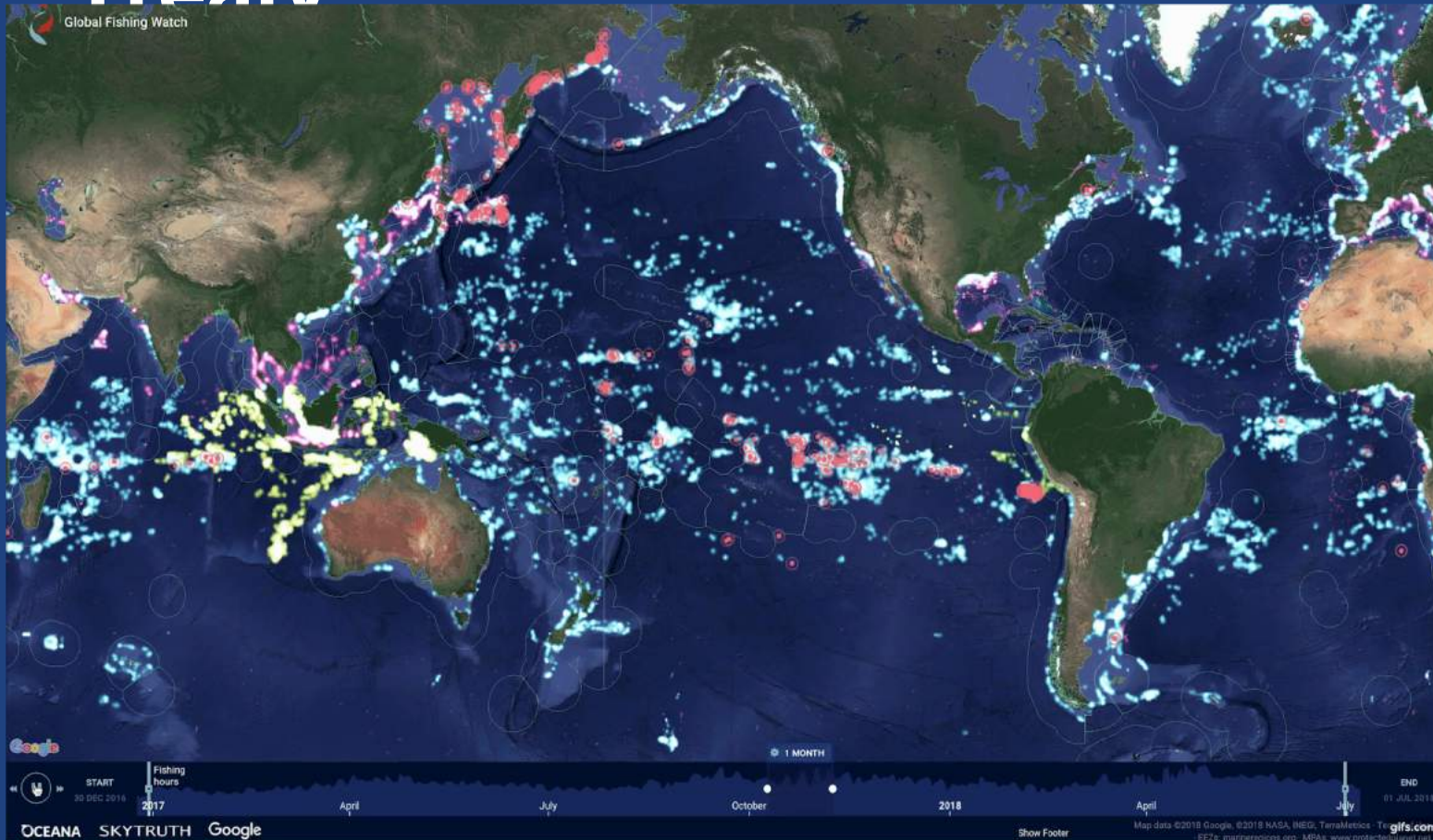


Strengthening Monitoring, Control and Surveillance (MCS) through a High Seas Treaty



Tony Long, CEO
Global Fishing Watch

November 2020



Global Fishing Watch

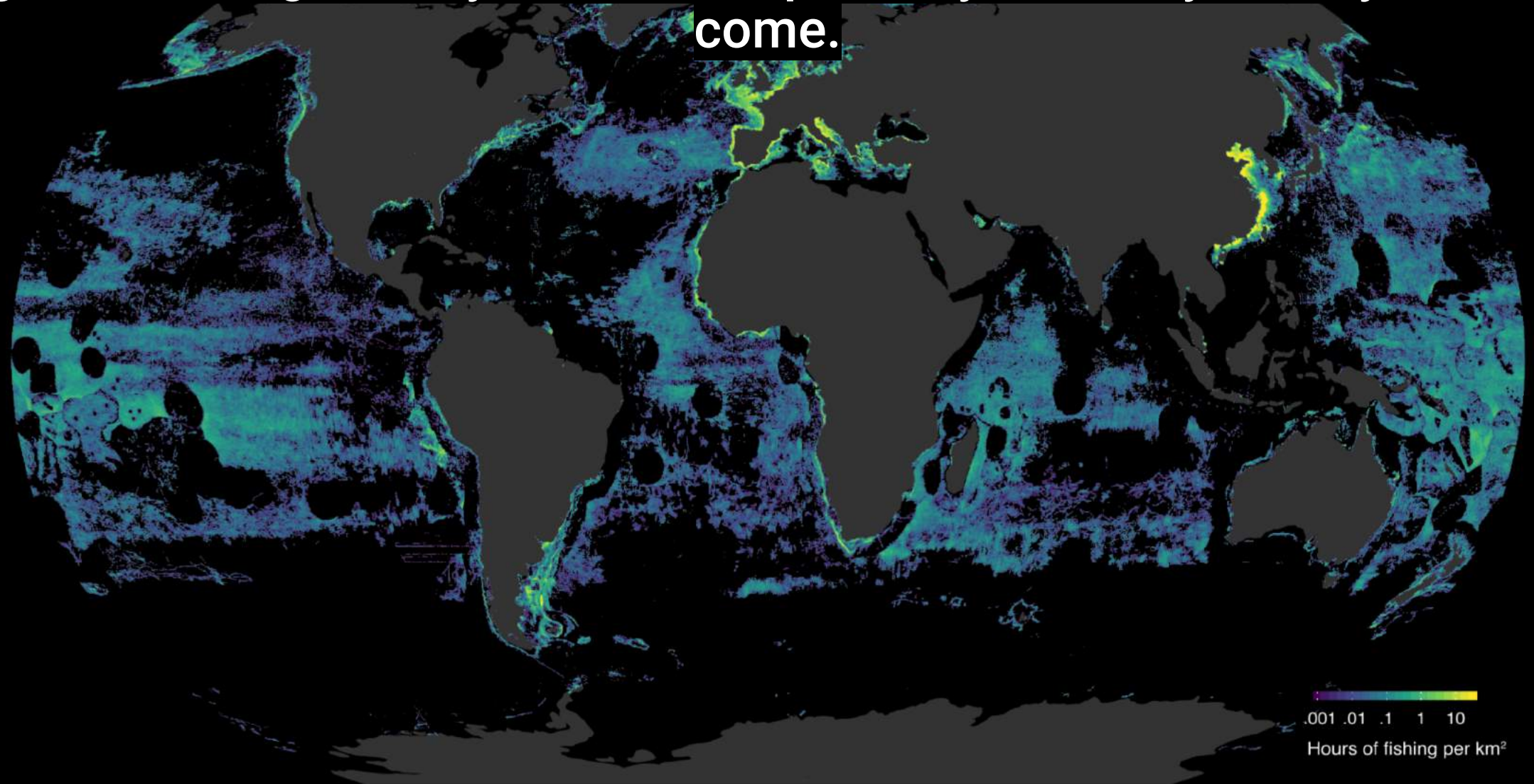
Who We Are

Global Fishing Watch is a nonprofit organization, our purpose is:

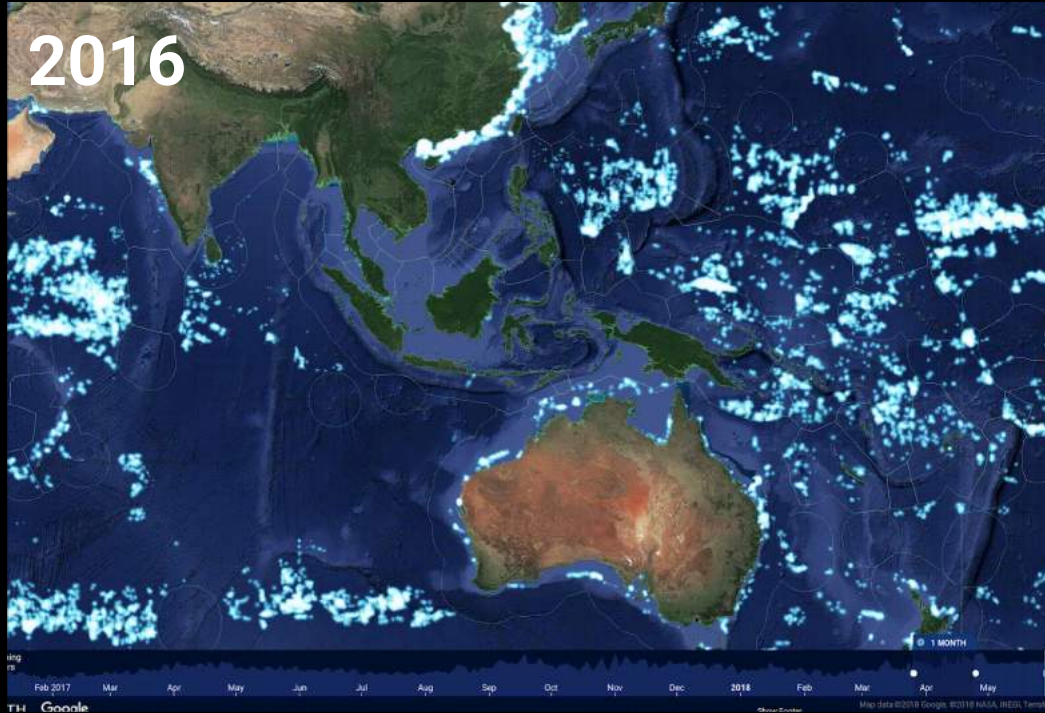
- to create and publicly share knowledge about human activity at sea to enable fair and sustainable use of our ocean
- drive policies that protect biodiversity, fisheries and livelihoods.
- support international cooperation;

and, thanks to our funding partners, our users access the platform for free.

Imagine - if countries publicly share their fishing vessel monitoring data then we can create a more complete and connected picture of global fishing activity and fish responsibly for many more years to come.



Key moments



Indonesia release VMS data into the public realm

Public: Indonesia, Panama, Peru, Chile, Costa Rica,

Committed: Namibia, Ecuador

Dialogue: Open in 5 more countries

Ambition: 20 countries transparency by end 2022



Global Fishing Watch

Key moments

Over 30 key studies published.

- The economics of fishing the high seas
(Sala et al) Science Advances 2018

FAO Global Atlas of AIS Fishing published
(FAO, AZTI; Global Fishing Watch; Seychelles
Fishing Authority)

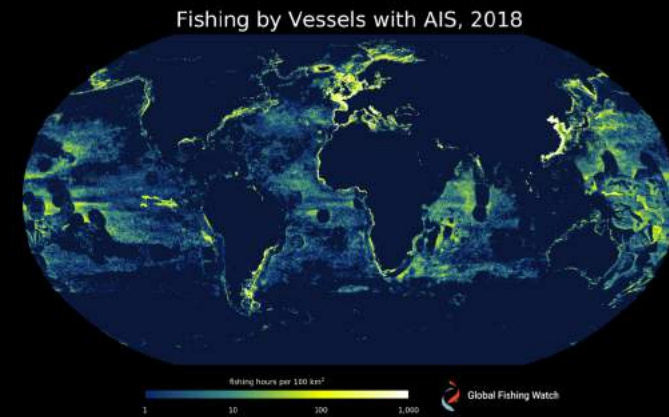
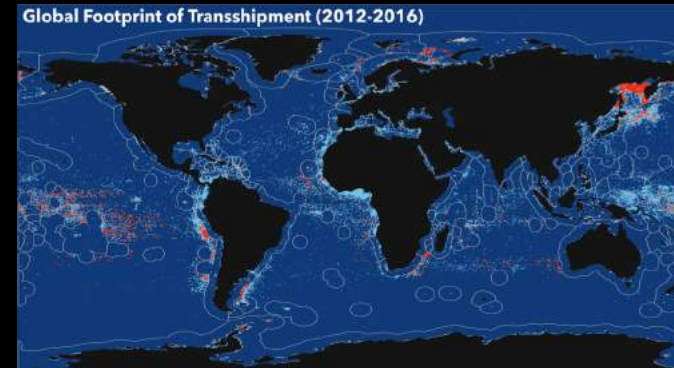
Carrier Vessel Portal live (Pew, GFW)

North Korea Dark Vessel paper (Rep,
Korea, Japan, GFW, Planet, KSAT, OrbComm,
Spire, ESA, JAXA, NOAA, NASA)

Marine Reserves Management Tool
(under development)

Global picture of AIS fishing effort and global
transshipments released

2018



Global Fishing Watch

Key moments

2019-2020



Public data and AI analysis used to increase efficiency and increase enforcement action

Support to Indonesia continues

Support to Ecuador (recent focus on the High Seas squid fleet)(Canada DFO, MDA, GFW)

Support to Ghana (recent exercise with UNODC, Trygg Mat Tracking, Vulcan Skylight led by Ghana Navy)

Partnership with US Coast Guard focused on Pacific High Seas Patrols (USCG, Canada DFO, GFW)

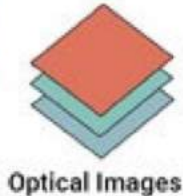
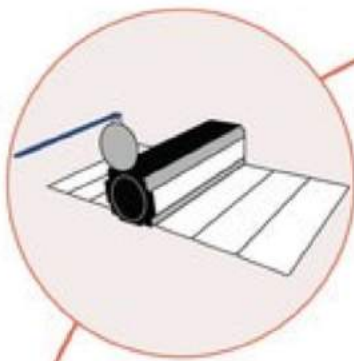


Global Fishing Watch

DETECTING THE DARK FLEET USING SATELLITE TECHNOLOGY

Optical Imagery

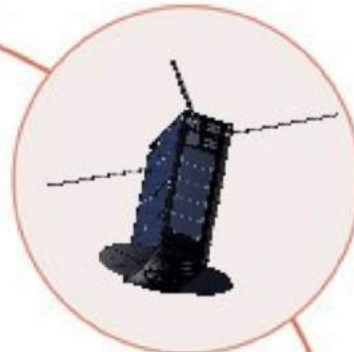
Daytime, high-resolution optical imagery can be used to visually identify vessels



Optical Images



Track movements



RF

Radio-frequency interception can be used to detect ships and sometimes identify them through their use of radar or radio



High Resolution



Identify vessels



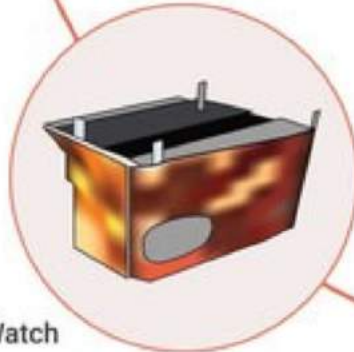
Detect lights



Penetrate clouds

Night-time Light

Night-time optical imagery (VIIRS) picks up the presence of fishing vessels using lights to attract catch or conduct operations at night



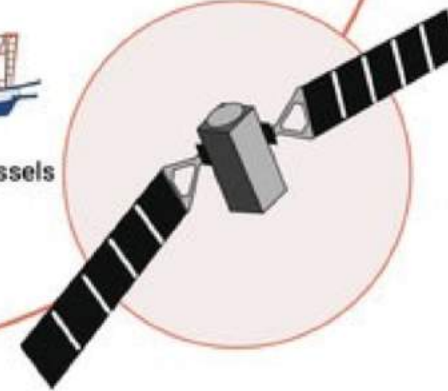
Global daily coverage



Identify metal vessels

Radar

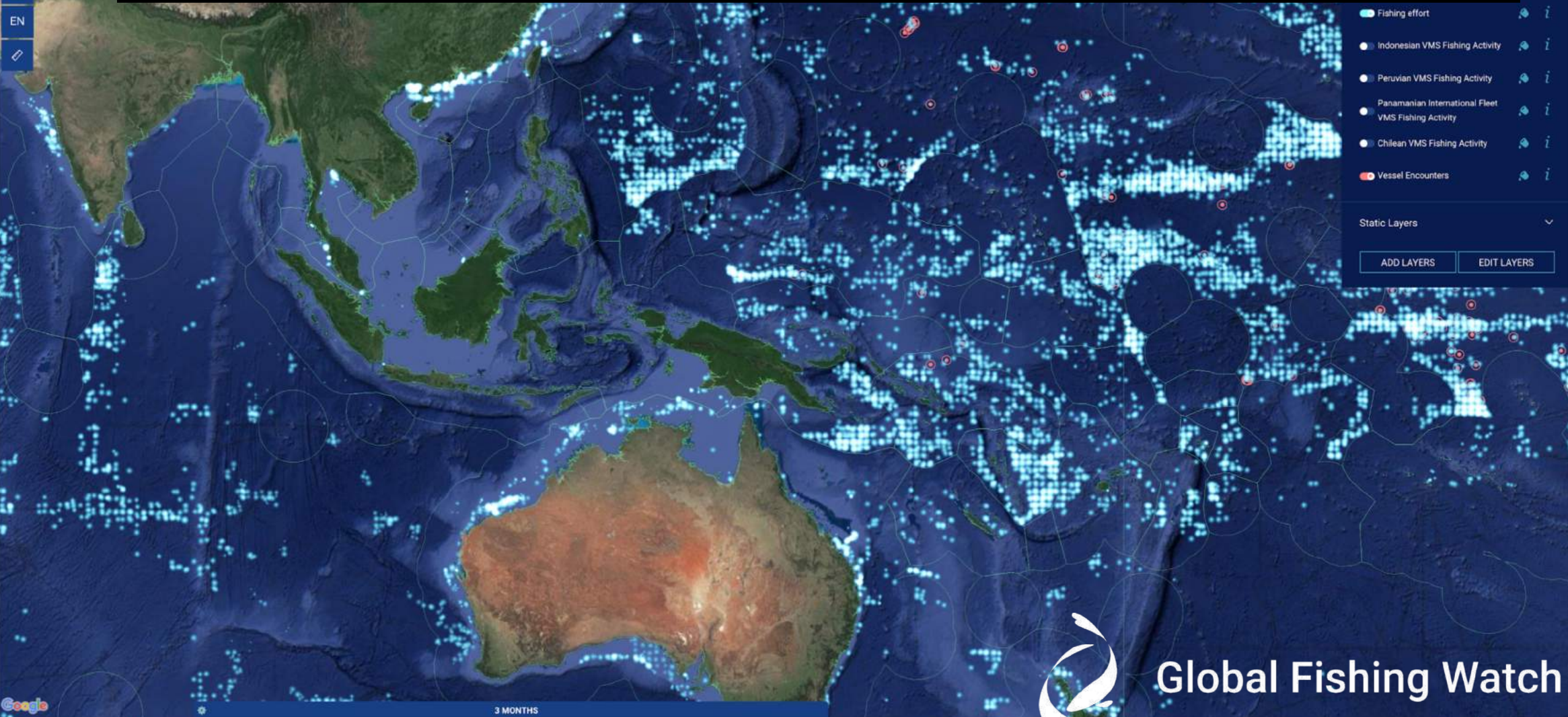
Radar images (SAR) can identify large metal vessels and penetrate clouds



Automatic Information System (AIS)

29.7143
224.1759

+
-
↶
EN
📍



3 MONTHS

START 23 DEC 2019

Fishing hours

2020

February

March

April

May

June

July

END 03 JUL 2020



AIS plus Indonesian Vessel Monitoring System (VMS)

29.9856
100.1228

+

-

↶

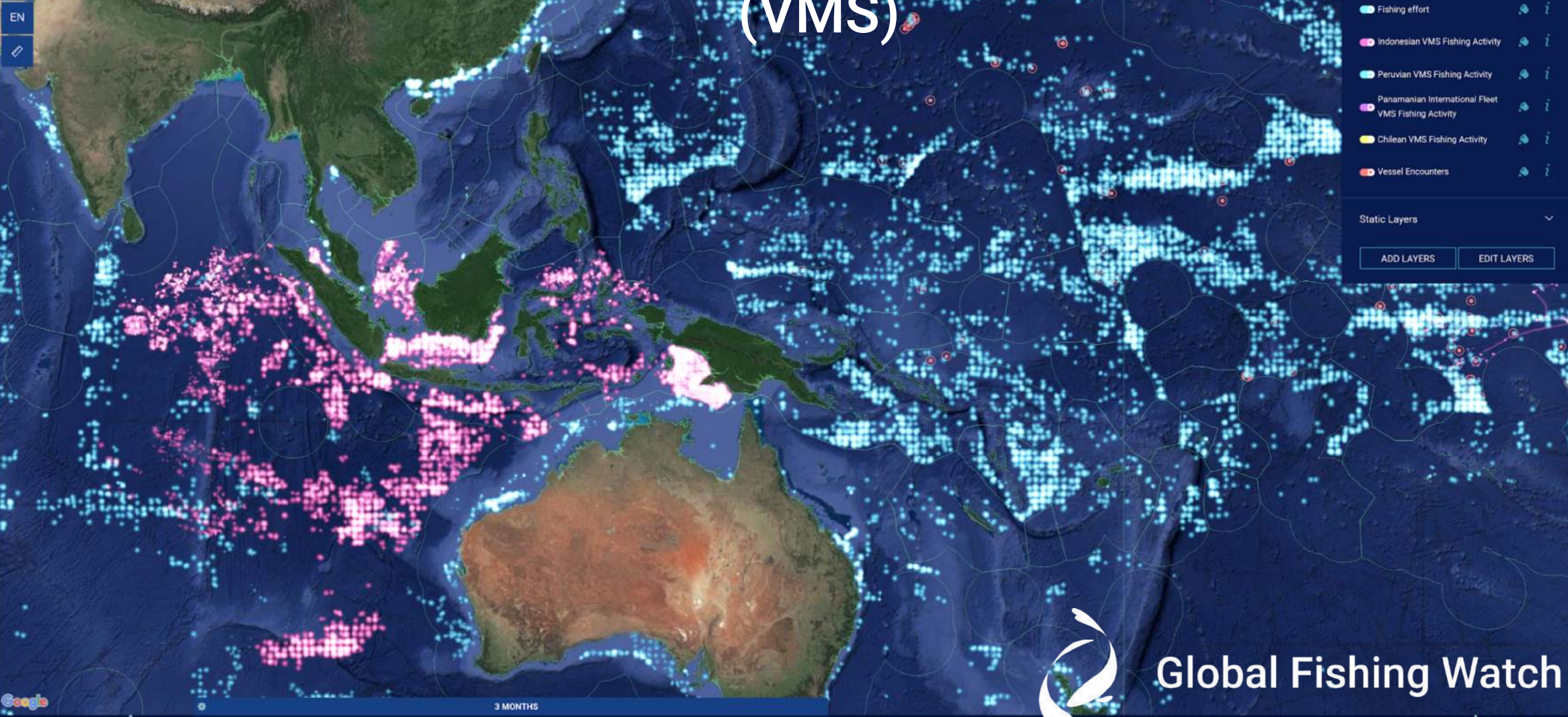
EN

📍

- Fishing effort
- Indonesian VMS Fishing Activity
- Peruvian VMS Fishing Activity
- Panamanian International Fleet VMS Fishing Activity
- Chilean VMS Fishing Activity
- Vessel Encounters

Static Layers

ADD LAYERS EDIT LAYERS



3 MONTHS

START 23 DEC 2019

Fishing hours

2020

February

March

April

May

June

July

END 03 JUL 2020

AIS, VMS plus VIIRS (Light Detection)

1,3985
218.0746

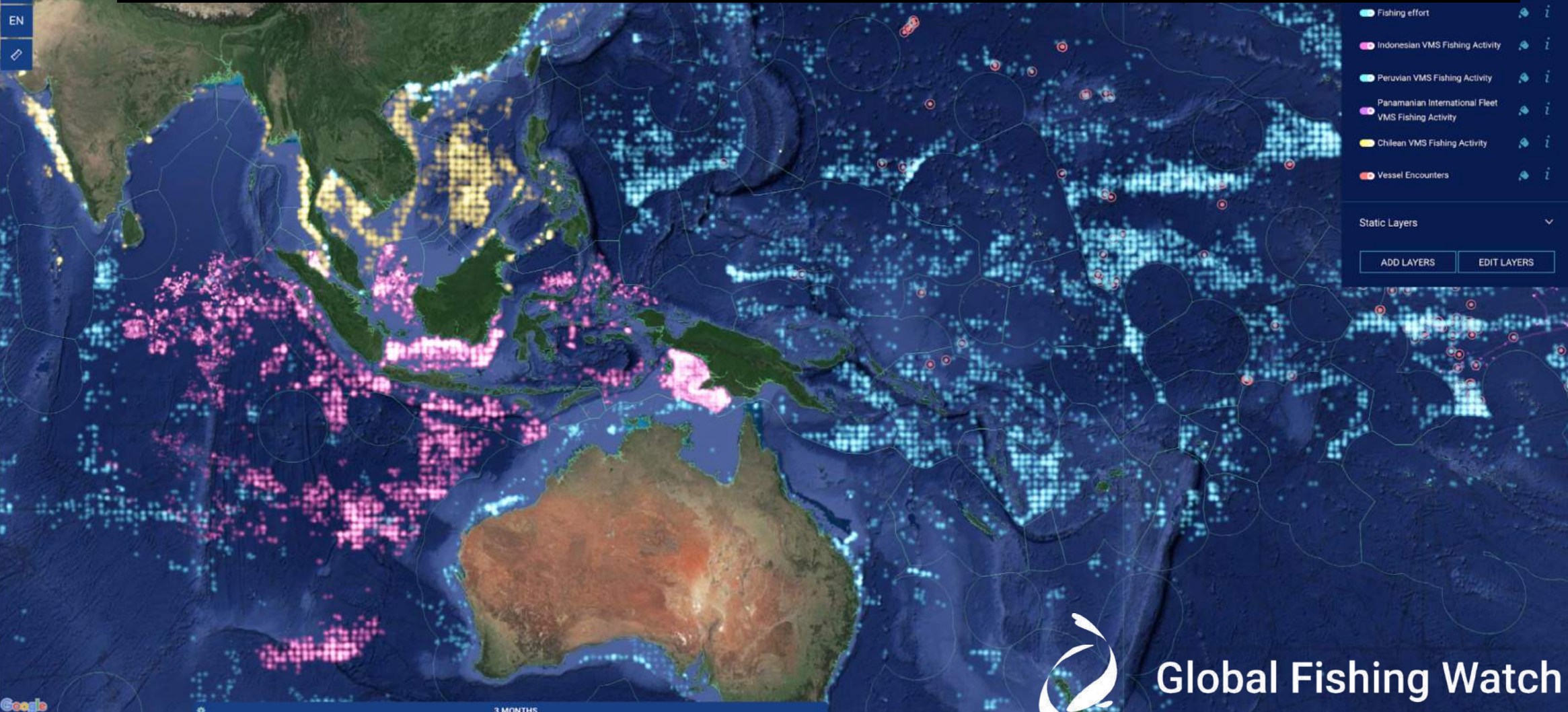
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EN

📍



Fishing effort *i*

Indonesian VMS Fishing Activity *i*

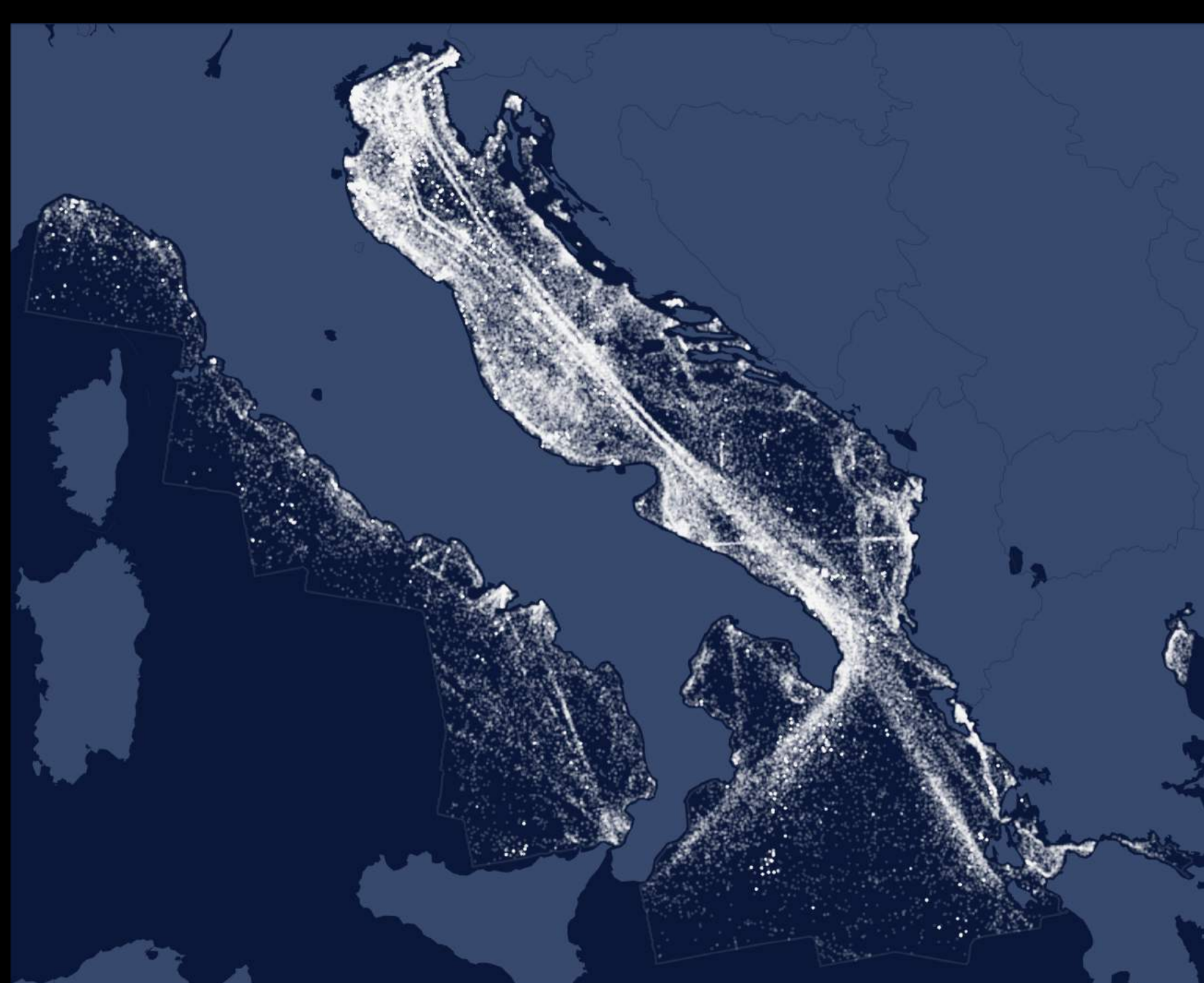
Peruvian VMS Fishing Activity *i*

Panamanian International Fleet VMS Fishing Activity *i*

Chilean VMS Fishing Activity *i*

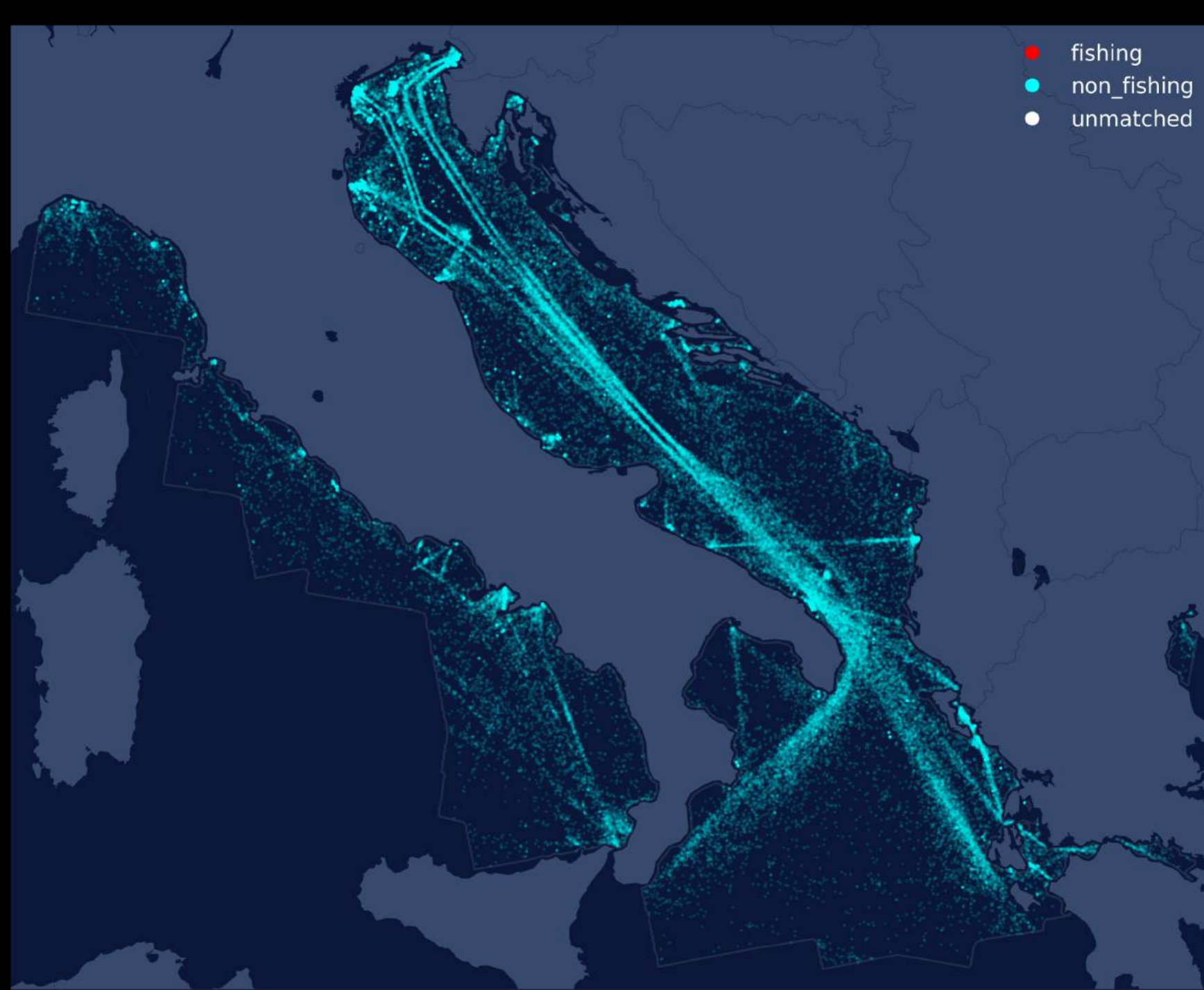
Vessel Encounters *i*

Static Layers



**Sentinel-1
Synthetic
Aperture Radar
(SAR)
detections for
all of 2017**

**(Every object in
the Adriatic that
is detected by
Radar from
Satellites)**



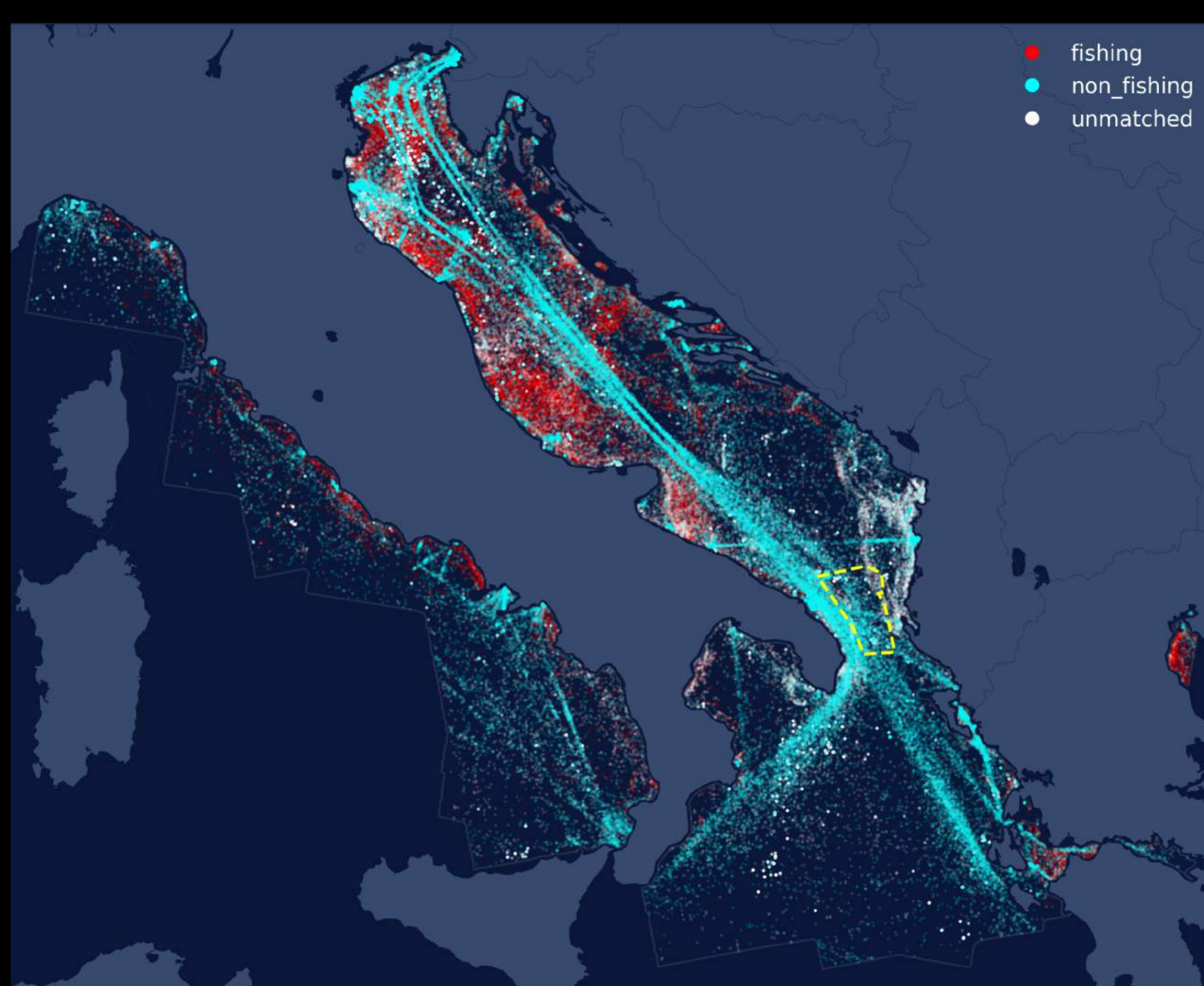
Sentinel-1 Synthetic Aperture Radar (SAR) detections for all of 2017

(matched to
non-fishing
vessels (blue))



Sentinel-1 detections for all of 2017

(matched to
fishing (red) and
non-fishing
vessels (blue))



- fishing
- non_fishing
- unmatched

Sentinel-1 detections for all of 2017

(matched to fishing (red) and non-fishing vessels (blue) plus likely fishing (white))

In summary

- Monitoring of the Global Commons needs a collaborative solution and nation State leadership
- Transparency drives compliance and helps target enforcement at sea and in port
- To fish a shared resource should mean shared information/data to drive responsible access
- Enforcement through traditional means is not affordable or available and is therefore not ubiquitous or reliable.



Global Fishing Watch

Global Fishing Watch

Thank you

www.globalfishingwatch.org

@globalfishwatch
@darkbluebloke



Global Fishing Watch