

INSTITUTIONAL ANALYSIS AND DEVELOPMENT FOR THE ESTABLISHMENT OF INTER-STATE JOINT BORDER COMMITTEE IN PENINSULAR MALAYSIA

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Abstract: Determining the inter-state border in Peninsular Malaysia is done through allocation, delimitation, demarcation and documentation. Starting in 1993, the Joint Boundary Committee (JBC) organised this procedure with the involvement of numerous state and federal organisations under the Ministry's coordination. This study examines how JBCs interact to make decisions and how well JBC formation rules-in-use work. Surveys, interviews, participant observations and document reviews were used to gather data which was then analysed using the Institutional Analysis and Development Framework (IAD) based on content analysis. Position rules, boundary rules, choice rules, aggregation rules, scope rules, information rules and pay-off rules are some of the rules in creating the JBC, although they have not been able to successfully direct interaction. For enhancement, a configuration of seven types of rules can be used because the analysis results show that seven types of rules have found significant weaknesses in establishing existing JBCs. Therefore, implementing the IAD will effectively coordinate the management and administration of the JBC in making decisions to expedite the inter-state border delimitation and demarcation in Peninsular Malaysia in line with the 16th goal of the Sustainable Development Goals (SDGs).

Keywords: Joint Border Committee, rules-in-use, demarcation, inter-state border, Peninsular Malaysia.

Introduction

Determining and finalising borders is very important, as it symbolises the sustainability of the institution of national sovereignty. After the Anglo-Dutch Treaty also known as the London Agreement was signed in 1824 and the formation of Federated Malay States by the British Empire in 1896, the delineation of the inter-state border in Malaya was specified in the treaty as stated in the Land Code of 1926 in the Federated Malay States Government Gazette 1926. The basis for defining inter-state boundaries in Malaysia today is also based on concepts introduced by the British such as the Boundary Convention dated 20 June 20 1891 (signed in London), Bangkok Treaty of 1899 (Boundary Agreement), Bangkok Treaty of 1909, Federation of Malaya Government Gazettes, Memorandum of Understanding (MoU), exchange of correspondence between the Secretary of the

Resident, Terms of References (ToR), the adjacent cadastral lots and main watershed. Delimitation and demarcation of the inter-state border in Peninsular Malaysia are divided into two types of boundaries: Artificial and natural. This artificial boundary involves boundary marking using a boundary mark synonymous with this boundary demarcation work. As stated in the border treaty, natural boundaries such as rivers, watersheds and others will be used as the basis for inter-state borders (Starke, 2007). The basis determination of the natural state border in Peninsular Malaysia is shown in Figure 1.

In Peninsular Malaysia, allocating boundaries, delimiting, demarcating and documenting border areas are used to establish the inter-state natural and maritime border. The Joint Boundary Committee (JBC) which included several state and federal government organisations, organised this process under

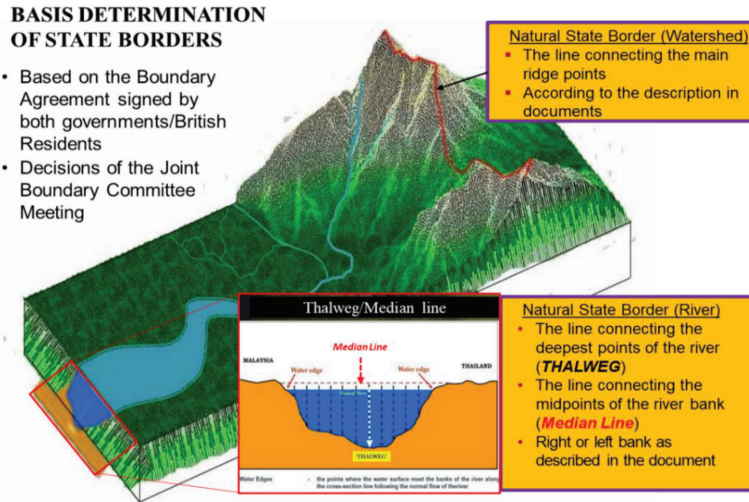


Figure 1: Basis determination of natural state border in Peninsular Malaysia (DSMM, 2021)

the direction of the Ministry of Land and Cooperative Development. The decision of the Cabinet at its meeting on 10 March 1993 while considering a Memorandum from the Ministry entitled “Delimitation and Demarcation of Inter-state Borders in Peninsular Malaysia” has created and established three Joint Border Committees (JBCs) which are: The Joint Technical Committee, the State Joint Border Committee and the National Joint Border Committee. This committee was established to coordinate the allocation, delimitation and demarcation of inter-state borders with funding borne by the respective states (Cabinet Council, 1993). In line with this decision, the Trust Account Committee for the Delimitation and Demarcation of Inter-state Borders in Peninsular Malaysia was created on 1 January 1994, under Section 9 of the Financial Procedure Act 1957. The Department of Survey and Mapping Malaysia (DSMM) set up this Trust Account expressly to receive donations from the state governments and then use those funds to pay for all costs associated with the coordinated state delimitation and demarcation activities. Peninsular Malaysia’s inter-state border is being delayed by several factors, including the following:

- According to the 19th century treaty signed by British colonialists, the river was chosen as the state border is difficult to resolve due to river flow changing course that has not followed the treaty caused by accretion and avulsion. This issue is discussed repeatedly in each meeting, with no decision leading to a specific solution.
- The state government does not prioritise state development by defining and demarcating state borders. The still blurred boundary lines it has slowed down local authorities’ planning and development of inter-state border areas.
- The change in state administration significantly impacted the establishment of interstate borders. The meeting to establish the state border was postponed due to the change in government. The role of the chief minister and the state government is vital as the change in the state’s politics will only delay the finalisation of the inter-state border.
- There are no defined guidelines for maintaining inter-state land and maritime borders, nor is there any mention of the necessity of coordination amongst the organisations in charge. Specific guidelines need to be made because the border area is

located above the common pool resource area to facilitate the governance of both state governments.

- v. Procrastination and delays in decision-making caused demarcation costs to overrun 211.85% from 1994 to 2006 and again overrun 153% in 2016 for unavoidable reasons (DSMM). The increased costs incurred due to delays in decision-making and demarcation will be to the detriment of both state governments.

First, land boundaries must be finalised to determine maritime boundaries (including natural borders such as rivers). To establish a lead agency for finalising maritime boundaries, a list of rights, restrictions and responsibilities must be addressed among the committees and stakeholders of the state's maritime boundary. Currently, other than DSMM, Malaysia still lacks the knowledge to lead the finalising of the inter-state border demarcation. Some practices and implementations of delimitation and demarcation of the inter-state border in Peninsular Malaysia produced by the JBC do not yet possess their full potential and capacity. The players' interactions during decision-making are still relatively slow because the appointment of the member elements involved is not based on expertise and experience, so, the problems raised drag on for quite some time and there is no best solution. The norms, limitations and obligations now being used to shape the JBC have not yet been considered. This case makes its enforcement more challenging. In order to effectively manage the determination of interstate borders, restrictions and enforcement are necessary. So, it is interesting to analyse the guidelines for JBC formation. This study sought to identify significant flaws in how current JBCs were formed and then develop reform guidelines to increase the efficiency of JBC decision-making. The external factors group of a set of rules-in-use are the elements that impact the action structure and behavioural circumstances of the players in the interaction. This study will use Ostrom's Institutional Analysis and Development (IAD) framework (2011).

Literature Review

In current practice, JBC in Peninsular Malaysia practices four process steps: Allocation, delimitation, demarcation and documentation based on the theory of Stephen B. Jones (1945). This process has been going on since 1994 but was implemented rather slowly due to delays in the delimitation stage, as there were mostly issues related to geographical and physical changes in the area to be demarcated. The process of border making according to Jones (1945), in theory, boundary-making is included in the category of delimitation and demarcation. He divides the formation process into four parts: Allocation, delimitation, demarcation and administration (Donaldson & Williams, 2008).

This study is based on the rules-in-use related to the Framework of Institutional Analysis and Development (IAD). Institutional Analysis and Development is a set of evaluation concepts for analysing the institutions' social structure, positions and rules. The political scientist introduced the analysis introduced by Ostrom (2011) as the best option to study and understand how the institutions operate and change upon implementing specific projects. Generally, IAD is a systematic approach to planning policy analysis activities compatible with a wide range of more specific analytic methods used in the physical and social sciences. Today, it is widely practised in common-pool resources governance such as forestry (Sinabutar, Suwarno *et al.*, 2014; Brodrechtova *et al.*, 2018), catchment areas (Nigussie *et al.*, 2017; Ran *et al.*, 2020), marine spatial planning (Rudd, 2017; Yatim, 2018), natural resources (Rahman *et al.*, 2017) and collaborative governance (Brisbois *et al.*, 2019).

Material and Methods

Study Area

This study was carried out in the JBC of Peninsular Malaysia's inter-state border. In Peninsular Malaysia, Figures 2 and 3 show the demarcation procedures used by the Department of Survey and Mapping Malaysia (DSMM)

for the 19 land boundary sectors and tensesa boundary sectors, respectively. Based on the circumstances as of 11 July 2019, Peninsular Malaysia’s interstate boundary length is predicted to be 2,540.6 kilometres long. A total of 1,223.5 kilometres (47.8%) have been finished and designated as of 31 December 2020. Only six border sectors: Pahang-Terengganu, Perak-Pahang, Pahang-Negeri Sembilan, Pahang-Selangor, Kelantan-Terengganu and Negeri Sembilan-Melaka have been completed to date. This study focuses on the delimitation and demarcation of interstate borders in Peninsular Malaysia, particularly between Selangor, Perak, Selangor and Negeri Sembilan. It has been selected as peninsular Malaysia’s JBC practice improvement pilot study.

As part of the research, a questionnaire with 44 validated questions was provided to 42 selected respondents including the Technical Committee of the Joint Border Committee and the major institutions DSMM, Selangor, Perak and Negeri Sembilan Land and Mines Office. The Director of Land and Mines of Selangor,

Subject Matter Experts Officers and Director of the Boundary Affairs Section of DSMM were interviewed face-to-face to receive feedback and validation on the previously circulated closed-ended questionnaire. The goal of the interview was to determine their knowledge and understanding of how JBC meetings and decisions were conducted and the flaws of the regulations since the JBC’s inception in 1993.

Nine marine border sectors are in the process of concluding the MoU and have not yet been delineated. In order to ensure that Memorandum of Understanding 1 (MoU 1) and Memorandum of Understanding 2 (MoU 2) are concluded and border delineation may be carried out, the State Authorities shall take aggressive measures as necessary. It was the first formed sector of the maritime boundary in Peninsular Malaysia. However, only one MoU of the Maritime Boundary Treaty — between the states of Melaka and Negeri Sembilan was signed on 15 October 2019 (Negeri Sembilan, 2019). Technical difficulties are not the only ones that come up; they become even more

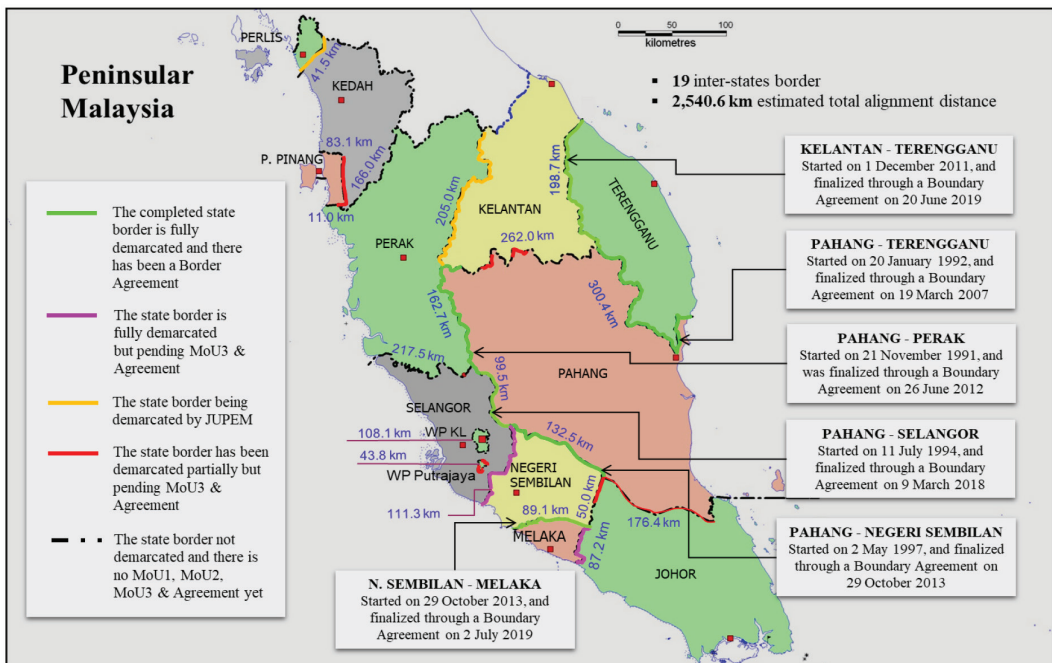


Figure 2: Status of Peninsular Malaysia’s inter-states border delimitation and demarcation project (land boundary) (DSMM Annual Report, 2020)

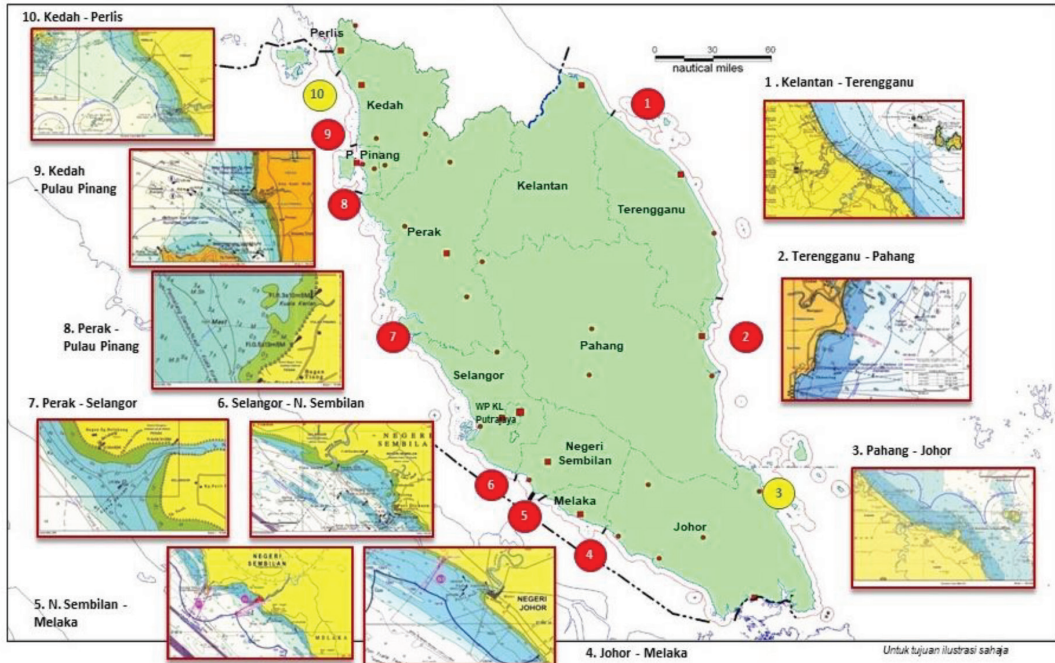


Figure 3: Status of the Peninsular Malaysian inter-states maritime delimitation and demarcation sector (DSMM, 2017)

important when deciding and establishing the boundaries at the State Authority level.

Natural boundaries created by rivers like as the Sanglang River (Perlis-Kedah border), Muda River (Kedah-Penang border), Kerian River (Kedah-Perak border), Bernam River (Perak-Selangor border) and Endau River (Pahang-Johor border) have not yet been designated as an interstate border. Due to various still-unresolved concerns, the state government has not yet given its assent to two river-based borders: The Sepang River (Selangor-Negeri Sembilan boundary) and the Kesang River (Melaka-Johor border). The Negeri Sembilan-Melaka border at the Linggi River has a single river boundary that both state governments agreed to in 2019. The two governments’ marine boundary Memorandum of Understanding was also finished that year (Negeri Sembilan, 2019).

Material

Standard Operating Procedure (SOP) of inter-states border delimitation and demarcation in

peninsular Malaysia (NRE, 2014) about the roles in the formation of the JBC and Terms of Reference (ToR) on the technical instructions are analysed as part of this study (DSMM). SOP and articles relevant to the creation of JBCs shall be the only sources for analysis, taking note of the implications for the former participants’ behaviour, performance and/or impact.

The Standard Operating Procedure (SOP) of Inter-state Borders Delimitation and Demarcation in Peninsular Malaysia, published by the Ministry in 2014, states that the Terms of Reference (ToR) and Memorandum of Understanding (MoU) between the states are used to determine interstate borders in Peninsular Malaysia. This committee was established to coordinate the allocation, delimitation and demarcation of interstate boundaries with funding split evenly between the two states. As depicted in Figure 4, finalising the state boundary involves multiple phases of MoU production, the Task Force (ToR) and the Agreement.

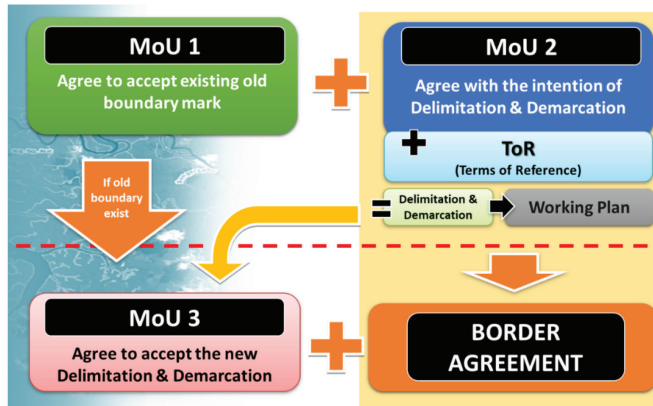


Figure 4: Flowcharts of delimitation and demarcation of inter-state border MoU (Cabinet Council, 10 March 1993)

In addition, every approval for the Interstate’s Border Delimitation and Demarcation must obtain the approval of the State Government Council and should be made known to His Excellency the Sultan or the Yang

di-Pertuan Negeri for approval. The lists of government agencies involved with the inter-state border committees covered in the research are shown in Table 1.

Table 1: Lists of Malaysia government agencies involved with the Joint Boundary Committee
Source: KeTSA

No.	Institutions	Ministry/Agencies
1.	Department of Survey and Mapping Malaysia	
2.	Department of Director General of Lands and Mines	Ministry of Energy and Natural Resources
3.	Department of Forestry	
4.	Land, Survey and Mapping Division	
5.	National Security Council	
6.	Economic Planning Unit	Prime Minister’s Department
7.	Attorney General	Attorney General’s Chamber
8.	State Government Secretary	
9.	State’s Land and Mining Department	
10.	State Legal Officer	
11.	State Finance Officer	
12.	State Economic Planning Unit	State Government
13.	Secretary of the State Security Committee	
14.	State Development Officer	
15.	Land and District Office	
16.	Local Authority	
17.	Representative of Armed Forces	Malaysian Armed Forces

Among the matters decided by the Cabinet in its meeting on 10 March 1993 while considering the memorandum from the Ministry of Land and Cooperative Development (now KeTSA) Paper No. 146/1865/93 entitled “Delimitation and Demarcation of Inter-state Borders in Peninsular Malaysia” agree:

- a. With guidelines (procedures) for the implementation of the delimitation and demarcation of the inter-state border in peninsular Malaysia,
- b. The cost of delimitation and demarcation of inter-state borders borne jointly by the state governments involved and
- c. Creating a Trust Account in the NRE for the delimitation and demarcation of the inter-state border in peninsular Malaysia can run smoothly.

In line with the decision, the Joint Border Delimitation and Demarcation Project Trust Account of the States of Peninsular Malaysia was established on 1 January 1994, in the Ministry of Land and Cooperative Development under Section 9, Financial Procedure Act 1957. This Trust Account is created specifically to receive contributions from the state governments and subsequently used to fund all expenses related to the work of inter-state border delimitation and demarcation carried out by DSMM. The roles in the formation of the Joint Boundary Committee (JBC) which have been established with the Cabinet’s approval are shown in Table 2.

Below are the stages, actions and responsibilities taken by JBC in Peninsular Malaysia, summarised from Standard Operating Procedures as shown in Figure 5.

Data Analysis

This study employs a quantitative and qualitative methodology with case study techniques (Creswell *et al.*, 2011). Questionnaires, document analysis, participant observations and interviews were employed to collect data (Sinabutar, 2014). The study’s objective was to identify informants using snowball sampling techniques,

i.e., some JBC members. Triangulation of sources and techniques is utilised to test data validity (Creswell *et al.*, 2018). The data were then analysed using content analysis following the IAD framework (Ostrom, 2011). Position rules, boundary rules, choice rules, aggregation rules, information rules, scope rules and pay-off rules. This classification is directly related to the structural elements of the action situation including participants, positions, authority actions, control, information, impact or results and cost-benefit analysis. Figure 6 depicts the relationship between the elements of rules-in-use and the situation’s action elements.

Based on an analysis of the rules governing the interstate border delimitation and demarcation plan, the institutional behaviour of the committee is developing the rules for the policy of state border demarcation along the Selangor-Perak and Selangor-Negeri Sembilan borders. In addition, the Institutional Analysis and Development framework for studying organisational behaviour incorporates the effectiveness components.

This study concludes by integrating the modified IAD framework with the effective practice of a joint border committee to propose a solution for the formation of institutional interstate border demarcation (Yatim, 2019). Using the Selangor-Perak and Selangor-Negeri Sembilan borders as a case study, this study investigates the relationship between the committees involved in the joint delimitation and demarcation of the borders. As the first stage of the study entails identifying the effective components of JBC practice, the framework focuses primarily on analysing the rules influencing the Action Situations section. The Action Situations section clarifies the specific knowledge adapted by the framework, the actors and the institutions involved in the activity and their interaction patterns (Suwarno *et al.*, 2014). Consequently, effective governance of joint border demarcation practice is being added to the external variable platform as a new variable. Figure 7 depicts the newly adopted framework for the research.

Table 2: Roles in the formation of the Joint Boundary Committee (JBC)
 Source: Standard Operating Procedure (SOP) of inter-states border delimitation and demarcation in Peninsular Malaysia (NRE, 2014)

National Joint Border Committee (NJBC)	State Joint Border Committee (SJBC)	Joint Technical Committee (JTC)	Trust Fund Committee
Roles			
1. To determine the priority of the border alignments of the states in Peninsular Malaysia as a whole.	1. Certification and agreement of the identified boundary areas to be demarcated.	1. To solve technical problems arising in the work of delimitation and demarcation of inter-state boundaries.	1. To decide on policies and procedures about the receipt and use of money in the Fund following the purpose of the establishment of the Fund.
2. To process and consider applications from states to carry out inter-states border delimitation and demarcation works.	2. Coordinating the work of inter-state border delimitation and demarcation in the field.	2. Coordinating the work of inter-state border delimitation and demarcation in the field.	2. To decide on the Fund's Annual Expenditure Estimates and the Fund's Supplementary Expenditure Estimates.
3. To coordinate all aspects of policies related to state boundary demarcation.	3. To prepare matters relating to the preparation of MoUs, Agreements and Gazettes for boundaries that have been delimitated and demarcated.	3. To prepare matters relating to the preparation of MoUs, Agreements and Gazettes for boundaries that have been delimitated and demarcated.	3. To ensure that all reports and statements relating to the Fund are prepared and submitted as stipulated in the Deeds, Treasury Instructions and relevant Circulars.
4. To take appropriate actions on the SJBC report.	4. To give consideration and agreement to matters recommended by JBT.	4. To conduct further studies for the preparation and stipulation of ToRs and MoUs for inter-states border delimitation and demarcation.	4. To ensure that the Fund has a credit balance and is not overdrawn when approving the Fund's Expenditure Estimates.
5. Reporting the progress of delimitation and demarcation work in the field and related issues to NJBC.	5. Reporting the progress of delimitation and demarcation work in the field and related issues to NJBC.	5. To conduct a preliminary study for State's Council approval.	5. To determine the amount invested in fixed deposits administered by the Accountant General's Department of Malaysia.
6. To report and certify changes in state boundaries to NJBC if they occur/are found during the delimitation and demarcation work carried out.	6. To report and certify changes in state boundaries to NJBC if they occur/are found during the delimitation and demarcation work carried out.	6. Planning and determining priority areas for the implementation of inter-states border delimitation and demarcation works.	6. To determine the amount invested in fixed deposits administered by the Accountant General's Department of Malaysia.
7. To review and evaluate the progress of state boundary surveying progress and resolve issues/problems arising.	7. To review and evaluate the progress of state boundary surveying progress and resolve issues/problems arising.	7. Planning mileage charts and monitoring the progress of inter-states border delimitation and demarcation.	7. To determine the amount invested in fixed deposits administered by the Accountant General's Department of Malaysia.
8. To report and evaluate the progress of state boundary surveying progress and resolve issues/problems arising.	8. To report and evaluate the progress of state boundary surveying progress and resolve issues/problems arising.	8. To report the progress of inter-states border delimitation and demarcation work in the field and related matters to SJBC.	8. To determine the amount invested in fixed deposits administered by the Accountant General's Department of Malaysia.
9. To report state boundary changes to SJBC if they occur/are found during the inter-states border delimitation and demarcation work carried out.	9. To report state boundary changes to SJBC if they occur/are found during the inter-states border delimitation and demarcation work carried out.	9. To report state boundary changes to SJBC if they occur/are found during the inter-states border delimitation and demarcation work carried out.	9. To determine the amount invested in fixed deposits administered by the Accountant General's Department of Malaysia.
10. To identify state boundaries that need to be demarcated.	10. To identify state boundaries that need to be demarcated.	10. To identify state boundaries that need to be demarcated.	10. To determine the amount invested in fixed deposits administered by the Accountant General's Department of Malaysia.

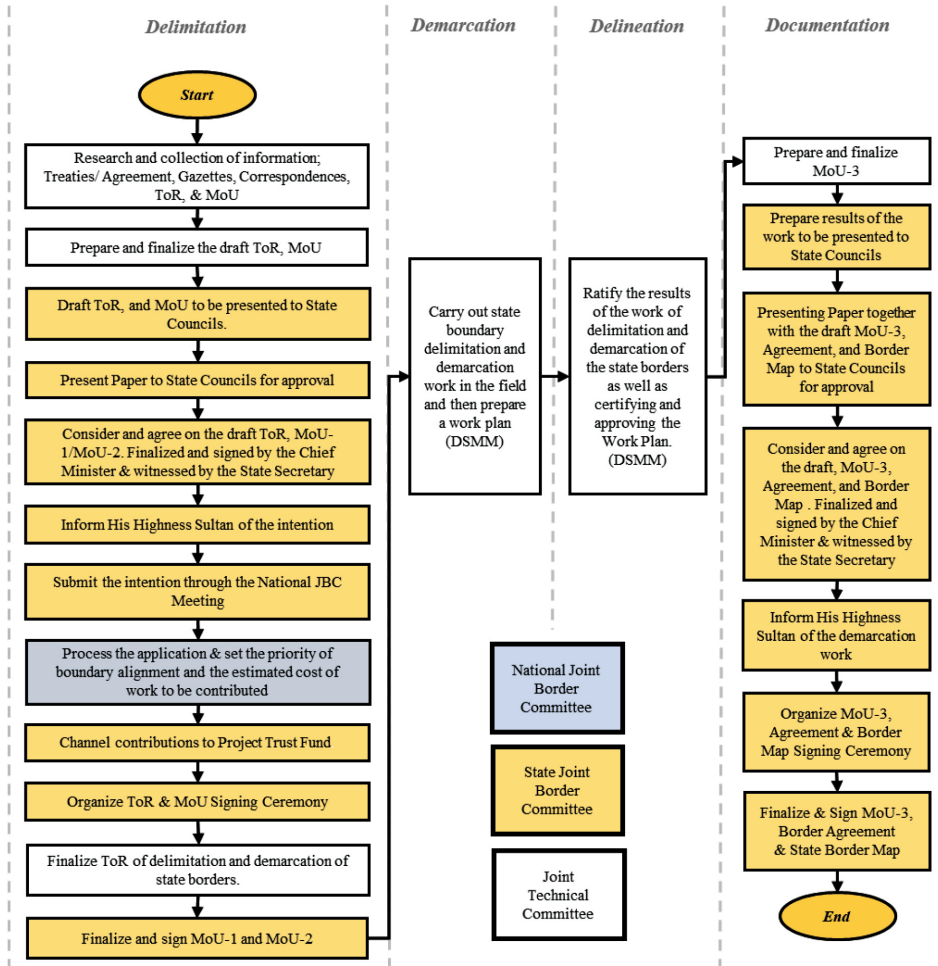


Figure 5: The stages flow, actions and responsibilities taken by JBC in Peninsular Malaysia summarised from Standard Operating Procedures

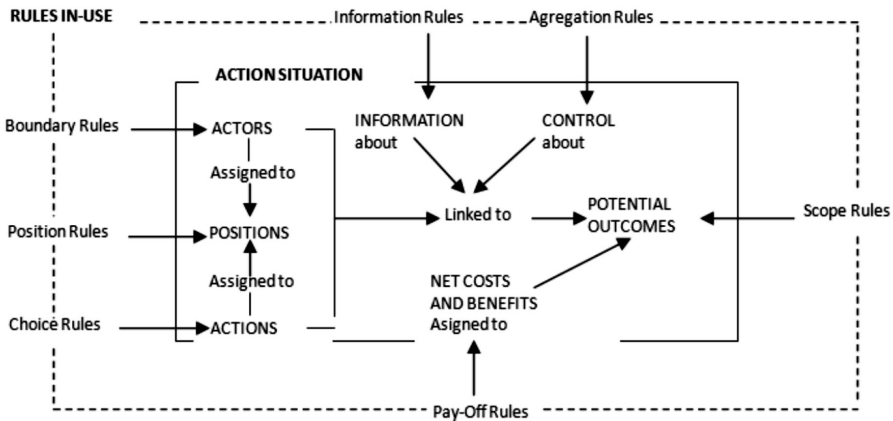


Figure 6: Linkage rules-in-use to action situation (Ostrom E., 2011)

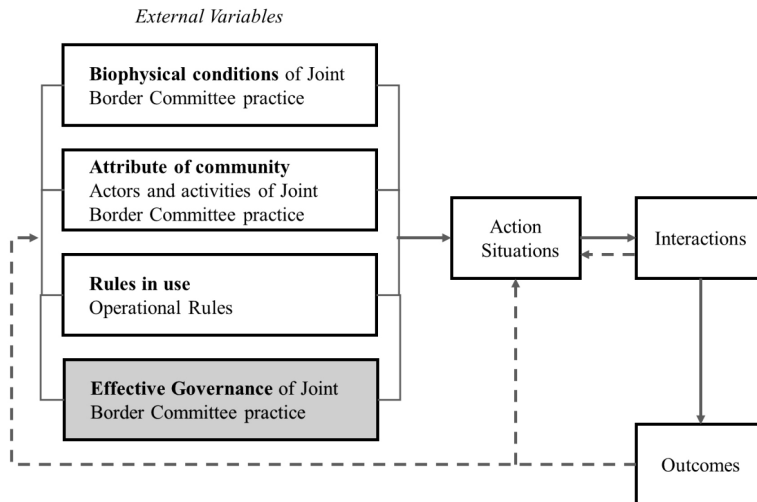


Figure 7: Modified IAD framework for the research

Conceptual Framework of Research

According to Trung Ho *et al.* (2014), a conceptual framework for JBC is much needed. Still, some steps must be streamlined before that to make the inter-state border demarcation progress more effectively. Firstly, committees need to know more in-depth about the factors of effective border making, as stated by Donaldson (2013) in *Creating Effective Structures and Practice Boundary Commissions*. There are five keys to forming an effective joint boundary commission: Constitutive agreement, mandate, structure, technical specifications and dispute resolution mechanisms (Donaldson, 2013). The federal and state government in charge of the JBC will divert their focus not solely on the technical and legal aspects of border demarcation but on the institutional and organisational behavioural aspects.

Second, institutional behaviour assessment must be carried out on decision-making committees, especially the State Joint Border Committee and the Joint Technical Committee. Behavioural assessment analysis will be

implemented according to the population of individuals, groups and organisations involved in the two committees. Thus, the expected outcome is individuals who are truly qualified in decision-making without delaying the process related to the implementation of state boundary demarcation. With behavioural analysis on the population involved, the organisations involved in the JBC are expected to provide more effective commitment among the committees.

Finally, the JBC involved will go through Institutional Analysis and Development (IAD) to establish an updated integrated rule-in-use specifically focusing on effective state boundary demarcation by streamlining legal aspects and pending development in border areas, which have not been implemented at the moment. The IAD also added to the state government's knowledge that involved the importance of expediting the demarcation of state boundaries and its impact on the state's economy. The author will deliver the conceptual framework into a scheme of thought as follows:

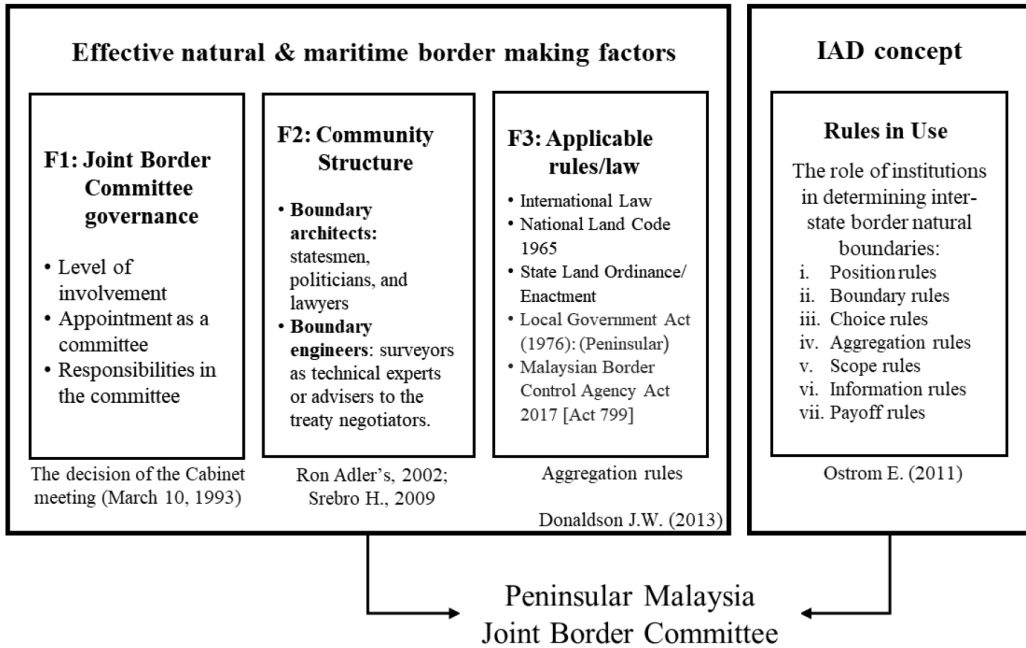


Figure 8: Conceptual framework for effective inter-state border delimitation and demarcation practice in Peninsular Malaysia

To make the JBC more effective, the state border scholar's recommendations for establishing the JBC should be implemented. Next, the effective factors must interact with analysing organisational behaviour and IAD implementation. As described in the results and discussion, the reorganisation of the JBC produces the interaction outcomes.

Results and Discussion

Interaction and the Role of JBC

In several Joint Border Committee technical meetings conducted since 2014, problems related to river flow changes were the main cause of delays in border demarcation. The time taken was too long to investigate in the field and the administration. As a result, the MoU is not signed as long as a mutual agreement is not reached. The entire border sector could not be demarcated because as long as MoU 2 was not signed by both states, survey work for boundary demarcation in the field could not be carried out. Funds for demarcation using trust accounts

will only be spent after MoU 1 is signed by both states (DSMM). The changing course of a river should not influence a state's border. MoU 1 or MoU 2 should be able to be signed so that the marking work can be started (Prescott & Triggs, 2008; Jerome Bouyjou, Donaldson, 2011; Srebro, 2018).

As the border demarcation work faced various problems related to issues in the field such as unpredictable geographical conditions, river flow shifted due to accretion and avulsion, which no longer followed the original treaty, political transition resulted in a change of state government, bureaucratic problems and several other factors, the process of demarcation between states has been slow (Kokha, 2019). The federal government believes that the delimitation and demarcation of state boundaries are very important (Hemananthani *et al.*, 2018). Cabinet Council has approved a proposal that the state government will bear the entire cost of demarcation work in a ratio of 25:25:50. The Federal Government, with the approval of the Cabinet Council will bear 50% of the total cost

that has exceeded the earlier estimate. At the same time, the two adjacent states will bear the cost with a ratio of 25:25 which is 25% for each state. Governments at both the federal and state levels will face a number of financial challenges due to this (Cabinet Council, 2016). Therefore, the longer the state boundary is delayed, the higher the operating costs will be borne by the Federal Government and the States Government involved.

Another major reason for the delay in finalising the inter-states border was the state government's transition (Srebro & Shosany, 2006). This government transition resulted in the postponement of the meeting to finalise the state border MoU signed by the two Chief Ministers of the state. It is difficult to decide if the political situation is unstable because of the boundary process by the state led by the Chief Minister or Menteri Besar. The transition of ruling politics significantly impacted the determination of inter-state borders. For instance, the state border coordination meeting between Perak and Selangor has been postponed several times since 2018 due to the transition of the ruling political party in Perak (Zahratulhayat & Mohd Nasaruudin, 2020). Hence, decisions and solutions on issues that arise cannot be made and indirectly will increase the cost of inter-state border demarcation.

According to these findings, the JBC's participation in the interstate border committee has not resulted in efficiency because the rules-in-use being used are ineffective because they are at odds with norms. Some jobs are seen to overlap. If the rules deviate from the accepted norm, they will not be effective and may even result in expensive future transactions.

Analysis of Rules-in-Use

The rules-in-use will have an impact on each variable in an action circumstance. In the IAD framework (Ostrom, 2011), the rules put into place will impact the actors in the interaction's structure and behaviour. Seven rules of action are used to construct situations and determine which actions occur (McGinnis, 2011; Ostrom, 2011).

If rules are not created with common sense, it will be unclear what acts are necessary, forbidden or allowed (Ostrom, 2011). Understanding the rules in use that are in place in an institution is essential. In other words, institutional rules' effectiveness can be assessed by examining the seven different rule configurations now in use. The relationship between JBC and the action context determines how well interstate borders are delineated and demarcated. This interaction will ensure that the interstate border is drawn in a way that complies with the ruling and is recognised by all parties. The rules, particularly those that determine the members, roles and authorities, rights and obligations, funding and accountability will impact how effective these interactions are. Analysing the acceptable features of any regulations that may affect how the interstate border is demarcated will help gauge the capacity of the government that the JBC has constituted. In this situation, policy analysis might look at how consistently the composition guidelines have been applied and whether there is a disconnect between intended goals and actual results. This paper will focus on the interstate border between Selangor-Perak and Selangor-Negeri Sembilan. It is necessary to identify significant flaws in the formation rules of existing JBCs. The outcomes are described in the subsequent paragraphs.

Position Rules

Position rules establish roles for participants, choose which institutions have positions and specify the duties of those institutions. It is established at the national level as either a National JBC, State JBC or Joint Technical Committee function. At the Peninsular Malaysia level, the Secretary-General of the Ministry determines the position of the JBC including its approved authority and duties (Cabinet Council, 1993). There is no clearly defined mechanism for determining JBC's organisational structure. The position of the JBC is automatically determined by Cabinet decisions, with the Secretary-General of the Ministry serving as its head and officers from various departments at each level of work serving as component members.

There is a lack of balance in decision-making because many government administration personnel lack expertise in the technical area of borders. Coordination is ineffectively facilitated by ministries, which are hindered by protocol and ranking levels. Ineffective coordination resulted and the Ministry made some decisions unilaterally. The facts contained in the positional rules, namely:

- (1) The JBC continues to adhere to its normative rules. There should be a justification for the role and related contributions, for instance, in terms of how the contributions of the institution and its head, as well as other members are not cumulative.
- (2) The regulations above must specify the duties and responsibilities of the members of the appropriate elements as their tasks and functions so duties and responsibilities are still carried out normatively. Before installing placemarks, DSMM is responsible for preparing and providing information and evidence documents such as maps and aerial photographs. It will be described which division of the Department of Irrigation and Drainage is responsible for rivers in border regions. The National Archives contains historic border treaties and agreements from the past. Using a space plan, the Forestry Department evaluates the forest. The same applies to the roles and responsibilities of other members.
- (3) There are no precise job descriptions or systems for distributing employment. The position corresponds to the position in the organisational structure. Similar to their duties and authorities, the roles they are specifically responsible for are not specified.

Boundary Rules

The boundary rules outline the qualifications a participant must fulfil to hold offices such as member or director credentials and they directly influence the participant in an action situation. Mechanisms and criteria for determining who is qualified to serve in any position on the JBC are outlined in this section. They have not specified

the conditions in detail. Although membership is stipulated in the JBC's Standard Operating Procedures, the requirements for membership have not been established, as each member is automatically assigned an officer attached to the structure or another officer authorised to be appointed as a member. Every level officer in an organisational unit or department automatically joins the JBC. In an ideal world, the rules under the Cabinet Council (1993) would have established the criteria and conditions for a person to become a member, as the rules above allow for the determination of members. According to the rules mentioned above, JBC members consist of elements that can be interpreted to select competent members with the necessary expertise. Consequently, JBC has no right to assert liability. Due to retirement or transfer, JBC membership is not associated with successor members. Automatic replacement occurs without the assignment of duties and responsibilities.

Choice Rules

Choice rules determine the types of actions or formal authority for each position. In other words, these rules determine the Ministry and regulate the JBC's rights and responsibilities as the boundary organiser. Rights and responsibilities remain normative. Each member's rights were not governed by the rules, which focused more on stipulating obligations. Accordingly, fewer stringent requirements are imposed by the rules. The primary responsibility of the rule is to outline the steps to resolve issues relating to the interstate border, forest, river and land in the border region. The completion and settlement mechanism were not determined throughout the project's implementation. The Chief Minister determines the choice and authority of the State Government. In some states, the choice has not been implemented due to a change in the ruling political party. The Selangor-Perak border, for instance has not been determined since 2011 and has been observed since then. Even since the British colonial era, 200.5 km have not been demarcated but mapped.

Aggregation Rules

Whether individuals or organisations decide on actions individually or collectively, these rules governing decision-making mechanisms must be reached through consensus. This rule will govern matters related to the maximum income that can be received or deducted for the set. The determination process will be completed if it meets the Department of Survey and Mapping Malaysia (DSMM) requirements for technical provisions, legal provisions and complete documentation. In the JBC, decision-making arrangements include: (1) A meeting chaired by the chairman, (2) If when the chairman is unable to attend a meeting, he can delegate complete decision-making and document-signing powers to the employee designated by a power of attorney and (3) The authority designated by a power of attorney may be given complete authority to make decisions and sign documents if the member is unable to attend the meeting. At least three times per year, national, state and JTC-level border meetings should be held. As its significance is consistently overlooked at state and federal levels, it is assumed that state boundaries do not generate revenue and return to state revenue. The same is true for the national border meeting, which the Ministry's general Secretary chairs because the Ministry prioritises other matters. A subordinate cannot assume the chairmanship. Progress along the state border is ostensibly the responsibility of the state government, which is chaired by the State Secretary and reports to the Chief Minister.

Nevertheless, political instability in the involved states can delay the completion of state borders. Due to the postponement of meetings and discussions regarding the determination of state boundaries, no decision could be made. Although the Joint Technical Team chaired by the State Director of Lands and Mines always engages in formal and informal discussions, the decision cannot be implemented because any decision made at the JTC level must be discussed at the State JBC and National JBC levels before a final decision can be made. This persisting procrastination requires immediate

corrective action. As a result, 914.6 km (36%) of problematic state natural boundaries such as rivers have been delineated in a previous treaty but have not been determined. It is proposed that boundary demarcation be conducted in non-problem areas while problem areas are separated for discussion in the "Outstanding Boundary Problem" (OBP).

Information Rules

The information rule specifies the expected output of an action performed by a participant in a position. These rules have a direct impact on the information provided to the JBC regarding situational actions. Although reporting rules and standards for the information have been established, it has not yet been established. The information aims to inform the state government regarding the development of the country's borders. Observe the situation on the ground to determine which rights could not be resolved by both parties when the boundary pillar was erected; mark boundary reference points at each distance specified in the ToR and MoU. Finally, the Director-approved work plan of the Survey and Mapping Department should be submitted to the involved state government to implement the planned development in the border region. Regarding the JBC's obligation to respond to and resolve disputes caused by the claims of both parties, only general provisions exist. In addition, the rule stipulates neither deferral nor intentional penalties; the responsibility is minimal.

Scope Rules

Conditions are designated as mandatory, prohibited, or permissible by the scope rules. This rule determines the outcome of a situational action desired by the JBC. Permitting the formation of the JBC is delegated to the state's Chief Minister and the state government makes administrative preparations via the director of state lands and minerals. The SOP explains that the JBC is responsible to the Ministry for implementing state border demarcation. During the demarcation process, the JBC was allowed

to determine measures to resolve issues at the state border.

Consequently, such activities are only mentioned politely during progress meetings. No specific decisions were made to address the issues that arose. As a result of JBC interaction, a qualified state border area is produced. Those who do not qualify will be discussed multiple times without a defined solution scope. According to the Terms of Reference and Memorandum of Understanding for the Border Agreement, DSMM should be permitted to propose settlement measures that comply with the treaty.

Pay-off Rules

The pay-off regulations define expenses and benefits for the committee, as well as rewards and limitations. In 1994, DSMM estimated that Peninsular Malaysia's interstate border delimitation and demarcation project would cost a total of RM10,401,300 to operate (Cabinet Council, 1994). Nonetheless, at a meeting of the National Joint Border Committee on 18 October 2006, DSMM presented an updated estimate of these cost overruns due to unavoidable factors. The Cabinet Council agreed at the outset of the JBC's formation that the cost of delimitation and the border demarcation would be shared equally by the two neighbouring states. On 26 August 2006, JBC reported a 211.85% increase in costs due to several unavoidable factors, including increased equipment maintenance costs, fuel costs, transportation costs and annual employee allowances. The Cabinet Council approved that the Federal Government would fund 50% of the total estimated cost (Cabinet Council, 2006). The process of demarcation between states has been sluggish due to some obstacles relating to issues in the field such as the unpredictability of geographical conditions, river flow shifting due to accretion and avulsion that no longer followed the original treaty, political transition resulting in a change in state government and bureaucratic issues, among others. The JBC reported again on 19 May 2016 that the cost of delimitation and demarcation of the inland to be demarcated

had increased by 153%. In 2006, the cost of delineating developing areas was 102% higher than in 2017 (Cabinet Council, 2016). The federal government considers the delimitation and demarcation of state boundaries to be of the utmost importance (Hemananthani *et al.*, 2018). Cabinet Council has approved a proposal that the state government will bear the entire cost of demarcation work in the proportion of 25:25:50. The Federal Government with Cabinet Council approval will bear 50% of the total cost that has exceeded the original estimate.

In contrast, the two neighbouring states will bear the cost of 25:25 or 25% each. This will have significant financial ramifications for the State and Federal governments (Cabinet Council, 2016). Therefore, the Federal and involved state governments will incur greater operating expenses the longer the state boundary is delayed.

Improving Rules-in-Use of JBC

In essence, reform policies establish norms, rights and limitations. Reform is not meant to halt the sociological process during collective agreement-making. There will be obstacles, particularly for those who are typically overly strict with bureaucracy and view regulation as the black-and-white side. It is anticipated that Peninsular Malaysia's interstate border will be demarcated ineffectively by the JBC, which acts as a border regulator. The assignment policy will prioritise technical and administrative considerations, although the institutions that define the borders are the real culprits, with social and political issues coming in second. In addition, the budget allocation is not based on social issues but estimates for the next five years. The structural officer is responsible for determining element members and issues that arise that are not resolved effectively or are delayed. This can reduce the effectiveness of demarcation. The DSMM will determine the success of interstate border demarcation. At the same time, the application of the restrictions will be determined by the rules they employ. The formation of the JBC is governed by rules

disregarding values, norms and constraints. Therefore, the rules do not effectively direct the JBC to collaborate during decision-making.

In light of this, the current structure of the committee under the JBC is complex, resulting in a diversion in the work scope of each progress meeting and inefficiency in the implementation of border making. The existence of the State Joint Border Committee overlaps with the function of the Joint Technical Committee, as both committees are solely concerned with the border marking and decision-making aspects in border regions. There will supposedly be no overlap between the roles of the two committees. The State Joint Border Committee will regulate aspects of legal advice while the Joint Technical Committee will be in charge of making technical recommendations. This reorganisation will provide a clear distinction for each discussion to carry out its functions, thereby, accelerating

the interstate border demarcation process in peninsular Malaysia. In contrast, from a technical and legal standpoint, it is essential to pay greater attention to the finalisation of interstate borders. Therefore, SOPs and ToRs must be revised to facilitate this procedure.

Based on these findings, it can be concluded that the rules governing the implementation of prohibitions and restrictions for natural boundary areas such as rivers were implemented slowly due to unresolved issues. The actual results of the limit cannot be used to mitigate the problems posed by the time-dependent increase in demand. Improving performance necessitates additional rule modifications at the organiser level. The rules governing the use of JBCs are not yet effective, so, decision-making interactions are typically slow to implement. Table 3 displays the repair guidelines utilised in the JBC's improvement.

Table 3: To improve rules-in-use of JBC

Component to Improve Rules-in-Use	Criteria Used to Improve Rules-in-Use	Form to Improve Rules-in-Use
Position rules	Assign a position based on the duties and functions rather than on the structure of the post	Provide job descriptions and positions within the border organisation
Boundary rules	Avoid direct appointments by the members of the institutions involved	Develop criteria and mechanisms for assigning members
Choice rules	Strengthen the authority of the JBC in solving technical and administrative issues	Formulate a mechanism to resolve the rights and claims of both parties
Aggregation rules	Establish prompt decision-making mechanisms	Reorganise Standard Operating Procedures (SOP) decision-making
Information rules	Determine the types of information needed to facilitate decision-making, for example, progress reports and problem-solving in the field	Enforcement of the rules by prescribing penalties if the decision is not directed to achieve the restriction of progress within the specified period
Scope rules	Describe the outcome to be achieved from the interaction	Develop an action plan for any interaction (criteria and indicators of the success of interstate border demarcation)
Pay-off rules	Not only top-down funding from the states involved in the Trust Account in the open period	Proposed funding through the federal government budget within a prescribed period to avoid cost overruns

Conclusion

The interstate joint border committee must be well-run, considerate and capable of ensuring that both entitled and non-entitled parties can demonstrate their legitimacy and validity. To achieve this goal, the JBC was responsible for regulating border delineation which is the process of defining state border territories. As a result, just 47.8% of the area has been defined since 1993. The findings show that the JBC rules are now in use. However, this presents a chance to reorganise the SOPs because they do not disclose factual difficulties clearly and their execution entails role overlap. The JBC's decision-making interaction has not been guided by position, boundary, choice, aggregation, information, scope or pay-off rules. JBC normatively applied them while the rule-in-use was in effect. JBC favours seeking physical colour over open space and transparent coordination and consultation of stated claims for resolving social concerns. As a result, each part of the current rules has to be improved.

To avoid procrastination in interstate border demarcation work, decisions must be made by truly qualified parties. To prevent roles from duplicating between committees, the SOPs must be reorganised within the JBC. Adapting effective factors with institutional behaviour analysis and IAD is necessary to distinguish interactions. The participation of agency arrangements, authority and positioning, obligations and rights and accountability mechanisms have not been considered in the JBC's development. Since the analysis' findings show that seven types of rules have discovered substantial flaws in creating JBCs, a configuration of seven types of rules can be employed to make improvements. This reorganisation will provide a clear distinction for each discussion to carry out its functions. Such certainty will also assure to expedite the process of inter-state border demarcation in peninsular Malaysia in line with the 16th goal of the Sustainable Development Goals (SDGs) namely peace, justice and strong institutions that promote peaceful and inclusive societies

for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

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