



ALLIANCE™

<https://www.globalseafood.org> Fisheries

Stanford researchers launch IUU fishing and labor abuse risk tool

19 April 2022

By Responsible Seafood Advocate

More than 50 percent of assessed ports are associated with risk of labor abuse or IUU fishing

Monitoring the world's fishing fleets for labor abuse and illegal fishing is a challenge, but new data could help companies and countries combat illegal, unreported and unregulated (IUU) fishing. Combining machine learning and human insights, a Stanford University-led research team has developed a new modeling approach to identify and map the regions and ports at highest risk for illicit practices (such as forced labor or illegal catch) as well as identify opportunities for mitigating such risks.

Overall, the findings indicate that labor abuse and IUU fishing are “globally pervasive.” According to the study, of more than 750 ports assessed around the world, more than half are associated with risk of labor abuse or IUU fishing. The paper, published in *Nature Communications* (<https://www.nature.com/articles/s41467-022-28916-2>), points to two main risk factors: (1) the country that a vessel is registered to (also known as its “flag state”) and (2) the type of fishing gear the vessel carries on board. The results offer policymakers and regulators a set of vessel characteristics and regions to watch for when sourcing seafood.


“Surveillance on the high seas is innately challenging, so these data provide a critical first step in




A new study indicates that more than 50 percent of assessed ports are associated with risk of labor abuse or IUU fishing.

helping stakeholders understand where to look deeper,” said Elizabeth Selig, lead author and deputy director of the Stanford Center for Ocean Solutions. “We hope these findings can help to inform strategically expanded enforcement, focus development aid investments and increase traceability, ultimately lowering the chance that seafood associated with labor abuse or illegal fishing makes its way to market.”

The research team chose to assess risk – or the possibility that illegal activities might be happening in a specific area – rather than predict case numbers. An anonymous survey was distributed to experts from seafood companies, research institutions, human rights organizations and governments to help “quantify the degree of certainty around whether certain ports were correlated with either labor abuse or IUU fishing.”



Early life nutrition for
future growth success.



[LEARN MORE](#)

(<https://www.global.admanimalnutrition.com/activities/aquaculture/>).

Using machine learning, the team then combined survey responses with satellite-based vessel-tracking data curated by Global Fishing Watch to identify higher-risk regions associated with transshipment, where crew and catches are exchanged between vessels, and at sea.

“Major seafood companies are now able to understand where risks are greatest in order to help them meet their commitments to remove labor abuse and illegal fishing from their supply chains,” said Henrik Österblom, co-author and science director at the Stockholm Resilience Centre. “These results can help them confront these challenges.”

For fishing vessels, coastal regions off West Africa, Peru, the Azores, Argentina and the Falkland Islands had higher risks for labor abuse and IUU fishing. The model also revealed that vessels registered to countries that have poor control of corruption, vessels owned by countries other than the flag state and vessels registered to China have a higher risk of engaging in illegal activities. Chinese-flagged vessels, comprising the world’s largest fishing fleet, dominated the data and were thus analyzed separately. For transshipment, certain fishing gear types – like drifting longliners, set longliners, squid jiggers and trawlers – were found to be higher risk.



Bottom trawling linked to high greenhouse gas emissions in MPA-supporting study

A study touts marine protected areas and bottom trawling bans, but its methods and conclusions are questioned by fellow researchers and fishers.



Global Seafood Alliance

0

The study also showed a strong presence of foreign-flagged vessels in fishing grounds thousands of miles away from where they bring their catch to port. This suggests that ports with weak monitoring standards can incentivize illegal activities far away, highlighting “the need for coordinated regional action.”

“Ports are one of the few places to identify and respond to labor abuse,” said Jessica Sparks, a fellow at the Stanford Center for Ocean Solutions and associate director at the University of Nottingham Rights Lab. “We need to ensure that policies and practices allow fishers to access trusted actors and services at port so they can safely report on their condition.”

Aside from revealing the global extent of these risks, the study also highlights potential pathways to reduce these risks through actions at port that detect and respond to labor abuse and deter the landing of illegally caught fish.

“Port state measures offer a lot of promise, but they need to be implemented effectively and, ideally comprehensively across regions, so that vessels cannot easily escape scrutiny by going to a port in a neighboring country,” said Selig. “We need regional ratification and effective implementation.”

[Read the full article here \(https://www.nature.com/articles/s41467-022-28916-2\)](https://www.nature.com/articles/s41467-022-28916-2).

[@GSA_Advocate \(https://twitter.com/GSA_Advocate\)](https://twitter.com/GSA_Advocate).

Author



RESPONSIBLE SEAFOOD ADVOCATE

editor@globalseafood.org (mailto:editor@globalseafood.org)

Copyright © 2022 Global Seafood Alliance

All rights reserved.