

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Indonesia is a country that has a very high level of biodiversity and endemism, making it one of the megabiodiversity countries. Indonesia is the largest archipelagic country in the world because it has a large sea area and a large number of islands. Indonesia has a total of 17,504 islands. The length of Indonesia's coast reaches 95,181 km (World Resources Institute, 1998) with a sea area of 5.4 million km², dominating Indonesia's total territorial area of 7.1 million km². Indonesia is also blessed with the potential large marine resources including the greatest wealth of marine biodiversity and non-biological diversity. According to Fishbase, Indonesia has 4605 species of finned fish consisting of 1193 species of freshwater fish, 3496 species of marine fish, 104 species of pelagic fish, and 310 species of deep water fish. Not to mention the position of Indonesia which is in the center of the world's coral reef triangle or commonly called "The Coral Triangle" which is also known by the world community as the area of "The Amazone Sea", has various species of coral reefs that are widespread throughout Indonesia, with an estimated area of reaching 50,000 km², which is almost 25% of the world's coral reefs, with the number of genera ranging from 70-80, and more than 500 species, or constitutes almost 75% of the diversity of coral reef species in the world.

Marine ornamental fish is one of the coral reef ecosystem resources. Seawater ornamental fish is a type of marine fish that is utilized for its visual beauty, usually kept in an aquarium. The habitat of marine ornamental fish is coral reefs, where there are

healthy coral reefs where ornamental fish gather. The marine waters of Indonesia have coral reefs that are famous for being beautiful and wide. By itself, Indonesia has a high diversity of marine fish compared to other countries. Many Indonesian marine ornamental fish centers also come from the eastern region which is included in the Coral Triangle zone.

According to Susanto (1994), marine ornamental fish usually live on coral reefs. This fish is also known as reef fish, because its habitat cannot be far from coral reefs. If coral reefs are damaged, the reef fish that are in them will also be destroyed. Most reef fish are not the type of explorer fish that likes to swim around on their own. They will always be around the herd or around coral reefs. Not all reef fish are used as ornamental fish, usually only those that are under 30 cm long and have attractive colors. Indonesia's coral reefs are the source of more than half of the world's rich and colorful tropical marine fish. Together with the Philippines, Indonesia supplies about 85% of the world's marine aquarium ornamental fish. However, there are several species that are not found in Indonesian waters. These types dominate the market in their own right.

The waters of Pulau Banyak are one of the fishing spots for marine ornamental fish by the fishermen because the coral reef ecosystem in the waters of this island is still natural. Reef fish is one of the organisms associated with coral reefs with the highest number and is a large organism that can be found in all coral reef habitats. Reef fish are organisms that live and settle and forage in coral reef areas (sedentary), so that if coral reefs are damaged or destroyed, reef fish will also lose their habitat. As fish that live depending on coral reefs, the damage to coral reefs will affect the diversity and abundance of reef fish (Nybakken, 1988).

Around 1,471 types of ornamental fish are traded in the world, with an estimated number of 20 to 24 million individuals. The jae-jae fish (*Pomacentrus Viridis*) and clownfish (*Amphiprion ocellaris*) are the most traded fish (Wabnitz et.al., 2003). Marine ornamental fish still rely on natural fishing, only less than 1% of which have been cultivated (Wood, 2001).

In Indonesia, the marine ornamental fish trade began in the 1960s, with the first fishing grounds being the Kepulauan Seribu. Currently, Indonesia is the largest exporter of marine ornamental fish, along with the Philippines. More than 280 species of marine ornamental fish are traded for export purposes. The trade gateways are centered in Jakarta and Bali, because these two places have flight access to America and Europe, so that they become centers of shelter for exporters. In some other places, there is also a small amount of export trade such as in Makassar, Solo, and Medan. Exports from Makassar usually transit in Bali first, while for Solo and Medan they transit in Singapore.

The potential wealth of abundant marine ornamental fish and natural conditions that support this can of course open up opportunities for the community to improve their economy. The selling price of marine ornamental fish in the local and export markets is quite high. Even for some endemic and rare types of marine ornamental fish, it can cost up to tens of millions of rupiah in the export market. The high economic value of coral ornamental fish triggers people to catch these fish in large numbers using fishing gear that destroys coral ecosystems such as bombing and the use of cyanide poison. The use of cyanide as a fishing gear, both ornamental fish and consumption fish, began to bloom and massively used in the 1980s to 1990s. The use of poison as a fishing gear for ornamental fish was considered quite effective and cheap at that time.

Besides being related to the problem of ecosystem destruction due to overfishing of fish, another problem that often arises is the problem of identifying marine ornamental fish between fishermen and exporters. Often fishermen cannot fulfill orders for the types of fish needed by exporters because fishermen cannot identify these types of fish. This problem arises because of differences in the names of fish by exporters with what is understood and recognized by fishermen. It is undeniable; each region must have a different name or term that is different for each biota in the area. This misidentification problem has long implications because the catches of fishermen cannot be accepted by exporters and result in the inhibition of ornamental fish export activities being carried out. This is one of the phenomena gaps that often occur in the business of marine ornamental fish which caused by misunderstanding between the trader and buyers or between fish catcher and consumer over the names of categories of fish. Thus, a study needs to be done to solve the problem among the traders.

This present study has also a very important relevant dealing with the problems often arised as the result of misidentification because of the fish naming systems of marine ornamental fish. This condition can lead to Illegal, Unreported and Unregulated (IUU) fishing which include: fishing in closed areas or during prohibited times, using illegal gear, catching prohibited species, mislabeling and falsifying documents, fraud, and smuggling in the marine ornamental fish trading. Without proper stewardship, we could lose our last sustainable source of wild marine ornamental fish and causes lost of Indonesian resource and heritage which the essential component of a functioning global economy.

Thus, the goal of this study is to provide a mean of structuring vernacular names, which, although in wide use, are highly variable and do not necessarily meet trade requisites. Large disparities in the number of vernacular names were found between species and among sites. Much of this variability is due to pronunciation and syllable adjunction, which do not affect the root name structure. Pronunciation aside, for the most part the analysed variability in vernacular names of fishes is of linguistic origin stemming from geographic – and thus cultural – groups. Most efforts at standardisation should then be invested at fish markets in order to integrate fish identification and labelling processes prior to selling.

Fisheries also provide an opportunity to explore a particular perspective on the sociolinguistics makeup of the world. The need to communicate about fish cuts across geographical, political, social and linguistics boundaries and an adequate understanding of the activity of talking about fish cannot be derived from a sociolinguistics description focused on a single community or a single language. It is perhaps only from a perception of the terminology of fisheries as a language problem, and as a subject for language planning, that this particular world view is able to emerge.

Furthermore, Fisheries also offer a rich field for the study of language problems. It is international in scope, utilizes a number of languages, is geographically diverse, and is economically important. It requires cooperative communication networks at many levels. These networks have sometimes been articulated as international organizations. For example, the Inter-American Tropical Tuna Commission or the International Council for the Exploration of the Sea. Project studies have focused on fish naming since this aspect of fisheries is of interest to all those involved in fishing. and since it is also

explicitly attended to by organizational networks on international, regional, and national levels.

People need to be able to talk about fish. The scientific, Latin-based system is hard and cumbersome, so common names and folk names are absolutely essential. In the context of speaking, precision of the degree desired in taxonomy is not an issue. This represents a straightforward language problem of the widest generality. Perhaps it can be referred as the *domain problem*.

People name fish in different languages. People speak different varieties in different places of what is regarded as the “same” language. This we can name *the language variation problem*.

Fish is sold and placed on dinner tables. Consumers need to know what they are buying; consumers need to have an idea of the taste. Fishermen and the fisheries industry wish to promote their products. Community agencies wish to mediate to forestall misinterpretations, deceit, and so on, to impose taxes and other regulation; or simply to keep statistics. All this we can refer to as *the commercial problem*.

Finally, people in different places exchange information about fish. And fish names occur incidentally in other communications. Problems of translation arise. This can be referred as *the Translation Problem*.

Naming, according to Kridalaksana (2008:160), is a process of searching for language symbols to describe objects, concepts, processes, and so on. The existence of differences in fish naming systems, namely: *Scientific, Common, and Folk Naming Systems*, creates problems and complications. The complexity of the people's naming

system or the problem of using professional and commercial names, of course, must find a solution in order to find the same or equivalent naming system.

According to Haugen (1972), the relationship between fauna and language has been widely studied from various disciplines, including from a literary, cultural and linguistic perspective. In linguistic studies, the relationship between language and the natural surroundings can be investigated through an ecolinguistic approach. Ecolinguistics is an approach that combines ecology and linguistics. The merging of these two fields results in the definition of ecolinguistics as the study of the interaction between language and the environment. (1972, p. 232). In principle, ecolinguistics can be divided into two parts, namely the section that analyzes environmental discourse or environmental discourse analysis which is often referred to as eco-critical discourse analysis and the section that focuses on research on the interaction between humans, the human mind, and the environment, or a study of how humans adapt linguistically to a new or unfamiliar environment (Nash, 2014).

Farrel (1972) stated in the Federal Register on the Nomenclature of fish and shellfish that there is lack of perception of the interrelatedness of the three fish-naming systems: the scientific, the common, and the folk naming system. Ichthyologists and regulators of the fish names do not sufficiently appreciate the motivation and intricacies of folk naming system which cause problems for the professional and commercial use of fish names. Ichthyologist may disagree on the appropriateness of particular names of the fish as it is against the principles for giving names based on the taxonomy of the fish. The name attached to the fish as it reflects. Simply put, fish naming is identical with the characteristics of the thing named. However, this is not so in naming fish. Therefore a study

needs to be done to solve the problems. At least, there are specific ways of naming fish for common sense of interaction. In other words, to avoid problems as cited before, there need to be done scientific names and folk names. This study is intended to address the problem of naming fish and tries to bridge the theoretical gap between the the existence of differences in fish naming systems, namely: *Scientific, Common, and Folk Naming Systems*, which often creates problems and complications.

Different regions of Indonesia have different names for fish species. A Study on the folk names of marine ornamental fish has not yet done, at least in the context of Indonesia. The study of folk names of fish was conducted by Kurniawan (2019) which discusses the marine ecolexicon in Batubara Malay in the millennial generation in Dahari Selebar Village, Talawi District, Batubara Regency. This study aims to describe the marine ecolexicon found in Batubara Malay in Dahari Selebar Village and describes the understanding of the community, especially the millennial generation, regarding marine ecolexicons in Batubara Malay in Dahari Selebar Village, Talawi District, Batubara Regency. The theory used in this research is ecolinguistic theory.

Likewise in Pulau Banyak, Aceh Singkil, Folk naming of fish, which have an important role in people's lives especially for the fishermen. The local names of fish serve as a symbol to mark each fish that has been caught. Identification of fish species has an important meaning when viewed from a scientific point of view because the entire sequence of subsequent work is highly dependent on the correct identification of a species. In reality, the folk fish names are used in business of ornamental fish. This reasearch gap indicates that a study of naming fish is worth doing. The fishermen on

Pulau Banyak, Aceh Singkil have local names fish species caught in their region. For example, *Clownfish* or *ikan badut* is known as “*Anak Rabu-rabu*.” For fishermen in Pulau Banyak. “This fish is called *Anak Rabu Rabu*, because it lives inside the anemone. In Pulau Banyak Anemone is called as *Rabu Rabu*. Rabu-rabu is also divided into *Mio Mio*, where there are different types of anemonefish live inside, namely *Giro Pasir* and *Balong*.

As addition, *Rabu-rabu* or anemone is usually consumed when there is a celebration or feast and the taste is very delicious, similar to the taste of stomach of a cow or buffalo or more similar to the taste of *kikil*. *Anak rabu rabu* or *clownfish* became increasingly known as *Nemo* when it first appeared in 2003 as the main character in an animated film by director Andrew Stanton entitled *Finding Nemo*. Nemo fish are marine ornamental fish that are cute, tame, always beautiful and easy to cultivate. This fish is usually brightly colored, yellow, orange, reddish or black, has a wide body and is equipped with a small mouth.



Figure 1.1 Clownfish is known as *anak rabu rabu*, *ikan badut* and *nemo* in Pulau Banyak, Aceh Singkil.

Seeing the above conditions, the main objective of this study is to analyze the types of marine ornamental fish caught by fishermen and their names in the waters of Pulau Banyak. Naming fish plays an important role in people's lives on Pulau Banyak because it serves as a symbol to mark each fish they have caught. In terms of Ecolinguistics, the naming of fish in the Pulau Banyak community is the result of the mindset of the speakers of the local language in the area. The naming of fish is influenced by the local language used by the community, the unique characteristics of the fish, as well as the cultural background of the people who have an agrarian lifestyle. This study aims to find out the basics used in naming fish, the meaning behind these names, and the cultural background that influences the naming.

In studying the meaning of the naming of marine ornamental fish in Pulau Banyak, Aceh Singkil, sufficient knowledge and understanding is needed. One of which is by using semantic studies. Semantics is the study of meaning. According to Aminudin (2011: 15) semantics implies "the study of meaning". In line with the opinion of Tarigan (2009: 7), semantics examines symbols or signs that express meaning, the relationship of one meaning to another, and its influence on humans and society.

Relations of meaning of fish names can be constructed in various forms. Construction can consist of a number of lexical systems or units of language that can be words, phrases or sentences and their meaning can be determined based on a set of relations known as semantic relations. Semantic relations can express the similarity of meaning, conflict of meaning, the scope of meaning, doubling of meaning or also the excess of meaning. The relation of meaning to naming fish in Pulau Banyak, Aceh Singkil is assumed having the chronology of the giving process.in naming system.

Chaer (2013, P. 44-52) states that the naming system consists of nine types, namely, 1) imitation of sound originating from the sound generated by the object, 2) mention of parts originating from the prominent characteristics of the object and are already known in general, 3) the mention of the characteristic that comes from the characteristics of the object, 4) the inventor and maker comes from the name of the inventor, 5) the place of origin comes from the name of the place where the object comes from, 6) the material comes from the name of the main ingredient of the object, 7) similarity comes from the meaning that is equated or compared with the lexical meaning of the word, 8) shortening comes from combining the elements of the initial letters or syllables of several that are combined into one, and 9) the new name comes from the term formed to replace the word.

In addition, another significance of this study is to provide a response to the problems that arise as a result of naming fish species related to SDGs or Sustainable Development Goals, a global program by the United Nations (UN) for development for the safety of the earth. Indonesia is one of the countries that strongly supports these efforts to eradicate or minimize emerging problems as an effort to improve the welfare of the Indonesian people. There are 17 goals of the SDGs that are expected to be achieved by 2030. One of the SDG points that covers the preservation of ecosystems and marine resources in Indonesia is SDGs 14, which contains Maintaining Marine Ecosystems. The general target is to conserve and sustainably utilize marine, oceanic, and maritime resources for sustainable development.

Naming marine ornamental fish is linked to Sustainable Development Goal (SDG) 14, particularly in the context of marine conservation and sustainable use. Appropriate

and educational naming can raise public awareness about the importance of maintaining marine biodiversity and reducing negative impacts on marine ecosystems.

There are some points related to the relationship between naming marine ornamental fish and SDG 14: (1) Raising Awareness: Attractive and memorable names can help raise public awareness about various types of marine ornamental fish and the importance of protecting their habitats. (2) Conservation Education: Information accompanying the naming, such as the fish's origins, behavior, and environmental needs, can educate the public about the importance of marine conservation and responsible fishing practices, (3) Reducing Illegal Trade: Accurate naming can help identify protected or endangered fish, thereby reducing the illegal trade in marine ornamental fish, which can damage ecosystems, (4) Developing Sustainable Tourism: Attractive naming can contribute to the development of sustainable marine tourism, such as snorkeling and diving, which can provide economic benefits while maintaining environmental sustainability, (5) Reducing Negative Impacts: By understanding the characteristics of fish through their names, the public can be more careful in selecting ornamental fish, avoid purchasing from unsustainable sources, and reduce negative impacts on wild fish populations. Overall, appropriate and informative naming of marine ornamental fish can be an effective tool in supporting marine conservation efforts and achieving Sustainable Development Goal 14.

1.2 The Problems of the Study

The problems in this research are as follows:

1. What ecolexicons are found in the identification of marine ornamental fish by fishermen on Pulau Banyak?
2. What are the criteria for naming marine ornamental fish by fishermen on Pulau Banyak?
3. Why is the name of the marine ornamental fish on Pulau Banyak realized in the way it is?

1.3 The Objectives of the Study

In line with the problems of the study, the objectives are:

1. To investigate and describe the ecolexicons found in the identification of marine ornamental fish by fishermen on Pulau Banyak.
2. To elucidate the criteria for naming marine ornamental fish by fishermen on Pulau Banyak.
3. To explain the reasons why the name of the marine ornamental fish on Pulau Banyak realized in the way it is.

1.4 The Scope of the Study

The study is limited on the folk naming system for marine ornamental fish in Pulau Banyak waters, Aceh Singkil. This study used Ecolinguistic and Semantic theory to look in more deeply about the lexicon phenomenon of marine ornamental fish in the area.

1.5 The Significance of the Study

The study of this research offers significance for the reader, both theoretical and practical. Theoretically, the results of this study are expected to be able to add the enrichment of facts and information about the marine ecolexicon used by fishing communities in Pulau Banyak. In addition, the results of this study are also expected to enrich scientific treasures and become a reference for other researchers who are interested in studying marine fish naming from an ecolinguistic point of view in a wider scope of research area.

Practically, the results of this study are expected to provide a response to the problems that arise as a result of naming fish species. The results of the study on the marine ecolexicon on Pulau Banyak are expected to be able to solve the problem of information gaps and contribute to fisheries management in the Pulau Banyak region, in particular and in Indonesia in general.



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