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5 Steps in Data Processing for Maritime Intelligence Decision Making

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ABSTRACT

The Intelligence field is one of the fields experiencing dynamics and rapid changes in the maritime field. Changes in the development of the strategic world environment both globally, regionally and nationally coupled with the rapid advancement of technological development increased information technology has changed the way work and patterns in the world of maritime intelligence. Conventional warfare, the use of biological weapons, environmental degradation, economic espionage, cyber warfare, transnational crime, and information theft are some of the real challenges for national security. To overcome all dynamic and fast challenges, maritime intelligence must be able to move quickly and precisely with systematic planning so that decisions are obtained in accordance with what is needed. Therefore we need an innovative, structured mindset to solve complex problems, focusing on the analysis of maritime intelligence, prioritizing the use of academic research as a method of analysis. From this background, maritime intelligence requires processes / stages of work completed with the right results. The purpose of this research is to study the data that is processed into the right information. The method used is a qualitative method using NVivo 12 Plus.

1. Introduction.

The concept of "World Maritime Axis" proclaimed by the Indonesian government is in need of a strategy to develop Indonesia into a strong and sovereign maritime nation. The concept of a maritime state cannot be separated from the power of defense. If the defense is strong the country's sovereignty will be protected from outside threats. The development of security issues is a global reality that greatly influences Indonesia's strategic environment in maintaining the country's sovereignty and the regional environmental security of Southeast Asia.

The high volume of activities that can be categorized as threatening or violating Indonesia's sovereignty, especially in Indonesia's territorial waters is crucial for Indonesia as an archipelagic state.

Intelligence plays a vital role in serving and supporting the government with regard to domestic, defense and foreign policy by providing and analyzing intelligence information relating to maritime affairs and dealing with specific threats.

Ideally an intelligence agency is required to have five abilities. First, intelligence agencies must be able to identify the dynamics of local, national, regional and global situations that have the potential to threaten national security. Second, intelligence agencies must be able to continuously identify and monitor the dynamics of the source of threats and risks. Third, intelligence agencies must be able to support military operations. Fourth, intelligence agencies must be able to support law enforcement actions carried out by competent authorities. Fifth, intelligence agencies must be integrated with members of other law enforcement agencies. (Wijayanto & Wardhani, 2008).

Intelligence is an activity that is special (Confidential) by sending field agents (individuals / teams), to collect data about opponents, then the data is processed (called intelligence), presented to users (leaders) which are used as a basis consideration in making good or more complete decisions or in short terms is

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a secret activity in carrying out the intelligence function. (Wijayanto, Wardhani, 2008).

Intelligence does not make a policy but rather functions as an accurate collection of data and information to be used as material in the formulation of a leader's policy. Data collection on intelligence operations carried out by an intelligence agency / organization on an ongoing basis will obtain data about problems according to the field, which is very useful for updating the data held.The introduction must be the first section of the text. It is important that it clearly describes the purpose and objectives of the work. It should also contain a review of the state of the art, that is references to the most relevant works reported in the literature in recent years.

This study tries to find the relationship between data processing in The intelligence cycle process and data processing using 5 stages of maritime intelligence data processing, where both systems lead to maritime intelligence decision making.

2. Materials and Methods.

2.1. Materials.

The material used in this study is the result of interviews with selected informants who are experts and experienced in maritime intelligence. The results of the interview were obtained by submitting a number of interview guide texts that were prepared by the researcher shortly before the interview in the hope that the interview results were structured, accurate and for the informants to be better prepared to provide answers or valid data, making it easier for the research interview process both researchers and informants.

2.2. Methods.

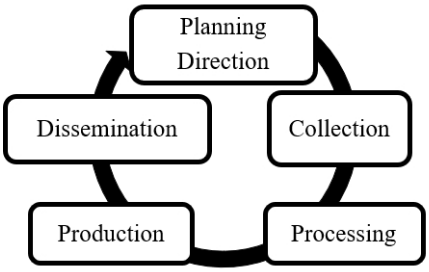
This research is a descriptive study with the method used is a qualitative method using Nvivo 12 Plus as a data processing tool. This is done to find out the instruments that play a role in the intelligence decision making process, where data and information related to research problems are obtained through interviews and direct observation in the field. Data collection techniques carried out by in-depth interviews with several competent sources / informants who have data and important information related to the problems in this study. The interviewees came from the Indonesian Navy and the Republic of Indonesia's Naval Security Agency (Bakamla) who are competent in the maritime sector or the like in data processing and decision making processes. The results of the interview are sorted into research questions so that topics and sub-topics are obtained, the triangulation technique is then carried out from the data obtained and translated into meaningful sentences / statements with explanatory descriptive techniques.

3. Application and Result.

3.1. The intelligence cycle process.

This is a model of the process of intelligence cycles in simple discourse involving structured steps to collect the data needed to create knowledge. The Intelligence cycle as an interconnected five-step process.

Figure 1: The intelligence cycle process.



Source: Authors.

3.1.1. Planning and Direction.

Prepare systematically the things that will be done preceded by the request of the User / decision maker about the context of the information he wants and analyze the initial target according to the task given. Next, study the targets and then plan.

3.1.2. Collection.

Collection of data needed to produce information or intelligence through the analysis process.

3.1.3. Processing.

A process related to the process of data analysis. Starting with data translation, data classification, filtering and sorting data according to categories.

The data obtained will be sorted which can be analyzed or only stored because not all data obtained by the agent can be used for analysis. Processing data through the analysis process into an appropriate and accurate intelligence to be used as material for decision making by users.

3.1.4. Production.

The results of data analysis / processing are produced into an intelligence reporting product to be distributed to users / decision makers.

3.1.5. Dissemination.

Information products resulting from data analysis are conveyed to related parties in their fields to be followed up, primarily to be submitted to Users as material for decision making.

3.2. 5 Steps of Processing Maritime Intelligence Data.

3.2.1. Collecting Data.

This step is an activity of collecting maritime data from various units below, to then sort out which data are analyzed or data that is directly archived. Data in the form of maritime events that are up to date or prominent events in the maritime field.

3.2.2. Displaying Data.

Steps to display data that are usually in the form of problems or incidents in the maritime sector that require further action or resolution. This is to be learned, understood before an analysis is carried out.

3.2.3. Corelating Data.

The data obtained is linked from various aspects, namely the field, location of the incident, previous actors or sorted according to previous data that has been collected, recorded and stored in a data bank so that it can map the things that are priorities for immediate attention or follow-up action so that it can be used as a lesson. Incident data in the form of crimes at sea are linked to information about similar incidents that are stored in the maritime intelligence data bank.

3.2.4. Data Analyzing.

These data will be analyzed after going through 3 (three) processes above. The most basic analysis technique using 5W + H: What, Who, When, Where, Why and How, but it can also be with other analysis techniques that adjust to the problem data area being analyzed. These data are given an assessment as a conclusion and a step to determine advice to the user or even to determine how to act.

3.2.5. Distribution.

The results of the process of analyzing data / issues will be used as a product of reporting intelligence, especially maritime affairs. The product will be distributed to the parties concerned in their fields, especially for the benefit of users, leaders or decision makers in the field of maritime intelligence. From the results of data processing can be taken a decision maker to take action or even a special operation.

3.3. The interview data Processing using Nvivo 12 Plus.

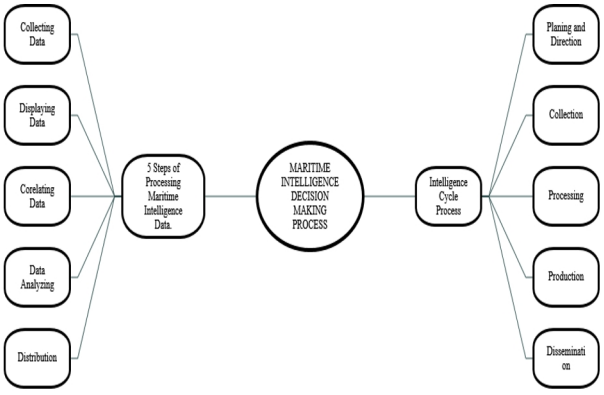
Data obtained from the results of interviews with several Indonesian Navy Intelligence officials and Bakamla (Indonesian Coast Guard) to be processed using NVivo 12Plus so that it can be known whether or not there is a relationship between the 5 (Five) Steps of Maritime Intelligence Data Processing with 5 (Five) Steps Intelligence Cycle in the process of maritime intelligence decision making. Determination of the main categories in the NVivo 12Plus in this study is to use each of the stages that exist in each model.

The main topic determined in processing the interview data with important informants that have been determined into NVivo 12 Plus is the Maritime Intelligence Decision Making Process (MIDMP).

From the main topic, it was revealed to be 2 (two) main subtopics which became the main discussion, namely 5 Steps of Processing Maritime Intelligence Data and Intelligence Cycle Process

Then an explanatory analysis is carried out by exploring the data to get ideas that become Sub Categories of Concepts. In this case it is the discovery of ideas which are the development of interview questions. Main Process in processing NVivo 12Plus data in this study lies in the stages contained in the Main Subtopics (Sub Categories of Concepts), so we get 10 (Ten) Sub Categories of Concepts. It is all divided into 2 (two) because each has 5 steps. In this stage the researcher conducted a deeper exploratory analysis, namely with a deeper understanding of the contents of the text (interview transcript).

Figure 2: The Mind Map.



Source: Authors (NVivo 12Plus).

Figure 3: Project Map.

Source: Authors (NVivo 12Plus).

To get a visual representation of the relationship with NVivo 12 Plus, the researchers conducted a Node system, which is to make an overall category into the existing system on the NVivo 12 Plus. Node is a place to store all Categories based on existing data in other words Node as a container that contains data on groups that have similar characters / ideas and / or reinforce one another. The next step the researcher Coding the data is to enter information contained in the statement in the interview transcript of the research subject in accordance with the existing category in the node system that has been created so that the information is recorded in the file nodes and it is known how much support from the information to the category in other words, qualitative research coding is a process of identifying

research data sources to be associated with certain themes that already exist in nodes.

Figure 4: Picture Visualitation.

Source: Authors (NVivo 12Plus).

Draw a complete chart depicting the flow of relationships between categories and opinions of informants according to the existing categories.

3.4. Result.

Table 1: MIDMP Nodes.

Nodes — Search Project

Name	Files	References
MIDMP	0	0
5 Steps of Processing Maritime Intelligenc	0	0
Collecting Data	2	2
Corelating Data	1	1
Data Analyzing	2	2
Displaying Data	1	1
Distribution	2	2
Intelligence Cycle Process	0	0
Collection	2	2
Dissemination	2	2
Planing and Direction	2	2
Processing	2	2
Production	2	2

Source: Authors (NVivo 12Plus).

An explanation was carried out on the 10 points of analysis of each sub category concept. In the provisions of the analysis results in the NVivo 12 Plus table it is determined that if the achievement of references reaches number 2 (Two) according to the amount of data source, the point is declared in accordance with the agreement in its application and if <2 the point is independent (applied by certain parties) . The agreement occurred at 8 points, namely:

- Collecting data, that is maritime data collection activities from various sources needed to produce intelligence analysis.
- Data analizing, that the process of data analysis becomes an intelligence.
- Distribution, that the results of data analysis which is a product of information that must be provided or submitted to parties related to their fields for further action, mainly conveyed to the User for use as material in decision making / policy.
- Collection, that is maritime data collection activities from various sources needed to produce intelligence analysis.
- Dissemination, that the results of the data analysis which is a product of information that must be given or submitted to the parties related to their fields for further action, mainly conveyed to the user to be used as material in making decisions / policies.
- Planing and Direction, that is an activity of linking data obtained with previous information that has been recorded and is a process of systematically preparing activities to be carried out to achieve a certain goal.
- Processing, that does an analysis but previously the data obtained will be sorted which ones can be analyzed and which data cannot be analyzed.
- Production, that the results of the analysis / processing of data produced into an intelligence reporting product are given an assessment as a conclusion and are a step to determine suggestions to the user to determine how to act.
- There are 2 points that did not get the agreement because references show <2, namely:
- Corelating Data, that Bakamla states as an activity of linking data obtained with previously recorded information.
- Data Displaying, that Bakamla states as an activity of displaying data to be studied before analysis.

Conclusions.

From the discussion above from the results of an analysis of 10 steps in the process of maritime intelligence decision making, the results are obtained:

8 steps practiced by Naval Intelligence and Bakamla. 3 steps experience similarities, namely Collecting Data-Collection, Data Analyzing-Processing, Distribution-Dissemination.2 steps are only done by Bakamla.

From the results of this analysis it can be concluded that the relationship between the 5 Steps of Processing Maritime Intelligence Data with the Intelligence Cycle Process lies in 3 pairs of steps that are similar namely Data-Collection, Data Analyzing-Processing, and Distribution-Dissemination.

Endnotes.

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