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CHINA'S APPROACH TO FISHERIES MANAGEMENT

Lyle J. Goldstein, Associate Professor, China Maritime Studies Institute (CMSI), U.S. Naval War College and Visiting Fellow, Watson Institute for International Studies, Brown University

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1) INTRODUCTION

In almost all of the maritime territorial disputes in East Asia, fisheries questions play a significant role. One need only consider that fishing has been at the heart of serious wrangling among East Asian states from the Yellow Sea, through the East China Sea and down to the South China Sea over this past year. In December 2011, a Chinese fisherman killed a South Korean Coast Guardsman, rocking a relationship that has been deeply troubled since at the spring 2010 sinking of the South Korean frigate *Cheonan*.[1] In September 2010, another fishing incident sparked a dramatic crisis between China and Japan. After the Japan Coast Guard arrested a Chinese fisherman for seemingly reckless navigation practices near the disputed Senkaku/Diaoyu islands, Beijing is alleged to have threatened Tokyo with a cut-off in supplies of critical rare earth minerals – a major shock to the bilateral relationship.[2] Moreover, in the South China Sea, fisheries has been raised as a key issue dividing the many disputants and also one that has played a role in escalating tensions in that region since at least 2009.[3]

The above list of troubling episodes strongly suggests that Chinese fisheries policy might be critical to the possibilities for peaceful resolution of the many maritime territorial disputes in East Asia. Moreover, China's status as the world's largest fishing power also means that Beijing's inclination to accept and practice global fisheries norms could mark a giant step forward for environmental protection of the oceans in the coming century. With both strategic and also environmental concerns in mind, therefore, this testimony endeavors to evaluate China's efforts to regulate its marine fisheries, to discuss the future prospects and challenges for this regulation and finally to outline various implications of this effort. Answers to specific questions outlined by the Commission are addressed in Section 5 below.

2) BACKGROUND

Before endeavoring to paint a fuller picture of the present situation in Chinese fisheries, it will be worthwhile to briefly present some background, especially focusing on developments of the last two decades. In addressing the issue of fisheries management, one should note that that from the earliest days of the PRC, the escort of China's fishing fleets was viewed as a core mission of the Chinese Navy.[4] In the aftermath of the devastating Cultural Revolution, the Chinese Navy began to consider more ambitious tasks and state institutions (including the armed forces) were generally reduced in capacity, in part to facilitate the growth of private entities. As originally developed in the 1970s, the fisheries service actually reported directly to both the State Council and also the Central Military Commission, reflecting the long-held belief that marine fisheries issues constitute a national security problem for China.[5]

Regulatory neglect ensued as a strong emphasis was placed on ever-increasing production targets. For Chinese fisheries, this trend led by Deng Xiaoping resulted in a massive expansion in Chinese fishing effort and production. In 1985, China entered the realm of the fishing powers by launching its first fleet of long-distance fishing vessels.[6] This dramatic growth in effort resulted in an almost fivefold increase in marine fisheries catch by 2000.

While fisheries protection efforts in the PRC go back as far as 1955 when a trawler restricted line was established by the State Council, it is also clear that many of the positive, preliminary steps toward conservation were ignored during the headlong rush for economic growth of the 1980s and early 1990s.[7] A major shift occurred in the late 1990s with Beijing adopting a series of important reform measures, including the inauguration of the summer fishing ban in the Yellow and East China Seas in 1995, the adoption of an explicit policy to favor aquaculture while "stabilizing" marine fisheries in 1996, as well as new fisheries agreements with Japan in 1997 and South Korea in 1998. The most important step in this reform process, however, appears to be the "zero growth" plan to control fishing capacity adopted in 1999, along with a measure to spread the summer fishing bans to both the Bohai and also the South China Sea (including notably both Hong Kong and Macau). With respect to enforcement capacity, the China Maritime Surveillance (CMS) was created in 1998 with the mission, closely related to fisheries enforcement, of protecting China's extensive Exclusive Economic Zone (EEZ) from various forms of encroachment. In 2000, a Fisheries Law Enforcement Command (FLEC) center was established "in order to bring Chinese fisheries management in line with international standards and to meet domestic needs for the centralization of fisheries management.[8] Other achievements of this period of intensive reform included: a fisheries agreement with Vietnam, the extension of fishing bans to parts of the Yangtze River, and also an ambitious effort to create marine protected areas.[9]

It is not certain at this point what leaders or bureaucratic constellation enabled the above sweeping reforms, but one may speculate that – as elsewhere in global fisheries – that a deep crisis in the form of depleted stocks have spurred the above actions. The kind of data at the heart of this crisis included the revelation that since the 1960s, fish species in the Beibu Gulf (Gulf of Tonkin) area of the South China Sea had declined from 487 to 238. The same study revealed that stock density had reached its lowest level in 1998 at just 16.7 percent of that in 1962.[10] Suggesting that the crisis would not be easily remedied, Chinese fisheries expert Prof. Mu Yongtong wrote in 2006: "Now, the fact is obvious that the development of our nation's fishing industry has reached an extremely important juncture. Most – if not all – of the fisheries have been fully exploited, and many are already exhausted."[11]

A different perspective on this crisis emerged from a study by faculty of the Maritime Police (China Coast Guard) Academy in Ningbo that was published in 2007 and which received ample attention in diverse parts of the Chinese government. The authors asserted, for example, that Chinese fisheries suffered from significant foreign encroachment, explaining that, for example, fishermen from Malaysia, Vietnam and the Philippines were taking advantage of the summer fishing ban on Chinese fishermen in the South China Sea to take a larger catch for themselves.[12] The authors maintained that part of China's problem in fisheries enforcement was related to the division of labor in maritime enforcement among "five dragons stirring up the sea," rather than the centralized enforcement (e.g. coast guard) wielded by states such as Japan or the United States. As an illustration of the problem, the Ningbo Academy faculty suggest the apparently common place problem in Chinese maritime enforcement of "**管得着的看不**见，看得见的管不了 [Got the jurisdiction, but can see or can see, but lack jurisdiction].[13] In other words, the balkanized nature of Chinese maritime enforcement into at least five different departments, of which the FLEC of the Agriculture Ministry is just one major entity and not at all the most potent, has seemingly contributed to the present crisis in Chinese fisheries and the weakness of fisheries enforcement.

3) RESULTS

3.1 *Chinese Fisheries Data*

The total marine catch for 2009 was 11,786,109 tons, up 2.5% from 2008. The catch of pelagic fishes for 2009 was reported to be 8,040,286 tons, up 1.8% from 2008. The take of shellfish for 2009 was reported as 2,018,924 tons, up 3.8% from 2008. Among the three basic regions encompassing Chinese fisheries, the East China Sea yielded the largest catch, followed by the Bohai/Yellow sea areas, and with the South China Sea somewhat lower than these other areas. While each of these sea areas registered higher catches, it is interesting to observe that the South China Sea area witnessed the smallest increase of .4 percent.[14]

Breaking down further the catch of pelagic fish by Chinese fishermen, the largest catch for 2009 by a significant margin was of hairtail at 1,172, 440 tons, a slight decline from 2008. Blue round carangid, anchovy, spanish mackerel, silver pomfret and small yellow croaker followed in that order, varying between 350,000 and 550,000 tons. However, the largest catch increases did not involve any of those large fisheries. Rather, major catch increases were of mullet, porgy, spotted maigre, black scraper, and sand lance – all of which increased 10-20% in 2009. The largest catch declines for 2009 were of bamboo pod fish, chub mackerel, anchovy, and pacific herring. The decline for anchovy amounted to - 20.8%.[15]

With respect to shellfish, the large shrimp catch was up 5.6% in 2009, rising to a total of 1,475,426 tons. The crab catch was down slightly to 543,498 tons. The squid catch increased to 351,778 tons in 2009. Prawns were reported to increase the most (20%), while the take of algae saw the steepest decline in this reported data (-38.75).[16]

China was officially reported to have just over a million fishing boats, of which 672,633 are motorized and 430,835 are involved in marine fisheries, including 1,570 large fishing vessels, 68,538 medium-sized fishing vessels and 360,727 small fishing boats. Despite policy intention to decrease fishing capacity, both numbers of boats and also tonnage are reported to have increased from 2008 to 2009. A few provinces, including Guangxi, Shandong and Guangdong succeeded in reducing fishing tonnage, but others such as Zhejiang and especially Jiangsu saw major increases.[17]

4.2 *Chinese Fisheries Law Enforcement Command (FLEC)*

The same annual report that yielded the catch data above suggests that the FLEC had 2,165 enforcement vessels of all sizes in 2009 with a total force equivalent of 55,453 tons. The force was reported to have been reduced by 144 ships (3,358 tons) since 2008. In terms of human capital, the FLEC has 35,093 personnel. Apart from a headquarters unit of 865 persons, they are spread among all of China's provinces.[18]

Reflecting an apparent consensus in the Chinese government that includes the influential military, there is a strong conviction that Chinese maritime enforcement forces are too weak, especially relative to other Pacific maritime powers. The announcement in October 2010 by a senior official that China would endeavor to build 30 maritime enforcement cutters over the next five years was the result of this consensus.[19] Relative to other world coast guards, this rate of production qualifies as a very significant buildup that illustrates both the determination of Beijing to advance in this area, but also the relative backwardness of current forces that have long been neglected. Indeed, it has seemed that over the last decade among the so-called "five dragons" of Chinese maritime enforcement that the FLEC has ranked among the lowest of priorities.

A recent unofficial report suggests that the FLEC has 140 ocean-going cutters with eight vessels exceeding 1,000 tons. This same report observes that 渔政 202 (hereafter YZ 202) was China's first modern, large enforcement cutter that entered service with the FLEC in 2001. Future operations and capabilities of the FLEC, however, are probably better understood by briefly examining the newest cutter – much heralded in the Chinese press -- designated YZ 310 that entered service in September 2010. Its speed of 22 knots makes it the fastest cutter in service with the FLEC. The cutter is 107m in length and has a crew of 56. At 2,500 tons, it is certainly capable of deep ocean patrols and is said to have a range of 6,000km. Notably, it appears to be the first FLEC ship to be significantly armed, as it is equipped with a pair of 14.5mm rapid fire machine guns mounted on deck, which is suggested to be a response to the increasing threat of piracy. More important still is that it is the first FLEC ship to have a helicopter hangar and launching deck.

As in most endeavors, capital and technology are only one part of the equation and more often than not, human capital more accurately determines true capability. At present, unfortunately, little is known regarding the recruitment, education and training of FLEC personnel. Of the approximate 33,095 employees of the FLEC reported above, it is said that 5,467 serve on board FLEC vessels. The FLEC apparently added 2,000 additional

billets over the last year. 67% of FLEC personnel are now college graduates, up 11 percentage points compared to 2005.[20]

For 2009, the FLEC claims to have performed 4,971 vessel inspections, and also expelled 103 foreign fishing vessels illegally fishing in Chinese waters. Although the FLEC appeared to have moderate patrol activity, including some inspections, in the vicinity of the Paracel Islands in the South China Sea, no vessel inspections were claimed in the sensitive Spratly Islands area.[21]

According to official data, about 300 Chinese fishermen died at sea with the most frequent causes of death being accidents resulting from collisions and also typhoon-related sinkings. The FLEC was reported to be involved in 877 rescue incidents in 2009 in which 4,502 Chinese fishermen were saved. An apparent priority for the FLEC has been to provide Chinese fishermen with advanced communication and navigation equipment to facilitate rescue.[22] A report in 2009 suggested that the government would provide two-way satellite communications equipment for one million Chinese fishing vessels. [23] The AIS system is widely functional along the Chinese coast. Satellite vessel monitoring systems are apparently in place, as well, to assist with enforcement.[24]

According to the 2009 China Fisheries Yearbook, the FLEC first undertook to patrol the Spratlys region of the South China Sea in 1994 and was ready at that time to both "eat bitterness … and to … struggle …"[25] On the other hand, such long distance patrols appear to be quite rare even up until the present time in light of the major headlines accorded to the deployment of the new YZ 310 to the Spratlys region in late 2010. This vessel's deployment to that sensitive sea area at that time was apparently intended to both "regularize [and] … institutionalize" Chinese fisheries patrolling in the Spratly's area of the southern South China Sea.[26] An even more significant clue regarding FLEC patrol patterns in the South China Sea concerns the 12 degree line, cited in at least one Chinese official pamphlet to suggest that the summer fishing ban is enforced north of that line, but not south of it.[27] This intriguing enforcement policy will be taken up again for discussion in the section that follows. Relying on Vietnamese data, as well as Chinese figures, Taylor Fravel concludes that there was a disturbing uptick in 2009 of Chinese confiscations of Vietnamese fishing boats in the South China Sea, but these numbers subsequently fell sharply in 2010 – and no cases were reported for 2011.[28] In November 2011, it was announced that the medium-sized FLEC cutter YZ 306 would hence forth be based in the Paracel Islands.[29] This may serve as yet another indication that the FLEC will play a definite role in China's evolving strategy for the South China Sea. A clear pattern of increasing FLEC patrols is evident in the South China Sea, a point noted recently by Fravel using similar data.[30]

Another rather conspicuous and likely politically motivated deployment of FLEC ships occurred immediately after the confrontation with Japan in September 2010 concerning the Japan Coast Guard taking a Chinese trawler crew into custody in the East China Sea. The image of China FLEC cutters standing eye-ball to eye-ball with the Japan Coast Guard cutters in the disputed area produced significant consternation among Chinese observers who noted that their cutters did not compare favorably either in respect to size or capabilities.[31]

4) DISCUSSION

4.1 ***Positive Outlook***

Given the trends outlined above, it is important to state that the overall picture is one of steady and even dramatic improvement in China's approach to fisheries management. Various and numerous problems continue to plague this system (and will be analyzed in section 5.2), to be sure, but China is in no sense a "rogue" actor in regional and global fisheries, nor does it seem to be using fisheries issues as lever to coerce its neighbors within a scheme of maritime expansion, as has been alleged.

First and foremost, the Chinese leadership has made a series of important decisions that have set China on the right course. These have included the mid-1990s decision to strongly emphasize aquaculture in order to take production and employment pressure off of marine fisheries. Also important have been the series of fisheries

agreements that followed in that period of major reform with key maritime neighbors. Those agreements have resulted in many angry Chinese fishermen[32] and they are perhaps by nature imperfect, requiring constant fine-tuning, but they have crucially created a strong institutional framework and enduring precedent for regional cooperation in fisheries management. The "zero growth plan" adopted in 1999 stands as a landmark decision by the Chinese leadership that cut sharply and directly against the country's national ethos of growth.

The implementation gap remains, but this paper suggests that this problem is being addressed. For example, the fact that fishing tonnage in both Shandong and Guangdong provinces (two of the largest marine fishing areas) decreased during 2008-09 appears to reflect major efforts to better regulate Chinese marine fisheries. Likewise, although the Chinese DWF fleet is active now on all the world's oceans, it is noteworthy that it declined in size during 2008-09 (the second year in a row),[33] suggesting again that Beijing is actually not simply out to exploit the world's oceans down to the last fish. An especially critical component of China's apparent commitment to improving its fisheries is its robust development and cultivation of fisheries expertise, which is readily apparent in its many ocean policy and fisheries research journals, as well as in its support of dedicated and robust research efforts embodied in such quality institutions as China Ocean University (Qingdao) or Shanghai Ocean University. Indeed, the technocratic Chinese approach to marine resources management specifically is amply evident in the annual Chinese Fisheries Yearbook – a major source for this testimony. Chinese statistics have been problematic for fisheries science in the past, but the data are now much more credible, reporting as they do both good news and bad. Overall, it should be recognized that the practices of Chinese fishermen have important regional and global environmental consequences and so continued strengthening of the China FLEC is a crucial process not just for Chinese but also for the world.

4.2 ***Major challenges***

Despite the generally positive outlook flowing from a series of brave decisions in the 1990s, Chinese marine fisheries cannot yet be described as healthy. A few positive signs have been recorded, but overall fish stocks remain dangerously depleted and Chinese fisheries experts remain pessimistic.[34] A recent Chinese study found that pollution was a significant reason that Bohai fish production is now just 20% of what it was in the 1980s.[35]

As discussed previously, a consensus among Chinese maritime analysts holds that China's approach of multiple maritime enforcement agencies without any single "leading dragon" has created a problematic situation of confusion, inefficiency and general weakness. While some significant steps toward realizing integration among the maritime enforcement agencies has been achieved, the outlook is not especially promising in this regard. For example, the phenomena described in section four above of various provinces integrating maritime enforcement while others do not, is broadly suggestive of the pervasive decentralization in Chinese maritime enforcement that inhibits uniform and effective fisheries management. Moreover, despite some improvements in both personnel and capital, it seems that the development of the FLEC is not a very high priority – well behind the vigorous Maritime Safety Administration (MSA), for example.

Despite stricter enforcement measures and a variety of steps discussed above, major problems may continue to exist within the mechanics of Chinese enforcement. Thus, a recent report in the Chinese journal 海洋开发与管理 [Ocean Development and Management] notes that four of five critical fish species stocks off of Guangdong show no improvement under the current regime of regulation.[36] The summer fishing ban, perhaps China's most fundamental control on fishing effort, is controversial. One study, for example, claims that the summer ban is more effective than restrictions on mesh size and that significant improvements followed the 2009 decision to extend the ban from 12 weeks to 14.[37] Other Chinese specialists, however, argue that the summer ban fuels regional tensions (see section 5.3 below) and needs to be replaced by a more advanced system of tradeable quotas – a practice gaining acceptance among global fisheries experts. Without quotas in place (and related measures), it is reported that China has done little to track bycatch in its fisheries – a veritable gaping hole in its effort to restore ecological balance in its proximate seas. Chinese specialists are, moreover, very concerned about the increasing and somewhat unpredictable impact of mariculture on coastal ecosystems.[38] Another concern

articulated by Chinese specialists concerns the issue of 三无 [three nils] or illegal, unregulated and unreported (IUU) fishing.[39]

4.3 Disputes

There is little doubt that recent tensions, mixing with bitter historical memories and jealousies may combine to spawn a dangerous "fishing nationalism," in the related countries. Certainly, this phenomena is amply evident in Chinese discourse. Thus, a recent Chinese book on "emergency management" of fisheries incidents asserts: "Although our country has signed one after another fishing agreements with neighboring states, the number of fishing industry security incidents involving foreigners has unceasingly increased … Some countries even send warships to bump and sink our side's fishing boats…"[40] Also troubling is the seeming tendency to deploy either fishing boats (maritime militia) and/or FLEC vessels for obviously political purposes that are only peripherally related to fisheries. Related examples including dangerous incidents with U.S. surveillance vessels in March 2009 and also the interaction described in late 2010 with the Japan Coast Guard in disputed areas of the East China Sea.

"武器化" [Weaponization] has been identified as a major trend for the various components of Chinese maritime enforcement including the FLEC.[41] Significant gun armament on the newest FLEC cutter, as described in section four, implies a rather major departure for Chinese fisheries enforcement vessels that have always been unarmed. The same report offers detailed plans regarding how Chinese fisheries cutters might be "re-outfitted" in wartime for various combat missions including anti-submarine warfare. Such a complexion for elements of China's maritime enforcement capabilities would not be outside the norm for major coast guards, but is still suggestive of worrying trends extant in the region.

Undoubtedly, a more robust FLEC comprising a large fleet of advanced, armed cutters that wield aviation capabilities might be viewed as a looming threat by other regional claimants in the East Asian region. China is hardly disguising its intent to employ these new capabilities for enforcing maritime claims, in addition to improving fisheries management. Still, one hopeful way to approach this development is to consider a much starker alternative. Would it be better if Beijing regularly dispatched naval vessels "grey hulls" equipped with missiles to enforce its claims or perhaps the "white hulls" of the FLEC instead? Chinese maritime strategists, including within the military, seem to understand that employing civil maritime enforcement "white hulls" into volatile situations is less dangerous and escalatory than the deployment of "grey hulls." Another interesting aspect of Chinese policy concerns the 12 degrees lattitude line that the FLEC apparently employs in its enforcement activities in the South China Sea that strongly hints at a less extreme and more compromising approach to claims and resources by Beijing. Indeed, this pragmatic line could point the way toward an equitable division of the sea's resources on the basis of a negotiated compromise.

4.4 Cooperation

Even as fisheries disputes may form the "leading edge" of intensifying struggles for resources in the Asia-Pacific region, it is alternatively possible to consider how fisheries might simultaneously form one of the most pioneering and innovative aspects of bilateral and multilateral maritime cooperation in this volatile region. It is not widely known that quiet, technocratic cooperation has been on-going in this area between China and various neighbors and other important maritime powers including the U.S. for decades.

A successful record of fisheries cooperation between Washington and Beijing is especially noteworthy given the other tensions that have plagued the broader relationship. In 1993, a memorandum of understanding was reached between the countries to jointly act against driftnet fishing in the North Pacific, a practice prohibited by the United Nations. The memo established the innovative concept of posting a Chinese FLEC ship-rider aboard a USCG cutter in order to give the American ship the necessary jurisdiction to enforce the UN prohibition effectively. At this point, the FLEC has leaned upon the superior capabilities of the USCG in cooperating to

serve global environmental imperatives. China FLEC personnel and related specialists have also visited various U.S. fisheries enforcement training centers in Alaska and elsewhere. In the future, however, a more robust FLEC may become a more equal partner in this kind of cooperation, regularly dispatching one or more high endurance cutter to patrol the waters of the North Pacific. No doubt, this original form of cooperation has been supported by the broader cooperative institutional framework of the North Pacific Coast Guard Forum, enabling the USCG and various maritime enforcement agencies including the FLEC to develop essential habits of dialogue and cooperation.

Some may criticize these efforts as more symbolic than substantive, but that is not at all how such efforts are presented in Mandarin-language (i.e. for Chinese audiences) official reports wherein international exchanges and cooperation are actually prioritized, for example in the China Fisheries Yearbook 2010. Thus, the East Sea FLEC department report calls for "active development of China-ROK and China-Japan fisheries cooperation, accelerating bilateral trust … and enhancing the exchange of information," among other objectives. It also calls for strict enforcement against violations by Chinese fishermen of the waters of neighboring countries.[42] This is consistent with provincial level FLEC reports that also highlight the benefits of close international cooperation.[43]

5) ANSWERS TO SPECIFIC QUERIES

a. How central are fish resources to territorial disputes in the East China Sea and South China Sea? What fishing resources are at stake? The fishing factor is of intermediate importance in these disputes. On the one hand, depleted stocks and pollution are pushing Chinese fishermen further off shore. Among maritime industries, marine fisheries and aquatic products remains one of the more significant in terms of profits. Also, fishermen are a vocal minority and they do not hesitate to play the nationalism card. On the other hand, Beijing has taken steps (elaborated above) to reign in its own fishermen and its significant overcapacity. China has also engaged in significant cooperation with neighboring in the domain of fisheries – though these cooperative steps are not often covered by journalists. Finally, it is well known that oil and gas exploration issues are the primary drivers of each of these disputes. If fully developed, offshore energy development in these regions would likely substantially dwarf fisheries profits.

b. What Chinese and foreign actors have been involved in fishing-related skirmishes in the disputed waters of East and Southeast Asia? To what extent can Chinese and other fishermen be characterized as proxies? Over the last several years, China has found itself entangled in fishing disputes with most of the region's countries, including especially South Korea, Japan, Philippines, Indonesia, and Vietnam. Occasionally, these incidents have resulted in violence and the loss of life. However, it is also worth noting that international fisheries cooperation has also occasionally resulted in the saving of lives (e.g. Chinese rescue of Vietnamese fishermen) and also the decreasing of tensions, as between China and Taiwan. With respect to various Chinese agency involvement with fisheries, management is mostly handled by the Ministry of Agriculture, but the Public Security Ministry and the State Oceanic Administration each also play important roles. It would not be quite accurate to characterize Chinese fishermen as proxies of the state. As with fishermen everywhere, most Chinese fishermen are inclined to keep their dealing with state institutions to a minimum. However, China does formally organize at least some segments of the fishing fleet as a "maritime militia." Though some incidents seem clearly to be orchestrated by Beijing (e.g. the March 2009 *Impeccable* incident), most incidents have featured Chinese fishermen getting into trouble of their own accord. In fact, there is ample evidence that Beijing wants to reduce and manage such incidents.

c. How do Chinese fishing activities impact maritime security and freedom of navigation in the region? Are there clear implications for U.S. interests? The question is no doubt prompted by the March 2009 incident in which Chinese fishing boats surrounded and navigated recklessly in dangerous proximity to USNS *Impeccable*. Such incidents endanger the lives of mariners and therefore are rightly condemned. However, the dangers to the freedom of navigation through the South China Sea that flow from this particular incident have been exaggerated. First, there is no discernible pattern of deploying fishing vessels against U.S. surveillance vessels – the incident remains exceptional, as least as far as open source reporting has revealed. Second, the incident does reflect a genuine difference in interpretations of the Law of the Sea, in particular regarding military activities in the EEZ. Third, the incident may be

regrettable, but it is worth considering that Beijing has chosen to indicate its displeasure with such surveillance activities by deploying civilian, unarmed vessels for the most part. That clearly suggests that China is not looking to escalate the crisis to a military confrontation. As indicated elsewhere in this paper, "white hulls" or unarmed fishing vessels in these incidents are preferable to grey hulls armed with cannons and missiles. The U.S. cannot and should not retreat from its widely accepted legal position regarding military activities in the EEZ. Nevertheless, Washington would be wise to consider reducing these surveillance missions in China's EEZ in return for increasing Chinese military transparency. Given modern Chinese history with "gunboat diplomacy," such missions conducted at a high rate of frequency are doing more harm than good for international security. The United States should take a more relaxed approach to China regarding freedom of navigation issues. After all, the rising maritime juggernaut that is contemporary China benefits enormously from freedom of navigation, and thus is very unlikely to block other states from doing so, not least because of its own intense vulnerability to blockade.

d. Are there any specific cooperative bilateral or multilateral measures to ensure sustainable and secure fishing practices in contested areas of the East China Sea or South China Sea? How effective are these measures? With regard to bilateral steps, it is worth emphasizing that bilateral fisheries agreements have been in place since the late 1990s. These agreements, while very far from perfect, have had some noteworthy successes, including for example, joint Vietnamese and Chinese fisheries patrols. In another example, it seems that Chinese maritime enforcement personnel have attended the Japan Coast Guard Academy with some regularity. As related above, it is important to note that Chinese fisheries reports draw attention to the successes of bilateral fisheries agreements – strongly suggesting that Chinese fisheries personnel are keen to demonstrate to the Beijing national leadership that they are working effectively with international partners. One way to energize these useful connections would be to establish a South Pacific Coast Guard Forum on the model of the North Pacific Coast Guard Forum – an organization that has had some major success in coping with the complex issues of civil maritime enforcement, rescue and management in the volatile region of Northeast Asia.

e. What are your recommendations for Congressional action regarding these matters? Contrary to conventional wisdom, the U.S. government (including Congress) should actually be less concerned with the disputes in the East China Sea and South China Sea. These disputes do not directly involve U.S. national security interests, and the U.S. should avoid triggering inadvertent escalation of these conflicts by intervening. Indeed, escalation of the South China Sea dispute since 2009 has partly resulted from Washington's more proactive stance, unfortunately. Tensions and anxiety are bound to accompany the rise of China, but resources disputes between neighbors are natural and wholly expected. Some related muscle flexing is also to be expected, but the fact that Beijing has not resorted to the significant use of force in more than three decades should be the basis for significant confidence that major military conflicts will be avoided in both of these cases. As regards effective fisheries management in East Asian waters, it is advisable that the U.S. Coast Guard maintain and even increase it helpful role. The non-threatening "white hulls" of the USCG are welcome everywhere in the region – offering genuine experience in combating the non-traditional security threats, from fish poaching to narco-trafficking -- that are of greatest concern. Indeed, the USCG has built a strategically significant reservoir of trust over time with various Chinese maritime enforcement authorities – though this cooperation is unduly limited, for example with respect to Chinese students at the US Coast Guard Academy, by statute. Congress should act to remove limits on this unique and helpful relationship that supports East Asian maritime security. Moreover, given USCG's very important role in international engagement, USCG needs to be funded at appropriate levels so that day-to-day security and rescue missions (the obvious priority) do not curtail outreach and engagement missions that are of secondary importance, but are still very significant for enhancing national security.

6) CONCLUSION

The conclusion of this preliminary survey of various Chinese-language materials related to fisheries, rarely examined by Western scholars, yields the tentative conclusion that significant, albeit incremental progress is

occurring in Chinese practices as demonstrated by major leadership commitment, the impressive related research apparatus, clear efforts to improve the China FLEC in order to close the implementation gap in Chinese fisheries, and an evident Chinese enthusiasm for bilateral and multilateral cooperation.

As enumerated in section four, major flaws are still evident in Chinese fisheries enforcement, such as tabulating and reducing bycatch but the trend is generally positive for the global environment and deserves international support. To be sure, small states in dispute with China over maritime claims will no doubt be anxious regarding a more capable FLEC that will carry the Chinese flag more frequently and on larger vessels into disputed waters. Still, there is little evidence at this point of Beijing recklessly pushing its fishermen and enforcement vessels into disputed zones. Rather, China appears to be generally trying to minimize the deleterious impact of fisheries complications on relations with crucial neighbors.

Contemporary China is always looking for external models to aid in its development process. Thus, it is not surprising to find Chinese specialists puzzling over the lessons of the 18 year struggle over fisheries between the United Kingdom and Iceland in the so-called "Cod War."[44] One may hope that a major lesson of that dispute for China is that the country with the bigger navy does not necessarily prevail in maritime disputes. However, Westerners evaluating Chinese policies in East Asian waters also need to recognize that current evidence suggests that Beijing is, as in many countries, facing a wave of discontent among fishermen, but still making gradual and earnest efforts to comply with emerging international norms regarding maritime governance.[45]

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[1] Choe Sang-hun, "Chinese Fisherman Kills South Korean Coast Guardsman," New York Times, 12 December 2011, at www.nytimes.com/2011/12/12/world/asia/chinese-fisherman-kills-south-korean-coast-guardsman.html. For a surprisingly candid Chinese perspective, see Cui Jia and Liu Ce, "Fishermen Ride Wave of Discontent," China Daily, 13 January 2012, p. 1.

[2] Keith Bradsher, "Amid Tension, China Blocks Vital Export to Japan," New York Times, 22 September 2010, at www.nytimes.com/2010/09/23/business/global/23rare.html.

[3] Taylor Fravel, "Maritime Security in the South China Sea and the Competition Over Maritime Rights," in Patrick Cronin (ed.), Cooperation From Strength: the United States, China and the South China Sea (Washington DC: Center for New American Security, 2012), pp. 37-38.

[4] 银河 [Yin He] "**中国近海**执法力量 [Development of China's Littoral Law Enforcement Force and Its Equipment] 舰载武器 [Shipborne Weapons] (March 2011), p. 16.

[5] 银河 [Yin He] "**中国近海**执法力量 [Development of China's Littoral Law Enforcement Force," p. 18.

[6] 2009**中国**渔业年鉴 [2009 China Fisheries Yearbook] (Beijing: China Agricultural Press, 2009, p. 2.

[7] Huiguo Yu and Yunjun Yu, "Fishing Capacity and Management in China: Theoretic and Practical Perspectives," Marine Policy 32 (2008), pp. 353, 355.

[8] 银河 [Yin He] "**中国近海**执法力量 [Development of China's Littoral Law Enforcement Force and Its Equipment], p. 18.

[9] 2009**中国**渔业年鉴 [2009 China Fisheries Yearbook], pp. 4-5.

[10] Yunjun Yu and Yongtong Mu, "The New Institutional Arrangement for Fisheries Management in the Beibu Gulf," *Marine Policy* 30 (2006), p. 251.

[11] **慕永通**[Mu Yongtong] 渔业管理: **以基于**权利的管理为中**心** [Fisheries Management: Focusing on a Rights-Based Regime] (Qingdao: China Ocean University Press, 2006), p. 292.

[12] **何忠**龙 [He Zhonglong et al]， **中国海岸警**卫队组成研究 [Research on the Creation of a Chinese Coast Guard] (Beijing: Ocean Press, 2007)., p. 54.

[13] **何忠**龙 [He Zhonglong et al]， **中国海岸警**卫队组成研究 [Research on the Creation of a Chinese Coast Guard], p. 41.

[14] The data in this paragraph is drawn from 2010**中国**渔业年鉴 [2010 China Fisheries Yearbook], (Beijing: China Agricultural Press, 2010), pp. 186, 188, 154, 158.

[15] The data in this paragraph is drawn from 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], p. 187.

[16] The data in this paragraph is drawn from 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], p. 186.

[17] 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], p. 208.

[18] The data in this paragraph is from 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], pp. 207, 221.

[19] "**中国**计划未来5**年内建造**30**艘海上**执法船" [China Plans to Build 30 Maritime Enforcement Cutters Over the Next 5 Years] **中国新**闻网 [China News Net] 11 October 2010.
[20] 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], p. 26.
[21] 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], p. 118.
[22] 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], p. 18-19.
[23]**中国**100**万**渔船将可装备国产卫星双向通信设备 [One Million Chinese Fishermen Will Be Equipped with Two Way Satellite Communications Equipment] **新**华网 [Xinhua Net] 22 May 2009.
[24] Interviews, Qingdao, December 2011.
[25] 2009**中国**渔业年鉴 [2009 China Fisheries Yearbook], p. 5.
[26] 陈韬颖[Chen Taoying] "**中国**渔政310**船**" [China Fisheries Enforcement Vessel 310] 舰船知识 [Naval and Merchant Ships] (December 2010), p. 71.
[27]严寅央 [Yan Yinyang, ed.]**海**业卫士: **平安**选择1997-2007 [Guardian of the Ocean Industry: the Choice for Security] (Hangzhou: Zhejiang Province Fisheries Law Enforcement Command, 2006), p. 23.
[28] Fravel, "Maritime Security in the South China Sea," p. 38.
[29] **中国首艘X西沙群**岛大型渔政船投入使用 [China Initiated the Basing of the First Large Fisheries Enforcement Cutter in the Paracel Islands] 舰船知识 [Naval and Merchant Ships] (November 2011), p. 13.
[30] Fravel, "Maritime Security in the South China Sea," p. 37.
[31] **海**韬 [Hai Tao] "**中国**酝酿建'**第二海**军'执法舰应配火炮" [China Must Affix Cannons As it Builds Its 'Second Navy'"] **国**际先驱导报 [International Herald Leader] 27 November 2010.
[32] See, for example, Cui Jia and Liu Ce, "Fishermen Ride Wave of Discontent," China Daily, 13 January 2012, p. 1.
[33] 2009 **中国**渔业年鉴 [2009 China Fisheries Yearbook], p. 14.
[34] Interviews, Qingdao, December 2011.
[35] 张显良 [Zhang Xianliang, editor] **中国**现代渔业体系建设**关**键技术发展战略研究 [Strategic Research on the Key Technologies and Development of China's Contemporary Fishing System] (Beijing: China Ocean Press, 2011), p. 66.
[36] **候秀**琼 [Hou Xiuqiong et al], "2007-08**年伏季**渔深圳**市海域**鱼类资源调查研究" [Research on the Fisheries Resources of the Shenzhou Sea Area During the Hot Season Moratoriums of 2007-2008] " **海洋开**发与管理 [Ocean Development and Management] Vol. 21, No. 6, January 2009, p. 111.
[37] 严利平 [Yan Liping et al] "东海区拖网新伏季渔渔业生态和资源增殖效果的分析" [Effect of New Summer Close Season of Trawl Fisheries on Fishery Ecology and Resource Enhancement in East China Sea] **海洋**渔业 [Marine Fisheries], Vol. 32, No. 2 (May 2010), pp. 185-191.
[38] Interviews, Qingdao, December 2011.
[39] 许浩 [Xu Hao] "**管制**IUU**捕**捞的渔业法对策" [Law and Policy for Controlling IUU Fishing] **海洋开**发与管理 [Ocean Development and Management], Vol. 26, No. 8, (August 2009), p. 26.
[40] Li Zhujiang (ed.), The Ocean and the Fishing Industry: Emergency Management (Beijing: Ocean Press, 2007), p. 299. [in Chinese]
[41] 银河 [Yin He] "**中国近海**执法力量 [Development of China's Littoral Law Enforcement Force and Its Equipment], p. X.
[42] 2010 **中国**渔业年鉴 [2010 China Fisheries Yearbook], pp. 118-122.
[43]***忠于法律*** *执**法**为**民** **浙江省**查处**北太非法流网工作**简报* [Faithful to the Law, Enforcement Serves the People : Short Report of Work Concerning the Investigation of Illegal Drift Nets in the North Pacific] (Hangzhou: Zhejiang Province Fisheries Law Enforcement Command, 2009).
[44] 蓝云 [Lan Yun, ed.] 鳕鱼战争 [The Cod War] 现代舰船 [Modern Ships] (XX), pp. 28-31.
[45] Cui Jia and Liu Ce, "Fishermen Ride Wave of Discontent," China Daily, 13 January 2012, p. 1.