OSINT Tool Box Part 2
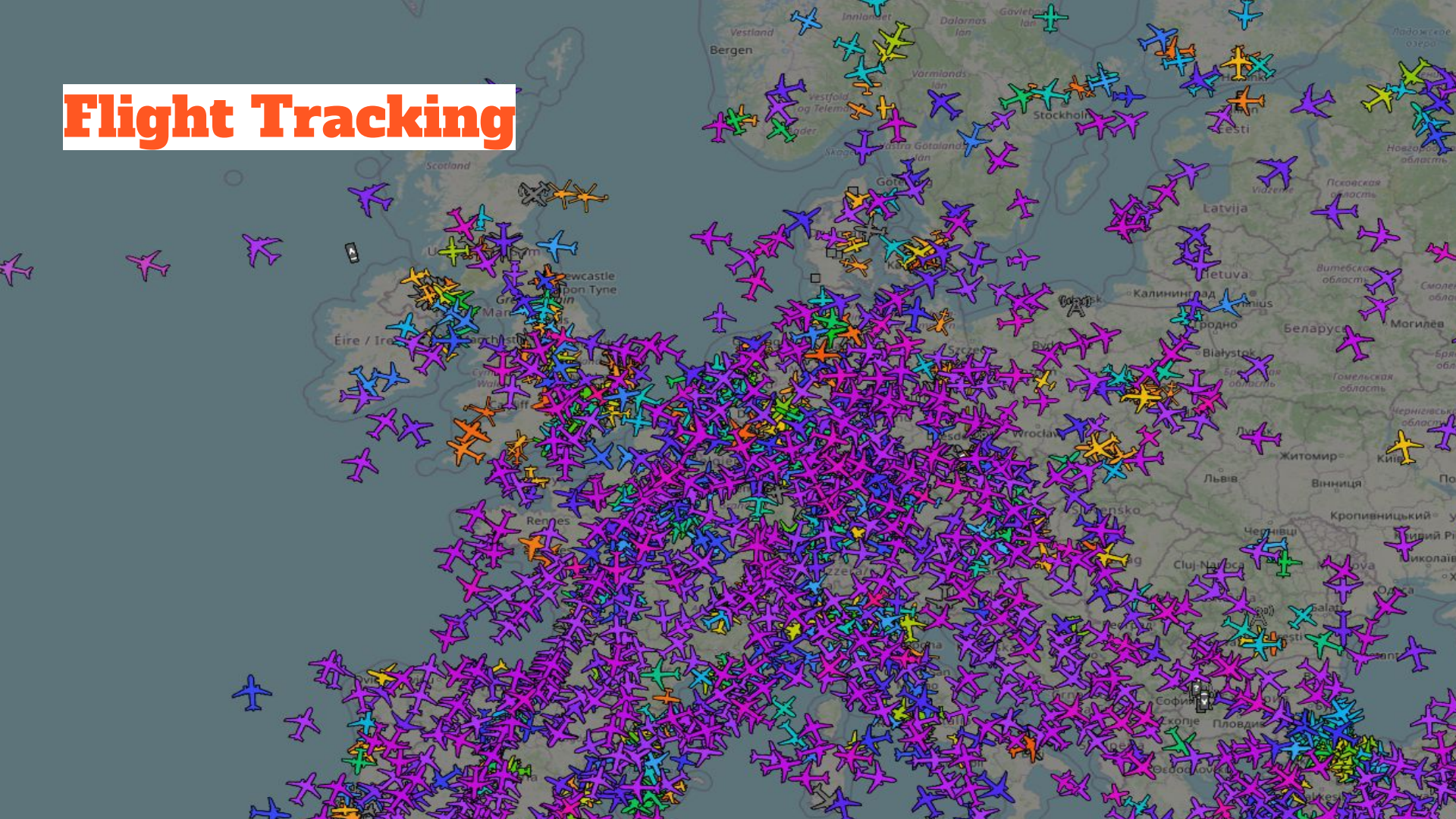
Max Bernhard
Twitter: @mxbernhard Email: max.bernhard@pm.me

Flight Tracking

Flight Tracking

- accidents and crashes
- powerful individuals
- armed forces and authorities
- companies
- global events
- drug traficking
- ...

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Since June 2019, Dictator Alert tracks the planes of authoritarian regimes all over the world. This projects is supported by OCCRP and the data comes from ADS-B Exchange. It is an extension of the @GVA_Watcher Twitter bot.

Recent Dictatorship Flights

Top Dictatorships Tracked

United Arab Emirates (2470 flights)	Russia (2248 flights)	Saudi Arabia (1630 flights)
Bahrain (1495 flights)	Qatar (1489 flights)	Venezuela (875 flights)
China (865 flights)	Algeria (805 flights)	Azerbaijan (659 flights)

dictatoralert.org
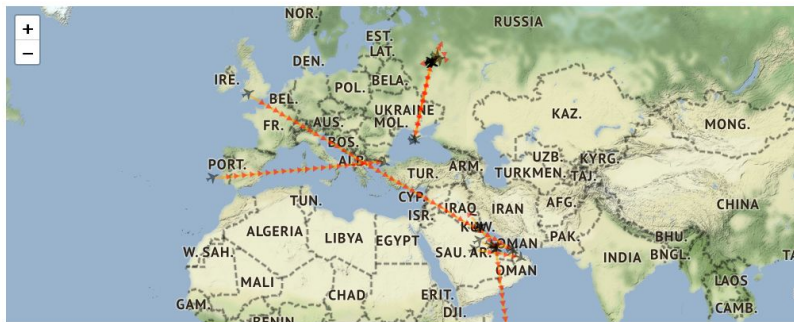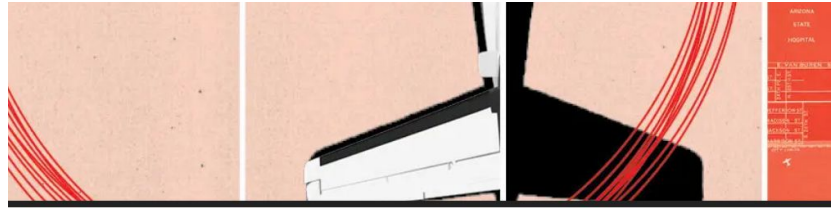
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BuzzFeed News — We Trained A Computer To Search For Hidden Spy Planes. This Is What It Found.

SCIENCE

We Trained A Computer To Search For Hidden Spy Planes. This Is What It Found.

From planes tracking drug traffickers to those testing new spying technology, US airspace is buzzing with surveillance aircraft operated for law enforcement and the military.

Peter Aldhous
BuzzFeed News Reporter

Last updated on August 8, 2017, at 10:47 a.m. ET
Posted on August 7, 2017, at 12:33 p.m. ET

Tweet   Share   Copy

Buzzfeed

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ModeS	Registration	Type	Owner
3C5C41	D-AGBA	Dassault Falcon 8X	Volkswagen AG
3C5C42	D-AGBB	Dassault Falcon 8X	Volkswagen AG
3C5C45	D-AGBE	Dassault Falcon 7X	Volkswagen AG
3C5C46	D-AGBF	Dassault Falcon 7X	Volkswagen AG
3C5C47	D-AGBG	Dassault Falcon 7X	Volkswagen AG
3C5C48	D-AGBH	Dassault Falcon 7X	Volkswagen AG
3C5C49	D-AGBI	Dassault Falcon 7X	Volkswagen AG
3CF774	D-CVAA	Pilatus PC-24	Volkswagen AG
3CF775	D-CVAB	Pilatus PC-24	Volkswagen AG
42478A	VP-CHW	Dassault Falcon 7X	Volkswagen AG
424763	VP-CUH	Dassault Falcon 7X	Volkswagen AG

Flightdb.net   Home   Live Radar New

Home / Volkswagen AG (11)

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Source: Bellingcat / Flightradar24

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Source: Bellingcat / Flightradar24

Flight Tracking: Terminology

- **Call Sign:** identifier used <u>during a flight</u>, the plane can change - same as on your boarding pass
- **Registration:** like a car's license plate (Germany - D, France - F, US - N)
- **Manufacturer Serial Number:** unique ID
- **Mode S / ICAO:** unique (to the transponder)
- **ADS-B:** used to avoid collision, unencrypted information incl. location and altitude

Flight Tracking: Sources

- **ADS-B data:**
  - **flightradar24.com**
  - **radarbox24.com**
  - **flightaware.com**
  - **planefinder.net**
  - **adsbexchange.com**
  - **icarus.flights**
- **Other info:**
  - **planelogger.com**
  - **planespotters.net**
  - **FAA**
  - **aviation-safety.net**
  - **Twitter**
  - **...**

Flight Tracking: Sources - build your own

microSD adapter

Raspberry Pi 3

RTL-SDR dongle

microSD card
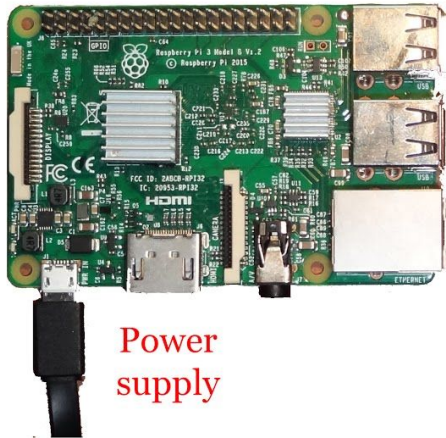
Power supply

Antenna with mount

Basic ADS-B station

Source: radioforeveryone.com

Flight Tracking: Case Study - Narco Traffic

Aterriza narco jet de emergencia en la vía federal y cruzan disparos con el ejército

Publicado en 5 julio 2020 — en Noticias/Sociedad — por Redacción

Felipe Carrillo Puerto.- Un jet aterrizó de emergencia luego de ser derribado por el Ejército y se armó una balacera en la selva con presuntos narcos, a 40 kilómetros de esta ciudad en el tramo Polyuc–Morelos.

Flight Tracking: Case Study - Narco Traffic

Grupo Origen
@grupo_origen

#OrigenNoticias / #QuintanaRoo

🔴 #AlMomento Learjet aterriza de emergencia en la carretera Felipe Carrillo Puerto-Mérida. ⬇️

Nota: facebook.com/origennoticias...
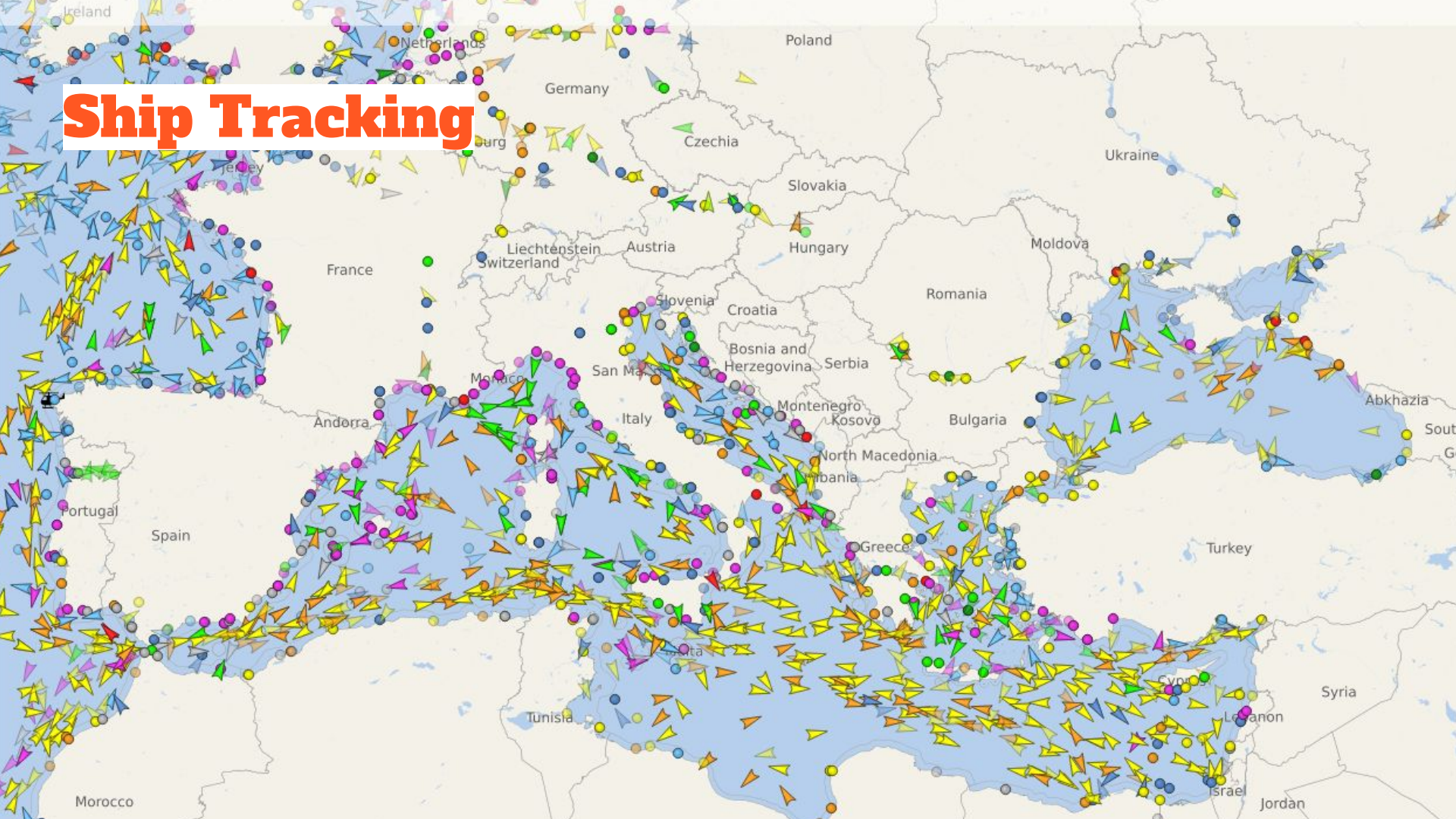
Translated from Spanish by Google

#OrigenNoticias/#QuintanaRoo

🔴 #AlMomento Learjet makes an emergency landing on the Felipe Carrillo Puerto-Mérida highway. ⬇️

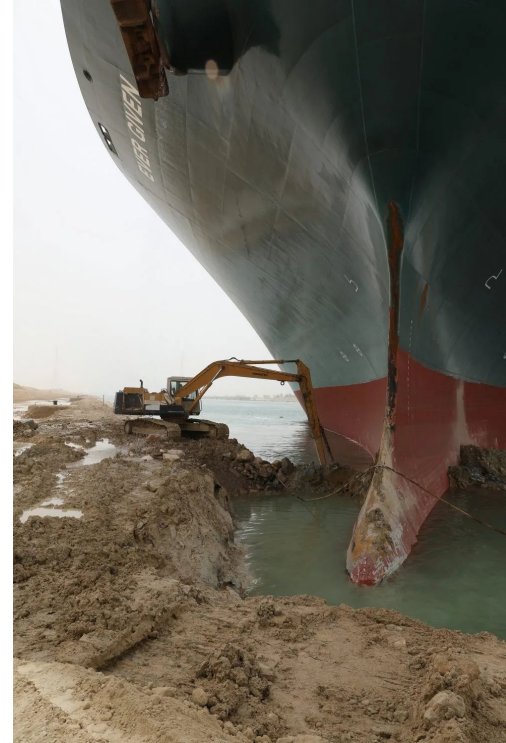Note:facebook.com/origennoticias...

683 views   0:12 / 0:30

Felipe Carrillo Puerto - Jose Maria Morelos   Exit Street View

© 2020 Google

Google Earth

Report a problem   Imagery Date: 5/2019   19°40'14.08" N   88°37'41.10" W   elev   38 m   eye alt   41 m

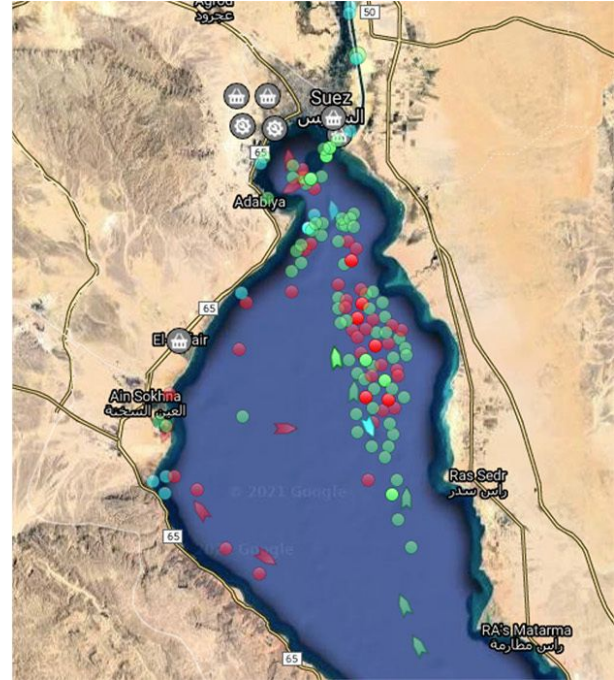Ship Tracking

Ship Tracking

- accidents
- sanction breaking / smuggling
- pollution
- illegal fishing
- ...
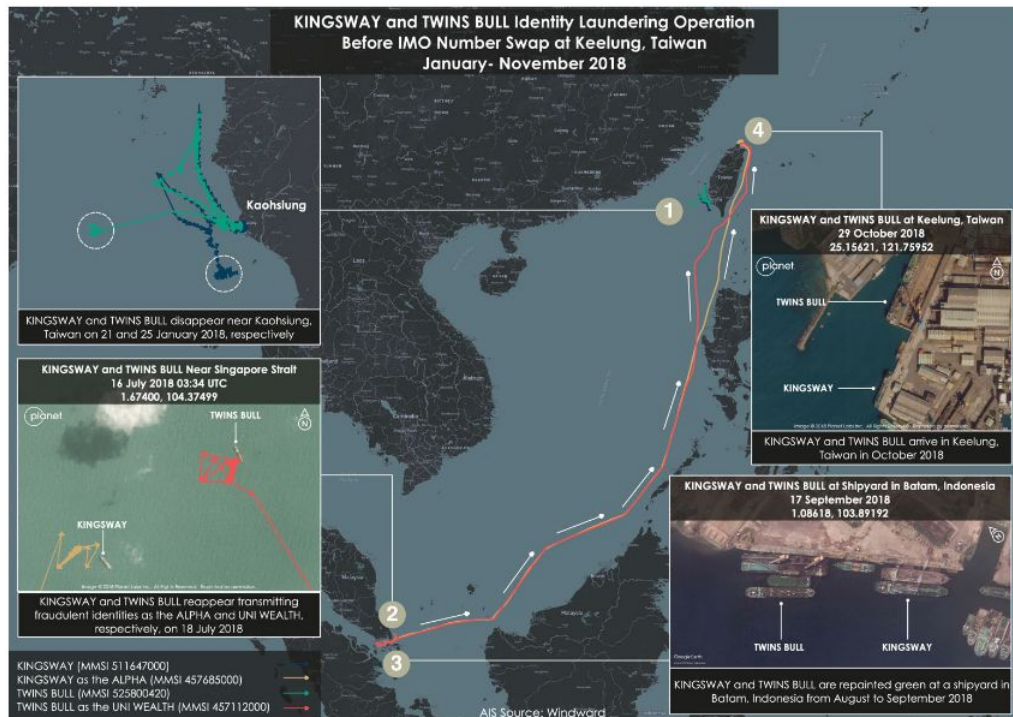

Source: abacapress

Ship Tracking

- accidents
- sanction breaking / smuggling
- pollution
- illegal fishing
- ...

Source: bellingcat

Ship Tracking

- accidents
- sanction breaking / smuggling
- pollution
- illegal fishing
- ...

Source: C4ADS

Ship Tracking

- accidents
- sanction breaking / smuggling
- pollution
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- …

Source: NASA

Ship Tracking

- accidents
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- ...

SkyTruth
@SkyTruth

Container ship Beijing departed China, headed for US, arrival Nov5. Along with MSC Danit, this vessel may have dragged anchor over pipeline off Huntington Beach on Jan25. Opp for Coast Guard to inspect?

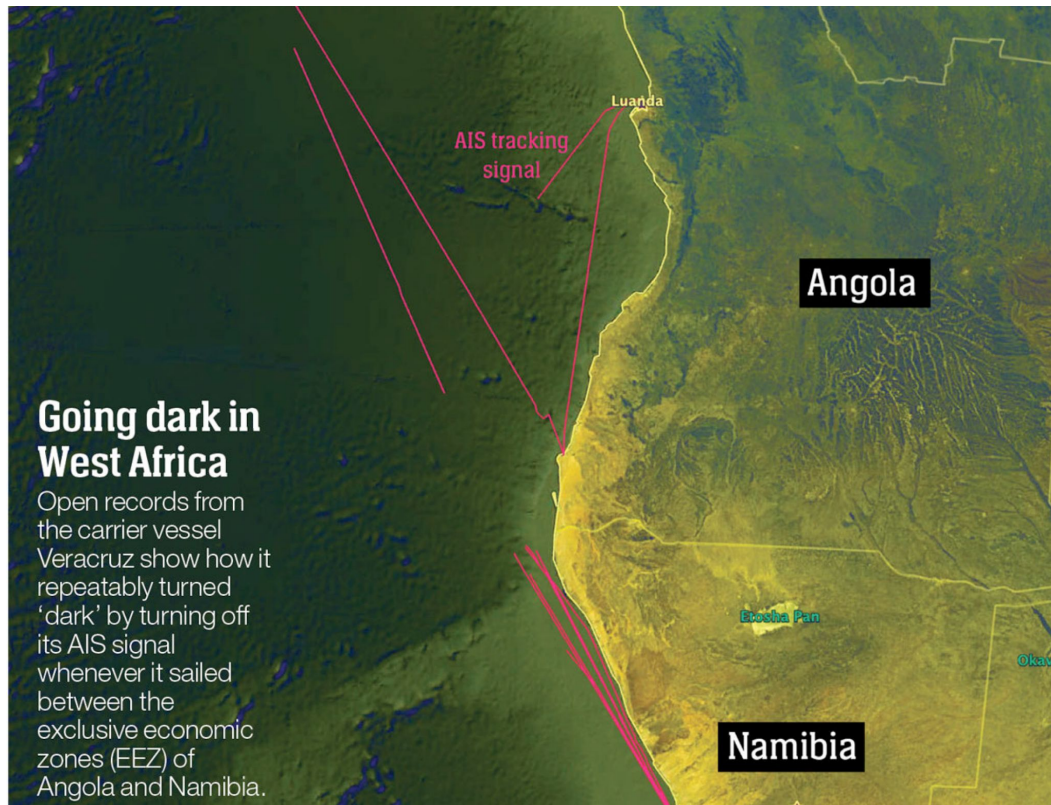8:09 PM · Oct 25, 2021 · Hootsuite Inc.

Flight Tracking: Terminology

- **Call Sign**
- **IMO / MMSI:** unique identifiers
- **AIS (automatic identification system):** information such as unique identification, position, course, and speed, to avoid collision

Ship Tracking: Sources

- MarineTraffic
- Bosphorus Observer
- Global Fishing Watch
- Illegal, unreported, unregular fishing Vessels List
- IMO Registry
- ShipSpotting.com
- VesselFinder
- Tokyo MOU/Paris MOU/Equasis
- OpenSeaMap
- MyShip.com
- ...

Ship Tracking

Going dark in West Africa

Open records from the carrier vessel Veracruz show how it repeatedly turned 'dark' by turning off its AIS signal whenever it sailed between the exclusive economic zones (EEZ) of Angola and Namibia.

AIS tracking signal

Luanda

Angola

Etosha Pan

Okav

Namibia

AIS signal tracks of vessels involved
April 19-30, 2020

LAUREN anchors at Iranian port ASALUYEH (27.53622, 52.55241)

IRAN

Kuwait

The Lauren turns off its AIS and signals for Kuwait as its destination (a ruse). Instead it docks at Asaluyeh port

LAUREN

PAULA
(prev Crown/Lady Classy)

Doha

Riyadh

Abu Dhabi

Muscat

Mumb

GAS SELLAN

Sanaa

Djibouti

Islan

Data sources: VesselsValue, VesselFinder

Ship Tracking: Case Study - Transshipment

- used to transfer catch to refrigerated cargo vessels that also supply fishing vessels with fuel, food, equipment and personnel
- happen on the high seas, in regions with poor regulation and oversight
- used to disguise criminal activities such as illegal, unreported and unregulated fishing, forced labor, human trafficking and drug smuggling.
- banned by several states and regional fishery management organizations

Ship Tracking: Case Study - Transshipment

[Ocean Fresh](#) (IMO: 8301175)
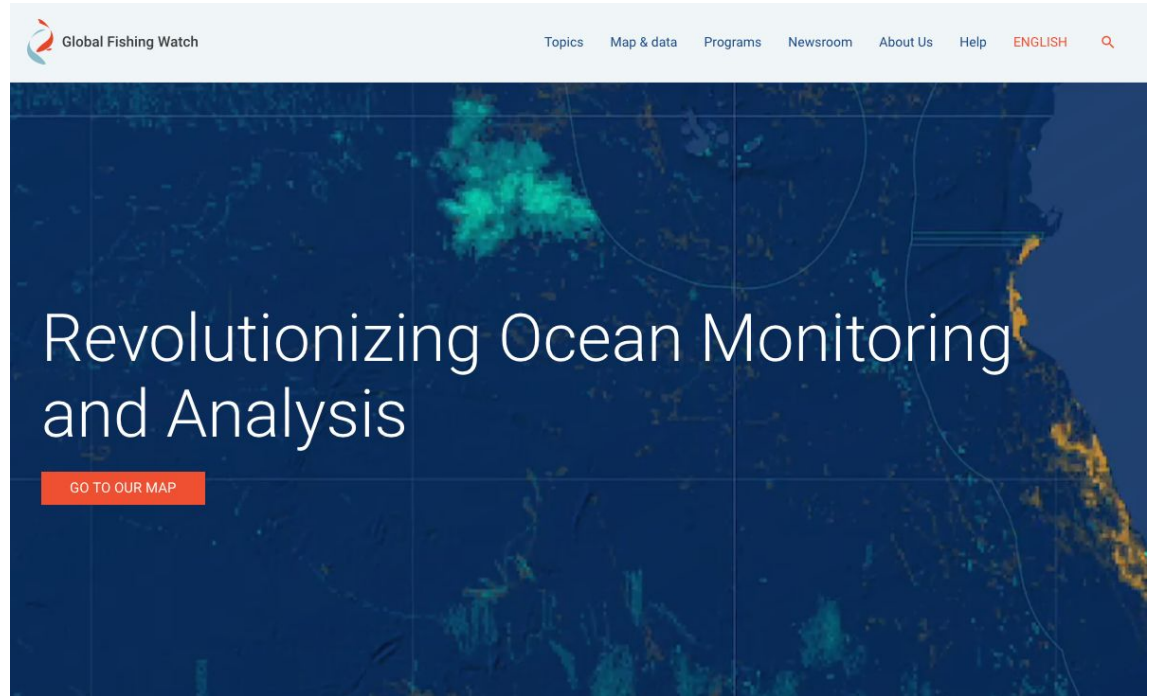
Ship Tracking: Case Study - Transshipment

MyShip.com
Social and career website
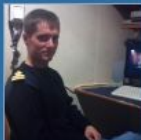
Find your ship, mates and job!

MyShip.com » OCEAN FRESH
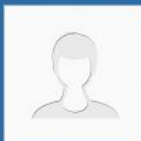
Crew List 8

Add me

Chief Officer
Artur Gorczyca
POLISH

2/Officer
Bartosz "B" Machnio
POLISH

2/Engineer
Zbigniew Szuba
POLISH

A/B

OCEAN FRESH
Ex names: AMERICAN FREEDOM, RED SEA

BERGEN
IMO: 8301175
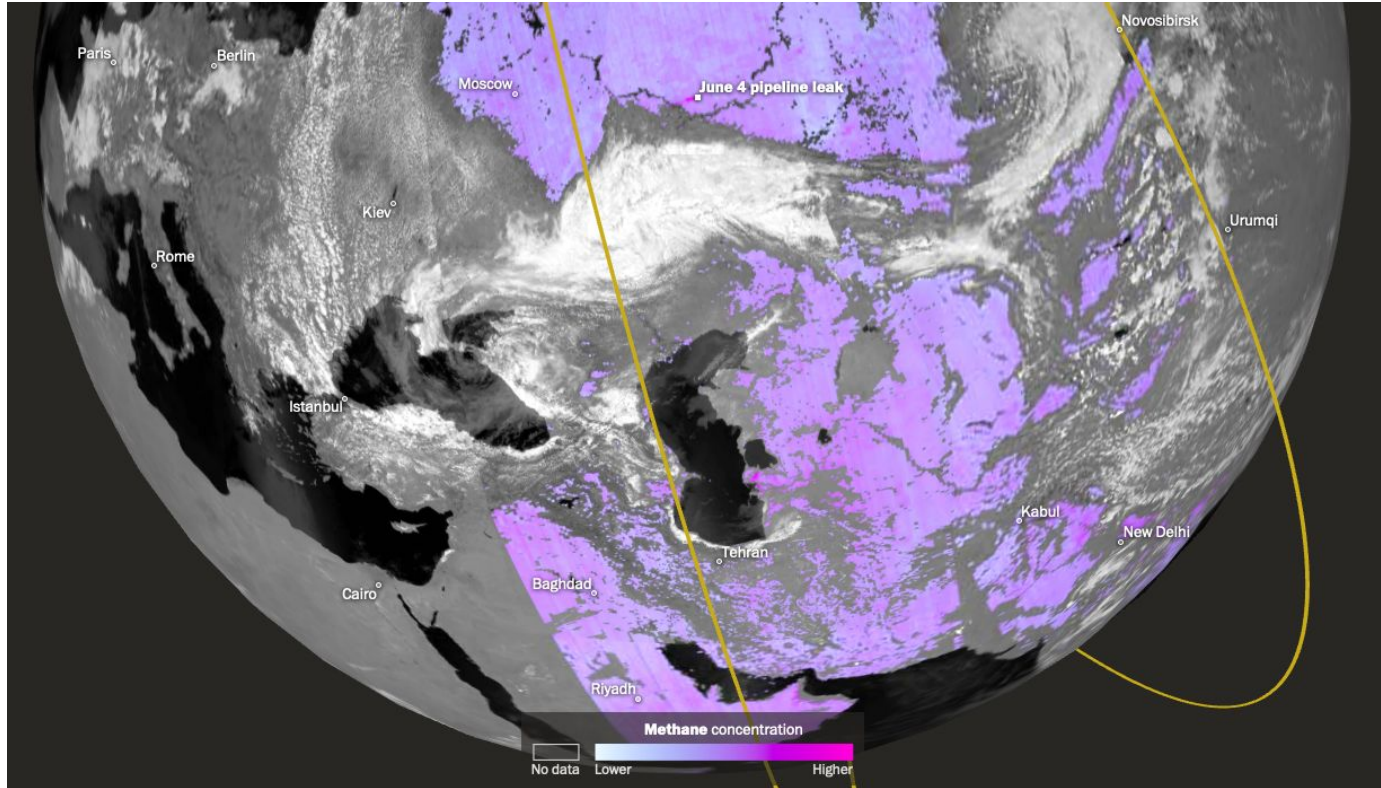Call sign: LAEZ7
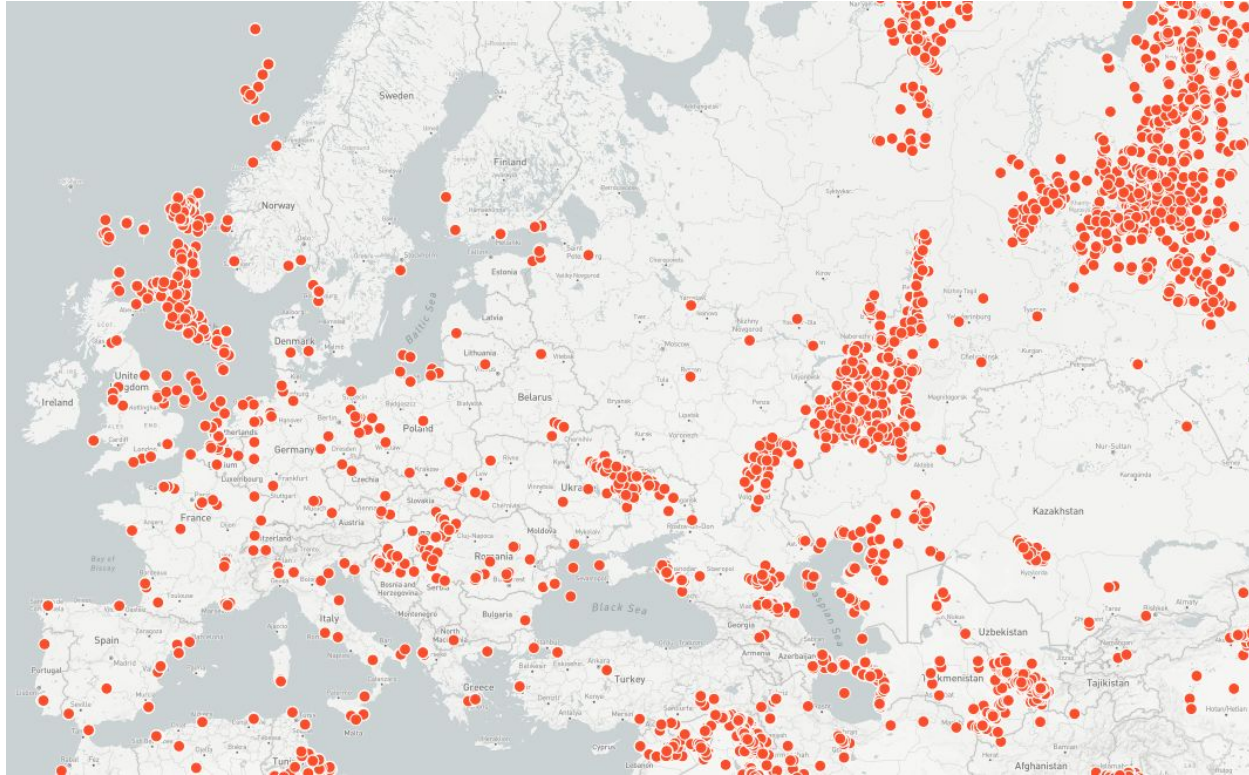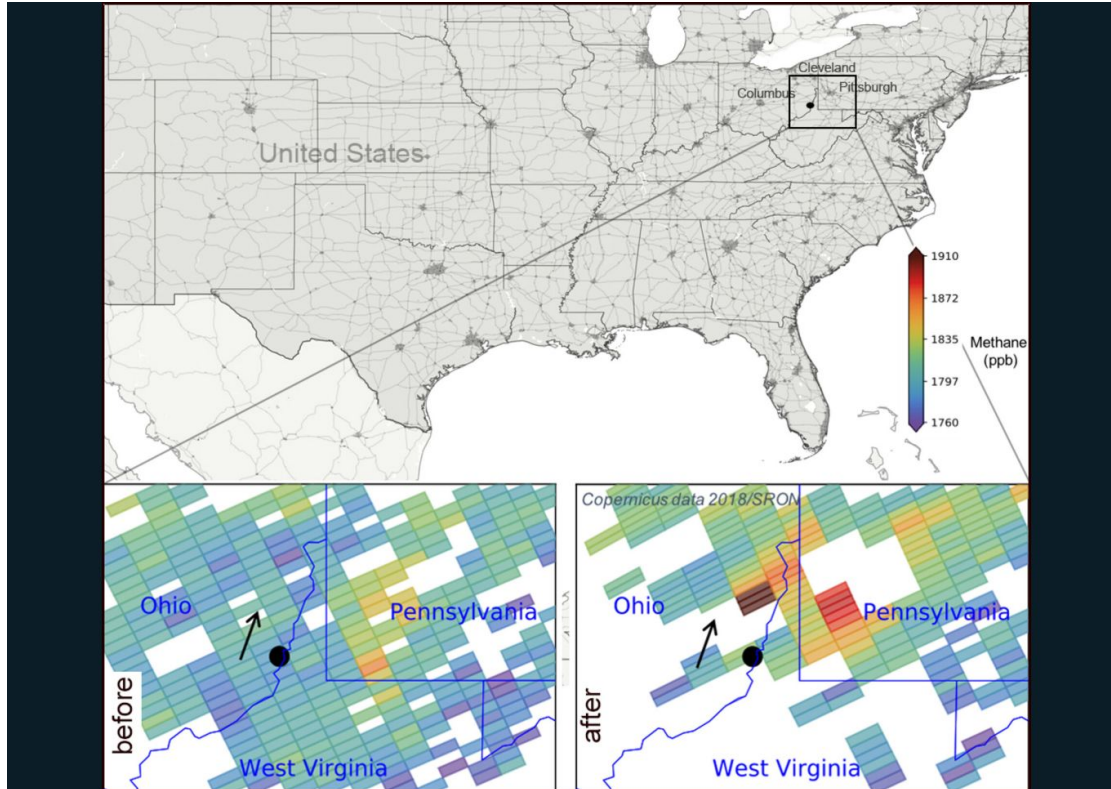MMSI: 259758000

Tweet

Edit ship   Add photo   Photos 6

Environment & Wildlife

Environment & Wildlife

Environment & Wildlife

Methane leak visible from space

17/12/2019   9106 VIEWS   89 LIKES   435063 ID

LIKE   DOWNLOAD ⌄

DETAILS   RELATED

Data from the Copernicus Sentinel-5P satellite revealed that an explosion in a natural gas well in Ohio in February 2018 released more than 50 000 tons of methane into the atmosphere. The blowout leaked more of this potent greenhouse gas in 20 days than the majority of many European nations do in a year from their oil and gas industries.
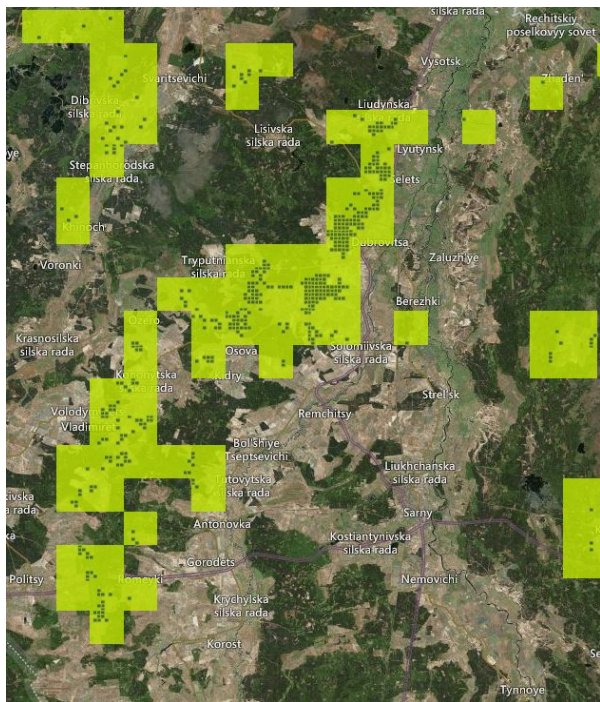
The findings were published in a study yesterday in the *Proceedings of the National Academy of Sciences*, and the study reveals the importance of using satellite data to detect and quantify pollutants such as methane. Data from the
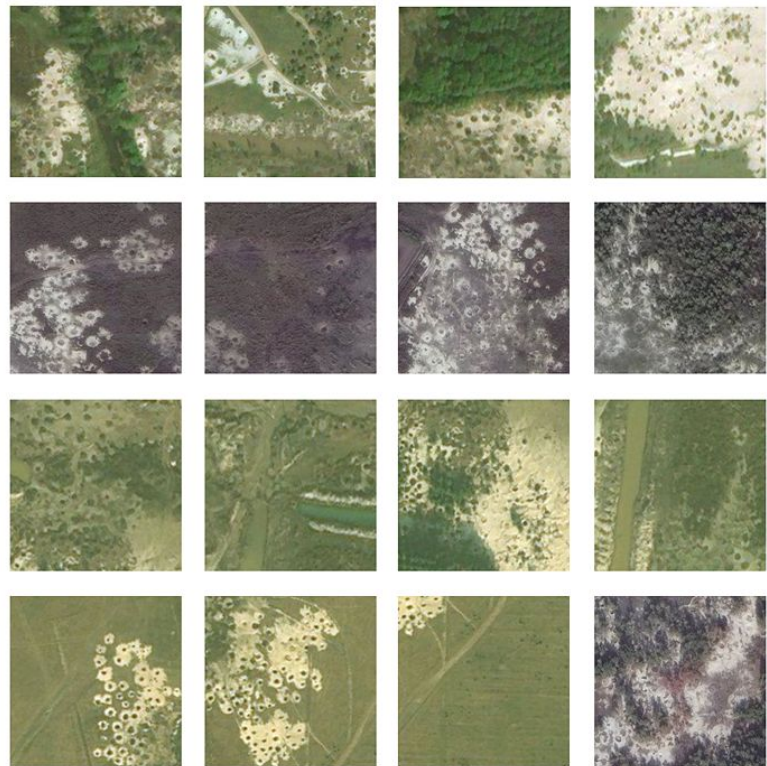
Environment & Wildlife

source: Bellingcat

Environment & Wildlife

source: Texty

Investigating Websites

- archive.org / waybackmachine, archive.is
- cachedview.com / viewcached.com
- whois data / historic whois
- email lookup
- spyoneweb
- publicwww

Thank you

Twitter: **@mxbernhard**

Email: **max.bernhard@pm.me**