



Fishery Cooperation the South China Sea: Prospects and Challenges

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Agenda

- Why Fishery Cooperation is critical
- Objectives of fishery cooperation
- Existing suggestions on promoting fishery cooperation in South China Sea
 - Marine Protection Areas
 - Joint fishery development
 - Multilateral fishery agreements
 - Regional Fishery Management Mechanism
 - Aquaculture
- Recommendations

Why Fishery Cooperation is Critical

- ▶ **On the one hand, fishery related issue has emerged as a major destabilizer**
 - ▶ IUU Fishing as top maritime threat to regional countries
 - ▶ Growing Number of Fishing Incidents In South China Sea, fishing has been heavily politicized and politicized
 - ▶ In recent years, some of these fishing incidents have become triggers for diplomatic and security tensions between

Fishing Disputes Could Spark a South China Sea Crisis

Rivalries in the South China Sea are getting heated over a resource fight. But it's more about fish than fuel.

BY **KEITH JOHNSON, DAN DE LUCE**

APRIL 7, 2016

KEITH.JOHNSON

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The simmering maritime disputes and land grabs in the South China Sea have long been seen as a battle over its potentially vast undersea deposits of oil and natural gas. That's not quite true: There is a sometimes **violent** scramble for resources in the region, but it's more a fight for fish than for oil.

Why Fishery Cooperation is Critical

- ▶ **On the other hand, under the “shelving dispute and joint development” principle, management of fishery resources could be the starting point for cooperation in SCS and create “spillover effects” into other areas of cooperation.**
 - ▶ Previous attempts has been focused on joint development of the hydrocarbon resources, which has proven to be very difficult due to a variety of reasons
 - ▶ Cooperating to manage and conserve fisheries re- sources is especially significant because fish are migratory, and even some of them are highly migratory.
 - ▶ Fishery cooperation at the bilateral level and regional level

Objectives of Fishery Cooperation



Ensuring Sustainable fishery and protecting marine environment

Meeting the food security and economic development

Preventing fishing tensions and frictions

Objectives of Fishery Cooperation

► Sustainable fishery: manage the excess capacity, protect coral reef

- Overfishing: excess capacity, too many fishing boats and too many fishermen
 - The fleet in Asia was the largest, consisting of 3.5 million vessels and accounting for 75 percent of the global fleet Asia has 80 percent of the reported motorized fleet
 - Depletion of fish stocks in China's coastal and inshore waters, over fishing, bilateral fishery agreements, and pollution and land reclamation
 - Excess capacity in the South China Sea, Over capacity nearly 50%, for China to remain at the sustainable level, 50% of the current fishing fleet needs to be downsized (Qiu Yongsong 2016)
 - Excess capacity in Vietnam, Thailand and other countries marine fishery sector, particularly in the coast waters
- Excess capacity from onshore sector
 - Fish processing sector, and aquaculture sector
 - Ship building sector

S.China Sea corals on brink of extinction

By Jiang Jie Source:Global Times Published: 2016-5-24 0:28:01



Poaching, fishing threaten existence of reefs: expert

China has lost 80 percent of its coral reefs in the South China Sea since the 1970s and the region's native corals, mangroves and seaweed bed ecosystems have not been in optimal health for years.

Experts said the poaching of corals could jeopardize the existence of some reefs and islets in the South China Sea.

Addressing a Sunday celebration for the International Day for Biological Diversity, Wang Xiaoqiang, a deputy director at the State Oceanic Administration, said that the biodiversity and biome of the South China Sea have suffered from destruction and degeneration.

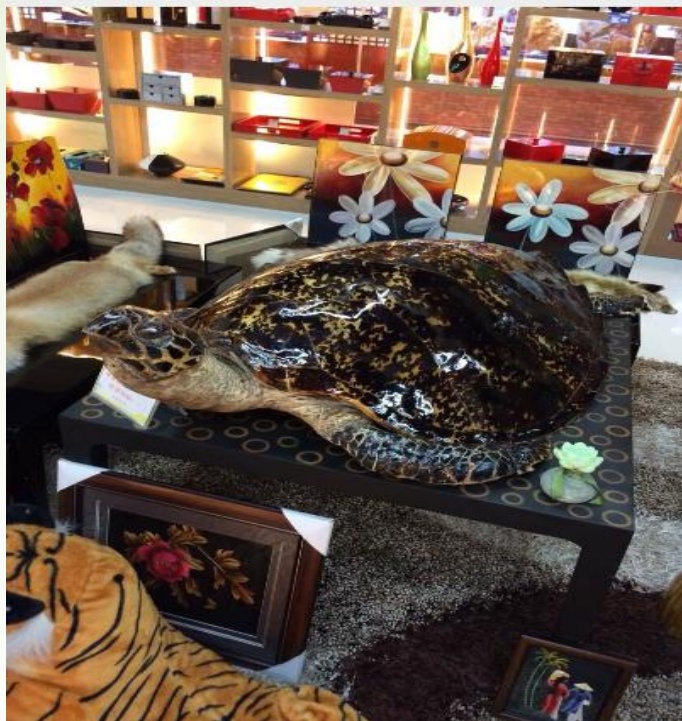
Objectives of Fishery Cooperation

- ▶ **Sustainable fishery-manage the excess capacity, protect coral reef**
 - ▶ When a reef is destroyed, the ecosystem unravels. Reef fish lose their habitat, and pelagic fish such as tuna lose an important source of food. Furthermore, reefs in the South China Sea are connected. Fish larvae from one reef ride the current across the sea to repopulate another reef. If a reef disappears, so does that source of larvae, extinction of fish species could be permanent.
 - ▶ **Giant Clam sector**
 - ▶ **Sea turtles and Red Coral sectors**









hawksbill
sea turtle
handcrafts











Objectives of Fishery Cooperation

- Fish and seafood are a major dietary for the coastal populations of South China Sea countries.

Countries	Per Capita Supply	Fish Proteins	Animal Proteins	Total Proteins	Fish/Animal Protein %	Fish/Total Proteins%
Cambodia	41.4	13.1	19.1	77.1	68.6	17
China	37.9	9	40	98.7	22.4	9.1
Taiwan, ROC	33.5	8.4	43	89.2	20	9.6
Indonesia	31.8	10.3	18.7	63	55.2	16.4
Malaysia	54	16.1	42.8	75.8	37.7	21.3
Philippines	30.2	8.8	24.5	59.6	36	14.8
Laos	19.8	5.9	14.6	68.9	40.5	8.6
Thailand	26.1	8.5	25	61	34	13.9
Vietnam	34.8	9.2	31.8	82	29	11.2
Myanmar	60.7	16.9	36.3	85.2	46.5	19.8
Brunei	47	12.3	59	90.6	20.5	13.3
Singapore	46.9	12.6	58.3	89.4	21.6	14.1

Objectives of Fishery Cooperation

➤ Rapidly rising demand for fishery products in China

- China's per capita consumption of fishery products (Source: Han Jun, 2014):
 - 1980: 2 kg / per year
 - 2010: 21.1kg/ per year, annual growth rate 8.2% per year
 - 2020: 29kg/ per year
 - 2035: 41/kg per year
- “Blue Granary” strategy, marine based food security strategy since 2007
- Boost fishery consumption as alternative to China's overreliance on pork consumption



Chinese Dietary Guidelines 2016 :

it strongly advises the selection of fish, poultry and eggs as a source of protein over red meats. Smoked and cured meats are to be avoided.

“优先选择鱼和禽。
吃鸡蛋不弃蛋黄。
少吃肥肉、烟熏和腌制肉食品。”

Objectives of Fishery Cooperation

➤ Fishery sector as importation contributor to employment and economic growth

- In 2014, 84 percent of the global population engaged in the fisheries and aquaculture sector was in Asia, (FAO 2016)
 - China has over 14 million fishermen, about 25 percent of the world total
 - Indonesia, has about 6 million, 11% of world total,
 - Vietnam, 4.5 million
 - Philippine over 1.6 million
 - Taiwan, 330, 000 fishermen
- Fishing sector employs 5.4 million people in the South China Sea directly, in addition to million of people in directly rely on fishing in the South China Sea for a living.

Objectives of Fishery Cooperation

- **Fishery exports as one of the key sources of foreign reserve earning for regional countries**

Ranking	country	USD million
1	China	20,980
3	Viet Nam	8,029
4	Thailand	6,565

- In the last four years, the value of Indonesian fisheries product exports has been steadily increasing. It was \$1.07 billion in 2011, \$1.15 billion in 2012, \$1.33 billion in 2013 and \$1.84 billion in 2014, and Indonesia aims to boost its fishery exports to USD 5 billion

Objectives of Fishery Cooperation


➤ Fishery sector as importation contributor to employment and economic growth

- Economic pillars for many coastal cities-
 - **Foreign reserve earning:** China's fishery exports in 2014 valued USD 20 billion
 - **Employment:** 14 million fishing working force, over 20 million fishing population, over 30 million depend on fishing sector to make a living
- **Largest fishery processing country in the world**
 - Excess capability, with nearly 10,000 fish processing companies, yet 70% Utilization rate,
- **Ship building industry**
 - A stronger marine fishery sector is considered key to absorb the country's excess capacity in the ship building sector
 - Ministry of Agriculture submitted a report entitled "Advice on Enhancing Marine Fishery as a Strategic Industry" to the State Council and this report was compiled 27 Academician from China's Academy of Engineering who see building new fishing vessels a solution to China's excess capacity in Shipbuilding sector

Objectives of Fishery Cooperation

► Prevention of tensions and frictions-depoliticise and desecuritize fishery

- Fishery issues in the South China Sea has been heavily politicized and securitized, which is partially owing to the maritime militia policy from the claimant states and partially, created by journalists, security analysts, and scholars
- Given the risk of power abuse, desecuritization should be the favored approach to achieve security: a reframing of issues away from the security domain, into that of normal politics by undermining the 'felicity' of the security logic with the intended audience.
- The issue over use of force, arrest and trial of foreign fishermen under domestic laws



Existing Proposals to Advance fishery cooperation in the South China Sea




Joint fishery development

Marine Protection Areas

Regional Fishery Management Organization

Multilateral fishery agreements


Aquaculture



Existing Proposals to Advance fishery cooperation in the South China Sea

► Joint fishery development

- A key consideration in the negotiation and establishment of joint fishery development agreement is the definition of the precise geographical area within which joint fishery development is to proceed
 - Joint zones are arranged in addition to a maritime boundary line, as in the case of Sino-Vietnam Beibu Gulf Fishery Agreement
 - In absence of a boundary line, many such joint areas are determined by the limits of the competing maritime claims and thus disputed waters , China-Japan, China South Korea Fishery agreements .
 - Different parties have different claims in the South China Sea, which was further complicated by the Arbitration



Existing Proposals to Advance fishery cooperation in the South China Sea

► Marine Protection Areas

- Which areas? The entire South China Sea, the Spratly islands or
- Not addressing the over capacity challenges
- Undermine fishery supply, economic development, and hurt fishermen's interest


Philippine fishermen hit out at Duterte's decision to ban them from disputed Scarborough Shoal

PUBLISHED : Wednesday, 23 November, 2016, 5:19pm

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However Filipino fishermen told AFP the Duterte plan would hurt their livelihood. "We are against that because it is inside the lagoon where there is more catch," said Charlito Maniago, village captain in Infanta, one of the main Scarborough Shoal fishing towns on Luzon.




Existing Proposals to Advance fishery cooperation in the South China Sea

▶ Regional Fishery Management Organization

- ▶ Political willingness
- ▶ Ineffective in addressing the over capacity challenges
- ▶ The issue of Taiwan
 - ▶ Main land will not accept Taiwan to participate as a full member
 - ▶ It is unlikely that Taiwan will accept to participate in the RMFO as an fishing entity only /in the name of Chinese Taipei, given the current cross strait times

Existing Proposals to Advance fishery cooperation in the South China Sea

- **Aquaculture-Aquaculture as a solution or problem for overfishing?**
 - Aquaculture has a direct linkage to marine capture fisheries
 - Demand for fresh fish and fishmeal as feeds
 - Capture fishery fish direct feeding to aquaculture
 - Aquaculture production demands almost all of the region's fishmeal (>80%)
 - – This demand drives overfishing

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China offers aquaculture, but fishers won't bite

Philippine Daily Inquirer / 12:30 AM November 14, 2016



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Fishermen from Zambales have known no other source of livelihood than the rich fishing grounds of Scarborough Shoal, which the Chinese had already taken over. They wouldn't accept any alternative, including an offer by the



- 30-50% of China's marine catch is not for human consumption,
- Marine catch from China's coastal and inshore waters are mostly used for feed in the aquaculture sector
- China imports over 1 million tonnes of fishmeal for its aquaculture and livestock sectors

Fishmeal or trash fish for feed in SCS (Simon Funge-Smith, FAO)

- 1.7m tonnes
- Consistently over 20 % of total catch
- Mainly from trawl fisheries
 - 40 to 60 % of catch
 - For fish meal or for direct feeding – Aquaculture & livestock feeds





Recommendations

- ▶ **No single solution can meet all the three key objectives, instead, need a mix of policy to promote fishery cooperation in the South China Sea**
 - ▶ Think out of the “South China Sea Box”, to manage the fishery disputes and promote fishery cooperation
 - ▶ Onshore measures as as important as actions taken in the South China Sea
 - ▶ the ‘low-hanging fruit’

Recommendations

- ▶ **Move out of the "South China Sea" box o manage the fishery disputes and promote joint fishery development**
 - ▶ **Aquaculture-** alternative feed is needed and great potentials for marine aquaculture in Indonesia and Philippines
 - ▶ **Fish Processing Sector:** Under China's BRI, China to relocate its excess fish processing sector to the Southeast Asian countries
 - ▶ **Fish labor cooperation---the Taiwan experience?**
 - ▶ Begin with as a commercial undertaking, with knowledge and management knowhow from Taiwan, modern fishing vessels and capita from China, fishing labor from Vietnam, Philippine, Indonesia and others



Recommendations

► On shore measures as as important as actions taken in the Sea

- **Demand side management**, particularly in the case red coral, giant clams and sea turtle products
 - Demand management will be more effective in deterring poaching of Giant clam and red coral etc
 - As for fish, are we consuming too much?
- **Fishery labor:**
 - Domestic capacity management
 - Entry of barrier to fishery
- **The excess and damaging fishing subsidy programmes**
 - Between 2011 and 2015, the central government's financial support reached RMB146 billion, which is 2.7 times of the amount from 2006-2010.
 - Vietnam's Decree 67 in 2014 to support building of new fishing vessels to encourage fishermen to go offshore

Recommendations



► Targeting the 'low hanging fruit'

- Scientific research, and fishery survey and technological cooperation
- Targeting the "poaching of red coral, giant clams and sea turtles"
 - Need to get Taiwan on board
- **Multilateral agreement on fishery law enforcement,**
 - The flag of state principle in disputed waters,
 - No use of force against other parties' fishermen and fishing vessels
- **Promote Fishery trade,**
 - **South China Sea fishery trade Corridor**
 - China needs to reposition itself from being the biggest fishery exporter to a major fishery importer, relying on foreign fishery resources to feed its population.

The End-Thank you very much





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- ▶ so rational use of the South China Sea and the preservation of its marine environment should be important to all parties. Thus, cooperation among littoral states in the region is essential. In order to avoid overfishing or depletion of resources, conservation measures have to be taken. Such measures are not possible without regional cooperation and close co-ordination among the parties concerned, especially in a semi-enclosed sea.



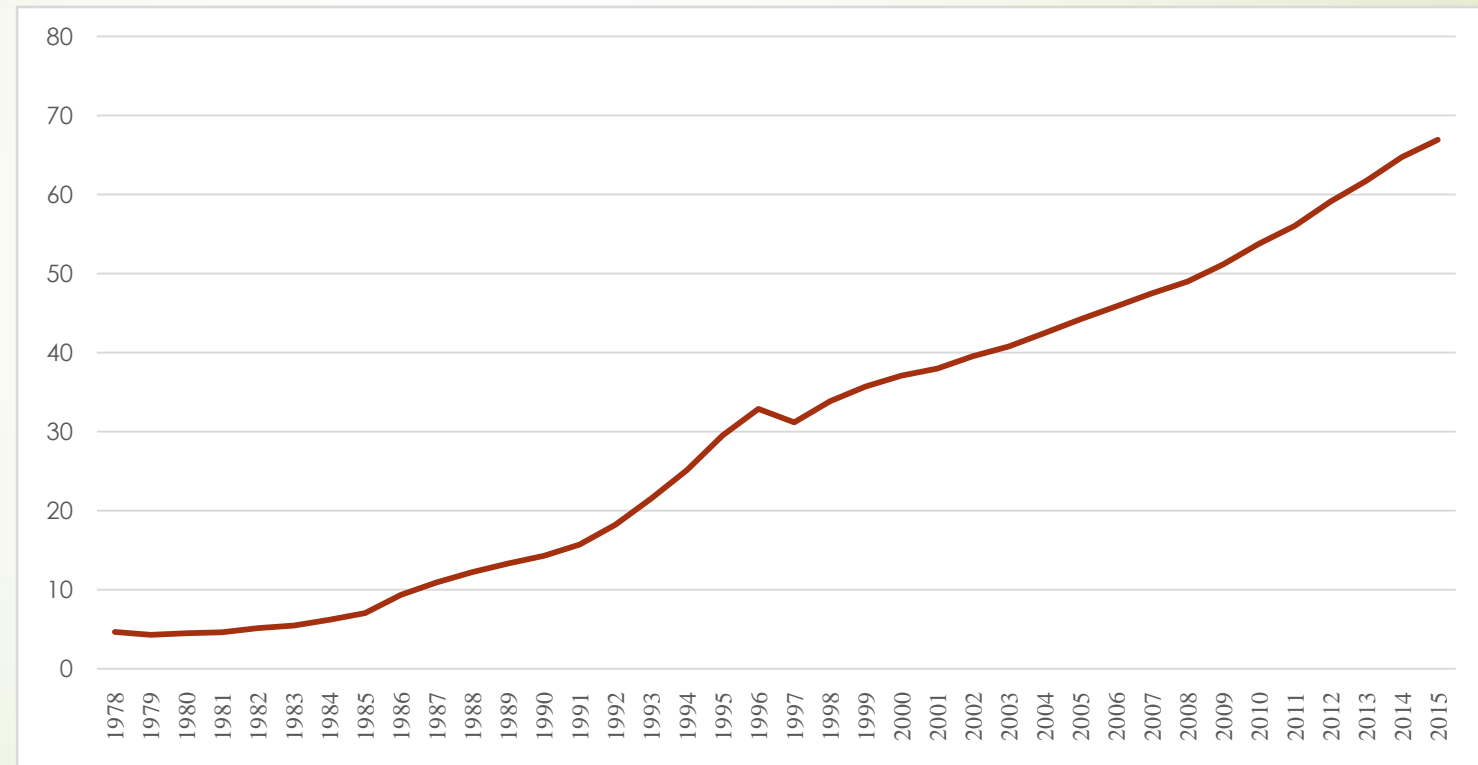
B. Regional Fisheries Management Organization as a Mechanism

- ▶ In the absence of an effective centralized authority in dealing with the matters of fishing issues, then probably the regional fisheries organization is an alternative to secure sustainable conservation and management of transboundary marine resources. Such regional fisheries cooperation involves efforts by states to overcome collective action problems related to the use of shared and common fisheries. This cooperation arises when two or more concerned states identify a shared problem or goal which requires a common and co-operative solution. Such cooperation is often formalized through bilateral or multilateral agreements establishing principles, rules, procedures and institutional organizations for the implementation of cooperation between the parties. In many cases these agreements are institutionalized by the formation of Regional Fishery Management Organizations (hereinafter cited as RFMOs).

Top Marine catch producers in the world

COUNTRY OR TERRITORY	AVERAGE 2003–2012	2013	2014
	<i>(Tonnes)</i>		
China	12 759 922	13 967 764	14 811 390
Indonesia	4 745 727	5 624 594	6 016 525
United States of America	4 734 500	5 115 493	4 954 467
Russian Federation	3 376 162	4 086 332	4 000 702
Japan	4 146 622	3 621 899	3 630 364
Peru	7 063 261	5 827 046	3 548 689
	918 049 ¹	956 416 ¹	1 226 560 ¹
India	3 085 311	3 418 821	3 418 821 ²
Viet Nam	1 994 927	2 607 000	2 711 100
Myanmar	1 643 642	2 483 870	2 702 240
Norway	2 417 348	2 079 004	2 301 288
Chile	3 617 190	1 770 945	2 175 486
	2 462 885 ¹	967 541 ¹	1 357 586 ¹
Philippines	2 224 720	2 130 747	2 137 350
Republic of Korea	1 736 680	1 586 059	1 718 626
Thailand	2 048 753	1 614 536	1 559 746
Malaysia	1 354 965	1 482 899	1 458 126
Mexico	1 352 353	1 500 182	1 396 205
Morocco	998 584	1 238 277	1 350 147
Spain	904 459	981 451	1 103 537
Iceland	1 409 270	1 366 486	1 076 558
Taiwan Province of China	972 400	925 171	1 068 244

China's Total Fishery Production, 1978-2015 (million tonnes)



Source: (Bureau of Fisheries of Ministry of Agriculture, P.R China, 2015; Bureau of Fisheries of Ministry of Agriculture, P.R China, 2016)