

## THE MARITIME GOVERNANCE CONCEPT IN THE CONTEXT OF ANTI-CORRUPTION, LOGISTICS CYBER SECURITY AND NATIONAL CUSTOMS TRANSIT SYSTEM'S ISSUES AND CHALLENGES IN MALAYSIA

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**Abstract:** Maritime governance is an elusive and formidable concept to define and operationalise since its meanings, interpretations, processes and procedures differ according to the approach, configuration, context, goal, form, level and scope used. The transboundary and complex nature of contemporary maritime environments signify the existence of increasingly complicated systems and forms of maritime governance. Hence the concept of maritime governance must be non-exhaustive, fluid and encompassing so as to be able to illustrate its applicability in different maritime sectors. The problem is that the above gives rise to confusion and misinterpretation of the elasticity of the concept; especially when it attempts to be “interactive, inclusive and integrative” while being contextually exclusive at the same time. The objective of this preliminary study is to illustrate the dichotomy of the concept of maritime governance in the context of anti-corruption, logistics cyber security and national customs transit system by focusing on their respective issues and challenges. A systematic literature review of the operations of the maritime governance concept in maritime anti-corruption, logistics cyber security, and national customs transit system systems of governance has been conducted. Relevant secondary data from official websites, publications, reports, national data sets and legal frameworks have been reviewed and thematically analysed. Findings reveal that the dichotomy of the maritime governance concept arise because of the compositions, operations, frameworks, as well as issues and challenges that are faced in these three areas. Hence it is recommended that more in-depth studies be conducted to illustrate whether the findings are applicable to other maritime sectors.

Keywords: Maritime governance, challenges, anti-corruption, logistics cyber security, national customs transit system.

### Introduction

The maritime sectors have a long and vast history as the oceans of the world. The navigable waterways have always played key roles in the development of human societies by providing passage for various types of vessels; thus, enabling economic, political, social and cultural activities and exchanges, as well as exploitation of resources to take place, between coastal cities, countries, regions and continents. The maritime sectors comprise organizations and activities such as maritime transportation and engineering, aquaculture, commercial fishing, defense, recreational sailing and sports, marine and ocean research, training academies and centers, exploration and exploitation of marine sources

of energy, maritime professionals and seafarers' associations and unions, and, professional and supporting services for maritime-related activities (Wind Rose Network, 2021). As such maritime governance is extremely important given the extensive and complex nature of the maritime sectors.

However, it is important to note that the task of defining maritime governance is daunting because it encompasses government and non-government entities, each with different levels of capabilities, jurisdictions, competencies, processes and procedures working in partnership vertically and horizontally across national, regional and international levels and boundaries. Indeed, the level of interdependency between

the numerous core and peripheral stakeholders in a continuously changing and dynamic maritime environment poses difficulties if one tries to segregate the numerous forms of maritime governance in existence. This is because maritime governance is not only overlapping, but is also “interactive, inclusive and integrative” in nature (Bowman & Smythe, 2019). The problem is that the above gives rise to confusion and misinterpretation of the elasticity of the concept; especially when it attempts to be “interactive, inclusive and integrative” while being contextually exclusive at the same time. Hence it is the objective of this article to illustrate the dichotomy of the maritime governance concept by examining it in the context of anti-corruption, logistics cyber security and national customs transit system’s issues and challenges. This is because it is not only wise to examine the problem from the authors’ respective research areas, but it is also impossible to properly cover, and do justice, to all areas and dimensions of the applications of maritime governance within the confines of this article. Hence this article begins by introducing the topic, followed by the methodology used. Findings and discussion on the issues and challenges of maritime anti-corruption, maritime logistics cyber security governance, and maritime national customs transit system governance, are then presented. The article ends by putting forward observations on the maritime governance concept and future actions that must be taken.

### **Methodology**

This preliminary study uses methods that are systematic and replicable in the identification, selection and critical assessment of appropriate research, as well as in the collection and analysis of data gathered from the studies that are incorporated in the review, so as to answer the research problem. These steps have been undertaken whereby: (i) existing reviews on the topic of maritime governance in the context of anti-corruption, logistics cyber security and national customs transit system have been checked and assessed; (ii) the research

question formulated is found to be clear and focused; (iii) a review protocol is formulated comprising dimensions of criteria for inclusion, strategy used for searching materials, selection of study, extraction of data, appraising quality and synthesis of data; (iv) the search strategies used comprise a search of the relevant databases to identify the relevant keywords and terms incorporated in titles, abstracts and subject descriptors, as well as bibliographies and reference lists; (v) the materials identified are categorised according to their respective criterion (e.g., critical studies, opinion papers, case studies, exploratory studies); (vi) data extracted thematically comprises expert opinions and qualitative research data; and finally (vii) meta-synthesis of qualitative data is undertaken, where possible.

### **Findings and Discussion**

A total of 36 journal articles, reports and official publications of national and international government agencies, policy think tanks’ research reports, reports and opinion pieces of international and national maritime companies and organizations as well as relevant stakeholders, that have met the criteria for inclusion, have been reviewed. These resources have been identified after consulting top academic research databases, namely Scopus, Web of Science, Science Direct, Directory of Open Access Journals (DOAJ), and JSTOR as well as the data bases of ASEAN, the United Nations, International Maritime Organization (IMO), Maritime Anti-Corruption Network (MACN), Interpol, International Chamber of Shipping, DTU Orbit, European Network and Information Security Agency (ENISA), Malaysian Anti-Corruption Commission, Malaysian Communications and Multimedia Commission, SAFETY4SEA, Transparency International (TI), Deloitte, Malaysia Integrity Institute (IIM), Customs and Excise Department, the Immigration Department, the Ministry of Transport (Marine Department, Port Authorities, Maritime Institute of Malaysia), Department of Environment, the Royal Malaysia Police, the

Malaysian Bar and Bar Council, the Securities Commission Malaysia and the Companies Commission of Malaysia, Centre to Combat Corruption and Cronyism (C4), Transparency International-Malaysia (TI-M), and Suara Rakyat Malaysia (SUARAM), Malaysia Shipowners' Association (MASA), Malaysian Seaman Association, United Seafarer Malaysia Organisation, National Union of Seafarers of Peninsular Malaysia (NUSPM), National Security Council (NSC), and the Department of Inspection, Quarantine and Services (Ministry of Agro and Food Industry). Searching techniques used comprised relevant keywords and terms incorporated in titles, abstracts and subject descriptors, as well as bibliographies and reference lists, namely "maritime governance", "maritime anti-corruption", "maritime logistics cyber security governance", "maritime national customs transit system governance", "issues", "challenges", "concept", "legal framework" and a combination of those keywords and terms. The main themes identified are "composition", "interactions", "operationalization", "problems", "issues" and "challenges".

### **Maritime Anti-Corruption Governance**

Corruption is commonly referred to "...as the abuse of entrusted power for private gain" (Transparency International, 2021). It also encompasses a state of degeneration, spoiling, disorder, harm and disruption directly or indirectly to the society as a whole, its member(s) and/or their environments and surroundings (Ahmed, 2019). This is because corruption enables those who engage in such conducts not only to benefit themselves, but also their personal or business associates, by intentionally not complying with the arm's-length principle (whereby personal or other relationships' considerations should not influence economic decisions if numerous parties are involved) (Tanzi, 1995). Corruption in the public and private sectors assumes numerous forms, the most common being bribery, collusion and cartels, conflicts of interest, extortion, embezzlement, fraud, insider trading, nepotism and patronage (Grabosky

& Lamour, 2000; Transparency International, 2021; Forgues-Puccio, 2013).

It is imperative to note that the extensive and complex nature of maritime sectors provide numerous opportunities for corruption to take place. These opportunities arise because of required interactions between various public bodies, private entities and their respective employees (e.g., bankers, charterers, clearing and forwarding agents, customs officials, import and export licensing officials, logistics providers, marine surveyors, product safety certification and standards officials, rail operators, terminal operators, trucking companies and vessel owners) in activities and services associated with the movements and clearance of goods and people across international boundaries. For example, corruption is a major threat to the shipping industry, which forms the backbone of global trade. Indeed, the competitiveness and/or survival of shipping companies can be adversely affected because corruption adds more than 10% to the costs that they have to bear when conducting business at the international level (Deloitte, 2015). Indeed, the most prevalent forms of maritime corruption that have been identified are under invoicing, extortion, payment of bribes to secure contracts, making illicit payments to marine surveyors, facilitation payments to customs officers, and fraudulent letter of credit (LC) (United Nations Conference on Trade and Development [UNCTAD], 2009; Deloitte, 2015).

### ***The Composition And Legislative Frameworks Of Maritime Anti-Corruption Governance***

In a nutshell the maritime anti-corruption governance comprises core and peripheral organisations and entities at the national, regional and international levels, as well issue networks and occasional interested individuals. Spearheading the anti-corruption drive are the giants and major stakeholders in the shipping industry who came together to form the Maritime Anti-Corruption Network (MACN) in 2011. The International Maritime Organization (IMO), as the international shipping regulator

with 174-member states, has also been showing its support to MACN's efforts. It is currently working on a guidance document to mitigate incidences of maritime corruption. The guidance will align IMO's maritime industry regulations and procedures with the United Nations Convention against Corruption (UNCAC); which was adopted in 2003 and came into force in 2005 (Safety4Sea, 2019). At the regional level, the ASEAN Parties Against Corruption ASEAN-PAC (previously known as the Southeast Asia Parties Against Corruption (SEA-PAC) which was established in 2004), is a platform for joint actions between member countries for combatting and eradicating corruption on land and at sea. The ratification of UNCAC by all ASEAN Member States means that all UNCAC provisions regarding information sharing, law enforcement and legal assistance, assets recovery, corruption proceeds and extradition of perpetrators are rigorously observed (Ke, 2020).

Spearheading the fight against corruption at the national level are the Malaysian Anti-Corruption Commission (MACC), National Centre for Governance, Integrity and Anti-Corruption (GIACC), as well as the Malaysia Integrity Institute (IIM). Other public entities include the Customs and Excise Department, the Immigration Department, the Ministry of Transport (Marine Department, Port Authorities, Maritime Institute of Malaysia), Department of Environment, and the Royal Malaysia Police. Other actors include the Malaysian Bar and Bar Council, the Securities Commission Malaysia and the Companies Commission of Malaysia. The Anti-Corruption Advisory Board, the Special Committee on Corruption, the Complaints Committee, the Operations Review Panel, and the Corruption Consultation and Prevention Panel are independent monitoring bodies over the MACC. NGOs include the Centre to Combat Corruption and Cronyism (C4), Transparency International-Malaysia (TI-M), and human rights monitor and advocator Suara Rakyat Malaysia (SUARAM). Affected parties also include Malaysia Shipowners' Association (MASA), Malaysian Seaman Association, United Seafarer Malaysia Organisation,

National Union of Seafarers of Peninsular Malaysia (NUSPM), freight forwarders, harbour pilots, ship agents, container hauliers as well as interested members of the public. It is important to note that peripheral members, members of issue networks and interested members of the public's participation tend to fluctuate according to their interests in the issues at hand.

At the national level, the National Anti-Corruption Policy (2019 – 2023) outlines a comprehensive five-year roadmap comprising 115 initiatives to fight corruption (MACC, 2019). The primary statute used to combat corruption and offences of a similar nature is the 2009 Malaysian Anti-Corruption Commission Act (MACCA); whereby Sections 16 and 17 deals specifically with bribery, Section 18 on false claims, Section 20 with the corrupt means used to procure tender withdrawals, Section 23 with conflicts on interest and abuse of power, Section 23 on bribing officials of foreign countries, and Section 25 on failures to report bribery.

Other statutes and codes that prohibit bribery are the Penal Code (Act 574), the Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA), the 1967 Customs Act, Youth Societies and Youth Development Act 2007, Financial Services Act 2013 and Islamic Financial Services Act 2013, Societies Act 1966, and Trade Unions Act 1959. Another important Act is the Whistle Blowers Protection Act 2010 (Act 711) that protects whistle blowers from any prejudicial effects of disclosing corruption or misconduct related information.

It is also imperative to note that many public and private entities, NGOs, international organisations and numerous stakeholders at the international, regional and national levels do have specific organisational guidelines and procedures for gift-giving and whistle blowing as means to address and prevent incidences of corruption.

Third, it must be noted that the success of the maritime anti-corruption drive depends on the capacity, expertise, resources, cooperation, coordination, interests and commitment of

all maritime anti-corruption governance's stakeholders. This has been an ongoing issue because these factors vary between stakeholders. This situation has also been exacerbated because of stakeholders' overlapping memberships in different maritime governance sectors. For example, it can be observed that the MACC in Malaysia does not have adequate time and resources at its disposal given the numerous tasks and functions (e.g., enforcement, prevention and education) that it is required to perform. Thus, the challenge is to get the required level of cooperation and support from national and international stakeholders given maritime corruption's transboundary nature.

### ***Issues and Challenges***

Numerous issues and challenges can be observed arising from the discussion on corruption and maritime anti-corruption governance. First, the extent, scope, types and complex nature of corruption have resulted in an ongoing quest to combat it that is as old as the history of humankind. The fact that corruption continues like a festering wound shows the limited effectiveness of moral, religious as well as legal approaches as means of addressing its causes and preventing its occurrences. Indeed, the crux of the problem is what can be observed are merely the tips of the corruption icebergs that are connected across nations, regions and continents. Indeed, it is impossible to know the exact extent of the effects and damages that corruption has caused in the maritime sectors. Given the nature, scope and global reach of maritime sectors, as well as the numerous opportunities for corrupt activities to take place, the challenge is how to ensure that an individual with the power and opportunity for corruption will not be corrupt. According to Klitgaard (1988), the decision to be corrupt is made when the individual believes that the benefits of not being corrupt is less compared to the benefits of being corrupt (after taking into account the probability of being caught times the penalties for being caught). If this challenge can be overcome, then maybe maritime corruption

can be contained from spreading every time a ship embarks on a voyage.

Cyber security is a very serious topic, it affects not only the maritime logistic operations but also the safety of employees involved in the operations. This is a critical issue to be tackled by maritime administrations, which claimed cyber security awareness and culture are part of companies' administrations.

Second, while corruption in the maritime sectors has long been acknowledged, the serious attention that is being accorded to it by the United Nations, the IMO, the MACN, ASEAN and by Malaysia itself, have resulted in numerous acts, conventions, agreements, understandings, guidelines and frameworks to combat maritime corruption. The issue is whether the acts, conventions, agreements, understandings, guidelines and frameworks introduced are adequate or effective enough to address the spread of maritime corruption. As there is inadequate study done on this issue, the challenge is to ensure that in-depth studies on corruption in all maritime sectors be conducted; hence, new anti-corruption measures and strategies can be formulated to accommodate the characteristics and needs of each maritime sector. This is especially needed in Malaysia as corruption in maritime sectors have not grab national and international attention and coverage given to corruption scandals involving the 1Malaysia Development Berhad (1MDB), the Federal Land Development Authority (FELDA), Malaysian Hajj Pilgrims Fund Board, and the Majlis Amanah Rakyat (MARA) (The Malaysian Insider, 2016).

Third, it must be noted that the success of the maritime anti-corruption drive depends on the capacity, expertise, resources, cooperation, coordination, interests and commitment of all maritime anti-corruption governance's stakeholders. This has been an ongoing issue because these factors vary between stakeholders. This situation has also been exacerbated because of stakeholders' overlapping memberships in different maritime governance sectors. For example, it can be observed that the MACC

in Malaysia does not have adequate time and resources at its disposal given the numerous tasks and functions (e.g., enforcement, prevention and education) that it is required to perform. Thus, the challenge is to get the required level of cooperation and support from national and international stakeholders given maritime corruption’s transboundary nature.

**Maritime Logistics Cyber Security Governance**

Cyber security is a very serious topic, it affects not only the maritime logistic operations but also the safety of employees involved in the operations. This is a critical issue to be tackled by maritime administrations, which claimed cyber security awareness and culture are part of companies’ administrations. Different companies and administrations have different companies and administration of cyber risks. Overall, there is no

major incident and losses recorded as a result of cyber-attack. However, the risk of cyber-attack is very high and could have adverse impact on maritime logistics (Chronis, 2019)

As a consequence, maritime logistics should be more prepared and alert with the issues and challenges. “Maritime port infrastructures rely on the use of information systems for collaboration, while a vital part of collaborating is to provide protection to these systems” (Polatidis et al., 2018). Therefore, maritime logistic is vital to explain its complex features and environment of maritime logistic network. As according to Enisa (2019), there are two new challenges of cyber security, which are; information technology (IT) and operation technology (OT). Maritime logistic operation depends on physical and cybernetic environment. The different features between physical and cybernetic environment as illustrates in Table 1.

Table 1: Differences between physical and cybernetic environments

Physical Environment	Cybernetic Environment
Port infrastructure, facilities	Infrastructure, such as buildings and ships
Port authorities	Platforms such as servers and databases
Maritime and insurance companies	Telecommunication systems
Shipping and cargo industry	Software and manuals
Government ministries	E-services, such as applications
Related transport infrastructure	External users, such as maritime companies
Human resources	Internal users, such as personnel

Source: Pyykkö et al. (2020)

This arrangement would customise ports or maritime logistic operations to better face the challenge of cyber threats and cyber-attacks. This is a combination of cyber security and risk management to tackle the issue of governance in maritime logistics environment. With the emerging of technologies, the demand for high resilience in global logistics is essential for cyber security to be well-prepared (Pyykkö et al., 2020)

The awareness on cyber security needs and challenges in the maritime logistic is currently low to non-existent. Maritime logistics should

consider a crisis protocol to develop and implement awareness among the maritime actors. In particular, it is highly recommended to provide cyber security training to relevant factors such as shipping companies, port authorities, etc. Lack of awareness and focus on cyber security leads to a low sense of urgency and less preparedness in facing cyber risks (Gard, 2016).

These perspectives highlighted the need for building the awareness to avoid or reduce cyber risks. There is no single solution to managing cyber risks. It is a collaboration involving people, processes and IT systems. Establishing



Figure 1: The perspectives of cyber security awareness among maritime actors

Source: Mohd Noor (2021)

awareness in all levels of an organisation is the important first step when implementing cyber security management (Gard, 2016).

From the industry or administration and employee perspectives, safeguard is on rules and regulations as well as better understanding. While the action is in terms of implementation and collaboration between the multi-actors. Therefore, the present of trust and accountability is a must in order to collaborate and build awareness.

Organizing cyber security training is one of the ways to increase awareness and robustness against cyber-attacks. This could reduce maritime logistics vulnerability that can cause by cyber threat challenges. As digital technology is dynamic, keeping up with this training is essential for both professionals and non-technical maritime logistics workforce (Alcaide & Llave, 2020). The training should have been conducted in an actual logistic operations environment to customised ports or maritime logistics sector. In port development, physical security is the concern, however recently cyber security needs more attention and response to the rapid growth of digitalization in maritime logistics. Thus, this will result in major challenges to ports and their development (Pyykkö *et al.*, 2020).

### ***Fragmented Maritime Governance***

There is fragmentation of maritime policies that brings difficulties for the clear definition of responsibilities and roles to be taken regarding cyber security matters in this maritime logistics.

As a consequence, it has an immediate impact on the possibility to accurately enforce minimum cyber security protection. As an example, inappropriate coordination and action could be taken in order to address a cyber security incident. The current situation implies a significant risk of inadequate coordination which could lead to inefficiencies such as governance gaps and overlaps. Furthermore, it could bring major discrepancies in the way cyber security issues are addressed from one maritime zone to another, and between governance levels (Sofartsstyrelsen, 2019).

### ***Cyber Security Policy – Safeguarding The Future Of Maritime Logistics***

Since 2006, Malaysia has built its cybersecurity ecosystem around the National Cyber Security Policy (NCSP). NCSP was the reference platform in ensuring a proper cybersecurity plan for a safer national cyber safe that focuses on governments and the Critical National Information Infrastructure (CNII). Besides, the NCSP recognises the critical and highly interdependent nature of the CNII and aims to establish a comprehensive cybersecurity programme and a series of frameworks that will ensure the effectiveness of cybersecurity controls over vital digital assets. The 10 CNII sectors in Malaysia are namely: Defence and Security, Transportation, Banking and Finance, Health and Emergency Services, Energy, Information and Communication, Government, Food and Agriculture and Water [NSC], 2020).

And recently, the Malaysia Cyber Security Strategy (MCSS) has been approved by the cabinet on January 2020, which is replacing the NCSP. MCSS contains five key pillars addressing national cybersecurity matters and holistic approach. There are also other policies by MAMPU and other government agencies at the national level (NSC, 2020).

### **Government's Roles**

With the National Cyber Security in place, the government role regards to cyber security initiatives will be implemented effectively. The government's role is very crucial in taking corrective action towards cyber threats and cyber-attacks. Therefore, government should play an immediate role and immediate action to make decisions.

- 1) Cyber Security Malaysia is a government agency under the supervision of the Ministry of Communications and Multimedia Malaysia (KKMM).
- 2) The role of Cyber Security Malaysia is to provide technical expertise assistance to Internet users cover all walks of life as well as agencies or organizations certain who face cyber incidents.
- 3) Apart from that, Cyber Security Malaysia is also active in developing training modules to train professional experts as well as increase cyber security level of awareness among Malaysians (NSC, 2020).

### **Challenges**

In this digital age, as the technology changes, the threat trends also change, in a dynamic way. Cybersecurity also have evolved with the technology. If not, the consequences will be very severe. There are also challenges in the ability to understand the changing situation and how we prepare our self in term of people, process and technology (Christopher, 2016). The challenges depend on various factors such as the following:

- i. Lack of national budget-Technology can be expensive -

This should not be the obstacle to use technology especially in maritime sectors. Technology is changing rapidly and we need to be prepared, and thus face the challenge. If not, we will be left behind.

- ii. Shortage of skilled and expert professionals -  
Should equip more high skills human capital and less dependent on foreign experts. In the age of technology or digitization, we should spend more on technology investment in order for the country to be more competitive.
- iii. Bureaucracy -  
In the modern world, bureaucracy should not be the focus. Hence, bureaucracy will lead to inefficiency and slow in decision making process. The implementation should be more on bottom-up approach.
- iv. People, process, technology -  
These three components are related to one another. They are interrelated and support each other. If the people are strong, the process and the technology will also be strong and vice versa. Therefore, the most important element is the people.
- v. People - Human is weakest link. We need to prepare or the right people. May require specialised training which is also costly but it will be a good investment for the industry.
- vi. Lack of buy-in and support from the head of state, ministers, the board of director and the top management.
- vii. Cyber-attacks can happen in a blink of an eye. It is ever-changing and sophisticated (Marsh, 2014).

### **Maritime National Customs Transit System (NCTS) Governance**

The term hinterland is derived from economic geography of transport referred to as the inland region, for which the port is used for exports and imports to a subordinate space where it is absolutely disengaged from the coastline. Hinterland is a region comprising most of the cargo typically carried by road and rail



for providing faster and less costly means of transporting goods over short distances. Hence, majority of forwarding companies preferred to transport via land transport but the risk for transit is not undertaken. In maritime terms, the hinterland is considered as an inland area to which import cargo is delivered and export cargo is collected. Hereby, the merchant and carrier haulage mode is acknowledged under hinterland operation for transport containers and activities of containerized freight in the hinterland (Yu *et al.*, 2018). The hinterland flows across different modes of transport, in countries, regions or through corridors. A policy can be defined as a deliberate course of action taken by those in authority to achieve certain goals and objectives (Dye, 2014). The formulation of policies includes the process of identifying and developing a set of alternatives to tackle a problem and narrow down the alternatives to reach a final decision on policy. In this case, a stakeholder could be Ministry of Transport, Haulage Company, freight forwarding and Royal Custom Malaysia. The benefits of formulating a policy are that it serves as the official representation of the policy. This research aims to illustrate the numerous forms of maritime governance in national customs transit system. Thus, the need for effective policy to stimulate the integrated inland transportation. Each policy formulation should carry out by the government through several stages/procedurals from inception to conclusion. Effective formulation involves analysis and identification of alternatives to solving issues. Policy formulation focuses on the opportunities and problems of managing an organization in relation to dynamic environment (Anshen & Guth, 2016).

Meanwhile, U-Customs, which will enable effective information-sharing, streamlined procedures, and genuine collaboration among all agencies involved in the clearance process (DOSSIER, 2016). U-customs will be a future undertaking operating system for customs declaration for import and export of goods but due to lack of proper standard of procedure and regulation in the system this research will

only discuss on how to bring forward hinterland transport sector and U-customs system towards successful of ASEAN Hinterland Strategic Plan and National Hinterland policy. National borders represent a nation's territorial boundaries and define the territory where governments exercise legal authority over the boundary systems, acts, and citizens. The term border is often associated with a border formed to regulate the movement of people, goods and services into a country and in some cases, to prevent it. Therefore, borders are also correlated with the establishment of a security perimeter for the control of entry into territory of sovereignty (Gerstein *et al.*, 2018). In order to establish national hinterland policy, various aspects need to be emphasized widely so that each agency in the transportation sector can keep the nation in a safe and secure during the movement of goods (DOSSIER, 2016). Thus, National Hinterland policy will protect a nation's borders to avoid illegal activities from occurring in-transit of goods. While, the cross-border movements will be improved across nations (example from Singapore to Malaysia, Malaysia to Thailand) to facilitate trade movement by using U-customs of Malaysia. In particular, increasing responsibility has been imposed on border agencies and customs to promote trade facilitation by accelerating and simplifying border clearance procedures (Pugliatti, 2011).

The implementation of U-customs regulation and procedural towards the successful of ASEAN and National Hinterland policy and plan is to improve standard procedure and integration among the stakeholders towards ASEAN and National Hinterland policy and plan. National Hinterland policy will also encourage haulage company, customs, freight forwarder and immigration to involve inland transportation policy to execute successfully. In ASEAN level, the policy has been launched and system been formally launched for general use. Besides, this formulation will significantly accelerate transit movements across nation and help to reduce time and expenses of carrying out cross border. One of the cornerstones of regional economic integration is customs transit. It allows goods to pass easily within a specific geographical area

and makes customs formalities more open by ensuring that duties and taxes which are usually payable on imported goods are suspended (du Marche, 2017).

The importance of the research study is to emphasize policy formulation, strategic plan, and integration with land transport sectors. This is because to develop the standard of procedure and regulation for hinterland transport sector, and to control the movement of goods and transportation to ensure the country's border are safe and also it is important that the movement of transportation and goods runs smoothly. The movement of goods must always be regulated. This is to prevent abuse of power resulting in losses for the country because of inadequate compliance with regulations and customs. The formulation of National Hinterlands Policy will help the country to overcome the problems and challenges. In order to success the formation policy, Malaysia should initiate to integrate inland transportation and exercise U-custom regulation and procedures.

### **Issues**

#### ***i. Lack of connectivity inland trade transport for the harmonization of intergovernmental on national hinterland integration and ASEAN Hinterland Strategic Plan.***

Malaysia has a non-integrated transport and customs control agency because the existing functionality is sectoral based. It is very difficult for the Malaysian government to support the ASEAN Customs Transit System (ACTS). It was found that Malaysia has a very complete legislation and policies related to customs and transportation but there are still obstacles to support the integration of the custom transit system at the national level. This is because the agencies do not like a break-in order as the powers for each institution specifically based on the responsibilities of the relevant department. Difficulties in harmonizing governance at the national level under the custom transit system governance resulting in overlapping responsibilities and difficulties in

comprehensively determining the functionality of the department. In fact, there are still agencies that enforce policies unilaterally without really referring to collective functionality. Among the agencies involved in the enforcement operation of the customs transit system, they carry out inspection and control matters separately and poorly. These weaknesses also need to be reviewed in order to facilitate inter-governmental coordination.

#### ***ii. Improper standard of procedure and regulation for hinterland transport sector towards successful of ASEAN Hinterland Strategic Plan and National Hinterland Policy.***

Although Malaysia has completed trade and customs regulations in detail based on specific sectors, there are weaknesses, especially with regard to integrated regulations involving customs, transportation and sectors. Defined that, each legislation occurs overlap and similarity of rules for a particular chapter. It makes it difficult to enforce by its enforcers at the national border gates for the process of handover of containers and departure of goods carried by land transport. In fact, the late, and weak clearance of goods at the border gate was due to the difficulty of applying the equivalence of enforcement of inspection operations to goods carried by truck transport, weaknesses in the inspection and clearance of container goods requiring that studies be conducted immediately. Weaknesses in the laws and regulations at the border gates for goods and transportation need to be assessed, amended, readjusted by the relevant agencies, especially those involved with the custom transit system. In fact, there is also the use and reference of the same act by two agencies with different functions because previously the inspection of containers was done by one agency but due to the need to specialize responsibilities to focused agencies has caused the newly established agencies had to use the same as the previous department. . It is desirable if the newly established agency has its own inspection act based on the responsibilities that have been set aside. In fact, amendments to rules and acts or policies should be reviewed

by the authorities in relation to negotiations and regulations, namely the Attorney General's togetherness with the relevant agencies. For it is necessary to hold joint negotiations between the Department of Land Transport (Ministry of Transport), Royal Malaysian Customs Department (Ministry of Finance), Department of Inspection, Quarantine and Services (Ministry of Agro and Food Industry) and several other agencies, to be coordinated. together to address existing weaknesses to create a standard custom transit system at the national level.

**iii. Risk of U-Customs standard of procedure due lacking of integration among the stakeholder towards ASEAN and Hinterland Policy and plan.**

In addition, the weakness is very significant when the stakeholders for the declaration of goods at the national border are faced with the weakness of the regulatory system that is difficult to integrate and apply among the main stakeholders in realizing the declaration and the process of checking the virtual documentation of goods carried by container by modes of transport. Due to the lack of enforcement for the online inspection system applied by stakeholders, there are often delays in the declaration of goods and lack of understanding for shipping agents and customs agents to carry out these inspections and declarations. It seems to be getting less attention due by stakeholders for this land transport operation. For that, it also gives the effect of inspection and custom clearance takes a long time and days. It does not support the operation of custom transit systems at the national level. Review and lobbying in relation to ACTS and NCTS should be reviewed by the relevant departments.

**Challenges**

The challenges that are felt to be faced in creating governance and policies related to the custom transit system are:

- i. Lack of enforcement officers skilled in the use of new technologies in inspection

and quarantine at border gates against containers carrying goods. An increase in the number of enforcement officers is needed to facilitate inspection and quarantine operations; as well as the control of land transport movements;

- ii. Increase custom transit system training among stakeholders and enforcers so that there is a clear understanding of each jurisdiction and responsibilities between agencies and stakeholders;
- iii. Ensure that the agencies involved fully understand the responsibilities and regulations under their respective powers so that there is no duplication of power that will disrupt the harmony of customs transit system enforcement;
- iv. Control of corruption in the inspection and control of imported goods among stakeholders and those who do not have integrity for the purpose of licensing goods that are not clearly declared; and do not comply with domestic trade and customs regulations;
- v. Strict smuggling controls are likely to exist to control the smuggling of prohibited goods, human smuggling, smuggling of goods that can potentially disrupt harmony, defense, security and sovereignty of the country.

**Conceptual Observations on Maritime Governance**

As the maritime sectors are continuously evolving in nature, it is imperative that the concepts used are also evolving in tandem with the pace of this evolution, so that the “reality” of the situation can be comprehended and interpreted accordingly. An insightful conceptual goodness criteria comprise eight elements namely: (i) familiarity (the degree to which common people and academics is accustomed to the concept); (ii) resonance (the way that the terms/words used lend themselves to cognitive recognition and memory); (iii) parsimony (the concept’s ability to compactly and succinctly encompass all important attributes of specific

phenomena); (iv) coherence (possesses internal coherency whereby the concept's attributes are aligned with the characteristics of particular phenomena); (v) differentiation (the manner with which a concept can be clearly differentiated from other concepts within its parameters); (vi) depth (the level of integration and inclusivity of the number of attributes that a concept can accommodate pertaining to the specific phenomena); (vii) theoretical utility (the concept's utility as a building block of theory); and (viii) field utility (the manner with which the concept fits with other existing concepts) (Gerring, 1999).

It is worth noting that the preliminary findings of the search on maritime governance reveal the existence of a certain degree of fuzziness with regard to the conceptual boundaries and interpretation overlap between the concepts of "maritime governance" and "ocean governance". Although the detailed examination of this issue is outside of the scope of this article, the authors believe that this fuzziness does negatively affect the "goodness" of the concept of maritime governance in light of all eight elements of Gerring's conceptual goodness criteria.

Moreover, the findings and discussion based on the issues and challenges faced by maritime anti-corruption, logistics cyber security and national customs transit system above show that the operationalization of the concept of "maritime governance" can be confusing and difficult. This is because of the significant contextual differences between them in terms of the variety of actors, compositions, legal frameworks, institutions and objectives involved for each of the above area. This is illustrated by the differences in the nature of the interactions and relationships between the various stakeholders, comprising the national, regional and international government systems (the state, nature of political regime and formal institutions of public administration/management), other stakeholders outside of formal government (civil society, customers/citizens, and community groups); all of

which have influence over policies made, implementation actions and strategies as well as the level of attainment of policy objectives. All of these factors weaken the "goodness" of the concept of maritime governance.

Finally, despite the concerns noted above, the maritime governance concept does provide a general framework of classifications and categorizations which can be used to understand the overall attributes of maritime anti-corruption, logistics cyber security and national customs transit system; by treating each as a distinct phenomenon. Indeed, it appears that the concept of maritime governance can be "interactive, inclusive and integrative" while being contextually exclusive at the same time by compromising the level of standards set by the conceptual goodness criteria; as shown by the above discussion and findings on maritime anti-corruption, logistics cyber security and national customs transit system.

## Conclusion

The discussion above illustrates the usefulness of the maritime governance concept at explaining the compositions, operations, frameworks, issues and challenges that are faced by maritime anti-corruption, logistics cyber security and national customs transit system, systems of governance. As the spread of corruption has been facilitated by maritime trade routes, cooperation and coordination between stakeholders at the international, regional and national levels are required so that its adverse economic, social and development effects can be contained. However, it is noted that the complexity, vastness and overlapping nature of various maritime sectors, present challenges to all stakeholders involved because of differing levels of capacity, expertise, resources and interests. Moreover, the numerous acts, statutes, conventions, policies and guidelines, in some circumstances, can be quite burdensome, to implementing agencies in terms of prioritisation of the competing goals that they have to achieve. As such continuous will and commitment are required from all stakeholders in the quest to combat corruption, around the globe in general, and in Malaysia in particular.

In the case of maritime logistic cyber security governance, it is undeniable that logistics cyber security is crucial for port logistics digitalization. Thus, the issues and challenges emerged within the maritime governance context. Therefore, multidisciplinary approach and multi-stakeholders are needed to narrow the awareness and culture gaps between people, technology and processes. Increasing implementations of new emerging technologies to existing maritime processes will also increase the need for comprehensive cybersecurity training before the new implementations can be taken into operational use. Hence, future perspective is to review previous studies' findings on how other sectors view cyber risks and cyber security.

Referring to Malaysia's direct involvement in integrating key policies and legislation related to the Customs Transit System, this presents a major leap to strengthen the movement of goods and land transport to realize ACTS with the aim of enhancing trade and economy regionally. However, it must be with the cooperation of agencies and departments related to the Custom Transit System at the national level. Therefore, the establishment of a new governance secretariat is effective for the purpose of coordination between governors is likely to be used as a key proposal as a catalyst for trade in a managed and complementary manner.

Indeed, the concept of maritime governance addresses the dichotomy of being "interactive, inclusive and integrative" while being contextually exclusive at the same time, by compromising the standards set by the conceptual goodness criteria. The discussion on maritime anti-corruption, logistics cyber security and national customs transit system systems of governance, shows the need for more studies to be conducted to further illuminate the strengths, weaknesses and workings of the maritime governance concept in all maritime sectors. The findings will then provide more insight on whether the fluidity of the maritime governance concept does not adversely affect its "goodness" as a concept when assessed against the conceptual goodness criteria, in other maritime sectors.

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## References

- Ahmed, F. B. J. (2018). Corruption *According to the Main Sources of Islam*. *Intellectual Discourse*, 26(1), 91-110.
- Alcaide, J. I., & Llave, R. G. (2020). Critical infrastructures cybersecurity and the maritime sector. *Transportation Research Procedia*, 45, 547-554.
- Bowman, R., & Smythe, T. (2019). Conceptualizing Maritime Governance: Addressing the challenges of the modern maritime environment. *Coast Guard Journal of Safety & Security at Sea, Proceedings of the Marine Safety & Security Council*, 76(2), 6-12.
- Cheruiyot, S., & Rotich, G. (2018). Factors affecting the implementation of one stop border post strategy. A case study of the Malaba border. *International Academic Journal of Human Resource and Business Administration*, 3(1), 303-324.
- Christopher R. Hayes (2016). Maritime cybersecurity: *The future of national security*. Naval Postgraduate School Monterey, California. Master Thesis USA.
- Chronis, K. (2019). *Cyber Security challenges for the maritime industry - in Cyber Security, Opinions*. Retrieved from <https://safety4sea.com/cm-cyber-security-challenges-for-the-maritime-industry/>
- Deloitte. (2015). Fighting corruption in the maritime industry what you need to do to navigate in transparent waters. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/finance/in-fa-fighting-corruption-in-maritime-industry-noexp.pdf>

- DOSSIER. (2016). Malaysia Launches New Information System. Royal Malaysian Customs Department, 30.
- Dye, T. (2014). The policy formulation process. *top-down policymaking, June 2008*, (pp. 39–64). <https://doi.org/10.4135/9781483330150.n3>
- ENISA. (2019). *Port Cybersecurity - The good practises for cybersecurity in the maritime sector*; October 2019.
- Forgues-Puccio, G. F. (2013). Corruption and the private sector: A review of issues. oxford policy management. Retrieved from [http://www.businessenvironment.org/dyn/be/docs/262/Corruption\\_and\\_the\\_Private\\_Sector\\_EPS\\_PEAKS\\_2013.pdf](http://www.businessenvironment.org/dyn/be/docs/262/Corruption_and_the_Private_Sector_EPS_PEAKS_2013.pdf)
- Gard. (2016). Cyber security awareness in maritime industry. Retrieved from <https://www.gard.no/web/content/cyber-security-awareness>
- Grabosky, P., & Lamour, P. (2000). Public sector corruption and its Control. *Trends and Issues in Crime and Criminal Justice/ Australian Institute of Criminology, 143*, 1-6.
- Ke, S. (2020). The rule of law at the national and international levels. Retrieved from [https://www.un.org/en/ga/sixth/75/pdfs/statements/rule\\_of\\_law/07mtg\\_asean.pdf](https://www.un.org/en/ga/sixth/75/pdfs/statements/rule_of_law/07mtg_asean.pdf)
- Klitgaard, R. (1988). International cooperation against corruption. Retrieved from <https://www.imf.org/external/pubs/ft/fandd/1998/03/pdf/klitgaard.pdf>
- Krasner, S. D. (1999). Sovereignty. Princeton University Press.
- Malaysian Anti-Corruption Commission (2019). “MACC news archive: National anti-corruption plan (NACP) 2019-2023”, Putrajaya, 31 January. Retrieved from <https://www.sprm.gov.my/index.php/en/arkib-berita-sprm/3227-national-anti-corruption-plan-2019-2023-nacp-2019-2023>
- Marsh. (2014). The risk of cyber-attack to the maritime sector. global marine practice. marsh cyber risk practice. UK.
- NSC. (2019). *Cyber Security Guideline for Industry 4.0. Cyber Security Malaysia, Cyberjaya Malaysia*.
- NSC. (2020). Malaysia cyber security strategy. 2020-2024. National Security Council, Prime Minister’s Department, Putrajaya Malaysia.
- Mission Secure Source. (2020). *A comprehensive guide to maritime cyber security*. Retrieved from [www.MissionSecure.com](http://www.MissionSecure.com)
- Polatidis, N., Pavlidis, M., & Mouratidis, H. (2018). Cyber-attack path discovery in a dynamic supply chain maritime risk management system. *Computer Standards & Interfaces, 56*, 74-82.
- Pyykkö, H., Kuusijärvi, J., Noponen, S., Toivonen, S., & Hinkka, V. (2020, September). Building a virtual maritime logistics cybersecurity training platform. *in hamburg international conference of logistics (hiel) 2020* (pp. 223-246). epubli. <http://dx.doi.org/10.15480/882.3130>
- du-Marche, R. (2017). Transit guidelines route for efficient transit regime. World Custom Organization. Brussels: Belgium. Retrieved from <http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/transit/transit-guidelines.pdf?db=web>
- Safety4Sea. (2019). Cyber security challenges for the shipping industry - in Cyber Security, Opinions. Retrieved from <https://safety4sea.com/cm-cyber-security-challenges-for-the-shipping-industry/>
- Safety4Sea. (2019, April 15). Shipping industry in favour of IMO’s new anti-corruption agenda. Retrieved from <https://safety4sea.com/shipping-industry-in-favour-of-imos-new-anti-corruption-agenda/>
- Sidney, M. S. (2007). Policy formulation: design and tools. *Handbook of public policy analysis: Theory, politics and methods*, (pp. 79-87).

- Sofartsstyrelsen. (2019). Cyber and information security strategy for the maritime sector. 2019-2022. Danish Maritime Cyber Security Unit.
- Tanzi, V. (1995). Government role and the efficiency of policy instruments (october 1995). *IMF Working Paper No. 95/100*. Retrieved from <https://ssrn.com/abstract=883247>
- The Malaysian Insider. (2016). Top 5 scandals leaked by informants. *The Edge Market*. Retrieved from <https://www.theedgemarkets.com/article/top-5-scandals-leaked-informants>
- Tonnies, F. (Ed.) (2018). *Custom: An essay on social codes*. Routledge.
- Transparency International. (2021). corruption perceptions index 2020. Retrieved from <https://www.transparency.org/en/publications/corruption-perceptions-index-2020>
- UNCTAD. (2009). Trade and development report 2009. UNCTAD/TDR/2009, Geneva: UNCTAD.
- Wind Rose Network. (2021). Maritime sector. Retrieved from <http://www.windrosenetwork.com>
- Yu, M., Fransoo, J. C., & Lee, C, Y. (2018). Detention decisions for empty containers hinterland transportation system. *Ttransportation Research Part B: Methodological*, 188-208.