

# Impact of the EC Regulation No. 1005/2008 on Tuna Long-line Fisheries in Vietnam

Nguyen Quoc Khanh, Tran Duc Phu and Nguyen Trong Luong

The seemingly incongruities between the Economic Community Regulation No. 1005/2008 or the EC Regulation and Vietnam’s fisheries regulations have challenged Vietnam to effectively combat IUU fishing in the country. Setting Vietnam’s regulations against that of EC’s, it would appear that as of the moment, the former would not be able to comply with the requirements of the latter especially on sustainable resource management and conservation in view of the complicated features of the fisheries sector of the country. An analysis of the challenges is spelled out in this article which focuses on tuna long-line fisheries of Vietnam.

Tuna fishery is a significant contributor to the national economy of Vietnam and is also a source of employment for the country’s local people. The main markets of Vietnam’s tuna products are the European Community (EC), United States, and Japan. In accordance with EC Regulation No. 1005/2008 Establishing a System to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing also known as the Illegal, Unreported and Unregulated Fishing Regulation which came into effect on 1 January 2010, export of fish products to the EC is allowed only when accompanied by a certified catch certificate indicating that the products are not obtained through IUU fishing. While attempting to apply the said Regulation, tuna fisheries of Vietnam had been confronted with various problems and challenges, especially with respect to the process of issuing catch certificates and fishing licenses as well as in complying with the requirements on sustainable resources management and conservation.

After tuna long-line fishing was introduced in Vietnam in early 1990s, it soon became one of the major industries of the country (Phong, 2010), particularly in the central provinces of Binh Dinh, Phu Yen, Khanh Hoa, and Ba Ria Vung Tau. In 2011, there were 2,520 tuna fishing vessels in Vietnam (DECAFIREP, 2012), of which about 1,270 were long-line vessels (GDCFRP, 2011). The main tuna species targeted are the yellowfin and bigeye tunas during the peak season from September to April, and to certain extent, in the leaner season from May to October (Tri, 2002). Tuna offers another opportunity for Vietnam to excel in the seafood industry, after shrimps and *Pangasius* spp. or the tra and basa catfish. In view of its high value, tuna is highly in demand in the global market (VASEP, 2011), and Vietnam exports tuna to sixty countries in the world (VASEP and GSO, 2011), the export value of which had been increasing at an average rate of 25% per year (Fig. 1). The country’s tuna export to its main markets, *i.e.* EC, U.S.A. and Japan, accounts for nearly 80% of the country’s total tuna export value (VASEP, 2011).

## Fisheries of Vietnam and the EC Regulation

Fisheries industry of Vietnam could be classified into industrial and small-scale fisheries, of which marine capture fisheries specifically practice an open access system (Tam, 2009). Although Vietnam has promulgated fisheries laws, regulations and decisions on fisheries management, the efficiency of the legal enforcement of such ordinances is rather low. This is coupled by the fact that IUU fishing which is reported to occur regularly in the

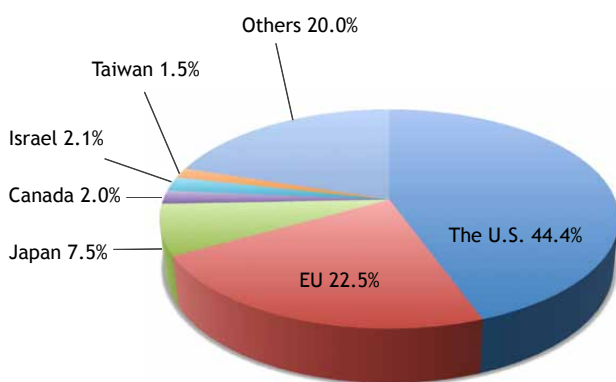


Fig. 1. Tuna export of Vietnam in volume, value and markets from 2006 to 2010

waters of Vietnam is practiced by both foreign and domestic fishing vessels. Nevertheless, in order that Vietnam would continue to have its presence felt in the world's fish market, the country's foreign trade policies must conform to international regulations and requirements.

It is widely recognized that illegal, unreported and unregulated (IUU) fishing has become a serious issue worldwide (Bray, 2001), and in order to prevent, deter and eliminate IUU fishing at the global scale, EC Regulation No. 1005/2008 was introduced to ensure that exploitation of the living aquatic resources conforms to sustainable economic, environmental and social conditions. The Regulation is a transparent and non-discriminatory instrument that applies to all vessels engaged in the commercial exploitation of fisheries resources in the high seas or in the waters under the jurisdiction of a third state. Nevertheless, IUU fishing has also been reported to be taking place not only within maritime waters of overseas countries but also in territories of the EC member states (EC, 2008). Thus, the Regulation aims to prevent IUU fishing practices in countries linked to the EC, either through trade to and from the EC or the involvement of EC nationals in IUU fishing activities of any flag states. It also provides a comprehensive legal basis for operational cooperation between third countries and the EC to efficiently combat IUU fishing.

Thus, the Regulation, which mainly aims to combat IUU fishing, imposes stringent trade measures on fishing vessels and foreign states that support IUU fishing. The control, sanctioning and conditionality elements at the heart of the Regulation includes port control over third country fishing vessels, catch certification requirements, development of an IUU vessel list, and establishment of a list of non-cooperating third countries (Tsamenyi, 2010). Considering the significance of its export of fish products to the EC for economic development, Vietnam exerts efforts to ensure that the requirements of the Regulation are complied with although the process involved had posed challenges to the country's fish trade. Therefore, a case study was conducted to assess the impacts of the implementation of the EC Regulation in Vietnam with the stakeholders of the tuna fisheries industry as respondents.

Nevertheless, in an effort to implement the EC Regulation, the Ministry of Agriculture and Rural Development of Vietnam adopted the corresponding regulations on fisheries certification of exports to European markets. Known as Decision No. 3477/QĐ-BNN and Circular No. 09/2011/TT-BNNPTNT, these regulations prescribe the processes, procedures and contents of checking, as well as the responsibilities and powers of fisheries authorities and individuals in certifying the origin of capture fisheries

production. The Government of Vietnam also developed its National Action Plan to Combat IUU Fishing, which underlines the need for regional information sharing on IUU fishing activities. The objectives of the country's National Action Plan are to guarantee the sustainable development of fisheries, protection of the resources, improvement of fishing techniques, and effectively combat IUU fishing.

### **Implementation of EC Regulation No. 1005/2008 vs. Vietnam's Regulations in Long-line Tuna Fisheries of Vietnam: Case Study**

The case study attempted to compare the impacts of the implementation of the EC Regulation No. 1005/2008 with those of the regulations of Vietnam in the country's long-line tuna fisheries. The primary data were collected through face-to-face interviews with fishers, skippers of tuna long-line vessels, and fisheries managers using questionnaires and qualitative models. Secondary data was collected from the archives of the Ministry of Agriculture and Rural Development, the General Department of Capture Fisheries and Resources Protection, and the Association of Seafood Exporters and Producers, as well as from published documents, annual fisheries reports, statistical documents, and keynote speeches. Additional information was also collected from literatures, journal articles, and newspapers. Specifically, the study was intended to seek for an answer to the question: What are the problems and challenges that arise when applying the EC Regulation in the context of Vietnam fisheries? In order to find out the problems and challenges, the case study also compared the requirements of the EC Regulation No. 1005/2008, the fisheries regulations of Vietnam, and the actual implementation of such regulations in Vietnam.

#### **EC Regulation No. 1005/2008 and Regulations of Vietnam**

After benchmarking the requirements of EC Regulation No. 1005/2008 with those of the regulations of Vietnam, the result indicated certain overlaps as well mismatches as shown in **Fig. 2**. However, a match exists in the catch certificate requirement, and fishing report and logbook keeping. The requirement of EC to enclose a valid catch certificate with the fish products imported into the EC ensures that the concerned fisheries products have been caught in compliance with the regulations on sustainable resource utilization, while the report and the fishing logbook would also prove that the fishing vessels comply with the requirements of the EC Regulation. In the regulations of Vietnam, it is prescribed that in order to export fisheries products to the EC such products should meet the catch

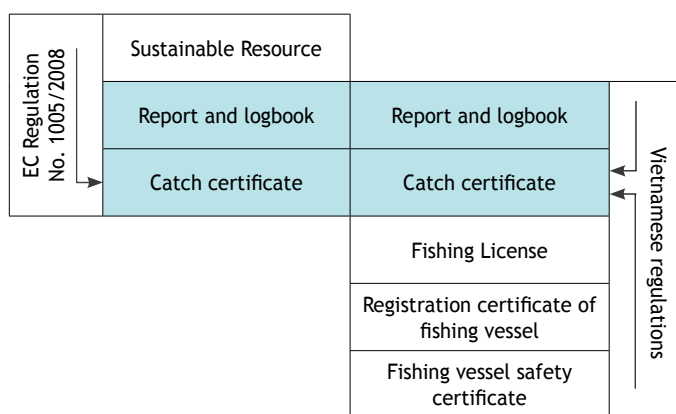


Fig. 2. Matches and mismatches between the Regulations of Vietnam and the EC Regulation No. 1005/2008

certificate requirement of EC Regulation No. 1005/2008. Therefore, there is some degree of homogeneity between the regulations of Vietnam and the EC Regulation with respect to catch certification.

Nonetheless, there are also differences between the above-mentioned sets of regulations especially on the steps in issuing the certificates. Specifically, the EC Regulation specifies that the objectives related to the promotion of sustainable resource management and conservation should be met, while efforts to promote resource management and conservation are not clearly defined in Vietnam's regulations. This weakness must have emanated from the gap of the country's regulatory systems, insufficiency of resource databases, the rapidly increasing fishing capacity, and the specific features of the country's fisheries.

In addition, issuance of fishing licenses and catch certificates from the perspective of Vietnam authorities does not need to comply with requirements on sustainable resource management but is rather focused on marine safety, which is a precondition for undertaking fishing operations. The Fisheries Administration of Vietnam therefore has different outlook especially on the requirements in the EC Regulation for catch certification. Overall, the problems occur in many aspects, such as in the process of issuing fishing licenses and catch certificates, promoting resources management and conservation, maintaining logbooks and reporting, and in complying with the EC Regulation in general due to the inadequacy of knowledge and absolute poverty on the part of the fishers.

## Problems and Challenges

### Issuance of and Obtaining Fishing Licenses and Catch Certificates

The regulations of Vietnam (Khai, 2005) stipulate that fishing vessels should obtain fishing licenses before undertaking fishing operations. A fishing license is issued

to a fishing vessel in accordance with the certificate of safety and registration certificate, without focusing on the condition of the resources, while the EC Regulation considers resource conservation as an important aspect in the catch certificate. This scenario has resulted in a conflict between the implementation of the requirements of the EC Regulation and the process of issuing a fishing license by Vietnam authorities. Consequently, the issuance of fishing licenses based solely on technical safety and registration instead of on sustainable resource management, has led to overcapacity, and subsequently to economic losses, diminished employment opportunities and reduced household incomes, eventually exacerbating poverty among coastal and artisanal fishers. Nevertheless, it is also well recognized that fishers would try to refrain from applying for fishing licenses and certificates when they are constrained and controlled by fishery authorities, while also trying to purposely delay payment of registration fees for as long as possible. Therefore, fishing vessels operating without licenses are a common sight in the waters of Vietnam for many years.

One of the main problems encountered by fishers in complying with the EC Regulation is in filling out the catch certificate form. According to the handbook on the practical application of the EC Regulation, the skipper of a fishing vessel is responsible in providing information especially on the species caught and the corresponding yields in the said form. However, in the real scenario in Vietnam, after the partial inputs are provided by the skipper, the form is sent to the exporters to complete the remaining information, which includes the name and address of exporter and transport details. The certificate form is then submitted by exporters to fishery authorities but in order to receive a valid catch certificate from the authorities, exporters should also provide copies of logbooks together with the fishing license and a complete catch certificate form. Since a catch certificate form is accomplished by exporters after buying fish from middlemen, the information may not be as precise as that of the skipper's.

The exporters could just write any species and corresponding volume caught by a particular fishing boat, while the skipper could appropriately provide such information as features of the fishing vessel, species and yields in the catch certificate form. Thus, in Vietnam the practical application of the EC Regulation through catch certification is not in line with the requirements of the said regulation. Furthermore, trading of fish products in Vietnam is usually done through middlemen (Dung, 2010), although middlemen are not involved by the authorities during the transshipment process of fish products at sea. While middlemen serve as a bridge between fishers and exporters, transshipment at

sea also links the fishers and exporters as well. This leads to two patterns of transactions in fish products in Vietnam:

**Pattern A.** Fishing vessels → transshipment → exporters

**Pattern B.** Fishing vessels → middlemen → exporters

Based on the regulations of Vietnam (Tam, 2009 and 2011), transshipment at sea (**Pattern A**) must declare information on transshipment, *i.e.* position of transshipment, estimated weight of catch, and name of transport vessel. However, transshipment information on fisheries products that moves through middlemen (**Pattern B**) is not declared in the catch certificate. While in **Pattern A**, authorities can trace the fishing vessels from which the fish had come from because information on transshipment is declared in the catch certificate, in **Pattern B** the origin of the fish cannot be traced because information on transshipment is not declared in the catch certificate form, and thus, could come from IUU fishing. Moreover, middlemen buy fish from fishers who comply with the regulations as well as from those who do not, so the result could be a mix of IUU with non-IUU fish products in which case IUU products could be sold under the pretext of non-IUU products. Furthermore, since trading of fish products between middlemen and fishers is not recorded in the catch certificate, this makes it difficult for authorities to trace the fish products that do not comply with the EC Regulation.

In addition, Vietnam does not have regulations requiring middlemen to record information on the fishing vessels that sold the fish products as well as the yield. In reality, middlemen buy fish from many fishing vessels, including those from fish buying-vessels at sea. The middlemen in turn sell the fish to more than one exporter in different places, making the process of tracing the fish products very complicated. Middlemen also do not check the fishers' logbooks, a reason why fishers do not usually write entries in logbooks. This leads to problems in issuing the catch certificate because fishing logbook is a necessary document in obtaining a catch certificate. In addition, because of the existing patterns of trading fish products in Vietnam, inspection by concerned authorities is not effective, notwithstanding a requirement in the EC Regulation stipulating the need for authorities to carry out random inspections of at least 5% of the total average landings and transshipment transactions at fishing ports each year.

Regarding tuna landings, the concerned authorities are not able to inspect fishing vessels at ports because tunas are unloaded immediately upon landing. By the time fishery authorities receive the catch certificate application form from exporters, the fish is already in processing factories. Furthermore, many fishers in Vietnam do not land their

catches at fishing ports, as these are often unloaded at landing places such as deep water areas, roadsteads and even in front of their houses. Therefore, inspection by fishery authorities is limited to checking only the validation of fishing licenses, the fishing gear used and the marine safety of vessels without having been able to inspect their fish catch.

### Sustainable Resource Management

One of the greatest weaknesses in fisheries management of Vietnam in general, and in tuna fisheries in particular, is the lack of updated resource databases. Similarly, fishery scientists often conclude that large management problems occur in traditional capture fisheries due to insufficiency of catch statistics and assessment reports on major fish stocks. For example, tuna fisheries have no reliable stock assessment data that could give a comprehensive picture of the country's tuna resources (Dung, 2010). As a matter of fact, Vietnam still does not have a good system of collecting and compiling fishery statistics. The annual fisheries data shown in Statistical Reports that include total yield, number of fishing vessels and fishing capacity are general information. Vietnam needs to compile specific fisheries data, such as yield of each gear per year and yield of each species and fishing grounds, in order to facilitate planning and development of the country's national fisheries policies, more particularly those that aim to prevent and eliminate IUU fishing (MARD, 2011).

The data and information on annual tuna catches and exports have been sourced from seafood companies and the General Statistical Office based on export information, and not collected by fishing vessels. As a result, a considerable amount of tuna traded and consumed in domestic markets is not reported. Such inadequacy of resource databases often leads to difficulties on the part of fishery authorities to develop effective tuna fisheries management policies, including allocation of tuna quotas, limiting the number of long-line fishing vessels and making long-term projections on the development of tuna fisheries.

Furthermore, Vietnam has no special regulations governing marine resource management and conservation, as well as assessments of the impacts of fishing on the environment, fisheries resources and the ecosystem. Fishers fish freely and are not concerned about the negative impacts of their fishing operations on the habitat. This leads to decline and loss of the marine ecological balance. Vietnam has not participated in collecting and sharing accurate data concerning its fishing activities and information from the national and international research programs, in view of the unavailability of information on stock assessment and fishery statistics (Hanh *et al.*, 2007).

Moreover, Vietnam does not have gear regulations, *i.e.* length of mainline, number and type of hooks in long-line fisheries, to protect and conserve the fisheries resources and eliminate by-catch. Therefore, long-line fishers use arbitrary types of hooks and scales of long-lines. In fact, fishers use non-selective hooks, and in the end catch all kinds of fish and organisms, resulting in negative impacts on the resources. This situation is obviously contrary to the requirements in the EC Regulation. Tuna species caught such as yellowfin and bigeye, account for 30-50% of the total catch from tuna long-line fleet, while by-catch which includes a number of prohibited species, *i.e.* sharks, turtles and porpoise, represents about 30-50%. A significant portion of the tuna catch (30-50%) is small tunas (Hanh *et al.*, 2007) while the remaining catch comprises high proportion of juveniles and by-catch, a situation that is harmful to the fisheries resources and in the long-term could exhaust the resources. However, since by-catch is a significant source of revenue in Vietnam, it would not be easy for fishers to eliminate the by-catch, even if the benefit in the short-term could only be additional income to individual fishers but in the long-term this would create negative impacts on the resources.

In an open access regime, too many fishers and not enough fish lead to competition for the target catch, and destruction of fisheries resources and habitats, and eventually contributing significantly to IUU fishing as well as to problems on overcapacity and overfishing (Hanh *et al.*, 2007). One of the main problems related to resource protection is that most fishing communities and fishers are not aware of the relevance of resource protection. Fishers also do not think of the future consequences of their actions thinking that fisheries resource management is a sole responsibility of fishery authorities and that the fisheries resources are infinite. Hence, fishers fish just to obtain the maximum immediate benefits and satisfy their needs without taking into account the need for sustainable resources management.

### **Reporting and Maintaining Fishing Logbooks**

Maintaining fishing reports and logbooks is compulsory for fishers and skippers of fishing vessels, but managing and inspecting the information provided by fishers and skippers are the responsibility of fishery authorities (Tam, 2009). In reality however, these are not practiced as the procedures would require considerable amount of efforts, since each province has thousands of fishing vessels. Added to this is the fact that fisheries in Vietnam are mostly small-scale and multi-gear, making it complicated to follow the necessary management procedures. Providing inputs for the logbooks is carried out manually since an electronic logbook system in Vietnam is still non-existent. Thus, the process of

providing information into the fishing reports and logbooks is impeded by a number of difficulties from the very first step. Moreover, the country's current laws and regulations do not set any criteria for accurate inputting into logbooks based on specific requirements for keeping fishing logbooks and reporting procedures nor is there a system of validating the data reported. Although fishers submit the logbooks and reports to fishery authorities, but the information which has not been validated will have no use and meaning. In other words, although the regulations require fishers to fill out the fishing logbooks and report their catches to fishery authorities, but ensuring the reliability of information is not stipulated in such regulations.

An additional challenge for fishers to maintain fishing reports and logbooks is the very nature and characteristics of the domestic fisheries market of Vietnam. Prices of IUU fishing products and non-IUU fishing products are the same, while fishers who do not maintain fishing reports and logbooks still participate in the fish trade and their catches bought by middlemen command the same prices as those of actual non-IUU fish. Therefore, fishers are not keen in maintaining fishing reports and keeping logbooks. Nonetheless, if prices of fish from fishers who comply with the regulations could be made higher than those that do not comply, it is more likely that awareness of the regulations would increase. Moreover, fishers adopting traditional fishing methods do not believe in the regulations that require accomplishing fishing reports and maintaining logbooks. Furthermore, conflict of interest and competition of fishing grounds also encourage fishers to conceal trip information or mis-state information on fishing areas and routes, especially in cases when banned species are caught or when highly productive fishing grounds are discovered which could attract the interest of other competing fishers. In fact, information in the fishing reports and logbooks has not been perceived as relevant for fishers who only think the information as private and classified. Fishers are either not eager to make the report or will report inaccurate information. Thus, a number of fishers refuse to report their yields and fill out the logbooks, considering the process inconvenient and irrational. Fishers only argue that in reality, maintaining fishing reports and keeping logbooks, only bring inconvenience to them affecting their fishing operations.

Another constraint is the distance that fishers need to travel to reach the fishery authorities' offices where most often fishers would spend one day every month to submit their fishing reports, thus, fishers consider submitting such reports not profitable at all whether these are well-accomplished or not. Sometimes when fishers have good harvests they do not dare to report the information to fishery

authorities, for fear that government might impose high taxes on them, and that they might have to pay more for their social duties, such as subscribing to charity, building houses of gratitude and constructing alleys. In fact, most fishers suggested that if their catch is low or harvest is lost, they should receive fuel subsidies such as those granted in 2008. It is for these reasons that fishers do not have the motivation to comply with the requirements to maintain fishing reports and keep logbooks.

In general, the purpose of the EC Regulation is to eliminate IUU fishing activities. However, a few gaps in the Vietnamese regulations regarding keeping fishing reports may be taken advantage of by fishers to engage in IUU fishing. Meanwhile, maintaining fishing logbooks is sometimes difficult for fishers to undertake because of the uncomfortable condition onboard fishing vessels. For example, long-line fishing vessels are usually artisanal and small-sized boats that sway when the weather at sea is severe with heavy winds and big waves. Tuna fishing boats do not have any instruments that measure the exact weight of fish, thus, fishers resort to estimating only the volume of fish caught. In addition, fishers also do not have the capability to sort the fish caught by species and to measure the exact volume by species. What is more depressing is the fact that almost all fishers have insufficient knowledge and educational background, so that recognizing and reading the words in the forms is quite difficult, let alone filling out the logbooks. Many fishers claimed that the specific writings in the fishing logbook are complex and complicated for them to follow.

Owners of fishing vessels also cited that the daily work of a skipper is really taxing and stressful. "Writing is not an interesting task for skippers who prefer fishing to holding a pen". A good skipper is difficult to find, so owners do not ask their skippers to fill out the fishing logbooks. The owners also fear that if forced to fill out logbooks, their skippers may abandon their work and move to other vessels. Nevertheless, a simple reason for the non-implementation of the requirements for logbook keeping by skippers could be merely "slothful", considering that middlemen or buying-vessels at sea buy fish from fishers without asking for fishing logbooks. This situation does not motivate the skippers to maintain fishing logbooks at all.

### **Inadequate Knowledge and Absolute Poverty among Fishers**

Educational level in fishing communities is generally low. From the sample residents in coastal fishing communities surveyed, 68% have not completed primary school. In fact, only 20% have completed primary school while only 10% have completed secondary school, and less than 1%

received certificate or diploma from vocational school or university (GSO, 2011). Therefore, the awareness of fishers on the regulations and enforcement is rather very limited. This concern had been addressed through the conduct of training courses by officers and staff of the country's Fisheries Administration. However, these training courses were attended by vessel owners, while the crew and skippers who are directly involved in complying with the regulations and laws could not attend as they are at sea almost all year round, especially for tuna long-line fisheries, where the number of fishing days is about one month (Hanh *et al.*, 2007), and upon landing, fishers must prepare the gear, bait and fuel for their next trip.

Furthermore, fishers do not comply with the regulations because of the practice of traditional fishing methods. Fishers try to catch as much fish as possible without minding about any consequences of their actions in the future. Moreover, they tend to think that market price is an objective factor that fishers cannot control. They do not care where their fish will be exported to and that they are not aware of the advantages of proper enforcement of the regulations, in terms of improved price and profit. More particularly, for fish trading to the EC which is an important market for Vietnam, some fishers declared that "if their fish cannot be exported to the EU they would rather sell their fish to Japan, USA, China and other countries".

Inadequate educational attainment and minimum awareness are the main factors that make keeping logbooks and maintaining fishing reports difficult for many fishers to undertake. Filling in information in the catch certificate is a challenge while fishers are not aware of fishery regulations in general and regulation on resource management in particular. They still could not recognize the fact that proper enforcement of the regulations could bring increased profit in the future. Poor economic factor is also another main reason for the incessant occurrence of IUU fishing in Vietnam (Dung, 2010). Some fishing vessels involved in IUU fishing recruit crews coming from areas with inadequate alternative employment opportunities or are unaware of the vessels' illegal fishing operations. Fishers must look for their means of subsistence, so they do not bother to participate in any training courses or capacity improvement as called for in the fishery regulations (Hanh *et al.*, 2007). Therefore, most fishers do not know what IUU fishing is and how IUU fishing is practiced.

Most fishers are generally poor, and although they might be aware that their activities are illegal, they must risk in undertaking such fishing practices for fear of losing their capital due to the high operating costs in fishing. Normally, the annual operating cost for a tuna long-line fishing vessel

could be as high as 571.6 million VND per year (Long *et al.*, 2008). This is a significant investment for the fishers/owners, which makes IUU fishing an attractive option in order to recoup their investments.

## Discussion

Tuna fisheries in Vietnam have been plagued with concerns such as overfishing, excessive fishing efforts and depleting resources. The role of fisheries management is, therefore, very important to achieve sustainable development of this particular fisheries sector. Moreover, Vietnam also seeks to better conserve and manage fisheries resources not only in its Exclusive Economic Zone but also beyond, in order to comply with relevant international norms and regulations. Since Vietnam does not have enough legal documents and scientific information related to tuna resources management, the country could not come up with a comprehensive tuna stock assessment and conduct biological research.

Information on tuna catches is also not reliable, thus developing a tuna database for making long-term plans in tuna fisheries management and development as well as vessel management, is almost an impossible task. In order that Vietnam could properly implement the EC Regulation, the country should enhance the cooperation between fishery authorities and fishers. Fishers should change their traditional attitudes and learn to maintain logbooks and records. For their part, fishery authorities need to develop relevant regulations that could address the inadequacies related to IUU fishing. For example, Vietnam still lacks inspection systems for fishing vessels at sea. Therefore, prevention, deterrence and elimination of IUU fishing are impeded by many challenges and problems.

Tunas are highly migratory species and their habitats could extend many state jurisdictions, so that catching tuna in one country could affect the tuna stocks of other countries. Therefore, in order to sustain its tuna fisheries, Vietnam should explore the possibility of establishing regional or international cooperation to solve the numerous challenges, especially transboundary problems. Moreover, since the EC Regulation requires that IUU fishing activities should be immediately stopped, the corresponding regulations of Vietnam should be re-adjusted to be able to satisfy the requirements of the EC Regulation. Moreover, the national fishing management system and mode of production should also be reviewed and updated. This could be a hard task for the fishery authorities to undertake because Vietnam has not had an inspection system for its fishing activities that could meet the requirements of EC.

## Way Forward

Nonetheless, Vietnamese fisheries in general have already evolved from small-scale and traditional fisheries in open access to fisheries with good management. In the process, some difficulties are encountered in the first steps in view of incomplete regulations as well as weakness in the implementation of management systems and regulations. Therefore, the problems and challenges in enforcing the EC Regulation could be addressed by embarking on an improved national fisheries regulation system, fishing infrastructure, management system, and enforcement. These problems and challenges should be mainstreamed in the fishery authorities' perspectives and fishers' foresights as well. Nevertheless, the implementation of the EC Regulation has served as an eye-opener to improve fisheries management in Vietnam.

As mentioned earlier, lack of scientific database on the country's resources had made it possible for concerned authorities to issue fishing licenses based on technical safety certificate but not on the aspects of resources conservation. Furthermore, inadequacy and weak enforcement of the country's regulations do not strictly require fishers to maintain fishing reports and logbooks. In addition, in Vietnam's fisheries being small-scale and traditional, fishers practice free fishing without giving any due concern about resources protection. Moreover, the low educational level of most fishers, lack of awareness of the implementation of regulations and poor economic capacity, make them not capable of maintaining fishing reports and logbooks. In the end, completely accomplishing the catch certificate form is still a long way to go for fishers in Vietnam.

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### About the Authors

Nguyen Quoc Khanh, Tran Duc Phu and Nguyen Trong Luong are working at the Institute of Marine Science and Fishing Technology, Nha Trang University, Nha Trang, Khanh Hoa, Vietnam.

