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Abstract
This research was conducted on the east coast of Sumatra Island including Aceh, North Sumatra, Riau, Jambi, South Sumatra and Lampung Province. From February 6 to May 20, 2017. The objective of the research is to analyze the existence of potential conflicts, types of conflicts and alternative solutions to conflict in the East Coast of Sumatra. The data collection methods are carried out using qualitative methods. The results showed that the potential for fisheries conflicts on the east coast of Sumatra is caused by poor utilization of space and tends to prioritize the economic side compared to the ecological and social side. The type of conflict found is class conflict, ownership conflict and agrarian conflict. The alternative solution of the potential of conflict is increasing the supervision law enforcement in the sea fisheries, strengthening institutional management of the utilization of fisheries resources and developing the network between fishing communities in the Malacca Strait.

Keywords: Conflict potential, type of cConflict, the alternative solution of conflict

1. Introduction
Fisheries resources are a major source of food especially as animal protein for humans and provide employment and economic benefits [1]. Low productivity leads to competition among fishermen to get fish catches are becoming increasingly stringent because the regime of fish resources management is open (open access). These conditions are prone to conflict [21]. Meanwhile, global demand for marine protein is growing [2]. Tunje said that the increasing fishing pressure and over-harvesting of fisheries resources, for instance, have resulted in an uptight competition for the fisheries resources between the multiple users and subsequent reduction or collapse of important viable fish populations. These, in turn, have led to conflicts among the different user groups and even within individuals in a particular fisher user group over the declining fisheries resources [9].
Fisheries resource use conflicts are common among artisanal fishers of tropical developing coastal areas. This is because most communities in these regions are highly dependent on the coastal and marine resources for livelihood[10]. These resource use conflicts, if not well understood and managed, can be a constraint towards achieving sustainable use and management of the resource with some associated negative socio-economic implications [9]. Conflicts among stakeholders are often expressed in three scales: communities, coastal area, and individual communities [18]. The conflicts that occur among fishermen include two main characteristics, the first is conflicts between fellow fishermen themselves or internal conflicts, and the second is conflicts between fishermen and non-fishermen or external conflicts [11]. Conflicts among fisheries stakeholders arise due to differences in power, interests, values, priorities, and manner of resource exploitation [15]. Demand for fishery outputs, which has exceeded the capacity of near-shore areas to satisfy all of the demands instantaneously, is causing spatial conflicts among fishing gear operators. This lead to serious problems as overfishing, degradation of coral reefs and other important near-shore habitats, coastal and marine pollution, and others, which could challenge sustainable development at both regional and local scales [18]. Conflict is a fundamental social process [4], particularly in vulnerable regions that depend on fish for food security [3]. A conflict is the result of opposing interests involving scarce resources, goal divergence and frustration [17]. Conflicts over access and control of fisheries and aquatic resources are a global phenomenon [10].

However, they have particular importance in developing countries where a significant portion of the population depends on capture fisheries for food and livelihoods [15]. Conflicts take place in fisheries when groups or individuals seek the same resource using different methods or try to utilize the same space for their activities with either party seeking dominan [5]. The others said that a conflict will occur if there is a difference of understanding between two or more persons against the various disputes, tensions, difficulty between parties who are disagreeable [19]. A conflict originates from different places, from different sources, occurs for varied reasons and in myriad forms such as, personal conflict, racial conflict, class conflict, political conflict, communal and non –communal conflicts, violent and non-violent conflicts, cultural conflicts, religious conflict, conflict of values and conflict of interests, social conflict, economic conflict and ideological conflict etc. It can be argued that conflict emerges in human society due to clash of interests and gains [20]. Analyzing and tracing of further conflicts in order to know the potential of fishery conflicts, the types and characteristics of fisheries conflicts and the frequency of fisheries conflicts as well as finding alternative solutions of fisheries conflicts in Indonesia especially East Coastal of Sumatera are urgent to do in this research. The results of this research are expected to provide an appropriate solution to prevent and resolve conflicts that occur, especially the conflicts that occur in the Coastal Area of Sumatra. According to Arnason in [14] there are several remedies towards alleviating the fisheries problem: a. fishing licenses, b. sole ownership, c. territorial use rights in fisheries (TURFS), d. individual catch quotas, and e. community fishing rights.

2. Material and Methods

Study area and analysis

This research was conducted from February 6, 2017 to May 6, 2017. The Location of data collection was done at some points which were representative of Coastal Area of Sumatra.

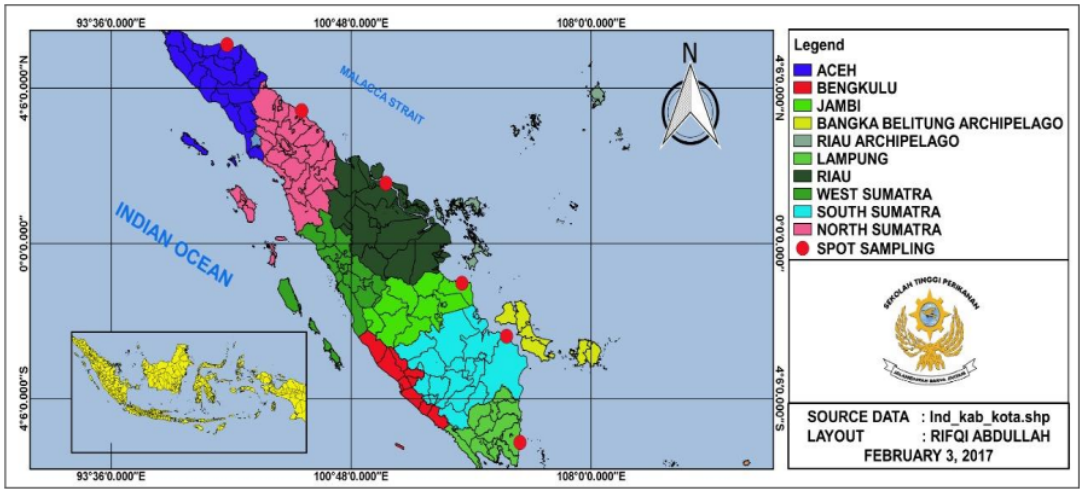

Fig 1: Map of Research Area

The data collection was done by qualitative survey method in which it involves the systematic collection, organization, description and interpretation of textual, verbal or visual data [1]. It was carried out through triangulation technique. The objective is to increase confidence in the findings through the confirmation of a proposition using two or more independent measures [7]. The types of data collected were primary and secondary data. It collected through interview techniques, observation, and literature study [12]. The interview as an interactive process where a person asks questions to seek particular information [16]. It was used an open questionnaire to have to the interested respondents of data. It is because the interview is flexible, allowing in-depth analysis from a relatively small sample size and place the focus of research on the views of participants [22]. Analysis of data used as a reference in the study include categories of data, display data and conclusions.

3. Results

3.1 Problems and Potentials of Conflict

The investigation results showed the potential for conflict in this region can be grouped basically into: a. Conflicts due to zoning or unclear division of space, b. Conflicts of this type occur due to the struggle for fishing ground [23], c. Conflict due to activities. Conflicts of this type relate to who determines the access, rights or entitlements of fishers to fish in a disputed area. Access issues are the root cause of this type of conflict [13], d. Conflict due to destruction of ecological functions. Irregular utilization and regardless of the functions of coastal ecology result in the degradation or decline of a function of the ecology itself.

3.2 Sample cases

3.2.1 East Coastal of Aceh Darussalam Province

Case / Year / Location:

1. Trawl; 2010, 2011, 2012, 2013, 2014, 2015; East Coastal of Aceh Province. Description: The use of trawl by Thailand fishermen which is unacceptable by local fishermen.
2. Purse Sein, 2010, 2011, 2012, 2013, 2014, 2015; East Coastal of Aceh Province. Description: The use of Purse Seine with using 40,000 watt lamp by Belawan and Thailand fishermen can attract many fish at Aceh but it is very detrimental to local fishermen.
3. Fishing Ground, 2011, 2012, 2013, 2014, 2015; Langsa of Aceh Province. Description: The entry of foreign

fishermen that utilize prohibited fishing gears in Aceh.

4. Fish Aggregating Device Termination; 2012, 2013, 2014, 2015; Nort of Aceh Province. Description: The fishermen using FADs have increased catches, however, fishermen who did not use FADs have decreased catches.

3.2.2 East Coastal of North Sumatera

Case / Year / Location

1. Construction of A Steam Power Plant; 2017; Medan Merelan: North Sumatera Province. Description: Traditional Fishermen in the Terjun and Paya Pasir Villages, Marelan District feel marginalized and persecuted for the attitude of PT. Sanghai Elektric Power Contuction and PT Mabar Electrindo which do not carry out their obligations for the impact of damage to the environment / Ecosystem / traditional fishing grounds
2. Trawl; 2010, 2011, 2012, 2013, 2014, 2015; Medan of North Sumatera Province Description: There was a demonstration of fishermen at the Belawan Ocean Fishing Port demanding to stop the use of trawl.

3.2.3 East Coastal Island of Riau Province

Bottom Gill Net, 2012 and 2013; Karimun: East Coastal Island of Riau. **Description:** There was a demonstration of fishermen at the Karimun demanding to stop the use of Bottom Gill Net.

3.2.4 East Coastal Mainland of Riau Province

Bottom Gill Net; 2017; Bengkalis: East Coastal Mainland of Riau Description: There was a demonstration of fishermen at the Karimun demanding to stop the use of Bottom Gill Net.

3.2.5 East Coastal of Jambi Province

Mini Trawl and Trammel Net; 2013, 2014, 2015, 2016, 2017; Tanjung Jabung Timur: East Costal of Jambi. Description: There are conflict of Kuala Simbur village fishermen with fishermen from Desa Lambur Luar, Kec. Muara Sabak Timur Kab. Tanjung Jabung Timur, about the boundaries of fishing areas and the use of fishing gear

3.2.6 East Coastal of South Sumatera Province

Trawl, Mini Trawl and Trammel Net; 2011, 2012, 2013, 2014, 2015; Banyuasin: East Costal of South Sumatera. Description: The use of trawl by Jambi, Riau, Jakarta, Central Java and Thailand which is unacceptable by local fishermen.

3.2.7 East Coastal of Lampung Province

Danish Sein; 2017; East Lampung. **Description:** The existence of a squid season in early 2017 which caused a gap between Danish Sein catches that was far more than the catch of the step chart

4. Discussion

4.1 The type of conflict that occurs in East Coastal Sumatera consists of;

a. The entry of unlicensed ships of Inter-Provincial or Foreign to the local fishermen waters.
b. The use of a modified bottom net (a mini trawl), trawl or purse seine is considered to be overfishing and damaging gillnet, trammel net and fishing gear.
c. Plotting of fishing ground by traditional fishermen at the local fishermen waters.
d. The utilization of fishery resources that are not in accordance with the rules or laws applied.
e. Fishing Activities using prohibited tools.

4.2 Frequency of Conflict

The frequency of fishery conflicts that occurred within the last 5 years on the island of Sumatera are as follows: a. The conflict of agrarian 58%; b. The conflict of class 34%; c. The conflict of ownership 8%.

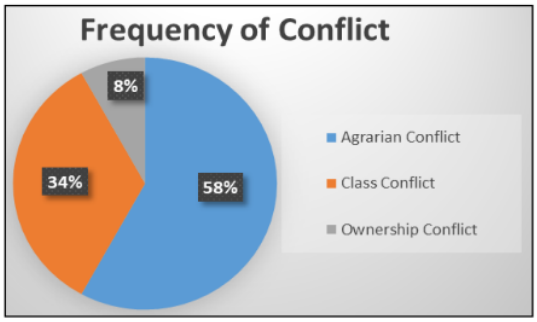

Fig 2: Frequency of Conflict

5. Conclusion

1. Potential conflict of fisheries in the East Coastal Area of Sumatera is because of a. unlicensed ship operation; b. Plotting of fishing ground by local fishermen; c.The use of a modified bottom net/ trawl/ purse sein fishing gear; d. Fishing activity by using devastating device
2. Type conflict on the East coast of Sumatera consists of vertical and horizontal conflict.
3. The frequency of agrarian conflicts is 58% for class conflict, 34% for conflict of ownership of resources and 8% for class conflicts.
4. Conflict solutions are mostly solved by seeking local agreements, although some are done formally.

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