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Implementation of CITES 1973 in Indonesia: a study of shark fishing in Tanjung Luar East Lombok, West Nusa Tenggara

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Abstract. This research is based on the issue of sharks being caught by the fishermen at Tanjung Luar, East Lombok. According to an international agreement on the protection of endangered species and Indonesia's national law, the activity of shark-catching should be limited or even prohibited. Nowadays, sharks as the top predator in the ocean are in the critical condition. Therefore, slow propagation, the limited number of babyshark, and long life cycle, makes them vulnerable against exploitation. This study aims to further investigate on Indonesia's obligation based on international and national law related to the protection and conservation of sea natural resources, on which shark fishing is the primary case. In principle, this research is normative-legal research. The empirical research conducted by interview and observation are intended to complete the primary data. As the biggest archipelago state, Indonesia is obliged to obey its obligations under international law. The loss or damage of certain species, in this case, the shark in Indonesia will be affecting the global situation. However, the efforts to supervising the shark sale in Tanjung Luar should be the main concern for both local and central government.

Keywords: Sharks, Endangered Species, Implementation, CITES 1973

1. Introduction

Convention on International Trade in Endangered Species of Wild Fauna and Flora or well-known as CITES is an international pact which arranged in an international diplomatic conference on March, 3rd 1973 in Washington. CITES was follow-up on Recommendation Number 993 which issued on United Nations Conference on environment in Stockholm 1972. CITES was attended by 88 countries and signed by 22 states. This regulation entered-into force by 1st of July 1975.

CITES was established due to the rampant-borderless wild flora and fauna trading activities [1]. By the CITES forming, member state expected can be implemented regulations within consistently according to international law principle, *pancta sunt servanda*. Indonesia ratify CITES 1973 with the Presidential Decree Number 43 Year 1978 which was formed in 15th December 1978. CITES 1973 has been established several protection levels for more 33.000 of endangered species[2] which consist around 5.000 fauna species and 25.000 flora species. More than half of those numbers are only live in Indonesia (endemic species) [2].

One of animals species which protect under CITES 1973 regulation are sharks. Sharks (*elasmobranchii*) is one of the important fisheries commodity in the world. Shark has important ecological values in a coral reefs ecosystem in the ocean. Shark is a top predator in an ocean's food chain which determine balance and control food webs under [3]. According to FAO's Report on sharks trading, there were 20 of shark fishing nations by 2000-2010, in which Indonesia is the number one shark fishing state in the world [4].

One of the most active shark fishing location in Indonesia is Tanjung Luar port, East Lombok Regency, West Nusa Tenggara. There are 84 sharks fishing boats in Tanjung Luar. On daily basis, four to five fishing boats landed in Tanjung Luar fish auction and dropped-off 10 - 20 sharks. Shark types



that mostly catch in Tanjung Luar are silky shark (local people call it *hiu lanjaman* or *hiu kejen*) and hammerhead shark (*hiu martil*) [5].

Sharks fishery production number in Indonesia are less than 1% from the national fishery production. However it contributed greatly to the fisherman income, whether catching sharks as targeted species or by catch [6]. Fisherman and local community economically dependent from shark fishing, since the sale value increase local community's income. Captured sharks were sale between Rp.1.500.000 – Rp. 5.000.000. shark fishing can take 7-14 days trip, where fisherman can get minimum 5 sharks.

2. Methodology

This work was normative empirical legal research which initialized by normative legal research. Normative legal research consisted of positive laws and legal principles inventory. Positive law inventory is an initial activity. This step not only collects regulations but also serves as an analytical-critical and a logic-systematic proses [7]. As normative empiric legal research, this work applied several approaches in order to answer the main problem, were statute approach and sociological approach.

Statute approach was meant to analyze laws and regulations related to the legal problems in this work [8]. Thus, this research departs from international law norms which focus on sea, marine, marine environment and fishery laws, in this respect are UNCLOS 1982, CITES 1973 and implementing regulations in Indonesia. In addition, sociological approach was implemented in order to analyze what extent CITES 1973 application in Indonesia thus this work was conducted field research in Tanjung Luar Fish Auction. Field research was intended as part of empirical legal research, which aimed to observe facts in the field and application of regulations in the community.

3. Analysis And Discussion

3.1. *Sharks Fishing Regulation in International Trade Framework According Convention of International Trade of Endangered Species of Wild Flora and Fauna (CITES) 1973 and Its Implementing Regulation in Indonesia*

Indonesia was registered as 48th of CITES 1973 member. However, Indonesia government needs 12 years in order to establish CITES 1973 implementing regulations which started in 1978 by CITES 1973 ratification law i.e. Presidential Decree Number 43 Year 1978. Then, several laws created in order to accommodate CITES 1973 were Law Number 5 Year 1990 on Conservation of Natural Resources and Ecosystem, and Law Number 45 Year 2009 on Fishery and Marine Affairs.

After determining the implementing regulations of CITES 1973, Indonesia has been nationally determined management authorities whom responsible to conduct permit system of international trade wild flora and fauna, in this case is the Directorate of Natural Resources Conservation and Ecosystem Ministry of Environment and Forest and Directorate General of Customs, Ministry of Finance.

The duty of Management authority are to perform legislation, permit issuance, law enforcement, sending annually report, and establish communication with other CITES institutions. Management authority have to send CITES 1973 annual report to CITES Secretariat in Geneve, Switzerland at the latest 31st October every year [9]. Directorate General of Customs have responsibility to secure the Indonesian borders and to protect Indonesian people from smuggle and illegal trade and also actively enforcing the law related protection of endangered wild species.[10]

CITES 1973 also instruct the states members to develop scientific authority in order to provide advice on international trade impact of certain species. In Indonesia, the mandate holder is Indonesia Science Institute according to Article 65 letter b Government Regulation Number 8 Year 1999 on Utilization of Wild Species Flora and Fauna. The main responsibility of this council is to provide advice to the management authority on non-detrimental findings and other scientific aspects of implementation and supervision international trade. In addition, through Head of LIPI Decree Number 1973 Year 2002 has determined Centre of Biology Research as Daily Executor of Scientific

Authority. Management authority and scientific authority were established as Indonesia commitment after CITES 1973 ratification, on which CITES 1973 itself stated that member state who is implement CITES 1973 regulations required to delegate or determine management and scientific authorities to ensure CITES 1973's implementation nationally.

CITES 1973 has been divided species into three appendices. Appendix I contained of species that threatened with extinction. This species preservation will be harmed by international trade. Specimen trade from species in Appendix I should be regulated strictly in order to preserve the sustainability of the species. Appendix II contained all of wild flora and fauna species not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival. Appendix III shall include all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as need of the co-operation on other Parties in the control of trade.

Export for endangered fauna as contained in Appendix I requirements prior grant and presentation of an import permit and either an export permit or a re-export certificate, as regulated in Article 3 paragraph (3) CITES 1973. However, export requirements for flora and fauna in the Appendix II as contained in the Article 4 paragraph (2) CITES 1973, that export requirement for species or specimen is export permit. Export permit only given if the applicants has completed the requirements from scientific authority state that the export will not harm the presence of the species and also management authority have to ensure that the export is not violating national laws on the protection of flora and fauna.

For state which will conduct the international trade of flora and fauna that contained in Appendix III has been regulated in the Article 5 paragraph (2) CITES 1973, in principle flora and fauna that listed in the Appendix III can be traded. Thus, export requirements are in the form of export permit that state management authority aware the species or specimen were obtained in legally matters, and those species or specimen have to be prepared in a such way in order to minimize damage or wound.

Indonesian ocean is the habitat for several types of sharks that regulated in Appendix II CITES 1973, for example oceanic whitetip shark and hammerhead shark, i.e. scalloped hammerhead, smooth hammerhead and great hammerhead [11]. Indonesia also have had issued several Ministry of Ocean and Fisheries Affairs decrees related to the protection of particular species of sharks, are Ministry of Ocean and Fisheries Affairs Decree Number 18/Kepmen-Kp/2013 on Determination of Full Protection Status for Whale Shark (*Rhinocodon Thypus*) and Ministry of Ocean and Fisheries Affairs Regulation Number 48/Permen-Kp/2016 on Second Amendment of Ministry of Ocean and Fisheries Affairs Number 59/Permen-Kp/2014 on Export Prohibition of Oceanic Whitetip Shark (*Carcharhinus Longimanus*) and Scalloped Hammerhead Shark (*Sphyrna Spp*) from Indonesia's territorial.

Rhinocodon thypus or whale shark is a mega-fauna in Indonesian ocean. According to the Ministerial Decree, whale shark was categorized as fully protected fauna not only parts of its body but also its live cycle. Fully shark protection was determined in order to ensure and to preserve whale shark presence in the ocean. However, whale shark utilization were allowed for research, development and eco-tourism [12].

Meanwhile, oceanic whitetip shark (*Carcharhinus Longimanus*) and scalloped hammerhead shark (*Sphyrna Spp*) decreased in Indonesian ocean since the increase of sharks fishing by fisherman in Indonesia. Therefore, Ministry of Ocean and Fishery Regulation Number 48 Year 2016 aims to extend export prohibition of both shark species to the outside Indonesia. Export prohibition not only to the body or shark organ, but also includes its processed products, as regulated in the Article 2. However, in the Article 3 state that export prohibition only valid until 31st December 2017. The ministry regulation then amendment by Regulation Number 5 Year 2018. Unfortunately, this regulation as its predecessor only valid a year, which is until 31st of December 2018.

Sphyrna spp and *Carcharinus Longimanus* has been included in Appendix II CITES 1973 in the year of 2013. This matter indicated that population of both sharks in the seriously threatened condition. One of the most affecting factors is the high international trade volume on *Sphyrna spp* and *Carcharinus Longimanus*. Therefore, in order of implementation preparation of CITES 1973 regulations and to anticipate of threatened condition by *Sphyrna spp* and *carcharinus longimanus* in Indonesia ocean, export and international trade for both species are temporarily prohibited [12].

3.2. Sharks Fishing Activity at Tanjung Luar Fish Auction and CITES 1973 Implementation

Tanjung Luar is the most well-known location for sharks fishing in Indonesia. Sharks processed products from Tanjung Luar are exported through Surabaya and Jakarta, on which its main destinations are Japan, China, Taiwan, Hongkong, South Korea, Singapore and Malaysia [12]

In principle, Tanjung Luar fisherman only sale sharks fin to exporter in Surabaya. Based on Tempo Joint Investigation in Coastal Resource Management Office Denpasar East Java Working Area, it has recorded that there are at least 20 sharks fin exporter in Surabaya [13] Prior sending sharks fin and other processed products to outside Indonesia territory, exporter should pass several steps. First., they should get export feasibility recommendation from BPSPL and certificate from Fish Quarantine Office. Next, , quality and safety control of fisheries products. Finally, it should pass the verification process by Indonesia Custom Office [13].

Annually, landed sharks in Tanjung Luar ranged 6.000-8.000 fishes with total values approximately Rp. 5.6 Billion. [14] Based on World Conservation Society (WCS) report, total amount of landed sharks in Tanjung Luar annually was fluctuates. In 2014, it got 6.480 fishes. In 2015, the number has decreased slightly to 5.198 fishes. In 2016, it got the peak with 8.006 fishes, and in 2017 it also decreased slightly to 6.690 fishes. From the above total amount every year, it was dominated by several species, belows :

- a. Silky Shark (*Carcharnihus falciformis*) about 36%,
- b. *Hiu Macan* (*Galeocerdo cuvier*) 20%,
- c. *Hiu Lonjor* (*Carcharnihus limbatus*) 10%,
- d. Scalloped Hammerhead Shark (*Sphyrna lewini*) 10%,
- e. *Hiu Karet* (*Prionace glauca*) 7%,
- f. *Hiu Lonjor* (*Carcharnihus brevipinna*) 5%
- g. *Hiu Merak Bulu* (*Carcharhinus obscurus*) 3%,
- h. *Hiu Tenggiri* (*Isurus oxyrinchus*) 2%,
- i. *Hiu Lonjor* (*Carharnihus sorrah*) 2%,
- j. Thresher Shark (*Alopias pelagicus*) 2%, dan
- k. Others shark species 10%.

However, based on Tempo Investigation in 2019, 70% of landed sharks in Tanjung Luar is silky sharks [13], which registered in Appendix II CITES 1973, it means that the species can be captured but with strict regulations for example catch and export quotas. Verification process towards shark fins which will be export from Tanjung Luar to targeted destinations in outside Indonesia conducts by the verifier in Denpasar BPSPL East Java Working Area [13]. Verification process is intended to generate recommendation for exporter send it abroad.

Number of sharks fin that verified by verifier are numerous. This could be a crack for exporter to put protected on sharks fin, included silky shark's fin, the most caught in Tanjung Luar. Since, it is hard for the verifier to check it one by one in the sack [13] Thus, to detect illegal sharks fin is not an easy case . However, sharks catching in Tajung Luar could not be stopped. Government faces difficulties to ask local community stop catching the sharks, beside of sharks economical values, traditionally Tanjung Luar Fisherman have catching the sharks for decades.

3.3. Indonesia's Challenges to Attain Sustainable Fisheries in the CITES 1973 Implementation Framework

Sustainable fisheries has become world's attention. This is because sharks role in balancing ocean ecosystem, which is irreplaceable by other species. Sharks has been exploited both for consumption

and non-consumption purposes. Shark has been facing various threats included unsustainable fishing practice, overfishing whether as targeted species or by catch. Sharks also experience losing their habitat, pollution and climate change effects [15].

A research published by Umi Chodrijah et.al, showed that current sharks fishery especially silky shark (*calcarhinus falciformis*) in Tanjung Luar Fish Auction, that silky shark exploitation rate indicated in the overfishing status. Silky shark is one of shark species which have high vulnerability in the exploitation which not only caused by overfishing but also its biology character which takes a long time to get maturity [16] However, silky shark has been covered into Appendix II CITES 1973 based on the Conference of the Parties 17th in Johannesburg.

Based on the same research, it was stated that, those catch dominated by female sharks with ratio between female and male is 1:0.72. This ratio is not ideal in order to maintain reproduction of certain species, since chance to get reproduction partner is deficient. Caught fish in Tanjung Luar also dominated by unripe gonads. This situation does not support sustainable fisheries since majority caught fishes is young fish which has not been spawn in its life cycle [16].

The research then confirmed by our research field in Tanjung Luar. In the research field, we found that fisherman catch lots of baby shark. Tanjung Luar's supervisor argues that main reason the presence of baby shark in Tanjung Luar was caused by fisherman did not know that they caught pregnant sharks. This situation absolutely contrary to the major goals within CITES 1973 which is to gain sustainability of certain species thus it is prohibited to traded loosely. Shark fishing either driven by fisherman needs in fulfilling their daily needs nor driven by export demand of shark fins.

Technical problems related to the shark fishing and selling in Tanjung Luar is related on the official, accurate and routine record which conducted by trained fisheries officer. There are daily enumerators which is in charge to record and to measure landed sharks in Tanjung Luar, however the officers is hired by Wildlife Conservation Society (WCS). The obtained daily data are uses as basic information to identify caught-species [14] From several conditions above, it can be concluded that two major problems in sharks management in Indonesia, are :

- a. Regulations, existed regulations in Indonesia only protect seven shark species from 100 sharks species. Available regulations are on the fully protection of whale shark, on the export prohibition for three species oceanic whitetip shark (*Carcharhinus Longimanus*) and scalloped hammerhead shark (*Sphyrna Spp*) and catch prohibition on *hiu tikus* (*allopias pellagicus*). However, there are technical legal problems in order to enforce the law. For example, Ministerial Decree Number 18 Year 2013 on the Fully Protection Status for Whale Shark, it has no criminal sanctions for those violating the law. Also, Ministry of Ocean and Fisheries Affairs Regulation Number 48 of 2016 and 5 of 2018 on the export prohibition of the whitetip shark and scalloped hammerhead shark only valid for a year. It can be concluded that, even though the law are exists, but it does not work properly.
- b. Three main aspects in endangered species trade in CITES 1973 are traceability, sustainability and legality which has not been implemented yet in sharks processed products in Indonesia [17]

4. Conclusion

Shark fishing remains as prima donna in Tanjung Luar and silky shark is the most-catch there. Existed national regulations and national bodies could not optimize yet in protecting particular shark species which has been adopted in CITES 1973 Appendix II. This situation caused by several issues such as disharmony of legislations and national control system which generating crack in the implementation

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