

Forging Maritime Cross-Border Connectivity in the South China Sea: A Case Study of Indonesia-Malaysia Initiatives

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Abstract

This paper assesses the opportunities for improving cross-border trade and human mobility at the maritime border between Indonesia and Malaysia in the South China Sea, focusing on Serasan (Natuna, Riau Islands) and Sematan (Sarawak). Currently, there is no formal connectivity between Serasan and Sematan. Cross-border activities are largely informal, centred around trade and human mobility, which increases the risk of smuggling and human trafficking. Due to the limited population and economic activity in both maritime towns, there is a lack of detailed secondary information available and published. To address this gap, a SWOT analysis has been conducted. Thereby, this study employed a qualitative and longitudinal approach to examine and assess the situation in Serasan and Sematan as a case study. The observations and findings were derived from the analysis and interpretation of data gathered from interviews with authorities and other reliable sources. The results show that geographical proximity and longstanding traditional economic relations through informal activities between the people of these regions provide a strong foundation for connectivity. However, this potential is hindered by significant weaknesses, including inadequate infrastructure development and a lack of alignment in priorities between the Indonesian and Malaysian governments. On the positive side, there are substantial opportunities in subregional cooperation and the growing sector of medical tourism. Nevertheless, illegal cross-border activities pose a serious threat to the stability and security of the region. These findings highlight the necessity for active involvement from various stakeholders and reciprocal efforts from both sides to achieve mutually beneficial outcomes. It is clear that maritime cross-border connectivity has unique features that differ from land borders, requiring a customized and context-specific approach.

Keywords: Cross-Border Governance; Maritime Connectivity; South China Sea; Subregional Cooperation; SWOT Analysis

Introduction

Historically, cross-border connectivity has emerged as a globally evolving issue after the formation of numerous modern states following the end of World War II and continuing to the present day. Cross-border connectivity is often associated with various crucial aspects of socio-economic development, such as border area development,¹ regional integration,² and the reduction of gaps or inequalities.³ These connections play a significant role in fostering closer economic ties, enhancing social cohesion, and promoting balanced regional growth.

Moreover, cross-border connectivity can substantially increase a country's competitiveness by reducing trade costs, which in turn facilitates smoother and more cost-effective movement of goods and services.⁴ Lower trade costs can lead to more robust economic activities, attract foreign investments, and encourage technological exchange and innovation. This underscores the strategic importance of efficient and well-planned connectivity infrastructure.

Studies on cross-border connectivity are predominantly conducted in several regions, particularly Europe,⁵ South America,⁶ South Asia,⁷ and Southeast Asia.⁸ In Southeast Asia, cross-border connectivity studies are often discussed within the framework of ASEAN (Association of Southeast Asian Nations) regional cooperation.⁹ However, there is a noticeable gap in the literature concerning connectivity in Southeast Asia in the context of bilateral relations. This article addresses this gap by focusing on cross-border connectivity under the framework of bilateral relations between countries that share maritime borders.

Indonesia and Malaysia, both located in Southeast Asia and members of ASEAN, present a compelling case for studying bilateral cross-border connectivity. These two countries share extensive maritime and land borders. In the South China Sea, the maritime boundary extends between the Riau Islands of Indonesia and southern Peninsular Malaysia, as well as between Sarawak and the Riau Islands. Additionally, the Malacca Strait serves as another critical maritime boundary between Sumatra, Indonesia, and the west coast of Peninsular Malaysia. On land, Indonesia and Malaysia share borders on the island of Borneo, where the regions of Kalimantan (Indonesia) and Sarawak and Sabah (Malaysia) are contiguous. Specifically, Sarawak borders West Kalimantan (Kalbar), East Kalimantan (Kaltim), and North Kalimantan (Kaltara), while Sabah shares a boundary with Kaltara.

These complex and multifaceted border regions between Indonesia and Malaysia offer rich opportunities for exploring various aspects of cross-border connectivity. This includes examining the economic, social, and cultural interactions that occur across these borders, as well as the challenges and opportunities that arise from such interactions. By focusing on these bilateral relations, this study will contribute to a deeper understanding of cross-border connectivity in Southeast Asia, moving beyond the predominant ASEAN-centric framework. The findings of this research can provide valuable insights for policymakers and stakeholders in both countries, helping to enhance cooperation and development in these border regions.

However, the majority of previous initiatives concerning Indonesia-Malaysia border have predominantly concentrated on land border connectivity. This includes the development of roads, railways, and other terrestrial infrastructure that enhance direct land-based interactions between neighboring countries. Such a focus, while critical, overlooks another vital aspect of cross-border connectivity: maritime borders.

Maritime cross-border connectivity, which involves the development of ports, shipping routes, and related maritime infrastructure, remains underexplored despite its potential to significantly impact global trade and regional development. Given that a considerable portion of global trade is conducted via maritime routes, enhancing connectivity in these areas can lead to substantial economic benefits. Effective maritime connectivity can reduce shipping duration times, lower transportation costs, and enhance the efficiency of supply chains.

Therefore, this paper aims to fill the gap in the existing literature by discussing the dynamics of developing maritime cross-border connectivity. It discusses the unique challenges and opportunities presented by maritime connectivity, examine case studies of successful maritime connectivity projects, and propose strategic recommendations for improving maritime infrastructure and policies. By doing so, this paper seeks to highlight the importance of maritime borders in the broader context of cross-border connectivity and regional integration, and to provide insights that could drive future research and policy development in this crucial area.

This study utilized a qualitative and longitudinal approach to examine the situation in Serasan-Sematan as a case study. The study employed three methods to gather primary and secondary data. Firstly, in April 2021 and July 2023, comprehensive interviews were conducted with government authorities and other relevant local sources in Natuna, and in June 2022 in Sarawak. The informants were chosen using the snowball sampling method. Additionally, observation was carried out at the Sematan Bazaar in June 2022, focusing on cross-border trade, people mobility, and the impact on the local community's livelihood. Furthermore, a thorough literature review and desk research were conducted, including official documents, books, journal articles, and other relevant sources.

A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was performed using the collected data to objectively evaluate the potential of cross-border activities and cooperation, taking into account the current development context and prospects of regional growth across borders. This method was selected because SWOT analysis facilitates the identification of internal and external factors that affect the success of maritime connectivity between Serasan and Sematan. Moreover, this analytical approach highlights the potential opportunities that stakeholders can explore for the further enhancement of maritime connectivity between Indonesia and Malaysia. There is limited published information available on the economic and social characteristics of the two maritime towns due to their small size and population. As a result, a SWOT analysis was conducted to assess their strengths, weaknesses, opportunities, and threats.

Connectivity under the Framework of Cross-Border Governance

According to Newman and Paasi, a border provides two primary functions: protection from external and internal dangers, and sovereignty over territory.¹⁰ A boundary also establishes the internal and exterior identities of an area. The present literature on border governance is dominated by two types of border concepts: soft and hard borders (Figure 1). While, governance is the act of governing a political decision-making process in which actors organize themselves through relationship structures, shaping a set of principles, rules, and similar elements, to implement processes (deliberation, negotiation, and decision-making) for a better use of power to ensure enhanced performance and/or to obtain better outcomes.¹¹

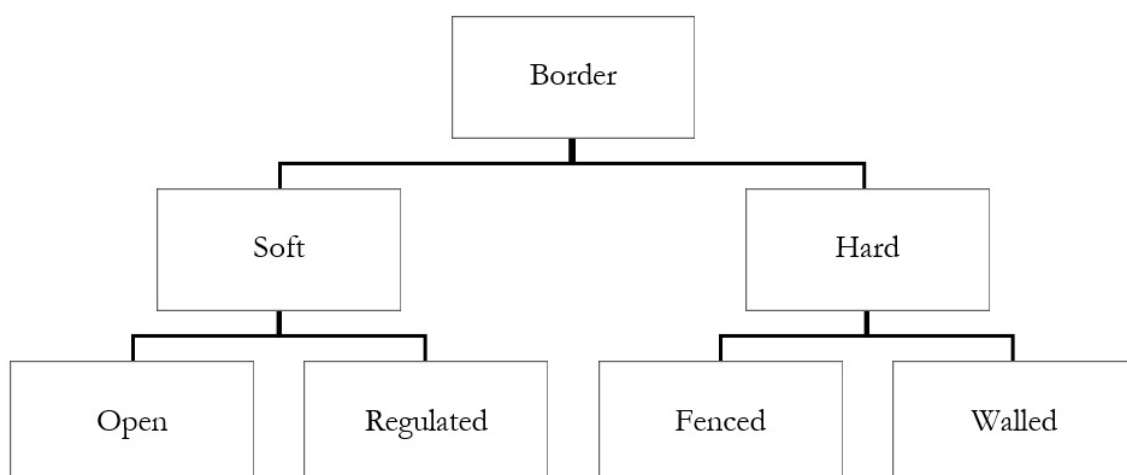


Figure 1: Soft and Hard Border Approach.
Source: Abstracted from Ullah and Kumpoh.¹²

Soft border policies aim to reduce physical and administrative barriers between countries or regions while maintaining some level of control and regulation. This approach encourages economic, cultural, and social cooperation and facilitates the movement of goods and people across borders. The degree of “softness” in border regulations can vary, with some regions being relatively open and others enforcing stricter restrictions in certain areas. These policies can promote economic cooperation and cultural exchange, but also require strict control to balance security concerns with the desire for openness and cooperation. The specific policies and approaches are determined by the goals and priorities of the participating countries or regions. A hard border policy is a strategy employed by governments to implement stringent controls and restrictions at their national borders. Hard borders may be reinforced with wire fencing, walls, and military personnel.¹³ The objective of a hard border policy is to tightly regulate the movement of people and the transportation of goods across the borders, with the goal of protecting national security, asserting sovereignty, or accomplishing specific policy objectives. According to Ullah and Kumpoh, the type of border governance utilized can have a significant impact on the level of international relations between neighboring countries.

Zumbusch and Scherer defined cross-border governance as the cooperation between different institutions and actors at the subnational level to address challenges arising from shared national borders.¹⁴ Tandia described it as a collective regime for managing interlocal problems and regulating borderlands within national frameworks.¹⁵ Cross-border governance involves actors from neighboring countries collaborating to address shared problems.

It is important to note that cross-border governance is not a universal solution for all cross-border issues, but rather a framework for developing interventions for cross-border integration.¹⁶ Cross-border integration refers to the socio-spatial dynamics that bring populations on both sides of the border closer together. This process involves functional, institutional, structural, and ideational linkages.

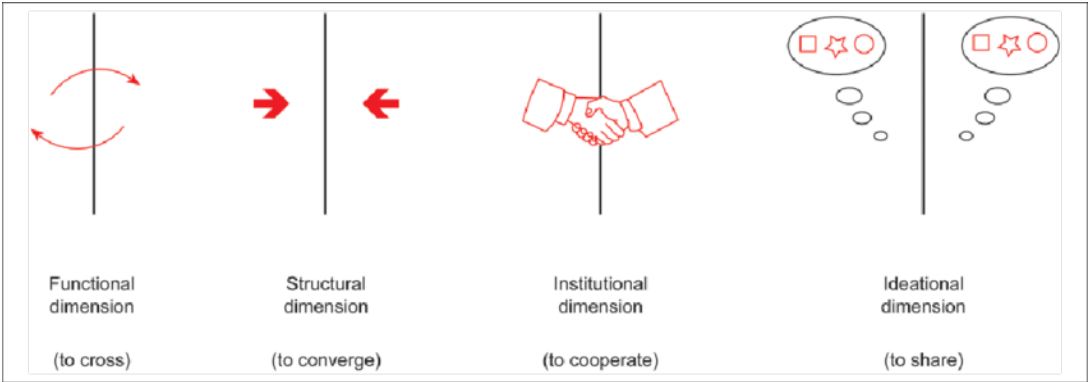


Figure 2: Multidimensional Process of Cross-Border Integration.

Source: Adapted from Durand and Perrin.¹⁷

The functional dimension of cross-border governance involves the movement of people and goods across borders for various purposes. The institutional dimension focuses on the collaboration between public and private actors and the policies and strategies for cooperation. The structural dimension relates to the socio-economic and spatial characteristics of border territories, including their business and fiscal environments. The ideational dimension encompasses subjective elements such as shared values and collective representations. Effective cross-border governance can enhance the attractiveness of border territories and improve integration.¹⁸

Another approach to review cross-border governance is through the three dimensions of connectivity as promoted by the Masterplan on ASEAN Connectivity.¹⁹ This framework comprises physical, institutional, and people-to-people connectivity. Physical connectivity involves the development and enhancement of infrastructure, such as roads, bridges, ports, and telecommunications networks, that facilitate improved linkages among and within ASEAN member states. This infrastructure is fundamental in supporting economic activities, trade, and mobility across borders, thereby fostering greater regional integration.

Institutional connectivity, on the other hand, pertains to the regulatory frameworks, policies, and agreements that aim to harmonize and streamline the rules governing cross-border interactions. This includes efforts to reduce trade barriers, synchronize standards, and simplify customs procedures, all of which are designed to create a more conducive environment for seamless movement of goods, services, and investments across ASEAN countries. By improving the regulatory landscape, institutional connectivity enhances the efficiency and effectiveness of cross-border cooperation and coordination.

Meanwhile, people-to-people connectivity focuses on fostering interpersonal exchanges and cultural interactions among the citizens of ASEAN member states. This dimension includes initiatives that promote tourism, educational exchanges, cultural programs, and knowledge sharing. By encouraging direct interactions between individuals, people-to-people connectivity aims to build mutual understanding, trust, and a sense of regional identity. These interactions not only enhance social cohesion but also contribute to the overall objective of regional integration by nurturing a community spirit among ASEAN populations.

The three dimensions of connectivity will serve as an analytical tool to examine how cross-border connectivity can be established in the maritime border area between Indonesia and Malaysia, specifically in the Serasan-Sematan region. This approach is particularly suited to the context of Indonesia-Malaysia relations as part of ASEAN regional cooperation, providing a comprehensive perspective that aligns with the unique characteristics and goals of ASEAN. Unlike the concept of cross-border integration rooted in the European Union experience, which may not fully capture the specific dynamics of Southeast Asia, the three dimensions of connectivity offer a more relevant and tailored analytical tool for understanding and enhancing cross-border governance in this region.

Historical Overview of Cross-Border Connectivity between Serasan and Sematan

Historically, cross-border connectivity has been a matter of concern for Indonesia and Malaysia since shortly after both nations gained independence. The first initiative between the two countries took place in 1967, when they signed the Basic Arrangement on Border Crossing on May 26, 1967. This agreement regulated the movement of goods into and out of the border areas of both nations.

Three years later, on August 24, 1970, Sumitro Djojohadikusumo, Indonesia's Minister of Trade, and Mohd Krir Johari, Malaysia's Minister of Commerce and Industry, signed the Agreement on Border Trade in Jakarta. This agreement served as a follow-up to the 1967 Arrangement and established regulations concerning classification, types of goods, eligible persons, designated border areas, border control posts, the value of traded goods, as well as the conditions and limitations governing cross-border trade between the two nations. The agreement explicitly identified Sematan in Malaysia as a designated border area for maritime trade, whereas Serasan was not explicitly mentioned but was implicitly included as part of the administrative region of the Riau Islands.

On October 16, 1973, both countries reaffirmed their commitment to cross-border connectivity by signing the Agreement on Travel Facilities for Sea Border Trade between the Republic of Indonesia and Malaysia. This agreement explicitly recognized Serasan and Sematan as part of the designated

border areas for maritime trade and officially designated them as ports of entry and exit. Furthermore, the agreement facilitated local residents of Serasan and Sematan by granting them a Pas Sempadan Laut (sea border crossing pass), allowing them to travel back and forth within the agreed border areas.

In 1984, Indonesia and Malaysia established the General Border Committee (GBC) to address security challenges along their shared border. The following year, the GBC formed the Social Economic Committee of Indonesia and Malaysia (SOSEKMALINDO) to oversee economic and social governance in the border region. SOSEKMALINDO was designed to foster peace and development in the borderlands while promoting collaborative efforts to enhance the region for the mutual benefit of both nations. To ensure effective cross-border governance, SOSEKMALINDO divided the Malaysia-Indonesia border region into three distinct sub-regions: (1) Sarawak–West Kalimantan–East Kalimantan–North Kalimantan, (2) Sabah–North Kalimantan, and (3) Johor–Malacca–Riau Island.²⁰ While SOSEKMALINDO facilitated formal cooperation between the two countries,²¹ its effectiveness was constrained by limited local government autonomy,²² and a lack of commitment from implementing agencies.²³ Nevertheless, it provided tangible benefits, such as ensuring the continued supply of essential goods from neighboring regions²⁴ and establishing an effective mechanism for pursuing joint economic ventures without compromising national security.²⁵

On 17 June 1988, both governments further developed cross-border connectivity through the signing of the Agreement on Maritime Transport. This agreement mandated both countries to implement the principle of equal treatment for vessels, crews, and cargo from the neighboring country, ensuring they receive the same treatment as domestic vessels and crews. The provisions covered various aspects, including dues and charges, mooring and unmooring, loading and unloading, pilotage, towage, and the supply of fuel, water, and provisions.

Subsequently, Indonesia and Malaysia attempted to revise the 1967 Arrangement in 2006, however, the revision was never ratified. During this period, both countries focused on developing their respective border areas. Indonesia constructed immigration, customs, quarantine, and security (ICQS) facilities in Serasan between 2020 and 2022, while Malaysia developed Sematan Bazaar. Ultimately, in June 2023, both nations successfully revised the 1967 Arrangement and the 1970 Agreement. However, the revisions introduced no significant changes, as Serasan and Sematan remained designated as exit and entry points for the movement of people and goods. Meanwhile, the 2023 initiatives resulted in the removal of several areas from the list of designated border areas and ports of entry and exit.

This historical overview provides key lessons, demonstrating that the governments of Indonesia and Malaysia have consistently prioritized cross-border connectivity between Serasan and Sematan from the early years of independence to the present. This sustained attention reflects both nations' recognition of Serasan-Sematan as a strategically significant region due to its location in the South China Sea.

Development Context of Serasan and Sematan Border Area

Serasan is a sub-district in the Natuna Regency, Riau Islands Province, covering an area of 44.72 square kilometers (see Figure 3). As of 2022, the population of Serasan was 5,311, with 2,704 males and 2,607 females. The population density was 119 individuals per square kilometer, indicating a high concentration of people in the area. The demographic composition was predominantly youthful, featuring 490 individuals aged 15-19, 480 individuals aged 10-14, and 479 individuals aged 20-24.²⁶



Map 1: Map of Serasan and Sematan in Indonesia-Malaysia Border Area

Source: Modified from Google Maps.

The agricultural, forestry, and fisheries sectors are vital to the economy of Natuna, contributing 11% to the gross regional domestic product. These sectors in Natuna experienced a 5% growth rate from 2015 to 2019, with the fisheries subsector making the most substantial contribution. In 2019, the capture fisheries in Natuna produced nearly 105,000 tonnes, accounting for 40% of the total sustainable potential of fish resources in the area. The total production of capture fish from Serasan and East Serasan is approximately 17,500 tonnes, which accounted for 17% of the overall capture fisheries in Natuna, according to an interview with SKPT Natuna.

The agriculture sector in Natuna has great potential for development. The region's favorable soil and climate conditions have led to thriving vegetable and fruit production. However, the industry is currently limited in size due to insufficient funding and restricted marketing efforts, resulting in the loss of collected produce. In 2022, vegetable production in Serasan fluctuated compared to the previous year, with the highest yield being 119 quintals of cucumbers. Watermelon was the seasonal fruit with the largest production, totaling 135 quintals.

The Indonesian government initiated the construction of the cross-border post in Serasan in November 2020, in line with Presidential Instruction (Inpres) Number 1 of 2019. This initiative aims to accelerate the development of 11 integrated cross-border posts and supporting infrastructure facilities in border areas. The cross-border post in Serasan holds strategic importance for Indonesia as it is located in a frontier, outermost, and underdeveloped area that shares borders with Vietnam and Cambodia to the north, as well as Singapore and Malaysia to the west and east. The construction of the cross-border post is expected to bring various benefits, including the improvement and mobilization of the local economy. Once completed, the cross-border post in Serasan will serve two main functions: providing cross-border services and serving as a port.

The Governor of Riau Islands Province has proposed to the Sarawak State government the establishment of a maritime border crossing between Serasan and Sematan, two coastal towns located adjacent to each other. This border crossing would utilize both the Indonesian border pass and the Malaysian border pass to facilitate cross-border mobility.

In other side, Sematan is a small coastal town in the Lundu sub-district, which is part of the Kuching division. It is a hub for economic activity, particularly in the fishing industry. The Department of Statistics Malaysia provides economic data for Lundu at the district level, but not at the sub-district level. Analyzing Lundu's economic structure can help identify Sematan's economic strengths and improve its infrastructure, positioning it as a crucial cross-border port for connecting Sarawak and Riau Islands (see Map 1).

Sematan size is 466 square kilometers, representing 25% of Lundu's total area. Lundu covers about 45% of Kuching's administrative area. The population of Lundu is nearly 34,000, accounting for approximately 1% of Sarawak's total population. Bumiputera make up 83% of Lundu's population, followed by Chinese at 9%.²⁷

The majority of the population in Lundu district, about 80%, is involved in agriculture, with a focus on cultivating cocoa, black pepper, rice, fruits, and palm oil. In coastal areas, fishing is the predominant occupation. Government and private agencies such as the Department of Agriculture, FELDA, SALCRA, the Farmers' Association, SEDC, PELITA, and FELCRA play a significant role in agricultural development. Additionally, locals are engaged in economic activities including logging, sawmilling, silkworm breeding, crab rearing, tiger prawns, freshwater fish, and silica sand mining.

The immigration office in Sematan is responsible for managing the visits of Serasan residents to the coastal town. Visitors must register at the Sematan Immigration Office. Additionally, there is a customs office to inspect merchandise brought in by Serasan residents to Sematan. Despite this formal process, the people of Serasan have a long history of engaging in traditional trading activities with Sematan on an informal basis. Once an ICQS is established in Sematan, traditional trade links between Serasan Island and Sarawak will become more formal and regulated.

The construction of cross-border posts to connect Serasan and Sematan is expected to encourage better trade between Indonesia and Malaysia. In January-March 2023, the total trade between Indonesia and Malaysia reached USD6.14 billion. Meanwhile, total trade between the two countries in 2022 reached USD27.8 billion. This figure shows an increase in total trade of 30.37 percent compared to 2021. During 2022, Indonesia's exports were recorded at USD15.4 billion and Indonesia's imports at USD12.4 billion. Indonesia recorded a surplus of USD2.9 billion against Malaysia. This is certainly an opportunity to increase trade, especially in border areas. In addition to trade in goods, the Indonesian government also hopes to increase the movement of people at the border and make the cross-border post an epicenter of economic development in Serasan.

Sarawak's total trade with Indonesia has been steadily increasing, rising from RM3 billion in 2019 to RM5 billion in 2022 (Table 1). Except for 2020, Indonesia has consistently maintained a positive trade balance. These trade patterns are promising for the anticipated Serasan-Sematan border crossing, which is expected to further enhance Sarawak's trade with Kalimantan, especially in maritime products.

Table 1: Sarawak Trade with Indonesia, 2019-2022

Sarawak:	2019	2020	2021	2022
Export to Indonesia (RM million)	1761	1364	1268	1172
Import from Indonesia (RM million)	1885	1170	1931	3545
Trade Balance (RM million)	-124	194	-663	-2373
Total Trade (RM billion)	3646	2534	3199	4717

Source: Department of Statistic Malaysia.²⁸

The development context above illustrates that Serasan and Sematan are maritime border regions between Indonesia and Malaysia with significant potential in fisheries and agriculture. To drive economic development, key commodities from these leading sectors must be traded across borders, with market opportunities extending not only to other regions in Indonesia and Malaysia but also to neighboring countries around the South China Sea. Therefore, cross-border governance efforts by both governments, particularly through the facilitation of cross-border maritime connectivity, are crucial for the present and future development of Serasan-Sematan.

SWOT Analysis: Facilitation of Maritime Cross-Border Connectivity in Serasan – Sematan

There are many factors that must work together to properly and efficiently run a country or region. Resources need to be managed and distributed for smooth operations, and citizens need to be able to conduct their daily lives productively based on these allocations. It is also important to ensure the maintenance of critical systems so that operations can continue as intended. Good infrastructure is essential for the social and economic growth of a country or business. Both hard and soft infrastructure are necessary for sustainable development and progress. Hard infrastructure provides the physical foundation for economic activities and connectivity, while soft infrastructure creates the institutional and human capital frameworks for inclusive and equitable growth. Effective development strategies often require a holistic approach that addresses both hard and soft infrastructure needs in order to unlock the full potential of economies and societies.

This SWOT analysis assesses the long-term growth needs of Serasan and Sematan in cross-border mobility and trade, considering physical and soft infrastructure, as well as the comparative advantages of both regions.

Strengths

The main forces driving cross-border activity between Serasan and Sematan are geographical and cultural proximity. Despite being included in the administrative region of Natuna, Serasan is the island furthest away from the Natuna Regency capital on Ranai, at around 330 miles with a 12-hour travel time. This is further than the distance between Serasan and Sematan, which is located in Sarawak, Malaysia. The travel time from Serasan to Sarawak only needs 5-6 hours using a traditional boat (see Map 1).

The close geographical and cultural ties between Serasan and Sematan have fostered strong relationships between the border communities. This closeness has been historically maintained through the exchange of goods via traditional trade. Residents of the Serasan Subdistrict have engaged in traditional trading with Sematan for a long time, and this practice continues today.

The people of Serasan rely on this traditional trading activity to meet their basic needs. Most goods transported to and from Serasan Island come from Sematan, Malaysia, due to its proximity and more efficient transportation costs. As a result, staple goods from Sematan are more affordable compared to those from other islands in Indonesia, such as Java, Kalimantan, Batam, and Tanjung-pinang. While it is possible to obtain basic necessities from Kalimantan, the existing transportation infrastructure for delivering commodities remains inadequate. Therefore, Serasan residents often use wooden boats to travel to Sematan to purchase goods at a more affordable price. Typically, fishermen from Serasan sell their catch of fish or pandanus woven mats in Sematan and use the proceeds to buy groceries, which they then transport back to their homes by boat.

The Pan Borneo Highway is also a supporting factor for Serasan-Sematan connectivity with other areas. It connects major towns in the Kuching administrative district. Table 2 shows the distances between Telok Melano, Sematan, Lundu, Kuching, Tebedu, and Aruk. This efficient connectivity will establish a supply chain network and promoting potential industries in the border regions.

Table 2: Distance Matric within the Kuching Administrative District (km)

Distance Matrix	Telok Melano	Sematan	Lundu	Kuching	Tebedu	Aruk
Telok Melano	0	34	58	138	186	71
Sematan (Proposed Border Crossing)	34	0	27	107	155	40
Lundu	58	27	0	84	135	49
Kuching	138	107	84	0	98	130
Tebedu (Border Crossing)	186	155	135	98	0	177
Aruk (Border Crossing)	71	40	49	130	177	0
Serasan	na	113	na	na	na	na

Notes: Distance calculated from Google Map (2024).

Source: Compiled by Authors’.

The proximity and long-standing commercial links between Serasan and Sematan, as well as their economic interdependence, are their strengths. These advantages will support the successful development of cross-border crossings between the two areas, potentially strengthening the tourism and maritime industries and contributing to regional development across borders. The Pan Borneo Highway is a key advantage in the study area connecting border regions.

Weaknesses

Serasan is characterized as an archipelago. Out of the total of 159 islands in Natuna, the subdistrict of Serasan has the highest number of islands, with a count of 31 islands, making up 19.5 percent of the total islands in Natuna. To enhance the movement of individuals and goods, the establishment of an efficient maritime transportation infrastructure is essential under the prevailing conditions. Currently, maritime transport to Serasan Island is significantly affected by wave height. In instances of elevated wave conditions, only vessels with substantial tonnage, such as KM Bukit Raya, are able to operate, often resulting in a waiting period of up to one week.

Cross-border activities between Serasan and Sematan are significantly reliant on maritime transportation. The current operations predominantly depend on traditional vessels commonly referred to as “pompong.” Alternatively, individuals opting to access the destination via Kalimantan may utilize the terrestrial route from Entikong to Pontianak, proceeding to Sambas, a journey that requires approximately 7 hours. Subsequently from Sambas, travelers can continue their expedition by maritime transport to Serasan, with an estimated travel duration of 5 to 6 hours.

Based on the given circumstances, the most optimal route that can be established is a direct sea route from Sematan to Serasan, which takes around 6 hours to complete. Regrettably, there is currently no definitive information available on the ferry that facilitates cross-border movement between these two regions.

Currently, the Indonesian government is engaged in ongoing discussions with the Malaysian government over the establishment of border openings at Serasan and Sematan. According to an interview with the Deputy Regent of Natuna, Serasan cross-border post will be under the management of the National Border Management Agency in Indonesia. It has been inaugurated on 2 October 2024. Nevertheless, the Serasan cross-border post remains non-operational due to the lack of preparation on the Malaysian side to establish the gateway at Sematan. Based on observations conducted in Sematan Bazaar in June 2022, there has been a lack of substantial progress in Sematan to facilitate cross-border operations between the two nations. At Sematan Bazaar, there is only a basic jetty that serves as a docking point for boats (see Figure 3).



Figure 3: Comparison on cross-border facilities between Serasan with ICQS (top) and Sematan with Jetty at Sematan Bazaar (down).

Source: BNPP and Authors' Documentation.

When examining the development of cross border posts in Serasan and Sematan, it is clear that the Indonesian government is better equipped in terms of physical infrastructure. This encompasses the creation of one-stop service cross border post, as well as ports and other Customs, Immigration, Quarantine, and Security (CIQS) facilities in Serasan. However, the Malaysian authorities in Sematan have not yet made the necessary arrangements to build a dedicated ICQS facility to accommodate the mobilization of people and trade from Serasan.

There is only an immigration office and a customs office located separately in Sematan. Therefore, Indonesians arriving from Serasan must individually report to both offices. The disparity in preparedness between Indonesia and Malaysia can be attributed to a mismatch in their priority on the development of cross-border post services.

Malaysia's present focus is on constructing cross-border infrastructure at Teluk Melano. In the Lundu district of Kuching, Sarawak, the border between Indonesia and Malaysia is not only at Serasan and Sematan on the maritime border, but there is also a land border between Temajuk and Teluk Melano. In comparison to the sea border between Serasan and Sematan, developing this land border is more feasible from the Malaysian point of view. The presence of two cross-border facility projects in Lundu district necessitates the Malaysian government to allocate its financing priorities accordingly. In 2020, the Central Government allocated RM6.2 million to build an ICQS complex in Telok Melano to replace the temporary CIQ site. In the meantime, the immigration office in Sematan will handle foreign nationals' entry and exit formalities at Telok Melano's entrance.²⁹ Thus far, the central government has not confirmed any budget for building an ICQS in Sematan.

Another weakness in the facilitation of cross-border activities in Serasan and Sematan is related to the status of Serasan cross-border post. The Indonesian National Border Management Agency categorizes cross-border posts into three types: Type A, B, and C. Type A facilitates international trade by allowing trucks transporting goods to directly enter the neighboring country. Type B can conduct trade activities but is limited, and must also be stopped at the 0-kilometer point. Type C is solely a conventional crossing with no provisions for export or import. According to the document titled "Master Plan, Development Plan, Pre-Feasibility Study, and Pre-Design of the Natuna Border Area and Tual Small Town", 2019, the cross-border post in Serasan will have a temporary classification of type C. Consequently, its purpose is solely to serve as a gateway and passage for individuals traveling between Indonesia, Malaysia, and Brunei. The establishment of a cross-border post with type C will undoubtedly serve as a catalyst for the growth of tourism in Serasan. Nevertheless, it will not be significantly advantageous for the facilitation of export and import operations involving commodities from Malaysia to Indonesia.

Although there are suggestions to establish a Serasan-Sematan cross-border crossing, political and financial commitments are still unclear. This is because it is still in the initial phases of discussion on the SOSEKMALINDO platform.

Opportunities

The Governor of Riau Islands asserted that the Riau Islands Province possesses significant potential for cooperation with Sarawak, particularly in the domains of tourism and fisheries.³⁰ However, the overall number of visits to Natuna declined by 63,792 in 2022. The marine/beach attraction received the highest number of visits, with a total of 57,636 visits. The least appealing tourist attractions are the historic sites. There were a mere 648 visits in the year 2022.³¹ Upon calculation, the average number of visitors to each maritime tourist site in Serasan was only 16 per week. In East Serasan, the weekly average was only 10.11 individuals. This quantity is undoubtedly quite minimal in relation to its significant potential.

In order to develop the tourism potential in Serasan, it is imperative to establish the Sisi Beach tourism area in conjunction with the Temajuk tourism area in Sambas, West Kalimantan. Consequently, it has the potential to appeal to a larger number of tourists from Malaysia or Brunei Darussalam. Many investment initiatives have been implemented in the tourism industry to facilitate the growth of tourism in Serasan, including the construction of a resort. There are two forthcoming resort complexes scheduled in Serasan, situated on Karang Aji Island and Sisi Beach.

In addition to tourism, the development of fisheries and agriculture are other viable prospects in Serasan. The Serasan community's fishery products are in great demand by Malaysians. In addition to the growth of tourism, the fisheries sector can be further enhanced to facilitate culinary travel centered around processed fish in Serasan. In addition to fishery products, Serasan also offers agricultural products such as coconut, cloves, and pandanus mat products.³² Pandanus is the primary material for weaving mats among the Serasan people due to the abundance of pandanus plants in their region. The production of mats is labor-intensive due to the reliance on traditional methods for practically all stages of the process. Currently, the Serasan pandanus mat product has already spawned other derivative products, including purses, tissue holders, and other items that possess significant economic worth and may be purchased as souvenirs by tourists.³³ The growth of tourism and the fishing industry, as well as agriculture, presents a significant chance to attract investors, both domestically and from Malaysia. The government can leverage the kinship network established between the communities in Serasan and Sematan to attract businesses from Sematan to make investments in Serasan.

Another sector with potential for development is the mobilization of people seeking medical care from Serasan to Sematan. Traditionally, residents of Natuna have opted to pursue medical care in Malaysia due to its proximity and better healthcare facilities compared to those in Indonesia. There is currently only a hospital in Ranai (Bunguran Island, Natuna), while there is only one community health center (*Pusat Kesehatan Masyarakat - Puskesmas*) in Serasan. Additionally, Serasan is further away from Ranai than Sematan, which offers the Malaysian government a potential opportunity to promote the growth of medical tourism, similar to the successful model established in Penang.

Sematan and Lundu have a strong tourism industry, with 3-star hotels and national parks such as Gunung Gading National Park, Tajung Datu, Talang Satang, Samunsam Wildlife Sanctuary, and Matang Wildlife Centre. They also have health centres that can serve Serasan patients, potentially leading to cross-border medical tourism. Infrastructure facilities and sustainability discussions at the SOSEKMALINDO level are crucial for the long-term success of the Serasan-Semantan border crossing.

To maximize the potential benefits, the governments of Indonesia and Malaysia could use the existing sub-regional cooperation framework to discuss future strategies. One example of potential collaboration is the SOSEKMALINDO forum, which provides a platform for discussing various issues related to the border between Indonesia and Malaysia, including social, cultural, economic, trade, and security concerns. The SOSEKMALINDO cooperation involves the Indonesian regions of Riau Province, Riau Islands, West Kalimantan, East Kalimantan, and North Kalimantan. It plays a crucial role in the relationship between Indonesia and Malaysia, allowing the two governments to align their perspectives and prioritize collaboration in socio-economic cooperation in the border region. The forum also involves local governments in border regions.

SOSEKMALINDO focuses on socio-economic development to promote cooperation, with an emphasis on improving welfare and security. Its main objective is to stimulate community production activities, promote environmental quality, and achieve equitable development and government services at the border. Since 1985, SOSEKMALINDO has facilitated negotiations on border matters between Indonesia and Malaysia. Some of its notable contributions include the establishment of cross-border posts and the facilitation of oil palm export licenses. The forum presents an opportunity for the two nations to expedite the agreement to establish an open border at Serasan-Sematan, which would enhance the efficient movement of individuals in both areas.

Threats

As previously mentioned, the people in the Serasan and Sematan border area are acquainted to long-standing cross-border trade. The interviews done by authors in Natuna revealed that products from Malaysia have gained popularity in Serasan for a long time. The reason behind this is the challenging accessibility from Serasan to Natuna. Therefore, people in Serasan grew accustomed to engaging in trade for their daily necessities, as well as selling their agricultural and fishery products to Sematan.

From a legal perspective, this economic activity is deemed illegal as it does not adhere to the authorized trade channels established by Indonesia and Malaysia. Consequently, there have been multiple occurrences in which Serasan fishermen, who were transporting fish for sale to Sematan, were apprehended by Malaysian officials. In September 2016, the Malaysian Custom Police apprehended two Serasan fishing boats, KM Kurnia Usaha and KM Usaha Nelayan 02, which were carrying groceries from Sematan.³⁴ Both captains were required to pay fines amounting to RM70,000 and RM50,000, respectively. Due to their inability to pay the fines, the captains were sentenced to one year of incarceration.

In response to this issue, the Indonesian government established the integrated cross-border post in Serasan to provide a transparent legal framework for the existing movement and trading activities for the people. The purpose of the development of Sematan cross-border post is not limited to providing immigration, customs, and quarantine services, but also to serve as a means of enforcing national law at the border. Indonesian government desires the complete cessation of any state activities at the border that do not comply with the laws and regulations. The implementation of the Serasan integrated cross-border post would grant local residents an exclusive privilege in conducting their cross-border activities. A unique permit will be issued exclusively for residents of Serasan and Sematan, granting them access to the Serasan integrated cross-border post. Furthermore, as stated by the Directorate General of Immigration of Indonesia, Serasan Cross Border Post is officially recognized as one of the designated Points of Entry for E-VOA Holders at the Cross Border Post Immigration Checkpoint.

However, the establishment of the cross-border post has raised concerns among the local people in Serasan. The concern comes because fishermen in Serasan anticipate that after the cross-border post is officially run, state restrictions and oversight will become tougher. Consequently, they are no longer able to sell their fish in Sematan at high prices and are unable to purchase daily necessities in Sematan at affordable prices. The economic activities of individuals residing at the border will decline, and there will be restrictions imposed on their customary cross-border trades. The reason for this is that the cross-border post in Serasan is classified as a type C cross-border post, which only permits the movement of people without permission for export and import activities.

According to the most recent Border Trade Agreement (BTA) between Indonesia and Malaysia signed on June 8, 2023, there is no revision in the maximum threshold value for the goods that people can bring across the border, which is no more than RM600 per person each month. With the current living conditions of the people, this threshold value limit is considered insufficient and cannot fulfill the people's needs. This restriction is a plague for people at the border and triggers the smuggling of items by the people in the border. Moreover, although the BTA document specifies the permissible commodities for cross-border trade between Indonesia and Malaysia, the list does not mention certain items, such as stove gas and construction supplies frequently bought by the Serasan people from Sematan. It could lead to the potential rising of illicit smuggling activities.

The Malaysian government, especially the local authorities, have noticed cases of smuggling and illegal trading. Interviews with government officials in Lundu district show a genuine concern for the underprivileged population in their area. The items being traded across the border often include government-subsidized products meant for Malaysians. Meanwhile, in Lundu, there are still people

whose per capita income is below RM1,200 (or fall into the B-40 category). The government is concerned that if people from Serasan buy goods in Lundu, the less fortunate residents of Lundu will be deprived of their essential needs and affordable consumer goods.

To resume, Table 3 shows the matrix of SWOT analysis findings. The analysis reveals the possibility of enhancing cross-border activities in Serasan and Sematan. Nevertheless, the primary hindrances to achieving this objective are the inadequately constructed infrastructure and the mismatch in priority of the two governments.

Table 3: Summary of SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
– Geographical proximity – Traditional Economic Relations between the people through informal activities	– Lack of connectivity and infrastructure development, particularly in Serasan – Mismatch priority between Indonesia and Malaysia government – The status of Serasan cross-border post to serve passengers only, not for export-import.	– Prospect for tourism and medical tourism development – Existing sub-regional cooperation: SOSEKMALINDO	– Potential rising of smuggling and other illegal activities

Source: Compiled by Authors’.

Theoretical and Policy Insights

Referring to the concept of three connectivity dimensions, the SWOT analysis findings above reveal several critical insights that demand further consideration. First, the dimension of people-to-people connectivity already exists in the Serasan-Sematan area through traditional cross-border activities. However, these activities remain informal, resulting in relatively low intensity compared to other regions with formal cross-border facilitation. This disparity underscores the urgent need for governments to formalize these activities by enhancing maritime connectivity. Such formalization would not only increase activity levels but also legitimize and regulate these interactions, fostering stronger cross-border relationships. Theoretically, this implies that the development of cross-border connectivity necessitates active involvement from various actors, including border residents and governments on both sides.

Second, while physical connectivity is under development, it remains asymmetrical. On the Indonesian side, the government is investing in infrastructure for customs, immigration, and quarantine facilities, envisioning a national border crossing post. Conversely, the Malaysian government has yet to develop similar facilities in Sematan, despite discussions on the matter. This imbalance reflects a critical flaw in cross-border connectivity development: the lack of reciprocal efforts from both sides. For cross-border connectivity to be effective and beneficial, both countries must engage in cooperative and coordinated development efforts. This reciprocity would generate mutual benefits, promoting a win-win situation for all parties involved.

Third, the dimension of institutional connectivity is addressed through frameworks such as border crossing agreements and the SOSEK MALINDO forum. Nonetheless, these frameworks fail to differentiate between the unique characteristics of land and maritime borders. For instance, the free-on-board quota of RM600 per person is impractical for maritime border crossers, who incur higher effort and costs. This oversight highlights the necessity for institutional rules to be tailored to the specific needs and challenges of maritime borders. Recognizing and addressing these differences would lead to more effective and equitable cross-border policies, ensuring that both land and maritime border areas are adequately supported and regulated.

Moreover, SWOT analysis' findings also lead to some considerations for policy responses. In order to enhance the existing strengths and optimize current prospects, the governments of both countries may implement at least three strategies. First, to facilitate the connectivity between Serasan and Sematan, it is imperative to attract increased private sector involvement in the development of hard infrastructure. For instance, the private sector can contribute to the provision of transportation services, such as ferries, that facilitate the movement of people and commodities between Serasan and Sematan. In order to entice private sector participation, the government must also guarantee the long-term viability of the movement of people and products in the area, thereby benefiting the private sector that operates transportation services. Currently, the average number of individuals crossing the border from Serasan to Sematan stands at 16 every week. This figure has the potential to be increased if the tourism industry in Serasan is adequately equipped to attract a larger influx of visitors from Malaysia.

Secondly, the objective is to enhance the status of the Serasan cross-border post from type C to type B to establish Serasan as a strategic hub for the cross-border movement of people and goods, facilitating the import and export between Indonesia and Malaysia. By upgrading the status to type B, there will be a significant increase in people traffic and the transportation of goods to and from Serasan Island. This is expected to stimulate the development of small and medium-sized trade and industrial hubs by capitalizing on the enhanced flow of goods.

Furthermore, it is imperative for the governments of Indonesia and Malaysia to immediately adjust their development plans and strategies in the border area, particularly in Serasan and Sematan, to prevent conflicting agendas and priorities that hinder border development. The governments of both nations can leverage the SOSEKMALINDO cooperation to engage in negotiation and achieve an agreement on the development of Serasan and Sematan. By aligning priorities and collaborating on the development of the border, there is a goal to transform the connection between Sematan and Serasan into thriving maritime cities that also function as a crucial link for other regions in Indonesia and Malaysia.

Conclusion

The study on cross-border maritime connectivity in the South China Sea between Serasan, Riau Islands, Indonesia, and Sematan, Sarawak, Malaysia since 1967 until the present reveals several significant findings. Firstly, the geographical proximity and longstanding traditional economic relations through informal activities between the people of these regions provide a strong foundation for connectivity. However, this potential is hindered by significant weaknesses, including inadequate infrastructure development and a lack of alignment in priorities between the Indonesian and Malaysian governments. On the positive side, there are substantial opportunities in subregional cooperation and the growing sector of medical tourism. Nevertheless, illegal cross-border activities pose a serious threat to the stability and security of the region.

To facilitate efficient cross-border activities between Serasan and Sematan, robust infrastructure and institutional preparedness are crucial. Effective communication and coordination between Indonesian and Malaysian authorities, specifically through mechanisms like SOSEKMALINDO and GBC, are essential for reaching a consensus on the port's role and status, enabling it to function as a regional hub for trade. Indonesia must engage in dialogue with Malaysia to harmonize the management of cross-border routes and encourage Malaysia to develop both hard and soft infrastructure in Sematan for the swift opening of borders.

The feasibility of sub-regional integration between Sematan and Serasan hinges on the political will and financial commitment of both nations, as well as their respective internal priorities. Leveraging existing sub-regional cooperation frameworks, such as SOSEKMALINDO, can significantly enhance cross-border activities in the region. Strategic planning and practical actions by the regional and central governments of Indonesia and Malaysia are imperative for the success of cross-border cooperation.

The theoretical contributions of these findings underscore the necessity for active involvement from various stakeholders and reciprocal efforts from both sides to achieve mutually beneficial outcomes. Furthermore, it is evident that maritime cross-border connectivity possesses distinct characteristics compared to land borders, necessitating a tailored approach.

In conclusion, establishing cross-border connections in the Serasan-Sematan region requires a soft and institutional strategy that considers the unique requirements of each locality. This strategy highlights the significance of cooperation and comprehension among different parties, while also ensuring that the local needs and cultural backgrounds are given priority. This approach promotes sustainable development and improves the efficiency of connectivity projects in the region. Formalizing people-to-people connectivity, ensuring balanced physical infrastructure, and adapting institutional regulations to the specific nature of maritime borders are essential steps towards fostering robust and mutually beneficial cross-border interactions. Such an approach not only aligns with theoretical insights but also addresses practical challenges, paving the way for sustainable and inclusive cross-border development. The success of this endeavor relies on the collaborative efforts of both nations to overcome obstacles and capitalize on opportunities, thereby transforming the Serasan-Sematan corridor into a model of effective maritime connectivity.

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Notes

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