Oceana Finds 300 Chinese Vessels Pillaging the Galapagos for Squid

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Introduction

The Galapagos Islands are an oasis for ocean wildlife with more than 20% of their marine species[i] found nowhere else on Earth. This remote area, nearly 900 kilometers off Ecuador's coast, was once a "living laboratory" that inspired Charles Darwin's theory of evolution. But today, the Galapagos is under siege by an industrial fishing fleet. In one month (July 13 – Aug. 13) nearly 300 Chinese vessels appeared to amass more than 73,000 hours fishing off the Galapagos Islands. This snapshot of fishing activity raises questions about the impact of this massive fishing armada on the oceans it sails.

During the one-month period, 99% of the visible fishing activity,[1] off the Galapagos was by Chinese-flagged vessels. The massive and ongoing fishing effort of this fleet threatens both ecological balance and livelihoods. Based on Global Fishing Watch (GFW) data, these 294 Chinese-flagged vessels were primarily targeting squid, which is essential to the diet of iconic Galapagos species such as fur seals[ii] and hammerhead sharks,[iii] as well as many commercial and recreational fish species such as tuna[iv] and billfish[v] that contribute to the local economy. This fleet's actions run counter to fishing rules implemented by the Chinese government in recent months to improve sustainable fishing practices. What is happening now in the Galapagos raises the question of whether these "rules" were merely rhetoric by the Chinese government.

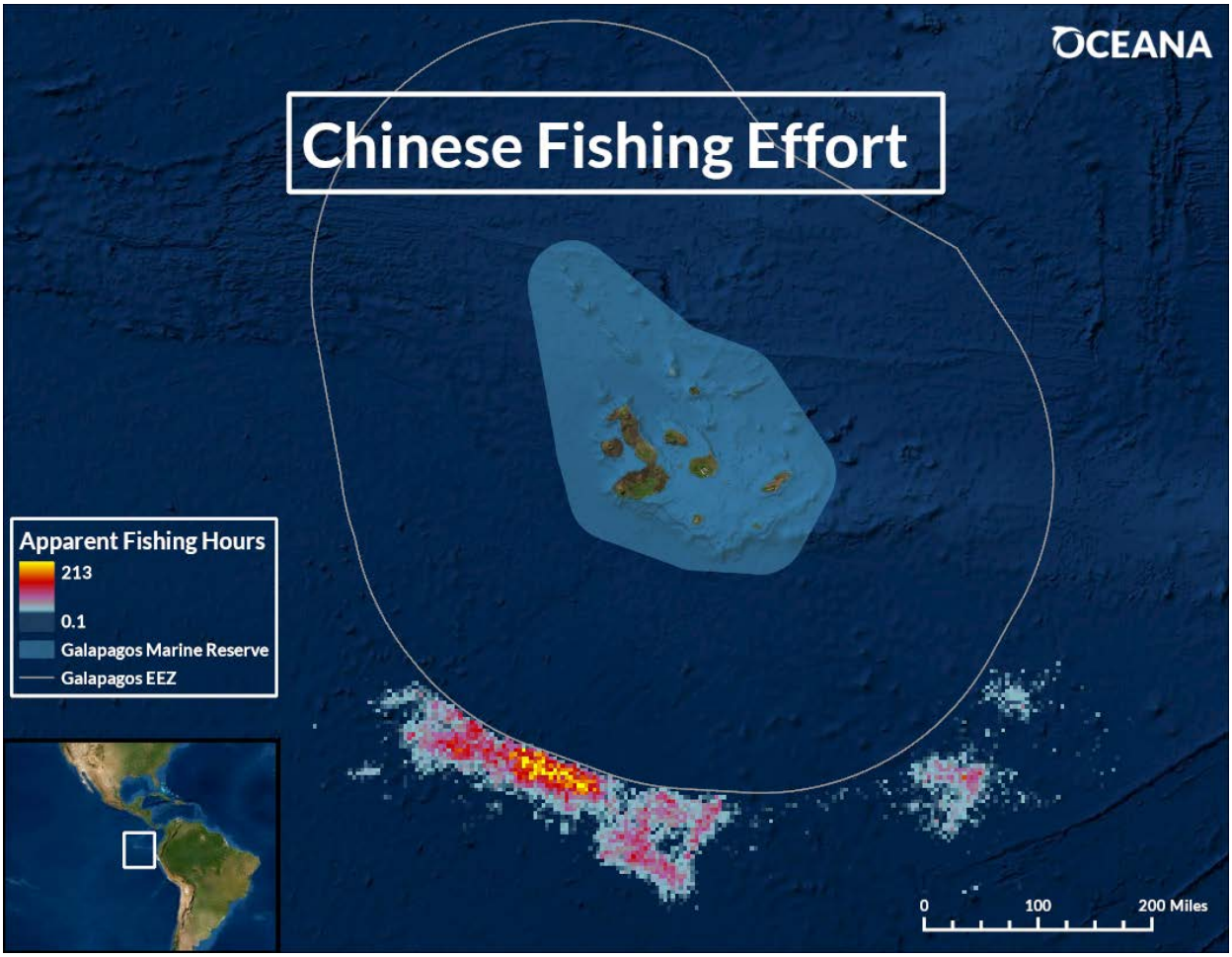
China is the world's largest fishing nation by far with a distant water fleet estimated to consist of as many as 17,000 vessels[vi] (compared to the European Union and the United states which each have approximately 250 to 300 vessels) and accounts for 40% of the global fishing effort.[vii] China

[1] Any and all references to "fishing" should be understood in the context of Global Fishing Watch's fishing detection algorithm, which is a best effort to determine "apparent fishing effort" based on vessel speed and direction data from the Automatic Identification System (AIS) collected via satellites and terrestrial receivers. As AIS data varies in completeness, accuracy and quality, and the fishing detection algorithm is a statistical estimate of apparent fishing activity, therefore it is possible that some fishing effort is not identified and conversely, that some fishing effort identified is not fishing. For these reasons, GFW qualifies all designations of vessel fishing effort, including synonyms of the term "fishing effort," such as "fishing" or "fishing activity," as "apparent," rather than certain. Any/all GFW information about "apparent fishing effort" should be considered an estimate and must be relied upon solely at your own risk. GFW is taking steps to make sure fishing effort designations are as accurate as possible.

is also ranked the worst nation in the world by the IUU Fishing Index,[viii] a tool that analyzes many countries' vulnerability, exposure and responses to IUU fishing, when it comes to illegal, unreported and unregulated fishing, and its fleet has been routinely implicated in violations related to overfishing, targeting endangered shark species, illegal intrusion of jurisdiction, false licensing and catch documentation, and forced labor.[ix]

Fishing a Fine Line

Using GFW, Oceana analyzed the data of fishing vessels found near the Galapagos Islands from July 13 to Aug. 13, 2020. GFW uses a publicly available tracking data transmitted by Automatic Identification System (AIS) transponders to monitor and track vessel movements in near real time. GFW data showed 294 Chinese-flagged vessels, primarily targeting squid, along the southern edge of the Ecuadorian exclusive economic zone (EEZ) surrounding the Galapagos. In this brief period, the fleet appeared to amass 73,058 hours of fishing. In comparison, only 10 non-Chinese-flagged vessels fished in the waters surrounding the Galapagos during this one-month period. Seven of the vessels were Ecuadorian-flagged tuna purse seiners, one was a Belizean-flagged squid jigger, one a Taiwanese-flagged squid jigger and one a Spanish-flagged longliner. These 10 vessels appeared to spend 775 hours fishing over the same month. Compared to these other countries, Chinese-flagged vessels made up 99% of the fishing effort during this one-month period. Not only is China the world's top fishing nation[x] overall (by catch, fleet size and apparent effort), its 2020 squid fishing effort alone (456,162 apparent fishing hours) is nearly three times greater than the next three largest squid fishing nations combined: Taiwan (69,315 apparent hours), Argentina (60,020 apparent hours) and Korea (38,835 apparent hours).



This figure shows the concentration of apparent fishing hours along the line of the Ecuadorian EEZ for the one-month period between July13 and *Aug. 13, 2020. The most intense fishing effort was concentrated to the south west of the Galapagos Islands.*

How Did They Get Here?

Before arriving off the Galapagos Islands, according to the GFW data, 92 Chinese vessels were observed fishing on the border of Argentina's EEZ, another known hotspot for squid fishing. These vessels then fished on the high seas adjacent to Peru's EEZ before transiting further north to fish around the Galapagos. Vessels transiting from both the Atlantic and Pacific converged on the southeast end of the Ecuadorian EEZ at the end of June, and spent July making their way westward. As of Aug. 13, fishing was concentrated along the southwest border of the Ecuadorian EEZ. The shift westward has also been marked by more frequent instances of vessels' AIS appearing to be turned off. These gaps in AIS transmissions can be a result of vessel density, lack of satellite coverage or other reasons, but they also can indicate that a vessel is intentionally disabling it to avoid detection.

The movement of the Chinese fleet is troubling as data from the United Nation's Food and Agriculture Organization suggests Argentine shortfin and Humboldt squid populations[xi] have declined consecutively for the last four years, with Argentine shortfin seeing the largest decreases. These are species found in the Atlantic and Pacific Oceans around South America. In 2020 alone, China appeared to conduct 456,162 hours of squid fishing. China's National Distant Water Fishing Association estimates that its fleet accounts for 50 – 70% of squid caught from international waters.[xii] The next closest fishing nation, Taiwan, only appeared to conduct 69,314 hours of squid fishing since January. In comparison, U.S. squid fishing is limited and thus is not included in the list of the top 10 squid fishing nations of 2020.

Extended Time at Sea

Transshipment poses another threat to the Galapagos, as fishing vessels can transfer their catch without going to port and fill their holds again and again. Transshipment is the process of offloading a small fishing vessel's catch onto larger refrigerated carrier vessels, known as reefers. This allows vessels to fish for longer periods of time without needing to stop in a port. Within the one-month period, there appeared to be six transshipment encounter events identified using GFW[2] between six different Chinese-flagged fishing vessels and a Panamanian-flagged, Chinese-owned reefer. Additionally, nine different carrier vessels that were Panamanian-flagged but Chinese-owned displayed activity in the area south of the Galapagos – four of which operate as reefers. Transshipment can be legal, but it can also be a weak link in the supply chain where illegally caught fish can sneak into the market. It can also enable a multitude of offences and misbehavior, such as obscuring catch origin, human trafficking, and smuggling of drugs and weapons.

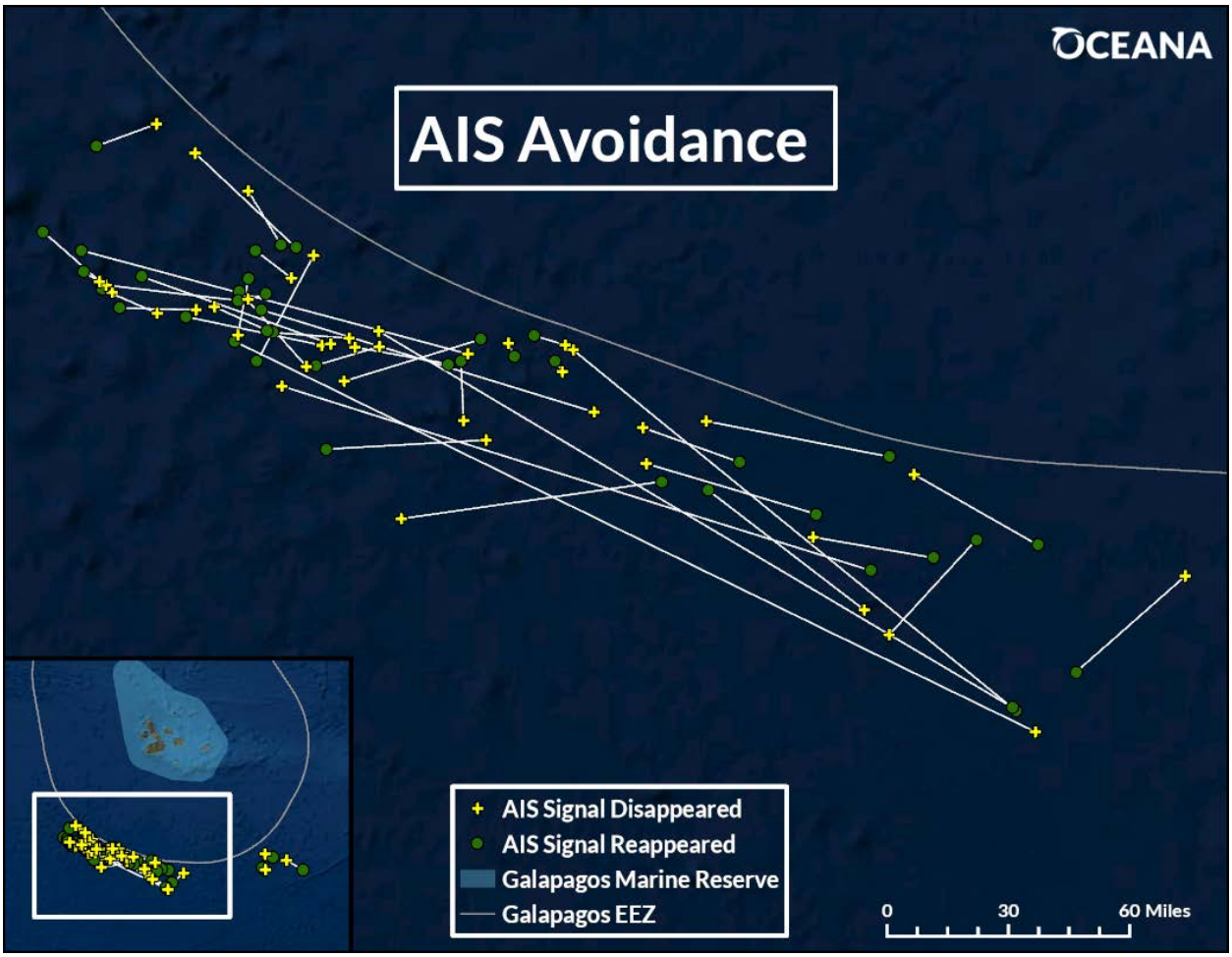
Ports provide a choke point to inspect vessel catch and shipboard conditions and provide respite for crew. Extended time at sea is also often associated with conditions of forced labor and other human rights abuses.[xiii] Of these vessels, 77% most recently visited ports in Chimbote, Peru (73 vessels), Zhoushan, China (60 vessels), Punta Arenas, Chile (52 vessels) and Callao, Peru (52 vessels). On average, these Chinese fishing vessels have not visited a port in 250 days, as of Aug. 13.

Going Dark

Between July 13 and Aug. 13, there were 43 instances in which Chinese fishing vessels with AIS transponders appeared to turn off their AIS. On average, these vessels had AIS gaps for two days

[2] An encounter is when the following three factors are true: two vessels are within 500 m of each other and traveling slower than 2 knots, this behavior lasts at least two hours, and it is happening at least 10 km away from a known anchorage point. In addition to encounters, GFW also detects loitering events when a single vessel is traveling slower than 2 knots. Loitering can mean that the vessel is transshipping with another vessel whose AIS is off.

at a time. The vessel with the longest gap in AIS detection, 17 days, was also potentially involved in a transshipment event with a reefer several hours before appearing to turn its AIS off.



This figure shows instances in which vessels appear to switch their AIS off (yellow) and then reappear (green). With AIS off, vessels can transit into the Ecuadorian EEZ to fish or hide transshipment events.

Accountability for World's Largest and Most Notorious Fishing Fleet

China, the world's largest fishing nation, has a distant water fishing fleet estimated between 4,000 to 17,000 vessels (compared to 300 for the United States).[xiv] This fleet accounts for 15% of the global fish catch[xv] and 40% of global fishing effort.[xvi] China's fleet fishes in the sovereign waters of more than 50 countries[vii] and is a member of seven Regional Fisheries Management Organizations, multinational bodies that manage fishing on the high seas, setting catch limits and implementing protocols for behavior on vessels that operate in waters beyond national jurisdiction. China's fleet is also the world's best financed through government subsidies totaling $7.2 billion (USD), followed only by the European Union ($3.8 billion) and the United States ($3.4 billion),[xvii] enabling the Chinese fleet to fish anywhere in the world.

With much international fanfare, China released its updated Distant Water Fishing Management Regulations[xviii] in April of this year. The updated regulations emphasize sustainable fishing, ocean protection, greater compliance to international fisheries management regimes and safe operations. The regulations also established a censure list system to sanction individuals who commit serious violations and prohibit foreign vessels known to be carrying illegally caught fish from entering China's ports. In January, the Chinese government began requiring mandatory broadcast of Vessel Monitoring System (VMS) data,[xii] from a minimum of once every four hours to once an hour. VMS is a closed tracking system. It is typically tamper resistant and transmits data from the vessel to the management authority. In this case, the Fisheries Bureau in the Ministry of Agriculture and Rural Affairs. Lastly, in July 2020, new management measures for the high seas squid fishery went into effect banning squid fishing during reproductive seasons[xix] in the southwest Atlantic (July through September) and East Pacific (September through November).

The Importance of Squid to Commercial Fisheries and Marine Ecosystems

Squid play an important role in the health of other fisheries and marine ecosystems.[xix] Many commercial fish species and important predators, such as tuna, salmon, sharks and billfish, rely on squid or fish that eat squid for a significant part of their diet. Depleted squid populations mean potentially depleted fisheries and ecosystems out of balance, leading to a loss of jobs in fishing and tourism. Some squid species are predators, regulating the population balance of their marine ecosystems, which can also be vital to the health of commercial species.[xx] The global squid trade will be worth more than $11.6 billion (USD)[xxi] by 2025 with key markets in the United States, European Union, China, Japan, Korea, India and Southeast Asia where they are used both as food, and increasingly as feed in the aquaculture industry.

Transparency Is Essential

Increasing transparency of vessels fishing on our oceans will allow fundamental improvements to the fishing activities of the distant water fleets across the globe, which share similar problems of illegality, unsustainability and unethical behavior. Commitments put forward on sustainability, ocean protection, rule of law, human rights and eliminating bad actors cannot be attained under the current cloak of secrecy that pervades distant water fishing operations. In the current

situation facing the Galapagos, we have seen the disabling of AIS devices, conflicting vessel identifier information and potentially suspect transshipment practices.

Oceana calls upon all distant water fishing countries to require:

- Transparency of vessel and catch data, including registration and licensing, real-time location, type of fishing and non-fishing activities such as transshipping, and catch monitoring and documentation
- Transparency of decision making, including fishing subsidies allocations and bilateral fishing agreements with coastal states
- Transparency of ownership, including front companies, flags of convenience and foreign vessels domesticated under international joint ventures

Transparency is the catalyst to reforming policies that will help ensure that all seafood is safe, legally caught, responsibly sourced and honestly labeled. China's fishing fleet is the largest in the world. As the demands for marine resources such as fish and squid increase, so too does the need to manage and protect these resources for future generations.

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