

TROUBLE IN THE CARIBBEAN: RESPONSES TO A POTENTIAL CHINESE-BAHAMIAN BILATERAL FISHING AGREEMENT

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ABSTRACT

As of 2011, the Caribbean Sea was one of the only fisheries unoccupied by China's Distant Water Fleet (DWF). However, in 2016, officials from the People's Republic of China and the Bahamas discussed a proposal for a bilateral commercial fishing agreement in Bahamian waters. An official agreement was never proposed, but given the notoriety of China's DFW and the Bahamas' monitoring and enforcement problems, such an agreement could have devastating impacts on the Caribbean fishery.

The proposal received international criticism from fishermen, scientists, and politicians, demonstrating the perennial conflict between the global commercial fishing industry and those engaged in recreational, sport, or subsistence fishing. In 1982, the United Nations Convention on the Law of the Sea (UNCLOS) attempted to resolve this conflict by establishing fishery conservation measures. However, these measures are undermined by concepts such as maximum sustainable yield and optimum utilization, which prioritize the market value of a fishery's resources over its recreational value. As the global commercial fishing industry begins to converge on one of the last fishing frontiers, the United States must shift how the world views fishery management. This article will discuss how stakeholders to the agreement can use both legal principles and non-legal incentives to induce the Bahamas to remain a sport fishing haven and support its artisanal fishing industry.

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I. INTRODUCTION

Although China's Distant Water Fleet (DWF) extends to almost every major fishery in the world, as of 2011, Chinese commercial vessels were not fishing in the Caribbean Sea.¹ However, in October 2016, officials from the People's Republic of China and the Bahamas shocked the Caribbean fishing community by discussing a proposal for a bilateral commercial fishing agreement in Bahamian waters.² While the Bahamas' commercial fishing industry effectively captures inshore resources like spiny lobster, Nassau grouper, and queen conch,³ its offshore pelagic fishery⁴ is harvested exclusively by tourists and recreational fishers.⁵ Therefore, pelagic fish landings are often underreported, and the fishery is considered underexploited by current fishery management standards.⁶

China is a cooperative member of many international conservation and sustainability organizations.⁷ However, in a 2009 survey measuring compliance with the FAO's Code of Conduct for Responsible Fisheries, China's DWF had a failing grade in Illegal, Unreported, and Unregulated (IUU) fishing, ranking 44th out of 53

1. Daniel Pauly, et al., *China's Distant-Water Fisheries in the 21st Century*, 15 FISH & FISHERIES 474, 477 (2014).

2. Candia Dames, *Letter Proves Gray Wrong*, NASSAU GUARDIAN (Nov. 2, 2016), <https://thenassauguardian.com/2016/11/02/letter-proves-gray-wrong/>.

3. CARIBBEAN REGIONAL FISHERIES MECHANISM, CRFM STATISTICS AND INFORMATION REPORT FOR 2012 32–33 (2014). The inshore fishery consists of species living in habitats from shallow-water coral reefs to the continental drop off point, where the continental shelf descends towards the deep ocean floor. *Id.* at 15–16 tbl.6.

4. The offshore pelagic fishery consists of medium and large sized fish such as tuna, mackerel, and marlin, living in the open waters of the ocean. *Id.* at 15 tbl.6.

5. ROB SOUTHWICK ET AL., FAO, W. Cent. Atl. Fishery Comm'n, *Recreational Fisheries Economic Impact Assessment Manual and its Application in Two Study Cases in the Caribbean: Martinique and The Bahamas* 95, 100 (2016).

5. *Id.*

6. *See generally*, BISSAR CHAKALALL & KEVERN COCHRANE, FAO FISHERIES TECH. PAPER, *MANAGEMENT OF LARGE PELAGIC FISHERIES IN CARICOM COUNTRIES 1* (Robin Mahon & Patrick McConney eds., 2004) (explaining the state of deep-water pelagic fisheries in CARICOM countries); Sean Hern, *Competing Values: Taking a Broad View on the Narrowing Conservation Regime of the 1982 United Nations Convention on the Law of the Sea*, 16 AM. U. INT'L L. R. 177, 194–95 (2000) (arguing that UNCLOS concepts like maximum sustainable yield and optimum utilization emphasize the market value of a fishery over its potential value as a sports fishery, leading to the determination that the fishery is “underutilized”).

7. *See, e.g., Regional Fishery Bodies Summary Descriptions: International Commission for the Conservation of Atlantic Tunas*, FAO, <http://www.fao.org/fishery/rfb/iccat/en> (last visited Apr. 6, 2018) (listing China as a member of ICCAT— the International Commission for the Conservation of Atlantic Tunas); *About WCPFC*, W. & CENT. PAC. FISHERIES COMM'N, <https://www.wcpfc.int/about-wcpfc> (last visited Apr. 6, 2018)(listing China as a member of the WCPFC— the Western & Central Pacific Fisheries Commission).

countries.⁸ Given the notoriety of China's DFW⁹ and the Bahamas' monitoring and enforcement problems,¹⁰ an agreement between China and the Bahamas could have a devastating impact on the Caribbean fishery. Stakeholders in Florida and in the Bahamas, many of whom rely on the fishery for either subsistence or recreational fishing, heavily criticized the proposed agreement.¹¹ Eventually, discussions ceased before the Bahamian government officially considered an agreement.¹²

Public response to a Chinese-Bahamian bilateral fishing agreement highlights the longstanding battle between the global commercial fishing industry and those engaged in recreational, sport, or subsistence fishing. However, current ocean law fails to strike a balance between these two parties, emphasizing the optimal exploitation of resources over non-consumptive management objectives.¹³ Although the United Nations Convention on the Law of the Sea (UNCLOS) created some conservation measures,¹⁴ concepts such as maximum sustainable yield and optimum utilization undermine these measures by prioritizing the aggregate market value of a fishery's resources.¹⁵ Policymakers should instead consider a

8. TONY J. PITCHER, ET AL., SAFE CONDUCT? TWELVE YEARS FISHING UNDER THE UN CODE 26 (2008). Although this score was for China as a whole, rather than its Distant Water Fleet, the ranking can be mostly attributed to acts of the DWF since the China regulates its domestic fishing industry tighter than its DWF. See Tabitha Grace Mallory, Ph.D. Candidate in China Studies, Johns Hopkins School of Advanced International Studies, Testimony before the U.S.-China Economic and Security Review Commission 5 (Jan. 26, 2012) [hereinafter Mallory Testimony].

9. For a discussion of abuses by China's DWF, see Section II.C.

10. SOUTHWICK ET AL., *supra* note 5, at 100.

11. Natario McKenzie, *Fishermen Blast \$2.1bn China Deal*, TRIBUNE (Bah.), Nov. 7, 2016, <http://www.tribune242.com/news/2016/nov/07/fishermen-blast-21bn-china-deal/> (reporting criticism from the president of the Bahamas Commercial Fishing Alliance); Jim Turner, *Talks to Sell China Fishing Rights in Bahamas Alarm Florida*, PALM BEACH POST, Nov. 16, 2016, <http://www.palmbeachpost.com/news/national/talks-sell-china-fishing-rights-bahamas-alarm-florida/JAhVZ6Dozi3fgkZ6PgyJqM> (noting the Florida Fish and Wildlife Commission's concern over an agreement's potential impact on the state's fisheries); Steve Waters, *Florida Anglers Help Stop Proposed China-Bahamas Deal*, SUN SENTINEL, Nov. 29, 2016, <http://www.sun-sentinel.com/sports/outdoors/fl-outdoors-fishing-report-1130-20161129-story.html> (noting that the Bahamian government was overwhelmed with contact from Florida fishermen denouncing a proposed Chinese-Bahamian fishing agreement).

12. Sloan Smith, *PM: Proposal with China is a no go*, NASSAU GUARDIAN, Nov. 22, 2016, <http://thenassauguardian.com/2016/11/22/pm-proposal-with-china-is-a-no-go/>.

13. EUGENE H. BUCK, CONG. RESEARCH SERV., RL32185, U.N. CONVENTION ON THE LAW OF THE SEA: LIVING RESOURCES PROVISIONS 3 (2011).

14. See generally United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

15. Hern, *supra* note 6.

regime that adequately recognizes an area's economic value as a sports fishery and conservation value as a conservation area.

As the global commercial fishing industry begins to converge on one of the last fishing frontiers, the United States must shift how the world views fishery management. This article will discuss how the United States and other stakeholders can use both legal and non-legal incentives to induce the Bahamas to remain a sport-fishing haven and support its artisanal fishing industry.¹⁶

II. A CHINESE-BAHAMIAN COMMERCIAL FISHING AGREEMENT: PARTIES, DISCUSSIONS, AND POTENTIAL PROBLEMS

UNCLOS established rules governing the worlds' oceans, many of which are now generally accepted principles of international law.¹⁷ Central to these rules is the concept of an exclusive economic zone (EEZ), which is a 200 nautical mile limit around a coastal state in which the state has the exclusive right to explore, exploit, conserve, and manage natural resources.¹⁸ This right carries corresponding obligations, including a duty to promote the "optimum utilization" of resources within the EEZ.¹⁹ The duty of optimum utilization has contributed to numerous bilateral fishing agreements that allow a foreign state to exploit unused resources in a coastal state's EEZ.²⁰ China is a major player in this industry, sending vessels to approximately 79 countries as of 2012.²¹

16. Although this article will primarily focus on activities inside the Exclusive Economic Zone (EEZ) of the Bahamas, many of the arguments may also apply to the rest of the Caribbean countries. The region's tight concentration of sovereign islands results in a fishery consisting entirely of each country's EEZ. Asha Singh, *Governance in the Caribbean Sea: Implications for Sustainable Development 3* (Dec. 20, 2008) (unpublished research paper, United Nations- Nippon Foundation Fellowship Programme). The fishery does not have any high seas. Most countries in the Caribbean fishery are similar to the Bahamas in that they have modestly developed commercial fishing industries in relation to tourism. *See generally* CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3 (describing each member states' commercial fishing industries). Thus, this article extends to the entire Caribbean fishery.

17. For which provisions are considered customary international law, *see* Ashley J. Roach, *Today's Customary International Law of the Sea*, 45 OCEAN DEV. & INT'L L. 239 (2014).

18. UNCLOS, *supra* note 14, at art. 56.

19. *Id.* at art. 62.

20. Mallory Testimony, *supra* note 8, at 2.

21. BLOMEYER, ET AL., EUR. PARL. COMM. ON FISHERIES, *THE ROLE OF CHINA IN WORLD FISHERIES* 67 (2012). Due to the lack of transparency surrounding Chinese bilateral agreements, the exact number of countries with which China has officially formed an agreement is difficult to calculate. *Id.*

A. *The Parties*

The Commonwealth of the Bahamas, located only 50 miles from the United States at its closest point, is a sovereign archipelagic state in the Caribbean containing over 700 islands, cays, and islets.²² Because of its dispersed nature, the Bahamas has the largest EEZ in the Caribbean, more than double the size of the next largest country.²³ To put this into perspective, the Bahamas' EEZ is only 28 percent smaller than China's EEZ, despite having a fraction of the land area and economic resources.²⁴ Perhaps due to its proximity to the United States and vast ocean resources, the Bahamas boasts the second highest per capita GDP in the Caribbean, 75-80 percent of which comes from tourism.²⁵ Recreational fishing contributes to approximately five percent of the country's total GDP, while commercial fishing contributes to less than one percent.²⁶

Bahamian fisheries consist of the following sectors: (1) an artisanal commercial fishery that primarily targets demersal species, such as queen conch and spiny lobster; (2) a large-scale, commercial spiny lobster fishery; (3) a sport and recreational fishery; and (4) a subsistence fishery in which fish are consumed by fishers and their families.²⁷ Although the Bahamas' commercial fishing industry effectively captures inshore resources like spiny lobster, Nassau grouper, and queen conch,²⁸ its offshore pelagic fishery is harvested exclusively by tourists and recreational fishers targeting species like mahi-mahi, wahoo, tuna, swordfish, and marlin.²⁹

China's Distant Water Fishing Fleet (DWF) is the other party to the potential agreement. "Distant waters" refer to major fishing areas

22. *Geography*, THE BAHAMAS, <http://www.bahamas.co.uk/about-the-bahamas/facts/geography> (last visited Dec. 11, 2017).

23. CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3, at 4.

24. Although the boundaries of both country's EEZ is in dispute, the Bahamas' EEZ is approximately 629,293 sq. km., while China's EEZ is 877, 019 sq. km. *Id.* at 4.

25. *The World Factbook: The Bahamas*, CIA, <https://www.cia.gov/library/publications/the-world-factbook/geos/bf.html> (last updated Nov. 29, 2017).

26. In 2014, the total GDP of the Bahamas was \$8.98 billion. *Id.* At this time, the FAO estimated that the recreational fishing industry contributed approximately \$411 million to the GDP and commercial fishing contributed approximately \$80 million. SOUTHWICK ET AL., *supra* note 5, at 99. This comes out to about 4.6% and .09%, respectively.

27. Nicola S. Smith & Dirk Zeller, *Bahamas Catch Reconstruction: Fisheries Trends in a Tourism-Driven Economy (1950-2010)* 2 (Fisheries Ctr., U. OF B.C., Working Paper No. 2013-08, 2008) <http://www.seaaroundus.org/doc/publications/wp/2013/Smith-and-Zeller-Bahamas.pdf>.

28. CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3, at 32-34 tbl.17.

29. *Id.*; SOUTHWICK ET AL., *supra* note 5.

that are not adjacent to the fishing country, such as the high seas³⁰ or the EEZ of another country.³¹ In 2010, China's DWF became the largest in the world, totaling approximately 1,900 vessels.³² At this time, the fleet consisted mainly of old vessels without adequate equipment and technology for long-range sea travel.³³ Therefore, its production capacity was lower than fleets in other developed countries.³⁴ To combat this problem, China implemented a five-year plan to develop large-scale fishing operations expected to produce 1.7 million tons by 2015. The plan included measures to expand and update the DWF fleet and utilize remote ports in fishing operations.³⁵ The initiative succeeded. From 2013 to 2014, the fleets' catch estimates grew from 1.35 million tons to 2 million tons – a 48 percent increase.³⁶ This figure might be much larger; a study by the European Parliament contends that China massively underreports its DWF statistics by overlooking catches from IUU fishing and catches from joint ventures with a coastal country to fish in that country's EEZ.³⁷ The study estimates that China's DWF instead caught an average of 4.6 million tons a year from 2000 to 2011.³⁸ Regardless, it is clear that China's DWF has become one of the world's most powerful fishing fleets.

China has many possible motivations for expanding its DWF fleet. First, the country has a growing need for fish as a domestic food source. Although fish consumption is difficult to estimate, even conservative approximations show that China's fish consumption has more than doubled since 1990.³⁹ However, an analysis of what

30. The area outside a country's EEZ is known as the "high seas." UNCLOS, *supra* note 14, at art. 86. This area is open for fishing to all states. *Id.* at art. 87.

31. Mallory Testimony, *supra* note 8, at 2.

32. *Id.* at 3.

33. FAO, THE STATE OF WORLD FISHERIES AND AQUACULTURE 31 (2016), <http://www.fao.org/3/a-i5555e.pdf> [hereinafter *State of the World's Fisheries*].

34. *Id.*

35. Mallory Testimony, *supra* note 8, at 3.

36. FAO, STATE OF THE WORLD'S FISHERIES AND AQUACULTURE, *supra* note 33, at 9–10 (noting the catch estimates officially reported by China). The catch statistics of China's DWF, depend on the fleet's scope. China's EEZ is located in a larger area known as "61 Northwest Pacific." *Id.* China officially reported the above statistics for catches from its distant water fishery. However, this includes all area outside China's EEZ, including the area inside 61 Northwest Pacific. If the scope of China's DWF is narrowed to include only the area outside 61 Northwest Pacific, the catch statistics would be much smaller— 586,000 tons in 2013 and 880,000 tons in 2014. These figures still amount to about a 50% increase. *Id.*

37. *Id.* at 21.

38. *Id.*

39. BLOMEYER, ET AL., *supra* note 21, at 59–60.

Chinese companies do with the fish might reveal a more telling motivation. One expert estimated that China exported almost half of its fish (many of which were high-value fish) to developed countries, implying that the growth of China's DWF is driven by economic concerns rather than domestic food consumption.⁴⁰ Finally, China may view current ocean expansion as the key to guarding future ocean interests. In 2010, China created a task force to analyze its DWF industry.⁴¹ In advocating for expansion of the fleet, the task force argued that the countries with longer histories of using the ocean have more influence on how ocean resources are distributed and receive a larger share.⁴² Policy makers should consider these drivers when determining how to best limit the environmental impact of China's DWF in the Caribbean.

China's DWF industry is heavily dependent on subsidies.⁴³ In fact, Chinese economists estimated that government subsidies accounted for approximately half of the net profits of China National Fisheries Corporation, the country's largest international fishing company.⁴⁴ Perhaps because of this dependence, the once state-owned industry is now 70% privately owned.⁴⁵ As a result, the Chinese government has lost control of its DWF industry, leading to inaccurate reporting by the fleet.⁴⁶ In a 2009 study measuring countries' compliance with the FAO Code of Conduct of Responsible Fisheries, China received a passing score on intentions but a failing score on enforcement.⁴⁷ Unlike state-owned fisheries, private companies do not report data for accidentally caught recreational fish species, and they report inaccurate information regarding location

40. Tabitha Mallory, *China's Distant Water Fishing Industry: Evolving Policies and Implications*, 38 MARINE POL'Y 99, 100 (2013) [hereinafter *China's DWF Industry*].

41. Mallory Testimony, *supra* note 8, at 3.

42. *Id.* (discussing the task force's report). The report stated, "if you occupy and possess, then you have rights and interests." *Id.*

43. *Id.* at 4.

44. *See id.* (discussing a report from three Chinese economists); *About us*, CHINA NAT'L FISHERIES CORP., http://www.cnfc.com.cn/view_en.asp?classid=14 (last visited Dec. 10, 2017).

45. BLOMEYER ET AL., *supra* note 21, at 31.

46. Mallory Testimony, *supra* note 8, at 3.

47. PITCHER ET AL., *supra* note 8, at 11 fig.5.

and species type.⁴⁸ This creates problems for host countries seeking to measure the impact of China's DWF on the country's resources.⁴⁹

B. Discussion Timeline & Proposal Details

In a letter dated October 3, 2016, the Minister of Agriculture and Marine Resources for the Bahamas authorized the Ambassador to China to pursue an agreement that would China access to fishing rights in Bahamian waters.⁵⁰ The Bahamian Ambassador to China did, in fact, speak to a Chinese official about such an agreement.⁵¹ The contemplated proposal allowed for 100 corporate entities, each equally owned by Chinese and Bahamian companies, to receive commercial fishing licenses.⁵² In return, over a 10-year period, the Chinese promised to invest \$2.1 billion in the form of cash, equipment, and expertise.⁵³ Although the proposal called for joint ownership of the companies, it prohibited non-Bahamians from operating the fishing vessels.⁵⁴ The proposal did not specify what species of fish the new vessels would target, but most people believe the agreement was intended to exploit the Bahamas' pelagic migratory fish resources.⁵⁵

Prior to 2016, the Bahamas had been opposed to any kind of foreign fishing. In 1993, controversy arose when a faction of the Bahamian cabinet reportedly considered allowing foreign fleets of

48. JIAHUA CHENG ET AL., AN ESTIMATION OF COMPLIANCE OF THE FISHERIES OF CHINA WITH ARTICLE 7 (FISHERIES MANAGEMENT) OF THE UN CODE OF CONDUCT FOR RESPONSIBLE FISHING 9 (2013), <https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbx0b255cGl0Y2hlcnclYnNpdGV8Z3g6Njc5ZWwMTc1OTY3NmMxYg>.

49. See *infra* pp. 13–14 (discussing effect of unreliable data on overfishing).

50. Dames, *supra* note 2.

51. Rashad Rolle, *D'Aguiar: Govt Selling Souls to the Chinese*, TRIBUNE (Bah.) (Nov. 3, 2016), <http://www.tribune242.com/news/2016/nov/03/daguilar-govt-selling-souls-chinese/>.

52. Dames, *supra* note 2.

53. *Id.*

54. *Id.*

55. *BNT Statement on Proposal for Chinese Funding for Investment in Bahamian Fishing Industry*, BAHAMAS NATIONAL TRUST (Nov. 5, 2016), <https://bnt.bs/bnt-statement-on-chinese-investment-bahamian-fishing-industry/> (noting that scientific assessments of pelagic fish stocks would be necessary to be fully informed of the ramifications of the agreement). The Bahamian Ambassador to China stated that he “planned to meet with Bahamian fishermen to see if there was any interest in joint ventures with Chinese capital to expand into areas *that are traditionally not exploited.*” *Id.* The deep-water pelagic fishery is one of the last Bahamian fisheries not exploited by the commercial sector. CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3, at 32–34 tbl.17. Given Ambassador Gomez's comments, current speculation over the agreements purpose is probably correct.

long-line trawlers access to the country's fisheries.⁵⁶ Parliament responded by banning long-line fishing.⁵⁷ In 2003, a fleet of Korean fishing vessels was spotted fishing in Bahamian waters under the banner of a Bahamian company.⁵⁸ However, the Bahamian government did not issue the company permits, and the fleet departed.⁵⁹ In 2007, the country allowed a Chinese company to "experimentally" harvest shark fins and sea cucumbers as part of a joint venture with the Bahamas.⁶⁰ Sharks were later protected, but the company is still harvesting sea cucumbers.⁶¹ Considering the government's prior protectionist attitude towards its fisheries, discussions between Bahamian and Chinese officials regarding a bilateral fishing agreement represent a significant policy shift.

The discussions received heavy criticism from U.S. Senator Marco Rubio, Floridian stakeholders, fishermen, environmental groups, scientists, and members of the Bahamian government.⁶² Although the Bahamian government repeatedly downplayed the discussions, there is reason to believe that a similar agreement could happen in the future.⁶³ Even after the Bahamian Prime Minister stated that the cabinet would have rejected such a proposal, the Minister of Agriculture and Marine Resources stated that he "has not withdrawn the letter," and expressed fear that the Chinese would

56. Larry Smith, *Tough Call: What Chinese Fishing Proposal Means for the Bahamas*, TRIBUNE (Bah.), Nov. 9, 2016, <http://www.tribune242.com/news/2016/nov/09/tough-call-what-chinese-fishing-proposal-means-bah/>.

57. *Id.*

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.*

62. See *Nominations Before the S. Comm. on Foreign Relations*, *infra* note 166 (quoting Sen. Marco Rubio); Natario McKenzie, *Fishermen Blast \$2.1bn China Deal*, THE TRIBUNE (Bah.), November 7, 2016, <http://www.tribune242.com/news/2016/nov/07/fishermen-blast-21bn-china-deal/> (reporting criticism from the president of the Bahamas Commercial Fishing Alliance); Jim Turner, *Talks to Sell China Fishing Rights in Bahamas Alarm Florida*, PALM BEACH POST, November 16, 2016 (noting the Florida Fish and Wildlife Commission's concern over an agreement's potential impact on the state's fisheries); Steve Waters, *Florida Anglers Help Stop Proposed China-Bahamas Deal*, SUN SENTINEL, November 29, 2016 (noting that the Bahamian government was overwhelmed with contact from Florida fishermen denouncing a proposed Chinese-Bahamian fishing agreement); Dames, *supra* note 2.

63. Sancheska Dorsett, *Gray: Govt Would Not Give Foreigners License to Fish*, TRIBUNE (Bah.) (Nov. 3, 2016), <http://www.tribune242.com/news/2016/nov/03/gray-govt-would-not-give-foreigners-licence-fish/>.

discontinue investment in the country due to the criticism.⁶⁴ Such a deal could have damaging effects to the Caribbean fishery.

C. Foreseeable Problems with a Chinese-Bahamian Joint Venture

Although bilateral agreements allow developing countries to harvest their fishery resources, fisheries governance experts argue that “[bilateral agreements] on the whole have led to unsustainable use of fisheries resources and have negatively impacted the socioeconomic development of host countries.”⁶⁵ Major problems with these agreements include pollution,⁶⁶ conflicts with artisanal fisherman,⁶⁷ and unsustainable fishing methods.⁶⁸ A Chinese-Bahamian deal like the one discussed would generate some of the issues that plagued past bilateral agreements while avoiding others. Such a deal would also create unique problems not experienced by other nations. While some of these issues affect only the Bahamas, many also impact the United States because of the countries’ close proximity and the migratory nature of many fish stocks. This section analyzes these potential problems.

i. Illegal, Unreported, and Unregulated Fishing

IUU fishing is perhaps the largest concern with a Chinese-Bahamian joint venture. This includes “fishing without a license or quota for certain species, unauthorized transshipments to cargo vessels, failing to report catches or making false reports, keeping undersized fish or fish that are otherwise protected by regulations, fishing in closed areas or during closed seasons, and using prohibited fishing gear.”⁶⁹ A Chinese-Bahamian bilateral agreement is

64. *Gray Suggests Chinese Agri-Fisheries Deal Still Open to Negotiation*, THE NASSAU GUARDIAN, Nov. 10, 2016, <https://thenassauguardian.com/2016/11/10/gray-suggests-chinese-agri-fisheries-deal-still-open-to-negotiation/>.

65. *China’s DWF Industry*, *supra* note 40, at 103.

66. See e.g., Afp Gunjur, *Pollution Clouds Gambia’s China Courtship*, TAIPEI TIMES, Jul. 31, 2017, <http://www.taipeitimes.com/News/world/archives/2017/07/31/2003675663> (describing the destruction caused by pollution from a Chinese fishmeal factory intended to support China’s DWF in Gambia).

67. See e.g., *China’s DWF Industry*, *supra* note 40, at 104 (describing conflicts between Chinese DWF vessels and artisanal fishermen in Liberia).

68. For a general discussion on the effects of unsustainable fishing practices in bilateral agreements see Jacqueline Alder & Ussif Rashid Sumaila, *Western Africa: A Fish Basket of Europe Past and Present*, 13 J. ENV’T. & DEV. 156, 169 (2004) (noting that “[m]any fishers in Ghana have actually become poorer as the landed values from their fisheries have increased”).

69. *IUU Fishing- Frequently Asked Questions*, NOAA, <http://www.nmfs.noaa.gov/ia/iuu/faqs.html> (last visited Dec. 10, 2017).

particularly susceptible to IUU fishing given the notorious fishing practices of China's DWF and the Bahamas' inability to sufficiently monitor or enforce fishing regulations.

In a 2009 study, the Chinese DWF ranked 44 out of 53 countries in IUU fishing with an "unequivocally failing" score.⁷⁰ Many developing countries that enter into bilateral agreements with China do not have the financial resources to survey vessels or enforce fishing regulations.⁷¹ For example, in Cameroon, Chinese DWF vessels, many of which are legally registered as Cameroon businesses in accordance with a joint venture agreement between the two countries, are beginning to overwhelm the Cameroonian navy.⁷² Even if the agreement calls for so-called "dedicated funds" to support the fishery sector from the increase in fishing activity, governments in coastal countries rarely use these funds for their intended purposes.⁷³

The Bahamas have multiple weaknesses in monitoring and enforcement that make IUU fishing a major risk. Although West African countries are commonly thought to have too few resources to combat IUU fishing in their waters, the Bahamas ranks lower in GDP per square kilometer of EEZ than Cameroon, Angola, Ghana, Guinea-Bissau, Mauritania, Gambia, and Sierra Leone.⁷⁴ The fact that only Bahamian citizens would be operating the fishing vessels is hardly consequential, considering Chinese DWF companies would manage the vessels' operations. A similar agreement is in place in Cameroon, where IUU fishing regularly persists.⁷⁵

Furthermore, the Bahamas has a long history of overfishing,⁷⁶ which has continued for some species. The Caribbean Spiny Lobster, by far the leading species captured in the Bahamas,⁷⁷ is considered

70. PITCHER, ET AL., *supra* note 8, at 26.

71. Alder & Sumaila, *supra* note 68, at 170.

72. *China's DWF Industry*, *supra* note 40, at 106; Moki Edwin Kindzeka, *Cameroon Deploys Navy to Seize Illegal Fishing Vessels*, VOICE OF AMERICA (Oct. 10, 2016), <https://www.voanews.com/a/cameroon-navy-fishing-boats/3544226.html>.

73. See Vlad M. Kaczynski & David L. Fluharty, *European policies in West Africa: Who Benefits from Fisheries Agreements?*, 26 MARINE POL'Y 75, 77, n.5, n.6 (2003) (describing the use of dedicated funds in Guinea Bissau).

74. See *infra*, note 84 and accompanying text.

75. See Kindzeka, *supra* note 72.

76. See MICHAEL CRATON & GAIL SAUNDERS, ISLANDERS IN THE STREAM: A HISTORY OF THE BAHAMIAN PEOPLE 88–89 (Univ. of GA. Press, 2011) (describing the seventeenth century Bahamian seal hunting industry); HENRY FRANK MOORE, THE COMMERCIAL SPONGES AND THE SPONGE FISHERIES 471 (1910) (claiming that the Bahamian sponge fishery had become "exhausted by overfishing" as early as 1875).

77. CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3, at 32–34 tbl.17.

overexploited by some experts.⁷⁸ Even experts that believe the fishery is in good condition have expressed concerns over the reported decline in landings and size.⁷⁹ The Nassau Grouper, the most landed finfish in the country, is also likely either fully exploited or over-exploited in the Bahamas and United States.⁸⁰

Overfishing is primarily due to insufficient resources and unreliable data.⁸¹ Experts estimate that from 1950 through 1986, the Bahamas fishery had more unreported catch than reported catch—in some years, unreported catch more than doubles the amount of reported fish caught.⁸² However, reporting failures are not only a historical issue. In 2014, an estimated 40% of total catch went unreported.⁸³ Out of 151 qualifying countries, the Bahamas ranked 128th in GDP per square kilometer of EEZ,⁸⁴ and the Department of Marine Resources has only six full-time vessels⁸⁵ to enforce regulations for approximately 628,000 square kilometers⁸⁶ of ocean. This trend will only persist if China's DWF enters the region.

Second, much of the data on the Bahamian commercial fishing industry are unreliable and outdated, and regional fishery management organizations have difficulty measuring how many

78. See e.g. Ernesto A. Chavez, *Potential Production of the Caribbean Spiny Lobster (Decapoda, Palinura) Fisheries*, 82 CRUSTACEANA 1393, 1400–01 (2009).

79. *Id.* at 1401.

80. See 81 C.F.R. § 42268 (2016) (listing the Nassau Grouper as threatened under the Endangered Species Act); NAT'L MARINE FISHERIES SERV., NASSAU GROUPE, *EPINEPHELUS STRIATUS* (BLOCH 1792) BIOLOGICAL REPORT 50 (2013).

81. See Chavez, *supra* note 78, at 1401 (noting the difficulty in monitoring and enforcement of the spiny lobster fishery); NAT'L MARINE FISHERIES SERV., *supra* note 80 at 46–53 (noting the data collection problems associated with Nassau Grouper landings).

82. *Catches by Reporting Status in the Waters of Bahamas*, THE SEA AROUND US, <http://www.seaaroundus.org/data/#/eez/44?chart=catch-chart&dimension=reporting-status&measure=tonnage&limit=10> (last visited Dec. 15, 2017).

83. See *id.* (estimating that the Bahamas had 8,480 tons of unreported catch, out of 20,780 tons total).

84. This ranking was created by combining GDP statistics from the International Monetary Fund and EEZ statistics from the Sea Around Us, a research initiative at The University of British Columbia. *World Economic Outlook Database*, INTERNATIONAL MONETARY FUND (Oct. 2017), <https://www.imf.org/external/pubs/ft/weo/2017/02/weodata/download.asp>; Simon Claus et al., *Marine Regions: Towards a Global Standard for Georeferenced Marine Names and Boundaries*, 37 MARINE GEODESY 99 (2014); *Tools & Data*, SEA AROUND US, <http://www.seaaroundus.org/data/#/eez> (last visited Dec. 11, 2017).

85. *About The Department of Marine Resources*, THE GOVERNMENT OF THE BAHAMAS, <http://www.bahamas.gov.bs> (follow “Agency Sites” hyperlink; then follow “Marine Resources, Dept. of” hyperlink; then follow “About Us” hyperlink) (last visited Dec. 11, 2017).

86. *Catches by Taxon in the Waters of Bahamas*, SEA AROUND US, <http://www.seaaroundus.org/data/#/eez/44?chart=catchchart&dimension=taxon&measure=tonnage&limit=10> (last visited Dec. 11, 2017).

vessels are fishing in Bahamian waters.⁸⁷ Exacerbating this problem, commercial vessels less than 20 feet in length are not required to obtain a commercial fishing permit.⁸⁸ Furthermore, catch statistics reported to the FAO do not include recreational landings.⁸⁹ One study estimated that total landings in the Bahamas were over two and a half times greater than the reported amount, primarily due to tourist and sport fishing catches.⁹⁰ This unreliable data creates problems for policymakers attempting to issue licenses, set regulations, and determine the maximum sustainable yield of the fishery.

The reliability and strength of a host country's government is another factor that leads to IUU fishing. In many cases, IUU fishing is exacerbated by corrupt government officials who allow the DWF to operate beyond the terms of agreements or in previously prohibited ways.⁹¹ For example, in Vanuatu, a small, pacific-island nation, the director of the Maritime Authority was also the shipping agent for foreign long-line vessels.⁹² Reportedly, "on the same day that he donated two trucks to the Department of Fisheries, fishing licenses were granted to two . . . [foreign] long-liners that allowed them to operate within the six-mile zone off the coast, which was formerly prohibited under Vanuatu law."⁹³ Other times, governments fail to enforce fishing regulations for Chinese vessels because they do not want to jeopardize other government aid projects China sponsors.⁹⁴ For example, in Guinea Bissau, the government exempted Chinese

87. See e.g., CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3, at 20 n.26 (noting that the 2012 data on the number of commercial fishing vessels came from the last Bahamas fishery census in 1995).

88. Fisheries Resources (Jurisdiction and Conservation) (Act. No. 1/2006) (Bah.) ¶ 11(2).

89. Smith & Zeller, *supra* note 27, at 1.

90. *Id.*

91. Alder & Sumaila, *supra* note 68, at 170.

92. Marie-Noelle Ferrieux-Patterson, *Conflict of Interest - Vanuatu's Experience*, in CONTROLLING CORRUPTION IN ASIA AND THE PACIFIC: PROCEEDINGS OF THE 4TH REGIONAL ANTI-CORRUPTION CONFERENCE 71, 73 (2003), <https://www.oecd.org/site/adboecdanti-corruptioninitiative/regionalseminars/35137722.pdf>.

93. *Id.* at 73.

94. *China's DWF Industry*, *supra* note 40, at 103; but see *Ecuador Jails Chinese Fisherman Found with 6,000 Sharks*, REUTERS (Aug. 28, 2017) (stating that an Ecuadorian judge sentenced Chinese fishermen to up to 4 years in prison for illegally fishing in a marine sanctuary); Rachael Bale, *Thousands of Sharks Found on Boat in Huge Illegal Haul*, NAT'L GEOGRAPHIC (Aug. 15, 2017), <https://news.nationalgeographic.com/2017/08/wildlife-watch-galapagos-illegal-shark-fishing/> (noting that the Ecuadorian government has been criticized for leniently enforcing fishing regulations with China because China provides a large amount of the government's funding).

boats from laws that prohibit commercial fishing boats from off-loading fish catches in foreign ports or onto other ships at sea.⁹⁵ Such preferential treatment hurts the domestic and artisanal fishing industries of host countries and nurtures illegal and unreported fishing.

It might be argued that the Bahamas need not be as concerned about corruption affecting a bilateral fishing agreement since the Bahamas has considerably higher governance indicators than many of the West African countries currently dealing with Chinese IUU fishing.⁹⁶ However, the country's fishing laws make it particularly susceptible to corruption. For example, the Bahamas has primarily regulated its fishery through the Fisheries Resources (Jurisdiction and Conservation) Act, which banned long-line fishing and prohibited non-Bahamians from participating in commercial fishing within the country's EEZ.⁹⁷ Foreign vessels may, however, fish commercially as part of an official treaty if authorized by the Prime Minister.⁹⁸ Furthermore, parties foreign commercial vessels may also fish if they receive permission from the governor-general after "it is shown to the satisfaction of the Governor-General that the pursuit of long-line fishing . . . would not endanger elements essential to sustainable fishery development and would not prejudice the development and expansion of eco-tourism in The Bahamas."⁹⁹ This standard appears to give the governor-general absolute discretion in permitting commercial vessels. Therefore, if the Bahamian governor general decided to give long-line fishing permits to select Chinese-Bahamian joint ventures, the Fisheries Resources Act appears to allow it.

Conflicts arising from IUU fishing are hardly limited to DWF vessels legally fishing under a bilateral agreement. Notably, three Chinese fishermen were killed after the South Korean Coast Guard, which suspected the vessel of illegal fishing, threw flash bang

95. ANDRE STANDING, CHR. MICHELSEN INST., CORRUPTION AND INDUSTRIAL FISHING IN AFRICA 12 (2008), <https://www.cmi.no/publications/file/3188-corruption-and-industrial-fishing-in-africa.pdf>.

96. See Daniel Kaufman et al., *The Worldwide Governance Indicators: Methodology and Analytical Issues* (World Bank Policy Research Working Paper No. 5430, 2010); Kaufman et al., *Worldwide Governance Indicators*, THE WORLD BANK, <http://info.worldbank.org/governance/wgi/#home> (last visited Dec. 11, 2017) (comparing The Bahamas to Cameroon, Ghana, and Guinea-Bissau across six governance indicators).

97. Fisheries Resources (Jurisdiction and Conservation) (Act. No. 1/2006) (Bah.) ¶7 (prohibiting foreign fishing but creating an exception for sport fishing); *Id.* at ¶ 2 (defining "exclusive fishery zone"); *Id.* at ¶ 22 (prohibiting long-line fishing).

98. *Id.* at ¶ 7–10.

99. *Id.* at ¶ 22(1).

grenades into the boat's cabin.¹⁰⁰ Furthermore, the Argentinian Coast Guard sunk a Chinese trawler in its EEZ the after the vessel reportedly ignored warning shots and attempted to ram the Coast Guard ship.¹⁰¹ The Chinese vessel, which should have been in the high seas, did not have authority to fish in Argentina's EEZ.¹⁰² In 2017, the Ecuadorian Navy discovered the *Fu Yuan Yu Leng 999* in the Galapagos National Park with almost 300 tons of fish on board.¹⁰³ Recently, the Bahamas has encountered similar problems with illegal fishing by unauthorized vessels; this will only intensify with Chinese DWF vessels in the Caribbean.¹⁰⁴

Scholars also consider several other factors to determine whether a country is vulnerable to IUU fishing.¹⁰⁵ These factors, which include the number of internationally attractive species in a country's territorial waters, patrol boats per 100,000 square kilometers, detectible fishing vessels, "monitoring, control, and surveillance" (MCS) efforts, and proximity to "ports of convenience," can predict a country's vulnerability to IUU fishing.¹⁰⁶ The Bahamas ranks poorly in many of these factors.¹⁰⁷

Proximity to ports of convenience, ports used by IUU vessels to transport illegal catches to international markets, are especially important facilitators of illegal fishing.¹⁰⁸ A country is considered to have access to a port of convenience if it is located within 1500 nautical miles of the port.¹⁰⁹ The Bahamas has access to at least one

100. Choe Sang-Hun, *South Korea Investigates Deaths of 3 Chinese Fishermen in Crackdown*, N.Y. TIMES, Sept. 30, 2016.

101. *Argentina Sinks Chinese Fishing Boat Lu Yan Yuan Yu 010*, BRITISH BROADCASTING COMPANY (MARCH 16, 2016), <http://www.bbc.com/news/world-latin-america-35815444>.

102. *Id.*

103. Rachael Bale, *Thousands of Sharks Found on Boat in Huge Illegal Haul*, NAT'L GEOGRAPHIC (Aug. 15, 2017), <https://news.nationalgeographic.com/2017/08/wildlife-watch-galapagos-illegal-shark-fishing/>.

104. Timothy Roberts, *Long Line Fishing Speculated to be Increasing in Bahamian Waters*, THE ABACONIAN (Bah.), Feb. 4, 2014, <http://www.theabaconian.com/2014/02/04/long-line-fishing-speculated-to-be-increasing-in-bahamian-waters/>.

105. *See generally* Gohar A. Petrossian, *Preventing Illegal, Unreported, and Unregulated (IUU) Fishing: A Situational Approach*, 189 BIOLOGICAL CONSERVATION 39, 46 (2015) (determining which factors most effect IUU fishing).

106. *See id.* at 41 (analyzing the strength of each of these variables in explaining IUU fishing).

107. *See infra* notes 108–112 (presenting statistics that show the Bahamas measures poorly in proximity to ports of convenience and patrol boats per 1,000 kilometers).

108. *Id.* at 46; *but see id.* at 45 fig.3 (noting that the impact of ports of convenience are less extreme in the Caribbean than in other geographic areas).

109. *Id.* at 41.

port of convenience, Port Cartagena, Colombia, which allows IUU fishing vessels to easily sell their illegal catch.¹¹⁰ This makes the Bahamas a prime target for illegal fishing by both legally registered commercial vessels and unauthorized DWF vessels. The two strongest variables for predicting IUU fishing in the Caribbean are the number of patrol boats per 100,000 square kilometers of EEZ and MCS efforts.¹¹¹ In this regard, the Bahamas ranks lower than both Ghana and Cameroon, both countries that have struggled to control IUU fishing.¹¹² Given the Bahamas' struggles with monitoring IUU fishing before expansion of its commercial fishery, it is hard to imagine that the new commercial fishing vessels would abide by prudent catch limits or regulations on techniques.¹¹³

The presence of China's DWF in the Bahamas could also increase IUU fishing in other Caribbean countries. First, many Caribbean countries are closer ports of convenience than the Bahamas.¹¹⁴ Also, the Caribbean consists of undeveloped countries that are particularly susceptible to IUU fishing due to an inability to invest in fisheries management and patrol surveillance resources.¹¹⁵ From this perspective, these countries are similar to many of the West African countries struggling with IUU fishing.¹¹⁶

110. See *id.* (classifying Port Cartagena as a port of convenience). The distance from the Port of Nassau to Port Cartagena is 1183 nautical miles. *Sea Route & Distance*, PORTS.COM (last visited, Dec. 11, 2017).

111. Petrossian, *supra* note 105, at 43 fig.1 (presenting the strength of the predictor variables in each region). Overall, the study found that monitoring activities and the number of internationally attractive species were the two best predictors of IUU fishing. *Id.* at 42. However, neither the number of internationally attractive species nor ports of convenience had a large impact on IUU fishing in Central and South America. *Id.* at 44–45 fig.2,3.

112. See generally ERIC WERTHEIM, THE NAVAL INSTITUTE GUIDE TO COMBAT FLEETS OF THE WORLD (16th ed. 2013) (for the number of patrol boats of each country); *Tools & Data, THE SEA AROUND US*, <http://www.seaaroundus.org/data/#/eez> (last visited Dec. 15, 2017) (for the size of the EEZ of each country).

113. Nico Scavella, *University Professors Warn of Dangers of \$2.1bn Andros Plan*, TRIBUNE (Nassau, Bah.) (Nov. 14, 2016).

114. See *e.g.*, *Sea Route & Distance*, PORTS.COM (last visited, Dec. 11, 2017). Port-au-Prince, Haiti is located 704 nautical miles from Port Cartagena. *Id.* Port Royal, Jamaica is located 373 nautical miles from Port Cartagena. *Id.*

115. See *e.g.*, SELIM JAHAN, U.N. DEV. PROGRAMME, HUMAN DEVELOPMENT REPORT 2016 200 tbl.1 (2016) (classifying Haiti as a country with low human development); See Petrossian, *supra* note 105, at 45.

116. See JAHAN, *supra* note 115 tbl.1 (classifying Cameroon and Guinea-Bissau as a countries with low human development).

ii. *Targeting Migratory Fish: Impact on Artisanal Fishermen & Other Countries*

A commercial fishing industry that targets migratory species is problematic.¹¹⁷ Large pelagic fish are not located in the Bahamas throughout the entire year.¹¹⁸ Once these fish migrate from the Bahamas, China's DWF will be faced with three choices: 1) follow the fish, 2) shift production to another permanent species, or 3) cease production and wait until the fish return. The third option seems improbable given the amount of investment China would put into the agreement, and the other two options are similarly challenging.

The geography of the Caribbean fishery makes following the migratory fish unlikely. Scientists estimate that mahi-mahi migrate at least 8,000 miles throughout the Caribbean Sea, United States waters, and high seas.¹¹⁹ Although the DWF could normally follow the fish into the high seas, countries in the Caribbean fishery are so concentrated that the entire fishery consists of country's EEZs.¹²⁰ Absent an agreement with the other Caribbean country, following the fish would constitute IUU fishing.

Shifting production to a permanent species during slow months is also problematic for the Bahamian domestic fishing industry. Many of the deep-water pelagic fish migrate by September, at which time more permanent species like snapper and grouper are still plentiful.¹²¹ While the large pelagic fishery might be underexploited in the Bahamas, it is doubtful that stocks of other, more permanent species could handle an influx of 100 commercial fishing vessels.¹²² Furthermore, these species are critical to the artisanal fishermen.¹²³

117. See IVAN GOODBODY & ELIZABETH M. THOMAS-HOPE, *NATURAL RESOURCE MANAGEMENT FOR SUSTAINABLE DEVELOPMENT IN THE CARIBBEAN 170–71* (2002) (posing the question, “[W]hat do you do when species migrates?”).

118. *Bahamas Fishing Calendar*, BAHAMAS FISHING CHARTERS, <http://www.fishinthebahamas.com/bahamas-fishing-calendar/> (last visited Dec. 13, 2017).

119. DOLPHINFISH RES. PROGRAM, *General Movement Patterns*, COOPERATIVE SCIENCE SERVICES <http://dolphintagging.homestead.com/GenMovePatterns.html> (last visited Dec. 13, 2017).

120. Singh, *supra* note 16, at 3.

121. See *Bahamas Fishing Calendar*, *supra* note 118 (showing that in September, fishing for Bluefin Tuna, Mahi-Mahi, Kingfish, White Marlin, Blue Marlin, and Wahoo is either “Fair” or “Poor”).

122. See, e.g., 81 C.F.R. § 42268 (2016) (stating that the Nassau Grouper is over-exploited in the Bahamas).

123. See Nicole M. Cushioin & Kathleen Sullivan-Sealey, *Landings, Effort and Socio-economics of a Small Scale Commercial Fishery in The Bahamas*, 60 GULF AND CARIBBEAN FISHERIES INST. (2007) 162, 164 (showing results of the five most abundant species landed by artisanal fishermen at New Provence).

Even if the Bahamas establishes fishing zones exclusively for artisanal fishermen, Chinese vessels have ignored these boundaries in other countries, leading to violent conflict.¹²⁴ For example, in Liberia, Chinese DWF vessels regularly collide with artisanal fishing canoes and have sprayed artisanal fishermen with hot water when conflicts escalate.¹²⁵ One Liberian fisherman even claimed he was detained on a Chinese vessel and severely beaten.¹²⁶ Although this type of conflict is probably less likely in a more developed country like the Bahamas, similar conflicts might occur if a bilateral agreement is reached.

iii. Delimitation of the Bahamas-US Exclusive Economic Zone

In addition the Bahamas' close proximity to other Caribbean countries, it is also located within 200 miles of the United States. Therefore, the countries have overlapping EEZs.¹²⁷ Article 74 of UNCLOS states, "[t]he delimitation of the exclusive economic zone between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law . . . [and States] shall make every effort . . . not to jeopardize or hamper the reaching of the final agreement."¹²⁸ The Bahamas and the United States have not yet delimited their EEZs and currently disagree on the northern axis of the Bahamas's potential maritime boundary.¹²⁹ With the EEZ of the Bahamas not yet determined, a bilateral fishing agreement risks the unauthorized entry by Chinese-owned vessels into waters claimed by the United States. Such an entry could further strain diplomatic relations over ocean rights between the two countries.¹³⁰

124. See e.g., BLOMEYER ET AL., *supra* note 21 at 73 (quoting MIKAEL CULLBERG, TO DRAW THE LINE: EU FISHERIES AGREEMENTS IN WEST AFRICA 16 (Swedish Society for Nature Conservation, 2009)) (noting that Chinese trawlers destroy habitat and fishing traps in artisanal zones in Mauritania).

125. *China's DWF Industry*, *supra* note 40, at 104.

126. *Id.*

127. *The World Factbook: The Bahamas*, CIA, <https://www.cia.gov/library/publications/the-world-factbook/geos/bf.html> (last updated Nov. 29, 2017) (noting that the United States and the Bahamas have not yet delimited their maritime boundaries).

128. Fisheries Resources (Jurisdiction and Conservation) (Act. No. 1/2006) (Bah.) ¶ 74(a).

129. *The World Factbook: The Bahamas*, CIA, <https://www.cia.gov/library/publications/the-world-factbook/geos/bf.html> (last updated Nov. 29, 2017).

130. *Trump offers to Mediate in Protracted South China Sea Feud*, BOS. HERALD, Nov. 12, 2017, http://www.bostonherald.com/news/international/2017/11/trump_offers_to_mediate_in_protracted_south_china_sea_feud.

iv. Impact on the Tourism and Sport Fishing Industry

As previously noted, the tourism and sport fishing industry has a greater effect on the Bahamian economy than commercial fishing.¹³¹ However, inadequate catch data for the recreational fishing industry makes setting commercial quotas difficult because experts cannot determine the fishery's maximum sustainable yield. Until the Bahamas is able to gather more information about the deep-water pelagic fishery, it risks overfishing these species by expanding its commercial fishing industry.

III. LEGAL RESPONSES TO A CHINESE-BAHAMIAN COMMERCIAL FISHING AGREEMENT

The Caribbean Fishery has a number of governance tools available to countries and other stakeholders should it wish to object to a Chinese-Bahamian commercial fishing agreement. Some of these tools provide only short-term solutions, while others are long-term strategies intended to change the world's perception of fishery management.

A. UN Fish Stock Agreement: A Short-term Solution

UNCLOS Article 63 states, “[w]here the same stock[s] . . . occur within the exclusive economic zones of two or more coastal States, these States shall seek . . . to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks.”¹³² Article 64 requires coastal states and other states whose nationals fish the region, including the high seas, for highly migratory species (including tuna, mahi-mahi, swordfish, and marlin) to cooperate with a view to ensuring conservation and promote optimum utilization of the species throughout the region.¹³³ Although the United States has not ratified UNCLOS, the UN Fish Stocks Agreement, signed by both the Bahamas and the United States, purports to implement these principles.¹³⁴ However, in many ways, the Fish Stocks Agreement provides more protection for fisheries than UNCLOS. First, it “goes further than [UNCLOS] in placing emphasis on *long-term conservation and sustainable use*, rather than

131. See *supra* text accompanying notes 25–27.

132. UNCLOS, *supra* note 14, at art. 63.

133. See *id.* at annex I; UNCLOS, *supra* note 14, at art. 64.

134. CHAKALALL & COCHRANE, *supra* note 6, at 9.

optimum utilization.”¹³⁵ Also, the agreement refers to “highly migratory fish stocks” rather than the mere “highly migratory species” list in UNCLOS, which broadens the range of resources to which the agreement applies.¹³⁶ For these reasons, the Fish Stocks Agreement is a powerful weapon for opponents to a bilateral fishing agreement in the Caribbean.

The United States or another Caribbean country could use climate change and the Fish Stocks Agreement to prevent a Chinese-Bahamian bilateral agreement. Article 7 of the Fish Stocks Agreement states,

If a natural phenomenon has a significant adverse impact on the status of straddling fish stocks or highly migratory fish stocks, States shall adopt conservation and management measures on an emergency basis to ensure that fishing activity does not exacerbate such adverse impact. States shall also adopt such measures on an emergency basis where fishing activity presents a serious threat to the sustainability of such stocks.¹³⁷

This provision implements UNCLOS’s “precautionary principle” by seeking to reduce the probability of adverse events when the level of uncertainty and potential costs of the event are significant and full reversibility is not ensured.¹³⁸ Unlike the rigid precautionary principle, however, the Fish Stocks Agreement adopts the “precautionary approach,” which allows for less stringent measures and does not bring all marine fishing activities to a halt.¹³⁹

The precautionary approach in Article 6 of the Fish Stocks Agreement might be appropriate to slow down a Chinese-Bahamian bilateral fishing agreement.¹⁴⁰ According to a recent study, the

135. *Id.*

136. *Id.*

137. *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, 34 I.L.M. 1542, 1552 (1995) [hereinafter *Fish Stocks Agreement*].

138. See S.M. Garcia, *The Precautionary Principle: Its Implications in Capture Fisheries Management*, 22 OCEAN & COASTAL MGMT. 99, 101 (1994) (discussing proper application of the precautionary principle).

139. See SIMON MARR, *THE PRECAUTIONARY PRINCIPLE IN THE LAW OF THE SEA: MODERN DECISION MAKING IN INTERNATIONAL LAW* 18 (2003) (distinguishing between the “precautionary principle” and the “precautionary approach”).

140. Although more research on the actual effects of dead zones on the Bahamas’ fishery would probably be needed to prevail on a claim under Article 7, low oxygen levels and habitat

ocean's oxygen content has decreased by more than two percent over the last 50 years, potentially due to climate change.¹⁴¹ This phenomenon has led to deep-water "dead zones" of reduced oxygen, causing habitat loss for "high performance" fish such as marlin, swordfish, and other migratory species that need high levels of oxygen to survive.¹⁴² As a result, these species have become more concentrated in high-oxygen areas, leading to potentially over-optimistic population estimates and placing these species at higher risk from near-surface fishing methods.¹⁴³ The dead zones have also been known to cause reproductive problems in some fish.¹⁴⁴

Significantly, the ocean near Andros Island, the site of the proposed joint ventures, experienced a substantial decrease in oxygen level during the past decade.¹⁴⁵ Given the already uncertain capacity of the Bahamas deep-water pelagic fishery, expanding the commercial fishing sector would conflict with any emergency conservation measure under Article 6. It should be noted, however, that conservation measures taken under this provision are only temporary, so a claim under Article 6 is not a long-term solution.¹⁴⁶

In addition to a preventative measure, the Fish Stocks Agreement could be used to limit the scope of a joint venture. Paragraph 6 of Article 6 of the Fish Stocks Agreement states,

For new or exploratory fisheries, States shall adopt as soon as possible cautious conservation and management measures, including, inter alia, catch limits and effort limits. Such measures shall remain

loss might justify emergency conservation measures under the Fish Stocks Agreement if the impact is *significant*. See *Fish Stocks Agreement*, *supra* note 137.

141. See Sunke Schmidt et al., *Decline in Global Oceanic Oxygen Content During the Past Five Decades*, 542 NATURE 335 (2017) (discussing the decreasing oxygen content of the world's oceans).

142. *Id.*

143. *Id.*

144. *What Causes Ocean "Dead Zones"?*, SCIENTIFIC AMERICAN, <https://www.scientificamerican.com/article/ocean-dead-zones/> (last visited Dec. 15, 2017).

145. See *Global Ocean De-Oxygenation Quantified*, GEOMAR, <https://www.geomar.de/en/news/article/weniger-sauerstoff-in-allen-meeren/> (last visited Dec. 15, 2017) (presenting a graphic that displays the percent change of dissolved oxygen in the global ocean over the last decade).

146. Note that the precautionary principle under the Fish Stocks Agreement only justifies a temporary stay of a bilateral fishing agreement that expands the Bahamian commercial fishing industry. It does not justify the more aggressive approach of allowing a country to utilize its EEZ solely for sport fishing. See Garcia, *supra* note 138, at 122 (noting that the principle, "if incorrectly applied, is an attempt to re-allocate resources to non-consumptive users, often without much reference or concern towards intra-generational equity or scientific objectivity.").

in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment shall be implemented. The latter measures shall, if appropriate, allow for the gradual development of the fisheries.¹⁴⁷

Here, the interpretation of “new or exploratory fisheries,” is critical. Although the agreement does not define “new,” “exploratory,” or “fishery,” this provision might apply to impose stringent catch limits on a newly formed deep-water pelagic commercial fishing industry.¹⁴⁸ For instance, the Commission for the Conservation of Antarctic Marine Living Resources defines a “new” fishery as a “species and (or) fishing on a ground that has not been previously fished,” which encompasses proposals to expand a fishing area.¹⁴⁹ Although this definition is not directly relevant to the Fish Stocks Agreement, opponents could similarly argue that the Bahamian deep-water pelagic fishery is a “new” or “exploratory” fishery because it has not been *commercially* fished.¹⁵⁰ In such a case, the aforementioned data collection problems should trigger conservation measures under this provision and limit the impact of China’s DWF.

A. *Escaping the Concept of Optimum Utilization: A Global Shift*

The Fish Stock Agreement moves away from the concept of Maximum Sustainable Yield and towards concepts like “long term conservation” and “sustainable use.”¹⁵¹ However, the Fish Stock

147. *Fish Stocks Agreement*, *supra* note 137, at ¶ 6 (emphasis added).

148. *See* MARR, *supra* note 139, at 17 (noting that the precautionary approach restricts pilot activities that might pose an irreversible environmental threat); *see also*, *Fish Stocks Agreement*, *supra* note 134 at ¶ 2 (“States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.”).

149. EVELYNE MELTZER & SUSANNA FULLER, *THE QUEST FOR SUSTAINABLE INTERNATIONAL FISHERIES: REGIONAL EFFORTS TO IMPLEMENT THE 1995 UNITED NATIONS FISH STOCKS AGREEMENT* 123 (2009).

150. *See Track a Fishery*, MARINE STEWARDSHIP COUNCIL, <https://fisheries.msc.org/en/fisheries/@search> (last visited Dec. 28, 2017) (noting that the only recognized fishery in the Bahamas is the Bahamian Spiny Lobster Fishery); *What is a Fishery*, MARINE STEWARDSHIP COUNCIL, <https://www.msc.org/track-a-fishery/what-is-a-fishery> (last visited Dec. 28, 2017) (recognizing that the FAO defines a fishery by, among other factors, the type of fishers and the purpose of the activities).

151. *See supra* text accompanying notes 137–39.

Agreement does not apply to all species— it only prevents certain actions both inside a country’s EEZ and in the high seas that affect migratory species.¹⁵² Therefore, UNCLOS’s Maximum Sustainable Yield concept still prevails over domestic fisheries that target non-migratory species. As long as this concept controls, countries will continue to view fisheries as exploitable resources and underestimate their conservation value.¹⁵³

Admittedly, some countries have tried to integrate amorphous principles of long-term conservation and sustainability into the rigid Maximum Sustainable Yield formula. For example, in the Bahamas and the United States, “optimum yield” is defined as the amount of resources “which will provide the greatest overall benefit to the nation with particular reference to food production and recreational opportunities, and which is prescribed as such on the basis of the maximum sustainable yield from a fishery as modified by any economic, social, or ecological factors.”¹⁵⁴ Furthermore, the precautionary approach, which has arguably become accepted international law,¹⁵⁵ promotes the conservation value of a fishery above its economic value (but only when uncertainty exists).¹⁵⁶ However, these concepts do not clearly and explicitly give a country free reign to establish a sport-fishing conservation area.¹⁵⁷ Until countries like the Bahamas are freed from the obligation of optimum utilization, this type of “exploitation” cannot be achieved. Instead, these countries will always feel pressure to exploit their fisheries by

152. See *Management of Large Pelagic Fisheries in CARICOM Countries*, FAO, 2004, at 8 (“The agreement sets out general principles for the conservation and management of straddling and highly migratory fish stocks . . . that parties to the agreement are to apply on the high seas as well as within their EEZs.”).

153. See Hern, *supra* note 6, at 195 (noting that UNCLOS “retains the monolithic vision of a global commercial fishery that may not be of service to future generations of resource managers”).

154. WILLIAM R. EDESON & JEAN-FRANCOIS PULVENIS, *THE LEGAL REGIME OF FISHERIES IN THE CARIBBEAN REGION* 48 (1983).

155. See Simon Marr, *The Southern Bluefin Tuna Cases: The Precautionary Approach and Conservation and Management of Fish Resources*, 11 EUR. J. INT’L L. 815, 823 (2000) (discussing the conflict among international legal authors concerning the status of the precautionary approach as a binding norm of customary international law).

156. See Hern, *supra* note 6, at 194 (describing the precautionary principle as a temporary buffer between the MSY and the requirement of optimum utilization when scientific uncertainty exists).

157. Hern, *supra* note 6; see John M. MacDonald, *Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management*, 26 OCEAN DEV. & INT’L L. 255, 257 (1995) (arguing that application of the precautionary principle to fisheries management decisions must be changed to reflect the value choices inherent in these decisions).

expanding their own commercial fishing sectors or executing bilateral agreements with distant water fishing nations.

A legal regime that gives countries more freedom to promote conservation within its EEZ would be more beneficial to Caribbean countries than mere restraints and exceptions to optimum utilization. For example, countries like the Bahamas would receive much higher exchange value on their living resources by using their EEZ solely for sports and recreational fishing and marketing its under-exploited fishery “as a scarce resource in an overfished world.”¹⁵⁸ Alternatively, the Bahamas could operate its EEZ primarily as an eco-tourism area but make exceptions for small-scale fishermen by keeping artisanal fishing areas or expanding aquaculture industry.¹⁵⁹ This approach would allow Bahamians to continue to feed their communities and preserve their culture. Since Caribbean countries have the infrastructure to support major tourism economies and hold a competitive advantage by being relatively unspoiled by major commercial fishing industries, they would be prime candidates for such a conservation and recreational fishing area.¹⁶⁰ In fact, the Bahamas has already experimented with this idea, prohibiting all commercial shark fishing in its EEZ.¹⁶¹ Although shark fins are a desirable product on the international market, the Bahamian government instead sought to protect the \$110 million recreational shark diving industry.¹⁶² The United States and other neighboring coastal countries would be wise to support this type of system since it prevents the problems that accompany bilateral agreements between Caribbean countries and other distant water fishing nations.

Implementing such a legal regime has a number of challenges. First, it would constitute a major shift in global fisheries management.

158. *Id.* at 195. Under such a scheme, the Bahamas would still need to implement catch limits for sport fishers to prevent them from “essentially engaging in commercial fishing ‘under the guise of sport fishing.’” Smith & Zeller, *supra* note 27, at 16.

159. Hern, *supra* note 6, at 195. The Bahamas has experimented with aquaculture production for some pelagic fish, but this industry is not currently developed. See CARIBBEAN REGIONAL FISHERIES MECHANISM, *supra* note 3, at 9–10, tbl.4 (noting experimental rearing of cobia in sea cages).

160. See generally discussion, *supra* Section II.A (describing the Bahamas’ fishery and economy).

161. *Bahamas Acts to Protect Sharks*, THE PEW CHARITABLE TRUSTS (July 5, 2011), <http://www.pewtrusts.org/en/about/news-room/press-releases/2011/07/05/bahamas-acts-to-protect-sharks>.

162. Andrea R. Haas et al., *The Contemporary Economic Value of Elasmobranchs in the Bahamas: Reaping the Rewards of 25 Years of Stewardship and Conservation*, 207 BIOLOGICAL CONSERVATION 55, 59 (2017).

Furthermore, the United States' ability to lead this movement is uncertain. Although UNCLOS is widely regarded as customary international law, the United States is one of the few countries to never ratify the agreement.¹⁶³ Its status under UNCLOS gives it credibility to lead the charge against one of the treaty's fundamental tenets. However, its unwillingness to ratify the almost unanimous agreement has hurt its global reputation as a leader in ocean policy reform. If the United States wants to promote a change from UNCLOS's concept of optimum utilization, it must determine which position gives it more credibility.

Another hurdle in implementing such a regime is China's status as a nonparty under the Fish Stocks Agreement. China has explicitly refused to ratify the agreement, citing disagreements surrounding provisions that allow countries other than the flag state¹⁶⁴ to use force during inspection of fishing vessels.¹⁶⁵ Therefore, China, one of the world's largest DWF nations, is not legally obligated under the most significant conservation and sustainability provisions in High Seas fisheries management. This undermines a regime that allows for a country to use its EEZ primarily as a sports fishing conservation area because of the highly migratory nature of deep-water pelagic fish. If Chinese DWFs ignore sustainable fishing practices, coastal countries will have no incentive to create a sport fishing conservation area because Chinese vessels fishing on the High Seas will deplete their fish stocks. Therefore, the countries seeking to implement such a regime would have to give up something to gain China's compliance with the Fish Stock Agreement.

Given China's refusal to recognize the recent arbitral tribunal ruling in the South China Sea—¹⁶⁶ a tribunal established based on the rules prescribed in Annex VII of UNCLOS—¹⁶⁷ countries could be skeptical that China would comply with the Fish Stock Agreement, even if it were ratified. Therefore, countries would only value China's ratification if they could be assured that China would enforce the agreement with its DWF. Countries seeking increased sustainability

163. Status of the United Nations Convention on the Law of the Sea, U.N., https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en (last visited Dec. 28, 2017).

164. A flag state is "the State in whose territory the Ship is registered." UNCLOS art. 91(1).

165. Mallory Testimony, *supra* note 8, at 5.

166. Tom Phillips, Oliver Holmes & Owen Bowcott, *Beijing rejects tribunal's ruling in South China Sea case*, THE GUARDIAN, July 12, 2016, <https://www.theguardian.com/world/2016/jul/12/philippines-wins-south-china-sea-case-against-china>.

167. *See generally* UNCLOS, *supra* note 14, at Annex VII.

have a few bargaining chips they could give up to gain China's support. With the growing global disapproval of capacity subsidies, evidenced by the environmental provisions of the Trans-Pacific Partnership,¹⁶⁸ partial allowance of subsidies might convince China to support a governance regime that allows large-scale sport and conservation fisheries. However, this approach has some problems. Given China's reliance on these subsidies, the country is unlikely to agree to any restriction, even if some subsidies are allowed. Furthermore, if the United States views fishing subsidies as the ultimate problem behind overfishing, softening its stance on this issue may be a poor tradeoff.¹⁶⁹

Proponents of a conservation regime could also reconsider their position on the Fish Stock Agreement's inspection provisions, which are China's biggest concern with the agreement. However, given flag states' inability to adequately monitor Chinese DWF vessels, countries like the United States might want as much inspection ability as possible.

Although both of these solutions are problematic, proponents of a conservation regime must find a way to get China's support in order to have a chance at successfully integrating international law concepts that allow a country to use its EEZ primarily for sport and recreational fishing.

A. POLITICAL AND ECONOMIC RESPONSES TO A CHINESE-BAHAMIAN COMMERCIAL FISHING AGREEMENT

The United States could also use political influence or economic incentives to prevent a Chinese-Bahamian commercial fishing agreement. As the Bahamas' leading trade partner, the United States could pressure the country into abandoning the deal. The United States government has already leveraged this tactic to some extent, stating that such an agreement would endanger "security, cooperation, tourism, economic interrelations, economic

168. Trans-Pacific Partnership Art. 20.16 (draft Feb. 4, 2016) (TPP Final Draft). ("[T]he Parties acknowledge that . . . fisheries subsidies that contribute to overfishing and overcapacity, and illegal, unreported and unregulated (IUU) fishing can have significant negative impacts on trade, development and the environment . . .").

169. See generally Anastasia Telesetsky, *Following the Leader: Eliminating Perverse Global Fishing Subsidies Through Unilateral Domestic Trade Measures*, 65 ME. L. REV. 627 (2013) (proposing the total elimination of fishing subsidies).

contributions . . . [and] would most certainly have a negative impact on our relations with [the Bahamas].”¹⁷⁰

The United States could also attempt to prevent a bilateral agreement by encouraging American investment in Bahamian tourism, hotels, agriculture, and infrastructure. Since Chinese investment in these areas was a principal motivation behind the discussions, the United States can eliminate the Bahamas’ incentive to do a deal by filling this void itself.¹⁷¹ The United States must dramatically increase its efforts to compete with China in this domain. Currently, China is the only country that has signed any type of bilateral investment treaty with the Bahamas.¹⁷² Notably, Chinese companies were major financiers of a \$4.2 billion luxury resort in Nassau¹⁷³ and a \$2.6 billion port facility in Freeport.¹⁷⁴ This activity is not limited to the Bahamas, as Chinese investment in the Caribbean has increased tenfold since 2005.¹⁷⁵ Although the United States has already established good relations with the Bahamas by way of trade, it should consider encouraging investment into a country that is desperate to grow its infrastructure.

Similarly, if a Chinese-Bahamian joint venture becomes inevitable, the United States should consider entering into its own bilateral fishing agreement with the Bahamas. Although some of the same problems with the proposed agreement may persist in a bilateral agreement with the United States,¹⁷⁶ bilateral fishing agreements are not inherently risky. With proper monitoring and control, the Bahamian commercial fishing industry can be expanded sustainably. However, sustainable growth is doubtful if the Bahamas tries to

170. *Nominations (Immediately Following “Assessing the Colombia Peace Process: The Way Forward in U.S.-Columbia Relations” Subcommittee Hearing) Before the S. Comm. on Foreign Relations*, 115th Cong. (2017), available at <https://www.foreign.senate.gov/hearings/nominations-080217>.

171. See *Gray Suggests Chinese Agri-Fisheries Deal Still Open to Negotiation*, *supra* note 64 (noting that the Minister of Agriculture and Fisheries of the Bahamas expressed concern over losing Chinese investment in other sectors after failed discussions for a bilateral fishing agreement).

172. *Bilateral Treaty Register*, <http://mofa.gov.bs/wp-content/uploads/2016/02/BILATERAL-TREATY-REGISTER2011.pdf> (last updated Apr. 8, 2011).

173. Shivani Vora, *In the Bahamas, a Long-Awaited Opening for Baha Mar Resort*, N.Y. TIMES (Apr. 17, 2017), <https://www.nytimes.com/2017/04/17/travel/bahamas-baha-mar-resort-nassau-hotel-casino-opening.html>.

174. RICHARD L. BERNAL, INTER-AMERICAN DEV. BANK, CHINESE FOREIGN DIRECT INVESTMENT IN THE CARIBBEAN: POTENTIAL AND PROSPECTS 8 (2016).

175. *Id.*

176. Under such an agreement, a question remains whether the Bahamas’ deep-water pelagic fishery could sustain both a recreational and commercial fishing industry.

expand by partnering with China's DWF, which often ignores sustainable fishing practices and is not monitored by its flag state. Instead, the United States is better geographically situated to ensure proper control and monitoring over the commercial fleet. However, the United States cannot use resource conservation as a veil to enhance its own competitiveness in the Caribbean fishery.¹⁷⁷ Instead, such an agreement must be designed to encourage the Bahamas to grow its commercial fishing industry sustainably and responsibly.

B. CONCLUSION

Put into context with China's other DWF enterprises, a bilateral fishing agreement with the Bahamas could have devastating environmental effects. IUU fishing, international maritime disputes, and conflicts with artisanal fishermen are all likely consequences of such an agreement. If the Bahamas reopen discussions over such an agreement, the United States may be able to use political pressure or the Fish Stocks Agreement as a short-term solution. However, a global shift in fisheries management is needed to promote the long-term sustainability of the Caribbean Fishery. The recent Chinese-Bahamian discussions should motivate United States to lead such a shift.

177. See *China's DWF Industry*, *supra* note 40, at 106 (“[S]ome developed DWF countries, in order to enhance their own competitiveness in areas, will certainly use the excuse of resource conservation to keep other new countries out, such as by signing agreements with these host countries that limit the number of countries and fishing boats in certain areas.”); MacDonald, *supra* note 157, at 257 (noting that critics of the precautionary principle view it as a way to promote cultural imperialism).