Targeting Natural Resource Corruption

Welcome! We will begin shortly.

This is a Zoom webinar. All participant videos are off and lines are muted, but please feel free to introduce yourself in the chat.

This event is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the Targeting Natural Resource Corruption project and do not necessarily reflect the views of USAID, the United States Government, or individual TNRC consortium members.

How data and technology can help address corruption in IUU fishing

Dr. Louise Shelley
Director, Terrorism, Transnational Crime and Corruption Center
Professor, Schar School of Policy and Government, George Mason University

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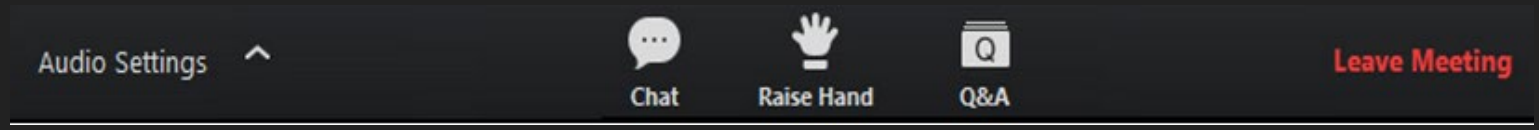
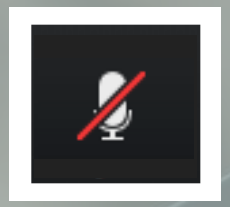
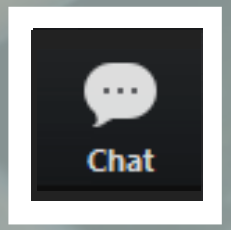
Ground rules...





1. All participants are muted

Given high attendance in this webinar, all lines will remain muted



2. Exchange thoughts and pose questions

Introduce yourself and share your own insights and questions in the chat window

How data and technology can help address corruption in IUU fishing

Michele Kuruc
Vice President, Ocean Policy, WWF

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How data and technology can help address corruption in IUU fishing

Bubba Cook
Western and Central Pacific Tuna Programme Manager, WWF

François Mosnier
Financial Research Analyst, Planet Tracker

Dr. Rashid Sumaila, FRSC
Professor and Director, Fisheries Economics Research Unit and the OceanCanada Partnership, University of British Columbia

Michele Kuruc, J.D.
Vice President, Ocean Policy, WWF
(Moderator)

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How data and technology can help address corruption in IUU fishing

Dr. Rashid Sumaila
Professor and Director, Fisheries Economics Research Unit and the OceanCanada Partnership, University of British Columbia

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How data and technology can help address corruption and IUU fishing

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OCEAN CANADA

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https://advances.sciencemag.org/content/6/9/eaaz3801

SCIENCE ADVANCES | RESEARCH ARTICLE

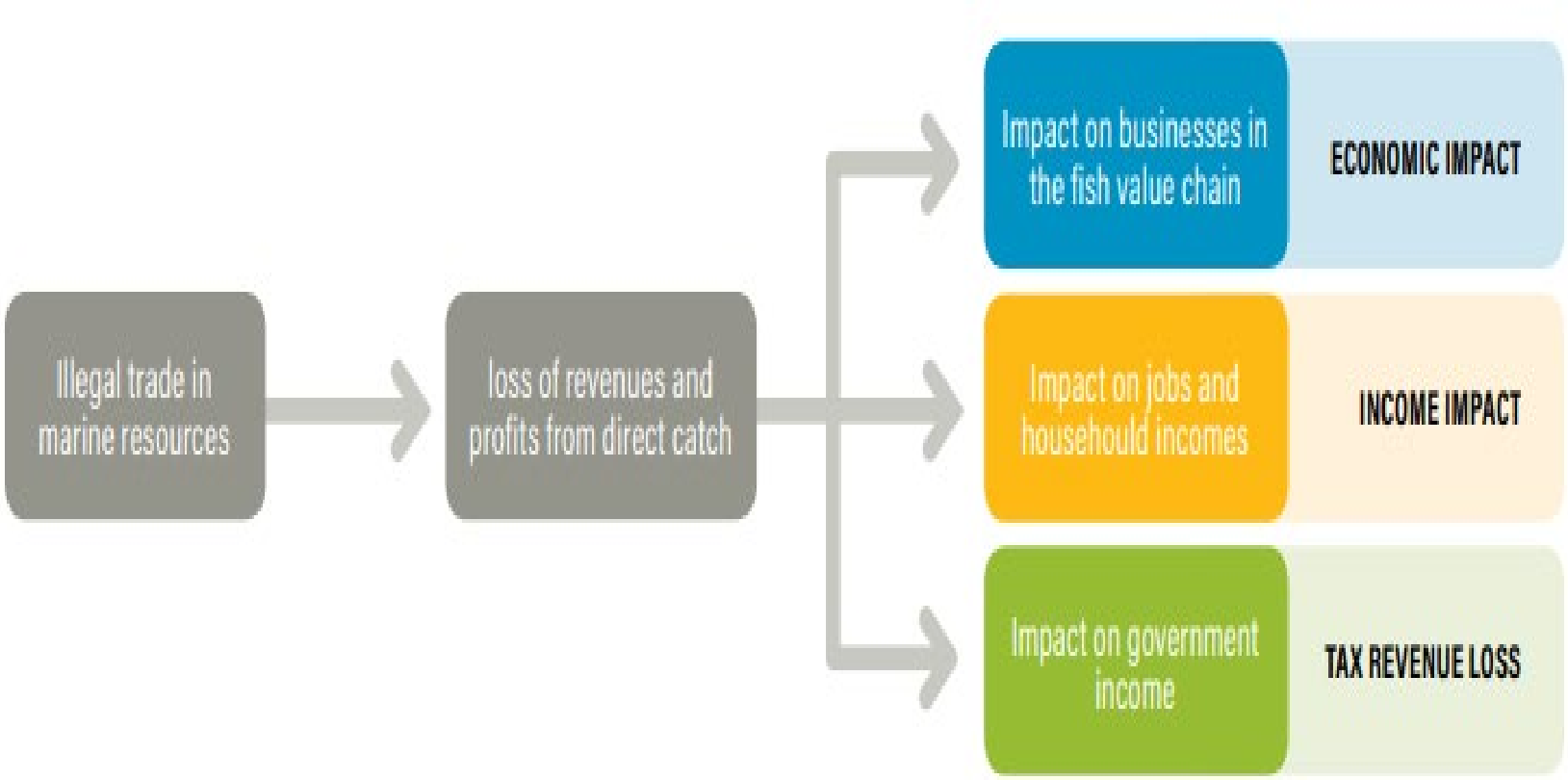
SOCIAL SCIENCES

Illicit trade in marine fish catch and its effects on ecosystems and people worldwide

U. R. Sumaila[1]*, D. Zeller[2], L. Hood[2], M. L. D. Palomares[3], Y. Li[4], D. Pauly[3]

Illegal, unreported, and unregulated fishing is widespread; it is therefore likely that illicit trade in marine fish catch is also common worldwide. We combine ecological-economic databases to estimate the magnitude of illicit trade in marine fish catch and its impacts on people. Globally, between 8 and 14 million metric tons of unreported catches are potentially traded illicitly yearly, suggesting gross revenues of US$9 to US$17 billion associated with these catches. Estimated loss in annual economic impact due to the diversion of fish from the legitimate trade system is US$26 to US$50 billion, while losses to countries' tax revenues are between US$2 and US$4 billion. Country-by-country estimates of these losses are provided in the Supplementary Materials. We find substantial likely economic effects of illicit trade in marine fish catch, suggesting that bold policies and actions by both public and private actors are needed to curb this illicit trade.

Economic losses across the global fish value chain



Sumaila et al. (2020): *Science Advances*

IUU fishing and illicit trade in seafood

Catch (million t)	Landed Value (Billion $)	Economic impact (Billion $)	Tax revenues (Billion $)
14.0	17.0	50.0	4.0

Sumaila et al. (2020): *Science Advances*

Examples of corruption in fisheries

- Corruption in fisheries institutions;
- Fisheries corruption at sea;
- Seafood supply chain corruption.

Sumaila et al. (2014): *Book Chapter*

Examples of corruption in fisheries

- Corruption in fisheries institutions;
- Fisheries corruption at sea;
- Seafood supply chain corruption.

- Failures in fisheries:
  - Policy;
  - Management;
  - Implementation.

- The role of corruption in fisheries failures;
- Data and technology as remedies for corruption & IUU fishing.

Thanks for your attention!

and

Thanks to the conveners of this Meeting for inviting me

OCEAN
CANADA

How data and technology can help address corruption in IUU fishing

François Mosnier
Financial Research Analyst,
Planet Tracker

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Planet Tracker

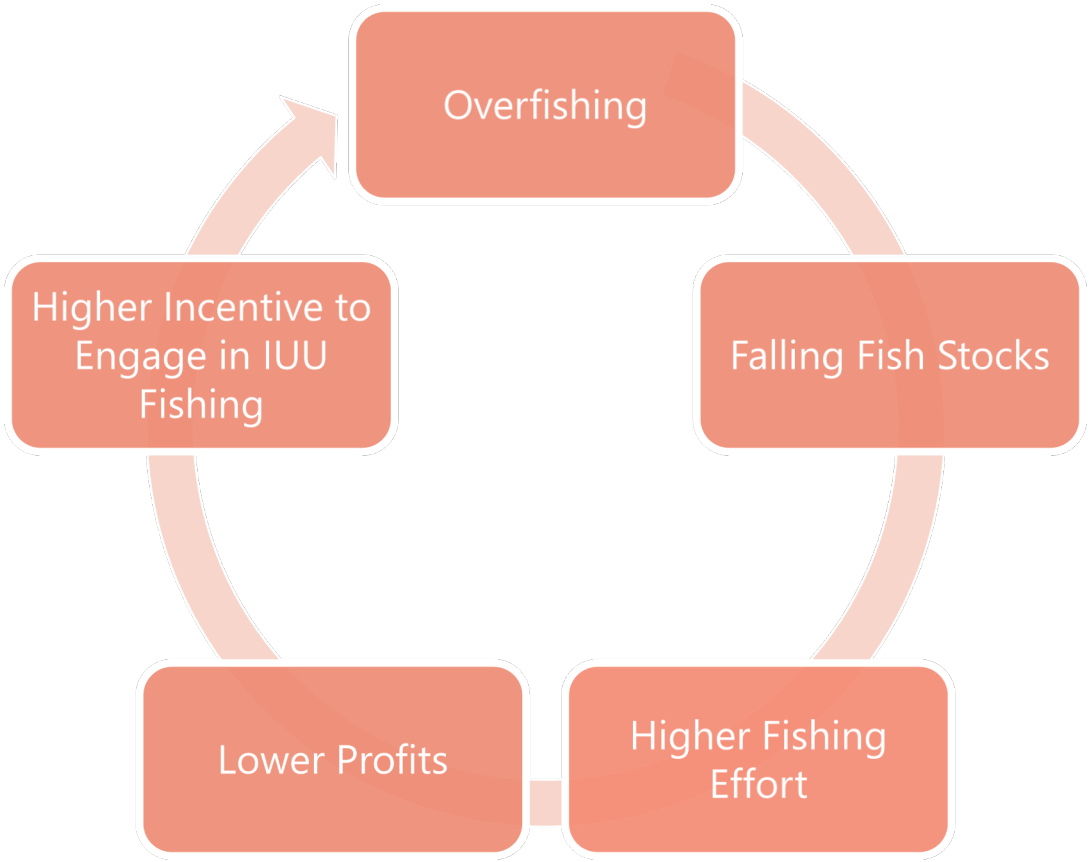
TRACEABLE RETURNS

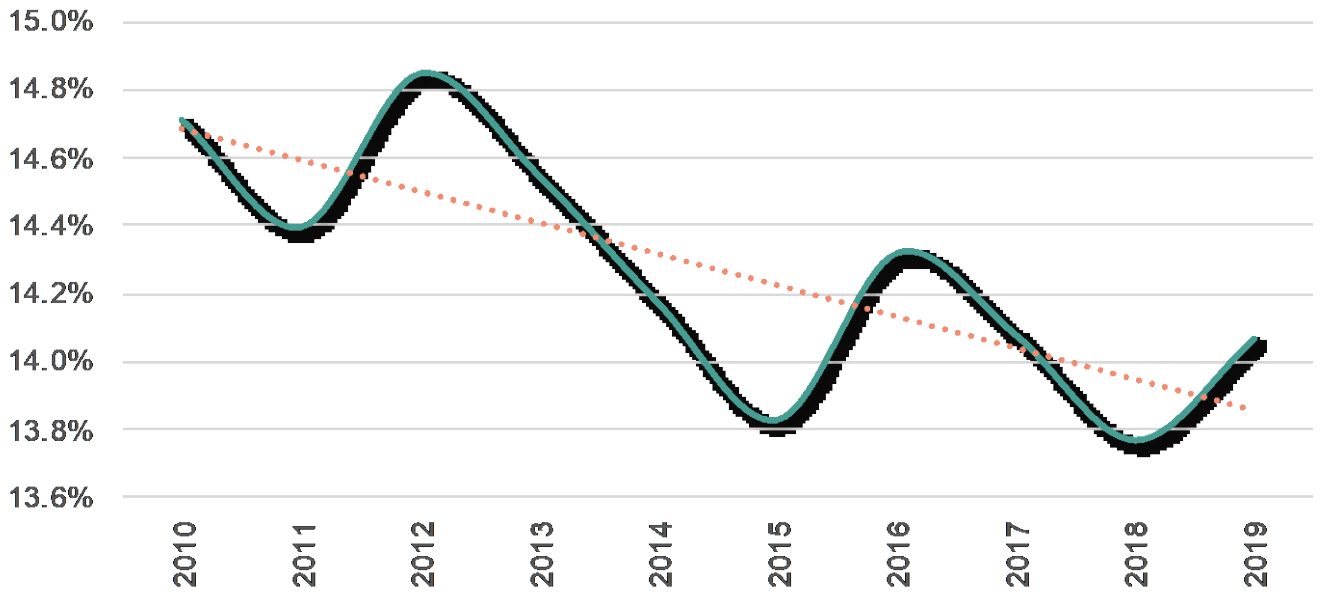
Seafood Traceability: A Profitable Tool to Reduce IUU Fishing and Related Corruption

2nd December 2020

Francois Mosnier
Financial Research Analyst

IUU fishing and lower profitability: a vicious circle

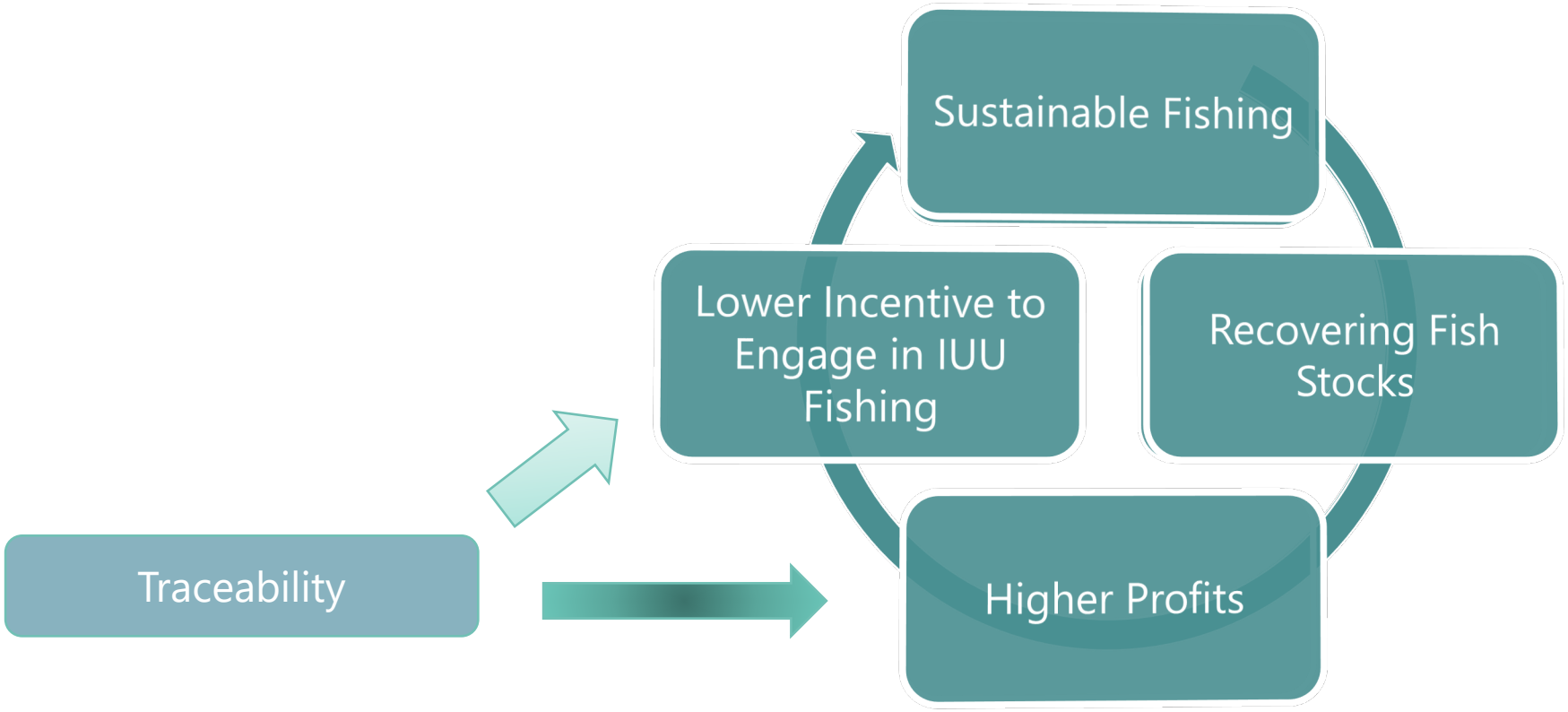




Average Gross Margin of Japanese Seafood Producers

Source: Planet Tracker via FactSet (2020).

Traceability: a profitable tool to reduce IUU fishing



Seafood traceability: definition, rationale and challenges

WHAT?

- Systemically identify a unit of production
- Track its location
- Describe any treatments/transformations

WHY?

- Minimise food recalls
- Minimise product waste
- Minimise IUU fishing and fish fraud

HOW?

- External vs internal
- Paper-based/Basic electronic/integrated hardware

CHALLENGES

- Poor data capture and management
- Systems not inter-operable
- Gaps in the supply chain

…a potential game-changer

The GDST standards could overcome 2 of the 3 main obstacles to industry-wide traceability

The GDST standards:

- Open-source, released in March 2020
- Common language for traceability data
- Explains how data should be captured and managed
- Compatible with existing standards used by retailers
- Endorsed by SeaBOS, Global Tuna Alliance, UK Seafood Industry Alliance

Overcoming challenges

- Gaps in the supply chain
- ✓ Systems become inter-operable
- ✓ Better data capture and management

Reducing gaps in the traceability chain

Triggers

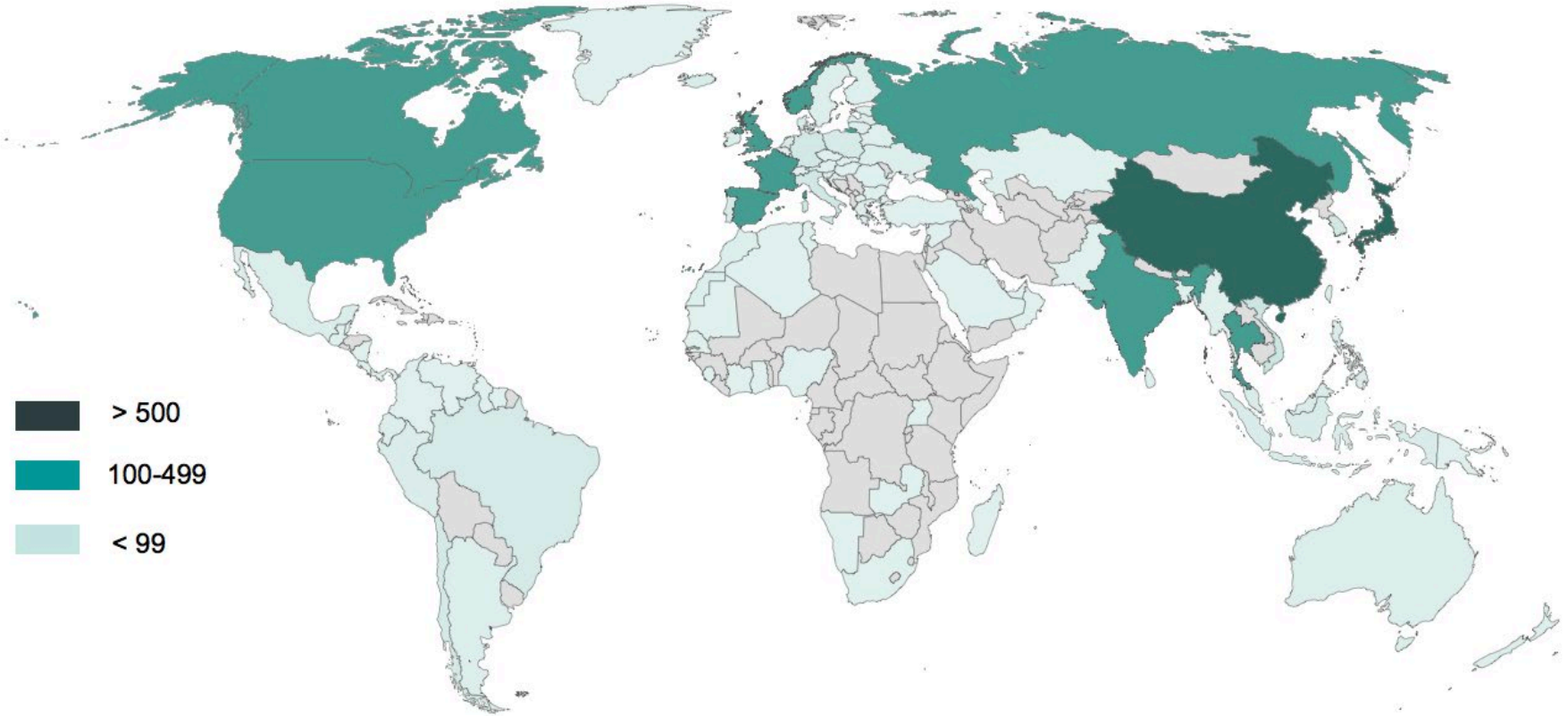
- Explicit support of owners and/or senior management
- Investment in a wider operating platform/ IT system
- Market pressures
- Confidence in financial benefits

Targets

- Mixing points in the supply chain
- e.g. processing companies

Seafood processing: a very fragmented market

Around 4,000 companies process seafood globally, 89 are listed on stock exchanges

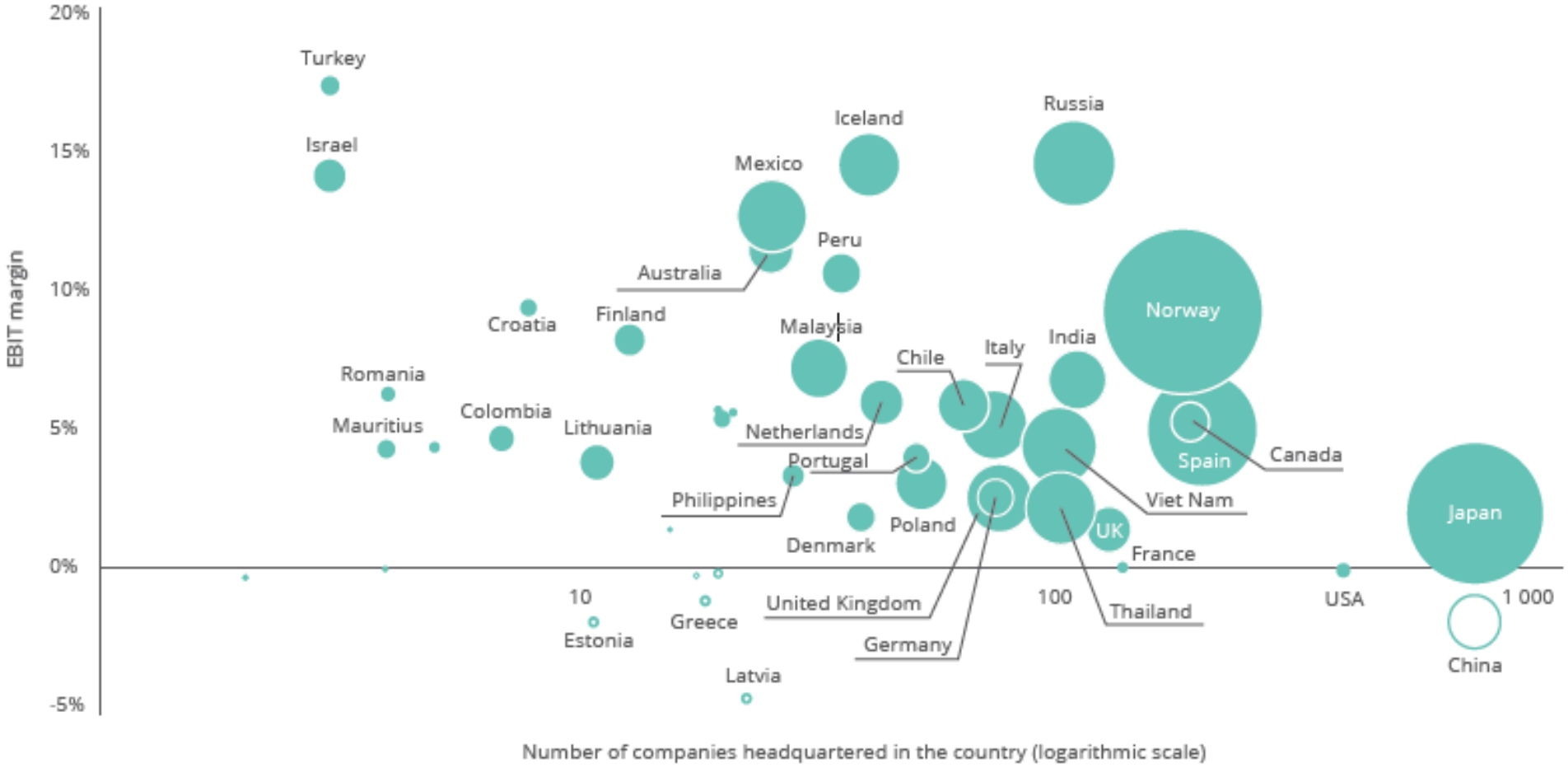


Number of Seafood Processing Companies by Country

Source: FactSet (2020).

A low-margin industry

Seafood processing is a 3% margin business



Seafood Processors: EBIT Margin and Number of Companies per Country.

The size of the bubble is proportional to the country's profit pool
Source: based on FactSet (2020).

Costing traceability implementation

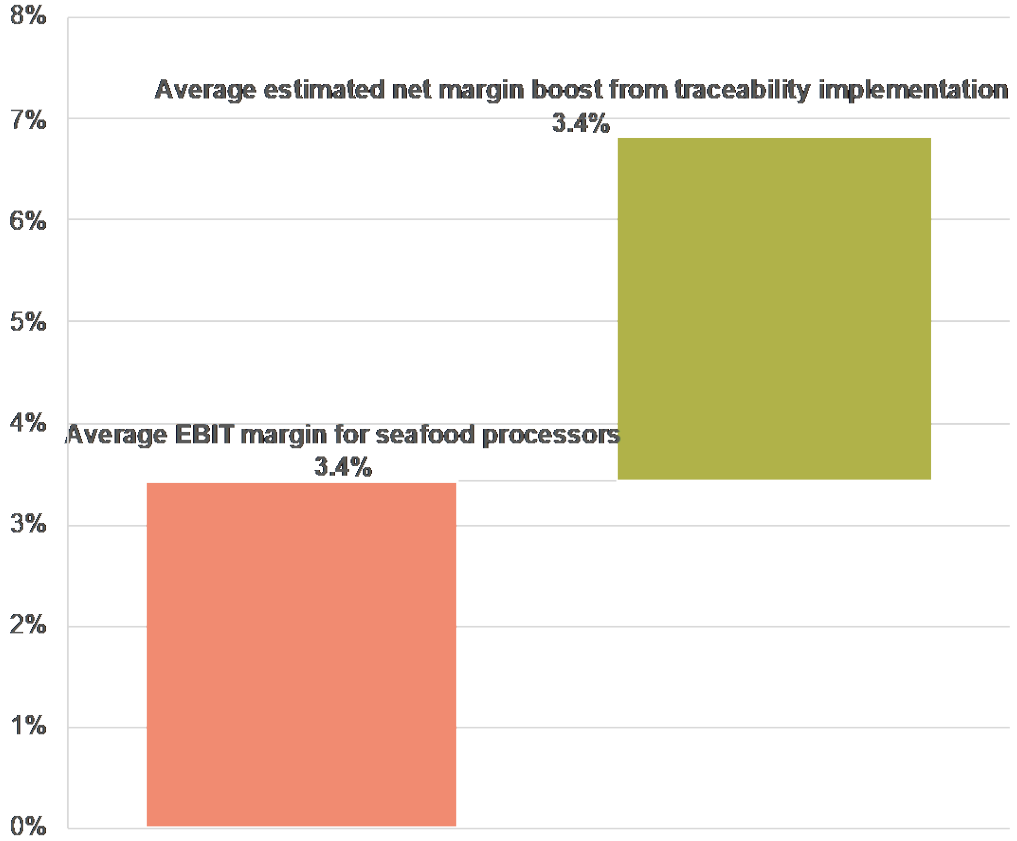
Main benefits: lower recall costs and lower waste

Item	Cost (% of sales)	Est. cost saving
New markets/Price premium	n.a.	0%
Lawsuits and liability insurance costs	2% (annualized)	-10%
Average costs of recalls	3% (annualized)	-25%
Total information management costs (before traceability platform costs)	7%	-25%
Scrap/waste/shrink	5%	-50%
Product handling, storage, stockouts, transportation, refunds and compliance	10%	-2%
Maintenance costs of the traceability platform	2%	n.a.

Costs and Benefits Assumptions Made to Estimate the Net Margin Gain of Traceability Implementation for the Average Seafood Company

Source: Global Food Traceability Center, FactSet, Planet Tracker

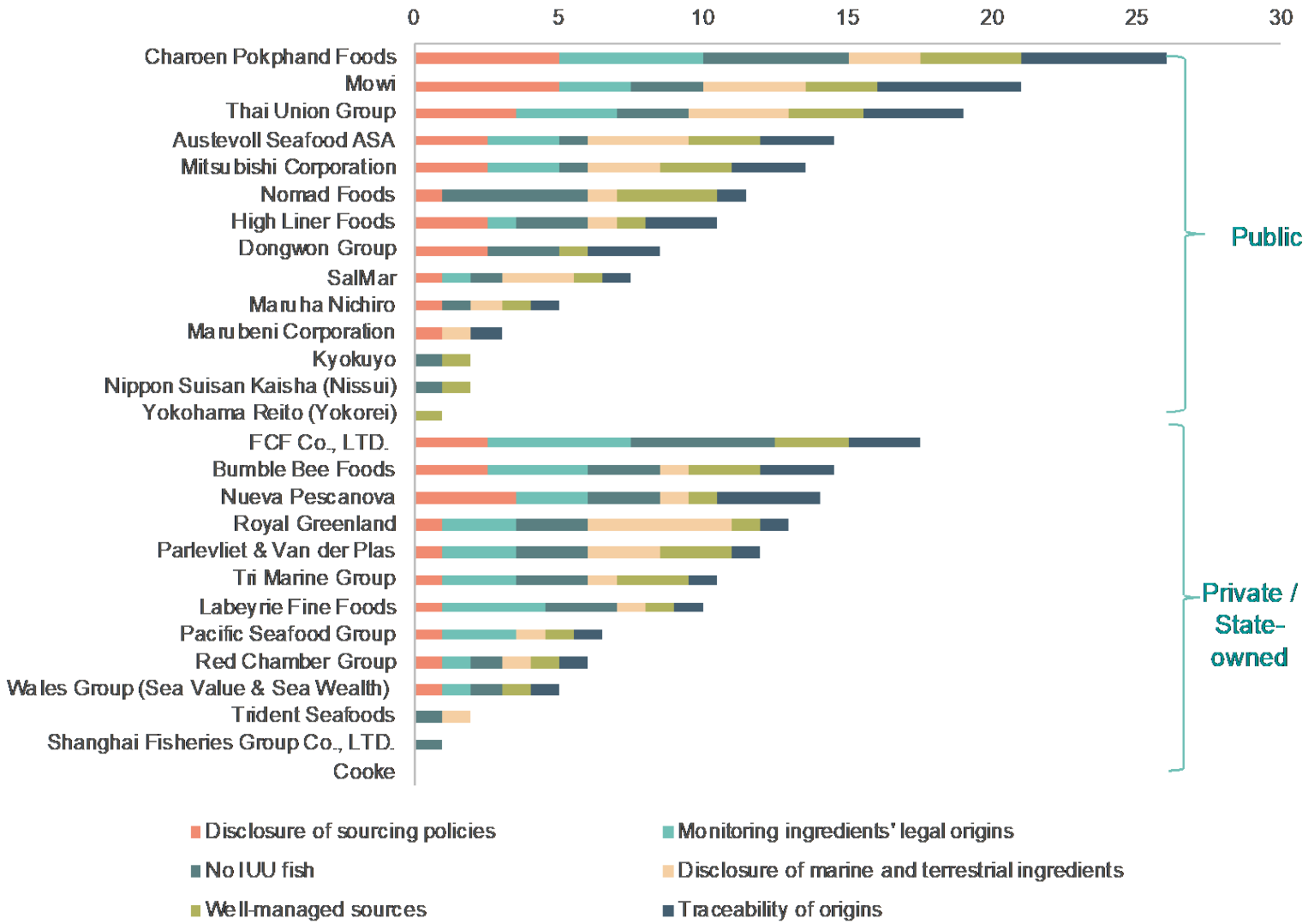
Traceability can double the margins of the average seafood processor



Estimated Average Net Margin Gain from Traceability Implementation at Seafood Processors

Source: Planet Tracker (2020), based on FactSet

Traceability opportunities exist at most processing companies



Traceability Score by Company (the higher the better)

Source: World Benchmarking Alliance (2019), Planet Tracker (2020)

TRACEABLE RETURNS

Thank you

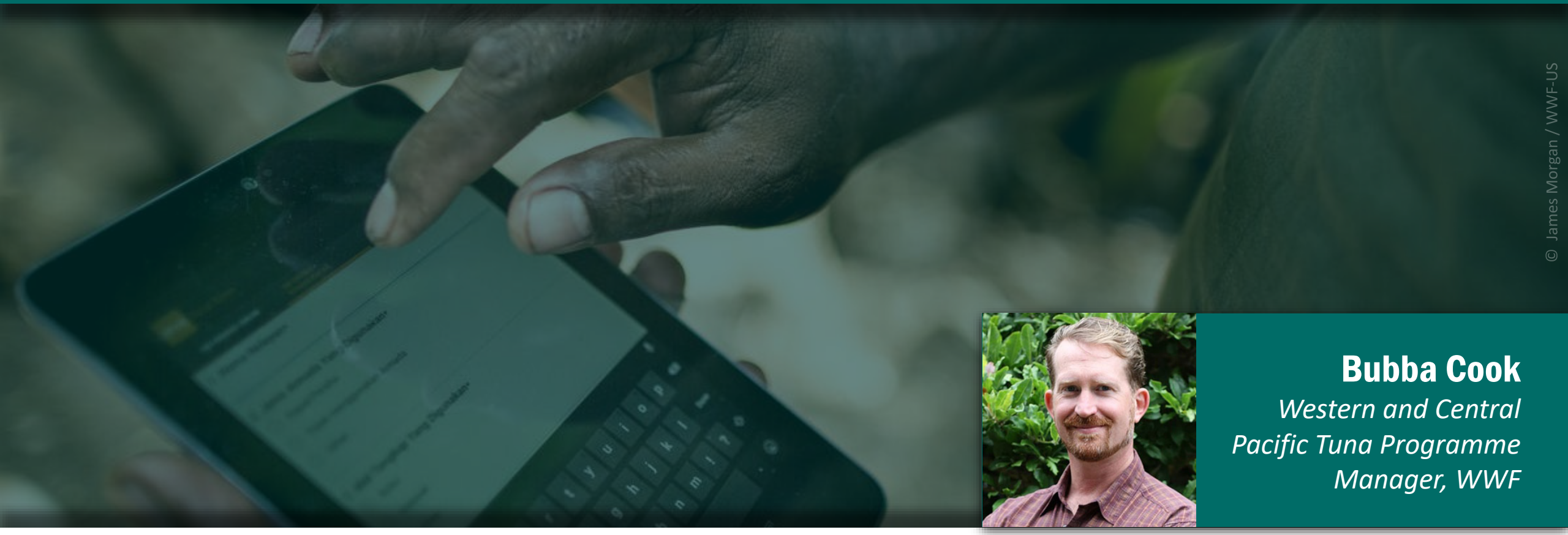
GORDON AND BETTY MOORE FOUNDATION

THE FINANCE HUB

This presentation is funded in part by the Gordon and Betty Moore Foundation through the Finance Hub, which was created to advance sustainable finance.

OAK FOUNDATION

How data and technology can help address corruption in IUU fishing



Bubba Cook
Western and Central Pacific Tuna Programme Manager, WWF

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Emerging Technologies to Address Corruption in IUU Fishing

Bubba Cook

World Wide Fund for Nature,
Western and Central Pacific Tuna
Programme Manager

WWF

Three Principles

1. Sunlight is the best disinfectant.
2. When it comes to crime, where there's a will, there's a way.
3. Technology is only a tool.

WWF

Emerging Technologies

- Unmanned Surveillance
- Electronic Monitoring
- Artificial Intelligence and Machine Learning
- Integrated Satellite Imaging & Tracking
- Genetics and Biochemical Markers
- Catch Documentation and Traceability
- Cryptocurrencies and Blockchain
- Data Management Solutions

Unmanned Surveillance

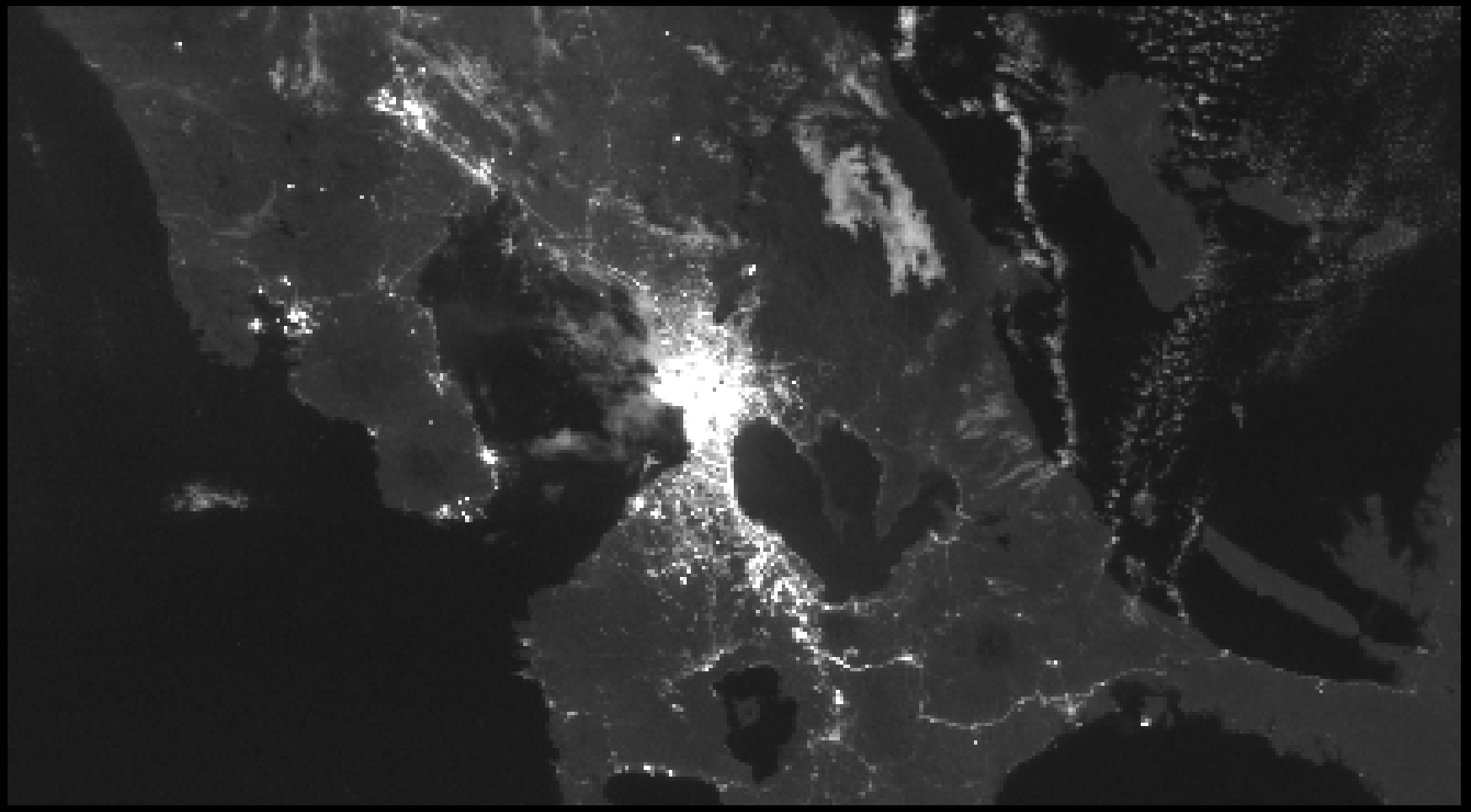
Electronic Monitoring

Artificial Intelligence

DNA Barcoding

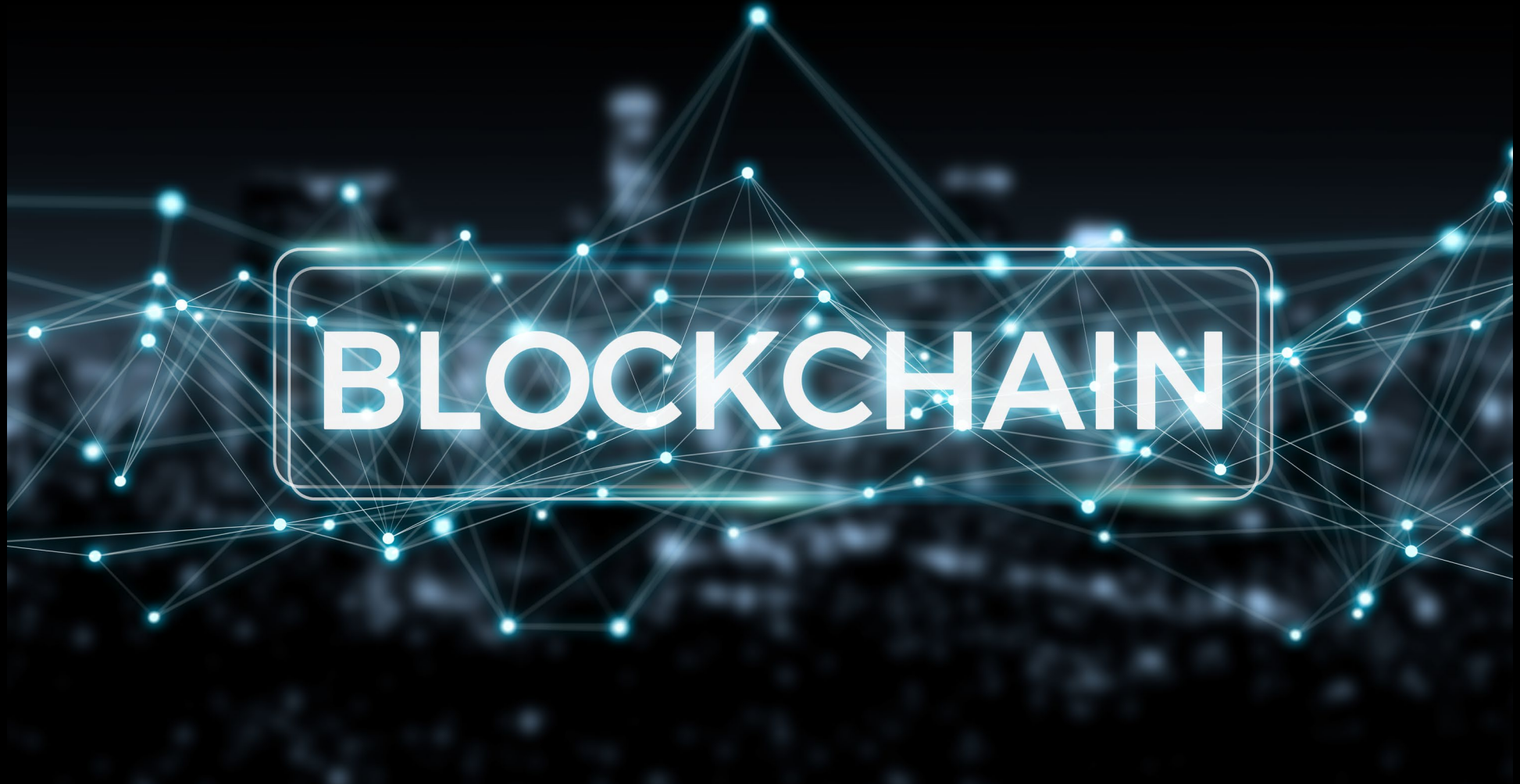
Biochemical Tracking

Integrated Satellite Imaging & Tracking



Catch Documentation and Traceability

Blockchain/Cryptocurrency



Data Management

Tech, IUU, and Corruption

COMPREHENSIVE APPROACH

Tech, IUU, and Corruption

STANDARDS

Tech, IUU, and Corruption

INCENTIVES

Tech, IUU, and Corruption

“Through transparency we expose corruption, but then there is no action taken against the corrupt.”

Aruna Roy

Thank You

www.seafoodandfisheriesemergingtechnology.com

How data and technology can help address corruption in IUU fishing

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Targeting Natural Resource Corruption

Harnessing knowledge, generating evidence, and supporting innovative policy and practice for more effective anti-corruption programming

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