An analysis of the development of tuna fisheries in Vietnam

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Outline

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- Vietnamese tuna fisheries profile-Status and trend of tuna catch and tuna fleet
- Tuna products, markets and value and tuna supply chain
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Introduction

- Tuna industry is the major fishing industry of Vietnam.
- The value of tuna export turnover increased from 484 million USD in 2014 to nearly 653 million USD in 2018, an increase of nearly 35%. The proportion of tuna export values in Vietnam's total seafood exports always accounted for 21%-22% in the period from 2014 to 2018.
- To the best of the authors' knowledge, there was a lack of academic research presenting the development of tuna fisheries in Vietnam.
- The objective of this study is to present an overview of Vietnamese tuna industry in the period (2010-2018) and show the recent development of Vietnamese tuna industry.
- The basic characteristics of Vietnam's tuna fisheries: tuna resources, tuna fleet, tuna catch, labour, technology, logistics infrastructures and services for tuna industry, tuna products, their markets and value, and tuna supply chain are illustrated in detail and clearly during the period (2010-2018).
- The main contributions: provide the latest and complete of data on the basic characteristics of tuna fisheries in Vietnam from 2010 to 2018 and analyse recent developments of Vietnamese tuna fisheries.

Vietnamese tuna fisheries profile-Status and trend of tuna catch and tuna fleet

- **Tuna resource**

- Oceanic tunas which includes skipjack tuna, bigeye tuna, and yellowfin tuna, are mainly found in the offshore waters of the central and southeast country (Hai 2018);

- Tuna fisheries take a significant role in the Vietnamese fisheries, developed widespread in all 28 coastal provinces;

- Oceanic tuna: mainly unloaded at Da Nang, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan, Binh Thuan and Ba Ria Vung Tau in which Binh Dinh, Phu Yen and Khanh Hoa provinces have the most oceanic tuna catches (Hai 2018).

Vietnamese tuna fisheries profile-Status and trend of tuna catch and tuna fleet

- **Tuna fleet**

- In 2018: 6,284 tuna fishing vessels (> 50hp) , 4,294 vessels (>400 hp); 4,436 vessels (15-24m): 70%, 137 vessels (>24m): 3%

- The tuna is caught by three major fishing gear types which includes longline/hand-line, purse seine, and gillnet;

- Main target species of tuna longline fishery are oceanic tunas including yellowfin tuna and bigeye tuna while main catch in gillnet and purse seine is skipjack tuna;

- In 2018: 2,848 vessels for longline/hand-line (45%);1,952 vessels for purse sein (31%);1,484 vessels for gillnet (14%);

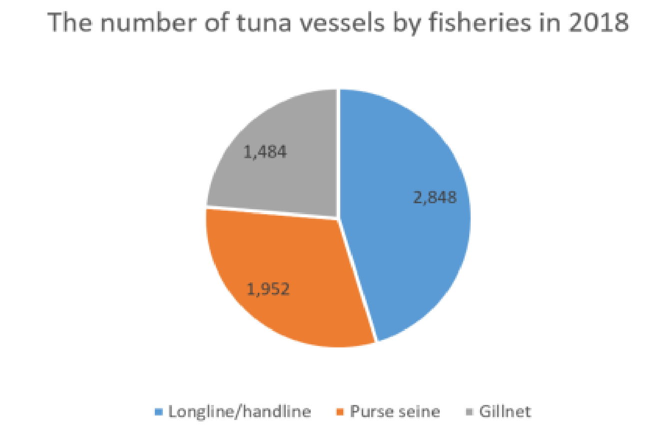
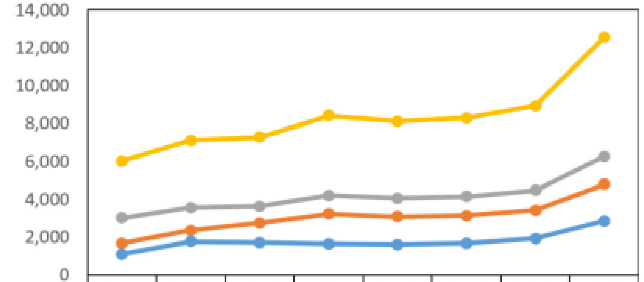


Figure 2: The number of tuna vessels by fishing gear types in 2018

Source: (D-Fish 2018)



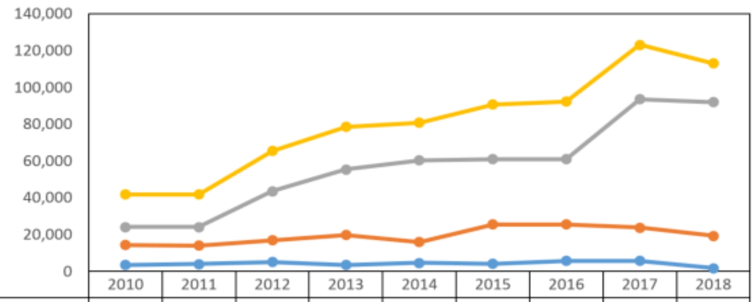
	2011	2012	2013	2014	2015	2016	2017	2018
Total vessels	3,009	3,567	3,641	4,210	4,057	4,151	4,478	6,284
Gill net	1,312	1,204	898	979	973	1,003	1,061	1,484
Purse seine	595	592	1,014	1,586	1,461	1,459	1,493	1,952
Longline/handline	1,102	1,771	1,729	1,645	1,623	1,689	1,924	2,848

Figure 3: The number of tuna vessels by fishing gear types from 2011 to 2018

Source: (D-Fish 2018)

Vietnamese tuna fisheries profile-Status and trend of tuna catch and tuna fleet

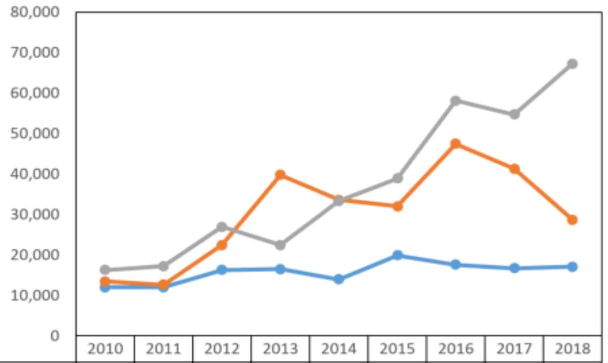
- **Tuna catch**
- In 2018, total skipjack tuna catches: 92,005 metric tons (82 %), yellowfin tuna: 19,268 metric tons (17%), bigeye tuna: 1,694 metric tons (1%);
- In 2018: the purse seine: dominant and 67,219 metric tons (60%); Gillnet: 28,656 metric tons (25%); Long-line: 17,082 metric tons (15%);
- Binh Dinh (46%), Khanh Hoa (17%), Ba Ria -Vung Tau(12%), Phu Yen (8%) = largest percentages of total tuna catches in nine surveyed provinces;



	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bigeye tuna	3,412	3,874	5,089	3,465	4,563	4,174	5,704	5,704	1,684
Yellowfin tuna	14,193	13,879	16,816	19,578	16,005	25,568	25,568	23,811	19,268
Skipjack tuna	24,056	24,068	43,626	55,391	60,274	61,009	61,009	93,561	92,005
Total oceanic tuna	41,661	41,821	65,531	78,434	80,842	90,751	92,281	123,076	112,957

Figure 4: Total tuna catches (MT) caught in Viet Nam's EEZ estimated by species in nine pilot provinces from 2010- 2018

Source: (D-Fish 2018)



	2010	2011	2012	2013	2014	2015	2016	2017	2018
Longline/handline fishery	11,958	11,967	16,230	16,428	13,953	19,885	17,538	16,681	17,082
Gillnet	13,454	12,632	22,375	39,719	33,603	31,964	47,439	41,252	28,656
Purse seine	16,253	17,235	26,939	22,484	33,286	38,902	58,099	54,692	67,219

Figure 5: Total tuna catches (MT) caught in Viet Nam's EEZ estimated by fishing gear types in nine pilot provinces from 2010- 2018 -Source: (D-Fish 2018)

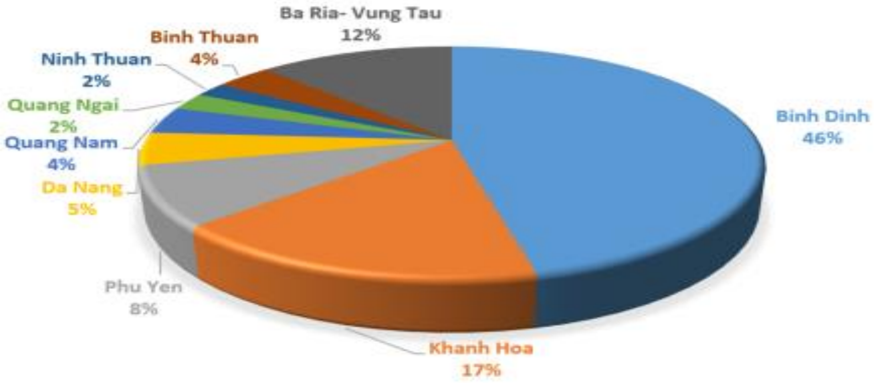


Figure 7: The structure of tuna catches of every province in nine pilot provinces in 2018

Tuna products, markets and value and tuna supply chain

- **Tuna products**
- Tuna export = 21%-22% of Vietnam's seafood export;
- The turnover of tuna export increased from 484 million USD in 2014 to nearly 653 million USD in 2018;
- **Tuna markets**
- US, EU, Israel, ASEAN, Japan, China, Mexico, Canada: some main export markets;
- US, EU, ASEAN, Japan, Israel: main export markets for Vietnamese tuna products (80%)

Table 8: Vietnamese tuna products exported to foreign markets from 2014 to 2018

Vietnamese tuna products in (2014-2018) (million USD)						
Product types	2014	2015	2016	2017	2018	% (2018/2014)
1.Tuna with code HS03 (1)	251.944	246.123	284.181	322.558	346.652	37.6
Live tuna/fresh/frozen/dried (with code HS03, except HS304)	58.765	43.185	43.422	49.626	36.337	-38.02
Fillet tuna (with code HS0304)	193.180	202.938	240.759	272.933	310.315	60.6
2. Processed tuna with code HS16 (2)	232.290	208.850	225.606	270.314	306.254	31.8
Canned tuna (with code HS16)	177.018	150.399	153.032	179.110	173.305	-2.1
Other processed tuna (with code HS16)	55.272	58.451	72.574	91.204	132.948	140.5
Total tuna export (1 + 2)	**484.235**	**454.972**	**509.786**	**592.873**	**652.905**	**34.8**

Source: (Custom 2018)

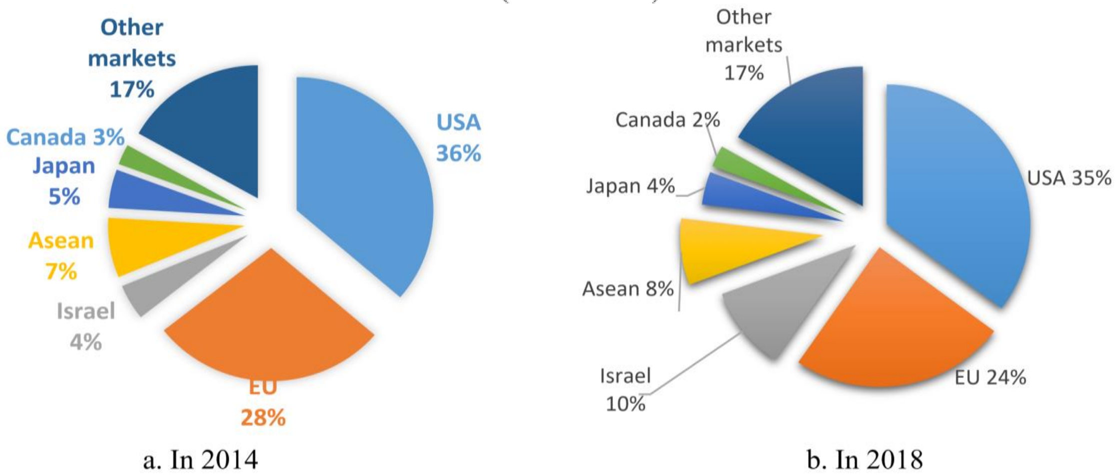


Figure 9: The structure of Vietnamese tuna export in 2014 and in 2018
Source: (Custom 2018)

Tuna products, markets and value and tuna supply chain

- **Vietnamese tuna supply chain**

- Starts with tuna fishermen who catch tuna in offshore, middlemen buying raw tuna from fishers to buy them for processors, and processors processing raw tuna into different product to serve for domestic and foreign markets.

- In Vietnam, tuna catch volumes are not sufficient to provide the processing industry with enough raw material so that tunas were imported from other countries.

- 50% of total tuna materials were through middlemen, 50% of total tuna materials went directly from fishers to processors. 95% of total tuna products were used for foreign markets, the remain proportions were used for domestic market

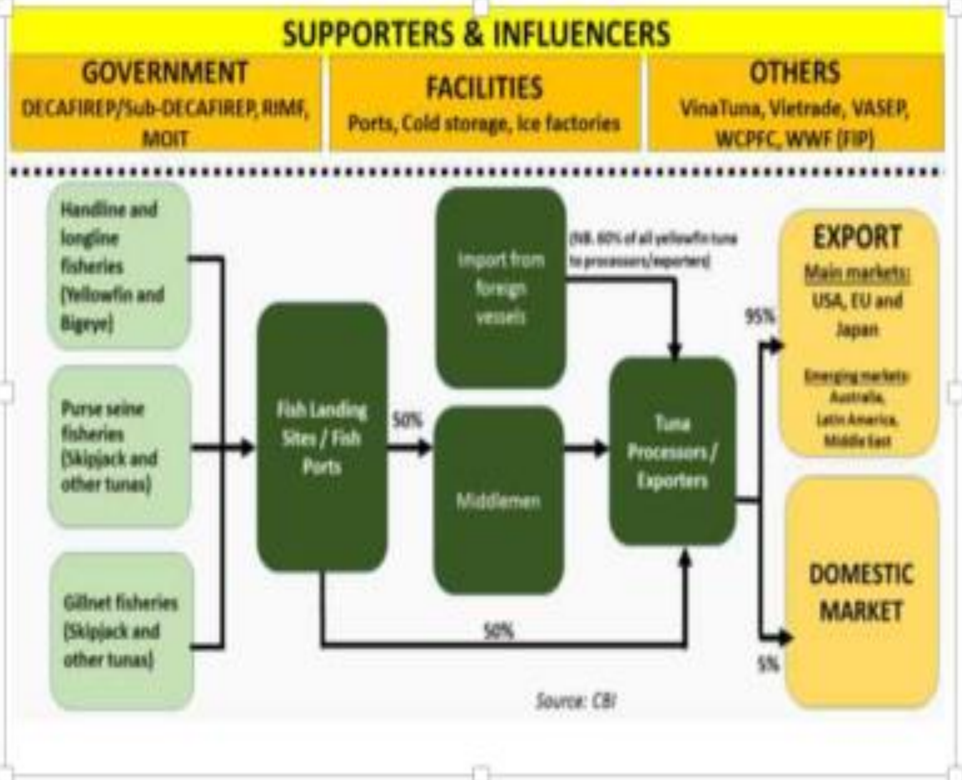


Figure 11: General supply chain for Vietnamese tuna fisheries
Source: (CBI 2018)

Recommendations

- There are some outstanding issues in Vietnamese tuna industry as follows:
- *Lack of scientific data:* lack of information about tuna fishing grounds and stocks→Currently, Vietnam is planning to implement a pilot project on management of tuna fisheries based on the quota system;
- *Outdated preservation techniques:* the equipment in vessels is incomplete; Equipment for preserving tuna on fishing vessels is rudimentary; no market for tuna auction ; logistics infrastructures and logistics service of tuna fisheries at fishing landings have not met the scale and quality of tuna fisheries;
- *Lack of cooperation within tuna supply chain:* lack of cooperation between producers, middlemen, and processors/exporters takes place at several stages of tuna supply chain*;*
- *Lack of materials for canning industry*: In 2018, the total export value of tuna products was 652.905 million USD whereas the total import value of tuna materials was 349.426 million USD→Vietnamese processors/exporters seem to be more dependent on imported tuna materials;
- *Lack of traceability:* Most of Vietnamese tuna vessels are small vessels which do not have financial capacity to document and measure their catches→Vietnamese government have regulations on tuna exploitation against to illegal, unreported and unregulated (IUU) exploitation→it is necessary to install surveillance equipment on tuna fishing to prevent illegal, unreported and unregulated exploitation .

Conclusions

- This paper presents the status and trend of Vietnamese tuna fisheries in the period (2010-2018);
- The tuna fisheries in Vietnam had positive changes in total tuna fleets and total tuna catches at both national and provincial levels;
- Some main bottlenecks of Vietnamese tuna fisheries and some recommendations for Vietnam fisheries on managing tuna's resources are focused;
- This paper is an essential literature for further researches on Vietnamese tuna fisheries.

Thank you for your attention!