ASEAN tuna ecolabelling (ATEL): the challenge and opportunity of the first seafood regional ecolabelling in the world

Andre Notohamijoyo[1,*], *Martani* Huseini[2], and *Syafril* Fauzi[3]

[1]School of Environmental Science, Universitas of Indonesia, Jakarta 10430, Indonesia
[2]Faculty of Administrative Science, Universitas Indonesia, Kampus Baru UI Depok, Indonesia
[3]Ministry of Marine Affairs and Fisheries, Medan Merdeka Timur No. 16, Jakarta 10110, Indonesia

Abstract Tuna (*Thunnus sp*) is the highest economic value and the most popular fish in the world. Exploitation of tuna fisheries was feared to threaten environment and social welfare for the people of the countries related to that resources. Many international organizations encourage countries involved in tuna trade to follow certain fisheries ecolabel standards. Nonetheless, driven ecolabel schemes do not yet reflect optimal sustainable tuna management. Tuna is a highly migratory species across the sea region of various countries. The effective management of tuna requires cross-country cooperation, but the certification system is not regional yet especially in Southeast Asia which has highest tuna production in the world. The Association of South East Asian Nations (ASEAN) has begun consolidation to start the regional system of ecolabel which named ASEAN Tuna Ecolabelling (ATEL). In the ASEAN Ministry of Agriculture and Forestry (AMAF) meeting in Hanoi, Vietnam, 12-13 October 2018, ATEL has agreed as a scheme of tuna ecolabelling in South East Asia region. The approval at the Ministerial level make ATEL the first regional seafood ecolabel scheme in the world. It needs more research for the implementation of ATEL in the future both in terms of challenges and opportunities.

1 Introduction

Tuna (*thunnus* sp) is the most popular fish and have the highest value in the world. The world record for the price of one tuna is 155.4 million yen, or around USD 1,38 million, which is recorded for one southern bluefin tuna (Thunnus maccoyii) weighing 222 kilograms. This record happens when the initial auction year at the Japanese Tsukiji fish market on January 5, 2013 [1].

The high economic value of tuna causes each country to compete to use it. Extrinsic value of tuna cause the price in the international market soared. Exploitation of tuna fisheries was feared to threaten environment and social welfare for the people of the countries related to that resources. Southeast Asia is one important area of tuna resources in the world. As a region dominated by the sea, tuna fisheries in Southeast Asia determines

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* Corresponding author: andre.hamijoyo@gmail.com

economy of its nations. Sustainability of marine resources plays important role in supporting the livelihoods of the people of Southeast Asia, especially for coastal communities and societies engaged in the fishery.

The tuna production in Southeast Asia territory reached 26.2% of the world tuna product or 1.7 million tons [2]. This is the highest tuna production in the world. Tuna is a fish that highly migrates in the sea and swims across various countries, so that in its management requires cross-country cooperation. Gareth Hardin [3] wrote about how exploitation that never cares about environmental sustainability will bring people to a shared tragedy which leads to a decline in the quality of life including the sea

Many cases of Illegal, Unregulated and Unreported Fishing (IUUF) in the region such as Benjina, North Maluku, Indonesia involving the world's largest tuna processing company, Thai Union Frozen Food (TUFF) opened eyes to the validity of fisheries ecolabel schemes carried out by multinational companies and international NGOs [4]. The same thing happened to illegal fishing activities by Philippine vessels in Indonesian waters. The illegal tuna fishing is believed to be the backbone of a famous fishing port city named General Santos, South Cotabato Province, Philippines [5]. Reflecting on the aforementioned cases, more comprehensive cooperation is needed between countries in the Southeast Asia region. The cooperation accommodated by the Association of South East Asia Nation (ASEAN) organization is the most effective way to encourage cooperation in tuna fisheries management.

ASEAN Tuna Working Group (ATWG) was formed as an institution of tuna fisheries scope of ASEAN cooperation. ATWG aims to promote intra-ASEAN trade tuna, competitiveness, cooperation among ASEAN countries in the form of sustainable management of tuna fisheries and strengthen alliances in dealing with regional and international issues. The cooperation in sustainable tuna fisheries management is a concrete manifestation of the implementation of Sustainable Development Goals (SDGs) especially the 14th Goal, Life Below Water [18] and related The Rio Summit 1992 [6]. At the second meeting of ATWG took place in Yogyakarta in 2012, Indonesia presented the initial concept of ASEAN Tuna Ecolabelling (ATEL). ATEL is expected to increase in sustainable tuna in the ASEAN region and improve the welfare of fishing communities, economic growth and the sustainability of tuna fisheries resources [7].

After going through six years of discussion process, ATEL scheme is agreed in the meeting of ASEAN Minister of Agriculture and Forestry on 11-12 October 2018 in Hanoi, Vietnam. ATEL scheme become the first regional seafood ecolabel scheme in the world. Although it has been ratified, all ASEAN countries still have homework related to the implementation of standards and integration among member countries. This is the key to the successful implementation of ATEL in the Southeast Asia region.

1.1 The basic concept of ASEAN tuna ecolabelling

The basic principle of ATEL is to answer the needs of tuna fisheries business actors for tuna sustainability certification who do not overload costs. Ecolabelling certification that has already existed is considered to create new market barriers and give excessive costs to businesses [8].

ATEL is to find a balance between meeting the market demand for export to ASEAN tuna producers' ability to meet the requirements relating to environmental protection. Ecolabelling certification which had already existed considered creating new market barriers and excessive cost burden for businesses. This was deemed contrary to the principles of FAO [9] stated as follows: *"The following principles should apply to ecolabelling schemes for marine capture fisheries*:

2.5. Be non-discriminatory, do not create unnecessary obstacles to trade and allow for fair trade and competition.
2.6 Provide the opportunity to enter international markets."

Referring to the guidelines from FAO, ecolabel schemes must be non-discriminatory certificates and encourage fair competition in international markets. This is where ATEL's role is expected to become a system that runs a balance between increasing economic, social and sustainability values in the ASEAN region. Eco-label certification concept proposed to the ASEAN Tuna Eco-labeling was developed from two main pillars; sustainable use of tuna fishery which supported by responsible social practices [8].

2 Problem formulation

ATEL is a manifestation of regional cooperation in the management of tuna fisheries in the ASEAN region. ATEL requires further deepening in strengthening the standards for implementing the scheme in ASEAN. Integration between ecolabel schemes in ASEAN countries is one of the keys to ATEL's success.

3 Material and methods

This study uses a limited survey of Indonesian tuna fisheries experts as well as literature studies on fisheries ecolabels in the world. The survey conducted on Indonesian fisheries experts aims to see the initial views of tuna fisheries experts on the regional fisheries ecolabel scheme.

Meanwhile a literature study was conducted to look at studies from various regions of the world related to the application of fisheries ecolabels. It is hoped that the study can explore more information in the application of fisheries ecolabel schemes in various countries.

4 Result

Surveys conducted on expert respondents were carried out using other ecolabel schemes as a comparison. The ecolabel schemes used in the survey were Marine Stewardship Council (MSC), National Ecolabel and ASEAN Tuna Ecolabelling (ATEL). Based on the comparison between the ecolabel model of MSC, the national ecolabel model and the regional ecolabel model, each model was proposed to the expert respondents selected in this study. Each of these models was assessed by these respondents. Based on the results obtained from the survey of expert respondents conducted calculations using the AHP method with the help of Expert Choice software. The results obtained are as described in figure 4.1. following:
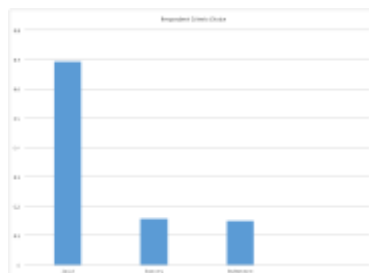

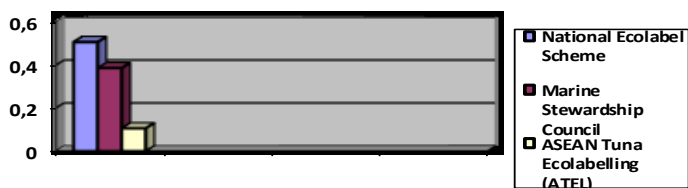**Fig. 1.** Respondent's criteria choice.

Fig. 2. Hierarchy process of ecolabelling scheme.

The calculation in figure 4.2. shows that the national ecolabel scheme occupies the first priority of respondents' choice with 58.2 percent followed by the MSC ecolabel scheme with 31.4 percent and the regional ecolabel scheme by 10.4 percent. These results indicate that the national ecolabel scheme is the first priority of expert respondents.

The choice of expert respondents indicates that there is a tendency for national fisheries ecolabel schemes to be chosen by Indonesian fisheries stakeholders. The choice of a national fishery ecolabel scheme is quite unique because in fact the ecolabel scheme model does not yet exist. The results obtained from the calculation using the AHP method show the priority of respondents to the ecolabel model offered. Based on this, it can be seen that there is a tendency of a large level of respondents' trust in the government's ability to run a fishery ecolabel system. The respondents' trust shows hope for an alternative to the existing fisheries ecolabel scheme.

5 Discussion

Based on the result, there is an opportunity for ATEL to develop even better. The development of national ecolabel schemes in various ASEAN countries is a good starting point for developing ATEL. What is needed is the integration between ecolabel schemes that develop in each ASEAN country to strengthen the scheme. Integration is the main requirement in strengthening ATEL

Certification system in ATEL should be supported by a competent and professional structure to implement their work. The organization should be simple, yet effective to deliver their program. The most important thing is that the institutional formed with a minimum cost. Some ASEAN countries have implemented ecolabel certification in their respective countries. Even though such certification has not been specifically leads to the fisheries sector, however ecolabel certification is a good start to encourage the realization of ATEL as certificates of tuna fisheries in the ASEAN region. Data from National Standardization Agency [10] shows that there are five ASEAN countries that have national ecolabel schemes, namely Singapore, Malaysia, Thailand, the Philippines and Indonesia. Indonesia, Thailand and the Philippines are the main producers of tuna in the region.

The integration step will make time preparation of ATEL becomes shorter and easier. The main challenge show to develop and agree on a standard sustainability of fisheries resources in the ASEAN level. An agreement of ASEAN countries become the key success of ATEL implementation.

There is a fundamental difference between ATEL and an ecolabel certificate that has already existed. First, ATEL is producer driven. The producer in this case is the government of each country that has sovereignty in its marine area. Second, ATEL is the integration of sustainable tuna fisheries management in the region, and thirdly, ATEL is a regional branding for all tuna products produced and originating from each ASEAN

country. Based on that differences, ATEL scheme has the prospect of further development in the Southeast Asia region. The success of ATEL depends on the ability of governments in the region. Research from Reczkova et al. [12] reinforces the statement.

Kvalvik *et al.* [13] made a study of the comparison of national and supranational ecolabels. The research compared the use of Marine Stewardship Council (MSC) in Norway and Icelandic Responsible Fisheries (IRF), national ecolabel fisheries in Iceland. In the study they compared government responses and stakeholders in Norway and Iceland. In their research, they states that the choice of a national or supranational fishery ecolabel scheme depends on 3 things: 1. the structure of a country's fisheries; 2. government commitment to the fisheries sector; and 3. stakeholder support in the country.

Stakeholder support also has a tremendous influence on the success of fisheries ecolabel schemes in a country. In developing countries, support from small scale fishermen, is the main thing that supports the success of fisheries ecolabel schemes. Ecolabel schemes that apply high certification costs will greatly complicate small scale fisherman to fulfill their obligations.

Research conducted by Hadjimichael and Hegland [14], Ramirez [12], Ramirez *et al.* [15] and Ponte [16] reinforces the statement that high costs make it difficult for small scale fishermen to join a fishery ecolabel scheme. This is where the need for an ecolabel scheme which is more acceptable to stakeholders, especially small scale fishermen.

Erskine and Collins [17] stated in their research that although ecolabel is good in terms of concept, its practical application in the field is not easy. Studies conducted on paper products with life cycle assessment (LCA) show how the process of formulating criteria is still a matter of controversy even though these criteria have been adopted by three groups of paper products. Research also proves that ecolabeling is only an initial step in encouraging nature conservation. Eco-labeling cannot independently change consumer behavior and control environmental damage.

Assessment of LCA in the ecolabel scheme of tuna fisheries needs to be considered. This refers to the value of tuna which is inversely proportional to paper products. The highest tuna value is fresh and can be consumed as sushi or sashimi. The difference between fish products and agricultural and plantation products is very interesting to be reviewed further by the LCA method

Beside that, most species certified by fisheries ecolabels such as MSC are demersal fish that have short lives. Demersal fish habitats are limited waters. Meanwhile for countries that have pelagic fish that used to live on the surface of the water and high migratory such as tuna, skipjack, mackerel, sardines and others, ecolabel schemes have difficulty in certification. Understanding of the territorial waters in countries that have sea characteristics dominated by pelagic fish is needed by ecolabel certificate.

The integration of the national scheme of each ASEAN country with the ATEL scheme is easier because some ASEAN countries already have national ecolabel schemes in their respective countries. These conditions simplify the integration process of the ATEL. Support from all ASEAN countries is needed to encourage the integration and standard.

6 Conclusion

The integration step will make the preparation time of ATEL will be shorter. The main challenge is how to develop and agree on tuna resource sustainability standards at the ASEAN level. The agreement on the standard is the key to the successful of ATEL implementation in the ASEAN region. Further research regarding it is needed.

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