

Law Enforcement Against The Theft of Marine Navigation Aids To Support Navigation Safety At The Sorong Class I Type A Navigation District

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Abstract.

Aids to Navigation (SBNP) equipment play a vital role in ensuring the safety, security, and smooth flow of maritime traffic in Indonesian waters. This study examines law enforcement regarding the theft of SBNP equipment within the operational area of the Sorong Class I Type A Navigation District, while also identifying obstacles and preventive measures. The study employs Progressive Legal Theory and Development Law Theory. Methodologically, it utilizes a statute approach, analyzing all relevant laws and regulations concerning the legal issue at hand. Primary and secondary data serve as the basis for analysis, with the latter providing supporting information and context; a normative-qualitative analysis method is applied. The research findings indicate that law enforcement against SBNP equipment theft involves both preventive actions (routine patrols and public outreach regarding the function of SBNP equipment) and enforcement measures (inquiry, investigation, and criminal proceedings in accordance with the Criminal Code, the Shipping Law, and navigation regulations). Key obstacles include the vastness of Sorong's waters relative to available patrol resources, coastal communities' limited understanding of the importance of SBNP equipment, and challenges in gathering evidence and apprehending perpetrators in remote areas. Enhanced inter-agency synergy (involving the Navigation District, the Indonesian Navy, the Water and Air Police/Polairud, and the Harbor Master and Port Authority/KSOP) is required, alongside the implementation of sensor- or GPS-based control technologies for SBNP equipment and public outreach to encourage coastal communities and fishermen to safeguard this equipment for the sake of navigational safety.

Keywords: Law Enforcement, Theft, Aids to Navigation (AtoN), Shipping Safety and Sorong Navigation District.

I. INTRODUCTION

Indonesia is an archipelagic state comprising thousands of islands connected by extensive maritime waters. Its geographical characteristics make maritime transportation an essential component of national mobility, economic activity, logistics distribution, and territorial connectivity. Indonesia's strategic location between Asia and Australia further reinforces the importance of maritime routes for domestic and international shipping. Consequently, the State has a fundamental responsibility to maintain maritime security, enforce applicable laws, and ensure navigational safety throughout Indonesian waters (Pelindo Marine, 2014).

The importance of maritime transportation is also closely associated with the function of the sea as a major communication and transportation corridor. Maritime routes facilitate the movement of passengers and goods between islands, countries, and continents. The effective use of these routes requires not only clearly designated shipping lanes but also adequate maritime safety infrastructure. Such infrastructure includes Aids to Navigation, maritime telecommunications systems, state navigation vessels, navigation workshops, hydrographic surveys, and other supporting facilities required to identify navigational hazards and maintain safe shipping routes (Pelindo Marine, 2014).

Maritime safety represents a fundamental element of an effective shipping system. Safe navigation requires clearly established maritime routes and appropriate marking of navigational hazards so that vessels can operate safely and efficiently. The planning, construction, operation, supervision, and maintenance of shipping lanes therefore form an integral part of the government's responsibility for maritime transportation. These measures are particularly important in Indonesia because maritime transportation serves communities across a geographically dispersed territory and supports the movement of goods and people to areas that cannot be efficiently reached through land transportation.

From a legal perspective, Indonesian shipping activities are regulated through a comprehensive statutory framework. Maritime transportation was historically addressed in the Indonesian Commercial Code, particularly provisions concerning the carriage of goods and passengers by sea (Purba, 2005). More comprehensively, Law Number 17 of 2008 concerning Shipping establishes shipping as an integrated system consisting of transportation in waters, port activities, maritime safety and security, and marine environmental protection (Republic of Indonesia, 2008). The enactment of this law strengthened the legal framework governing shipping safety and clarified the government's responsibilities in maintaining maritime navigation systems.

One of the most important components of maritime safety is the availability and proper functioning of Aids to Navigation. Under Regulation of the Minister of Transportation Number PM 25 of 2011 concerning Aids to Navigation, an Aid to Navigation refers to equipment or a system located outside a vessel that is designed and operated to improve the safety and efficiency of vessel navigation and maritime traffic (Ministry of Transportation of the Republic of Indonesia, 2011). Such facilities include lighthouses and other navigational markers that assist navigators in identifying vessel positions, determining courses, recognising coastal areas and ports, and avoiding navigational hazards. A properly functioning navigation system therefore plays a direct role in preventing maritime accidents and supporting safe vessel movement.

The effectiveness of Aids to Navigation depends not only on technological capacity but also on institutional management. In response to evolving maritime transportation needs, the Indonesian government issued Regulation of the Minister of Transportation Number PM 2 of 2024, amending Regulation Number PM 19 of 2022 concerning the Organisation and Working Procedures of Navigation Districts. The regulatory reform reorganised the classification and institutional functions of Navigation Districts and was intended to optimise their responsibilities in planning, providing, operating, maintaining, and supervising shipping lanes and Aids to Navigation (Ministry of Transportation of the Republic of Indonesia, 2024; Shipping Cargo, 2024).

The regulatory framework also reflects the increasing importance of technological modernisation in maritime navigation. Navigation Districts are expected to integrate technologies such as Vessel Traffic Services and Coast Radio Stations to improve vessel monitoring, maritime communication, operational coordination, and navigational safety. Organisational restructuring and technological development are therefore important elements in strengthening Indonesia's maritime safety governance (Shipping Cargo, 2024).

Despite the existence of legal regulations and institutional mechanisms, the protection of Aids to Navigation continues to face practical challenges. Navigation equipment provided by the government represents public infrastructure that requires significant financial resources for procurement, installation, operation, and maintenance. Damage, removal, or theft of components of these facilities can reduce their operational effectiveness. More importantly, interference with navigational infrastructure may create serious risks for vessels because navigators depend on such equipment to identify safe routes, determine positions, and recognise navigational hazards.

This problem is particularly relevant to the Type A Class I Navigation District of Sorong. As an operational unit responsible for navigation services, the district is required to ensure that Aids to Navigation within its jurisdiction remain functional and capable of supporting maritime safety. However, the implementation of this responsibility is confronted by incidents involving the theft and destruction of navigation equipment. Such acts should not be viewed solely as ordinary offences against property because their consequences may extend to maritime safety, public transportation, government assets, and the protection of human life at sea.

The theft of components of Aids to Navigation therefore raises an important legal issue concerning the adequacy and effectiveness of law enforcement. Although the legal framework places maritime navigation under governmental responsibility, effective protection cannot depend exclusively on the existence of statutory provisions. Law enforcement must also ensure that legal rules provide meaningful protection for public interests and effectively prevent conduct that threatens maritime safety.

This issue can be examined through the perspective of progressive law. Progressive legal theory emphasises that law exists for human beings and should ultimately serve justice, welfare, and social interests. Law should not operate merely as a rigid system of written rules. Instead, legal institutions and law enforcement authorities must respond to concrete social problems and ensure that legal enforcement produces substantive benefits for society (Nasihuddin et al., 2024; Rahardjo, 2004, 2006; Syamsuddin, 2012). In the context of maritime navigation, this perspective implies that the enforcement of laws concerning the theft of navigation equipment should prioritise the protection of human life, maritime safety, public infrastructure, and the continuity of transportation services.

The issue is also relevant to the theory of law and development developed by Mochtar Kusumaatmadja. This approach places law not only as a mechanism for maintaining public order but also as an instrument for directing social development and institutional improvement. Legal norms, institutions, and implementation processes should operate together to create legal certainty, order, and social progress (Kusumaatmadja, 1995, 2002; Shidarta, 2012). Consequently, the legal protection of navigation infrastructure should form part of a broader strategy for developing a safe, reliable, and sustainable maritime transportation system.

The central problem addressed in this study therefore concerns the gap between the formal regulation of maritime navigation infrastructure and its effective protection in practice. The existence of rules governing Aids to Navigation does not automatically guarantee that these facilities are protected from theft, destruction, or other unlawful interference. Effective maritime safety requires not only adequate regulations but also appropriate institutional supervision, preventive measures, effective sanctions, coordination among relevant authorities, and consistent law enforcement.

Against this background, this study examines law enforcement against the theft of Aids to Navigation in supporting maritime safety within the Sorong Type A Class I Navigation District. Specifically, the study aims to analyse the policies governing the role and function of navigation in supporting maritime safety from the perspective of progressive law and to evaluate the enforcement of laws against perpetrators involved in the theft of Aids to Navigation. The study is expected to contribute to the development of a more effective legal framework for protecting strategic maritime infrastructure while strengthening navigational safety in Indonesian waters.

II. METHODS

This study employed a normative juridical research method, also known as doctrinal legal research. This method examines law as a system of norms, principles, doctrines, and statutory provisions that regulate legal relations and provide standards of conduct in society (Amiruddin & Asikin, 2016; Soekanto, 2006). The method was selected because this study focuses on the legal regulation of Aids to Navigation, maritime safety, and law enforcement against the theft of navigational facilities.

The study relied on secondary data obtained through library research. The legal materials consisted of primary, secondary, and tertiary sources. Primary legal materials included Law Number 17 of 2008 concerning Shipping, Regulation of the Minister of Transportation Number PM 25 of 2011 concerning Aids to Navigation, the *United Nations Convention on the Law of the Sea 1982*, and the *International Regulations for Preventing Collisions at Sea 1972*. Secondary legal materials included legal textbooks, journal articles, legal doctrines, and scholarly opinions relevant to maritime safety and law enforcement. Tertiary materials consisted of legal dictionaries and other supporting references (Soemitro, 1994).

The study applied a statute approach to examine, interpret, and evaluate the legal provisions governing navigation and maritime safety. The analysis also used vertical and horizontal legal synchronisation. Vertical synchronisation assessed the consistency between Law Number 17 of 2008 and its implementing regulations, particularly Regulation of the Minister of Transportation Number PM 25 of 2011. Horizontal synchronisation examined the relationship between Indonesian shipping legislation and relevant international maritime instruments.

Legal materials were collected by identifying, reading, recording, classifying, and reviewing relevant legislation and legal literature. The collected materials were analysed using a normative qualitative method.

The analysis involved interpreting legal norms, identifying relationships among regulations, and examining their consistency with relevant legal theories and doctrines. The findings were then systematically organised to assess the adequacy of the legal framework for protecting Aids to Navigation and enforcing the law against their theft.

III. RESULT AND DISCUSSION

Navigation and Aids to Navigation as Instruments of Maritime Safety

The normative analysis shows that navigation occupies a central position in Indonesia's maritime safety system. As an archipelagic state with extensive maritime routes, Indonesia requires reliable navigation infrastructure to ensure the safe and efficient movement of vessels. Aids to Navigation, hereinafter referred to as AtoN or *Sarana Bantu Navigasi-Pelayaran* (SBNP), serve not merely as technical equipment but as essential public infrastructure for protecting vessels, crews, passengers, cargo, and the marine environment.

Law Number 17 of 2008 concerning Shipping places responsibility on the government to provide Aids to Navigation in accordance with technological developments. The regulation requires these facilities to comply with applicable technical and operational standards and obliges operators to maintain their reliability. Government Regulation Number 5 of 2010 further classifies Aids to Navigation into visual, electronic, and audible systems. Their functions include determining vessel positions and courses, identifying navigational hazards, marking safe shipping lanes, identifying traffic separation schemes, and indicating special maritime areas (Republic of Indonesia, 2008; Government of Indonesia, 2010). The source specifically identifies lighthouses, light beacons, light buoys, GPS, DGPS, radar beacons, and radio beacons as part of this navigational architecture.

International maritime safety standards reinforce this national framework. SOLAS, STCW, MARPOL, and other instruments adopted under the International Maritime Organization establish technical, operational, communication, and personnel standards intended to minimise maritime accidents (Yahya, 2024). The Global Maritime Distress and Safety System (GMDSS), for example, integrates distress communication, Search and Rescue coordination, Maritime Safety Information, and ship-to-shore communication. Supriyono (2022) explains that GMDSS divides maritime operational areas into Sea Areas A1 to A4 according to the availability and coverage of terrestrial and satellite communication systems.

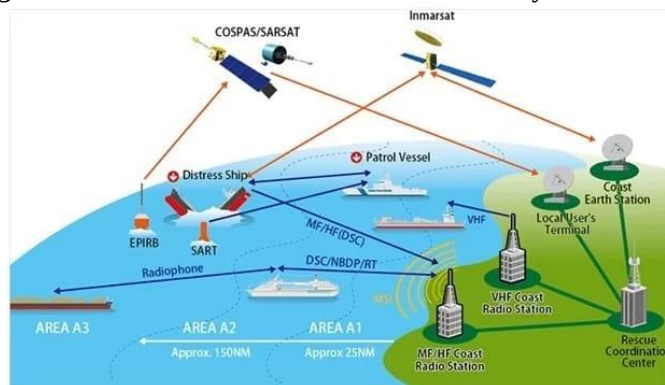


Fig. 1. Configuration of the Global Maritime Distress and Safety System

The configuration demonstrates that navigational safety is based on an interconnected system rather than a single device. Damage to or loss of one navigation component can reduce the reliability of information available to vessels. This finding is important when examining SBNP theft because the legal interest being protected extends beyond the economic value of the stolen equipment. The more significant concern is the potential disruption of maritime safety.

Table 1. Normative Framework for Navigation and Maritime Safety

Legal/Regulatory Instrument	Principal Regulatory Function	Relevance to SBNP Protection
UNCLOS 1982	Establishes international principles of navigation and freedom of navigation	Provides the broader international framework for safe maritime navigation

Legal/Regulatory Instrument	Principal Regulatory Function	Relevance to SBNP Protection
SOLAS 1974	Establishes international standards for safety of life at sea	Supports communication, navigational, and emergency safety standards
Law No. 17 of 2008 concerning Shipping	Regulates navigation, maritime safety, SBNP, telecommunications, and law enforcement	Establishes government responsibility and prohibits interference with SBNP
Government Regulation No. 5 of 2010 concerning Navigation Minister of Transportation Regulation No. PM 25 of 2011	Regulates navigation systems, shipping lanes, telecommunications, and SBNP Provides technical regulation of Aids to Navigation	Defines functions, types, and operational requirements for SBNP Establishes operational and technical standards
Criminal Code	Regulates theft and aggravated theft	Provides the general criminal-law basis for prosecuting the unlawful taking of SBNP components

The regulatory structure therefore demonstrates substantial normative protection. The main problem identified by this research is not the complete absence of regulation, but the gap between the rules and their effective implementation.

Criminal Law Protection Against the Theft of Aids to Navigation

The analysis further indicates that theft of SBNP can generate two interconnected legal consequences. First, the unlawful taking of equipment may constitute theft under the Criminal Code. The source identifies ordinary theft and aggravated theft, particularly where the offence involves several perpetrators, property damage, or other aggravating circumstances. Second, when the conduct damages or causes Aids to Navigation to cease functioning, the act enters the specific regulatory domain of Law Number 17 of 2008 concerning Shipping.

Article 174 of the Shipping Law prohibits any person from damaging or performing an act that causes Aids to Navigation and shipping-lane facilities to become non-functional. The sanctions reported in the source become substantially more severe when the conduct creates danger to a navigating vessel, causes a vessel to sink or run aground, or results in death. The source states that the penalties may reach 12 years of imprisonment where danger to navigation arises, 15 years when the act results in a vessel sinking or running aground, and life imprisonment or imprisonment of up to 20 years where death results.

This sanction structure confirms that Indonesian shipping law does not treat interference with navigation infrastructure solely as an offence against property. The protected legal interests include vessel safety and human life. Consequently, SBNP theft should be assessed according to both the act of unlawful appropriation and its potential consequences for maritime navigation.

Law enforcement authority is also provided institutionally. The Coast and Sea Guard is authorised to conduct maritime patrols, pursue vessels, stop and inspect vessels, and conduct investigations through authorised Civil Servant Investigators (*Penyidik Pegawai Negeri Sipil* or PPNS). Its statutory responsibilities include securing Aids to Navigation and supporting maritime search and rescue activities.

Forms and Characteristics of SBNP Theft in the Sorong Navigation District

The document analysis identifies several SBNP components reported as frequent objects of theft within the working area of the Sorong Type A Class I Navigation District. These components are not limited to the principal navigation light itself but include supporting electrical systems, solar-energy components, batteries, cables, structural components, and facilities associated with lighthouse personnel.

Table 2. SBNP Components Identified as Objects of Theft

Facility	Components Reported as Stolen or Damaged
Lighthouse/navigation structure	Lighting equipment Solar panels/cells Batteries Lightning-protection grounding wires Lighting-equipment mounts Anchor and structural bolts Fence posts and fencing
TMS/PMS personnel facilities	Louvered windows Electrical installation cables Fence posts and fencing Doors Roofing components

The pattern described in the source suggests that some incidents require considerable physical effort and technical capability. The document characterises several offences as planned activities that may involve more than one person because many of the targeted components are heavy, securely installed, and difficult to remove. It also describes a modus operandi in which perpetrators allegedly stop near navigation lights under the pretext of experiencing vessel problems before removing components. The document further suspects that stolen components may enter a resale market because several items have considerable commercial value.

These descriptions should nevertheless be interpreted cautiously. The source does not provide criminal judgments establishing the identity, organisational structure, or guilt of specific offenders. Therefore, statements concerning organised perpetrators and receivers of stolen goods should be treated as indications contained in the source material rather than judicially established facts.

Gap Between Normative Regulation and Law Enforcement

The most important result of the analysis concerns the discrepancy between a relatively comprehensive legal framework and weak enforcement capacity. The source states that the working territory of the Sorong Type A Class I Navigation District covers a broad area including Southwest Papua, West Papua, and parts of North Maluku. This geographic scale creates considerable monitoring difficulties.

The document also indicates that supervision has often depended on reports submitted by shipmasters and fishermen through maritime radio communications after an SBNP has malfunctioned, been damaged, or disappeared. In some instances, equipment reportedly disappeared after technicians had conducted maintenance or installed replacement components.

More significantly, the source states that cases involving theft and damage to navigation equipment have not resulted in the identification of perpetrators. It attributes this condition partly to difficulties in investigation, tracing, and identification.

The effectiveness of law enforcement can be examined through legal, institutional, facility, community, and cultural factors (Arliman S., 2012). In the Sorong context, these dimensions interact rather than operate independently.

Table 3. Major Law-Enforcement Challenges Identified in the Study

Dimension	Main Finding	Legal/Operational Implication
Geography	SBNP are located in open waters, remote islands, and isolated locations	Continuous visual surveillance is difficult
Investigation	Direct witnesses are rarely available	Identification and evidentiary processes become difficult
Human resources	Only two personnel are identified in the document as having PPNS status, and they have not been fully utilised	Investigative capacity remains limited

Dimension	Main Finding	Legal/Operational Implication
Facilities	Hydrographic and navigation-monitoring facilities are inadequate	Detection and rapid response are constrained
SBNP condition	Several light beacons are damaged or unfit for operation	Safety risks may arise independently of criminal conduct
Internal coordination	Operational coordination is considered insufficient	Enforcement and maintenance may become fragmented
Community awareness	Knowledge concerning SBNP functions and maritime regulations remains limited	Preventive legal compliance is weakened
Communication	Interaction between navigation authorities, local government, community leaders, and coastal communities remains limited	Community-based surveillance is underdeveloped
Enforcement process	Cases have not consistently reached effective legal resolution	Deterrent effects remain weak

The source specifically records inadequate navigation and hydrographic facilities, damaged light beacons, limited operational infrastructure, weaknesses in personnel competence, insufficient certification, and limited public understanding of SBNP functions.

These findings reinforce Wignjosoebroto's (1976) argument that effective law requires clear rules and conditions that allow those rules to operate in society. Similarly, Manan (2018) emphasises legal awareness through knowledge, understanding, attitudes, and legal behaviour. In the context of SBNP protection, criminal sanctions alone cannot create effective compliance when coastal communities have limited knowledge about the public-safety function of navigation equipment.

Progressive Law and an Integrated Enforcement Strategy

From the perspective of progressive law, the effectiveness of navigation regulation should be measured by its capacity to protect people rather than merely by formal compliance with statutory provisions. Progressive law places human welfare, substantive justice, and social benefit at the centre of legal implementation (Rahardjo, 2006). Applied to SBNP theft, this perspective requires authorities to move beyond a purely reactive model in which enforcement begins only after navigation equipment disappears.

The study therefore supports an integrated combination of **repressive, preventive, technological, institutional, and community-based measures**. Repressive action remains necessary through investigation and prosecution where sufficient evidence exists. However, prevention must receive equal attention through periodic patrols, more frequent inspection of SBNP installations, scheduled maintenance, visual monitoring systems, smart sensors, GPS-based tracking, and stronger coordination among maritime law-enforcement institutions.

The source identifies a multi-agency structure involving the Directorate General of Sea Transportation and KPLP, the Indonesian Navy, Bakamla, and the Water and Air Police. It also recommends digitalisation, smart sensors, GPS tracking, integrated patrols, and education of coastal communities concerning the legal risks associated with stealing or receiving navigation components.

Community participation is particularly relevant. Many SBNP units are located beyond continuous institutional surveillance. Fishermen and coastal communities are therefore strategically positioned to provide early information concerning suspicious activities or malfunctioning navigation equipment. Strengthening legal awareness can transform these communities from passive observers into partners in maritime safety.

The findings ultimately demonstrate that the protection of Aids to Navigation requires more than severe statutory penalties. Indonesia already possesses legal provisions capable of criminalising acts that

damage navigation infrastructure and endanger maritime traffic. The principal weakness lies in implementation. Limited surveillance, broad geographical coverage, insufficient investigative capacity, inadequate facilities, weak coordination, and limited public awareness reduce the practical effectiveness of these norms. A progressive approach therefore requires law enforcement to integrate criminal accountability with technological surveillance, institutional capacity building, continuous maintenance, and community participation. Such an approach better reflects the fundamental purpose of maritime law: protecting human life and ensuring safe, secure, and reliable navigation.

IV. CONCLUSION

This study concludes that navigation plays a fundamental role in ensuring maritime safety, security, reliability, and efficiency. The navigation system encompasses Aids to Navigation (AtoN), maritime telecommunications, shipping lanes, and hydrographic services, all of which function as an integrated foundation for safe vessel movement. However, the implementation of maritime safety law that relies excessively on rigid statutory rules may become less responsive to technological developments and emergency conditions at sea. From the perspective of progressive law, legal regulation should not be limited to formal compliance with written rules but should prioritise the protection of human life, environmental safety, public interests, and the effective use of modern navigation technology. Accordingly, navigation policy should remain adaptive to changes in maritime technology and operational risks while maintaining legal certainty.

The study also finds that law enforcement against the theft of Aids to Navigation remains less than optimal. Such offences may be prosecuted under general provisions on ordinary or aggravated theft in the Criminal Code, while Law Number 17 of 2008 concerning Shipping provides a more specific legal basis for acts that damage or cause navigation facilities to become non-functional. Nevertheless, the application of these specific provisions has not yet been fully effective in practice. The extensive operational territory of the Sorong Type A Class I Navigation District, limited patrol personnel, insufficient monitoring facilities, and the remote location of navigation equipment create significant obstacles to effective surveillance and law enforcement. These conditions increase the vulnerability of components such as batteries, solar panels, and navigation lights to theft. Limited public understanding among some coastal communities regarding the safety function of Aids to Navigation also contributes to the problem. Therefore, effective protection of navigation infrastructure requires stronger enforcement of specific shipping regulations, improved technological surveillance, adequate personnel and patrol capacity, and continuous public education. An integrated approach combining legal enforcement, preventive supervision, technological support, and community participation is essential to strengthen maritime safety within the Sorong Navigation District.

V. ACKNOWLEDGMENTS

The author would like to express sincere gratitude to all parties who contributed to the completion of this study. Appreciation is extended to the academic supervisors and lecturers for their valuable guidance, constructive feedback, and scholarly support throughout the research process. The author also acknowledges the support of the Sorong Type A Class I Navigation District and related maritime authorities for providing information and institutional perspectives relevant to navigation safety and the protection of Aids to Navigation.

Special thanks are also conveyed to colleagues, family members, and all individuals who provided encouragement, assistance, and support during the preparation of this research. Their contributions were valuable in completing this study and strengthening the overall quality of the manuscript.

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