues have been rectified over two decades, new challenges persist, underscoring the complexity of this concept and the need to accord it substantial importance (Gerlitz & Prause, 2021). Sustainable development offers the advantage of averting environmental degradation and ensuring continual regional development in the future (Suryatmojo et al., 2019; Yuen et al., 2013). However, the prioritization of economic considerations in development has historically and continues to perpetuate harm to natural resource systems (Duran, 2015). Consequently, the existence of sustainable development, which aligns its interests with inclusive development, becomes imperative to circumvent a development trajectory solely fixated on economic gains.

The Sustainable Development Goals (SDGs), also known as the Global Goals, are a set of 17 ambitious, interconnected goals established by the United Nations in 2015. They were designed to address the world's most pressing social, economic and environmental challenges of the world and provide a global framework for global cooperation and action. These goals aim to guide countries towards a more sustainable and equitable future by 2030, building on the Millennium Development Goals (MDGs) and highlighting the need for innovative approaches integrated for development taking into account economic, social and environmental aspects. At the core of the SDGs is the commitment to eradicate poverty (SDG 1) and hunger (SDG 2) while ensuring access to quality education (SDG 4) and good health and well-being (SDG 3) for all. These foundational goals set the stage for broader objectives, including gender

equality (SDG 5), clean water and sanitation (SDG 6), and affordable and clean energy (SDG 7). A key differentiator of the SDGs is their emphasis on addressing inequalities (SDG 10) within and among countries, as well as promoting peaceful, just, and inclusive societies (SDG 16).

Environmental sustainability is a central theme, with goals like responsible consumption and production (SDG 12), climate action (SDG 13), and the conservation of life on land (SDG 15) and below water (SDG 14). The SDGs recognize the interconnectedness of these issues and advocate for a holistic approach that recognizes the complex relationships between poverty, inequality, environmental degradation, and social justice. Achieving the SDGs requires collective global efforts, strong partnerships, innovative solutions, and a commitment to leaving no one behind, ultimately paving the way for a more prosperous, sustainable, and equitable world for future generations.

III. Research Methodologies

Systematic Literature review is a really useful method by reviewing the knowledge that has been studied previously, the basic things that this theory has can be understood (Fauzi et al., 2023; Silva et al., 2022). Continuously repeated routines, such as summarizing, analyzing, and combining several related literatures with each other, new hypotheses can be tested with the aim of developing existing theories into new theories (Jiang & Chen, 2021; Jokhu & Kutay, 2020). Apart from that, the validity and quality of existing literature can be evaluated so that we can identify weaknesses and contradictions with other literature. Reviewing various literature can help researchers better understand the core discussion of a theory, provide a theoretical basis for a research problem, support a literature as a new theory, and support the validity of a theory raised in a literature (Kuchenmüller et al., 2022). As a forum for scientific information, literature reviews must be valid, trustworthy and repeatable.

Basically, Systematic literature reviews can be divided into two, reviews that serve as background to empirical studies and works that can stand alone. A literature review that functions as background is usually used as a basis for truth in making research design decisions. Apart from that, literature reviews can also be used to provide theoretical context and understand the differences in theories that the author expects. Meanwhile, a literature review that can stand alone functions to find out the main idea of a piece of literature through aggregation, interpretation, explanation, or integration of existing research. Thus, a good literature review can improve the quality of background reviews of other research (Xiao &

Watson, 2019). In this research, we used existing literature to analyze Indonesia's infrastructure development.

Researcher uses several literature that discuss about development in several regions and grouping it with the core of SDG's to see is the development in Indonesia is paying attention to inclusive and sustainable aspect or not. The researcher uses a collection of literature in the form of scientific journals, books and other items from the Scopus and Sinta database that discuss the development in Eastern Indonesia. On the literature search page on Scopus keywords are then linked with boolean operators (AND, OR) and the keywords produced by the researcher are: TITLE-ABS-KEY (development AND Indonesia) AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017). At least, literature on the development in eastern Indonesia emerged as a result of searching from all of database and some of them were eliminated according to research needs.

The use of Bibliometric analysis in this study is only to show themes and words that often appear in discussions of Papuan development in previous studies, where this research will not focus on mapping or grouping sources from the literature in depth. The themes and words that often occur are community empowerment, infrastructure, and construction problems. This Research will only use several important literature in order to discuss deeper about all of that themes. The analysis and discussion in this study is strengthened through literature or other secondary data, where the researcher will analyze it deeper to see the achievement of inclusive development from every projects (Fauzi & Kusumasari, 2020; Schünemann et al., 2006; Fauzi et al., 2023).

IV. Result and Discussion

Inclusive Development in Indonesia

Across Indonesia's vast archipelago, inclusive development has become a top goal, with a number of inspiring cases demonstrating the country's determination to fight economic and social disparities at the same time to promote progress for all (Nope et al., 2020; Simamora et al., 2020). One of the cornerstones of Indonesia's inclusive development is the Village Law, enacted in 2014. This groundbreaking law empowers local communities, especially in rural areas, by directly delegating power and resources to them. Villages receive direct capital

allocations, allowing them to invest in critical infrastructure, education, health and livelihood projects that meet their specific needs. This decentralized approach has a profound impact because it empowers marginalized communities and promotes inclusive growth at the local level (Susmono, 2020; Waeterloos, 2021). To combat poverty and improve access to vital services, Indonesia has implemented conditional cash transfer programs. Programs such as the *Keluarga Harapan* (PKH) and *Bantuan Pangan Non-Tunai* (BPNT) programs provide financial assistance to low-income families under certain conditions, such as ensuring children arrive school and receive regular health checks (Abidin, 2021; Sari & Rahman, 2021). These initiatives break the cycle of poverty and improve access to education and healthcare for vulnerable populations, furthering the cause of inclusive development.

In the field of disability-inclusive development, Indonesia has made commendable progress. Organizations such as the National Movement for the Independent Living of People with Disabilities (Gerkatin) tirelessly advocate for the rights of people with disabilities, working to ensure their social inclusion and economic empowerment. Additionally, laws and regulations have been passed to ensure access and employment opportunities for people with disabilities, thereby promoting a more inclusive and equitable society. Microfinance institutions and initiatives play an important role in supporting small and medium-sized enterprises (SMEs) in Indonesia, especially businesses owned by women and disadvantaged groups. These efforts enable marginalized communities to access financial resources, develop entrepreneurial skills, and establish sustainable livelihoods (Fahrudi, 2020; Hegoualch et al., 2018). Companies such as one of Indonesia's Public Bank have played a key role in providing financial services to underserved populations, contributing significantly to inclusive economic development (Daat et al., 2021).

Moreover, in the field of environmental sustainability and inclusive development, Indonesia's community-based forest management (CBFM) programs are commendable. These initiatives enable local communities to manage and conserve forest resources in a sustainable way (Febria et al., 2021). By allowing indigenous and local communities to participate in activities such as non-timber forest product exploitation and ecotourism, these programs not only protect the environment but also ensure that communities benefit directly from these forest-related efforts (Huang & Mabon, 2021; Koens et al., 2022). These stories from Indonesia highlight the country's multifaceted approach to inclusive development. While challenges certainly remain, these initiatives represent significant progress in reducing disparities and promoting equitable growth across the country.

Inclusive development for Infrastructure in East Indonesia

Community participation is an important aspect in inclusive development, which several literature in this research agree with that narrative (Sulistyawan et al., 2018; Fauzi et al., 2019, 2023). Sulistyawan et al (2018) reveal how the results of participatory mapping from key community areas are integrated into district spatial planning through participatory GIS (PGIS). The process of integrating SIGP into land use planning regulations has three stages. The first phase involved developing a shared vision between traditional communities and district authorities and gaining commitment from both sides to use the results in subsequent planning processes. The second phase involves supporting the SIGP process, led by the community and the facilitator – in this case a team from the WWF Indonesia Sahul Papua regional office – and the final phase involves Integrate SIGP results from key community areas in land use planning regulations.

Their case study results show that of the total land area adopted by RTRW, approximately 69% is Important Community Areas designated as Cultural Conservation Areas. The remaining significant community areas are allocated to two other land use types: conservation areas (22%) and development areas (9%). In this case, 91% of the community area (647,850 hectares) is protected from other land uses such as agriculture, mining, forestry and large-scale infrastructure. The PGIS approach can be applied to districts across Indonesia to map community land use practices and integrate them into land use planning regulations. This approach then give an overview to the government or developer where is the representative area to build an infrastructure in Merauke. The potential for conflict or resistance in the community also becomes lower due to community involvement in planning and development activities (Sulistyawan et al., 2018).

According to Fauzi et al. (2019), the research underscores the favorable influence of infrastructure development on community progress and economic advancement in Jayapura, Papua. Notably, this study accentuates the introduction of various developments, including sports facilities and bridges, previously limited within Jayapura's confines. This development initiative, executed through a public-private partnership (PPP) model, engaged governmental bodies such as the Development Ministry (PUPR), State-Owned Enterprises (BUMN), alongside multiple other stakeholders from private and community institutions. The primary objective of this endeavor aimed at amplifying Jayapura's economic capacity, broadening employment horizons, and facilitating convenient access for the local Papuan populace (Fauzi et al., 2019). Evidently, this developmental undertaking has left a considerable impact on the

inhabitants of Jayapura and its adjacent environs, as evident from the recent staging of the National Sports Week (PON) in Papua. The presence of infrastructure, particularly in the form of sports facilities, not only introduces physical enhancements but also augments the region's economic prospects.

Moreover, the inclusivity and sustainability of this development are discernible through the emergent economic prospects that have fostered prosperity among the area's residents. Local inhabitants have harnessed this opportunity to cultivate enterprises like traditional Papuan crafts, snacks, and service provisions. Those previously lacking stable income sources found support through the stadium's construction, engaging in small and medium-scale entrepreneurial activities. Such endeavors seamlessly align with the initial objectives of stadium construction, as articulated by representatives of state-owned enterprises and governmental authorities, who envisioned the stadium's presence as a catalyst for boosting local community businesses. This multifaceted development initiative conscientiously incorporated provisions for kiosks and other commercial spaces, designed to accommodate burgeoning entrepreneurial aspirations (Fauzi et al., 2019). Additionally, the staging of the PON event showcased a surge in accommodation bookings around Jayapura, drawing tourists from both domestic and international spheres. This surge stands as a testament to the farreaching impact of the stadium's construction in Jayapura, magnifying the region's multifaceted economic potential.

An illustrative instance of inclusive development manifests in the case of East Nusa Tenggara (NTT), specifically within the context of tourism development. This undertaking not only engaged governmental and private entities but also incorporated participation from local community groups within the area. Within NTT, Kupang historically grappled with limited material and human development. Predominant issues encompassed constrained employment opportunities and low educational attainment levels. To address these foundational challenges, sustainable development initiatives within the tourism sector were initiated, aiming to redress the city's underlying deficiencies. Ringa et al. (2019) elucidate that the government's implementation of tourism development strategies in Kupang Town yielded constructive outcomes in terms of community involvement, fostering collaborations among the private sector and select community groups. The adoption of the community-based tourism (CBT) framework, a collaborative effort between private enterprises and government bodies, became integral to all tourism development endeavors within Kupang City. This approach emerged as particularly apt in ensuring the longevity of tourism endeavors, emphasizing sustainability at

its core. Various tourism infrastructure projects established in Kupang have been made accessible to the local community, facilitating employment opportunities or enabling the promotion and sale of authentic regional crafts.

The latest research from Fauzi et al., 2023 shows interesting things, where the researcher sees the potential and problems presented by new autonomous regions in development. This research touches on inclusive efforts that have been carried out previously, where researchers see several participatory efforts in infrastructure development, however, problems such as low understanding still need to be addressed by the government. The researchers found that development in Papua and West Papua is currently paying attention to participative and environmental aspects.

Features for Inclusive Development in East Indonesia

The Indonesian Government has endeavored to expedite both tangible and intangible progress across eastern regions, notably Maluku, Papua, and West Papua, exerting a discernible positive influence on the indigenous Papuan populace. Extant research, as highlighted by Fauzi et al. (2023), underscores three pivotal facets imperative to the development of East Indonesia: process, environment, and communication. Within these dimensions, various government-led developmental initiatives have been set in motion, encompassing the acceleration of infrastructure projects, collaborative ventures with the private sector, fostering community capacity through the cultivation of local values, and the active inclusion of indigenous communities in every developmental trajectory.

Despite these concerted efforts, several salient considerations demand the Indonesian Government's attention in the execution of forthcoming developmental agendas. Pertinent issues encompass challenges related to land acquisition, accessibility hurdles, community knowledge and capacity limitations, efficacious planning and oversight functions essential for development implementation, susceptibility to political and interest-based interventions, and the absence of an integrated communication system (Fauzi et al., 2023; Wibawa et al., 2021). These multifaceted concerns necessitate strategic consideration and concerted action in the government's future developmental endeavors within these regions.

SDGs goals are a relevant parameter for measuring the achievement of inclusive development (Soliman et al., 2022; Vela-Jiménez et al., 2022), where all indicators show the extent to which the development process in a particular case is carried out sustainably by involving various aspects such as gender equality and the involvement of various parties in

each process. In this research case, each existing case example is also mapped according to the SDGs achievements, so that we can see the extent to which inclusive development has been accommodated in eastern Indonesia.

Table 1. Mapping of Literature and Core SDGs

Literature	Location	Core of SDGs
Sulistyawan et al., 2018	Merauke, Papua	SDG 1, SDG 13, SDG 14,
		SDG 15, SDG 16
Fauzi et al., 2019	Jayapura, Papua	SDG 1, SDG 3, SDG 10,
		SDG 12, SDG 16
Ringa et al., 2019	Kupang, East Nusa Tenggara	SDG 1, SDG 3, SDG 4, SDG
		10, SDG 12, SDG 14, SDG
		15
Wibawa et al., 2021	East Nusa Tenggara, Maluku	SDG 1, SDG 2, SDG 4, SDG
	and Papua	6, SDG 7
Fauzi et al., 2023	Papua and West Papua	SDG 1, SDG 2, SDG 3, SDG
		10, SDG 12, SDG 16

In fact, inclusive development has become a concern in several eastern regions of Indonesia, where various previous studies have shown a positive intersection between development in the eastern region and the SDGs goals. Even so, several aspects still need to be taken into account, such as gender equality, which cannot be denied is still a problem in the development and utilization of infrastructure in eastern Indonesia. Previous research has not discussed this much, although other aspects such as the environment are almost always mentioned in all the literature used in this research. Researchers also see that inclusive and sustainable infrastructure development also has a positive impact on the welfare of people in the eastern region of Indonesia, both directly and indirectly. Inclusive development can have a significant impact on Eastern Indonesia in the future, where community involvement can actually support improvements in other aspects such as the economy and environmental sustainability.

V. Conclusion

This research shows the extent to which inclusive infrastructure development efforts have been carried out in eastern Indonesia. The core of SDGs has become a concern in some infrastructure development activities in eastern Indonesia, where the intersection can be seen in the table shown in the previous section. However, some aspects still need to be taken into account, such as gender equality, which undeniably remains an issue in the development and use of infrastructure in Eastern Indonesia. Previous studies have not covered this topic much, although other aspects such as the environment were almost always mentioned in the documents used in this study. The researchers also found that comprehensive and sustainable infrastructure development also has a positive impact on the well-being of people in the eastern region of Indonesia, both directly and indirectly.

The researcher realizes that there are limitations and potential development for future research, where further research can look at each case in other areas in more depth by conducting direct observations. It is hoped that this research can become an initial discussion regarding inclusive development, not only in eastern Indonesia but also in Indonesia as a country or even in the wider, such as comparative study between countries or vice versa.

VI. Bibliography

- Abidin, M. Z. (2021). Pemulihan Ekonomi Nasional Pada Masa Pandemi Covid-19: Analisis Produktivitas Tenaga Kerja Sektor Pertanian. *Indonesian Treasury Review: Jurnal Perbendaharaan, Keuangan Negara Dan Kebijakan Publik*, 6(2), 117–138. https://doi.org/10.33105/itrev.v6i2.292
- Acosta, P., & Curt, M. D. (2019). Understanding the expansion of oil palm cultivation: A case-study in Papua. *Journal of Cleaner Production*, 219, 199–216. https://doi.org/10.1016/j.jclepro.2019.02.029
- Al-Qaicy, S. T., & Breesam, H. K. (2021). An Effective Post Disaster Reconstruction Information Management System for Iraqi Projects (O. A.J., A. S., H. B.H., & A. H.A. (eds.); Vol. 1804, Issue 1). IOP Publishing Ltd. https://doi.org/10.1088/1742-6596/1804/1/012013
- Arifin, N., & Anwar, A. Z. (2021). The improvement model of microenterprises of post-disaster through empowerment of productive zakat. *Journal of Governance and Regulation*, 10(4), 156–163. https://doi.org/10.22495/JGRV10I4ART14
- Asongu, S. A., Amankwah-Amoah, J., Nting, R. T., & Afrifa, G. A. (2021). Information Technology and Gender Economic Inclusion in Sub-Saharan Africa. *Journal of Global Information Technology Management*, 24(2), 120–133. https://doi.org/10.1080/1097198X.2021.1914497

- Asongu, S. A., Efobi, U. R., Tanankem, B. V, & Osabuohien, E. S. (2020). Globalisation and Female Economic Participation in Sub-Saharan Africa. *Gender Issues*, *37*(1), 61–89. https://doi.org/10.1007/s12147-019-09233-3
- Azhari, A., Aziz, M. I. A., Cheah, Y. K., & Shahiri, H. (2021). Oil Price Shocks and Energy Stock Returns of ASEAN-5 Countries: Evidence from Ready s (2018) Decomposition Technique in a Markov Regime Switching Framework. *Sains Malaysiana*, 50(4), 1143–1156. https://doi.org/10.17576/jsm-2021-5004-24
- Baba, S., Mohammad, S., & Young, C. (2021). Managing project sustainability in the extractive industries: Towards a reciprocity framework for community engagement: Managing Project Sustainability in the Extractive Industries. *International Journal of Project Management*, 39(8), 887–901. https://doi.org/10.1016/j.ijproman.2021.09.002
- Bashlakova, V., & Bashlakov, H. (2021). The study of the shadow economy in modern conditions: Theory, methodology, practice. *Quarterly Review of Economics and Finance*, 81, 468–480. https://doi.org/10.1016/j.qref.2020.10.032
- Bebbington, A., Chicchon, A., Cuba, N., Greenspan, E., Hecht, S., Bebbington, D. H., Kandel, S., Osborne, T., Ray, R., Rogan, J., & Sauls, L. (2020). Priorities for governing large-scale infrastructure in the tropics. *Proceedings of the National Academy of Sciences of the United States of America*, 117(36), 21829–21833. https://doi.org/10.1073/pnas.2015636117
- Brockhaus, M., Di Gregorio, M., & Carmenta, R. (2014). REDD+ policy networks: Exploring actors and power structures in an emerging policy domain. *Ecology and Society*, *19*(4). https://doi.org/10.5751/ES-07098-190429
- Busch, J., & Amarjargal, O. (2020). Authority of Second-Tier Governments to Reduce Deforestation in 30 Tropical Countries. *Frontiers in Forests and Global Change*, 3. https://doi.org/10.3389/ffgc.2020.00001
- Čábelková, I., Smutka, L., Rotterova, S., Zhytna, O., Kluger, V., & Mareš, D. (2022). The Sustainability of International Trade: The Impact of Ongoing Military Conflicts, Infrastructure, Common Language, and Economic Wellbeing in Post-Soviet Region. *Sustainability (Switzerland)*, 14(17). https://doi.org/10.3390/su141710840
- Cao, F., Meng, M., Shan, B., & Sun, R. (2021). Source apportionment of mercury in surface soils near the Wuda coal fire area in Inner Mongolia, China. *Chemosphere*, 263. https://doi.org/10.1016/j.chemosphere.2020.128348
- Carrasco, L. R., Le Nghiem, T. P., Chen, Z., & Barbier, E. B. (2017). Unsustainable development pathways caused by tropical deforestation. *Science Advances*, *3*(7), 1–10. https://doi.org/10.1126/sciadv.1602602
- Cisneros-Montemayor, A. M., Moreno-Báez, M., Reygondeau, G., Cheung, W. W. L., Crosman, K. M., González-Espinosa, P. C., Lam, V. W. Y., Oyinlola, M. A., Singh, G. G., Swartz, W., Zheng, C.-W., & Ota, Y. (2021). Enabling conditions for an equitable and sustainable blue economy. *Nature*, *591*(7850), 396–401. https://doi.org/10.1038/s41586-021-03327-3

- Daat, S. C., Sanggenafa, M. A., & Larasati, R. (2021). The role of intellectual capital on financial performance of smes. *Universal Journal of Accounting and Finance*, 9(6), 1312–1321. https://doi.org/10.13189/ujaf.2021.090610
- De Mattos, F. A. M., Neto, J. H., & Proni, M. W. (2021). ECLAC's Utopian vision and income inequality in Brazil . *Revista Critica de Ciencias Sociais*, 124, 131–156. https://doi.org/10.4000/RCCS.11605
- Djalante, R., Lassa, J., Setiamarga, D., Sudjatma, A., Indrawan, M., Haryanto, B., Mahfud, C., Sinapoy, M. S., Djalante, S., Rafliana, I., Gunawan, L. A., Surtiari, G. A. K., & Warsilah, H. (2020). Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. *Progress in Disaster Science*, 6, 100091. https://doi.org/10.1016/j.pdisas.2020.100091
- Duran, H. E. (2015). Dynamics of business cycle synchronization in Turkey. *Panoeconomicus*, 62(5), 581–606. https://doi.org/10.2298/PAN1505581D
- Dwi Riana, A., Hunsnayain, F., Andres Pramana, E., Song, H., Yoyok Dwi Setyo, P., Zulfia, A., & Hudaya, C. (2018). Implementation of talis and dc house system for rural areas in Indonesia. In M. W., P. S., W. R., S. I., & S. M.I. (Eds.), *1st International Conference on Industrial, Electrical and Electronics, ICIEE 2018* (Vol. 218, pp. 1–7). EDP Sciences. https://doi.org/10.1051/matecconf/201821801006
- El Achi, N., Honein-Abouhaidar, G., Rizk, A., Kobeissi, E., Papamichail, A., Meagher, K., Ekzayez, A., Abu-Sittah, G. S., & Patel, P. (2020). Assessing the capacity for conflict and health research in Lebanon: A qualitative study. *Conflict and Health*, *14*(1). https://doi.org/10.1186/s13031-020-00304-x
- Esfandabadi, Z. S., Ranjbari, M., & Scagnelli, S. D. (2022). The imbalance of food and biofuel markets amid Ukraine-Russia crisis: A systems thinking perspective. *Biofuel Research Journal*, *9*(2), 1640–1647. https://doi.org/10.18331/BRJ2022.9.2.5
- Fahrudi, A. N. L. I. (2020). Alleviating poverty through social innovation. *Australasian Accounting, Business and Finance Journal*, 14(1 Special Issue), 71–78. https://doi.org/10.14453/aabfj.v14i1.7
- Fauzi, F. Z., Erwin Mayor, D., & Liauw, G. (2023). The Direction of Papua Development: Is A New Autonomous Region the Answer? *Policy & Governance Review*, 7(1), 1. https://doi.org/10.30589/pgr.v7i1.609
- Fauzi, F. Z., & Kusumasari, B. (2020). Public-private partnership in Western and non-Western countries: a search for relevance. *Journal of Financial Management of Property and Construction*, 26(1), 87–102. https://doi.org/10.1108/JFMPC-08-2019-0071
- Fauzi, F. Z., Murti, A. A. G. B., Imamah, L. A., & Hapsari, N. (2019). Infrastructure Development in Papua: Features and Challenges. *Policy & Governance Review*, *3*(3), 225. https://doi.org/10.30589/pgr.v3i3.162
- Febria, D., Fithriyana, R., Isnaeni, L. M. A., Librianty, N., & Irfan, A. (2021). Interaction between environment, economy, society and health in the concept of environmental health: Studies on peatland communities. *Open Access Macedonian Journal of Medical Sciences*, *9*, 919–923. https://doi.org/10.3889/oamjms.2021.7178

- Gamage, A. (2022). An inclusive multifaceted approach for the development of electronic work-integrated learning (eWIL) curriculum. *Studies in Higher Education*, 47(7), 1357–1371. https://doi.org/10.1080/03075079.2021.1894116
- Gelfi, M., Kencana, E. R., & Achiari, H. (2021). *Tsunami Wave Transformation in Selesung Bay (Lampung)*. 698(1). https://doi.org/10.1088/1755-1315/698/1/012027
- Gerlitz, L., & Prause, G. K. (2021). Cultural and creative industries as innovation and sustainable transition brokers in the baltic sea region: A strong tribute to sustainable macro-regional development. *Sustainability (Switzerland)*, 13(17). https://doi.org/10.3390/su13179742
- Han, Z., Song, X., Li, M., & Xiaoxuan, Z. (2021). Experience and Enlightenment of Japan's Emergency Power Supply Guarantee Mechanism. 680(1). https://doi.org/10.1088/1755-1315/680/1/012048
- Hegoualch, K., Carmenta, R., Atmadja, S., Martius, C., Murdiyarso, D., & Purnomo, H. (2018). Managing peatlands in Indonesia: Challenges and opportunities for local and global communities. *Managing Peatlands in Indonesia: Challenges and Opportunities for Local and Global Communities*, 205. https://doi.org/10.17528/cifor/006449
- Heimerl, K., Hasan, S., Ali, K., Brewer, E., & Parikh, T. (2013). Local, sustainable, small-scale cellular networks. *6th International Conference on Information and Communications Technologies and Development, ICTD 2013, 1 FULL PAP*, 2–12. https://doi.org/10.1145/2516604.2516616
- Howell, J., & Duckett, J. (2019). Reassessing the Hu-Wen Era: A golden age or lost decade for social policy in China? *China Quarterly*, 237, 2–14. https://doi.org/10.1017/S0305741018001200
- Huang, Y.-C., & Mabon, L. (2021). Coastal landscapes, sustainable consumption and peripheral communities: Evaluating the Miramar Resort controversy in Shanyuan Bay, Taiwan. *Marine Policy*, 123. https://doi.org/10.1016/j.marpol.2020.104283
- Iradha, & Pamungkas, A. (2021). Concept of emergency clean water infrastructure provision for minimizing potential impact of earthquake. 778(1). https://doi.org/10.1088/1755-1315/778/1/012006
- Jiang, A., & Chen, C. (2021). Research on Determinants of Inclusiveness of China Rural Infrastructure (A. M. & S. F. (eds.); Vol. 236). EDP Sciences. https://doi.org/10.1051/e3sconf/202123604024
- Jokhu, P. D., & Kutay, C. (2020). Observations on appropriate technology application in indigenous community using system dynamics modelling. *Sustainability (Switzerland)*, 12(6). https://doi.org/10.3390/su12062245
- Junaidi, S. N., Khalid, N., Othman, A. N., Hamid, J. R. A., & Saad, N. M. (2021). Analysis of the Relationship between Forest Fire and Land Surface Temperature using Landsat 8 OLI/TIRS Imagery. 767(1). https://doi.org/10.1088/1755-1315/767/1/012005
- Koens, K., Klijs, J., Weber-Sabil, J., Melissen, F., Lalicic, L., Mayer, I., Önder, I., & Aall, C. (2022). Serious gaming to stimulate participatory urban tourism planning. *Journal of Sustainable Tourism*, 30(9), 2167–2186. https://doi.org/10.1080/09669582.2020.1819301

- Kuchenmüller, T., Chapman, E., Takahashi, R., Lester, L., Reinap, M., Ellen, M., & Haby, M. M. (2022). A comprehensive monitoring and evaluation framework for evidence to policy networks. *Evaluation and Program Planning*, *91*. https://doi.org/10.1016/j.evalprogplan.2022.102053
- Labonté, R., Martin, G., & Storeng, K. T. (2022). Editorial: Whither globalization and health in an era of geopolitical uncertainty? *Globalization and Health*, 18(1). https://doi.org/10.1186/s12992-022-00881-x
- Li, H., Forbes, A., & Yang, W. (2021). Developing Culturally and Developmentally Appropriate Early STEM Learning Experiences. *Early Education and Development*, 32(1), 1–6. https://doi.org/10.1080/10409289.2020.1833674
- Lister, K., Pearson, V. K., Collins, T. D., & Davies, G. J. (2021). Evaluating inclusion in distance learning: a survey of university staff attitudes, practices and training needs. *Innovation: The European Journal of Social Science Research*, 34(3), 321–339. https://doi.org/10.1080/13511610.2020.1828048
- Lockwood, F. (2020). Bristol's smart city agenda: vision, strategy, challenges and implementation. *IET Smart Cities*, 2(4), 208–214. https://doi.org/10.1049/iet-smc.2020.0063
- Malik, S., Swapan, M. S. H., & Khan, S. (2020). Sustainable mobility through safer roads: Translating road safety strategy into local context in western australia. *Sustainability* (Switzerland), 12(21), 1–20. https://doi.org/10.3390/su12218929
- Matti, S., & Ögmundardóttir, H. (2021). Local knowledge of emerging hazards: Instability above an Icelandic glacier. *International Journal of Disaster Risk Reduction*, 58. https://doi.org/10.1016/j.ijdrr.2021.102187
- Muralidharan, K., Shanmugan, K., & Klochkov, Y. (2022). The New Education Policy 2020, Digitalization and Quality of Life in India: Some Reflections. *Education Sciences*, *12*(2). https://doi.org/10.3390/educsci12020075
- Nerenberg, J. (2021). 'Start from the Garden': Distribution, Livelihood Diversification and Narratives of Agrarian Decline in Papua, Indonesia. *Development and Change*, 0(0), 1–23. https://doi.org/10.1111/dech.12691
- Nope, K. B. N., Suthanaya, P. A., Wedagama, D. M. P., & Astana, I. N. Y. (2020). The jakarta tod model application for typology of middle cities (Applied research design in Kupang city). *Geographia Technica*, 15(Special Issue), 103–112. https://doi.org/10.21163/GT_2020.151.27
- Novaglio, C., Bax, N., Boschetti, F., Emad, G. R., Frusher, S., Fullbrook, L., Hemer, M., Jennings, S., van Putten, I., Robinson, L. M., Spain, E., Vince, J., Voyer, M., Wood, G., & Fulton, E. A. (2022). Deep aspirations: towards a sustainable offshore Blue Economy. *Reviews in Fish Biology and Fisheries*, 32(1), 209–230. https://doi.org/10.1007/s11160-020-09628-6
- Olutuase, S. O., Brijlal, P., & Yan, B. (2020). Model for stimulating entrepreneurial skills through entrepreneurship education in an African context. *Journal of Small Business and Entrepreneurship*. https://doi.org/10.1080/08276331.2020.1786645

- Otun, O. W. (2021). Incremental planning of the location of public health facilities in a rural region. *Indonesian Journal of Geography*, *53*(1), 1–8. https://doi.org/10.22146/IJG.56107
- Prasetyo, A., & Gartika, D. (2021). Spatial Economy Approach to Assess the Effectiveness of Poverty Treatment Policy Models and Regional Economic Impacts. *IOP Conference Series: Earth and Environmental Science*, 887(1). https://doi.org/10.1088/1755-1315/887/1/012019
- Rahmanto, F., Pribadi, U., & Priyanto, A. (2021). Big Data: What are the Implications for Public Sector Policy in Society 5.0 Era? 717(1). https://doi.org/10.1088/1755-1315/717/1/012009
- Retno Susilorini, R. M. I., Lika, R. R., Sriyana, Angghita, L. J., & Sinaga, J. I. (2021). Gender Mainstreaming in Drought Disaster Risk Reduction. https://doi.org/10.1088/1742-6596/1811/1/012109
- Ringa, M. B., Setiawina, N. D., Dewi, M. H. U., & Marhaeni, A. A. I. N. (2019). the Role of the Government, Private Sector and Social Capital Towards Development of Community-Based Tourism Sustainability in Kupang Nusa Tenggara Timur. *Russian Journal of Agricultural and Socio-Economic Sciences*, 94(10), 220–229. https://doi.org/10.18551/rjoas.2019-10.29
- Rofiah, N. H., Kawai, N., & Hayati, E. N. (2021). Key elements of disaster mitigation education in inclusive school setting in the Indonesian context. *Jamba: Journal of Disaster Risk Studies*, *13*(1), 1–8. https://doi.org/10.4102/JAMBA.V13I1.1159
- Rumahorbo, B. T., Hamuna, B., & Keiluhu, H. J. (2020). An assessment of the coastal ecosystem services of Jayapura City, Papua Province, Indonesia. *Environmental and Socio-Economic Studies*, 8(2), 45–53. https://doi.org/10.2478/environ-2020-0011
- Rumbiak, M. M. G. G., Fauzi, A., Hakim, D. B., & Kolopaking, L. M. (2021). Evaluation of Outranking Border Region Sustainable Development in Papua Province Papua New Guinea Using PROMETHEE. *International Journal of Sustainable Development and Planning*, 16(7), 1393–1402. https://doi.org/10.18280/ijsdp.160720
- Ruwanpura, V., Neukom, J., Grietens, K. P., Price, R. N., Thriemer, K., & Lynch, C. A. (2021). Opening the policy blackbox: unravelling the process for changing national diagnostic and treatment guidelines for vivax malaria in seven countries. *Malaria Journal*, 20(1). https://doi.org/10.1186/s12936-021-03959-w
- Sari, Y. I., & Rahman, E. (2021). Roads for Communities, Not Commodities: A Qualitative Study of the Consequences of Road Development in Papua, Indonesia. *Human Ecology Review*, 27(1), 139–161. https://doi.org/10.22459/HER.27.01.2021.08
- Sarker, M. N. I., Peng, Y., Yiran, C., & Shouse, R. C. (2020). Disaster resilience through big data: Way to environmental sustainability. *International Journal of Disaster Risk Reduction*, 51(July), 101769. https://doi.org/10.1016/j.ijdrr.2020.101769
- Schünemann, H. J., Fretheim, A., & Oxman, A. D. (2006). Improving the use of research evidence in guideline development: 13. Applicability, transferability and adaptation. *Health Research Policy and Systems*, 4. https://doi.org/10.1186/1478-4505-4-25

- Shamsuzzaman, M. M., Islam, M. M., Begum, A., Schneider, P., & Mozumder, M. M. H. (2022). Assessing Fisheries Policies of Bangladesh: Need for Consistency or Transformation? *Water (Switzerland)*, 14(21). https://doi.org/10.3390/w14213414
- Silva, F. M., Sousa, C., & Albuquerque, H. (2022). Analytical Model for the Development Strategy of a Low-Density Territory: The Montesinho Natural Park. *Sustainability* (Switzerland), 14(7). https://doi.org/10.3390/su14074373
- Simamora, M., Hama, S., Yoshida, A., Maulana, S., Firdaussy, U. F., & Yaman, A. (2020). Potential Environmental and Economic Impacts of Biofuel Production for the Local Community: A Case Study. 439(1). https://doi.org/10.1088/1755-1315/439/1/012068
- Soliman, S., Attia, S., & Khalil, H. (2022). Evaluation of Open Spaces in Relocated Communities Using Affordance Theory: Al-Asmarat Community as a Case Study (F. M., Z. M., & M. H. (eds.); Vol. 1056, Issue 1). Institute of Physics. https://doi.org/10.1088/1755-1315/1056/1/012044
- Spuhler, D., Germann, V., Kassa, K., Ketema, A. A., Sherpa, A. M., Sherpa, M. G., Maurer, M., Lüthi, C., & Langergraber, G. (2020). Developing sanitation planning options: A tool for systematic consideration of novel technologies and systems. *Journal of Environmental Management*, 271. https://doi.org/10.1016/j.jenvman.2020.111004
- Sulistyawan, B. S., Verweij, P. A., Boot, R. G. A. A., Purwanti, B., Rumbiak, W., Wattimena, M. C., Rahawarin, P., & Adzan, G. (2018). Integrating participatory GIS into spatial planning regulation: The case of Merauke District, Papua, Indonesia. *International Journal of the Commons*, 12(1), 26–59. https://doi.org/10.18352/ijc.759
- Suryatmojo, H., Imron, M. A., Gasa, M. S., Saputra, D. M., & Maryani. (2019). Groundwater level response of the primary forest, ex-peatland fire, and community mix plantation in the Kampar peninsula, Indonesia. In M. B., U. N.A., & F. R. (Eds.), 7th International Conference on Sustainable Future for Human Security in conjunction with 3rd International Conference on Green Development in Tropical Regions, ICGDTR 2018 (Vol. 361, Issue 1). Institute of Physics Publishing. https://doi.org/10.1088/1755-1315/361/1/012034
- Susmono. (2020). From household-based sanitation facilities to urban-scale infrastructure (G. K., S. N., Pradono, S. I., & A. I.G.A. (eds.); Vol. 592, Issue 1). IOP Publishing Ltd. https://doi.org/10.1088/1755-1315/592/1/012005
- Vela-Jiménez, R., & Sianes, A. (2021). Do current measures of social exclusion depict the multidimensional challenges of marginalized urban areas? Insights, gaps and future research. *International Journal of Environmental Research and Public Health*, 18(15). https://doi.org/10.3390/ijerph18157993
- Vela-Jiménez, R., Sianes, A., López-Montero, R., & Delgado-Baena, A. (2022). The Incorporation of the 2030 Agenda in the Design of Local Policies for Social Transformation in Disadvantaged Urban Areas. *Land*, 11(2). https://doi.org/10.3390/land11020197
- Waeterloos, E. (2021). Introducing collaborative governance in decentralized land administration and management in south africa: District land reform committees viewed through a 'system of innovation' lens. *Land*, 10(5). https://doi.org/10.3390/land10050534

- Wibawa, B., Fauzi, I., Novianti, D. A., Shabrina, N., Saputra, A. D., & Latief, S. A. (2021). Development of Sustainable Infrastructure in Eastern Indonesia. In N. S.E., W. S., H. R., Sativa, & Suwartanti (Eds.), 3rd International Conference on Sustainable Infrastructure, ICSI 2020 (Vol. 832, Issue 1). IOP Publishing Ltd. https://doi.org/10.1088/1755-1315/832/1/012045
- Wijesinghe, A., & Thorn, J. P. R. (2021). Governance of urban green infrastructure in informal settlements of windhoek, Namibia. *Sustainability (Switzerland)*, 13(16). https://doi.org/10.3390/su13168937
- Xiao, Y., & Watson, M. (2019). Guidance on Conducting a Systematic Literature Review. *Journal of Planning Education and Research*, 39(1), 93–112. https://doi.org/10.1177/0739456X17723971
- Yasin, H. Q., Breadsell, J., & Tahir, M. N. (2021). Climate-water governance: A systematic analysis of the water sector resilience and adaptation to combat climate change in Pakistan. *Water Policy*, 23(1), 1–35. https://doi.org/10.2166/wp.2020.113
- Yuen, J. Q., Ziegler, A. D., Webb, E. L., & Ryan, C. M. (2013). Uncertainty in below-ground carbon biomass for major land covers in Southeast Asia. *Forest Ecology and Management*, 310, 915–926. https://doi.org/10.1016/j.foreco.2013.09.042



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