

## AN ANALYSIS ON THE EFFECT OF ILLEGAL, UNREPORTED & UNREGULATED (IUU) FISHING TOWARDS THE QUALITY & SUSTAINABILITY OF MALAYSIA MARINE RESOURCES AND SECURITY

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### Abstract

The fisheries industry in Malaysia has an important role in managing the yield of national protein sources, and this sector also contributes to the country's economic income by exporting. However, the high demand and the use of protein sources indirectly affect the conservation of marine resources. Thus, irresponsible parties have taken the opportunity to engage in Illegal, Unreported, Unregulated Fishing (IUU) activities for their own profit and threaten the sustainability of marine resources and the security of the country's waters. This study is to evaluate the effect of IUU fishing towards sustainability Malaysian marine resources and water security. The focus on IUU fishing that contributes to the over-exploitation of fisheries and illegal fishing. The results from this simultaneous quantitative method study indicate that Illegal, Unreported, Unregulated (IUU) Fishing activity has negative impact on the sustainability of marine resources and may threaten the security of Malaysia waters.

**Keywords**-- IUU Fishing, Marine Resources, Security Effect, Quality & Sustainability.

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### INTRODUCTION

The fisheries resources are very important to human in all aspects. However, illegal, unreported, unregulated fishing (IUU) has become a threat to the worldwide especially maritime economy. In fact, this issue enthraten fishing activities and sustainable management, people livelihoods, and food and economic security. IUU also has effect towards the transnational crimes by disrupting the market and undermining sustainable efforts to implement sustainable fishery policies. Then, the word of "IUU" is standing for illegal, unregulated and unreported. This IUU is a concern to the fishing activities. Agnew and Barnes (2004) described the (IUU) fishing as fishing activity that does not comply with national, regional, or international fisheries conservation or management legislation or measures. NIC (2016) emphasizes that IUU fishing is referring to a broad set of human fishing activity that undermines sustainable fisheries management, although in some cases like illegal fishing largely goes unreported. This IUU fishing is also referred as "pirate fishing," because it is one of the maritime activities which does not comply with national, regional or global fisheries conservation and management need (Madeline, & Don Young, 2015).

### LITERATURE REVIEW

#### Definition of IUU Fishing

#### Illegal Fishing

Illegal fishing is a perpetual activity or action performed without consent and directly violates the existing law or refers to fishing activities by vessels from one country in the jurisdiction of another country without permission, or other activities of fishing vessels that contravene fisheries laws (citation).

#### Unreported Fishing

According to the FAO International Plan of Action on IUU Fishing (FOA NPOA, 2001), IUU fishing activities are the fishing activities which have not been reported or misreported to the related national authority, in dispute of national laws and regulations or undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported in contravention of the reporting procedures of that organization.

#### Unregulated Fishing

Unregulated fishing is well described by the Food and Agriculture Organization and the definition includes fishing on the high seas by 'free riders' for those who fail to sign up to regional management arrangements and refuse to follow with the conservation and also includes fishing on the high seas where there are no regional management arrangements in place.

#### IUU fishing in global

Environmental Justice (2005) observes, perhaps as much as 75% of the fish stocks in the world are either consumed or exploited, and it is also true that at least 15% of the world's total catch anywhere from 11 to 26 million tonnes per year are associated with IUU fishing. In addition, the pressure on fish stocks and the negative impacts are associated with wider marine ecosystems, while the issues of IUU fishing destroy food security and coastal life which may damage the world economy by \$10 billion to \$23.5 billion annually (Agnew et al., 2009). In Europe, perhaps half of all seafood consumed comes from illegal and in some fisheries, illicit activity accounts for approximately one-third of all catches (House, 2000). In 2006, an increase of 108%

compared to the previous five years of illegal fishing in the northeast of the US after the Oceanic and Atmospheric Administration opened 750 investigations (Environmental Justice, 2005).

**Malaysia Fisheries Situation**

Regional Fisheries Policy Network (RFPN) program by South Asian Fisheries Development Center (2017) states that in 2015 the Malaysia fisheries sector has provided employment to 175,980 people and its contribution to national GDP was at 1.1%. Food fish production is at 2.0 million MT/year valued at US\$3.3 billion. Fish trade is valued at US\$1.7 billion, and the estimated average consumption of fish is 56.8 kg/person/year (citation). Sabah is also Malaysia’s biggest producer of cultured fish. Total aquaculture production excluding seaweeds is about 20,000 MT per year, which 80% comes from marine aquaculture. Sabah is also the biggest producer of seaweed in Malaysia, producing nearly 261,000 MT in 2015 as reported in United State Agency Development (USAID, 2017). However, in the effort of Malaysia to empower this fisheries sector, there are hindrances of (IUU) fishing. According to Agnew and Barnes (2004), illegal, unregulated and unreported (IUU) fishing is related to fishing

activities that do not follow with national, regional, or international fisheries conservation or management legislation or measures. So, these issues will give negative impact to Malaysia fisheries sector, sustainability of marine resources, and open water security. That issue does not happen in Malaysia only, but it is occurring internationally. In addition, the IUU fishing has also become a problem of disagreement both of Exclusive Economic Zones (EEZs) and high sea.

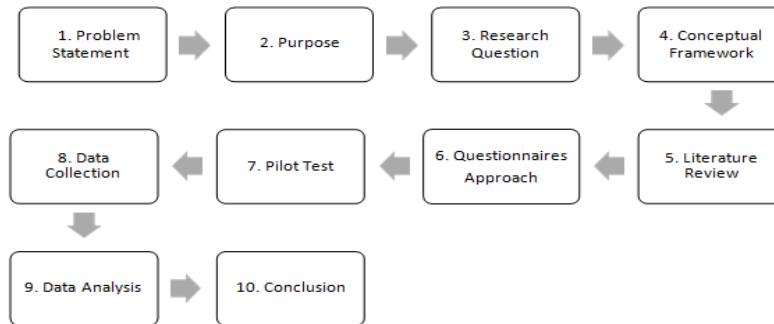
**Consequences of IUU Fishing**

Through illegal, unreported, and regulated fishing problems, there are many adverse effects on maritime activity and they affect the interdependence of these ecosystems to humans. This also contributes to over exploitation and threatened fish stocks. In addition, these consequences hindrance the recovery of fish populations and ecosystems (Agnew, Pearce et al., 2009). IUU fisheries not only threaten the commercial competitiveness of target capture species, they also affect marine ecosystems. Furthermore, IUU fishing undermines legitimate fisheries and conservation measures, nationally and regionally, and challenge the sovereignty of coastal states (Metuzels, 2009).

**METHODOLOGY**

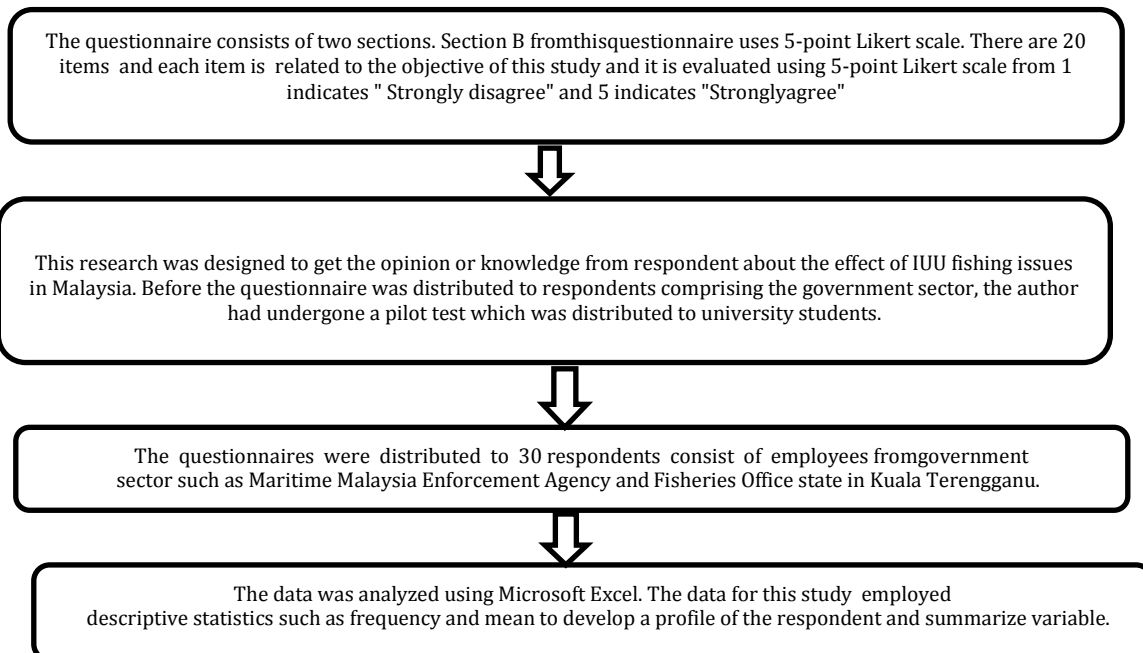
**Research Framework**

The research framework for this research is as follows:



**Research Methodology**

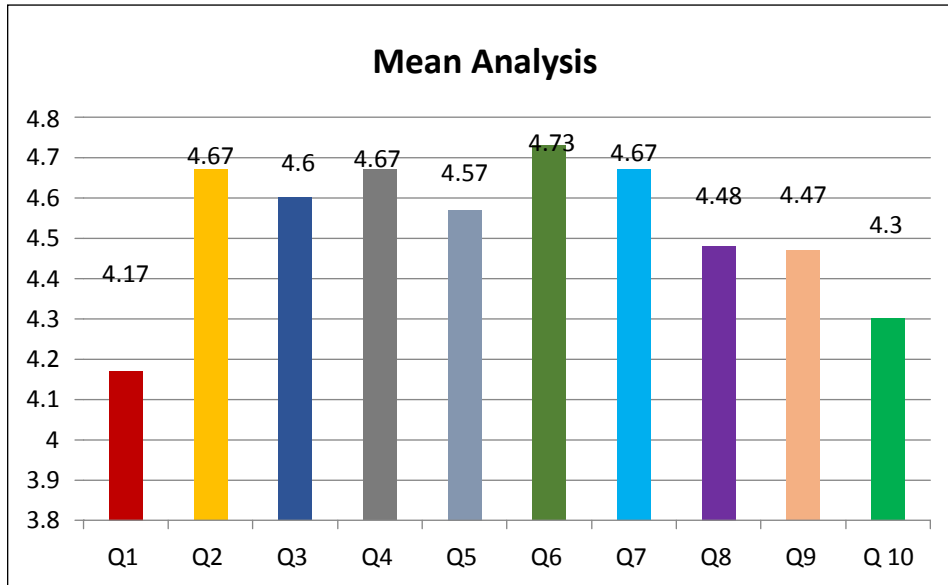
The tools and method used in this study in order to obtain the data and analyzed the data are as below:



**RESULTS AND DISCUSSION**

A survey was conducted with 30 respondents from the Maritime Malaysia Enforcement Agency (MMEA) and Department of Fisheries in state of Kuala Terengganu. The questionnaire is divided into two parts. The first part which is Part A is about demographic data of respondents and the second part which is Part B contains 20 questions. The items were created based on the objectives of this study. The questionnaire employs closed-ended question using 5-point Likert scale questionnaire. Table 1 below shows the score for category of mean score.

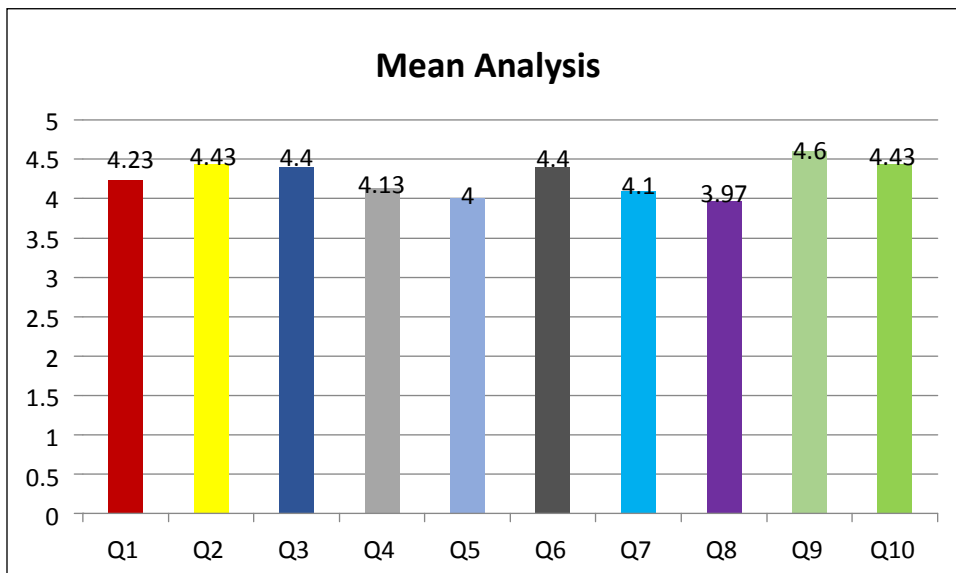
Score	Represent
0.01 - 1.00	Strongly Disagree
1.01 - 2.00	Disagree
2.01 - 3.00	Neutral
3.01 - 4.00	Agree
4.01 - 5.00	Strongly Agree



**Figure 2.** Mean Analysis for the Effect of Illegal, Unreported, Unregulated (IUU) Fishing towards Malaysian Marine Resources.

Based on Figure 2, it shows that the highest mean score is 4.73 with 94.7% refers to item 6 which is about an invasion of foreign vessel for illegal fishing can cause damage to coastal fishing, dermal fish and other marine life. This is because, the type of catch tool used by fishermen has violated the conditions in certain zones. Then, one of the most popular tankers in Malaysia is the use of trawlers. The use of the trawlers has destroyed the ocean floor along the coast of Malaysia and can indirectly extend

the extinction of marine life. While, the lowest mean is 8.17 which is equivalent to 83.3%. This item is about perception of respondent towards the problem of IUU fishing in Malaysia at a serious level. This item gets the lowest mean because some respondents aid that they were not sure about this statement which is 'IUU fishing affects respondents.' Overall, Figure 2 shows respondents' responses to the questionnaire are very inclined to the Likert scale which represents agree and strongly agree.



**Figure 3.** Mean Analysis about the Effect of the Illegal, Unreported, Unregulated (IUU) Fishing towards Malaysian Security

The highest mean is 4.6 which equivalent to 92% is about good co-operation between Malaysia and neighboring countries involved with this IUU fishing problem. This is because, IUU fishing problem, not only involves Malaysian citizens, but also other citizens and it makes it difficult for the national authorities to take decisive action against offenders who are not from Malaysia. Therefore, with the cooperation of both countries, it is indirectly able to improve the security of the country's waters. The lowest mean value is 3.93 which is 79.3%. This is because the number of respondents who agreed to the item is similar with the number of respondents who disagree to the item. This question is about weapons distributors also use fishing boats to smuggle their products. Such crime happens because the distributor wants to avoid from being caught by the authorities and for respondent who were not sure, this crime may be less likely to occur in Malaysia. Hence, to some respondents they did not realize of this issue.

Overall, the Figure 3 shows feedback given to the questions given are very inclined to the Likert scale which represents agree and strongly agree. As the mean for every questions shows the value of more than 4 (except question 8), the research can conclude that the IUU fishing activities are giving negative impact to Malaysia marine resources and security.

### CONCLUSION

As a conclusion, the authors find that IUU Fishing activity has actually had a negative impact, especially in the fishery industry. Based on findings from this study, authors also believe that it is very difficult to sustain the country's marine resources in a sustainable manner due to the presence of IUU Fishing problem. The impact of IUU Fishing activities such as resource exploitation, prohibited arrests and overfishing have undermined the sustainability of marine resources and caused fish stocks to decline. Besides, the security of the country's waters is threatened by the presence of foreign fishermen who encroach on the waters of the country to run illegal fishing. The invasion of waters by foreign fishermen also involves not only illegal fishing, but also can be attributed to cross-border crimes such as smuggling of drugs, cigarettes, fish sources, petrol and other crimes. Therefore, the impact of this activity can have an adverse impact on the security and the image of the country.

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