

## TRADE AND SUSTAINABILITY OF ASEAN FISHERIES RESOURCES

Wen Chiat Lee <sup>1</sup> and K. Kuperan Viswanathan <sup>2+</sup>

<sup>1,2</sup> Universiti Utara Malaysia

<sup>+</sup> Corresponding author: [kuperan@uum.edu.my](mailto:kuperan@uum.edu.my)

### Abstract

*Fisheries trade is crucial to a country as it provides employment and income for the fishers and person indirectly involved in fisheries. The objective of fisheries trade is to provide opportunities to fishers to reach wider markets and obtain greater value for their produce. Extensive catch of fisheries stocks is carried out to increase the trade in fisheries products especially in ASEAN countries where there is a high demand for fish with trade liberalisation. The large harvesting of fisheries resources may result in the depletion of fisheries resources. ASEAN will face the problem of sustainability of fisheries resources in the long run if the large harvesting of fisheries resources is not managed with sustainability as an important goal. One way of reducing the depletion of fisheries resources and ensuring adequate fish for future consumption is to develop sustainability standards for fisheries and fisheries products. This paper focuses on fisheries standards for managing fisheries in ASEAN countries and addresses the problems faced by small-scale fishers and governments in implementing the standards. Moreover, this paper suggests ways to ensure the sustainability of fisheries resources in the future.*

Keywords: *Fisheries trade, sustainability of fisheries resources, ASEAN, fisheries standards.*

JEL Codes: *Q22, Q27*

### Introduction

Fisheries trade is crucial to a country's economy because it provides sources of income for the fishers. Trade of fisheries involves extensive catch of fisheries stocks, especially high-value fisheries stocks that could fetch higher prices. As a result of this, trade of fisheries may lead to depletion of fisheries resources or over-harvesting of fisheries resources. The value of the Global Fisheries export was estimated at USD136 billion in 2014 (Food and Agriculture Organization 2014). China tops the export list with USD19.6 billion followed by Norway at USD10.4 billion and Thailand at USD 7 billion. The main importers are the USA at USD19 billion, Japan USD15.3 billion followed by China at USD8 billion. The Association of Southeast Asian Nations (ASEAN) accounts for some 15 per cent of the global fisheries exports (Rabobank 2015).

Trade will play a big role in the sustainability of fisheries resources. By sustainability, we mean that fisheries resources will be exploited in a managed regime that ensures that future supplies of the resource are not endangered by overfishing at any point in time. An estimated 45 per cent of the world catch is now traded internationally (FAO 2016). When the trade barriers for fisheries are removed as a result of liberalisation of trade programmes such as ASEAN, European Union (EU) - ASEAN Free Trade Agreement (FTA), Trans-Pacific Partnership Agreement (TPPA), there will be more demand of fish to serve a bigger market. The market access for fisheries and fisheries products becomes wider. The demand for fish from external sources will increase. The demand for fish increases because fish is a main

source of protein globally. When the trade of fisheries and fisheries products increases, more fish will be caught, thus sustaining fisheries resources will be a challenge.

The depletion of fisheries resources disrupts the sustainability of fisheries resources. In other words, we may not have enough fish to consume in the future. Therefore, we need sustainability standards to ensure fisheries and fisheries products can be sustained in the future. Thus, this paper focuses on the sustainability standards for fisheries in ASEAN and addresses the problems faced by small-scale fishers and governments in implementing the fisheries standards in the face of expanding world trade in fisheries and fisheries products. We also discuss the WTO sustainability standards for fisheries and the public and private roles in maintaining fisheries sustainability standards.

This study explains the link between trade and the sustainability of the world fisheries resources. An attempt is made to answer the question of whether the trade of fisheries can lead to the depletion of natural resources or ensure the sustainability of the resources. If the trade of fisheries can lead to the depletion of natural resources, ways to manage the fisheries and trade are discussed so that the world fisheries resources can be sustained in the future.

### **Fisheries Management**

Fisheries management involves conservation of fisheries to prevent over-exploitation of fish and ensures sustainable and responsible management of the fisheries. The overarching problem of fisheries management is always the issue of how to manage overexploitation of fish stocks. According to the FAO, 87 per cent of the world's marine fish stocks are fully exploited, overexploited or depleted, and this number has been increasing steadily. The fish stocks have been declining. There is a need to review the condition of the fish stocks. Fish depletion has long been masked by improved technology. Human consumption of fish has nearly doubled in the last 30 years resulting in the world eating down the marine food web (Jacquet & Pauly, 2007). Larger sized fish are being replaced by smaller sized fish and more squids and shrimps indicating the harvesting down the marine food chain. The question of how human consumption can be met given the rapid decline in the fish stocks all over the world is a challenge for fisheries management.

#### *Fisheries trade and depletion of fish stocks*

One of the major reasons for the collapse of fish stocks is the increase in fisheries trade over the past century. Even though fish stocks are collapsing in many parts of the world, fisheries trade continue to intensify. FAO data show that the world trade flow (exports plus imports) in fish and fish products reached US\$264 billion in the year 2013. Fisheries have become one of the most globalised commodities, representing about 10 per cent of all agriculture exports globally. The sharp increase in fisheries trade is a consequence of the increase in demand for seafood in developing countries and Asia and the perceived positive health effects of fish consumption. The market for seafood may be dynamic, but its consequences are uncomfortably static and predictable. The question is how to manage the fisheries trade to ensure fisheries sustainability. Fisheries sustainability definition is discussed in the next section.

### **Fisheries sustainability definition**

Fisheries managers are often concerned with the sustainability of the fish. Sustainability of the fish is referred to as the availability of fish supply in the long-run. However, there is no proper definition of fisheries sustainability. There is a methodological approach to measuring fisheries sustainability, i.e., the maximum sustainable yield (MSY). The maximum sustainable yield is

a science-based technical management approach that requires stock assessment by fisheries scientists. However, fisheries management has shifted away from the science-based management approach to a more legally-based management approach with the ratification of international agreements, such as United Nations Convention on the Law of the Seas (UNCLOS), the Food and Agriculture Organization (FAO) and the International Maritime Organization (IMO) by the member states. The member states are required to adopt the sustainable fishing practices, and actions agreed under the international agreements.

#### *WTO's Sustainability Standards for Fisheries*

The World Trade Organisation (WTO) requires its members to follow the fisheries guidelines to ensure trade sustainability for fisheries resources. The guidelines are the management of the subsidies and food safety/traceability requirements (under the Agreement on the Application of Sanitary and Phytosanitary Measures (or the SPS Agreement)) to ensure sustainability for fisheries resources. The sustainability of fisheries resources is crucial for future generation's consumptions and trade. Sustainability of fisheries trade is the main agenda of multilateral countries discussion. After thorough discussions and negotiations, the World Trade Organization (WTO) requires the member states to certify the fish products to ensure that the fish products are harvested sustainably to maintain healthy fish stocks. Both the private and public sectors have roles to play in ensuring sustainability. The role of public and private sectors to ensure the sustainability of fisheries trade are discussed in the next section.

#### **Public Sector's Role in Ensuring Sustainability**

Public sector's role is to ensure that the fisheries resources are not depleted and are sustained in the long run. To enable this, fishers are required to certify their fisheries products. In the case of ASEAN, the predominance of small-scale fishers will require them to certify their fisheries products. However, the certification of fisheries products increases the costs of the small-scale fishers and imposes a greater burden on the fishers. The small-scale fishers could not bear the cost, and thus the public sector will have to provide support to the small-scale fishers to certify the fisheries products to ensure sustainability. The small-scale fishers should not be left out in the market share just because of certification. The public sector can consider forming an advisory council to assess the appropriateness of different fisheries for certification, as mentioned in the United Nation Environmental Programme (2009).

However, the challenge of the public certification scheme is that different governments have different sustainability standards for fisheries products. This makes the certification of fisheries products a lot more complex. One way of solving the complexity of certification is for the governments in developing countries especially ASEAN countries to call upon the fishing communities involved to discuss the sustainability standards of certifications. Finally, the ASEAN governments should agree on the certification standards set for long-term fisheries sustainability. For example, ASEAN Fisheries Committee, the Southeast Asian Fisheries Development Centre (SEAFDEC), should set the standards that comply with the Food and Agriculture Organization (FAO) voluntary guidelines in small-scale fisheries (FAO 2015) and World Trade Organization (WTO) sustainability standards.

However, there are some limitations for public sectors to manage the fisheries sustainability through certification. The institutional arrangement to certify the fisheries products to prevent the collapse of fisheries and ensure sustainability requires financial commitments. A huge amount of funds is required to track the fishers harvesting from fish production to fish trade (Gulbrandsen, 2009). The huge amount of funds required to certify the fisheries products for the small-scale fishers in ASEAN would increase the financial burden of the government or

public sector. Thus, the public sector must include the role of the private sector to ensure fisheries sustainability.

### **Private Sector's Role in Ensuring Sustainability**

Private sectors consist of the industry players and private certification bodies such as the Marine Stewardship Council (MSC). The Marine Stewardship Council provides certification services for fish and fish products that are traded and comply with sustainability standards. The WTO and the private sector set the sustainability standards. The private sector ensures that sustainability of fisheries resources is complied with before the fish products are marketed domestically and internationally. One prominent type of certification to ensure sustainability is the use of eco-labelling. Ecolabelling was first recognized internationally at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. The United States Environmental Protection Agency (USEPA) (1993) defines eco-labelling as “making relevant environmental information available to appropriate consumers”. The main notion or idea behind eco-labelling is to educate consumers about the nature of the sustainable harvesting that is followed by the harvesters of fisheries products. Thus consumers can be sure that they are purchasing fish that is harvested sustainably. The idea of eco-labelling is to change the consumers' purchasing behaviour to be more consistent with environmentally preferred production measures and methods (Gardiner & Viswanathan 2004; Villes, 2007). Ecolabelling such as MSC is a market-based incentive that encourages consumers to make the best environmental choice in consuming seafood. Apart from MSC, other reputable certification programmes include Sea Choice, Ocean Wise, and Monterey Bay Aquarium Seafood Watch.

Moreover, eco-labelling can have a positive effect on the price of the product in question (Erwann, 2009). Fishers or producers can benefit because they can have a premium price or higher price to cover all additional costs associated with eco-labelling creating incentives for producers to produce eco-labelled products for the larger market (Erwann, 2009).

### **Eco-labelling as a fisheries sustainability standard**

There are many fisheries sustainability standards globally. One of the fisheries sustainability standards is eco-labelling. The other fisheries sustainability standards are gear restrictions, mesh size regulations, and the Food and Agriculture Organization (FAO) guidelines for small-scale fisheries. Ecolabelling is most popular in developed nations such as the European Union and the United States (USA) because consumers in developed nations are more aware of the environment and fisheries sustainability. The consumers would like to ensure that the fisheries and fisheries products they consume are sustained in the long run so that there will be enough fisheries resources in the long run. However, eco-labelling is not popular in the developing countries that are predominantly poor (almost half of the people live on less than USD2 a day). Most of the fisheries consumers in developing countries are not highly educated and are not aware of the fisheries sustainability standards. The consumers in the developing countries are only aware of the availability of fisheries products for their daily consumption. Another reason for the lack of the use of eco-labelling in the developing countries is the high transaction costs and enforcement costs of ensuring that the small-scale fishers in developing countries adhere to the sustainability standards. The small-scale fishers are not able to pay the cost for labelling their fisheries products.

There are three types of eco-labelling. The first type is the first party labelling schemes. The first party labelling schemes are established by individual companies based on their product

standards. The standards might be based on the criteria related to the specific environmental issues known to inform consumers through the media or advertising.

Industry associations establish the second party labelling schemes for their members' products. The members set the certification criteria, sometimes by drawing upon external expertise from academia and environmental organisations.

The third party labelling schemes are established by an initiator (public or private) independent from the producers, distributors and sellers of the labelled products. The products supplied by organisations, or resources that are certified, are labelled to inform consumers that the product was produced in an "environmentally friendly" fashion.

### **Principles of Good Management Practices for Ecolabelling**

Responsible eco-labelling for sustainable fisheries trade need to follow good principles. The United Nation (UN) has identified five principles for sustainable fisheries trade:

- a. Traceability
- b. Prevent Mislabelling
- c. Reduce Bycatch
- d. Efficiency
- e. Accountability

Traceability involves tracing the sources of fish to ensure the fish stocks are obtained from the healthy fishing area. A healthy fishing area is an area that is not overfished and has abundant fish stocks. Harvesting fish in the healthy fishing area can ensure fisheries sustainability because fish has ample time to grow into maturity in the healthy fishing area. Certification of fisheries products through eco-labelling that follows the principle of traceability can ensure that fisheries products harvested for trade are always sustainable in the long run.

The second principle of good management practice for eco-labelling is preventing mislabelling. Mislabelling refers to the mislabelling or renaming of the seafood and thus preventing consumers from fully recognising or understanding the type of product they purchase. The Boston Globe recently reported that some 48 per cent of fisheries products sold in the Boston area in the United States are mislabelled (Olmstead, 2013).

The third principle of good management practice for eco-labelling is to reduce bycatch. Bycatch refers to the fish caught unintentionally by fishers who are targeting other species. Bycatch essentially becomes discarded waste because fishers are not allowed to profit from unintentional catch or they will be charged with a fine. The fishers might dump the discarded fish into the sea, and the discarded fish turns into discarded waste or bycatch.

The fourth principle of good management practice for eco-labelling is efficiency. Efficiency refers to fewer barriers that prevent an ecolabel from effectively implementing sustainability standards within the global fish industry. The ecolabel is efficient with fewer stakeholders involved in the certification process and involves fewer stages of certifying the fisheries products that are sustainable.

The fifth principle of good management practice for eco-labelling is accountability. Accountability refers to an organisation's ability to be transparent in its decision-making processes, and the fishers that are practising unsustainable fisheries trade or do not follow the sustainability standards are held accountable for their actions.

### **Problems faced by certification systems**

Many of the certification systems cannot serve the needs of the artisanal or small-scale fishers because the number of artisanal fishers is huge, especially in developing countries. According to FAO (2014), there are about 6,462,057 fishers in six selected ASEAN countries in the year 2012. The small-scale fishers operate small boats; hence, certifying the fish caught by the many small-scale fishers is a complex activity. The principle of efficiency is not met in the case of artisanal fishers. Managing fisheries resources involves not only the environmental perspective, but also the social perspective. The society deals with the livelihood of the people. Fisheries management such as the use of certification, especially private certification that incurs the high cost of certification, often ignores the livelihood of the fishers. Thus, managing the social aspect of resources that ensures the livelihood of the fishers also poses a challenge for fisheries management.

The question is how to manage the fisheries to ensure sustainability that encompasses the environmental and social aspects of the fishers. We need to design an innovative and robust management plan to prevent the collapse of fisheries resources and at the same time sustain the livelihood and traditional culture of the fishers. Previous certification system has overlooked the traditional culture of the local fishers. Fortunately, the concept of Fair Trade Fish is established to overcome the limitation of the previous certification system (Deleselle, 2011). Fair Trade Fish goes a step further beyond the previous certification system that incorporates the idea of traditional culture and the livelihood of fishers. It may support the development of economic security, protection of culture, access rights, and control for coastal communities within the fisheries sector to create an improved level of cultural survival. Fair Trade Fish offers an alternative trading opportunity for many producers by developing a new approach to the current global trading systems and the development systems linking the local, regional producers with global consumers through trade (Utting-Chamoro, 2005). Fair Trade Fish is designed as an alternative certification system to reconnect producers and consumers economically, socially, and environmentally through the creation of an innovative moral certification system. The fair trade movement harnesses benefit from free trade, such as consumer choice and specialisation of production while also promoting social justice and capacity building within communities (Schuler & Christmann, 2011).

The main objectives of Fair Trade Fish include:

- a. Reducing the risk of extinction of fish species as a result of exploitation.
- b. Stabilising catches and slowing down the rate of fish harvested.
- c. Promoting local control and access over traditional fishers.
- d. Supporting small scale over industrial fishers.

### **The Principles of Fair Trade**

In recent years, fair trade has acquired considerable prominence due to an increasingly public acknowledgement that international trade actors have the moral obligations to address the issues of poverty, sustainable livelihoods, environmental assets, and sustainable development (Utting, 2009, p. 127). Fair trade practices encompass two important principles to ensuring sustainable fisheries resources for trade and sustainable livelihood of fishers. The two principles are socially equitable and ecologically sustainable (Erwann, 2009, p. 251).

At a minimum, fair trade standard for fisheries products are ratified by a “price premium, a guaranteed price floor, long-term trading contracts, easier access to credit, and shorter supply chains (Goodman, 2004, p. 287). Fair trade initiatives “aim to change the behaviours of

producers and traders in international trade by establishing production and transaction standards such as environmentally friendly production methods, minimum age for work, and fair prices paid to the producers (at least a third of the value goes back to the producers), as well as mechanism to enforce the standards, in order to improve the lives of the producers and their communities” (Schuler & Christmann, 2011, p. 153). Fair price incorporates and establishes social considerations in consumers’ purchasing decisions (Schuler & Christmann, 2011).

### **Impacts of Marine Capture Fisheries Certification Scheme**

Two large private certification bodies ensure the sustainability of fisheries resources for trade. The two bodies are Friend of the Sea (FoS) and the Marine Stewardship Council (MSC). These two schemes claim to cover around 18 per cent of global marine fisheries production, although after processing and repackaging the number of labelled products sold on the market may be much less than this (Washington & Ababouch 2011). In other words, these two schemes ensure that 18 per cent of global marine fisheries are harvested sustainably. The two schemes have made a significant contribution to ensuring the sustainability of fisheries resources. Many countries in the the European Union and the United States have given strong support to the private sector certification. MSC records the registration of 8 per cent of the global capture whereas FoS certification covers 10 per cent of the global capture. The United Nation Forum facilitates the private schemes on Sustainability Standards (UNFSS) to achieve a breakthrough in dialogue and research on the role of private standards and impacts on sustainable development.

However, the private sectors’ roles are profit maximisation. Big corporations can certify their fisheries products and earn a huge amount of money. The large-scale fishers can drive the small competitors away; thus, the small-scale fishers are not able to certify their products. The MSC can form alliances with the big scale fishers to reap the monetary benefits from the consumers. This market-driven certification scheme is harming the consumers of fisheries products. Government agencies should ensure that the fisheries products sold do not burden the consumers. Government or public sector is complementing the role of the private sector to ensure the sustainability of fisheries products. Both public sector and private sector should not have conflicting interests in the certification of fisheries products.

There are three impacts of private certification, namely trade impacts, environmental impacts and developmental impacts. These impacts are discussed below.

#### *Trade impacts of private certification*

A weakness of the private certification is the high cost of certification. For example, the independent third party of Marine Stewardship Council certification can cost up to USD250,000 while a simpler certification scheme, such as FOS costs USD2,000. The huge difference in costs between the MSC and the FOS means that fisheries owners are incurring a high cost to certify their fisheries products by using MSC standards and would rely on FOS to do simpler certification. Some governments such as the Netherlands and New Zealand may provide financial assistance to the fishing industry to get their fisheries products certified. Governments still have to bear some costs to help the fishing industry. Thus, the limitation of private certification regarding trade impacts is the high cost required for the the fishing industry to certify their products. The welfare, trade and revenue of the fishing industry are affected.

Another major limitation of the private certification schemes is the lower economic benefits obtained by the fishers due to the specific fishery or market situation certification (MRAG, 2009). Retailers gain more than the fishers from certification.

Consumers in more affluent markets especially the developed countries tend to increasingly require high standards of quality assurance and demand guarantees that the fish they purchase is produced sustainably. The European Union and the United States consumers are more aware and sensitive to food safety requirement and sustainability of fisheries resources. The consumers force the government to adopt the sustainability standards and meet the safety requirements of processed seafood. Thus, governments end up using trade policy tools such as tariffs and subsidies to ensure the sustainability of fisheries resources. However, few issues are arising from government management of fisheries. The reformation of subsidies might lead to welfare loss of the fishers especially the vulnerable societies that depend on subsidised fishing. Reform of tariff levels also raises concerns on harming the development prospects of a country. The liberalisation of tariffs by the government might erode the tariff preferences enjoyed by countries, especially the developing countries. Furthermore, the impacts of tariffs liberalisation on fisheries stocks are ambiguous depending on the effectiveness of fisheries management in each country.

The dissatisfaction with public fisheries management efforts has led to the emergence of private sustainability labels, driven by the demand of large food retailers in the United States and European Union for verifiable assurances of sustainably sourced product. As mentioned earlier, the two major private schemes are the Marine Stewardship Council and Friends for the Sea. The private schemes complement the efforts of the government to ensure the sustainability of fisheries resources. The private schemes that comprise large retailers provide inputs to the government to create awareness and ensure the sustainability of fisheries. Public sector then raises their safety standards and sustainability standards. Public food safety standards appear to function as requirements for entry to a particular market while private standards as requirements for entry to a particular supply chain. The public sector and private sector roles in certification are thus complementary and work to ensure food safety and sustainability of the fisheries resources.

### **Challenge for developing countries to certify their fisheries products**

Most of the certification of the fisheries products is initiated by the developed countries especially the European Union, Japan and the United States. The private certification schemes are Friend of the Sea, Marine Stewardship Council, MEL-Japan, GlobalGAP, GAA, and Naturland. Developed countries own these private certification schemes. The World Trade Organization (WTO) requires the developing countries to invest in technology and processes of the fishing industry. The schemes require not only the developed countries but also the developing countries to meet sustainability standards. Thus, the developing countries need to ensure that their fisheries products are certified by private schemes to prevent their products from being rejected. We discuss the challenge posed by private certification schemes to the developing countries in the next section. The certification schemes can be divided into marine capture fisheries and aquaculture certification scheme.

#### *High cost of installation*

The installation of the certification scheme is very high. This becomes the burden of the developing countries especially those countries that rely on fisheries to pay a high cost for getting their fisheries products certified. The developing countries will have to bear the high cost of investing in technology for certification purpose and comply with the WTO



requirements. The governments of the developing countries will have to bear high costs for certification purpose to remain in the international trade for the fisheries products. The question is whether the developed countries are willing to help the developing countries?

*Exploitation of fisheries resources in developing countries*

The need for investment in technology and processes to certify the fisheries products ensure that the developed countries can transfer their technologies to the developing countries. The developed countries have the upper hand against the developing countries in terms of technologies. Are the developed countries willing to share their technologies and ensure sustainability of fisheries resources? The answer is ambiguous and uncertain. The EU and US can impose strict trade and sustainability standards through the World Trade Organization (WTO) and require the developing countries to comply with the new standards. Failure in complying with the new standards might lead to rejection of fisheries resources by the EU and US. This exacerbates and further reduces the welfare of developing countries.

The advanced technologies of the developed countries might be used as a tool to exploit the fisheries resources in developing countries waters. As pointed out by Joseph Stiglitz, a Nobel laureate in Economics Science, the developed countries pursue their interest ahead of developing countries. For example, in the Uruguay Round and Doha Round, the developed countries exploit the developing countries by using unfair trade practices. The Uruguay Round shows that the multilateral trade negotiations make the playing field less level. The developed countries impose far higher--on average four times higher--tariffs against developing countries than against developed ones (Stiglitz, 2002, 2006). A poor country like Angola pays as much in tariffs to the United States as does rich Belgium; Guatemala pays as much as New Zealand. The discrimination against developing countries exists even after the developed countries have granted so-called preferences to developing countries. This shows that developed countries that have high capital always exploit the resources of developing countries. The massive capital owned by big ships that enter the developing countries seawaters to exploit as many fish as possible is good examples in this case. The consequence is that the fisheries resources in developing countries are overexploited and the revenue from fisheries drops as a result of that.

The extraction of fisheries resources may threaten the diversities and ecosystem of the fisheries resources in developing countries. The fish extracted from the developing countries is sold at a very low price to the developed countries. The developed countries may certify the low-value fish using the developed countries certification scheme. The developing countries could not afford to pay for the certification fee. The developed countries could resell the high value-added processed fish at an exorbitant price to both developed countries and developing countries. The developing countries may thus lose out in the competition with the developed countries due to the price differentials in the name of sustainability standards.

China is a major exporter of fish, exporting 14 per cent of global fish and fish products in the year 2016 (FAO, 2018). China has the power of not following the WTO rule to participate in eco-labelling and certification of their fish. China can retaliate against the European Union and US fish products by not importing their fish from the developed countries given that China is the third largest importer in the world, representing 6.5 per cent of the global quantity of fish import in the year 2016 (FAO,2018). China can export more fishery products to ASEAN and may thus sideline the EU and US markets. China might import more fishery products from least developed countries and developing countries if the certification cost is too high. Thus, the developed countries may lose out in the fisheries trade.

*Main challenge of sustainability standards for countries*

There are different sustainability standards for different countries. There is no harmonization of the sustainability standards because the fish species are different among countries and the fisheries management among countries are different as well. For example, the National Oceanographic and Atmospheric Administration (NOAA) is a federal agency in the United States that focus on the conditions of the ocean resources. NOAA has a different sustainability standard as compared to the European Union and France. Thus, there is no standardisation for the sustainability of sea resources. However, the countries in the world can refer to the sustainability guidelines from the FAO Code of Conduct for Responsible Fisheries Management. FAO Code of Conduct provides guidelines for eco-labelling of products for marine fisheries (2009) and inland capture fisheries and aquaculture production (2011). The challenge is how to ensure the degree of coherence among the developed countries' sustainability standards and also ensure the acceptance of the developed countries standards by developing countries.

WTO member countries have differences in poverty level and development priorities. For example, Myanmar is a poor country compared to Norway, a developed country. Special and differential treatment given to the poor developing countries were considered in the WTO trade guidelines draft text set out in the year 2007 but was removed in the year 2008. The Russians focus more on low value, high volumes pelagic fish such as sardines and mackerel (DFID, 2009) whereas EU and US focus on high-value fish such as tuna. The different types of fisheries resources targeted lead to the complexity of multilateral trade. Developed countries must restructure the subsidies to meet requirements of all countries and ensure sustainability standards of fisheries resources are accepted by the developing countries to encourage trade.

*Trans-Pacific Partnership Agreement (TPPA) and the implications on ASEAN fisheries*

Trans-Pacific Partnership Agreement is a multilateral agreement signed by 12 countries to promote trade and create job opportunities for its member countries. The TPPA on fisheries agrees to sustainable fisheries management to combat illegal fishing. However, the challenge lies on the mislabeling of fisheries products when TPPA is enforced.

Fisheries products are often mislabeled. The traders may try to mislead the consumers to believe that they consume sustainable fisheries products. Data on fisheries trade shows that 37 per cent of frozen tuna in Spain are mislabeled (Gordoa et al., 2017). The actual fish sold in the market is claimed to be another type of fish to fetch a better price. For example, the consumers could not differentiate the source of the fish because the meat of the fish from different fishes is not distinguishable. The fish traders may attempt to benefit from the high price of fish through mislabeling. The mislabeling of fisheries products exist in illegal fish trading activities and bring harm to the consumers. Thus, government agencies must trace the fisheries sources to ensure the mislabeling of fish does not exist. Traceability of fisheries sources must be carefully examined by the enforcement officers selected from the government agencies.

Moreover, the TPPA prohibit harmful subsidies that negatively affect fish stocks. However, this poses challenges to the ASEAN fisheries. The ASEAN fisheries technologies are not well developed, and 90 per cent are small-scale fisheries. The small-scale fisheries in ASEAN require their governments' subsidies to buy boats, gears. The TPPA guidelines in fisheries can affect the small-scale fishers negatively and leave them unable to compete with the large-scale fishers from the United States and Europe with their state-of-the-art fishing technologies.

(United States Trade Representative, 2018). TPPA also yields counterproductive lessons. The lowering of the subsidies for the small-scale fishers in ASEAN may disrupt their standards of livings. The small-scale fishers would thus have higher tendencies to engage in illegal, unreported and unregulated (IUU) fishing since the fishers find it hard to eke out a living. The objective of TPPA to combat IUU fishing may not succeed because of TPPA's agenda to reduce the subsidies among member countries.

### **Conclusion**

The impact of trade on the sustainability of fisheries shows that trade can increase the pressure on the harvest of fisheries. The lack of sustainability standards can lead to unsustainable fisheries in the advent of increasing market demand for fish. The government or public sector should work hand in hand with the private sector to ensure the sustainability of the fisheries resources. They should not have conflicting interest because they have the common interest to ensure the sustainability of fisheries resources. Public sectors role is to serve the interest of the small-scale fishers who are weak and do not have the financial capacity to certify their fisheries products whereas the private sectors' role is to serve the interest of the big scale fishers who are capable of paying more money to certify their products. However, the challenge in certification lies in the governments in different countries to ensure common sustainability standards are agreed upon.

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