



## LATIN AMERICA'S ENVIRONMENTAL POLICIES IN GLOBAL PERSPECTIVE

*This series explores the international dimensions of Latin America's environmental challenges and the role of environmental issues in shaping the region's most important diplomatic and economic relationships.*

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# Ecuador on the Frontier of a Changing Ocean:

Understanding the Impacts of Illegal, Unreported, and Unregulated Fishing on Ecuador's International Economic Relations

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## INTRODUCTION

The jurisdictional waters of Ecuador cover an area that is five times the size of its land. Located within these vast waters and within Ecuador's Exclusive Economic Zone (EEZ) sits one of the most important natural sanctuaries on the planet. The Galápagos Islands are undoubtedly a "jewel of the Pacific," with a unique natural history. A visit to the Galápagos represented a turning point in the theories developed by Charles Darwin, when in 1835 he spent five weeks studying the islands' diverse wildlife while aboard the HMS Beagle. Recognized as a UNESCO

World Heritage site, today the Galápagos serve as a stark reminder of the growing threat of biodiversity loss and the need for greater environmental action to protect the world's oceans.<sup>1</sup>

This small archipelago also highlights Ecuador's unique relationship with other threatened ecosystems in South America, with nearly 2 percent of the Amazon River basin within its borders. Like the Amazon, the surrounding waters of the Galápagos are becoming emblematic of the drastic and rapid advance of the climate crisis. The international community recognizes land use change, deforestation,

Photo credit: Fishing boats in the Bay of Santa Elena in Salinas, Ecuador: Ksenia Ragozina, Shutterstock, September 2011





Photo credit: Hammerhead sharks and other wildlife swimming by the coast of the Galápagos Islands, Ecuador: Alex Vog, Shutterstock

and wildfires as key culprits on land, but the role of expansive human activities and overfishing are also having profound and consequential impacts on the Earth's carbon cycle and vulnerable marine ecosystems.<sup>2</sup>

Global fishing and overexploited fish stocks are most concerning as it relates to illegal, unreported, and unregulated (IUU) fishing. This scourge affects Ecuador not only on a national level but also internationally. The EEZ waters off its mainland have become a hotspot for increased activity by foreign fleets, which operate freely throughout the Pacific, including on the high seas where there is no jurisdiction or enforcement to limit unsustainable fishing practices.<sup>3</sup> Furthermore, as an illegal activity, which takes place in jurisdictions in South America with often-underfunded government agencies and navies, many of the consequences of IUU fishing are not fully understood by the international community. Devastating environmental loss and ecological damage in these waters could become irreversible in the coming decades, due to climate change and other human pressures.<sup>4</sup>

As governments around the world respond to the climate crisis, Latin America's trade relationships and

their impact on the environment are coming into focus. In the case of Ecuador, the impacts of IUU fishing are of considerable interest to major economies, including the European Union and the United States. How Ecuador navigates these important commercial and economic relationships, and recognizes external concerns about Ecuador's environmental management, can serve as a critical lesson for other governments in South America that are evaluating more sustainable approaches to development and trade.

## IMPACTS OF IUU FISHING AND ECUADOR'S SHARP LEARNING CURVE

Calculating the economic loss and impact on government revenues due to IUU fishing is difficult, and estimates vary. However, it is clear that IUU fishing is most prevalent in the developing world, plaguing countries in Asia, Africa, and South America. To promote more sustainable practices, we must understand the negative impact that IUU fishing represents not only for local economies but also for the global commons, including the capacity of marine environments to absorb carbon emissions.

According to Sumaila et al. (2020), the three regions mentioned above account for approximately 85 percent of total catch losses likely attributable to illicit trade.<sup>5</sup> The authors also estimate that the overall economic loss of IUU fishing represents somewhere between \$26 billion to \$50 billion dollars each year globally, while potential losses to countries' tax revenues are between \$2 billion and \$4 billion each year. Beyond the economic loss, it is important to highlight that the removal of targeted and nontargeted species negatively affects the ocean's carbon cycle and exacerbates climate change. That is worrisome; during the past decade, the ocean's carbon cycle was responsible for absorbing a quarter of greenhouse gas emissions.<sup>6</sup>

To counter these trends, the United Nations Food and Agriculture Organization (FAO) introduced regulatory instruments to tackle IUU fishing in 2001. The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) was one of the first policy mechanisms to address IUU fishing, employing a "soft law" or non-binding approach.<sup>7</sup> The plan helped to define these activities and guide the responses by governments. According to the IPOA-IUU, the most basic definition of illegal fishing concerns activities "conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations." Further definitions cover unreported and unregulated fishing, especially as it concerns conservation and management measures, as well as reporting requirements for the appropriate regulatory agencies (Figure 1).

The IUU fishing definitions by the FAO were a first step in creating a foundation for recognizing the global challenge of IUU fishing, but it was not until almost a decade later that they became legally binding through the Agreement on Port State Measures (PSMA). The PSMA was the first international treaty to address the problem by "preventing vessels engaged in IUU fishing from using ports and landing

their catches. In this way, the PSMA reduces the incentive of such vessels to continue to operate, while it also blocks fishery products derived from IUU fishing from reaching national and international markets."<sup>8</sup>

However, despite such efforts, Ecuador, like many developing countries with rich, diverse territorial waters that are important for local economies and livelihoods, has seen increased international attention concerning its marine resources and IUU fishing in recent years. For Ecuador, this is not a minor concern; after the country's oil sector, fisheries and aquaculture represent the second-largest export sector.<sup>9</sup> Ecuador has historically been a major producer of fishery products, and it is the world's second-largest producer of tuna, after Thailand.<sup>10</sup> From 2017 to 2020, Ecuador's export market in fishery products was valued between \$3 billion and \$4 billion annually, with the vast share of exports destined for China (Figure 2). Unsustainable practices tied to this critical market could jeopardize Ecuador's fisheries and associated ecosystems that are necessary to slow biodiversity loss and mitigate climate change.

## SOUNDING THE ALARM

Given the country's exceptional oceanographic position near important marine resources and fisheries, Ecuador has experienced firsthand the growing risks associated with IUU fishing, both from foreign and national fleets, including artisanal longline fishing, which can release tens of thousands of hooks dragged behind fishing vessels. In many instances, this technique leads to catches of nontargeted species, including vulnerable marine wildlife such as turtles, sharks, stingrays, and seabirds. Growing concern over Ecuador's unsustainable fisheries management resulted in a strong reaction from the European Union in 2019.

Figure 1: IPOA-IUU Definitions

**Illegal fishing refers to activities:**

3.1.1 conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;

3.1.2 conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or

3.1.3 in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

**Unreported fishing refers to fishing activities:**

3.2.1 which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or

3.2.2 undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

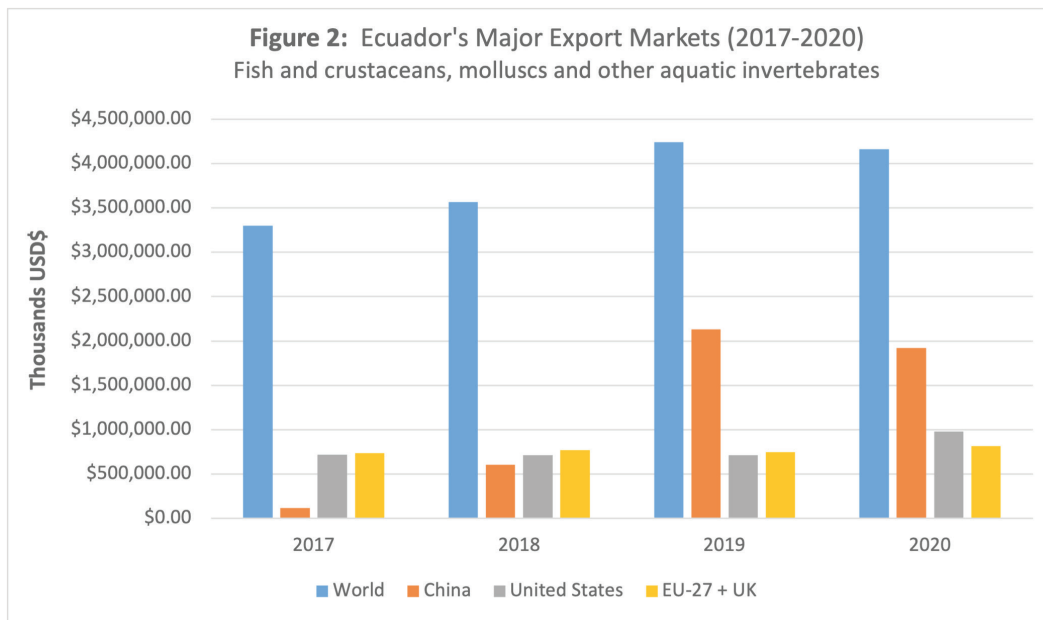
**Unregulated fishing refers to fishing activities:**

3.3.1 in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or

3.3.2 in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

3.4 Notwithstanding paragraph 3.3, certain unregulated fishing may take place in a manner, which is not in violation of applicable international law, and may not require the application of measures envisaged under the International Plan of Action (IPOA).

Source: Food and Agriculture Organization of the United Nations



Source: International Trade Centre, Trade Map Data. <https://www.trademap.org/>

To encourage better management of Ecuador's maritime territory, the European Commission issued a "yellow card" to discourage IUU fishing, and it put Ecuador on notice that its fishery products could lose access to the EU Common Market.<sup>11</sup> The initial failure of the Ecuadoran government to address IUU fishing was the result of an obsolete legal framework that did not meet international and regional standards regarding the sustainable use of fisheries and other marine resources. Deficiencies in the oversight and regulatory framework permitted noncompliance with international standards and obligations by Ecuador's tuna and processing industries.

**"By ramping up the use of technologies to address the problem of traceability in fisheries, and by forming new national action plans, Ecuador could build a more sustainable framework for its fisheries."**

The warning from a major consumer of Ecuadorian fishery products represented a key challenge but also an opportunity to improve public policies and implement new monitoring and control systems. By ramping up the use of technologies to address the problem of traceability in fisheries, and by forming new national action plans, Ecuador could build a more sustainable framework for its fisheries. Moreover, by improving conservation and management of its marine resources, Ecuador could better understand the status of existing stocks, such as shrimp, tuna, shark, and other species. Indeed, the warning from the European Commission forced officials in Quito (the capital of Ecuador) to assess the linkages between sustainability and trade.

However, implementing a sustainable framework to address the "yellow card" will take time, and meaningful progress has been slow. The initial response from Ecuador highlighted its understanding of the risk of losing market access. Legislators committed to more sustainable practices in Ecuador's fisheries and higher environmental standards, passing the Law on the

Development of Aquaculture and Fisheries, which went into force on April 21, 2020.<sup>12</sup> By replacing legislation from 1974, this new law integrated modern legal and environmental concepts and helped harmonize domestic regulations with international law and treaties signed and ratified by Ecuador. Some of the law's main elements include:

- (1) The creation of a census conducted by authorities to better understand and monitor the actors that participate in Ecuador's fishing industry.
- (2) The creation of the Public Institute for Research in Aquaculture and Fisheries, and targeted funding of new action plans, programs, and research projects from Ecuador's National Fund for Research.
- (3) Incentives for those involved in the industry who improve sustainability outcomes, processes to improve the control and surveillance of fishing activities in Ecuador, and administrative procedures to address violations and levy fines.
- (4) The establishment of a new regulatory body to pursue sustainability in Ecuador's marine and aquaculture industries, complying with requirements of treaties signed between Ecuador and the European Union, Inter-American Tropical Tuna Commission (IATTC), and the South Pacific Regional Fisheries Organization, among others.

However, the full implantation of this new law is still pending, including much of the overall framework to improve sustainability. On the other hand, the US National Oceanic and Atmospheric Administration, which produces a biannual report to the US Congress on international fisheries management, has recognized the corrective measures taken by Ecuador with respect to IUU fishing since 2019.<sup>13</sup> Ecuador has also adopted a more proactive approach toward the IATTC, including proposals to increase restrictions and

monitoring for tropical tuna fishing, such as onboard observers, electronic monitoring, rules for transshipment, and other measures. Although these proposals lacked support from other IATTC members and were never adopted, Ecuador's advocacy at the forum was a positive signal.

## LINKING TRADE AGREEMENTS TO ENVIRONMENTAL OUTCOMES

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Efforts by Ecuador to obtain greater recognition of its steps to reduce IUU fishing and improve sustainability in part reflect its interest in a free trade agreement with the United States. On August 12, 2021, representatives from the US and Ecuadoran governments marked the entry into force of the Protocol to the Trade and Investment Council Agreement, which had been previously signed in December 2020.<sup>14</sup> The agreement consists of four chapters that seek to facilitate trade, good regulatory practices, anti-corruption efforts, and increased benefits for small- and medium-sized enterprises. The agreement demonstrated a shared desire to deepen bilateral trade, but authorities in Quito aspire to a more comprehensive trade deal with the United States, similar to the US agreements with Colombia, Peru, and Chile.

Since Ecuador's election of a center-right president, Guillermo Lasso, in April 2021, improving the country's trade relations has been a major focus. Lasso recently announced plans to negotiate trade agreements with the world's 10 largest economies.<sup>15</sup> Negotiations with the United States would likely involve serious discussions about environmental issues. With regards to IUU fishing, a trade deal might require improvements to management practices, traceability, and incidental capture of nontarget species. For Ecuador to become a more prominent supplier of marine resources and fishery products to the US market, it would need to meet high environmental





Photo credit: Fishing boats docked in Posorja, Ecuador: Ricardo Estrella, Shutterstock, September 2021

standards. In other words, guarantees would need to be in place to ensure that increased trade with the United States would not increase IUU fishing in Ecuador.

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The United States addressed similar concerns in its trade agreement with Chile. Of the 24 chapters and various annexes and appendices in the US-Chile Free Trade Agreement, Chapter 19 focuses exclusively on the environment, complemented by Annex 19.3, which covers environmental cooperation.<sup>16</sup> These sections seek to ensure that trade and environmental policies are aligned. Decision-making is to be based on the best scientific evidence available, and the highest standards of resource management are elevated through the trade relationship. Relatedly, in 2001, US and Chilean authorities, along with

their counterparts in Australia, Canada, and Peru, negotiated the International Monitoring, Control, and Surveillance (MCS) Network before the signing of the US-Chile trade agreement two years later.<sup>17</sup>

The MCS was founded to “promote and facilitate cooperation and coordination among members through information exchange, capacity development, and collaboration in order to achieve the improved effectiveness and efficiency of monitoring, control, and surveillance activities in order to prevent, deter, and eliminate IUU fishing and related fisheries activities on local, regional, and international levels.”<sup>18</sup> Ecuador would benefit from joining this initiative to improve monitoring, control, and surveillance through partnerships with other nations in the fight against IUU fishing.

For now, the likelihood of a US-Ecuador free trade agreement depends upon improvements to Ecuador’s management and conservation of its fisheries. This is especially true given the requirements of the Magnuson–Stevens Fishery Conservation and Management Act (MSA), the purpose of which is “to support and encourage the implementation and enforcement

of international fishery agreements for the conservation and management of highly migratory species, and to encourage the negotiation and implementation of additional such agreements.”<sup>19</sup>

The reauthorization of the MSA in 2006 helped promote international coordination by defining actions that strengthen international fishery management organizations. It urged “other nations at bilateral, regional, and international levels, including the Convention on International Trade in Endangered Species of Fauna and Flora and the World Trade Organization to take all the steps necessary, consistent with international law, to adopt measures and policies that will prevent fish or other living marine resources harvested by vessels engaged in illegal, unreported, or unregulated fishing from being traded or imported into their nation or territories.”

**“Evidence has shown that the expansion of marine protected areas can directly contribute to the protection of migratory species and reduce the impacts of overfishing on critical ecosystems.”**

To meet these standards, Ecuador would need to go beyond its recent progress in countering IUU fishing. Large industrial companies hold significant political and economic influence in the country, but these businesses, and smaller artisanal families whose incomes depend upon fishing, could be convinced to adopt more sustainable practices if it meant greater access to the US market. For deterring foreign fleets, greater coordination with regional and US government agencies is necessary to detect and eliminate IUU fishing.

However, marine conservation is perhaps the greatest method for not only deterring IUU fishing

but also revitalizing vulnerable and overexploited ocean habitats. Major conservation initiatives are already under consideration, and bold commitments could propel an important economic sector toward a sustainable future. Such an effort might also help improve trade negotiations, by showing that Ecuador is serious about tackling IUU fishing.

## **MARINE PROTECTED AREAS: ENHANCING SUSTAINABLE DEVELOPMENT AND TRADE**

Among potential marine conservation projects in Ecuador is the possibility of increasing protection of the Galápagos Marine Reserve to better safeguard important and unique species, such as sharks, turtles, and seabirds. Evidence has shown that the expansion of marine protected areas can directly contribute to the protection of migratory species and reduce the impacts of overfishing on critical ecosystems.<sup>20</sup> An influential group of scientists and civil society organizations has urged an expansion of protected areas in the Galápagos, arguing that “an extended marine reserve could help avert the precipitous decline of migratory species, stave off the threat of illegal and unsustainable fishing, and even mitigate the effects of climate change.”<sup>21</sup>

Similar objectives have motivated a global campaign to protect 30 percent of the planet’s coastal and marine areas by the end of this decade.<sup>22</sup> Not doing so ensures further environmental degradation and irreversible change in the world’s oceans. Ecuador, as part of the UN’s Convention on Biological Diversity, has committed to meet the 30 percent target, and it recently joined the Global Ocean Alliance, a group of 62 countries, led by the United Kingdom, that champions the 30 percent goal.<sup>23</sup>

In light of that commitment, expanding protected areas within the Galápagos Marine Reserve is a



logical step. Furthermore, it could catalyze broader efforts by Ecuador and other fishing nations in South America to address IUU fishing and the conservation of marine biodiversity, including through cooperation using satellite tracking systems of industrial and artisanal fleets, as well as through improved monitoring and control of vessels via boarding inspections at sea and at port.

Since Ecuador's national fishery and aquaculture industries represent a significant component of its international trade portfolio, trade negotiations have the potential to promote sustainable practices. However, it remains to be seen whether Ecuador's trade partners will succeed in changing the legal and regulatory environment in Ecuador. There have been major areas of concern, such as traceability in Ecuador's supply chain, and whether serious commitments to conserve and protect important marine refuges, such as the Galápagos, will be formalized. However, on this last issue, conservationists may not have to wait much longer.

During the U.N. Climate Summit (COP 26) in Glasgow, a historic announcement was made by Ecuador, highlighting the case for climate action and marine conservation over lofty rhetoric. President Guillermo Lasso alongside his counterparts in Costa Rica, Colombia, and Panama, pledged to carry out both national and regional efforts to create important marine conservation initiatives—from the expansion of the Galápagos Marine Reserve in Ecuador to the Isla del Coco National Park and Submarine Mountains Marine Management Area in Costa Rica; the Malpelo Fauna and Flora Sanctuary in Colombia; and the Coiba National Park and Cordillera Coiba Managed Resources Area in Panama. Together the conservation area will become known as the Eastern Tropical Pacific Marine Corridor initiative.<sup>24</sup>

The expansion of the Galápagos Marine Reserve will include an additional 60,000 square kilometers, making it one of the most important sanctuaries in the world, followed by equally important contributions of other Latin American nations to conserve and protect critical marine ecosystems.<sup>25</sup> This example shows good leadership on behalf of Ecuador, but it also highlights the fact that multilateral efforts within Latin America to protect the environment can yield results. Despite much work ahead for this initiative, it is a good signal that Ecuador may be getting serious with its conservation efforts.

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