“LEGAL OCEAN WATCH” PROJECT

PROGRESS REPORT ON THE 2024–2026 PILOT PROJECT

2026

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I. General background

The Legal Ocean Watch (LOW) project was developed within the context of civil society organisations with the capacity to litigate and secure rulings in administrative and judicial forums, with the aim of identifying gaps and opportunities in current legislation to prosecute illegal activities committed at sea that can be observed using satellite technology.

In the course of this work, it was found that maritime and fisheries law can be more flexible than expected, but has not been systematically incorporated into the region's legal strategies, despite its potential to address issues related to the marine environment, in particular illegal, unreported and unregulated fishing (IUU fishing).

Over a two-year period, four legal teams worked to identify the key opportunities and challenges involved in using satellite data in administrative and judicial proceedings to combat illegal fishing in Latin America. In this context, organisations from Chile (the NGO FIMA), Peru (DAR), Panama (CIAM) and Mexico (DAN) set about assessing the current state of IUU fishing regulation, as well as designing and bringing judicial and administrative proceedings against cases of illegal fishing based on satellite data collected via official satellite positioning (VMS) and radio-satellite (AIS) systems.

At the same time, a team of expert consultants in IUU fishing regulation was commissioned to investigate leading regulatory practices worldwide, with the aim of conducting a comparative analysis of legislation on illegal fishing across various jurisdictions, which resulted in the report *"Leading Practices in the Collection and Use of E-Data in Fisheries Governance*".

II. Results

1. Development of legal reports on the regulations applicable to IUU fishing

As part of the project, four legal reports were produced covering the jurisdictions of Chile, Mexico, Panama and Peru. These documents systematise the state of the art in IUU fishing regulation in each country through a technical analysis that evaluates the national regulatory framework.

The structure of the reports follows a logical sequence comprising, firstly, an introduction to the national situation of the fishing industry and its economic impact. Subsequently, the applicable legal regime is detailed, covering the international legal framework, regional agreements relating to Regional Fisheries Management Organisations, and the internal regulatory hierarchy. Furthermore, the institutional architecture is described, identifying the bodies with competence in the prosecution of IUU fishing and the administrative, civil and criminal procedures in force for determining liability.

A central component of the reports is the analysis of the use of monitoring and control technologies. This section documents the history and regulation of satellite positioning systems (VMS and AIS), specifying the entities subject to these requirements and the technical specifications of the devices. It also examines the evidential value assigned to satellite data in each jurisdiction, analysing its admissibility as 'full evidence' as a public instrument, and the procedural difficulties in its effective assessment before administrative and judicial authorities.

Finally, the reports identify legal and operational gaps, such as regulatory fragmentation, technological disparities between fleets, and limitations on civil society's standing to report infringements. The content concludes with preliminary recommendations aimed at harmonising sanctioning procedures, strengthening transparency in access to technological data, and optimising inter-institutional coordination to ensure effectiveness in combating IUU fishing.

2. Report on global best practices

As part of the LOW project, consultants Adriana Fabra, Andrew Freedman and Osvaldo Urrutia produced two complementary reports on the use of electronic data, hereinafter e-data, in fisheries governance.

The report *'E-data for fisheries compliance: Case Studies and Summary Report'* examines the legal regimes of Australia, New Zealand, Spain, the United States and the Republic of the Marshall Islands regarding the collection and application of e-data, with an emphasis on its use as evidence in administrative and judicial proceedings against IUU fishing. Based on the comparative analysis, it was concluded that e-data constitutes a key tool for fisheries governance, the adoption of which is advancing even in

contexts of limited state capacity, where it operates as a cost-effective alternative to physical patrols. Its strategic value lies in the integration of complementary technologies, such as VMS, AIS, electronic reporting and on-board camera monitoring, coordinated through monitoring centres using risk-based algorithms. From a legal perspective, it was found that e-data is regularly used as evidence under general evidentiary frameworks, without requiring specific regulatory authorisations for each technology, provided that its reliability is guaranteed through validation processes.

The report *'Leading Practices in the Collection and Use of E-Data in Fisheries Governance'* systematises best practices based on the above findings and incorporates inputs from the country studies developed within the framework of the Legal Ocean Watch project. Its main conclusions identify that the successful implementation of e-data depends on clear legal frameworks, the integration of multiple sources with VMS as the cornerstone, inter-institutional coordination, the automation of verifications, and the use of artificial intelligence for the analysis of large volumes of data. It also highlights that systems must be designed from the outset for evidential purposes, so that the legal status of the data is defined prior to its use in sanctioning proceedings.

3. Activities with local authorities

During the pilot phase, advocacy, transparency and technical coordination efforts were carried out with the competent bodies in each jurisdiction, aimed at assessing institutional responses to reports of potential infringements detected through satellite monitoring tools.

In Chile, requests for access to public information were submitted to the National Fisheries and Aquaculture Service, the Chilean Navy and the Undersecretariat of Fisheries and Aquaculture, with the aim of cross-checking Global Fishing Watch data against official VMS positioning records and cartographic boundaries. These efforts led to two key findings: firstly, that the administrative authority requires explicit confirmation of fishing activity before acting on complaints, dismissing evidence based on navigation patterns when these are not recorded in its own records; secondly, that there is a regulatory gap regarding foreign-flagged vessels operating with Class B AIS systems, whose traceability is limited in national systems.

In Mexico, transparency requests submitted to the National Commission for Aquaculture and Fisheries and the Federal Attorney General's Office for Environmental Protection regarding administrative files and alerts from the Satellite-Based Vessel Monitoring System revealed structural limitations in the systematisation and traceability of sanctioning procedures. In particular, it was found that there is no consolidated public database linking technological alerts to sanctioning decisions, which hinders the assessment of the system's effectiveness

as an autonomous evidential tool. Furthermore, a restrictive interpretation of jurisdiction by the fisheries authority was identified regarding cases of IUU fishing occurring in Protected Natural Areas, leading to a fragmentation of the institutional response.

In Peru, discussions were held with the Piura Regional Directorate to present the Global Fishing Watch platform as a complementary enforcement mechanism, and requests for information were submitted to the Regional Directorate of Production and the Ministry of Production to identify vessels engaged in illegal trawling and mechanised purse seine fishing within the three- and five-nautical-mile zones.

The impact of these activities is evident in three dimensions. Firstly, they highlighted gaps in transparency and the restrictive criteria applied by the authorities when processing complaints based on independent satellite monitoring. Secondly, they positioned civil society organisations as technical interlocutors with agencies possessing expertise in fisheries and environmental matters, opening channels of dialogue that did not previously exist. Thirdly, they generated empirical evidence to support the recommendations for regulatory and institutional reform contained in the project's legal reports.

4. Legal actions brought

During the project's implementation, a litigation strategy was implemented to assess the institutional response of administrative and judicial authorities to complaints of IUU fishing based on independent satellite monitoring tools.

In Chile, the strategy focused on filing administrative and civil complaints against three Chinese-flagged vessels. The first case involved the vessels Hengxin 11 and Hengxin 7, which were reported in November 2025 to the National Fisheries and Aquaculture Service for alleged IUU fishing and unauthorised transhipment within the Juan Fernández Archipelago National Park. The authority dismissed the complaint on the grounds that the satellite records only proved transit and did not allow for the corroboration of the actual act of extraction or transhipment, which led to the filing of an administrative appeal for reconsideration, currently pending, and a civil complaint before the courts of Valparaíso, which was dismissed due to procedural rules. The second case concerned the vessel Lu Rong Yuan Yu GG7, which was reported for squid fishing at night within the Exclusive Economic Zone, as evidenced by VIIRS sensors and speeds of less than one knot. Following a series of incidents relating to the electronic designation of the court, the complaint was filed in April 202G with the First Civil Court of Iquique, where it is currently being processed. The third case involved the vessel ZhanHai 004, which was reported in April 202G to the same court for entering the Exclusive Economic Zone with a navigation pattern and use of lights

consistent with night-time squid fishing.

In Mexico, the strategy assessed institutional responsiveness in the face of overlapping jurisdictions between fisheries and environmental authorities. In August 2025, an administrative complaint was lodged with the National Commission for Aquaculture and Fisheries regarding unauthorised sport fishing activities by the vessel Red Rooster III within the boundaries of Revillagigedo National Park, based on AIS data from Global Fishing Watch. In the absence of a response, an indirect amparo action was brought, in which the fisheries authority argued that it lacked jurisdiction to sanction incidents occurring within Protected Natural Areas, referring the matter to the Federal Attorney-General's Office for Environmental Protection and the National Commission for Protected Natural Areas. This response led to an amendment of the claim in March 202G, with the proceedings currently awaiting a constitutional hearing.

In Panama, proceedings began following an incident on 22 January 2025 in the Cordillera Coiba Managed Resources Area, where sixteen commercial longline vessels were detected carrying out illegal fishing operations within the protected area. The Environmental Advocacy Centre of Panama filed a habeas data application against the Panamanian Aquatic Resources Authority to gain access to the administrative sanction files, a claim upheld by the Supreme Court of Justice in July 2025. A technical and legal analysis of the files relating to seven seized vessels revealed VMS navigation patterns consistent with fishing operations and the presence of catch, mainly yellowfin tuna and dorado, in the holds at the time of seizure. On this basis, it was planned to file two applications for annulment against the decisions that closed the administrative investigations into the vessels Don Victorio and Yakadi, despite the satellite evidence. In parallel, it was identified that the fisheries authority had issued six reconsideration decisions substantially reducing the fines imposed on other vessels convicted for the same incident, with reductions that in some cases exceeded seventy per cent of the original penalty, prompting the assessment of six additional applications for annulment that were planned to be filed under the project.

5. Findings arising from the litigation

The legal proceedings revealed that administrative authorities tend to apply a restrictive standard of proof, dismissing satellite evidence when it is not accompanied by physical verification of the extracted resource. This approach was evident both in the dismissal of the complaint against the vessels Hengxin 11 and Hengxin 7 by the National Fisheries and Aquaculture Service in Chile, and in the closure of the administrative investigations into the vessels Don Victorio and Yakadi by the Panamanian Aquatic Resources Authority, despite the availability of VMS reports evidencing fishing activity within the protected area.

Furthermore, institutional fragmentation was observed, creating uncertainty as to which body is competent to sanction IUU fishing in officially protected areas, as was particularly evident in the Mexican case, where the National Commission for Aquaculture and Fisheries declined jurisdiction over incidents occurring in Protected Natural Areas and referred the matter to the environmental authorities.

Finally, judicial monitoring in Chile revealed that the lack of automated operational rules for the allocation of cases by rotation hinders effective access to justice in complaints filed by third parties outside the administration, a situation that was evident in the successive case files of the complaints against the vessels Hengxin and Lu Rong Yuan Yu GG7 due to the formal application of the rules of the Virtual Judicial Office.

III. Findings from the pilot phase

1. Common challenges identified in the participating countries

Firstly, institutional fragmentation was identified, leading to conflicts of jurisdiction and undermining the prosecution of IUU fishing, due to the dispersal of powers among agencies with overlapping mandates over maritime space and hydrobiological resources. In Panama, a conflict of jurisdiction was observed between the Ministry of the Environment and the Panamanian Aquatic Resources Authority regarding the monitoring and sanctioning of fishing activities in protected areas, with no clarity as to whether both authorities should impose sanctions separately and whether the dismissal of a case by one of them precludes action by the other, given that the system's operational effectiveness depends on joint action protocols that are still being defined. In Mexico, responsibilities are scattered among the Ministry of Agriculture and Rural Development, the Ministry of the Environment and Natural Resources, and the Ministry of the Navy, without a functional coordination framework; this situation is exacerbated by limited transparency and accountability regarding inspection activities, the sanctions imposed, and the allocation of public resources assigned to fisheries surveillance.

Secondly, regulatory inconsistencies were identified that affect the protection of resources in officially protected areas, allowing extractive activities to take place in sensitive ecosystems. In Peru, there are regulations authorising extractive activities in marine reserves that appear to contradict the Regulations of the Law on Protected Natural Areas, as is the case with Supreme Decree No. 008-2021-MINAM, which permits both large- and small-scale fishing in the Nasca Ridge National Reserve. Added to this are recent regulatory amendments that have restricted the Ministry of Production's power to impose sanctions in these areas, transferring this authority to the National Service for Protected Natural Areas, without any formalised mechanisms for the exchange of satellite data between the two bodies. In Mexico, the lack of coordination between the

General Law on Sustainable Fisheries and Aquaculture and legislation on wildlife and ecological balance allows the National Commission for Aquaculture and Fisheries to grant fishing permits in protected natural areas without mandatory coordination with the environmental authority, which undermines the effective enforcement of control measures in fragile ecosystems.

Thirdly, a structural limitation was identified in civil society's standing to formally intervene in sanctioning proceedings. In Chile, Mexico and Peru, the regulatory framework restricts the power to initiate and participate as a party to proceedings in cases of IUU fishing primarily to public officials attached to enforcement agencies, thereby excluding local communities and environmental organisations from social control over fishing activities and leaving the decision to pursue investigations to administrative discretion.

2. Opportunities for action

The pilot phase made it possible to identify not only obstacles but also concrete opportunities upon which more effective strategies for action can be built in the short and medium term.

Firstly, satellite data from platforms such as Global Fishing Watch, combined with AIS and VMS data, proved technically sufficient to identify patterns of behaviour consistent with IUU fishing and to substantiate administrative and judicial complaints. The fact that the cases have reached the courts and that some remain pending, such as the cases before the magistrates' courts in Iquique, Chile, or the amparo petition before the Seventh District Court in Mexico, demonstrates the existence of a viable procedural path under current legal frameworks, even without prior reforms. Added to this is the ruling by the Supreme Court of Justice of Panama upholding the habeas data application filed by CIAM against the Panamanian Aquatic Resources Authority, a decision that recognises the legitimacy of civil society's oversight role regarding ongoing administrative proceedings.

Secondly, the systematic exercise of the right of access to public information served as an evidential and diagnostic tool with a dual purpose. In Chile, the more than twenty requests submitted to the National Fisheries and Aquaculture Service, the Navy, the Undersecretariat of Fisheries and Aquaculture, and the National Directorate of State Borders and Limits, some of which were taken to court through appeals for constitutional protection before the Council for Transparency, made it possible to cross-check Global Fishing Watch data against official VMS records and the cartographic boundaries of the Exclusive Economic Zone, thereby strengthening the technical soundness of the complaints. In Mexico, requests submitted to the National Commission for Aquaculture and Fisheries and the Federal Attorney-General's Office for Environmental Protection revealed a significant structural gap, in that the authority itself acknowledged that it lacked a systematised approach to the administrative procedures arising

from alerts issued by the Satellite-Based Vessel Monitoring System, which in itself constitutes an actionable finding.

transparency, therefore, serves not only as input for individual cases but also as a mechanism for mapping institutional shortcomings.

Thirdly, the report on global best practices provides comparative evidence relevant to the region. The experience of the Republic of the Marshall Islands demonstrates that jurisdictions with limited domestic patrol capacity can bridge this gap through access to shared regional monitoring infrastructure, such as the virtual regional surveillance centre, which enables near-real-time detection of incursions into restricted areas and timely coordination with regional patrol assets. This experience is directly transferable to Latin America, where the geographical dispersion of foreign fleets in the South-East Pacific and the Central American Pacific exceeds the operational capacity of any single State. The opportunity lies in positioning the regional integration of e-data as a solution for operational efficiency that can be implemented within existing legal frameworks and memoranda of understanding already in place, such as those between the National Fisheries and Aquaculture Service and Global Fishing Watch in Chile, and between the Panamanian Aquatic Resources Authority and Global Fishing Watch in Panama.

Finally, regional experience shows that combining strategic litigation with non-contentious administrative mechanisms, such as requests for information, appeals for reconsideration and habeas data applications, allows for the generation of institutional pressure without prematurely exhausting judicial avenues. The Panamanian case of the Cordillera Coiba illustrates this dynamic, in that the retrieval of files through habeas data enabled a technical legal analysis of seven seized vessels, identified reductions in fines of over seventy per cent in the reconsideration decisions of the Panama Aquatic Resources Authority, and allowed for the preparation of the corresponding nullity claims on an empirical basis.

3. Proposals for regulation

Based on the comparative analysis of the four countries and the report on best practices, a set of regulatory reforms emerges, aimed at improving the effectiveness of national systems in the fight against IUU fishing.

Firstly, with the aim of strengthening the evidential value of satellite data, it is proposed that national regulatory frameworks explicitly recognise the admissibility and value of e-data—that is, VMS, AIS, VIIRS sensors, on-board electronic monitoring and data from independent platforms—without making this conditional on specific authorisations for each technology. The reliability of this evidence could be ensured through validation mechanisms, either by ex ante certification of the devices or by validation supported by manufacturers and technical experts, so that the records constitute full proof once the applicable standards have been accredited,

shifting the burden of proof onto those seeking to refute them. Additionally, it is proposed to enshrine in law the possibility of presuming illegal activity based on navigation patterns incompatible with innocent passage in restricted zones, or the duty to report such activity where necessary, in order to prevent the standard of proof from requiring the complainant to prove the actual act of extraction.

Secondly, to address the fragmentation of jurisdiction between fisheries and environmental authorities, it is proposed to formalise inter-institutional coordination through binding protocols that define responsibilities, communication channels, and procedures for the referral and consolidation of proceedings where jurisdictions overlap in relation to protected areas. Furthermore, it is suggested that these instruments incorporate mandatory mechanisms for shared access to satellite monitoring data, as well as clear rules on the effects of one authority's dismissal of a case on the subsequent action of the other, so as to prevent areas of ambiguity from operating as zones of impunity.

Thirdly, with the aim of strengthening transparency and integrated oversight capacity, it is proposed to move towards national e-data management platforms that enable automated cross-referencing between VMS data, AIS, electronic logbooks, authorisation records and landing reports, with access differentiated by profile and traceability of queries. Comparative experience shows that these platforms do not operate as mere archives, but as active enforcement tools through automated alerts and cross-checks. Additionally, it is proposed to ensure the official publication of VMS data for national fleets on open platforms, thereby strengthening citizen, international and independent oversight.

Finally, in order to reduce exclusive reliance on administrative discretion to pursue investigations, it is proposed to expand the range of parties authorised to initiate and participate as parties to proceedings in sanctioning procedures for IUU fishing. To this end, it is suggested that mechanisms equivalent to the existing public complaint system in environmental matters be incorporated, that the procedural standing of the complainant be expressly recognised during administrative and judicial proceedings, and that the legitimate interest of environmental organisations, fishing associations and coastal communities in these proceedings be enshrined.