

Law Enforcement Capacity to Address IUU Fishing

The capacity of Latin American and Caribbean states to address IUU fishing may be thought of as having at least three significant components: physical capacity, surveillance capabilities, and prosecutorial-judicial capacity. The capacity of these states to monitor, prosecute, and deter IUU fishing varies considerably along all three components.

Physical Capacity

One of the primary problems of Latin American and Caribbean states in combatting IUU fishing relates to these countries' underwhelming physical capabilities. There are great disparities between the material capabilities of the more developed South American states and the Central American and Caribbean states, which tend to have the least personnel and equipment. For example, Argentina has a combined naval and coast guard fleet of more than 250 vessels and more than 64,000 naval and coast guard personnel, while Guyana has just nine vessels and 180 active sailors in its joint coast guard and navy¹ and Suriname's Coast Guard – established in 2017— has three vessels.²

These disparities persist even if we take into account the size of fleets relative to the size of national waters in the nine countries covered by this report. Argentina has by far the largest combined fleet, with a ratio of 0.132 personnel per nautical square mile in the national EEZ, a ratio which puts it slightly ahead of both the U.S., a major naval power (0.089), and Colombia (0.108), an important regional peer.³ Ecuador (.072) and Uruguay (.065) are slightly lower, but still demonstrate sizeable scale. At the other end of the spectrum, Guyana (.002), Jamaica (.002), and Suriname (.003) are the three nations with the lowest measures of manpower by far, aside from Costa Rica, with the caveat that Costa Rica does not have a navy and only has rudimentary coast guard capabilities (.0016).⁴ Panama (.02) and Chile (.017) sit in the middle of the pack.⁵

These quantitative estimates of relative physical capacity could be misleading, because of a number of other factors that may affect the deployment of capacity. For example, ships and personnel are often more devoted more to other priorities, such as combatting drug trafficking, than to deterring IUU fishing, as will be discussed in the next section. The condition and age of fleets across the region is also of particular concern, as fiscal constraints limit investment and maintenance. In the case of Jamaica, for example, the state of economic disrepair after the global recession of the late 2000s left its Coast Guard “almost completely unserviceable” by 2012,⁶ although plans are in the works to upgrade the coast guard's personnel and fleet, and the U.S. recently donated Boston Whaler patrol boats to the Jamaican government.⁷ Another example comes from Suriname, where “[o]verall the armed forces show a lack of maintenance and negligence, which compromises its capabilities.”⁸ Even in wealthier countries, fleets are aging and undermaintained. According to *Jane's World Navies*, regional power Argentina “deploys an ageing blue-water fleet with finite capabilities across the spectrum of force roles, especially pertaining to patrolling,” and modernization of the fleet has been a stated priority of the government since the early 2000s, but little progress has been made on its implementation.⁹

The most significant exception to these problems is Chile, whose Navy (and coast guard component), is “the most modern and best-equipped in South America.”¹⁰ Chile recently

underwent a decade-long naval modernization campaign that included the acquisition of offshore patrol vessels (OPVs) which have expanded its patrol capabilities beyond its Exclusive Economic Zone (EEZ) and into international waters, while increasing the number of OPVs patrolling its EEZ.¹¹

In terms of physical capacity, Chile and Argentina invest the most in their coast guards and navies by a wide margin. Chile is poised to spend almost \$1 billion on its navy in 2022 and an additional \$127 million (down from \$145 million in 2020) on its coast guard.¹² Argentina is poised to spend \$340 million on its navy in 2022 and spent \$302 million on its coast guard forces in 2021.¹³ In terms of the naval budget, the only other country in this report that approaches Chile and Argentina is Ecuador, which spends almost as much on its navy as Argentina, though defense-wide budget cuts have pushed that figure down in recent years.¹⁴

Table 1: Naval/Coast Guard Capacity

Countries and Navy/Coast Guard Capabilities	Naval Fleet Size	Naval Personnel	Coast Guard Fleet Size	Coast Guard Personnel
Argentina	69 total vessels	18,368 (.032 men per nautical mile)	182 vessels	45,900 (.10 guards per nautical mile)
Chile	39 vessels	20,000 (.015 men per nautical mile)	74 vessels	2,000 (.0015 guards per nautical mile)
Ecuador	66 total vessels	9,130 (including CG)	66 vessels	TOTAL (.072 men per nautical mile)
Uruguay	16 vessels	3,600 active (.047)	37 vessels	1,400 (.018)
Costa Rica*	N/A, does not have a military	N/A, does not have a military	69 vessels	514 (.0016)
Panama**	At least 61 vessels	3,800 active, 0 reserves (.02)	40-45 vessels	3,800 ¹ (partially integrated defense force, vessels are correct)
Guyana***	9 vessels (1 of which is a floating base)	180 active, 100 reserves (.002)	Integrated defense force	Integrated defense force
Jamaica****	25 vessels	340 active, 50 reserves (.002)	Integrated defense force	Integrated defense force
Suriname	10 vessels	240 active, unknown reserves (.003)	3 vessels	Newly established, not yet operational (currently training students) ²

Source: Janes 2020 figures for World Naval Assessment 2021. Manpower per nautical mile as calculated from EEZ sizes listed at <https://www.marineregions.org/eezdetails.php?mrgid=8461&zzone=eez>

Notes:

(*)Costa Rica abolished its military in 1949 after its civil war, though it retains a small Coast Guard.

(**)Panama abolished its armed forces in 1990 after the fall of longtime dictator Manuel Noriega, but retains small air and maritime forces under civilian control of the SENAN (Servicio Nacional Aeronaval).

(***)The Guyana Defence Force (GDF) has an integrated naval and coast guard component.

(****)The Jamaican Defence Force Coast Guard (JDF CG) is the naval arm of Jamaica, combining maritime law enforcement, maritime safety, national building, and defense readiness and naval duties.

Surveillance Capability

Monitoring, control, and surveillance (MCS) is another important component to combatting IUU fishing. Monitoring refers to the measurement of fishing effort yields and the attributes of those yields. Control refers to the regulatory environment in which the utilization of fishery resources is conducted. Surveillance refers to efforts to observe the state of compliance with the regulatory environment for fishery resources. According to the United Nations Food and Agriculture Organization (UN FAO):

*MCS is an often overlooked aspect of oceans and fisheries management; but, in reality, it is key to the success of any planning strategy. The absence of a strategy and methodology for implementation of monitoring, control and surveillance operations would render a fisheries management scheme incomplete.*¹⁵

In the region, there are several major categories of efforts to combat IUUF through MCS, including 1) U.S. partnership efforts aimed at increasing joint MCS capabilities; 2) MCS instruments developed and carried out by non-governmental organizations; and 3) domestic MCS capabilities.

With regard to the first of these, the U.S. has surveillance partnerships with counter-IUU fishing components in a number of countries in the region. Ecuador is one such example. A U.S. Orion P-3 aircraft carries out maritime aerial exploration operations to collect information on IUU fishing and the U.S. is developing sensors and communications equipment to enhance the Ecuadorian Navy's surveillance profile.¹⁶ In response to the Chinese fishing fleet's growing presence in Ecuador's EEZ, the U.S. has deployed Coast Guard patrol boats and personnel to Ecuadoran waters.¹⁷ Another example is the U.S.'s 2020 Operation Southern Cross, which institutionalized maritime surveillance cooperation with Guyana, Argentina, and Uruguay.¹⁸

In the Caribbean, U.S. surveillance capacity building operations have traditionally emphasized counter-narcotics missions. The U.S. has developed shiprider agreements that allow U.S. assets and personnel to patrol local waters with host country officials. In 2020, the U.S. signed a shiprider agreement with Guyana that allows U.S. personnel and assets to patrol local waters and train Guyanese forces.¹⁹ Similarly, in 2021, Jamaica and the U.S. amended an existing 1997 shiprider agreement focused on drug interdiction to expand technical assistance and cooperation against IUU fishing.²⁰ As the Caribbean states are also less likely to be parties to the PSMA, the U.S. and FAO in recent years have focused on building capacity to bring these countries into compliance, with the eventual goal of joining the agreement. For example, from 2017 to 2020, NOAA's Office of Law Enforcement, in partnership with the FAO, has provided support for MCS capacity building to implement the terms of the PSMA in Guyana and Jamaica, which are not currently members.²¹

Second, there are international instruments in the field of MCS that include several of the countries surveyed in this study. The International MCS Network (IMCS Network) emerged out of the 2000 Santiago Declaration, drafted by representatives of Australia, Chile, the European Union, Peru, and the United States.²² The IMCS Network is a voluntary network of countries and RFMOs committed to improving fisheries-related MCS activities and it encourages information

sharing and organizes capacity building trainings for MCS, among other functions.²³ Because participation is voluntary, commitments established in IMCS Network proceedings are non-binding. One thing to note about the Network is that the Santiago Declaration expressly tasked the FAO with coordinating the Network and promoting participation by less developed nations (many of which have the most at stake in terms of food insecurity and lost revenue when it comes to IUUF).²⁴ Only five of the nine countries that are the focus of this research (Chile, Costa Rica, Ecuador, Panama, and Uruguay) are members of this institution.²⁵ The Network is not significantly integrated into existing fishery institutions and “has struggled to attain global legitimacy.”²⁶

Another relevant international instrument in the field of MCS is Interpol’s Project Scale, a project to help Interpol member countries prevent fisheries crime by exposing criminals and their networks. The Fisheries Crime Working Group (FCWG) is an international platform within INTERPOL’s Project Scale for the sharing of knowledge and information, as well as the development of policing approaches to fisheries crimes.²⁷ Costa Rica appears to be the only country of the nine covered here to have engaged on a significant level with Project Scale. Costa Rica utilized the Project Scale Interpol architecture to prosecute violators of IUU fishing law, requesting that a Purple Notice be issued to make states aware of an illegal shark-finning technique that Costa Rica discovered in 2011.²⁸ However, only 49 countries worldwide are currently members.²⁹

With regard to domestic MCS, the surveillance capacities of individual countries in the LAC region and their law enforcement agencies vary enormously. The South America countries in this report generally outperform their peers in the Caribbean and Central America, although the extensive fisheries they surveil are also home to significant international fishing vessels, including many engaged in IUU fishing activities.

Argentina has “adequate MCS infrastructure” to monitor domestic and foreign fleets fishing in its EEZ.³⁰ Fishing vessels flagged to Argentina that intend to fish on the high seas must follow rules on vessel registration, flag state obligations, and reporting requirements. Argentina has a vessel monitoring system (VMS) mandate for artisanal boats longer than 10 meters. Onboard video cameras were required to monitor compliance with fishing regulations, but this mandate has not been uniformly implemented. Onboard observer coverage varies considerably. The maritime forces have adequate manpower for sea-based patrols, but “gaps are reported with respect to number of inspectors versus operational vessels for surveillance in artisanal fisheries” and corruption has been reported among inspectors.³¹ The Argentine navy has the capacity to conduct aerial patrols of fishing vessels and does so. It also has a relatively good offshore presence to deter fishing of squid along its EEZ boundary, especially by comparison to its neighbors.³²

Chile is a regional leader on surveillance capacity. In 2019, Chile’s National Fisheries and Aquaculture Service (SERNAPESCA) elected to share its VMS data with Global Fishing Watch in the interest of transparency, as well as mandated the use and publication of VMS. However, Chile has struggled to build sufficient infrastructure to monitor vessels that do not voluntarily report their VMS data.³³ In order to comply with the 1979 International Maritime Search and Rescue Convention (SAR Convention), Chile established a “vessel situation notification system” that reports on the monitoring of vessels in Chile’s SAR jurisdiction. Chile

has invested dramatically in recent years in drones and satellite technologies to improve its MCS capabilities, especially in Marine Protected Areas (MPAs) further away from the coast. In areas with a high concentration of foreign fishing vessels, the Chilean Navy conducts anti-IUU fishing Oceanic Fisheries Control Operations.³⁴

The two other South American countries covered by this report have considerably lesser MCS capacity. Ecuador is “moderately equipped” to monitor fishing vessels active within its EEZ³⁵ but it has been understaffed. In marine reserves there are good satellite, radial and radar systems. Boats can be sanctioned or fined for entering the marine reserve.³⁶ But existing inspections at landing docks in artisanal fisheries and coastal patrols are insufficient to deter illegal fishing and illegal cross-border trade. Since Ecuador is not a signatory to the FAO Compliance Agreement and its national laws do not require Ecuador flagged vessels to report their position at regular intervals on the high seas, it lacks adequate management plans to monitor its vessels on the high seas.³⁷ A portion of industrial tuna vessels, trawlers, and purse seiners are fitted with VMS; however, many of its artisanal vessels are classifiable as semi-industrial vessels capable of fishing on the high seas but are not fitted with VMS.³⁸

Uruguay has a number of regulations on the books. It requires all large fishing vessels to share their VMS location data. It also requires foreign vessels fishing in its water to have VMS surveilled by the flag state. Within the country, foreign vessels with catches to unload are required to notify Uruguayan fisheries authorities at least 48 hours in advance of their arrival in Montevideo. However, capacity to actually implement these regulations has been sparse, and experts estimate that no more than one fifth of all vessels docking in Montevideo are even nominally inspected.³⁹ Montevideo has seen multiple cases in recent years of crew members being abandoned in port, reports of mistreatment, and routine disembarkation of fishers’ corpses. Partly in consequence, the government has announced plans to increase the number of fishing vessel inspectors by 33 percent. But this may not address the issue of significant bribery of inspectors, reportedly persistent in Uruguay, nor does it influence a larger structural issue, which is that the port of Montevideo benefits enormously from servicing foreign fishing fleets that are often engaged in questionable activities in neighboring countries’ waters.⁴⁰

The two Central American countries covered by this report have middling MCS capabilities. Costa Rica suffers from serious overfishing in its EEZ, including tuna catch that may be three times as great as the quotas set by the fisheries authority INCOPECA.⁴¹ Costa Rica has invested in patrol boats, installed radars in marine protected areas (MPAs), and launched a drone surveillance system in 2015 to deter poaching and eliminate IUU fishing. It also shares VMS data with Global Fishing Watch.⁴² But overall capacity remains insufficient to adequately control the maritime domain, especially in MPAs, where the remoteness of the location means that authorities are often absent or understaffed.⁴³ One expert suggested that as many as two-thirds of fishers are unlicensed, and government inspectors have no control and no data, aside from suffering from corruption.⁴⁴

Panama was yellow flagged by the EU in 2019 for failing to demonstrate sufficient effort in combatting IUU fishing. The National Aeronaval Service (SENAN) and Coast Guard have sufficient capacity to patrol coastal and territorial waters, as well as to control ports to prevent IUU fishing, and to control vessel activities within MPAs.⁴⁵ But although Panama monitors all industrial fishing boats by VMS, it does not automatically overlay EEZ and high seas boundaries, “rendering identification of fisheries violators ineffective.”⁴⁶ The government shares

its VMS data with Global Fishing Watch, but Panama's International Maritime Organization (IMO) vessel numbers are replaced by anonymous GFW ID numbers (Chile, by comparison, allows GFW to release IMO ID numbers).⁴⁷ Further, many problems visible elsewhere are also present in Panama: prioritization of drug interdiction over IUU fishing; a shortage of fisheries inspectors; and inadequate onboard observer presence. As a result, even though its budget for fishing control is much larger than Costa Rica's, Panama has limited capability to monitor its vessels on the high seas, and those found violating the law are often able to avoid penalties (ships could often just switch their flag after being caught to avoid paying fines).⁴⁸

The Caribbean nations covered by this report have the weakest capacity, starting with bad data collection, which poses an immense challenge to any significant fisheries planning. In Guyana, all trawlers are required to install VMS transponders before licenses are issued every year, and catch recording in logbooks is mandatory.⁴⁹ However, Guyana has limited manpower for land and sea-based enforcement, the Fisheries Department budget is insufficient, the Guyana Coast Guard lacks radar systems to conduct surveillance,⁵⁰ and the government has largely been dependent on patrol boats and training donated by the U.S. via the Caribbean Basin Security Initiative (CBSI).⁵¹ At present, the Coast Guard can only monitor 40 miles out from shore and is poorly equipped to pursue IUU fishers.⁵² The government has often relied on private vessels for surveillance on what is happening, although the recent purchase of a 115-foot vessel may improve control over the EEZ.⁵³ Fines by the coast guard are used as a deterrent, but they are seldom enforced. There are important gaps in licensing procedures, and small fishers often deliberately avoid licensing so as to avoid income tax.⁵⁴ One consequence is overfishing: some areas are so crowded that there is not enough space for the fishing nets.⁵⁵ Vessels are not being inspected or measured, landing sites are not being monitored and no one from the fisheries inspects the waters.⁵⁶

Jamaica is in the process of expanding VMS mandates to all locally-licensed motor fishing vehicles, and in 2019 the government expanded guidelines and sought to improve interagency cooperation around IUU fishing. In recent years there has been a good partnership between the Marine Police and Coast Guard.⁵⁷ In 2018 the government also obtained a Beechcraft King Air 350 WR maritime patrol aircraft (MPA) and two Bell 429 helicopters to build up surveillance capabilities specifically against IUU fishing. Yet Jamaica's patrol boats are old and poorly maintained.⁵⁸ It is also difficult to gain a full picture of IUU fishing in Jamaica because of poor data collection. Jamaica has collaborated with CARICOM and the Inter-American Development Bank to create a system with management plans, a list of boats with permits to fish in Jamaica and a system through which foreigners can apply for boating licenses and pay online. Under this new system sports fishers will also have to register their boats.⁵⁹ However, an absence of effective data collection allows illegal fishers to continue their activities, especially as currently conch and lobsters are the only two regulated species.

Suriname seeks to maintain close regulation over its own domestic fisheries, in part to ensure that it is able to continue to export to foreign markets, especially the European Union.⁶⁰ The country requires permits for offshore fishing and a VMS mandate for every license holder of a fishing vessel, although this regulation is still in the process of implementation, with private sector cooperation.⁶¹ But the newly formed Coast Guard, as noted earlier, is quite small, and limited budgets mean that patrols occur only sporadically, while there are few statistics on which to base fishery policies.⁶² This means that monitoring is more effective with domestic fishers that land fish at national ports than with fleets operating further offshore. Even here, however, there

are significant problems with the forgery of fishing licenses and boat numbers, which are provided to foreign fishers or used to evade fishing restrictions.

Prosecutorial capacity

The ability of the nine countries covered in this report to deter IUU fishing is hampered by low levels of effective prosecution of environmental crimes. In part, this is due to the low priority given to environmental crimes by prosecutors, and the low sentencing guidelines for such crimes. Across the region, experts note that not all crimes are typified in criminal code, nor are the fines and possible sentences an effective deterrent.⁶³ In some countries, such as Costa Rica and Ecuador, local experts report that it can be difficult to educate members of the judiciary about the issue and judges refuse to accept evidence related to fishing crimes.⁶⁴ Equally important may be weak prosecutorial-judicial capacity: a majority of the nine countries show low capacity despite considerable divergence across their prosecutorial and judicial systems.⁶⁵

Only four of the nine countries are above the fiftieth percentile on the World Bank's "Rule of Law" index: Chile (84th percentile), Uruguay (74th), Costa Rica (70th), and Suriname (50th).⁶⁶ A measure of "timely, effective criminal adjudication" by the World Justice Project shows only two of the nine countries in the top tercile internationally: Suriname and Chile.⁶⁷ Uruguay, Ecuador, Costa Rica, and Guyana fall in the second tercile, and Argentina, Jamaica and Panama in the third.⁶⁸

There has been important international support for prosecutorial efforts. The U.S. government and international organizations have worked with partners to improve prosecutorial training regarding IUU fishing. For example, the U.S. trained Ecuadoran prosecutors on deterring IUU fishing,⁶⁹ and through the Caribbean Basin Security Initiative (CBSI), the U.S. has provided support for technical capacity training of Guyanese and Jamaican prosecutors.⁷⁰

Given low prosecutorial-judicial capacity, it is perhaps not surprising that examples of successful prosecution are few and far between. However, the prosecution of a variety of fishing-related crimes in the countries covered by this report in recent years suggests that with adequate will, violations can begin to be addressed, even if somewhat spottily:

- In Chile, salmon thieves were busted in 2019 and sentenced in 2021 to between seven hundred days and three years in jail for stealing ten tons of farmed fish.⁷¹
- In Ecuador in 2019, authorities sentenced 20 crew members of the Chinese ship *Fu Yuan Yu Leng 999* to one to three year terms, confiscated the ship, and imposed a US\$6.1 million fine after they were caught with 7,600 sharks off the Galapagos.⁷²
- Also in Ecuador, in 2021 the alleged exporter of 26 tons of illegal shark fins to Hong Kong, taken from more than 38,000 sharks, was fined by the government (the fine, however, was less than \$4,000).⁷³
- The Guyanese Coast Guard in 2018 conducted operations against three vessels found fishing without turtle excluding devices (TEDs). The captains were prosecuted, and two were found guilty.⁷⁴

- In Jamaica, two fishing vessels run by Dominican fishers were seized for IUU fishing. The fishers were convicted in 2019 resulting in the forfeiture of their ships.⁷⁵
- Argentine authorities seized several ships for IUU fishing in the EEZ, including the Spanish Playa Pesmar Uno in 2018⁷⁶, the South Korean trawler O Yang 77 in 2019⁷⁷, and the Chinese Hong Pu 16⁷⁸ and Lu Rong Yuan Yu 668⁷⁹ in 2020. However, it should be noted that we are unaware of subsequent successful prosecution of the ships' crews or owners.

These examples demonstrate that prosecution of IUU fishing is possible, although it is far from common in any of the nine countries covered by this report.

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