



**AVERTING ASIA'S
FISHING CRISIS:
CHINA'S FISHING
POLICIES NEED TO BE
REFORMED**

Policy Report

May 2015

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Executive Summary

Asia is facing a looming fishing crisis. On the one hand, due to over-fishing and pollution, the fishing industry in many areas is suffering from rapid depletion of fish stock which presents an acute threat to marine ecology, regional food security and livelihood of millions of traditional fishermen. On the other hand, over the past few years, this region has witnessed a growing number of fishing related incidents, ranging from fishing disputes in the troubled waters of the South China Sea and the East China Sea; Illegal, Unreported and Unregulated (IUU) fishing; to hijacking of fishermen by pirates or other actors. Some of these fishing incidents have evoked tensions among regional countries.

While national and regional policies to help sustain fisheries are important steps to prevent this fishing crisis, success will largely depend on the actions of China, not only because it has the largest fishing industry in the world but also due to the fact that China's overemphasis on the marine fishery sector's role in ensuring food security and, to a lesser extent, its maritime militia policy are directly and indirectly responsible for triggering this fishing crisis. Therefore, to avert this looming fishing crisis, reforms in China's fishing policies will be vital and the following policy recommendations may be considered:

1. **Sustainable Fishing as the top priority:** China cannot continue to develop its marine fishery sector with "boosting fishery production and fishermen's income" as the overarching principle. Instead, sustainable fishery must be placed as the top priority which governs the future development of China's fishery sector, and marine fishery in particular.
2. **Better Utilisation of International Fishery Resources:** To meet the country's rising demand for fishery products, China should better utilise international fishery resources from three aspects. First, while China should continue to promote the development of distant water fishing, immediate steps must be taken to mitigate the negative consequences of over-fishing and IUU fishing by Chinese fleet and distant water fishing companies. Second, China should cooperate with regional countries to enhance regional fishery trade. Guangxi's proposal to build a China-ASEAN Fishing Corridor in the South China Sea is certainly a welcome move. Third, as the biggest fishing farm nation with advanced technological and management know-how, China should strive to work together with other regional countries to promote the development of regional aquaculture as an alternative to meet Asia's rising demand for seafood and combat over-fishing.
3. **Reconsidering the maritime militia policy:** The maritime militia policy incurs far more costs than benefits to China and the region as a whole. In view of tensions brewing in the South and East China Seas and strong competition for scarce fishery resources in the region, the concept of maritime militia policy is obsolete and ought to be discarded.

INTRODUCTION

The fishery industry plays an important role in the lives of hundreds of millions of people in Asia. In this region, fish provides 30 per cent of the animal protein in a typical diet, and in many coastal regions, the share is even higher. In addition, millions across the region, especially traditional fishermen who rely on small-scale fishery, make their living or supplement their incomes via fishing or related industries. Furthermore, as seen in Table 1, 10 countries from Asia were among the world's top 15 marine fishery producers in 2012; these 10 Asian countries together accounted for nearly half of global production. However, it appears that Asia is facing a looming fishing crisis. The fishery industry in many parts of Asia is suffering from rapid depletion of fish stock. For instance, the *2014 State of the World Fishery and Aquaculture*, published by the Food and Agricultural Organization (FAO) of the United Nations, states that most stocks are being either fully fished or overfished in the western part of the South China Sea.¹ Depleting fish stocks are posing a huge threat to marine ecology, regional food security and social stability, particularly in China and

other Asian countries. In the meantime, this region has witnessed a growing number of fishing related incidents, ranging from fishing disputes in troubled waters such as the South China Sea and the East China Sea; Illegal, Unreported and Unregulated (IUU) fishing; to hijacking of fishermen by pirates or other actors. Some of these fishing incidents have evoked tensions among regional countries.

As far as managing this looming fishing crisis is concerned, China deserves the most attention. China has by far the biggest marine fishing fleet in the world, with annual marine catch accounting for over 17 per cent of the global total.² Yet, due to over-fishing and pollution, China's traditional fishing grounds in its inshore waters are almost running out of fish. As a result, the Chinese marine fishery sector is expanding from inshore to offshore waters and high seas. During this process, owing to the ongoing maritime disputes in the South and East China Seas as well as some fishermen's ignorance of maritime boundaries, there have been frequent occurrences of fishing disputes involving Chinese fishermen.

Table 1
Marine capture fisheries: major producers in the world, 2012 (million tonnes).

Rank	Country	Production	% of the world
1	China	13.9	17.40%
2	Indonesia	5.4	6.80%
3	United States	5.1	6.41%
4	Peru	4.8	6.03%
5	Russian	4.1	5.10%
6	Japan	3.6	4.53%
7	India	3.4	4.27%
8	Chile	2.6	3.23%
9	Vietnam	2.4	3.03%
10	Myanmar	2.3	2.93%
11	Norway	2.1	2.70%
12	Philippines	2.1	2.67%
13	South Korea	1.7	2.08%
14	Thailand	1.6	2.02%
15	Malaysia	1.5	1.85%

Source: FAO 2014

1 FAO. *2014 the State of World Fishery and Aquaculture*. Rome, 2014

2 Ibid

Many international commentators and maritime experts attribute China's outward expansion of its fishing sector to the country's strategic and political motives, arguing that China has been deliberately encouraging its fishermen to undertake fishing activities in disputed waters in order to assert China's maritime claims in the South and East China Seas.³ Although this political and strategic argument is appealing, it fails to touch on the root cause of the growing fishing conflicts between China and other countries. Behind the looming fishing crisis is the predicament confronting China's marine fishery

sector: Chinese fishermen with expanding catch capability are trapped in the country's inshore waters with depleting fishery resources. Although the role of market forces should not be neglected, the government policy is the single most important force driving the development of China's marine fishery sector as China still maintains a heavy-handed approach towards the fishing sector and its agricultural industry in general. This paper argues that China's misplaced policy priorities for its marine fishery sector is the fundamental reason for its current fishing predicament and the region's looming fishing crisis.

3 Andrew S. Erickson and Conor M. Kennedy. "Meet the Chinese Maritime Militia Waging a 'People's War at Sea'". *Wall Street Journal*. 31 March 2015, available at <http://blogs.wsj.com/chinarealtime/2015/03/31/meet-the-chinese-maritime-militia-waging-a-peoples-war-at-sea/>; Harry J. Kazianis. "China's 50,000 Secret Weapons in the South China Sea". *National Interest*. 30 July 2014; Johan Bergenas and Ariella Knight, "Fishing Wars: China's Aggression Could Stoke Future Conflict", *World Political Review*. 19 February 2015; Alan Dupon and Christopher. G. Baker. "East Asia's Maritime Dispute: Fishing in Troubled Waters". *The Washington Quarterly*. Spring 2014. Pp. 79–98; "Beijing creates armed militia to enforce S China Sea claims" available at [http://www.wantchinatimes.com/news-subclass-cnt.aspx?id=20150111000012&cid=110](http://www.wantchinatimes.com/news-subclass-cnt.aspx?id=20150111000012&cid=110;);

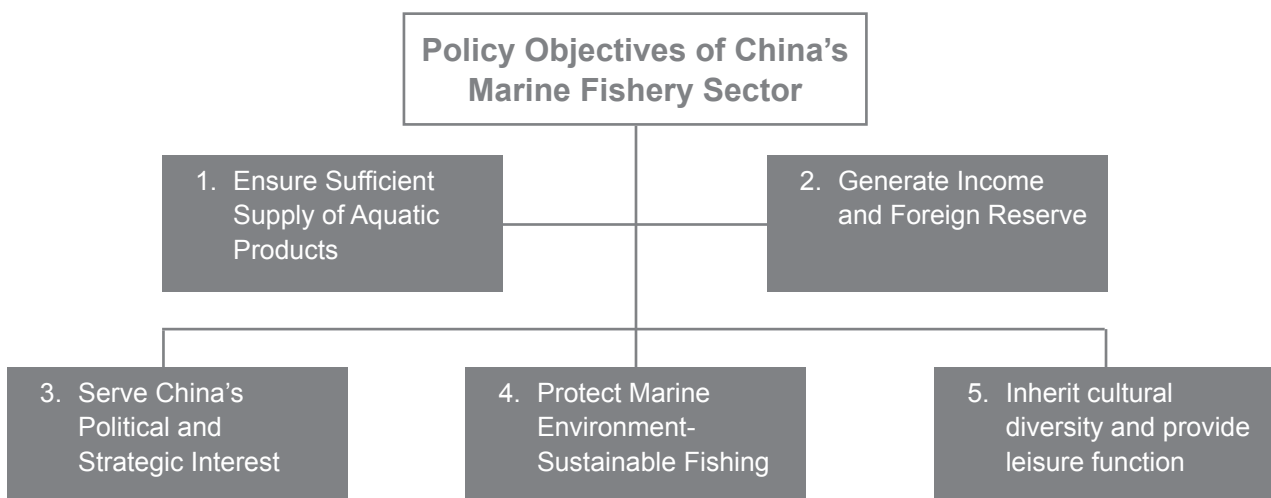
FIVE KEY POLICY OBJECTIVES OF MARINE FISHERY

As a sub-sector of China's agricultural industry and given its trans-boundary nature, marine fishery has five major policy objectives to fulfil. The first and most important policy objective is ensuring supply of aquatic products, including high quality protein for human consumption and raw materials for related industries. The second objective is enriching the fishermen and earning foreign reserve. Development in the marine fishery sector can contribute to fishermen's income growth; and given the comparative advantage of China's marine fishery sector, it has great potentials for exports, which then generates foreign reserves for the country. The third objective is protecting the marine environment through sustainable fishing. Marine species and the water body itself are integral parts of marine environment and the marine fishery sector plays a vital role in protecting the marine environment. On the one hand, over-fishing, pollution and introduced species could bring devastating impacts to marine environment. On the other hand, sustainable fishing practices including construction of ocean artificial reefs, re-stocking, improving water quality and other measures contribute to protection of the marine environment. The fourth objective is serving the country's political and strategic interest. It is recognised that promoting development of the marine fishery sector will safeguard China's maritime interests in the disputed waters and a distant water fishing fleet will enable China to expand fishery cooperation with the international community and

contribute to China's international strategy. The last one is the cultural and leisure function. In other words, the marine fishery sector plays a big role in preserving and inheriting the cultural diversity of the country. As one the oldest economic sectors, marine fishery itself is embedded in very rich cultural resources and marine fishing tourism is increasingly becoming an important component of the modern fishing sector.

In an ideal situation, with the right mix of policies, these objectives could be achieved at the same time. In reality, however, China faces a tough choice as how best to balance these five policy objectives so that an optimum result could be achieved. Quite often, fishing policies which aim to achieve one objective might be at the expense of another. For instance, over-stressing the need to produce more fishery products to meet the country's rising demand undermine the sustainability of the marine fishing sector and jeopardise the marine environment. And this is exactly what has been happening in China's marine fishery sector. The government's overemphasis on the marine fishery sector's role in ensuring food security and, to a lesser extent, securitisation of fishermen in the disputed waters of the South and East China Seas are the key factors behind the outward expansion of China's marine fishing sector, which then directly and indirectly contributes to this looming fishing crisis.

Figure 1
Policy Objectives of China's Marine Fishery Sector



Source: Yue Dong-dong and Wang Lu-min, 2013⁴

⁴ Yue Dong-dong and Wang Lu-min, 2013. "Analysis of the current Status of Strategic studies on China's Fishery Industry and A Preliminary Reflection" *Journal of Agricultural Science and Technology*. 2013. No 15 (4), pp: 168–175. The same view is also expressed by Tong Chunfeng in her book *Marine fishery transition and fishermen transformation*. 2007. Ocean University of China: Qingdao

OVER-EMPHASIS ON BOOSTING PRODUCTION AND INCOME

Since the fishery sector is considered an integral component of China's big agricultural industry, the marine fishery sector carries the mandate to contribute to the country's food security by ensuring self-sufficiency in fishery products. To meet the rising demand for fishery products, for decades, boosting production has been considered the overarching objective for the development of the fishing sector. China's fishery production increased from 5 million tons in 1978 to 60 million tons in 2013.⁵ China has not only achieved self-sufficiency in the supply of fishery products, but has also become the largest exporter of fishery products since 2002.⁶ In contrast, the sufficiency rate of fishery products in Japan, which has twice the EEZ of China but one-tenth of the total population, is only around 60 per cent.⁷ Not surprisingly, China's high degree of self-sufficiency in fishery products is being achieved through over-utilisation of its domestic fishery resources, which eventually leads to rapid depletion of fish stock in China's traditional inshore fishing grounds.

Facing rising demand for aquatic products with rising income of Chinese people and constrained and declining production capacity of marine catches—particularly in the inshore water, the Chinese government has taken serious efforts to reform the production structure of its fishing sector. The top priority has been given to promote inland and marine fish farming. This strategy has been quite successful in the sense that production of aquaculture is currently accounting over 70% of total production of aquatic products in China. Although the rapid development of aquaculture successfully replaced the marine catch sector as the biggest contributor to the supply of fishery products, the country's marine catch sector is still under huge pressures to expand due to three major reasons.

First, aquaculture has a direct linkage to marine capture fisheries as fresh fish and fishmeal are important source of feeds for aquaculture. The preferred protein source in most aquaculture is fishmeal or 'trash fish' (small fish forming the low-value component of commercial catches). Rapid

expansion of China's aquaculture resulted in surge in demands for low value trash fish and fish meal and this demand is driving the further expansion of the country's marine catch sector. China's domestic production of fishmeal has been falling far short of the rapidly rising demand and China is by far the world's largest importer of fishmeal, bringing in an average of more than 1.1 million metric tons per year from 2009 to 2013, according to IFFO and Oil World statistics.⁸

Second, while aquaculture produces abundant and cheap fishery products, Chinese consumers are increasingly concerned about the quality and safety these fishery products particularly against the backdrop of widespread food safety scandals in China. Reports on the overuse of antibiotics, hormones and other chemical imports as well as water pollution problems in China's aquaculture⁹ has been leading to higher demand for safer and better quality wild marine catch. This is especially the case as the country's increasingly affluent middle class is now able to afford it.

Third, overcapacity in the country's onshore fish processing sector adds further pressures on the marine catch sector. As demand for processed seafood rises, China's fish processing industry has been expanding rapidly. China is also the biggest fish processor in the world. In 2013, China had 9774 fish processing companies, with annual processing capacity of 27.5 million tonnes. However, in the same year, China's fish processing industry produced fishery products 19.5 tonnes, among which 80% are from marine fishery and 20% are inland fishery. This indicates that the utilisation rate of China's processing capacity was only slightly above 70% in 2013.¹⁰

Therefore, while the Chinese government has recognized the need to regulate its marine catch, the safeguarding of the supply of its fishery products is still the overarching principle which guides the development of the country's marine catch sector. As seen in the twelfth five-year plan for the fishery industry, meeting the country's growing demand

5 2014 China's Fishery Yearbook.

6 Ibid

7 Irina Popescu, Toshihiko Ogushi. "Fisheries In Japan". *European Parliament Report*. 2013.

8 <http://www.undercurrentnews.com/2014/10/30/chinese-fishmeal-regulatory-changes-not-seen-boosting-imports/>

9 http://www.nytimes.com/2007/12/15/world/asia/15fish.html?hp&_r=0

10 China's Fisheries Yearbook 2014, pp: 256

for fishery products was listed as the fundamental objective of China's fishery industry, and for the marine fishery sector, the decade long restrictions on domestic marine catch production was lifted.¹¹ In recent years, facing the mounting challenge to achieve national food security, the notion of "blue granary or a marine based food security" has emerged as a popular concept and sourcing food from the seas is being considered as one of the key approaches to achieving food security in China.¹² A report in 2010, produced by a high level task-force on strengthening the country's Distant Water Fishing (DWF) sector, argued that China cannot merely rely on its resources on land and its territorial waters and EEZs to satisfy the country's growing demand for food. Instead, China should actively explore and utilise ocean resources, particularly marine biological resources in the high seas which are seen as the largest store of protein.¹³

While the central government is concerned about food security, local governments are more interested

in the role of the marine fishery sector in generating foreign reserve and boosting local GDP. In China's coastal regions, particularly the less developed areas, marine fishery sector is being considered as one of the pillars of the local economy. In recent years, despite the fact that China's overall agricultural trade has registered a huge deficit of over 50 billion in 2014, China remains the world's biggest exporter of fishery products. In fact, for 12 consecutive years, China has been the world's number one exporter of fishery products. In 2013, China's total export of fishery products reached USD 20 billion, representing 15.6 per cent of the global total.¹⁴ Thus, understandably, many coastal regions set very high growth rate for the fishery sector. For example, China's Hainan province, which relies heavily on the fishing sector for economic development, set an annual growth target of 13.8 per cent for its fishery sector in the twelfth five-year plan for fishery development. The province intends to boost the annual production value of the fishery sector to 45 billion Yuan in 2015 and its share in the province GDP to 12 per cent.¹⁵

11 Since the late 1990s, China introduced the Zero Growth Policy its marine fishery sector to control overfishing, and in the country's 10th and 11th Five Year Plans on Fishery Development, mandatory goals were set to reduce China's total marine catch production, however, these restrictions on marine catch sector were lifted in its 12th Five Year Pan, for more information, refer to China's 12th Five Year Plan on Fishery Development, available at http://www.moa.gov.cn/zwl/m/ghjh/201110/t20111017_2357716.htm accessed on 23 April 2012

12 Qing Hong. 2015. "Research summary on the construction of marine food system." *Marine Sciences* / Vol. 39, No. 1

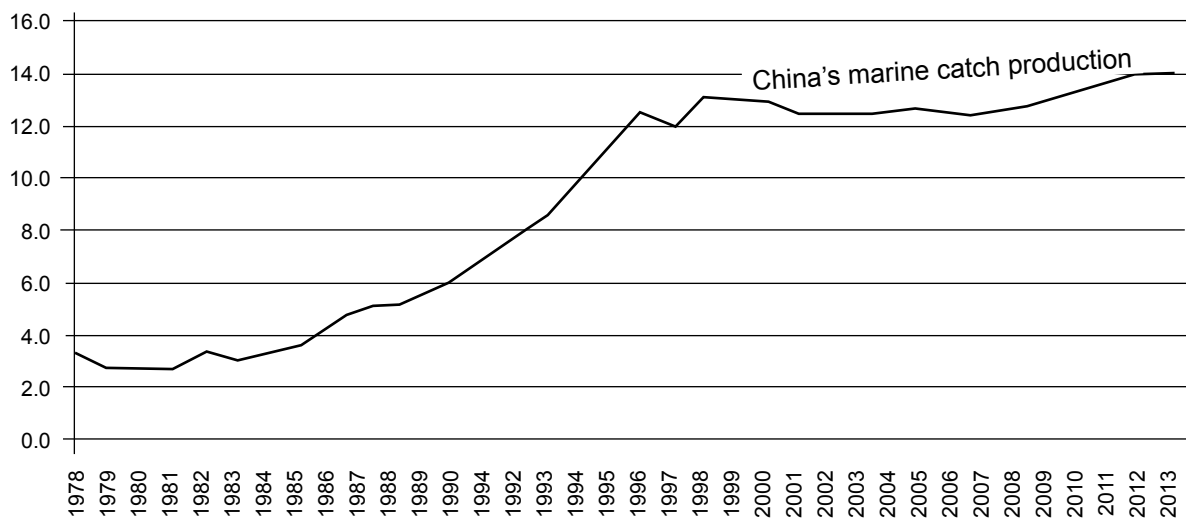
13 Ji, Xiaonan, Shenli Liu, and Task Force. "To Support Distant Water Fishing as a Strategic Industry". China National Conditions and Strength, no. 9 (2010).

14 See more information at http://news.xinhuanet.com/fortune/2014-06/30/c_1111384848.htm

15 Refer to http://www.gov.cn/gzdt/2011-03/10/content_1821502.htm

HALF-HEARTED EFFORTS ON SUSTAINABLE DEVELOPMENT

Figure 2
China's annual marine catch production



Source: China's Fishery Yearbook, Multiple Years

Facing rapidly depleting fishery resources in its inshore waters as well as deteriorating marine ecology due to over-fishing and pollution, since the mid-1990s, China has implemented a fishing ban in the Bohai, Yellow Sea and later in South and East China Seas. In 1999, China introduced the Zero Growth Policy for marine fishery, and in 2003 it formally began to implement the Fishermen Transfer and Fishery Transition Programme which intends to preserve fishing resources and ensure sustainable development of the fishing sector through reducing the number of fishing vessels as well as controlling marine catch intensity. However, as boosting production and increasing income is still the overarching objective and the fishing fleet to a certain degree has the political motivation, the country's efforts to protect fishery resources and ensure sustainable development is not surprisingly less effective than it is supposed to be.

Looking at official data, the results seem to be quite impressive. In terms of marine catch production, after the introduction of the Zero Growth Policy in the late 1990s, the remarkable growth trend has indeed been reversed, showing negative growth or zero growth throughout the first decade of the 21st century before gradually moving upward over the past few years (Figure 2). On the total number of marine fishery vessels, as shown in Table 2 from 2004 to 2013, the

number of marine fishing vessels has reduced from 220,000 to 196,800 which represents over 10 per cent reduction in the country's total fishing fleet.

"Our main result is that China, which was previously known to over-report its domestic marine catch, massively under-reports (to the Food and Agriculture Organisation of the United Nations (FAO) the catch of its distant-waters fleets."

— Roland Blomeyer, Ian Goulding, Daniel Pauly, Antonio Sanz and Kim Stobberup, "The Role of China in World Fisheries". *Study Report*. European Parliament. 2012.

While these achievements appear to be impressive, the reliability of the data remains in question. Official data suggests China's marine catch production has halted since the late 1990s, but it is often being argued that China which was previously known to over-report its domestic marine catch, now underestimates its annual catch production. For instance, according to a Chinese research team led by Lu Huosheng, a professor at Guangdong Ocean University, China's annual catch from the South China Sea exceeded 4.8 million tonnes as compared with the official data of 3.4–3.5 million tons in recent years.¹⁶ In 2012, a study conducted by the European Parliament concluded that the catch of China's distant-waters fleets is estimated at 4.6 million

16 See more at <http://roll.sohu.com/20120627/n346613241.shtml>

Table 2
China's Marine Catch Fleet

Year	Number, 000	Tons, 000	Average tonnes	Total Engine Power, million Kilowatts	Average Engine Power Kilowatts
2004	220	5559	25.3	12338	56.1
2013	196.8	6687.6	34.0	13614	69.2
2004–2013	–10.55%	20.30%	34.48%	10.34%	23.35%

Source: China's Fishery Yearbook, Multiple Years

tonnes per year globally for the 12 year period from 2000 to 2011, compared to an average of 368,000 tonnes per year reported by China to the FAO.¹⁷ One of the key reasons for the underestimation of annual marine catch production is the existence of a large number of “black ships”—fishing vessels without relevant legal permits. Taking Zhejiang province for example, while official statistics indicate that in 2014 there were 22,000 fishing vessels with relevant legal permits, there were also about 12,000 “black ships”.¹⁸

Second, even though official data shows that the number of fishing vessels has reduced, the average size and engine power of the fishing fleet improved significantly (Table 2). China's marine fishing fleet's average tonnage has increased by one-third and engine power by nearly a quarter from 2004 to 2013. This is primarily due to the conflicting fishing subsidies provided by the government. On the one hand, after the introduction of the Fishermen Transfer and Fishery Transition Programme, China's central fiscal set up a special fund to support the policy. From 2002 to 2006, the central government provided around 1.2 billion Yuan to fishermen under this programme. In comparison, when China made a historical decision to abolish the agricultural tax in 2006 and started subsidising agricultural production, its marine fishing sector began to receive financial support in the form of fishing fuel subsidy. Parallel to the phenomenal increase in China's total agricultural subsidy during the same period, the fishing fuel subsidy had

increased from 5.43 billion Yuan (88.6 per cent of the central government's total spending on fishery) in 2007 to 23.4 billion yuan in 2012.¹⁹ On an average basis under the Zero Growth Policy, the government provided around 2,500 Yuan per Kilowatts in 2011 for every ship downsized. In contrast, in some areas, under the fishing fuel subsidy policy, fishermen received 1,250 Yuan per Kilowatts per year.²⁰ What it means is that if a fishing vessel owner participated in the government ship reduction programme, the total amount of money he could receive would equal to two years' fishing fuel subsidy if he chose to continue to operate his fishing vessel.

The huge difference in fuel subsidy and financial support by the Fishermen Transfer and Fishery Transition Programme contributed to the boom of the fishing vessel building sector. Reports suggested that the country's fishing vessel building price index jumped up by 20 times between 2006 and 2012.²¹ Fishing fuel subsidy is provided to fishing boats with official fishing permits and the amount of subsidy is based on the engine power of the vessel regardless of the actual amount of fuel consumed. The bigger the fishing vessel, the more fishing fuel subsidy the fishing boat owner will receive. Thus, to get more fishing fuel subsidy, the fishermen began to invest massively in building new fishing vessels. As no new fishing permit will be issued, fishermen have been building big ships by purchasing engine power quotas from their peers. With bigger and better

17 Roland Blomeyer, Ian Goulding, Daniel Pauly, Antonio Sanz and Kim Stobberup, “The Role of China In World Fisheries”. *Study Report*. European Parliament. 2012.

18 See news report from *Chinanews* available at <http://www.chinanews.com/ny/2014/09-19/6608160.shtml>

19 China's Fishery Yearbook 2014

20 Zhong Xiaojing, Yu Guoping, Zhou Wei and Ji Guangkun. “Advices on application of diesel subsidies in fishery”. *Fishery Information and Strategy*. 2012. Volume 27, No 4. Pp:

21 Shi Chunbio. Fishermen has no fish to catch, but fishing vessel horsepower Index increased 20 times in 7 years. *Qianjiang Evening New*. 17 December 2013

fishing vessels, fishermen who are trapped in inshore waters with depleting fish stock, venture further into the seas—be it the disputed waters near the Spratly Islands and *Diaoyu/Senkaku* Islands or even other countries' EEZs where fish is still plentiful.

The outward expansion of China's marine fishery sector is also partially due to the fact that China's efforts to curb over-fishing and protect marine ecology primarily concentrate on inshore waters while the country encourages offshore fishing and distant water fishing. Due to over-fishing, pollution and land reclamation, fish stocks in China's traditional fishing grounds has quickly depleted. According to senior government officials, due to over-utilisation, 70 per cent of China's beaches are polluted and 50 per cent of tidal wetlands disappeared. China's four major traditional fishing grounds, including the Bohai Sea fishing ground, Zhoushan fishing grounds, fishing grounds near coastal waters in the South China Sea and the Beibu Gulf fishing grounds, now exist only in name.²² In particular, big fish stock in the Bohai Sea has almost completely disappeared and the annual production of small fish is less than 10 per cent of its peak amount.²³ As the depletion of fishery resources mainly occur in inshore waters, China naturally focuses more on curbing inshore fishing. Meanwhile, to ensure stable supply of fishery products and protect fishermen's livelihood, China encourages its fishermen to go further into the seas to make a living. As urged by Xi Jinping during his visit to Tanmen fishing town in 2013, Chinese fishermen need to "build bigger ships and venture even further into the oceans and catch bigger fish".²⁴ Here, venturing further into the ocean largely means offshore fishing in waters near the Spratly islands and Distant Water Fishing.

Fishing in waters near the Spratly Islands is not covered by China's South China Sea Fishing Ban and receives an additional fishing fuel subsidy, named the Spratly Islands Special Fuel Subsidy. In 1999, China introduced fishing ban in the South

China Sea. This annual fishing ban lasts from 16 May to 1 August, covering areas north of the 12th parallel, including Scarborough Shoal (Huangyan Island) but excluding most of the Spratly Islands. Fishing vessels with Spratly Islands fishing permits will not be affected by the ban. Furthermore, as the Spratly Islands are too distant from the mainland and even from China's Hainan province, China introduced the Spratly Islands Special Fuel Subsidy in 1995 to compensate high production cost of the fishermen. In the past, fishery resources were still abundant in the near waters and few bigger ships could sail that far. In recent years, however, as fish stocks in China's inshore waters quickly depleted and competition intensified with bigger and more powerful ships, more fishermen apply for the Spratly Islands fishing permits to fish in waters near those islands. In 2013, China established a "South China Sea Fishery Resources Survey and Evaluation Programme", which is supported by the Special Fiscal Fund. Based on two years' survey, it claims that there are over 1.8 million tons of fishery resources in waters near the Spratly Islands with annual catchable amount around 500,000 to 600,000 tones, as well as over 20 high value fishery species,²⁵ which could become an important fishing ground for Chinese fishermen. As Southeast Asian countries including Vietnam, Indonesia and Philippines are also expanding their fishing operations in the South China Sea, China and the neighbouring countries seem to be on a collision course as competition for limited fishery resources is likely to lead to more fishing conflicts.

Promoting DWF has been another approach emphasised by the Chinese government to address the domestic demand and supply imbalance of fishery products, and provide economic benefits for fishermen. China has been promoting distant water fishing in the past few decades through providing huge amounts of financial support to its fishing companies such as the state-owned China National Agricultural Development Group Co.²⁶ China now has the largest distant water fishing fleet—2,460

22 See more at http://photo.china.com.cn/news/2014-12/09/content_34269221.htm

23 See news report from People.cn, available at <http://opinion.people.com.cn/n/2015/0311/c159301-26671525.html>

24 Minnie Chan. "Xi's fishermen visit seen as warning to South China Sea neighbours", South China Sea Morning Post. 10 April 2013

25 See news report from People.cn, available at <http://politics.people.com.cn/n/2015/0224/c1001-26589833.html>

26 Another worth noting point is that that lobbying by the industrial and local government is also one for the factors for the development of distant water fishing in China. Government of Qingdao—which is the leading processor and exporter of high value cold fish, and its local scholars and the key force behind the "Blue Granary" concept, and companies such as China National Agricultural Development Group are also utilizing the food security narrative to gain more fiscal support from the government for their expansion.

distant water fishing vessels with total engine power of around 2 million Kilowatts in 2014. China's distant water fishing fleet operates in the EEZs of 40 countries and in the high seas of the Pacific, Indian, Atlantic and increasingly the Antarctic oceans.²⁷

While the remarkable development of DWF is being celebrated as a success and an important approach to alleviate China's domestic resource shortages,

the international community is worried that massive expansion of China's DWF could lead to localised depletion and decline in catch rates across fisheries around the world and jeopardise the livelihood of locally- owned small-scale fishermen in many poor countries. In October 2014, China Tuna Industry Group's IPO draft, which stated that China would not crack down on companies engaged in illegal fishing, further exacerbated the fear.²⁸

27 China Fishery Daily. "Transform Development Mode, Become a Strong Distant Water Fishing Nation". 6 April 2015, online version is available at http://szb.farmer.com.cn/yyb/images/2015-04/06/01/406yy11_Print.pdf

28 Shannon Service. "Tuna firm's bungled IPO exposes China's flouting of global fishing rules", the Guardian. 27 October 2014, available at <http://www.theguardian.com/sustainable-business/2014/oct/27/toyo-reizo-shell-companies-fisheries-china-tuna-overfishing-oceans-ipo>

THE CONCEPT OF THE MARITIME MILITIA REVISITED²⁹

Given its trans-boundary nature, marine fishery inevitably carries an important political and diplomatic function, particularly in waters where disputes exist. It has been no secret that China, Vietnam as well as other regional countries have considered fishermen important players in strengthening their maritime presence in disputed waters. Fishermen are provided with financial and political support to undertake fishing activities in contested waters and countries deploy fishing boats to confront each other during maritime crises. For instance, both China and Vietnam dispatched fishing vessels during the recent 981 oil rig row.

While it is an over-exaggeration for some commentators to conclude that China is waging a “People’s War” at sea, there is no denial that the Chinese government has taken efforts to strengthen fishermen’s role in protecting the country’s maritime interests in the disputed waters and developing a strong fishing fleet is considered an integral approach to becoming a sea power. In 2013, during a visit to the Tanmen fishing town of Qionghai city in Hainan province, president Xi Jinping advised the maritime militia members to “not only lead fishing activities, but also collect oceanic information and support the construction of islands and reefs”.³⁰ In the meantime, some Chinese scholars and security experts have been advocating maritime militia to be China’s first line of defence in the disputed waters, particularly in the South China Sea. In the past few years, several coastal cities in China have established their fishing militia forces.³¹

For the purpose of safety and self-defence, fishermen certainly need to be better organised and adequate training should be provided. The concept of maritime militia, however, needs to be reexamined. It is true that Chinese fishermen and their fishing boats had played a very important role in the early days of the PLA Navy. And during the Sino-Vietnam naval

clash in 1974, Chinese fishermen were proven to be a valuable force. Nonetheless, in light of on-going tensions in the South and East China Seas, China’s maritime militia policy needs to be reconsidered from the following perspectives.

First, now that China has one of the biggest and most advanced naval fleets in the region and much stronger maritime law enforcement forces, it no longer needs the maritime militia to protect its sea interests. Civilian fishermen could be paid to perform the task of collecting oceanic information and supporting the construction of islands and reefs. Some advocates of the maritime militia policy argue that given the civilian nature of maritime militia, it could well safeguard China’s maritime interests in the disputed waters and prevent military clashes between China and neighbouring countries. However, growing nationalism in China and its neighbouring countries raises the stakes in these disputes, and could allow one small fishing incident in disputed waters to easily trigger big diplomatic and security tensions,³² as evidenced in the 2010 *Diaoyu/Senkaku* boat collision incident and the 2012 Scarborough Shoal (Huangyan Island) standoff.

Second, militarising fishermen could put their lives in danger and politicising the marine fishery sector could jeopardise the whole industry. As maritime disputes between China and neighbouring countries intensify, Chinese fishermen are already facing growing dangers in the South and East China Seas. Chinese fishermen, perceived as proxies of the PLA, are vulnerable to violence inflicted by regional countries. Already, maritime accidents in the South China Sea between 2002 and 2012 claimed the lives of over 100 fishermen from China’s Tanmen fishing town alone.³³

Third, under the Chinese market economy, the fishermen are ultimately profit-seekers. This is

29 The militia is an armed mass organisation not released from production. It is a reserve force of the PLA and the basis for the prosecution of a people’s war under modern conditions. The General Staff Headquarters administers the building of the militia under the leadership of the State Council and the CMC. Under the command of military organs, the militia in wartime helps the standing army in its military operations, conducts independent operations, and provides combat support and manpower replenishment for the standing army. In peacetime, it undertakes the tasks of performing combat readiness support, taking part in emergency rescue and disaster relief efforts, and maintaining social order. See more at http://eng.mod.gov.cn/Database/WhitePapers/2004-09/07/content_4005644.htm

30 China Daily. “President pays visit to Hainan fishermen”. 11 April 2012, available at http://usa.chinadaily.com.cn/2013-04/11/content_16394643.htm

31 See more at <http://mil.huanqiu.com/Observation/2012-06/2862590.html>, and http://ngdsb.hinews.cn/html/2013-01/27/content_5_6.htm

32 Alicia P.Q. Wittmeyer. “Why are so many diplomatic crises sparked by fishermen?” *Foreign Policy*. 16 May 2013

33 Qi Yuefeng. “The Story of Tanmen”. *Oriental Outlook*. 2014. No.551.

particularly the case as Chinese traditional fishermen are being replaced by peasant workers from inland provinces who do not have much emotional attachment to the seas, but are determined to make more money as soon as possible. As fishery stock quickly depleted in China's inshore waters, they incline to cross the boundaries to catch fish in the disputed waters or even in other countries' EEZs beyond the 9 dash lines. This could hijack China's foreign policy and undermine its relationship with neighbouring countries.

Fourth, patriotism could be used as a cover by some members of the maritime militia to undertake illegal fishing activities. For instance, fishermen in China's Tanmen town were praised by Xi Jinping during his visit in 2013 for protecting China's maritime interests in the disputed waters of the South China Sea. Because their ancestors have been fishing in the

South China Sea since ancient times, they refer to it as the "ancestors" sea.

However, in recent years, the rise of the giant clam handicraft industry has completely transformed this old fishing town. Over the past few years, more and more fishermen have turned from fishing to harvesting giant clams for higher profits.³⁴ Similarly, in the East China Sea, as prices of red coral have skyrocketed in recent years, fishermen from Zhejiang and Fujian go after the red coral in the waters near *Diaoyu/Senkaku* islands. Driven by huge profit, some Chinese fishermen even travel hundreds of kilometres to waters near Japan's Ogasawara to poach corals from the seabed.³⁵ Poaching coral reefs, sea turtles and other endangered species is not only against international law but also Chinese domestic regulations, apart from threatening marine ecology and jeopardising China's international image.

34 Zhang Hongzhou, Chinese Fishermen in the Troubled Waters. *The Diplomat*. 23 October 2014

35 Refer to <http://www.japantimes.co.jp/news/2014/11/06/national/chinese-coral-poachers-encroaching-japanese-fishermen/#.VSShCfmUf8s>

CONCLUSION AND POLICY RECOMMENDATIONS

Asia is facing a looming fishing crisis and this is reflected in two major aspects: one, the race to feed the region's growing demand for fishery products has resulted in massive expansion of fishing operation in regional waters, which then pushed many fishery stocks to the brink of extinction, posing an acute threat to regional food security and livelihood of millions of small scale fishermen; second, competition between fishermen for limited fishery stocks, compounded by existence of territorial disputes in the South and East China Seas, is leading to growing fishing incidents, some of which even escalated into larger diplomatic and security tensions.

While national and regional policies to help sustain fisheries are important steps to prevent this fishing crisis, success will largely depend on Chinese actions, not only because the country has the largest fishing industry in the world but also due to the fact that China's fishing policies are directly and indirectly responsible for triggering the fishing crisis. China must take due efforts to deal with the predicament facing its fishing sector and this paper has the following policy recommendations.

To begin with, China cannot continue to develop its marine fishery sector with "boosting fishery production and fishermen's income" as the overarching principle. Instead, sustainable fishery must be placed as the top priority which governs the future development of China's fishery sector, and marine fishery in particular.

Next, to meet the country's rising demand for fishery products, China needs to better utilise international fishery resources from the following aspects: First, while China should continue to promote the

development of distant water fishing, immediate steps must be taken to mitigate negative consequences of over-fishing and IUU fishing by Chinese fleet and distant water fishing companies. As China seeks to utilise fishery source food from the high seas and other countries' EEZs to meet its growing food demand, it needs to take full consideration of the marine ecology, global maritime security, as well as food security concerns of other countries. Second, it is better to utilise international fishery resources by increasing fishery imports. China should cooperate with regional countries to enhance regional fishery trade. Guangxi's proposal to build a China-ASEAN Fishing Corridor in the South China Sea is certainly a welcome move. Third, as the biggest fishing farm nation with advanced technological and management know-how, China should strive to work together with other regional countries to promote the development of regional aquaculture as an alternative to meet Asia's rising demand for seafood and to combat over-fishing.

Lastly, while for the purpose of safety and self-defence, the fishermen certainly need to be better organised and adequate safety and security training should be provided, the concept of maritime militia however needs to be reconsidered. The maritime militia policy incurs far more costs than benefits to China and the region as a whole. In view of tensions brewing in the South China Sea and the East China Sea, and in view of strong competition for scarce fishery resources in the region, the concept of maritime militia policy is obsolete and ought to be discarded. Instead, China should take the lead to establish a multilateral fishing management framework to regulate IUU fishing, manage fishing disputes and prevent fishing incidents from escalating.

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