The role of the database system on the regional marine industry

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Abstract
Nationally, marine problems related to technology are where technology has unlimited access, the system is still traditional, and the system is not yet efficient. This research was conducted based on analysis and research methods used in data collection are case studies and direct interviews with directly related parties or several people who play a role in the company's internal parties. System development has three main pillars, namely monitoring, testing and supervision. Information systems or databases in Indonesia have not been implemented evenly in all regions, the lack of implementation has resulted in many parties experiencing problems.

Keywords: Database System, Regional Marine Industry

1. Introduction
Indonesia is the largest archipelagic country in the world. Under the UN Convention on the Law of the Sea (UNCLOS) of 1982, the national area of 5.0 million km2 which consists of 3.1 million km2 national waters and a land area of 1.9 million km2, and the Exclusive Economic Zone (EEZ) 3.0 million km2. In this area there is a coastline of approximately 81,000 km and the number of islands is approximately 17,000. In other words 62% is national waters while 38% is land.

Strategic issues that are the main obstacles in realizing sustainable fisheries activities in Indonesia include fisheries management, law enforcement and fisheries business actors. The weakness of the fisheries management system is a strategic issue and a major general problem in realizing a sustainable fisheries sector in Indonesia.

Law of the Republic of Indonesia Number 45 of 2009 concerning Amendments to Law Number 31 of 2004 concerning Fisheries Article 46 paragraph 1, the central government and regional governments compile and develop information systems and fishery statistics data and organize the collection, processing, analysis, storage, presentation, and dissemination of potential data, updating of data on fish movement, facilities and infrastructure, production, handling, processing and marketing of fish, as well as socio-economic data relating to the implementation of fish resource management and development of fishery business systems.

Nationally, marine problems related to technology are technology with unlimited access, the system is still traditional, the system is not efficient, and also has an impact on the capital of parties who want to apply for loans, where the bank is difficult to provide capital, besides the database system is very necessary. To facilitate the activities of the marine industry, functions in managing data, carrying out the operations of the company's activities. By implementing this, it is easier for companies to provide information to both internal and external parties. The purpose of this study is to determine the role and database system for the regional marine industry.

2. Literature review
2.1 System Information
The system is a collection of elements that are integrated to achieve certain goals, while information is data that has been processed into a form that is more meaningful to the recipient and is useful in making current or future decisions (Davis, 1999). Information can describe real events that are used for decision making. The source of information is data that can be in the form of letters, symbols the alphabet and so on.

Information systems have three main elements, namely data that provides information, procedures that tell users how to operate the information system, and people who make products, solve problems, make decisions, and use the information system. People in information systems create procedures for processing and manipulating data to produce information and disseminate that information to the environment. The basic model of the system is input, processing, and output. The information processing function often requires data that has been collected and processed in the previous period.

Therefore, in the information system model, data storage media (data base) is also added, so the information processing function is no longer converting data into information but also storing data for further use.

This basic model is useful in understanding not only the entire information processing system, but also for the application of individual information processing. Each application can be analyzed into input, storage, processing and output.

The success of an information system is highly dependent on the database system. The more complete, accurate and easy it is to display the data in the database system, the higher the quality of the information system.

Database (database) is a collection of data that are interconnected with each other, stored on computer hardware and used by software to manipulate it. The data needs to be stored in the database for the purpose of providing further information. With the addition of data storage, the function of information processing is no longer converting data into information but also storing data for further use.

2.2 Fishery Sector

The fisheries sector is a business activity that includes catching and cultivating fish, types of crustaceans (such as shrimp, crabs), molluscs, and other aquatic biota in sea, brackish water and fresh water. Fishery resources can be utilized through fishing (capture fisheries) and fish cultivation. The fisheries sector should be a mainstay in Indonesia's development, but so far it has received little attention so that its contribution and utilization in the Indonesian economy is still small.

According to (Dahuri, 2001) [4], the process of utilizing fishery resources in the future must have a common vision of fisheries development, namely a fishery development that can utilize fish resources along with optimally for the welfare and progress of the Indonesian people, especially fish farmers and fishermen in a sustainable manner.

2.3 Overview of the Axiology of Fisheries Information Systems

An integrated information system, as a realization of the need for a monitoring system, must be built to meet the increasing needs. This system, which is called the Fishery Information System, has uses, among others: a) supports the creation of a synergistic atmosphere between information systems related to fisheries, both those that already exist, are being developed, or are being planned. b) Reducing waste due to duplication of data related to fisheries, as well as being complementary to each other. c) Creating an efficient and simple data collection system so that it is easily understood by various parties. d) Requires data related to fisheries so that it is easily accessible by all levels of society and agencies that need it. e) Provide data related to fisheries quickly. f) Educate the public to be able to understand the characteristics of Indonesian fisheries. g) Creating a sense of responsible ownership of Indonesian fisheries in Indonesian society in general. h) Provide more valid and complete information needed to make policies more effective. The benefits obtained from the availability of a fishery information system can be seen from 3 (three) sides, namely as a data provider, as a decision maker, and as a user of information. From the side of the data provider, the benefits are obtained by using more optimal data and the opportunity to sell information with a wider dimension. The decision-maker side benefits

from improving services, making decisions more quickly and accurately, as well as the Scientific Journal of Agribusiness and Fisheries (agrikan UMMU-Ternate) Volume 4 Edition 2 (October 2011) 54 policies that will be more effective and efficient. Meanwhile, from the user's point of view, the added value of information is in reducing the risk of inappropriate actions, increasing competitiveness, and increasing profits.

3. Method

The research is conducted by Analysis and m etode of research used in the data collection is a case study and interviews of the parties are related directly or some people who play a role in the internal companies. The process of developing a computer-based information system that will be developed follows the system life cycle method. According to McLeod (1993), the stages of the system life cycle in the development of computer-based information systems consist of the stages of planning, system analysis, design, implementation and use. Each stage can be further divided into stages, stages that are more detailed so that the implementation can be more systematic and planned. The stages of work done for computerized information systems are as follows: 1) Overview of the field early and identification systems, aims to look at the conditions and problems that occur in the field. The technique used at this stage is Haluan *et al.* – Development of the Capture Fisheries Management Information System 125 using direct interviews with company leaders, staff and company employees. From interviews are asked constraints that exist and the system what the running and the system of what are really needed company in the presentation of the production control information. 2) The stage of system analysis is intended to explain the current system in more detail, which includes data sources, information users, input and output of information users and information flow mechanisms. The same thing is also done for the system to be built, namely by setting goals to be achieved, establishing mechanisms and system requirements to achieve these goals. 3) System design stage, aims to create more detailed system documentation so that it will simplify the process of coding computer programs. The tools used at this stage are data flow diagrams (data flow diagrams), pseudo code (structured English) and program algorithms; 4) The program coding stage is the main stage of the computer-based information system development process. At this stage the coding of computer programs is carried out so that an application system is obtained from the information system that is built. 5) The testing stage is carried out to see the validity (conformity with the wishes of the user) of the application system that is built. Tests are carried out using the company's historical data. If the application system built is still not valid, then improvements are made, whereas if it is valid, then the application system is ready to be applied to the system.

4. Results and Discussion
4.1 Result

Developing a system has three main pillars, namely monitoring, testing and supervision. Information processing can be carried out after all data has been collected. Implementation of a management information system in the management of a port is one of the strategies that is expected to help realize an effective and efficient port performance. The production process at the fishing company is as follows:

A. Receipt of products from suppliers.
B. The process of sorting products received by type, weight and condition.
C. Payment and recording of products by the administration and finance.
D. Storage of products in the company that are stored in storage tanks for a certain period of time.
E. Product maintenance.
F. Packing that is ready to ship with dry and wet packing techniques.
G. Delivery of products to customers according to the type and size of the product.
H. Recording of product data received by customers and product sales costs.

The existing information system already uses computers but is still limited to making reports and recording products and other technical matters. Most of the company's administration is carried out by using a documentary archive consisting of letters (purchase of goods, sales of goods and travel documents). Provision of operational information and company conditions in the context of implementing the company's managerial activities with the following data specifications:

A. Production data obtained from the production department. The production data are in the form of quality, quantity and types of products available and become inputs for the marketing department to carry out subsequent marketing activities.
B. Customer data obtained from the main customers (exporting companies and restaurants) through records made by the marketing department. The customer data consists of quality, quantity, size, type of product and frequency of delivery.
C. Sales data obtained from the marketing department. After the transaction is made, the data in the form of quality, quantity, type of product and marketing time and shipping costs are included in the sales report.
D. Supplier data obtained from suppliers through records made by the purchasing department. The supplier data contains data on the supplier's name, address, telephone number, date of starting supply and type of supply.
E. Purchase data obtained from the production department. The data in the form of quality, quantity, type of product, time of purchase, suppliers and shipping costs.
F. Inventory data of production support facilities obtained from the production department. The data includes the type, quantity and condition as well as other information regarding the hardware used in the production process.
G. Staffing data obtained from the HR and General. The data includes the number, identity and other information regarding employees who work in the company.
H. Cost data is issued by each managerial part of the company. This data includes the amount, time, use and other information related to the operational costs of each managerial part of the company.

4.2 Discussion

The advantages of this Capture Fisheries Management Information System are Ease in data storage and processing, Accuracy and speed of information in analyzing product data, can predict production levels from lobster fisheries, price levels are more accurate and

fast, Effective in planning lobster fishery business development for both export and local markets, Product fishing season can be estimated based on monthly catches, and operation is easier and faster than manually. There is a need for development in the Capture Management Information System, especially the need to anticipate inaccurate data so that the analysis in the application model is not optimal. In addition, the influence of the season needs to be supported by data such as temperature, salinity and rainfall so that the analysis of the effect of the data on the season will be more optimal.

5. Conclusion

Information systems or databases in Indonesia have not been implemented evenly in all regions, the lack of application has resulted in many parties experiencing problems, both in terms of capital and in business activities, making it difficult to develop a business. The development of an information system or data base is very necessary for a company in the marine sector, able to support the company's activities from various aspects and elements to improve access to information in developing regional marine programs and facilitate capture fisheries business. And the existence of data that is systematically arranged will also facilitate the development of the regional marine industry

6. References

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