Implications of Cross-Border Organized Crime of Foreign Fishing Vessels on Local Fishing Communities: A Synthesis from Literature Review

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Abstract
It is a form of cross-border organised crime that continues when foreign fishermen engage in illegal activities within a country's fishing zone. It involves commercial fishermen from certain countries such as China, Vietnam, Japan, South Korea from East Asia; Russia from Eastern Europe; and Mexico from South North America carrying out sea resource capture activities in bordering countries' waters. The crime of cross-border fishermen has impacted the sustainability of fishery stocks, thus having a significant impact on the safety of the local fishing community which is mostly traditional, from various aspects such as economic, social and psychological. The purpose of this paper is to construct a synthesis based on the literature review. It aims to provide a comprehensive analysis of the impact of criminal activities across foreign fishermen's borders on their local fishing communities. A synthesis of the literature shows that cross-border fishermen's crime has resulted in a decline in the fishing catch of local fishermen, making it difficult for them to maintain their livelihood on a long-term basis. For example, people in West Africa estimate that seven (7) million people depend on fishing revenue as their main income. As a result of the illegal arrival of fishing boats from Russia and China, the fishing community has been unable to rely solely on fishery products for its livelihood. Thus they changed their life strategy by robberizing foreign fishing boats as a means of generating income. In terms of safety, the presence of foreign fishermen has had an indirect impact on health issues, for example in Somalia which relies entirely on marine produce as a source of protein resulting in a lack of fishery yields which has resulted in malnutrition. The consequences of excessive fisheries exploitation especially by foreign
fishermen using modern ships and equipment have presented challenges to local and traditional fishermen.  

**Keywords:** Local Fishermen, Cross-Border Organized Crime, Foreign Fishermen, Local Fishing Community.

**Introduction**
Survival is a mechanism to maintain life even in difficult circumstances (Zwoelfer, 2021). According to Webster (2021), survival refers to the continuation of life, livelihood or existence under uncertain conditions, so those who are able to maintain continuity of life can be considered survivors. It is important to note that in the context of this study, those who are considered to be attempting to survive are the local fishing communities in the waters. This is in response to the fact that foreign fishermen are engaged in cross-border crime.

According to the Food and Agriculture Organization (2021), cross-border organized crime by foreign fishing vessels is a crime committed by non-citizens (foreign fishermen) in another country's waters. They operate fishing activities without the permission of the relevant country (Blackhart & Shimada, 2018; United Nations Conference on Trade and Development, 2014). Transboundary crime is a term used to describe an offense under the United Nations Convention Law Of The Sea 1985. Fishermen are considered trespassing in foreign waters if they lack travel documents or permits approved by the country involved. In this case, the crime committed is carrying out illegal fishing in the waters of the invaded country. This is done by landing in their country of origin or marketing it on the international market.

Cross-border organised crime of international fishing vessels includes offences across the borders of other countries and carrying out fishery activities without permission, which includes the offence of carrying out fisheries activities without a permit or license; in the off-season or in a closed place; capturing protected fishery species; using banned fishing tools; and capturing more than the prescribed quota. Meanwhile, according to Aghilinejhad et al (2018), foreign fishermen are also unregulated fishing vessel drivers because they do not report their fisheries activities to country enforcers. In this regard, foreign fishermen who drive vessels that are not registered in any country or do not obtain a license from the destination country categorized as illegal foreign fishermen. This is also often associated with the Flag Of Convenience (FOC) promoted by the International Transport Workers Federation (ITF). In this case, the vessel is registered as a vessel of another country and fly the wrong flag. This occasion allows the vessel to fly and change the flag wherever the vessel is docked, this condition is called flag hopping. For example, FisH-I Africa (2013) investigated the NAHAM-4 vessel under a second faded name Der Horng 569 from Taiwan. It was captured by South African maritime authorities who found 4 more vessels using the same registration and name. Next, according to Yoserizal et al (2016), local fishermen are among the communities still facing poverty. The difficult situation in question is poverty such as lack of food resources, psychological problems, and disability (Jane et al., 2011). Xie et al (2018) states that there are 3 determining factors for survival. First, the ability to adapt to social phenomena. In addition, reproduction occurs by producing offspring and preserving its habitat. Last but not least, the support system also affects survival. This is supported in the Triyanti and Firdaus study (2016) stating that among the strategies of local fishermen to ensure life survival is in solidarity with fellow fishermen by lending money and rice for the needy. This is done with high awareness and family to maintain survival.
Figure 2.0: Impact of Cross-Border Organized Crime of Foreign Fishermen

Based on figure 2.0 the social phenomenon of cross-border crime by foreign fishermen and its implications for local fishermen's survival is due to criminal activity by the main actor, namely foreign fishermen. This diagram is a guide to the explanation of the implications in this paper. In the context of this study, foreign fishermen carry out cross-border crimes on the waters of countries that are weak in terms of maritime enforcement. Among the main objectives of their cross-border criminal activities is due to the attraction of fishery treasures and their country is already suffering from fishery exploitation. For example, the increase in the number of fishermen in Vietnam doubled from 1990 to 2004 by 270,600 to 550,500 as well as the cause of the reduction in marine resources in Vietnam (Inter Press Service, 2005). The growing population of Vietnam fishermen has created competition among themselves. The need to meet the demands of the international market causes them to carry out fishing activities in foreign countries.

Therefore, the most significant impact of this cross-border crime is that local fishermen experience resource competition with the perpetrators of this crime. In Somalia, foreign fishermen use domestic vessels that are approximately two times larger than local vessels, where they fished up to 95,000 metric tons in 2014 (Glaser et al., 2014). Due to this, it has been difficult for local fishermen to obtain the maximum amount of fish. Furthermore, cross-border crimes committed by foreign fishermen also pose a threat to the security of local fishermen. Fishermen are familiar with firearms' threat, particularly those who smuggle people and drugs as part of their modus operandi. As a result of this activity, local fishermen are being intimidated to refrain from interfering with their illegal activities. As a matter of fact, this is also the case in the country. In 2012, Vietnamese foreign fishermen issued M4 weapons to local fishermen in Terengganu. A shooting incident involving maritime enforcement officers and foreign fishermen was also reported in Paser Puteh, Kelantan, in August 2020. According to Amalina Alias, 2020, this occurs as a result of foreign fishermen aiming to burn the enforcement boat by throwing rubber at the flames.

As a result, foreign fishermen's cross-border organized crimes affect the fishing community's social life. For example, local fishermen in Somalia should change their lives by committing robberies on foreign fishing boats. There are also those who ask for food from the boat as
one of the ways they survive. This is because relying solely on the fishery is not enough because foreign fishermen have already mastered/exploited the location. This impact can also be seen from a psychological point of view, the loss of trust in the authorities gives the perception that less decisive actions cause reports to be squandered, local fishermen are under pressure because they do not have other skills to generate other income.

Methods
Researchers used the diagram guide (Figure 1.0) to analyze the impact of cross-border crime by foreign fishermen on the survival of local fishing communities in this systematic literature review.

Figure 1.0: The process of preparing an article literature review.

This process refers to the method outlined by (Moll-Willard, University of Cambridge, 2021; University Indianapolis, 2021). In accordance with the diagram, the first step is to identify the study's question, which is what are the implications of cross-border organized crime by foreign fishermen on the local fishing community? Reading such articles primarily from the journals Foreign Illegal, Unreported and Unregulated Fishing in Somali Waters Perpetuates Conflict (Robert et al, 2019) and Assessing Guinea Bissau's Legal and Illegal Unreported and Unregulated Fisheries and The Surveillance Efforts to Tackle Them (Francisco & Belhabib, 2018) is helpful. There is a well-known fact that the unanswered study question is due to the commencement of a research project (Stellenbosch University, 2019), which is why this issue is important to understand. In addition, the two disciplines identified in this article are sociology and criminology. The next step, the researcher performs a literature review by reading relevant to the title of this article and making references. The researcher analyzes the content by reading the entire content. The sentence that catches the reviewer's
attention will be outlined. From the sentences the reviewer finds related to the study title or question, will be synthesized. This process is carried out on several articles relevant to researchers' articles. After reading and analyzing, the researcher will take the content and combine the verses outlined earlier by combining them into a more comprehensive one. To produce consistent, coherent and clear study highlights, researchers synthesize the verse using its own verses so that readers can understand the study.

Findings and Discussions
This section provides an explanation of the findings and a discussion of the main impacts of cross-border organized crime committed by foreign fishermen on local fishermen.

Implications of cross-crime of foreign fishermen against local fishermen.

Economic Implications
Fisheries and related activities are the main source of employment and suppliers to the sustainability of food resources to more than 120 million people worldwide. Population involved in the fisheries sector, more than 97 percent are living in developing countries and an estimated 90 percent work in small-scale fisheries sectors, covering different locations for harvesting, processing, transportation and distribution (Andrea, 2018).

Mexican fishermen illegally engage in fishing activities in the United States. Approximately 1,100 cross-border crimes occur each year, which involve the theft of up to 760,000 pounds of red grouper (red carcasses) in the Gulf of Mexico (Gulf Coast Leadership Conference, 2015). Consequently, the catch of the local fisherman decreased and the commercial and recreational activities of the fisheries, which are the main economic contributors to the region, were disrupted. It is important that the fisheries in the bay contribute to the local economy through the creation of jobs and by providing over $30 billion USD a year. Additionally, 60,000 tons of fishery revenue were lost annually by United States maritime enforcement officials in 2018 (Doumbouya et al., 2017). Meanwhile, in Latin America and the Caribbean (LAC), cross-border crime by foreign fishing vessels from China exploiting sea products threatens the sustainability and sustainability of the food supply of the LAC community, whose survival-dependent lives depend on fishery resources encompassing up to 2 million individuals. According to the FAO, local fishing vessels at this location produce up to 70 percent of marine catches for domestic needs. This activity causes significant economic losses for LAC countries, directly from lost catches and indirectly from habitat degradation and loss of marine species (Yamazaki et al., 2015). Local ships compete with foreign fleets by increasing fishing capacity and effort (Money, 2019).

Additionally, fishery resources provide more than 22% of protein intake in Sub-Saharan Africa for more than 400 million people. More than 12.3 million people work in the fisheries sector in this location, either as fishermen or as processors (Food and Agriculture Organization of the United Nations, 2020). Over 10.9 million tons of fish are landed as a result of this activity. In West Africa, approximately seven million people depend directly on fishing for their livelihood, though this activity is often hindered by industrial vessels from the European Union (EU), particularly from Russia, Eastern Europe, and Asia; China, South Korea, and Japan. They encroach upon and conduct fisheries activities within areas that should be assigned to small-scale fishermen and local fishing communities in West Africa.

As a result of the cross-border organized crime of this foreign fishing vessel, a loss of up to US$2.3 million USD has occurred within the waters of six of the seven countries which are subregions of the West African Sea, namely Mauritania, Senegal, Gambia, Guinea Bissau, Guinea and Sierra Leone. Up to 20 percent of global illegal fishing losses are attributed to
these losses. It is estimated that more than 300,000 people have lost their jobs as a result of illegal fishing in the region (Dyhia Belhabib, 2017). In the same way, if this illegal fishery could be contained, tuna entrepreneurs in Guinea Bissau could increase their income from 50 percent to 100 percent, approximately by 429.2 million dollars.

Due to the cross-border organized crime of foreign fishing vessels from China and India that engage in illegal fishing, local fishermen, entrepreneurs and fishmongers in Pakistan have experienced a decrease in their livelihoods. China's foreign fishing vessels engaged in cross-border crime in Pakistani waters resulted in a reduction in the daily catch of local fishermen by up to 80% from 1000kg to 400kg (Annie, 2007). In fact, some foreign vessels have a relatively large size, allowing them to catch fish within a week, as opposed to local fishing vessels, which have traditionally caught fish within a year. Almost 90 percent of the community working as fishermen in Anambas is affected by Vietnamese fishing vessels capable of storing 100 tons of fish after 20 days at sea. Due to the use of tiger trawlers (trawlers) in comparison to local fishermen who used only 8-metre vessels and regular fishing, they lost their competitive edge, resulting in a reduction in catch and a dreary atmosphere in the port (Sulasi, 2014).

Therefore, cross-border organized crime involving foreign fishing vessels interferes with the income source of local fishermen who rely on traditional fishing methods to earn their living. Fisheries resources harvested by local fishermen are reduced as a result of competition from foreign fishermen (Rhyzova, 2019; Mustaffa and Marsitah, 2011). A MMEA arrest against Vietnamese fishermen in 2019 resulted in the seizure of 3 million, including 8,500 kilograms of sea products, and three vessels (Fazlina, 2019). As a result, it can be concluded that fishing activities are highly profitable and involve a considerable amount of money. The lack of large numbers of fish stocks for a considerable period of time is also one of the reasons for local fishermen in Malaysia to stay in the Mersing Islands and move to the city, seeking new employment opportunities in light of competition over fishery resources with foreign fishing vessels (Marsitah et al., 2011).

Social Implications
As discussed in this paper, cross-border organized crime of foreign fishermen, specifically intrusion for the purpose of illegal fishing, also has a social impact on the community. In Western Africa and South Africa, for example, fishing communities have begun to replace their jobs as fishermen with drug trafficking activities due to foreign fishermen draining resources. Due to the fact that this economic activity brings more profit in a shorter period of time, it is undertaken in this manner. Nevertheless, relying on shrinking sea products cannot guarantee survival (Sow et al., 2017; Hatcher, 2015; Marchal, 2011). A cross-border crime committed by foreign fishermen, namely the intrusion of illegal fisheries in the context of this paper, also has a significant social impact. Due to the draining of resources by foreign fishermen, fishing communities in West Africa and South Africa are turning to drug trafficking for employment as a means of replacing their jobs as fishermen. It is done for the reason that this economic activity generates more profit in a shorter period of time. The reliance on shrinking sea products, however, cannot guarantee survival (Sow et al., 2017; Hatcher, 2015; Marchal, 2011). Additionally, frozen fish was used for drug trafficking operations as a disguise to avoid detection by dogs due to the fact that nature covered the operation. Similarly, Somalia's fishing community is known for its maritime piracy activities. The reason for this is that foreign ships pollute the waters with nuclear waste. In response to this hardship, Somali fishermen have tried a variety of methods to earn money in order to maintain their
livelihoods. In addition to pirate activities, they commit armed robberies. They steal valuables from foreign fishing vessels (Murphy, 2011).

In addition, there have been cases in which local fishermen have taken foreign fishermen as prisoners in order to obtain compensation (Mukhtar, 2011). From a social perspective, this illustrates the impact of uncontrolled foreign cross-border crime on local fishermen. In order to survive such a situation, they had to change their way of adapting. To restore and protect the marine resources of the Galapagos Islands, local fishermen have been forced to transition from subsistence fishing to the tourism sector (Johnson, 2017). In part, this is due to the exploitation of sea products, one of which is the result of cross-border crime perpetrated by Chinese foreign fishing vessels (Alava & Fabrizio, 2017; Sills, 2017; Castrejón, 2015). The fact that 6,000 frozen sharks were caught in the Galapagos waters by the foreign fishing vessel Fu Yuan Yu Leng 999 from China in 2017 provided evidence of this. Fishing is becoming increasingly scarce, which in turn causes a reduction in catch, putting a strain on the local economy. It is also worth mentioning that the difficulties of local fishermen in the Galapagos can be seen when they are forced to transition from fishing vessels to tourist boats, which is very costly. In addition to purchasing equipment such as life jackets, canopies, and going through a complex process, they must also obtain a license. They are also required to enter the environmental impact class, which may cost up to $15,000 USD. A notable example of this difficulty occurs when the local fishing community does not have the capital to start a new business. Additionally, they possess limited skills. A lack of knowledge of other languages such as English and only a knowledge of Spanish, for example. As a result, they are unable to communicate, which is an essential skill in the tourism industry (Johnson, 2017).

Security Implications
Cross-border organized crime by foreign fishing vessels has a significant impact on the safety of the local fishing community, resulting in many deaths. An example of this can be found in North Korea, where foreign fishing boats from China encroached on the country’s waters using vessels from the fishing industry. It is for this reason that the local traditional fishing community using small-sized boats cannot compete (Steven Borowiec, 2014; Choe Sangu Hun, 2020). In spite of the bad waves and weather, they have been forced to leave the waters. It is estimated that most of them sail from North Korea to Japan and South Korea, a distance of up to 500 kilometers. The use of wooden boats by North Korean fishermen often results in them lacking the endurance to sail for long periods, leading to a lack of food supply. This resulted in the discovery of many fishing vessels and their dead bodies in a shipwreck. A ghost ship is a term used to describe this condition. During the first half of 2020 alone, more than 50 North Korean bodies were found washed up on the shores of Japan (Urbina, 2020; Valentino, 2020).

Foreign fishing vessels from Iran, Yemen, and China are engaging in cross-border crime in Somalia, Kenya, and Tanzania, making it difficult for fishing communities to generate economies (Ghassan & William, 2013; Hagos, 2015; Kerins, 2016; Zamzam, 2017). As a matter of fact, foreign fishermen have used nets to damage wooden boats and local fishing equipment in Papua New Guinea, injuring local fishermen as well (Lowrey 2004; Economic Justice Foundation, 2007). In the LAC region, this situation is particularly important since small-scale and industrial fisheries compete for the same marine resources and maritime space and threaten the safety of the population (Carvalho et al., 2011). Approximately 200 million Africans consume fish on a regular basis. Africans consume less fish than their counterparts in North America, Europe, and Asia. Nonetheless, even a small
amount of fish can have significant health benefits due to its high protein and macronutrient content. It is for this reason that in many African countries, fish is considered an "irreplaceable food source, no other affordable food source can replace it".

There is a significant impact of illegal fishing on local populations' health (Dobo, 2009). Because of food shortages in developing countries, protein is very scarce, and it is particularly important for children (Kent, 2003). The number of people entirely dependent on marine products in West African countries such as Senegal, Ghana and Guinea is estimated at 6.7 million (Belhabib and Sumaila, 2015). They are highly dependent on marine protein (FAO, 2009). The uncertain availability of fisheries resources at sea due to the exploitation of fisheries from China and the increasing consumption of the fishing industry puts the fishing community at risk of malnutrition (AEC, 2005). As a result of exploitation of fishery resources, rural communities in Senegal may experience protein deficits due to an inability to obtain fishery resources available for sale at low prices on the local market (Alder and Sumaila, 2006).

Psychological implications
As a result, cross-border crimes against local fishermen are also at risk when foreign fishing vessels carry weapons against them or chase them. As an example, cross-border crime by foreign fishermen has been a contributing factor to the depopulation of peninsular Malaysia because Vietnamese fishermen carry weapons and are hesitant to engage in fishing activities (Raduan, 2005). The situation is similar to that in Betong Patinggi Ali fishermen from Vietnam entered the waters of Malaysia's Exclusive Economic Zone (ZEE) scaring local fishermen. A report in the media indicates that local fishermen encountered foreign fishermen who displayed firearms of the M16 type as a form of warning against interfering with their activities (Rizal, 2016). While Chinese fishermen also chase and expel local fishermen in Indonesia’s northern Natuna Ocean for the purpose of scaring them, fishermen are treated as foreigners who engage in fishing activities in their own country (King, 2020).

It is also important to note that the uncontrollable cross-border crime of foreign fishing vessels in Peninsular Malaysia has adversely affected the fisheries-based economy. Additionally, there are local financiers who hire foreign fishermen as crews for their boats. This is considered to close most employment opportunities for local fishermen, and even a significant loss to the country due to the outflow of money (Izlan, 2021). On the East Coast of Sabah in 2019, the Marine Police Force arrested foreign fishermen from Vietnam on Lankayan Island. As a result of the arrests, marine enforcement officials confiscated approximately 1.62 million Malaysian ringgit, as well as foreign fishing equipment. In addition, the Coronavirus pandemic 19 has raised concerns about the spread of the disease to the local community indirectly as foreign fishermen continue actively encroachment on the country's waters. For example, 25 Vietnamese fishermen entered Mantanani waters along with 4 tons of fish caught using the trawler method. Health officials from the Ministry of Health Malaysia conducted a Covid-19 screening test due to concerns of transmission. In addition to harming the government, endangering the safety of law enforcement officials, threatening local fishermen's survival, and posing a health risk to the local community, cross-border criminal activity by foreign fishermen is also harmful to the local community. In addition to damaging marine biology, fisheries exploitation could also result in a reduction in production if it is not managed sustainably, according to the Department of Fisheries Malaysia (2017). According to the evidence, fish density declined from 1 million tonnes in the mid-1990s to just 70000 tonnes in 2013 in the southern Mediterranean (Colloca et al., 2017), and in Malaysia, fish density declined up to 24000 to 53 000 per square kilometer per fishery zone.
Conclusion
The analysis of the literature survey revealed that cross-border crime of foreign fishermen in addition to causing fishery sustainability issues, also directly affects the local fishing community, especially those who carry out traditional fisheries activities. As a result of these cross-border crimes, fishermen experience a decline in income due to the depletion of fishery resources. These strings do not just make it hard for them to purchase basic items. As a result of the absence of this catch, some communities have been unable to obtain adequate protein sources, resulting in malnutrition problems that are detrimental to their health. Consequently, some African fishermen have started engaging in illegal activities, such as looting foreign fishing boats for food, as a result of this activity. The transfer of jobs as a means of adapting to the situation also makes it difficult for local fishermen due to a lack of capital and skills. This is quite stressful on them. The presence of foreign fishermen not only creates conflict over their income but also poses safety concerns. To ensure that local fishermen are not disturbed, firearms are used as provocations to prevent their operations from being disturbed. This negatively impacts the fisherman's psychological well-being.

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I have written the article as the main author with Gusni Saat, Syahruddin hj Awang, and Dayang Suria Jj Mulia as co-authors. Every excerpt and summary of each one I have explained the source. I am fully responsible for articles submitted in terms of facts accuracy and free from plagiarism, translation or publication in any publication.

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