International Conference on Seafood Transparency and Sustainability

Conference Booklet

Program

Day 1 2017.5.16 (Tue) Ono Auditorium, Waseda University

13:00-13:10 **Welcome Speech**
Ms. Maria Damanaki (Global Managing Director for Oceans, TNC; Former European Commissioner for Maritime Affairs and Fisheries)
Prof. Masahiko Gemma (Director, Organization for Regional and Inter-regional Studies (ORIS), Waseda University)

13:10-14:50 **Session 1:**
IUU fishing issues surrounding Japan and technologies to promote seafood transparency
Facilitator: Mr. Masanori Miyahara
(President, Japan Fisheries Research and Education Agency〈FRA〉)
[Presentation]
Dr. Yoshioki Oozeki
(Councilor, FRA)
Ms. Hiromi Shiraishi
(Programme Officer, TRAFFIC)
Dr. Quentin Hanich
(Associate Professor, Australian National Centre for Ocean Resources and Security, University of Wollongong)
Mr. Tony Long
(Director, Ending Illegal Fishing Project, The Pew Charitable Trusts)

14:50-15:10 **Break**

15:10-17:00 **Session 2:**
Strengthening international cooperation for combatting IUU fishing
Facilitator: Mr. Charles Bedford
(Regional Managing Director, Asia Pacific Region Program, TNC)
[Presentation]
Mr. Stefaan Depypere
(Directorate-General for Maritime Affairs and Fisheries, European Commission)
Mr. John Henderschedt
(Director, Office of International Affairs and Seafood Inspection Program, NOAA, U.S.A.)
Mr. Philippe Michaud
(Special Adviser, The Blue Economy Department, Vice President's Office of Seychelles)
Mr. Shigeto Hase
(Deputy Director-General, Fisheries Agency of Japan)
Mr. Sven Biermann
(Director, Fisheries Transparency Initiative 〈FiTI〉)

17:00-17:15 **Day 1 Comments and Closing Remarks**
Dr. Kenji Horiguchi
(President, Japan Institute of Agricultural Management; Professor Emeritus, Waseda University)

Day 2 2017.5.17 (Wed) Masaru Ibuka Auditorium, Waseda University

13:00-13:10 **Welcome Speech**
Ms. Maria Damanaki (Global Managing Director for Oceans, TNC; Former European Commissioner for Maritime Affairs and Fisheries)
Mr. Kaoru Kamata (President, Waseda University)

13:10-14:10 **Keynote Speech**
Mr. Shigeru Ishiba
(Member of the House of Representatives; Chair, Liberal Democratic Party's Fisheries Basic Policy Committee)
Mr. Kazuo Sato (Director-General, Fisheries Agency of Japan)
Mr. Karmenu Vella
(European Commissioner for Maritime Affairs and Fisheries)
* Video message
Ms.Kahori Miyake (Executive Officer, CSR & Communication, Aeon Co., Ltd.)

14:10-14:20 **Video Message**
H.S.H. Albert II (Prince of Monaco)

14:20-14:35 **Summary Report of Day 1**
Mr. Masanori Miyahara (President, FRA)

14:35-15:55 **Session 3:**
Policies and measures to promote seafood transparency and achieve sustainable fisheries
Facilitator: Prof. Hiroshi Ohta
(School of International Liberal Studies 〈SILS〉, Organization for Regional and Inter-regional Studies〈ORIS〉, Waseda University)
[Presentation]
Mr. Tetsuji Ida
(Senior Staff Reporter, Environment, Energy and Development, KYODO NEWS)
Mr. Mark Zimring
(Director of Indo-Pacific Tuna Program, TNC)
Mr. Thomas Kraft (CEO, Norpac Fisheries Export, USA)
Mr. Yasuyuki Yamamoto
(Merchandising Strategy Department, AEON Retail Co., Ltd.)
Mr. Wakao Hanaoka (CEO, Seafood Legacy)

15:55-16:15 **Break**

16:15-17:35 **Session 4:**
Use of fisheries certification and labels to promote fisheries transparency and sustainable fisheries
Facilitator: Prof. Hiroshi Ohta
(SILS, ORIS, Waseda University)
[Presentation]
Dr. Mitsutaku Makino (Head, Fisheries Policy Research Group, FRA National Research Institute of Fisheries Science)
Mr. Josh Madeira
(Federal Policy Manager, Monterey Bay Aquarium)
Mr. Kozo Ishii (Program Director, MSC Japan Office)
Mr. Naoya Kakizoe (President, Marine Eco-label Japan Council)
Prof. Isao Sakaguchi (Professor, Gakushuin University; Visiting Scholar, Middlebury Institute of International Studies at Monterey)

17:35-17:55 **Session 5:**
The Way Forward (wrap up session)
Mr. Masanori Miyahara (President, FRA)
Prof. Hiroshi Ohta (SILS, ORIS, Waseda University)
Ms. Maria Damanaki (Global Managing Director for Oceans, TNC; Former European Commissioner for Maritime Affairs and Fisheries)

17:55-18:00 **Closing Remarks**
Mr.Atsushi Ishiyama (Vice President for Research Promotion; Professor, Faculty of Science and Engineering, Waseda University)

International Conference on

Seafood Transparency and Sustainability

Theme

As global consumption of seafood increases and now, according to the United Nations Food and Agriculture Organizations, over 80% of fisheries resources are over utilized or have reached the limits of their capacity and have no room to expand production, there is growing attention on seafood sustainability and ocean health. Increasing numbers of people in the world want to know that the seafood they consume was caught legally and from well managed fisheries. Also, many countries are concerned of illegal, unreported or unregulated (IUU) fishing because it threatens their economies and environment, lowers the countries' ability to promote sustainable fisheries, and has adverse effects on fishers who follow the rule.

As a major player in the global fishing industry and a major consumer of seafood products, Japan is an essential player in moving towards a future of sustainable seafood, with transparency throughout the supply chain. As host of the 2020 Olympic and Paralympic Games, Japan has a unique opportunity to demonstrate leadership in this area by committing to seafood transparency and sustainability. In addition, countries such as the U.S. and the E.U. are seeking to strengthen coordination and cooperation with Japan on this issue, in order to combat IUU fishing globally.

The Conference provides an opportunity for the multiple Japanese stakeholders concerned with and affected by this issue to share information, learn how other nations are addressing seafood transparency and sustainability, and to discuss potential next steps that could increase seafood transparency and sustainability in Japan.

The Conference also aims to inform broad range of audience on the impact of IUU fishing to Japanese society and importance of promoting fisheries transparency towards sustainable fisheries. It will provide an opportunity for them to consider the actions they can take to solve this issue, particularly taking advantage of the opportunity of hosting 2020 Tokyo Olympics.

Examples of potential actions that will be explored include the establishment of a system to control seafood imports and promote traceability, improving standards of fishing companies, retailers and consumers, as well as enhanced international cooperation among countries.

Japan Fisheries Research and Education Agency

FRA

Organzatin for Regional and Inter-regional Studies, Waseda University

Waseda University
Organization for Regional and Inter-regional Studies

The Nature Conservancy

The Nature Conservancy

International Conference on food Transparency and Sustainability
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Session 1

IUU fishing issues surrounding Japan and technologies to promote seafood transparency

Dr. Yoshioki Oozeki

Ms. Hiromi Shiraishi

Dr. Quentin Hanich

Mr. Tony Long

Session 1: Biography

Dr. Yoshioki Oozeki, Councilor, FRA

Dr. Yoshioki Oozeki serves as the Councilor for the Japan Fisheries Research and Education Agency (FRA). Dr. Oozeki graduated from Tokyo University of Fisheries in Aquaculture Science in 1981, and Graduate School of Agriculture at the University of Tokyo in 1989 where he received his PhD in Agriculture. He joined the Ministry of Agriculture, Forestry and Fisheries in 1989, where he held various positions, including as a Researcher at Tohoku National Fisheries Research Institute, Visiting Fellow at Alaska Fisheries Science Center, Head of Fisheries Biology Section at National Research Institute of Fisheries Science (NRIFS), Visiting Professor at Tokyo University of Marine Science and Technology, and Director of Research Center for Fisheries Management, NRIFS. He has served the current position since 2016. He has also been appointed to the President of the Japanese Society of Fisheries Oceanography since 2017. Dr. Oozeki specializes in Marine Resource Ecology and Fisheries Oceanography of small pelagic fish species such as the Japanese sardine and the Pacific saury.

Ms. Hiromi Shiraishi, Programme Officer, TRAFFIC

Ms. Hiromi Shiraishi graduated from Tohoku University. After serving for the Miyagi Prefectural Government, Ms. Shiraishi completed her Master's degree in Geography at University College London. To pursue her passion to build a sustainable society, she joined WWF Japan (TRAFFIC Japan Office) in July 2013. She works on wildlife trading research and advocacy, mainly on fisheries species that have close relation to Japan, such as eels and sharks, and provides training for domestic and international executive agencies. While working on providing new information and different perspectives on issues, she strives to solve problems through cooperation with domestic and international stakeholders. She co-authored "*Eel market dynamics: An analysis of Anguilla production, trade and consumption in East Asia.*"

Dr. Quentin Hanich, Associate Professor, Australian National Centre for Ocean Resources and Security, University of Wollongong

Dr. Quentin Hanich is an Associate Professor at the Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong, where he leads the Fisheries Governance Research Program. He has worked widely throughout the Asia Pacific region on numerous research, advisory and consulting projects, and is recognized as a regional expert on international fisheries governance and development, and more broadly on various aspects of oceans governance and marine conservation. In addition to his research and project activities, he has chaired working groups at international treaty meetings, facilitated inter-governmental workshops, and advised Ministerial meetings and national delegations.

Mr. Tony Long, Director, Ending Illegal Fishing Project, The Pew Charitable Trust

Mr. Tony Long joined Pew in October 2012 after 27 years in the Royal Navy, where he reached the rank of commander. Highlights include, serving on the First Sea Lord's strategy team, providing executive- and ministerial-level defense planning and policy support to the head of the Navy, his executive board and government ministers. He also acted as the Arctic lead adviser, responsible for researching and understanding maritime security issues that arise from environmental changes in the Arctic region.

Long commanded a mine-hunter (HMS Blyth) and a frigate (HMS Monmouth) and spent a great deal of time deployed at sea, including patrols in the Atlantic, Persian Gulf, Indian Ocean and the Far East. He is a helicopter aviation and surveillance operations specialist and has a thorough understanding of the laws of the sea, surveillance, maritime security and global geopolitics.

He holds a master's degree in defense studies from Kings College, London.

Session 1: Abstract

Dr. Yoshioki Oozeki, Councilor, Japan Fisheries Research and Education Agency

Recent cases of IUU fishing off the waters of Japan" (focus on Chinese IUU fishing)

There has been a growth in the number of fishing vessels from China, Taiwan, and other countries operating in the Northwest Pacific region recently which causes concern over the impacts on marine resources including the Pacific saury and mackerel. The rapid increase in the number of Chinese vessels is especially notable, and it is suspected that some of them are unlicensed, unregistered vessels (IUU fishing vessels). Japan Fisheries Research and Education Agency conducts analysis of fishing vessels that integrates night-time light images obtained by NOAA's S-NPP satellite, automatic identification system (AIS) information, and information from Japanese patrol vessels. According to the trial analysis conducted in the summer of 2016, more than 100 large Chinese fishing boats including some IUU fishing boats were operating just outside of the Japanese EEZ off the coast of Sanriku for a few months with no port call. The catch of these boats was frozen on mother ships and transported to China by various carrier ships. It was estimated that the total catch of mackerel by these boats in the 2016 fishing season was more than 300,000 tons if not more. This analysis method enables monitoring of overfishing and IUU fishing activities in large areas effectively and relatively easily, and can be used to assess IUU fishing activities around the world.

Key words: IUU fishing, S-NPP satellite, Northwest Pacific, night-time light data, AIS information

Ms. Hiromi Shiraishi, Programme Officer, TRAFFIC

An effective management of fisheries resources that is underpinned by scientific ground is an urgent need in order to deal with overfishing causing continued decline of global fish stocks. Illegal, Unreported, and Unregulated (IUU) fishing is a global issue that needs to be addressed immediately both in terms of fisheries resource conservation and responsible use of resources. Recently, there have been reports of overfishing and illegal operations in the Northwest Pacific. However, surrounding countries and territories such as Japan, China and Taiwan have different legal flameworks, varying circumstances around fisheries, and different issues. Strengthening of fisheries resources management in each of these countries and territories is needed using international frameworks such as Port State Measures Agreement (PSMA) and Regional Fisheries Management Organizations (RFMOs). In addition, East Asia is a major region for seafood import and should fulfil its responsibility as an importer. For achieving these

goals, cross-border collaboration of stakeholders and establishment of traceability is important.

Keywords: IUU fishing, Conservation and responsible use of marine resources, Strengthening countries' fisheries management in each country, Collaboration, Traceability

Dr. Quentin Hanich, Associate Professor, Australian National Centre for Ocean Resources and Security, University of Wollongong

Monitoring fishing activities on the global ocean is a key challenge for ocean governance. The loss of marine biodiversity, decline of global fish stocks and illegal unreported unregulated fishing (IUU) are among the key concerns driving the need for improved monitoring of fishing activity. Technology offers vital tools for policymakers to overcome the limitations of conventional methods for monitoring, control, and surveillance in order to meet global goals to conserve and sustainably use marine biodiversity. Automatic identification systems (AIS), which broadcast location and other information about vessels, could offer a tool for fisheries management and biodiversity conservation to increase transparency and improve observation of activities taking place at sea.

AIS provides open access information to identify vessels and track fishing activity. However, questions have been raised about the limitations of AIS in this context. This presentation demonstrates that the majority of large (>24m) fishing vessels broadcast AIS, and that falsified AIS locations can be readily identified and often corrected. The technical and human factors limiting AIS are discussed, followed by an analysis of the technological and policy options that can overcome these limitations. The presentation concludes that the limitations to using AIS as a fisheries monitoring tool can be identified, quantified, and effectively addressed. The presentation includes examples of AIS in practice.

Keywords: Automatic Identification System (AIS), Fisheries Governance, Monitoring and Surveillance Technology, International Fisheries Law

Mr. Tony Long, Director, Ending Illegal Fishing Project, The Pew Charitable Trusts

"Project Eyes on the Seas and the Ending Illegal Fishing Project"

Pew's ending illegal fishing project is working around the world to develop and establish an international fisheries enforcement system that will significantly reduce illegal, unreported, and unregulated, or IUU, fishing. This work focuses on industrial-scale fishing, which does the greatest damage both environmentally and economically, and on international cooperation with key partners for policy changes and actions that can be carried out over the next five to 10 years. We

are working in global policy, international markets and cost- effective technology. Our objective is to ensure that there is a cost-effective global system that monitors, deters, prevents, and prosecutes illegal fishing.

Project Eyes on the Seas is a cutting-edge technology platform that combines satellite monitoring and imagery data from Automatic Identification Systems (AIS), Vessel Monitoring Systems (VMS), Satellite mounted Synthetic Aperture Radars (SAR) and electro-optical (EO) imagery satellites. SAR generates remote sensing imagery using satellite-based radar to find vessels not employing AIS or VMS often known as 'dark-targets'. The system is operational and information from the SAR images have been used to target EO satellites to take pictures of suspicious vessels. The data collected is cross-referenced with external information from such sources as license lists maintained by regional fishery management organizations (RFMOs) and coastal states, fishing vessel databases and 'blacklists', and oceanographic information to identify vessels and alert officials to suspicious activity. To make the system globally scalable, algorithms and alerts help identify vessel movements automatically and prioritize where analysts need to focus their efforts by provide a vessel compliance risk index (VCRI).

Keywords: Enforcement system, International cooperation, International markets, Dark-targets, Vessel compliance risk index (VCRI)

Recent cases of IUU fishing off the waters of Japan (focus on Chinese IUU fishing), Possible use of satellite remote sensing images

- Fishing activities outside the Japanese EEZ of the northwestern Pacific
- Data processing
- Estimation of catch amount of chub mackerel

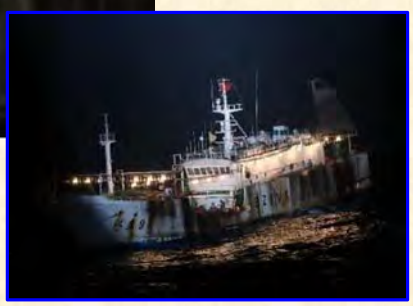
Suomi National Polar Orbiting Partnership

Japan Fisheries Research and Education Agency

Yoshioki Oozeki 2017. 5.16

Fishing activities outside the Japanese EEZ in the NW Pacific


neon flying squid (*Ommastrephes bartramii*)



Chinese squid jigging fishing boats
Ship length: 40 m, GRT: 340 ton

Recruitment of large boats
Ship length: 71 -123m, GRT: 1600-8800 ton

(Japanese Fisheries Agency 2017)

Fishing activities outside the Japanese EEZ in the NW Pacific

Pacific saury
(*Cololabis saira*)

(Japanese Fisheries Agency 2017)

Chinese stick-held dip net (side) fishing boats
Ship length: 70 m, GRT: 1500 ton

Japanese fishing boats
Ship length: 35 m, GRT: 185 ton

Fishing activities outside the Japanese EEZ in the NW Pacific

chub mackerel
(*Scomber japonicus*), NW Pacific stock

Chinese stick-held dip net (stem) fishing boats
Ship length: 70 m, GRT: 1500 ton

Chinese lighting purse seiner (tiger net)
Ship length: 55 m, GRT: 950 ton

(Japanese Fisheries Agency 2017)

Fishing activities outside the Japanese EEZ in the NW Pacific

- Fishing boats stay in the fishing grounds during the whole fishing season.
- Transport ships received fishes and supply fuel and foods to fishing boats.
- Refrigeration factory ships froze fishes and transport it to China and others.

(http://www.hongtaiship.com/m/view.php?aid=24)

(Fisheries Research Agency 2015)

Chinese refrigeration factory ships
Ship length: 98 m, GRT: *ca*. 3000 ton

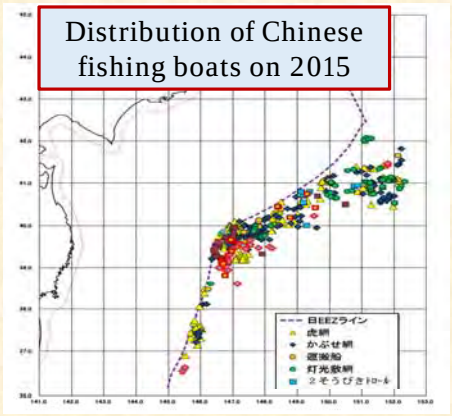
False identification of Chinese boats observed in the NW Pacific

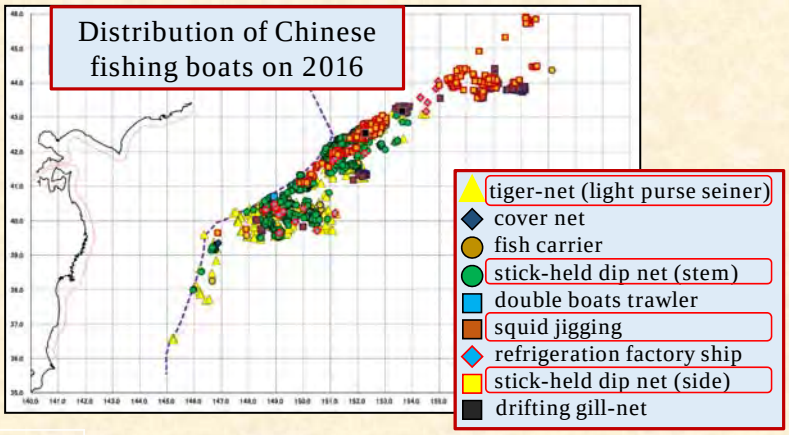
different boats displaying the same name

(Japanese Fisheries Agency 2017)

There were a large number of Chinese IUU fishing

Observation by fisheries patrol vessels in the NW Pacific





Redrawn from JFA (2016, 2017)

Observed number of fishing boat including IUU fisheries (JFA)	
year 2015	2016
194	288

Japanese patrol vessels can not cover all

Need to establish another reliable tool for monitoring of overall fishing activities.

All Chinese fishing boats use lights for gathering fishes

Most fishes and squid gather to the light at night

Chinese fishing boats light power（500kW～）

stick-held dip net (side)
Ship length: 70 m

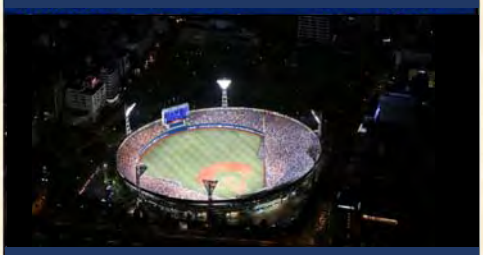
stick-held dip net (stem)
Ship length: 70 m

How strong the fishing lights of Chinese boats?

2 Chinese boats

||

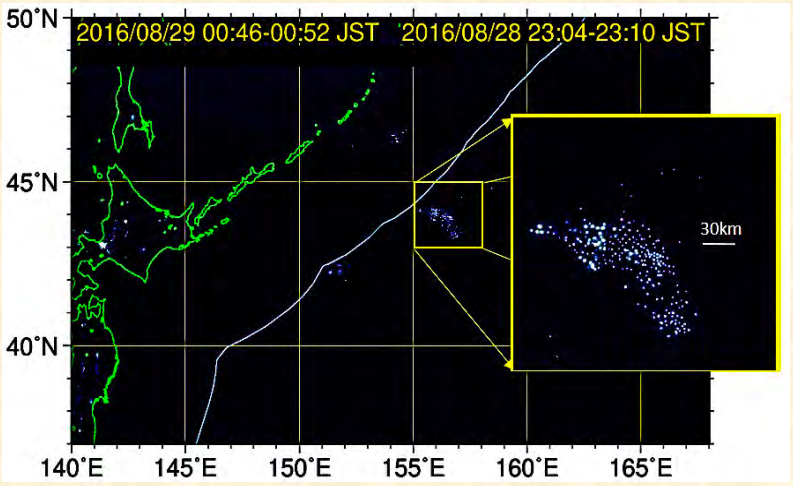
Yokohama baseball stadium 2014.8.30



Metal halide lamps
1500W × 708 = 1,062 KW

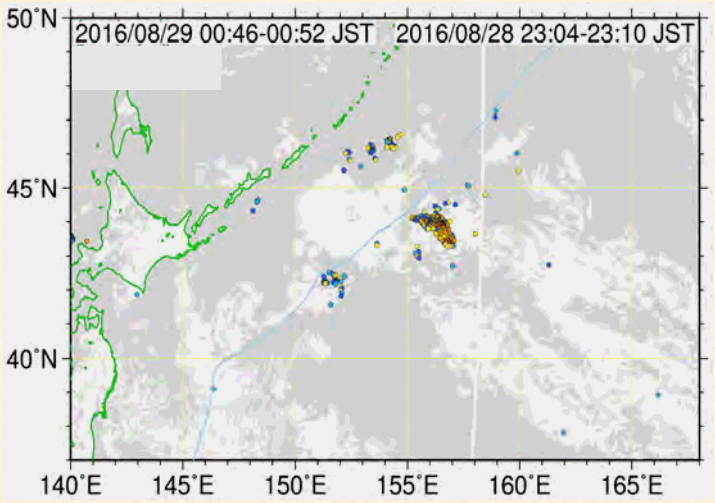
（株）横浜スタジアムのご厚意により使用
横浜スタジアムは、2015年から全LED化（プロ野球初）され、メタハラ利用時よりも消費電力が56%削減されています。

Typical example of light points at the midnight

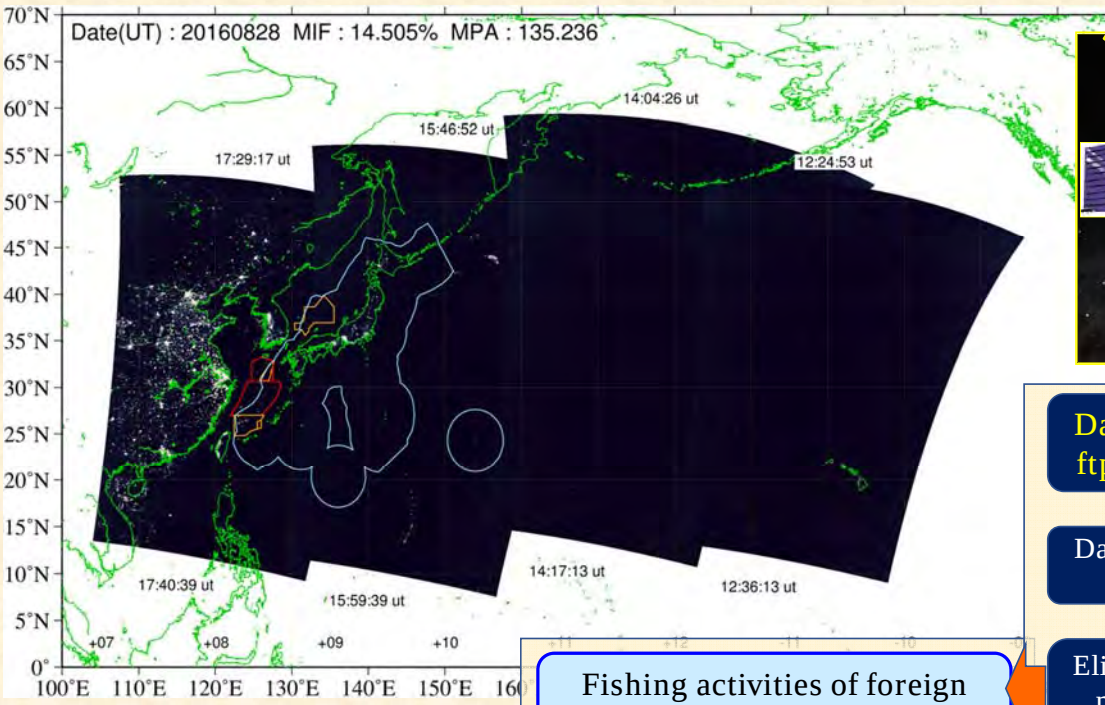


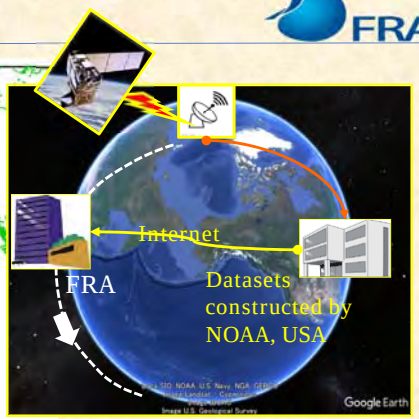
- Each light point corresponds to one fishing boat.
- Number of fishing boats in operation can be counted.

- Light points extracted from the data of S-NPP satellite.
- Effects of sun light, moon and clouds are eliminated.



Data processing procedure





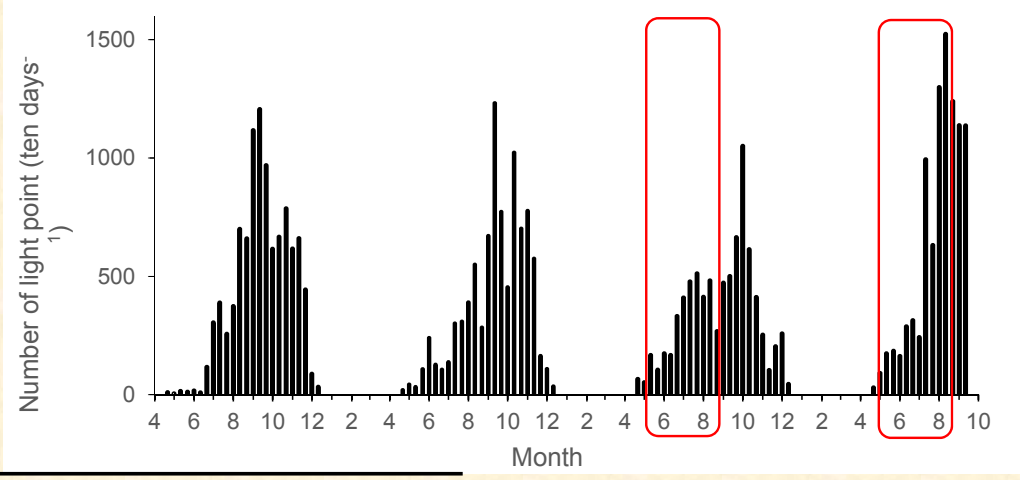
Data downloaded from the ftp site of Wisconsin Univ.

Data processing for extracting light points

Eliminating the effects of sun, moon and the reflection of clouds

Fishing activities of foreign fishing boats in the NW Pacific

Recent increase of light points in the NW Pacific



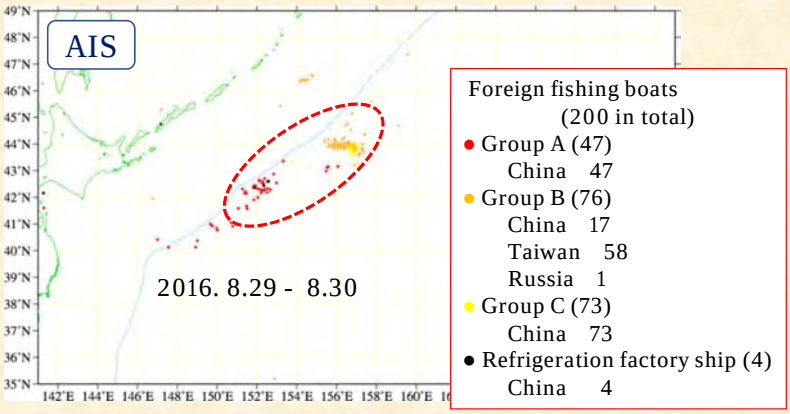
Year	Observation (JFA)	Light points (S-NPP) May - Nov.
2015	194	6,444
2016	288	11,015
2016 / 2015	1.5	1.7

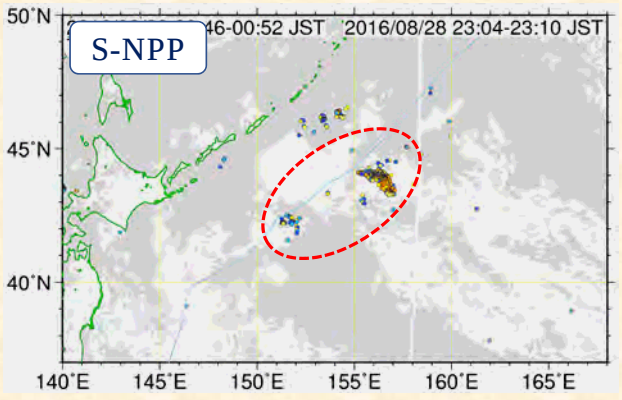
Recent increase of light points corresponds to the increase of fishing boats observed by fisheries patrol vessels.

But only with light points data, we cannot estimate catch amounts.

Automatic Identification System (AIS)

- AIS is an automatic tracking system used for collision avoidance on ships.
- AIS information include MMSI code (ID), name, position, course, and speed.
- Satellite-AIS system provides the information of ships in high seas.

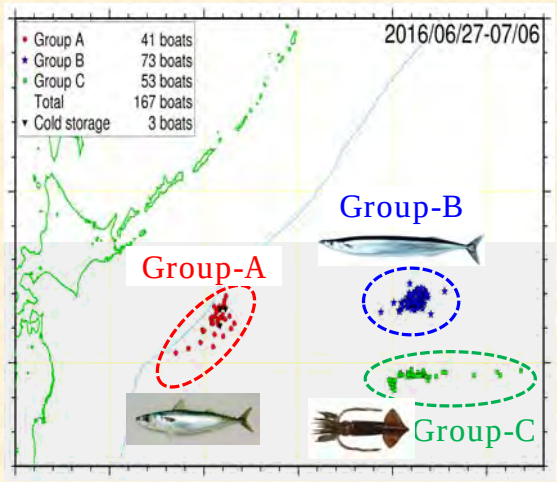


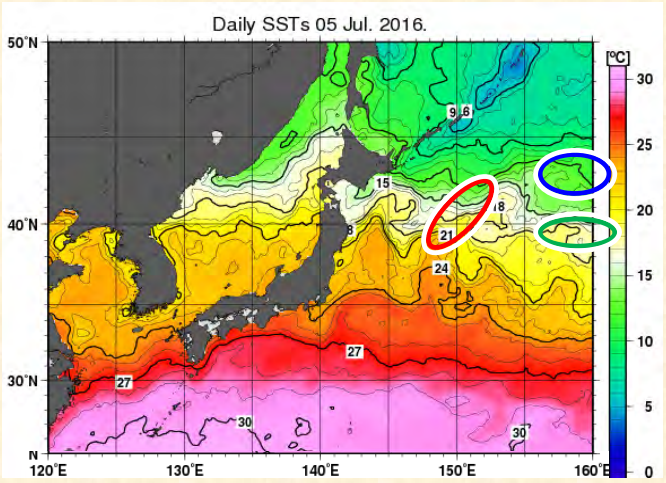


- Monitoring only by AIS information is not reliable enough.
- Intentional suspension of signal transmission from the onboard AIS, low reliability of AIS signal including incorrect datum.

But integration analyses with light point data provide valuable information on fishing activities.

Fishing ground and target species





- Target fish species in a certain area might be specified by sea surface temperature (SST) obtained from satellite remote sensing.
- Fishing boats belong to Group-A distributed at the area of 15-20℃ SST, where chub mackerel distributes in this season.

Fishing activities on chub mackerel were analyzed from June to September, 2016.

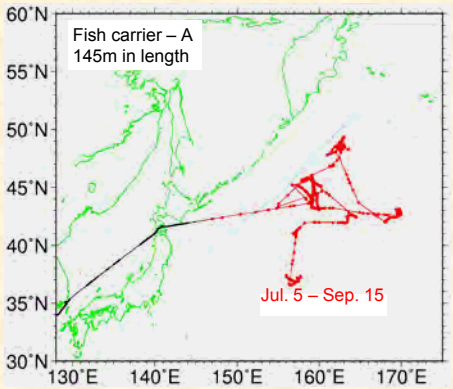
Catch estimation by Chinese fishing boats

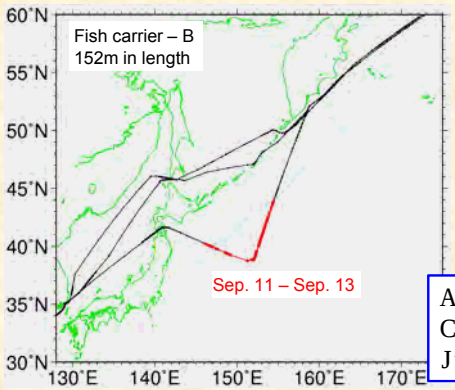
- More than 100 Chinese fishing boats caught chub mackerel in NW Pacific from June to September, 2016.
- Chinese catch amount of chub mackerel was estimated to be 300,000-400,000 MT, based on the ability of Chinese fishing boats.

Reference information on chub mackerel
- Allowable biological catch (ABC)
  383,000 MT (2016)
- Japanese catch inside of EEZ
  ca. 400,000 MT (2016) (inc. spotted mackerel)
- Report of Chinese catch to NPFC
  143,000 MT (2016)

Chinese IUU fishing boats caught 150,000-250,000 MT chub mackerel ?

Amount of transportation from fishing ground





AIS information of Chinese fish carriers from June to September, 2016

- Chinese fishing boats continued fishing operations in the fishing grounds for several months.
- Fish carrier ships transferred frozen fishes to China and other ports.
- Amount of annual transportation consisting of fish carriers and refrigeration factory ships was estimated to be 450,000-1,000,000 MT based on the AIS information and light points.

Reference information (Report of Chinese catch to NPFC, 2016)
ca. 260,000 MT in total
chub mackerel 143,000 MT, Pacific saury 63,000 MT, others *ca.* 50,000 MT

Summary

- Monitoring system of foreign fisheries around Japanese EEZ has been constructing by using satellite remote sensing light images at night with the aide of AIS information.
- Chinese IUU fishing boats were observed in NW Pacific.
- Chinese catch of chub mackerel was estimated as 300,000-400,000 MT, including IUU fisheries.
- Amount of annual transportation of China was estimated as 450,000-1,000,000 MT.
- Fishing activities during a whole fishing season will be monitored.

北西太平洋の周辺国とIUU漁業

国際シンポジウム　水産物の透明性と持続可能性
2017年5月16日（火）

トラフィック
プログラムオフィサー　白石広美

北西太平洋の周辺国とIUU漁業

- IUU漁業とは
- 北西太平洋の漁業状況
- 周辺国・地域の漁業をめぐる状況
- 日本との関係

トラフィックとは

WWF（世界自然保護基金）とIUCN（国際自然保護連合）の共同プログラム

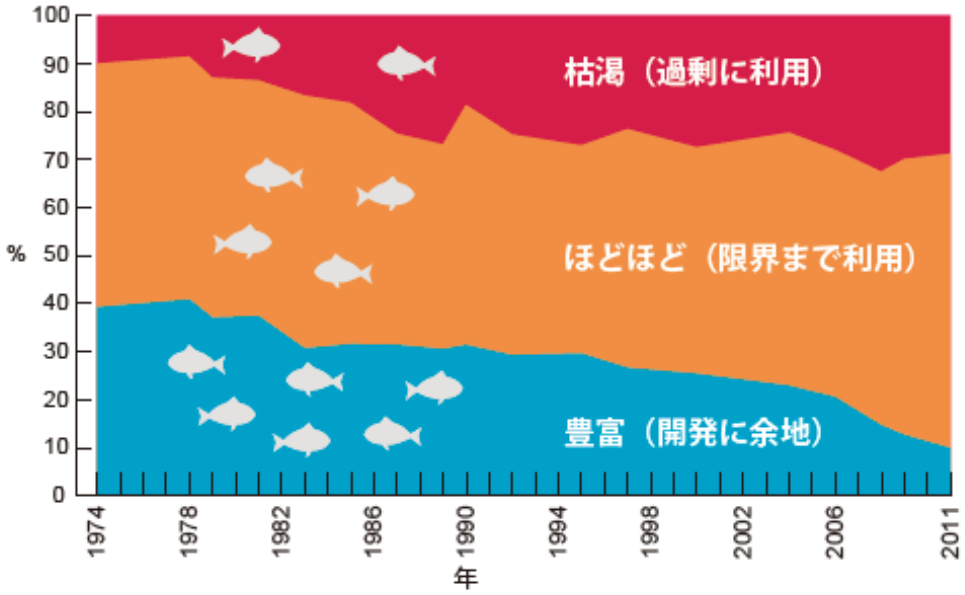
TRAFFIC
the wildlife trade monitoring network
is a strategic alliance of
WWF　IUCN

トラフィックが目指すのは、野生動植物の取引が、持続可能なレベルで保たれている世界

トラフィック　ネットワーク

野生生物の国際取引が持続可能なレベルであるよう監視・支援

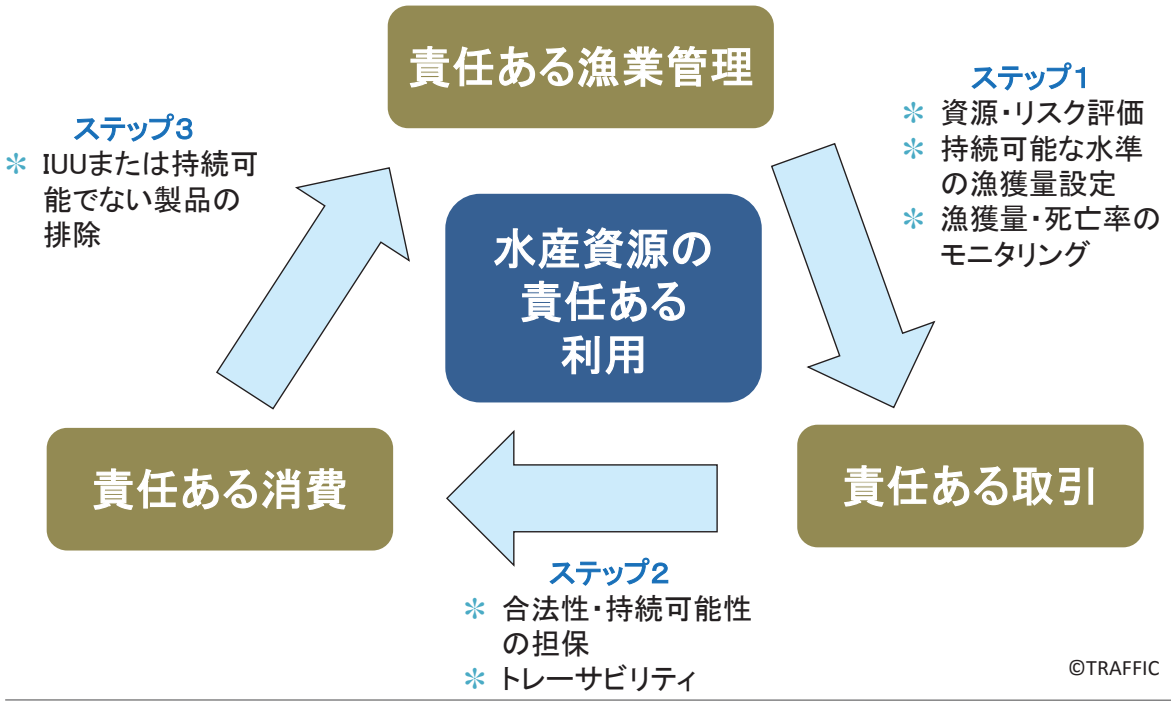
世界の水産資源の動向



世界の水産資源ストックのグローバルトレンド 1974-2011年

(FAO, 2014, Fig.13. をもとに作成)[2]

水産資源の利用



IUU漁業とは

* 違法漁業

どこで？	誰によるもの？	どんな行為？
ある国の管轄内（領海、EEZ）	その国あるいは他国の船舶	その国の国内法に違反する漁業活動
公海	RFMO（地域漁業管理機関）の加盟国・協力的非加盟国の船舶等	• RFMOの措置に違反して行われる漁業活動 • 国際法に違反して行われる漁業活動

* 無報告漁業：漁業に関連する情報の無報告、過少報告、誤報告（水産物の転載、輸送に関する情報も含まれうる）
* 無規制漁業
  - 漁業管理の失敗により無規制に行われる漁業活動
  - 漁業管理の仕組みがない海域で行われる漁業活動

IUU漁業とは

検査官による網目の大きさの確認

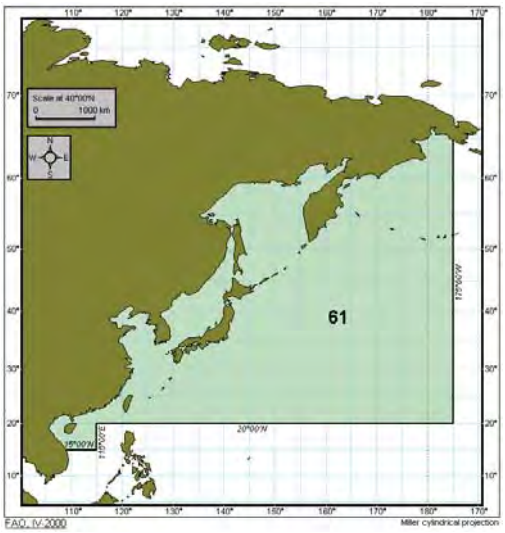
* 違法・無報告漁業による世界的な損失：推定年100億米ドル～235億米ドル
* 違法性は重要な観点ではあるが、法制度に違反していないかの判断基準となるだけ

→ 法制度の中身はそもそも適切か？

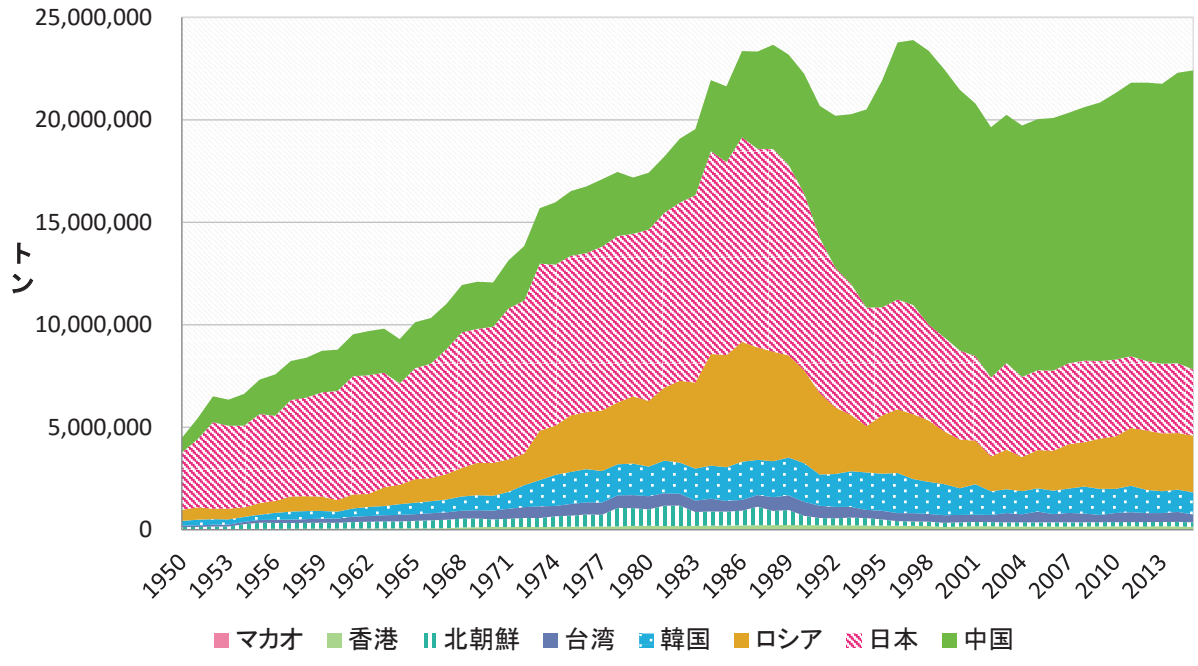
→ 持続可能性の担保は？

北西太平洋でのIUU漁業リスク

- 2011年の北西太平洋での漁獲量：世界全体の漁獲量の26%
- 北西太平洋での違法漁業の推定金額：10億米ドル～30億米ドル（2000年～2003年）
- 2000年～2003年の違法漁業の割合：推定33%
- 主な漁業国は中国、日本、ロシア、韓国、台湾



北西太平洋での周辺国による漁獲量の推移



出典：FAO Global Capture Production

中国の状況

* 2016年12月、国家漁業発展13次5カ年計画（2016年-2020年）策定
  - 現在の課題：非合理的な構造、広範囲でバランスに欠けた開発形態、協調性の欠如、持続可能性の欠如、インフラの弱さ、漁業者の安全性、品質や食の安全、「船名、漁業許可、船籍港の3つがない」船舶等
  - 国内の資源保全の強化：“国内”漁獲生産量のマイナス成長、12メートル以上の漁船の数の削減、海洋保護区の増加
  - 遠洋漁業：「標準化・秩序ある遠洋漁業の発展」を目指す（遠洋漁業産業を最適化、企業の再編）一方、遠洋漁業のための総合拠点建設等への言及も
  - 違法漁業への法執行、責任ある漁業国としての地位の構築（「3なし漁船」16,700隻の取り締まりを実施）

中国の状況

* 水産業の発展一辺倒ではなく、持続的な発展へ
* 国内の水産資源の保全には力を入れ始めたが、他国や公海の水産資源への配慮はこれからの課題
* 中央政府と地方政府の考え方に相違がある可能性（地方政府：管理の強化の一方で、遠洋漁業への投資を増やしたい）

北京の魚市場

台湾の状況

* EUのIUU漁業規則に基づき、イエローカードを出されるなど、台湾漁船による違法漁業は国際的にも問題視されている
* 2015年の海岸巡防署による執行件数は881件
* 主な要因は非効果的な執行
  - 取り締まりを行うキャパシティの欠如
  - 法執行への消極的な姿勢（一部の漁業団体の反対・圧力）
* 2017年1月、遠洋漁業法が新たに施行
  - 当局の責任を明確化するとともに、当局が巡視や法執行などの措置を取ることができるようにした
  - 罰則強化

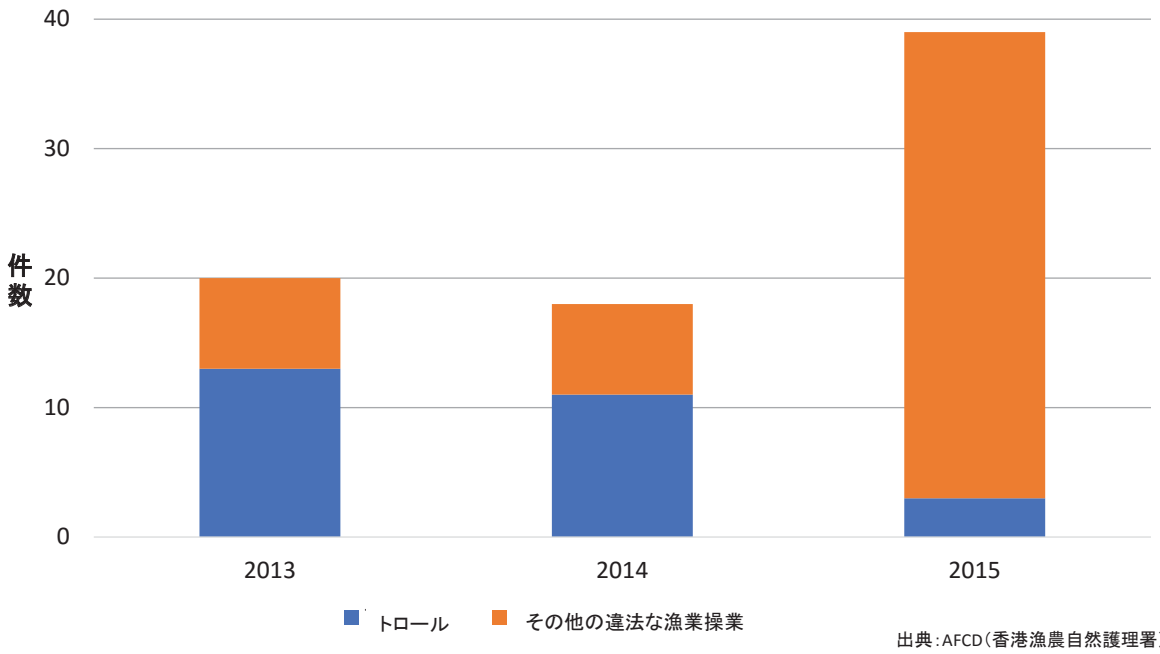
香港の状況

* 領海、EEZ、大陸棚等は中国政府が管理
* 漁業については、香港の内海等で漁業を行う香港を母港とする地元の船舶に許可を出す制度がある
* 香港の海事局は監視船25隻を用い、船舶への許可のチェックを行っている

2015年の香港の許可船舶数

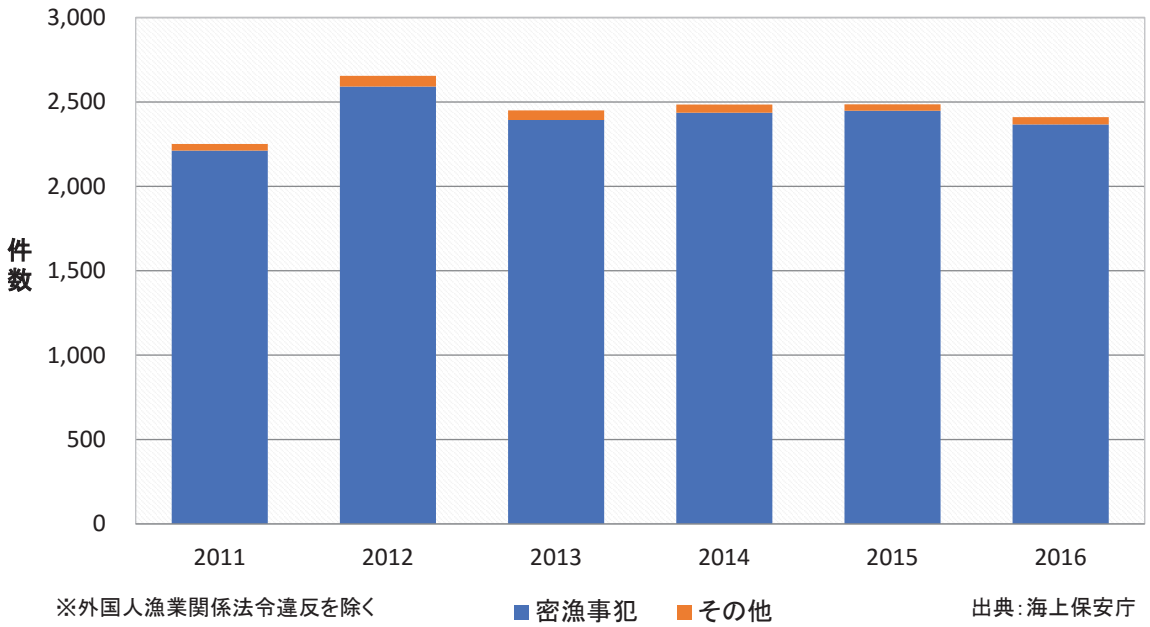
	60純トン以下	61～300純トン	合計
運搬船	15	11	26
漁業用サンパン	1,997	0	1,997
漁業船舶	631	1,399	2,030
その他サンパン	2,575	0	2,575
合計	5,218	1,410	6,628

香港での違法漁業検挙数
（2013年-2015年）



出典：AFCD（香港漁農自然護理署）

日本での漁業関係法令違反の送致件数



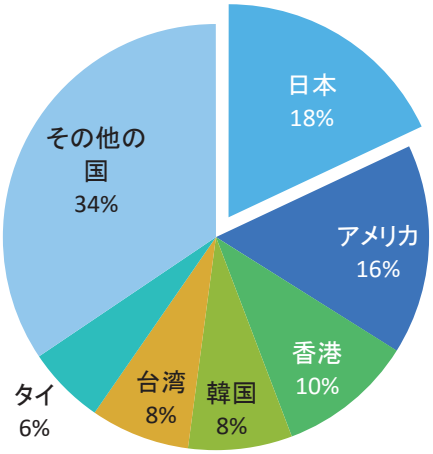
※外国人漁業関係法令違反を除く

出典：海上保安庁

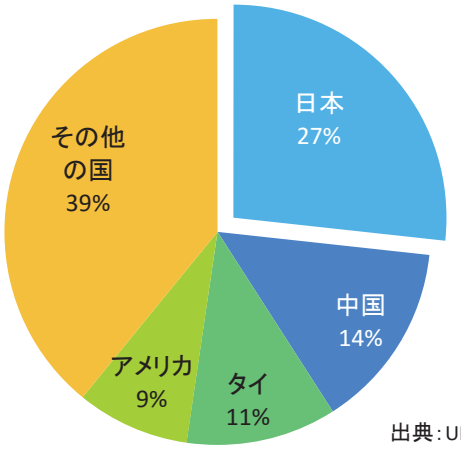
輸入国としての日本

* 東アジアの国・地域にとって、日本は重要な水産物輸出相手国
* 東アジア全体の漁業の合法性を担保し、責任ある漁業を促していくためにも、違法な水産物の輸入を防ぐ取り組み（法制度、自主的な取り組み）は重要

【中国の水産物・製品
輸出金額内訳（2015年）】

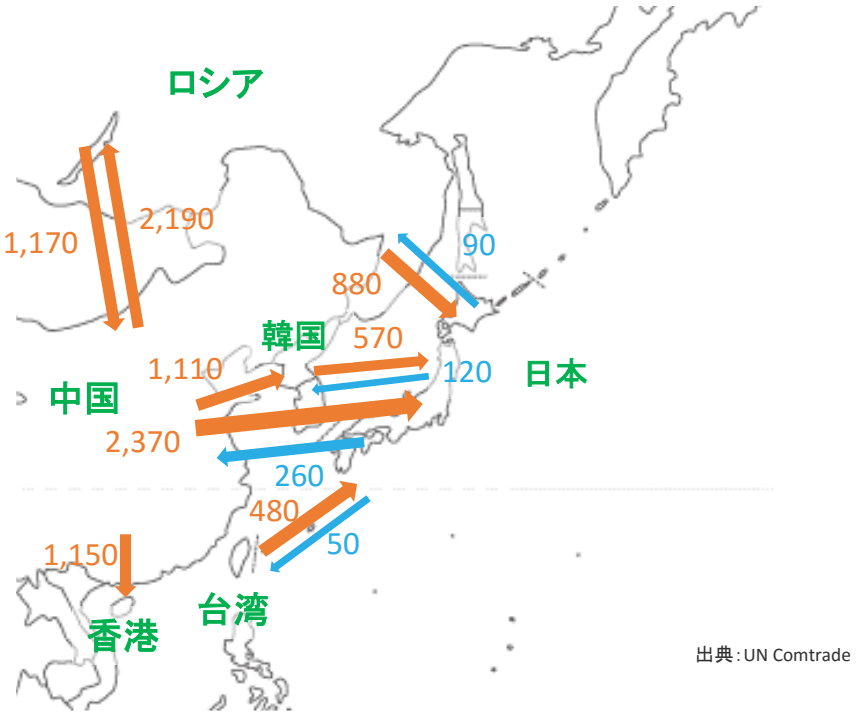


【台湾の水産物・製品
輸出金額内訳（2015年）】



出典：UN Comtrade

2015年の極東アジアの国・地域間の水産物輸出入額（100万米ドル）



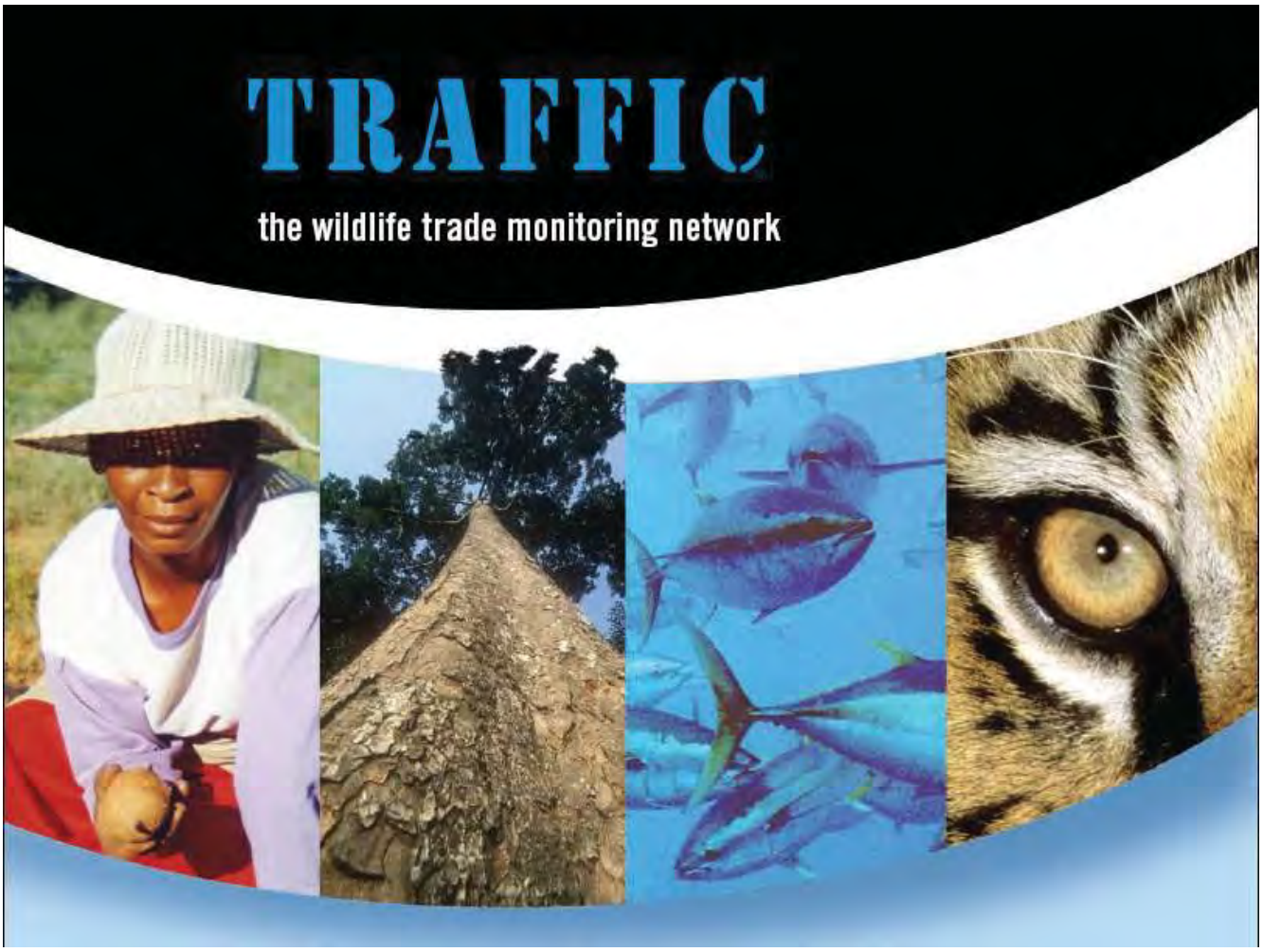
出典：UN Comtrade

トレーサビリティ

- サプライチェーン（関わる事業者、各段階で収集される情報）の理解が不可欠
- 直面する課題への配慮を含め、利害関係者との事前協議により、理解を得る
- 効果的なトレーサビリティ制度の確立、維持には事務的、金銭的なコストがかかる
- トレーサビリティは国外向け、国内向け両方の製品に適用されるべき
- トレーサビリティ制度は法制度やモニタリングの仕組みにより強化できるが、ガバナンスの弱さという問題を解決することはできない
- 異なる種から作られる製品のトレーサビリティの問題

まとめ

- 資源・漁業管理、IUU漁業対策は国内でも必要：他国や輸入水産物だけの問題ではない
- 責任ある水産資源の利用の実現がゴール
  - 違法漁業に関心が向くのは望ましい傾向ではあるが、脅威論（防衛、資源の囲い込み）、非難の応酬に終始しない
  - IUU漁業対策は通過点：手段の目的化を避ける
- 違法性の排除とともに、その判断基準となる法制度をより良いものにするための見直し・修正も常に必要
- 関係国がそれぞれIUU漁業対策を進めるとともに、協働していくことが望ましい


TRAFFIC
the wildlife trade monitoring network

The Role of Technology in Countering Illegal Fishing

"Tell the Truth and Trust the People."

J N Pew Jr 1946

- **Improve** public policy
- **Inform** the public
- **Invigorate** civic life

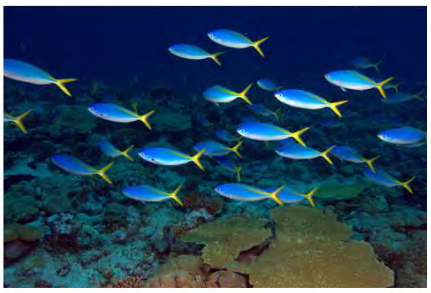
“Tell the Truth and Trust the People.”

J N Pew Jr 1946

Pew partners with visionary philanthropists aligning passion with possibility to drive change and generate lasting impact.

Pew Programmes





The Global Cost of Illegal, Unreported and Unregulated (IUU) Fishing

1 in 5 wild caught fish are estimated to be caught outside of regulations

=

11-26 million tons of fish/year

Up to $23.5 billion revenue lost

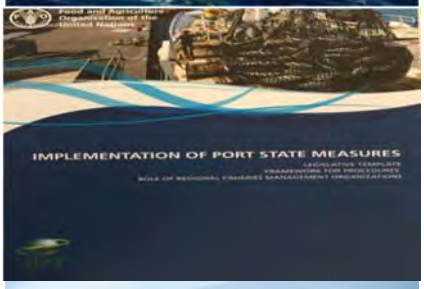
Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, et al. (2009) Estimating the Worldwide Extent of Illegal Fishing.

It is more than just fish .....

Ending Illegal Fishing Project

The Campaign

- Exploit technology
- Robust legal and policy framework
- Equitable access
- Effective action



Who is involved?

Mandatory IMO numbers and onboard vessel Tracking System

Interpol Project Scale

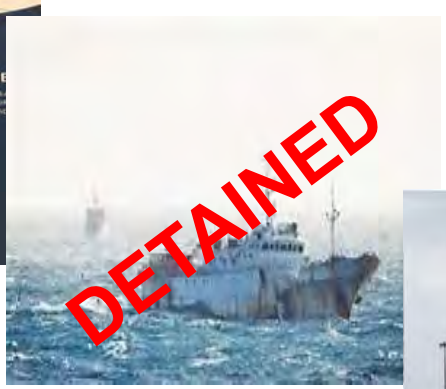
U.S and EU as Champions against IUU fishing

Fish-i: Africa

Independent Analytical Unit

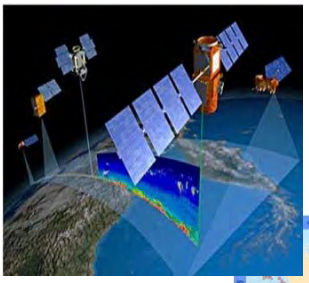
Ratification of Port State Measure Agreement

Success to date

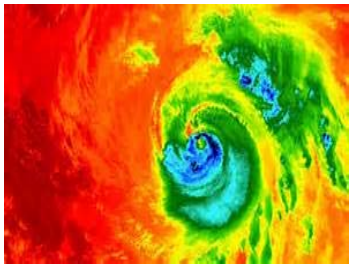


Why Technology is Important

Layering Information

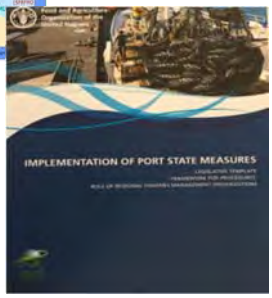


Position(s)



Environment

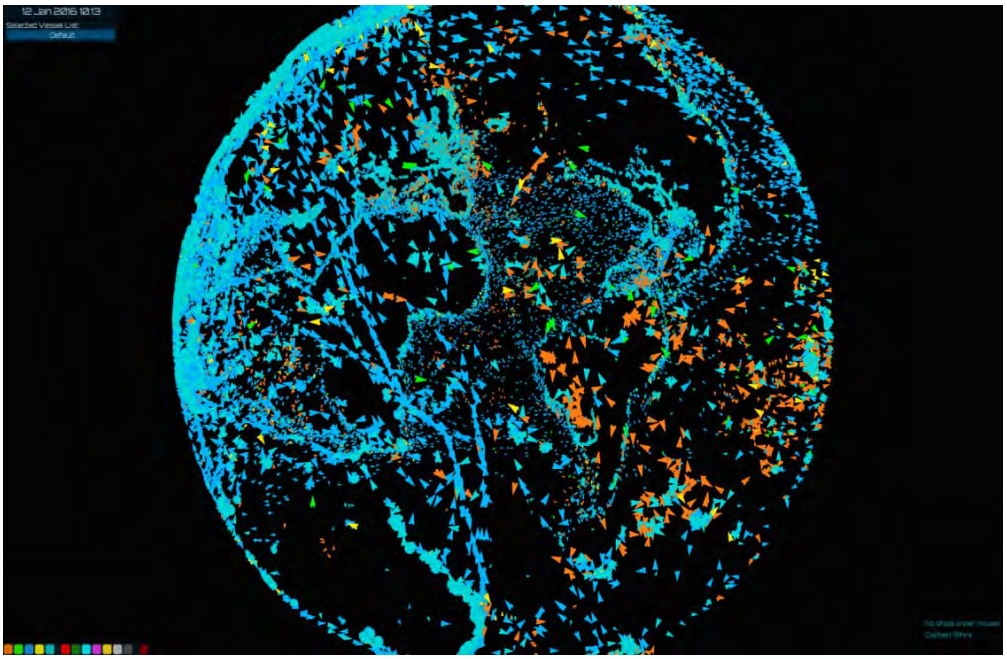
Permissions



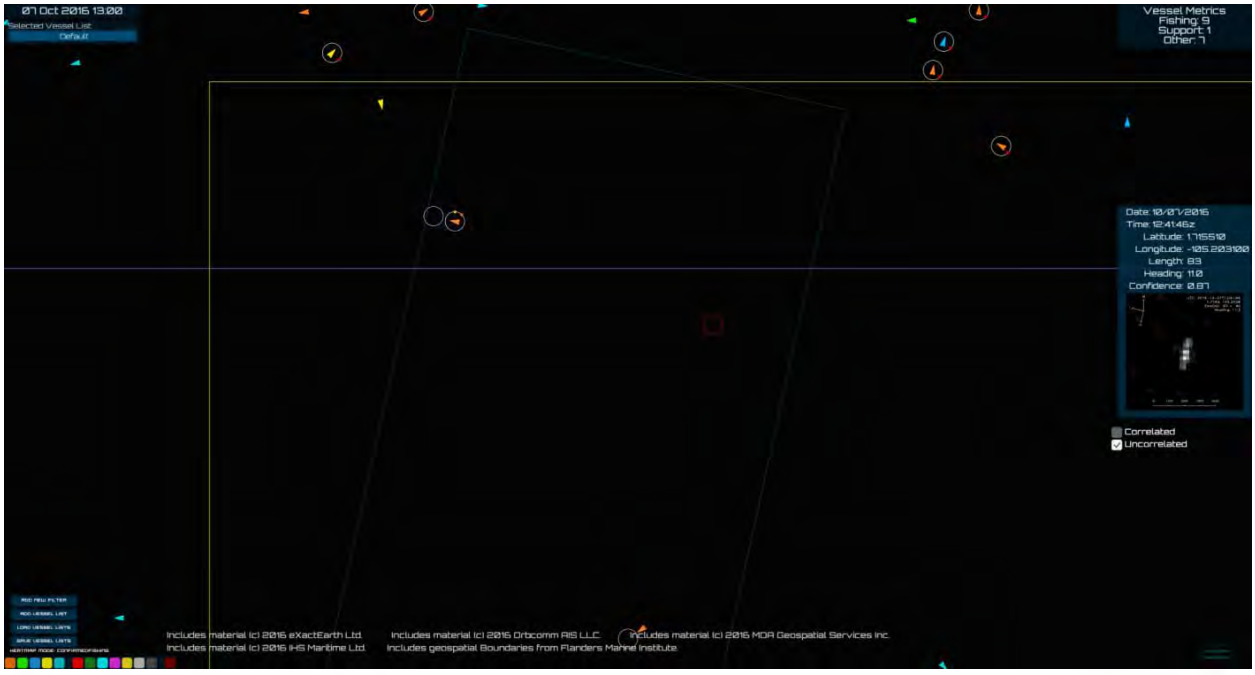
Policies

Knowledge

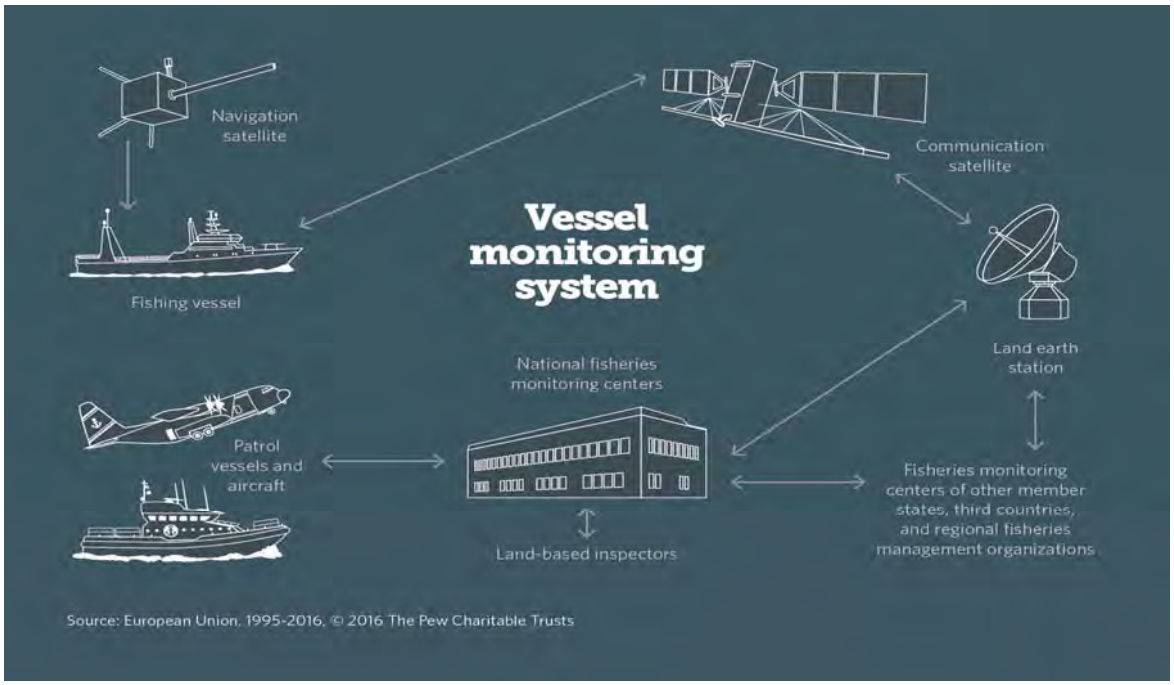
Knowing where to look

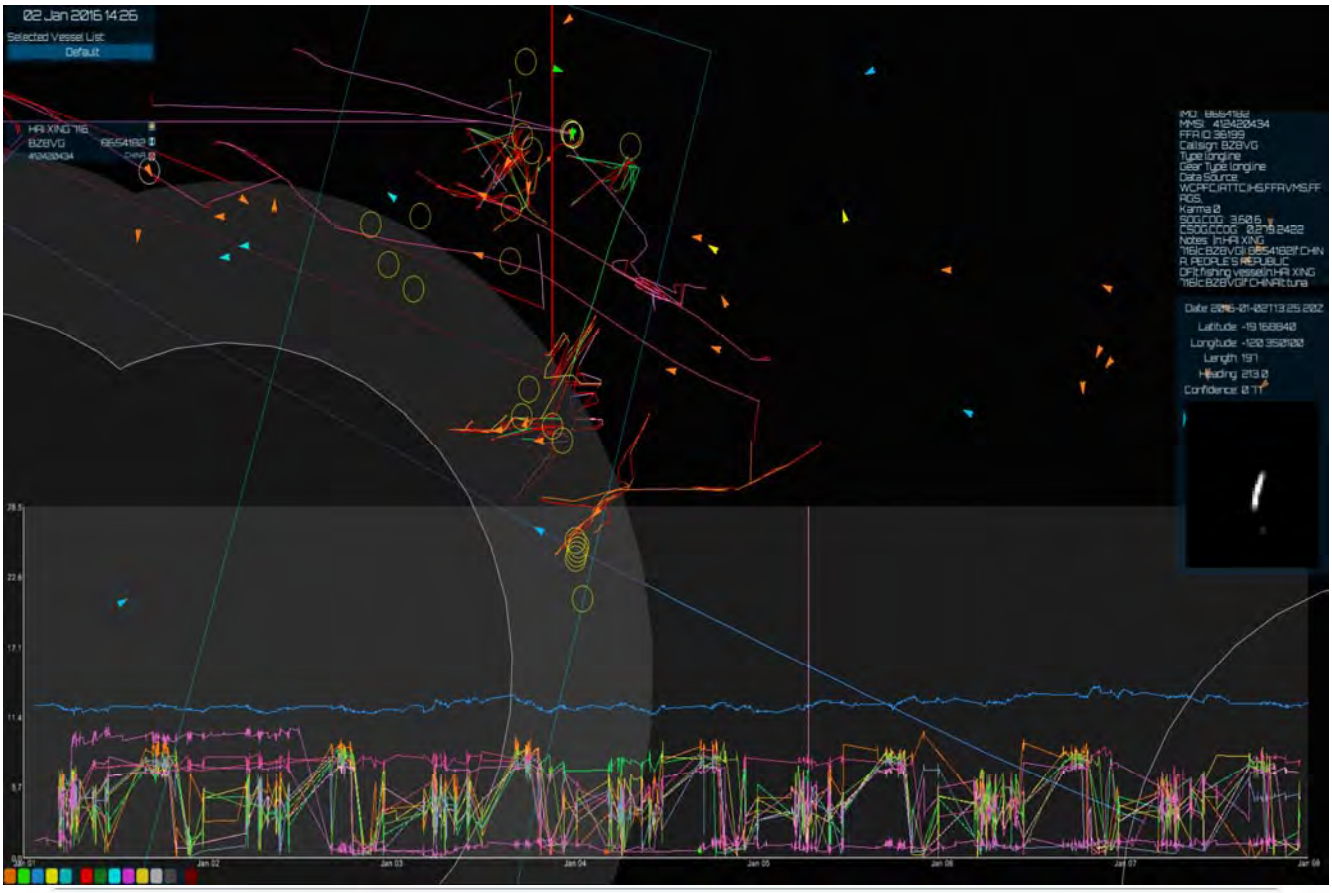


Why not use AIS Alone?



Monitoring Vessels

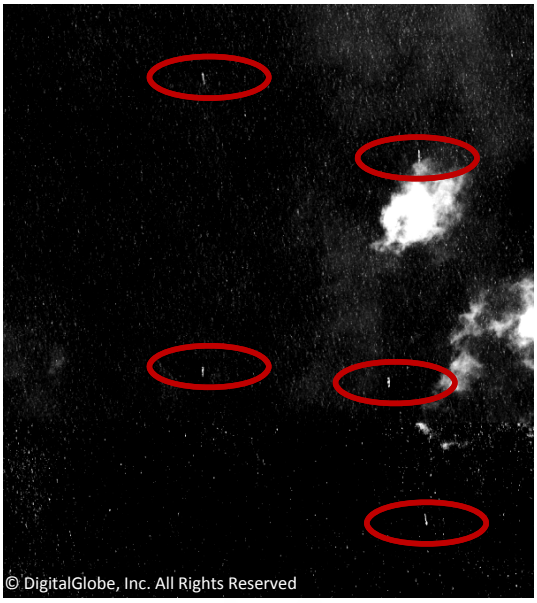




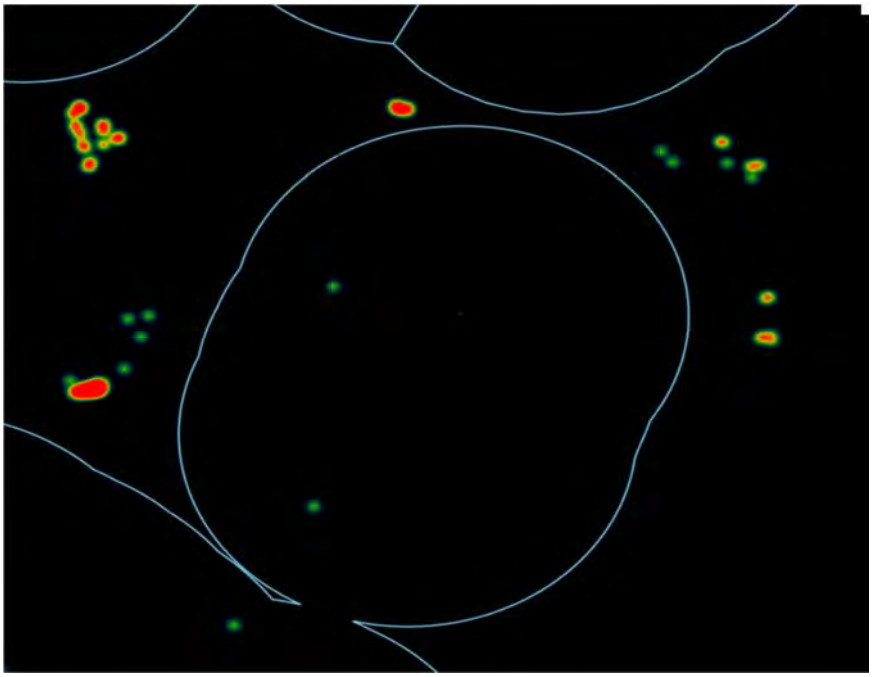
Identifying Behaviour of Interest 1

Transshipment

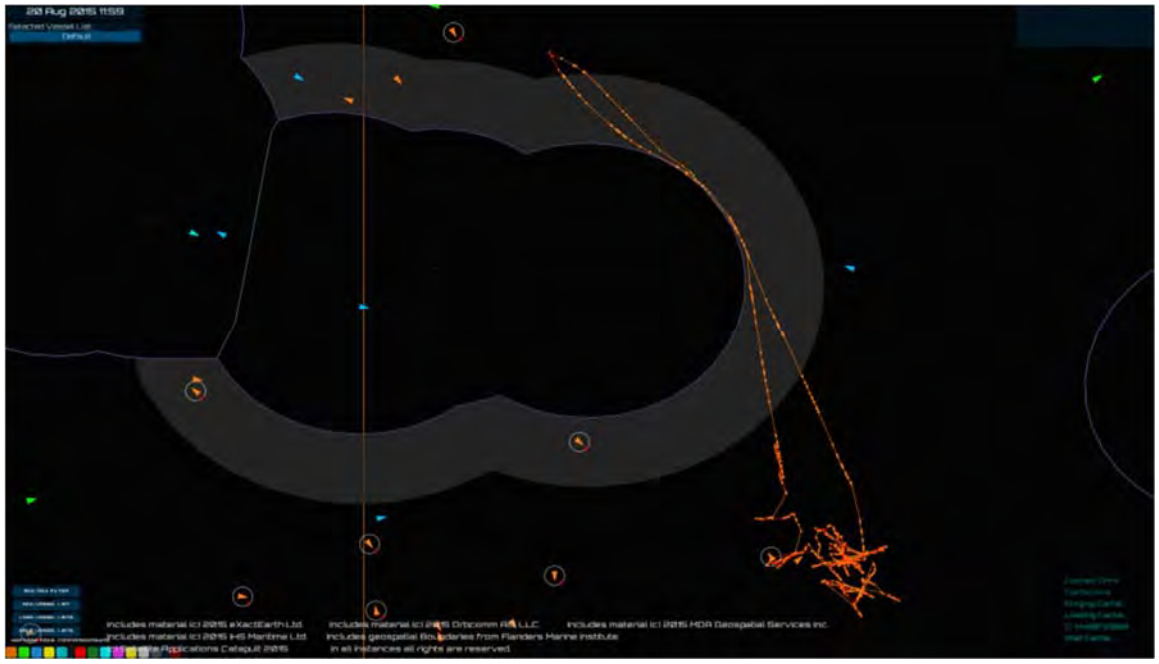
But who else?



Identifying Behaviour of Interest 2



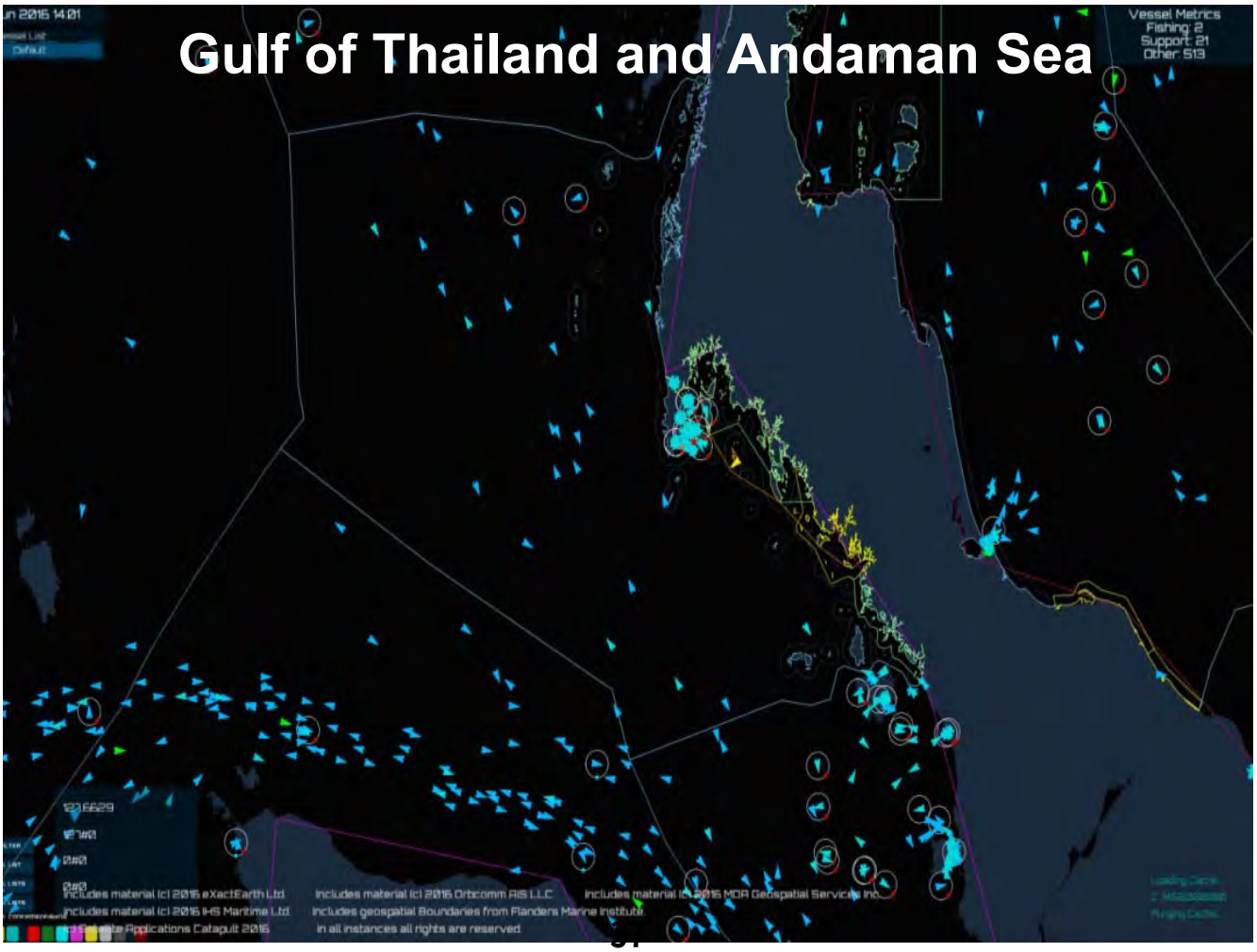
Pitcairn Islands



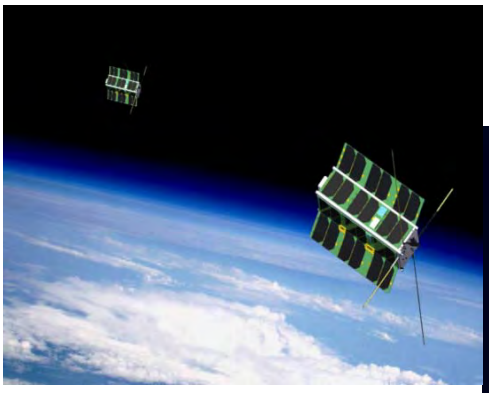
THE PEW CHARITABLE TRUSTS

pewtrusts.org

Gulf of Thailand and Andaman Sea



Emerging Technologies



CubeSats

Infra Red

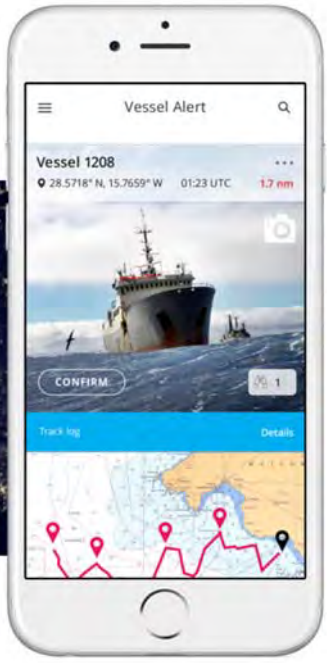


Photo Recognition

Tony Long
Director, Ending Illegal Fishing Project
The Pew Charitable Trusts
along@pewtrusts.org

Session 2

Strengthening international cooperation for combatting IUU fishing

Mr. Stefaan Depypere

Mr. John Henderschedt

Mr. Philippe Michaud

Mr. Shigeto Hase

Mr. Sven Biermann

Session 2:Biography

Mr. Stefaan Depypere, Directorate-General for Maritime Affairs and Fisheries, European Commission

Mr. Stefaan Depypere was born in Belgium in 1955. He graduated in Applied Economics from University of Antwerp in 1976 and Commercial Engineering from European University College Brussels (EHSAL) in 1982. After military service in 1979 he joined the National Bank of Belgium before moving to the European Commission in 1986.

He has served for the European Commission since 1986 in the departments of Competition, External Relations, Trade and MARE (Maritime Affairs and Fisheries). He was appointed to the Director for Trade Defence from early 2008 to 2011. Since 2011, he has been appointed to the Director at Directorate-General (DG) for MARE for International Affairs and Markets (2011-2016) and for International Ocean Governance and Sustainable Fisheries (2017- current). DG MARE covers multilateral and bilateral relations and agreements, strategic partnerships, trade and fight against IUU fishing.

In parallel Mr. Depypere is Chairman (2014-15) and First Vice-Chair (2016-2017) of the International Commission for the Conservation of Atlantic Tunas (ICCAT). He is also Chair of the KOBE process of tuna RFMOs.

Mr. John Henderschedt, Director, Office of International Affairs and Seafood Inspection Program, NOAA, U.S.A

Mr. John Henderschedt serves as Director of NOAA Fisheries' Office of International Affairs and Seafood Inspection. In this role, he manages the execution of the office's broad portfolio which includes international fisheries and conservation engagement (regional fisheries management organizations, multilateral conservation agreements, bilateral consultations), administration of internationally-focused statutory authorities addressing IUU fishing, bycatch, and protection of marine mammals, delivery of NOAA's Seafood Inspection Program services, and work to ensure access of U.S. seafood products to global markets.

Mr. Henderschedt has over 30 years of diverse experience in fisheries - working in the Alaska and West Coast groundfish fisheries, managing various aspects of food safety, seafood harvesting and production for domestic and international

markets, and administering commercial fishing vessel safety and security programs. He held an appointment to the North Pacific Fishery Management Council from 2008 to 2015. Prior to joining NOAA Fisheries, Mr. Henderschedt also served as Executive Director of the Fisheries Leadership & Sustainability Forum, where he led professional development and capacity building programs for fisheries managers and stakeholders.

Mr. Philippe Michaud, Special Advisor, The Blue Economy Department, Vice President's Office of Seychelles

Mr. Philippe Michaud after his secondary education in Seychelles went to the UK where he graduated in economics at the London School of Economics. On his return to Seychelles he worked as economist with Government until being transferred in 1984 to the newly created Seychelles Fishing Authority where in 1986 he become Managing Director. In 2002 he was appointed Technical Adviser (Fisheries) in the Ministry of Environment and Natural Resources and in 2006, Technical Adviser in the Ministry of Foreign Affairs. He was appointed as Special Adviser (Blue Economy) to the Vice President in November 2016 after having served a similar function with the Minister of Finance, Trade and the Blue Economy. Mr. Michaud is also Chairman of SFA and Co-Chair, and Joint Commissioner responsible for the Joint Management of the Seychelles-Mauritius Joint Zone of Jurisdiction of the Extended Continental Shelf in the Mascarene Plateau Region.

Mr. Shigeto Hase, Deputy Director-General, Fisheries Agency of Japan

Mr. Hase graduated from Hokkaido University in aquaculture and joined the Ministry of Agriculture, Forestry and Fisheries in 1981. Mr. Hase has served various positions at FAJ, including: Deputy Director of Fisheries Conservation Division (Marine Conservation Section); Deputy Director of Fisheries Coordination Division (Coastal Management Section); Director of Resources Management Promotion Office; Director of Fisheries Coordination Division; Director of Resources and Environment Research Division; Councillor of Resources Management Department; and Director-General of Resources Enhancement Promotion Department until he was appointed to the current position. Mr. Hase also served for North Pacific Anadromous Fish Commission (NPAFC) and the Fisheries Policy Planning Division of Miyazaki Prefecture's Agriculture and Fisheries Department as Director.

Mr. Sven Biermann, Director, Fisheries Transparency Initiative (FiTI)

Mr. Sven Biermann is the Director of the Fisheries Transparency Initiative (FiTI). The FiTI is a global voluntary multi-stakeholder partnership which aims at enhancing responsible fisheries through transparency and participation.

Throughout his careers, Sven has been focusing on practical and sustainable solutions for good governance, corporate social responsibility, risk management and business integrity.

Sven is also the co-founder and Managing Director of the HUMBOLDT-VIADRINA Governance Platform, a not-for-profit organization based in Berlin/Germany. Prior to this position, Sven spent almost 10 years with the global consulting company Accenture.

Session2:Abstract

Mr. Stefaan Depypere, Directorate-General for Maritime Affairs and Fisheries, European Commission

Fighting IUU fishing efficiently requires the use of many instruments and a coordinated engagement at various levels. These instruments can take the form of legislation, policy initiatives, information, technology, engaging human and financial resources. They need to be deployed at multilateral governance level (UN, FAO, WTO), at regional management level (RFMO), at the level of States individually or jointly, at the level of companies producing, processing and retailing seafood, civil society and ultimately at the level of individual consumers.

The various instruments should aim at developing solid rules and regulations - evolving in line with the new practices developed by IUU perpetrators - and fostering good compliance with these rules. They should also enable the consumers to play an active role. They should work towards increasing the benefit of compliance and the cost and the risk of non-compliance.

The more we cooperate and the better these instruments are coherently applied, the quicker the world community will be able to eliminate IUU fishing. The key word in this sentence refers to coherence and this can only be achieved through strong international cooperation, which has proven for that matter, to be a major vector of progress. The sobering message is that this requires a continued concerted effort. The good message is that this battle can be won. We have witnessed various cases of productive cooperation: between regulators and policy makers of major market states, between regulators and policy makers of market states and coastal states, between regulators and civil society, between regulators, civil society and major retailers. Between academia, fishing and processing industry and those previously mentioned. By making this continued effort, all involved contribute to preserving a precious global public good.

Key words: international cooperation, sustainability, governance

Mr. John Henderschedt, Director, Office of International Affairs and Seafood Inspection Program, NOAA, U.S.A.

"U.S. Government Efforts to Combat IUU Fishing – Partnerships and Coordination"

As a leader in sustainable fisheries management and a major seafood market state, the U.S. has a long history of working to combat IUU fishing. These efforts include, *inter alia,* implementation of measures developed through multilateral conservation and management fora, accession to PSMA, bilateral arrangements, capacity building, and trade related regulations.

A recent U.S. "whole-of-government" initiative to combat IUU fishing focuses on international engagement, enhanced enforcement, strengthened partnerships, and seafood traceability. International efforts include supporting adoption and implementation of PSMA, promoting application of best practices for combatting IUU fishing by regional fishery management organizations, enhancing international monitoring, control, and surveillance capabilities, and building capacity to sustainably manage fisheries and combat IUU fishing. International partnerships, including with key communities in the private and non-governmental sectors, have been enhanced through the creation of the Safe Ocean Network.

NOAA recently published rulemaking establishing the Seafood Import Monitoring Program (SIMP), which will provide the U.S. government with information allowing it to verify that priority species fish and fish product imports were legally harvested and truthfully represented. The information reported and records retained by importers of these products as required by the SIMP regulation support traceability from the point of harvest to entry into U.S. commerce.

International cooperation is critical to combatting IUU fishing effectively. Multilateral programs and initiatives should promote partnerships, support shared objectives, and accommodate diverse governance frameworks and socio-economic conditions.

Keywords: U.S., Traceability, Capacity building, Partnership

Mr. Philippe Michaud, Special Adviser, The Blue Economy Department, Vice President's Office of Seychelles

IUU fishing knows no frontiers. It is a problem which has national and international implications. The cost of IUU fishing was estimated by MRAG in 2005 to be US7.5m for Seychelles and much more in some other Indian Ocean countries. The main species targeted is tuna. The fact that tuna is a highly migratory species is an important reason why international cooperation is so essential. Furthermore, small vulnerable states are the ones that are the most impacted by this activity.

The need for international cooperation is even more pressing as in the Indian Ocean in particular, one of the main commercial tuna species, yellowfin is considered as over exploited.

Fortunately, regional cooperation programmes are in place and these are described by the presenter. Problems and challenges faced are described and solutions are proposed.

Keywords: IUU, Tuna, International cooperation, Indian Ocean

Mr. Shigeto Hase, Deputy Director-General, Fisheries Agency of Japan

From the Statistic Certification System to a ban on imports from certain countries and, moreover, the Catch Certification System, measures against IUU fishing have been strengthened over time in response to an increase in the number of vessels flying flags of convenience representing countries that have not joined Regional Fisheries Management Organizations (RFMOs). As a leading tuna-fishing nation and also the world's largest consumer nation, Japan has demonstrated leadership in strengthening measures against IUU fishing in order to contribute to sustainable management of resources, and this has achieved a certain level of success. A new approach is needed, however, to deal with illegal fishing in the high seas of the North Pacific that targets species such as mackerel that do not enjoy the same international trade and distribution arrangements as tuna. Japan is leading the efforts within the North Pacific Fisheries Commission (NPFC) to adopt conservation and management measures such as an IUU fishing vessel listing system and also preparing to ratify the United Nations' Food and Agriculture Organization (FAO)'s the Port State Measures Agreement (PSMA).

Mr. Sven Biermann, Director, Fisheries Transparency Initiative (FiTI)

There is now a widely shared understanding for the need to achieve sustainable and responsibly managed marine fisheries. While there are many facets to achieve this, there is widespread agreement that the public availability of credible information is essential. Lack of transparency may undermine both the quality and credibility of decision-making, and it diminishes the prospect of effective oversight and accountability. Without such accountability, problems such as illegal fishing and corruption may flourish.

In this context, the Fisheries Transparency Initiative (FiTI) has been developed as a unique effort that complements and supports other national, regional and global efforts for achieving responsible fisheries governance. At the heart of the initiative is an agreement on what information on fisheries should be provided by public authorities. Such information includes the status of fish stocks and marine ecosystems, conditions attached to fishing authorisations, the contracts of fishing access agreements signed between fishing nations and coastal states or the amount of fish taken from the ocean.

The presentation will outline the core characteristics of this new voluntary, global initiative that aims to increase transparency and participation in fisheries governance for the benefit of a more sustainable management of marine fisheries. It will outline the initiative's transparency paradigm as well as benefits and challenges of its multi-stakeholder orientation and highlight how the FiTI can not only make fisheries management more transparent and inclusive, but also help tackling other pressing issues which impact all actors in the fisheries sector,

including the support the fight against Illegal, Unreported, and Unregulated Fishing.

Keywords: Sustainable fisheries, Transparency, Multi-stakeholder participation, Fishing access agreements, Public debate

Strengthening international cooperation for combatting IUU fishing

Stefaan Depypere
Director
International Ocean Governance and Sustainable Fisheries
European Commission, DG Maritime Affairs and Fisheries

Disclaimer:
1. This presentation represents solely the views of its author and cannot in any circumstances be regarded as the official position of the European Commission.
2. Chatham house rules

Origin of the problem

Living marine resources:
- **precious for mankind**
- **supply of these resources is finite (estimated to be around 100 million tons)**

Ocean:
- **common resource pool (tragedy of the commons")**

Technological evolution:
- **need for regulation and**
- **good management**

Act at various levels

Multilateral governance level: **UN, FAO, WTO**
UNCLOS, UNFSA, IPOA on IUU, PSMA, SDG 14.6

RFMO:

- **cooperation between parties and**
- **between RFMO, inter alia Kobe process**

States and Union of States (like EU)

Act at various levels

Private operators: companies, civil society, academia

Individual consumers: power of the market

Direction

Solid tools, evolving in line with new practices of IUU perpetrators:

- **Increase benefit of compliance**
- **Increase cost of non compliance**
- **Increase risk of non compliance**

Change the economic incentive balance

Good cooperation required

Create a coherent toolbox

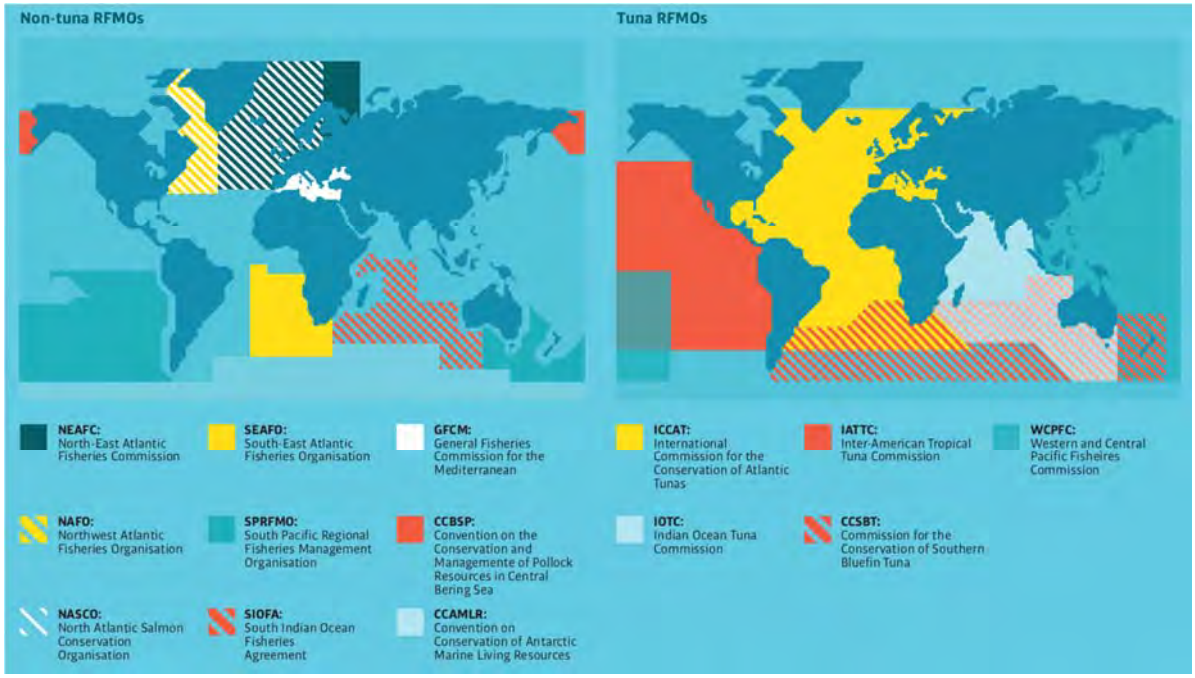
Use it efficiently: system compatibility, gradual but continuous improvement (TQM)

Examples: standard for electronic logbook (UN/CEFACT), Global Record

New Challenge: PSMA

Global public good: Good Ocean Governance

Status



Science, Service, Stewardship

Strengthening International Cooperation for Combating IUU Fishing – the U.S. Experience

Presenter: John Henderschedt,
Director, Office of International Affairs
and Seafood Inspection

NOAA FISHERIES SERVICE

NOAA

Early efforts to combat Illegal, Unreported, and Unregulated (IUU) fishing…

- Enforcement strategies
- Engagement and advocacy at regional fishery management organizations
- International agreements such as the Port State Measures Agreement (PSMA);
- Bilateral agreements
- Training and capacity building
- Trade-related regulations – identification and certifications of nations engaged in IUU fishing

Recent U.S. “whole-of government” initiative…

- International engagement
  - Supporting adoption of PSMA
  - Promoting adoption of best practices
  - Enhancing international Monitoring Control and Surveillance (MCS) capabilities
  - Building capacity for managing sustainable fisheries and combating IUU fishing
- Enhanced enforcement
- Strengthened partnerships
- Seafood traceability

Capacity Building Strategy

- Enhancing industry and market incentives for self-regulation
- Fostering greater transparency in fisheries management and supply chains
- Strengthening fisheries governance and management
- Building enforcement capabilities and effectiveness
- Leveraging political will and fostering genuine constituencies
- Promoting stronger coordination in capacity building

Seafood Import Monitoring Program

- Point of harvest to entry into U.S. commerce
- Priority species
- Government-to-business framework
- International Trade Data System (ITDS)
- Commerce Trusted Trader Program

International cooperation should:

- Promote partnerships
- Support shared objectives
- Acknowledge diverse governance frameworks
- Accommodate differing socio-economic conditions


Questions?
Office of International Affairs and Seafood Inspection,
National Marine Fisheries Service,
National Oceanic and Atmospheric Administration,
US Department of Commerce
www.nmfs.noaa.gov/ia
NOAA FISHERIES

Fisheries Transparency Initiative

International Conference on Seafood Transparency and Sustainability

Session #2: Strengthening international cooperation for combatting IUU fishing

Tokyo/Waseda University, 16 May 2017

Fisheries Transparency Initiative (FiTI)

The FiTI aims at enhancing responsible fisheries through transparency and participation.

- The FiTI is a global voluntary initiative; it does not focus on a single country or on a region.
- The FiTI is country-centered; the intention to join the FiTI must come from a country's government.
- The FiTI is not owned or operated by one organisation nor does it represent the work of a single interest group.

Conceptual Phase (May 2015 – April 2017)

Supported by an International Multi-Stakeholder Advisory Group:

- **FiTI Standard, defining**
  - requirements for implementing countries
  - international governance
- **5 pilot countries**

The International Secretariat received financial support from the governments of Mauritania and Guinea

Key output of conceptual phase: the FiTI Standard

1. Sets transparency requirements for marine fisheries
2. Permits progressive improvement of transparency in the public domain
3. Enhances data credibility through multi-stakeholder participation
4. Stimulates public debates on fisheries governance
5. Ensures compliance with requirements through regular validations

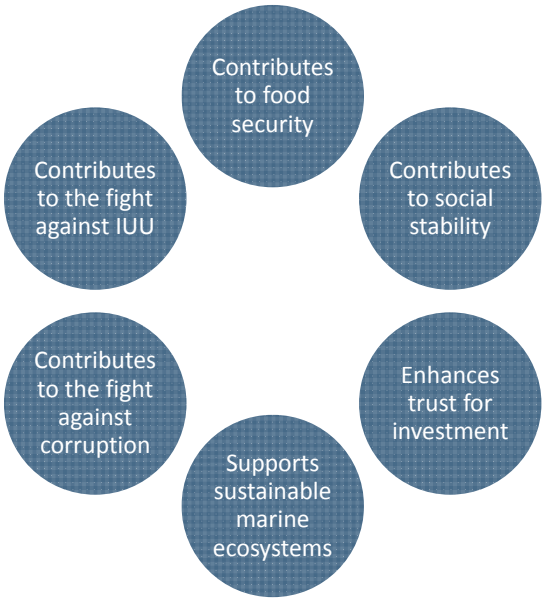
Benefits

Direct benefits

Improve responsible fisheries management

Establish trust-based multi-stakeholder environment for collective action

Indirect benefits



Outlook: The FiTI in the next three years

- Obtain first FiTI Reports (starting in 2018)
- Establish regional support hubs
- Engage 20+ countries in the FiTI process
- Establish global FiTI Members' Association
- Transition FiTI International Secretariat to Seychelles

Fisheries Transparency Initiative

Thank you for your attention

www.fisheriestransparency.org

@FisheriesTI

fisheriestransparencyinitiative

Fisheries Transparency Initiative (FiTI)

Keynote Speech
Video Message

Mr. Shigeru Ishiba

Mr. Kazuo Sato

Mr. Karmenu Vella

Ms.Kahori Miyake

H.S.H. Albert II

Keynote Speech: Biography

Mr. Shigeru Ishiba, Member of the House of Representatives; Chair, Liberal Democratic Party's Fisheries Basic Policy Committee

Born in Tottori, Mr. Ishiba graduated from the Law School of Keio University and joined Mitsui Bank, where he had a firsthand experience with management of small- and medium-sized enterprises. Mr. Ishiba was elected as the youngest member of the House of Representatives in 1986 and consecutively won 10 elections afterwards. Mr. Ishiba has served various cabinet positions, including: Minister of Defense; Minister of Agriculture, Forestry and Fisheries; and Minister of State in charge of Overcoming Population Decline and Vitalizing Local Economy in Japan and the National Strategic Special Zones. In LDP, he has served as Chairman of Research Commission for Security, Chairman of Policy Research Council, and Secretary General. Mr. Ishiba became the Chairman of LDP's Fisheries Basic Policy Committee in 2016. Mr. Ishiba strives to recover the fisheries sustainability and to revitalize the world-leading Japanese fisheries industry.

Mr. Kazuo Sato, Director-General, Fisheries Agency of Japan

Mr. Kazuo Sato was born in 1957 in Nagano Prefecture. Mr. Sato graduated from Waseda University's School of Law and joined the Ministry of Agriculture, Forestry and Fisheries in 1981. At the Ministry he has held various positions, including: Deputy Director (General Administration Office) of Business Development Division; Director of Agricultural Administration Division, the Mie Prefectural Department of Agriculture, Forestry, and Fisheries; Deputy Director of Agricultural Administration Division, Structural Improvement Bureau; Director of Livestock Industry Management Office; Director of Livestock Management Improvement Division; Director of Structural Improvement Division; Director of Meat and Egg Division; Director-General of Livestock Industry Department; Director-General for Policy Coordination, Minister's Secretariat; Director-General of Agricultural Production Bureau; and Director-General of Minister's Secretariat. Mr. Sato has been appointed to the current position since August 2015.

Mr. Karmenu Vella, European Commissioner for Maritime Affairs and Fisheries

Mr. Karmenu was born in Malta in June 1950. Mr. Vella graduated in Architecture and Civil Engineering, and later obtained a Master of Science in Tourism Management from the University of Sheffield. He was first elected to Parliament in 1976 and continued to be re-elected in the elections that followed for nine consecutive times. During his political career, he has exercised governmental responsibilities as Minister for Public Works, as Minister for Industry and twice as Minister for Tourism. Mr. Vella had also held various senior posts in the private sector.

As European Commissioner, he is mandated to engage in shaping international ocean governance in the UN, in other multilateral fora and bilaterally with key global partners of the EU. As a part of his mandate, he has presented in November 2016 – together with the EU's High Representative for Foreign Affairs and Security Policy – the European Commission's strategy "International ocean governance: an agenda for the future of our oceans".

Ms. Kahori Miyake, Executive Officer, CSR& Communication, Aeon Co., Ltd.

With retail at its core, the Aeon Group comprises over 300 companies in 13 nations spanning finance, real estate development and retail affiliated services. Ms. Miyake joined Jusco Corporation (now Aeon) in 1991 and was appointed Project Leader for 2020 Group Vision Project in 2006, followed by General Manager for Branding Department in 2007 and Chief Executive Officer, Claire's Nippon Co., Ltd. in 2008. From 2014, she served as Executive Officer and General Manager, Customer Service Division for AEON RETAIL Co., Ltd. In 2015, her title changed to General Manager for Public Relations and Customer Service, AEON RETAIL Co., Ltd. She took on her current responsibilities in 2017.

Video Message: Biography

H.S.H. Prince Albert II, Prince of Monaco

H.S.H. Prince Albert II, Sovereign Prince of Monaco, Marquis of Baux, is the son of Prince Rainier III and Princess Grace. His Highness graduated in political science from Amherst College, Massachusetts, in the United States, in 1981.

HSH Prince Albert II of Monaco acceded to the throne on July 12, 2005. The following year, he created the Prince Albert II of Monaco Foundation, dedicated to the protection of the environment. The Foundation supports sustainable, ethical and innovative projects around the world, with a focus on three main challenges: fighting against climate change and promoting renewable energy; combating the loss of biodiversity and preserving water resources. In acknowledgement of his actions towards environmental protection, HSH the Prince received a number of distinctions, including an Honorary Doctorate in Science from Plymouth University, the Teddy Roosevelt medal at the United States Congress, the Roger Revelle prize at the University of California in San Diego, and the B.A.U.M Environmental Award in Hamburg.

イオンの持続可能な調達について

2017年5月17日
イオン株式会社
執行役　環境・社会貢献・PR・IR担当
三宅　香

イオンの概要

年間３６億人の
お客さまが来店

２０,０００の店舗
４４７のｼｮｯﾋﾟﾝｸﾞｾﾝﾀｰ

52万人の従業員
と共に

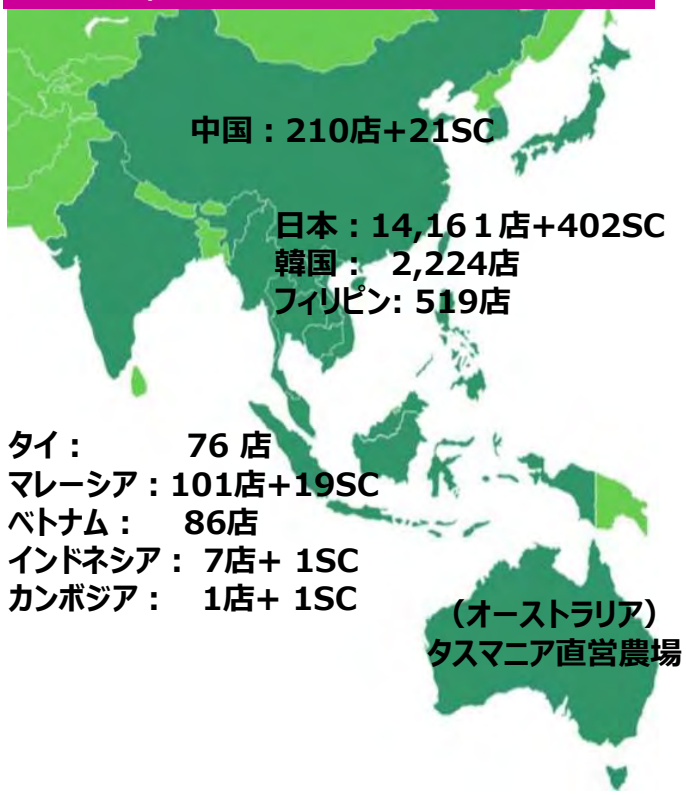
８兆円の
物販・サービス

店舗につどうお客さまへの
「場（店舗）の提供」

商品のサプライチェーンを通じた
「ネットワークの提供」

イオンの海外事業～「日本の食文化」の発信拠点として

海外　3,224店／45ショッピングセンター



COOL JAPAN WORLD TRIAL
FIND JAPAN STYLE
Find the bond between Japan and you, the way to develop your own style

出典：経済産業省
クールジャパンHP

イオンサステナビリティ基本方針

方針

イオンサステナビリティ基本方針

私たちイオンは、「お客さまを原点に平和を追求し、人間を尊重し、地域社会に貢献する」という基本理念のもと、多くのステークホルダーの皆さまとともに、持続可能な社会の実現を目指します。

取組みにあたっては、「低炭素社会の実現」、「生物多様性の保全」、「資源の有効利用」、「社会的課題への対応」を柱とし、グローバルに考え、それぞれの地域に根ざした活動を積極的に推進してまいります。

2011年3月1日制定

重点課題

- 重点課題① 低炭素社会の実現
- 重点課題② 生物多様性の保全
- 重点課題③ 資源の有効利用
- 重点課題④ 社会的課題への対応

ビックチャレンジ２０２０

ビックチャレンジ２０２０：2020年までの挑戦的な取り組み

店舗でのチャレンジ

1　エコプロジェクトの推進
　エネルギー使用量原単位半減
　再生可能エネルギー２０万KW
　全国１００箇所の防災拠点
（＝「スマートイオン」の展開）
2　自然冷媒の冷蔵・冷凍設備を導
（自然冷媒宣言）
3　廃棄物ゼロへの挑戦

商品でのチャンレンジ

4　サプライチェーンにおける持続可能な調達ｶﾞｲﾄﾞﾗｲﾝ制定
5　お客さまのヘルシーライフを応援する商品の提供
6　ソーシャルブランドの強化
（フェアトレード取組拡大）

雇用でのチャレンジ

7　外国人従業員の雇用の拡大
8　女性管理職比率の拡大50％

お客さまとともにチャレンジ

9　ネクスト１０００万本
（植樹から育樹、活樹へ）
１０　商品・サービスを通じた
お客さまのCO2削減の推進

持続可能な調達原則と水産物調達方針

イオン持続可能な調達原則

1 自然資源の違法な取引・採取・漁獲を排除します。
2 生物多様性保全、自然資源枯渇防止の観点で、イオン基準を設定・運用します。
3 再生不可能な資源の利用については、最小限に留めます。
4 農産物や漁業資源の産地、漁獲方法などのトレーサビリティを確立します。
5 林産物において、保護価値の高い森林の破壊を防止します。

イオン水産物調達方針と取組内容

資源の枯渇防止と生物多様性保全の観点から、定期的にリスク評価を行います。また、リスク低減のために、実行可能な対策を検討し、持続可能な水産物の調達に努めます。

持続可能な調達2020年目標

対象	持続可能な調達２０２０年目標
農産物	・プライベートブランドは、GFSIベースの適正農業規範（ＧＡＰ）管理を１００%実施をめざす。 ・プライベートブランドおよび自社農場によるオーガニック商品の売上１００億円をめざす。
畜産物	・プライベートブランドは、GFSIベースの食品安全マネジメントシステム（ＦＳＭＳ）または、適正農業規範（ＧＡＰ）による管理を100%実施をめざす。
水産物	・連結対象のGMS、SM企業で、MSC、ASCの流通・加工認証(CoC)を１００%取得をめざす。 ・主要な全魚種で、持続可能な裏付けのあるプラベートブランドを提供する。
紙・パルプ・木材	・主要なカテゴリーのプラーベートブランドについて、持続可能な認証（FSC認証等）原料の１００%利用をめざす。
パーム油	・プライベートブランドは、持続可能な認証（RSPO等）原料の１００%利用をめざす。

ASC認証商品の販売

2014年2月、アジア初のＡＳＣ認証商品「生アトランティックサーモン」を発売

ASC認証　生アトランティックサーモン

２０１６年１０月、宮城県南三陸町ASC認証「戸倉っこかき」を発売

69

MSC認証商品の販売

2014年3月、 日本初のＭＳＣ認証を取得した北海道産のホタテ貝を販売開始。

MSC認証赤がれいを地元の京都女子大の協力で演出物を作成して普及活動実施。

「Fish Baton」MSC・ASC認証品コーナーの設置

**次の世代に豊かな食文化を引き継ぐための取り組みとして、
ＭＳＣ・ＡＳＣ認証商品の常設のコーナー「Ｆｉｓｈ　Ｂａｔｏｎ」を設置**

私たちは、持続可能な社会の新たなライフスタイルの実現に貢献します。

- 店舗や商品を通じて、お客様に、**持続可能な**ライフスタイルを提案
- 日本生産者の想いを届け、海外の人々のニーズにも応える**持続可能な**商品を提供
- **持続可能な**未来につながる取組を、中長期の視点をもって実施

Session 3

Policies and measures to promote seafood transparency and achieve sustainable fisheries

Mr. Tetsuji Ida

Mr. Mark Zimring

Mr. Thomas Kraft

Mr. Yasuyuki Yamamoto

Mr. Wakao Hanaoka

Session 3:Biography

Mr. Tetsuji Ida, Senior Staff Reporter, Environment, Energy and Development, KYODO NEWS

Mr. Tetsuji Ida is a senior Staff Reporter of Kyodo News in charge of environment, energy and development issues. He began working on environment and development issues in 1987, and since then, he reported these issues and conservation efforts on the ground in many counties in Asia, Africa and the South America and also covered many international conferences on multilateral environmental agreements including UNFCCC COP3, COP21 in Paris, CITES, CBD, Montreal Protocol, WSSD in 2002 and Rio+20, Brazil in 2012. He has authored or coauthored fifteen books on global warming, fisheries resources, toxic chemicals and natural resources management. He is a member of Central Environment Council of Ministry of Environment of Japan.

Mr. Mark Zimring, Director of Indo-Pacific Tuna Program, TNC

Mr. Mark Zimring is the Director of The Nature Conservancy's Global Tuna Program. The program aims to engage pragmatically with the fishing industry, other supply chain actors and governments to pragmatically improve the economic and environmental performance of the planet's tuna fisheries, with primary focus in the Western and Central Pacific Ocean.

Mark is an expert in market-based approaches to conservation, impact investing and the intersection of finance and policy. Prior to The Nature Conservancy, Mark led research for the U.S. Department of Energy on clean energy finance and policy. Mark began his career at Deutsche Bank Securities. He completed his undergraduate studies at the University of Pennsylvania and his graduate studies at the University of California at Berkeley.

Mr. Thomas Kraft, CEO, Norpac Fisheries Export, USA

Mr. Thomas Kraft is Managing Director of Norpac Fisheries Export with 30 years of seafood experience and President of Insite Solutions. He was previously a Certified Public Accountant with Price Waterhouse.

He has developed a seafood electronic traceability system covering the full value chain, with installations in Costa Rica, Hawaii, Indonesia, Micronesia, RMI, Vietnam.

He is also designated as an Advisor to The Prince's Charities Marine Programme, a member of Seafood Choices Multi Stakeholder Group, Board Member of the Blue Water Fishermen's Association, and a "Seafood Champion" by the Conservation Alliance for Sustainable Seafood.

Mr. Kraft is currently leading the first industry-run Comprehensive Tuna Fishery Improvement Project, in The Republic of the Marshall Islands, and a Drop-Line Snapper Fishery Improvement Project in Indonesia (newly formed).

Mr. Yasuyuki Yamamoto, Merchandising Strategy Department, AEON RETAIL Co., Ltd.

Mr. Yasuyuki Yamamoto is responsible for procurement and private brand development for Aeon Group, Japan's largest seller of seafood by volume. He has formulated sustainable procurement methodology for Aeon and previously worked on various projects including: development of criteria for environmentally conscious PB Green Eye standard (based on European organic criteria) in 2001; development of hormone-free eels, first Green Eye Seafood product in 2002, introduction of MSC certification to Japan in 2006, naming it *Umi no Ecolabel* or "Ocean's Ecolabel"; introduction of ASC certification in 2014; formulation of Aeon Seafood Procurement Policy (in charge of the Committee to Promote Sustainable Procurement) in 2014; and hosting of Supply-Chain Human Rights Seminar in 2016.

Mr. Wakao Hanoka, CEO, Seafood Legacy

Mr. Wakao Hanaoka is the founder and CEO of Seafood Legacy Co., Ltd. For the past 15 years, Wakao has been involved in activities and market campaigns aimed at protecting the marine ecosystem. He believes that it is business that holds the key to finding solutions for seafood sustainability — through partnerships with environmental organizations that support more sustainable business practices. Seafood Legacy was formed to develop the partnerships necessary to solve the complex problems of sustainable seafood supply chains by tapping into the experience of the global sustainability community and connecting it to innovative, forward-looking businesses in Japan.

Session3 : Abstract

Mr. Tetsuji Ida, Senior Staff Reporter, Environment, Energy, and Development, KYODO NEWS

Some marine species like Bluefin tuna, sea cucumber and Japanese eel are heavily traded and command very high values on the Japanese seafood market. Because of the high value of these products, IUU activity and illegal trade in these species remains rampant in Japan in spite of government efforts. My presentation provides consideration of IUU related activity in Japan based on a database of information gleaned from Japanese news articles, selected academic research, transaction data and other sources. In addition, it validates current government measures to combat IUU and shortfalls in their effectiveness through comparison with measures taken by other nations.

Key words: IUU, Bluefin tuna, Japanese eel, illegal trade

Mr. Mark Zimring, Director of Indo-Pacific Tuna Program, TNC

Advanced technology and data analytics offer new prospects for filling foundational fisheries data gaps and delivering true "hook to plate" seafood traceability and transparency. Filling these critical gaps and delivering this information at the pace of global supply chains has potential to underpin catalytic sustainability-oriented shifts through a range of levers including market-based initiatives, trade policy and enhanced fishery management. This presentation will illustrate these emerging opportunities through a case study on an electronic monitoring project that has been implemented in Western and Central Pacific Ocean longline tuna fisheries by Pacific Island nations in close collaboration with industry and regional support institutions. Electronic monitoring harnesses video cameras, sensors and spatial tracking tools to passively collect data on fleet catch and effort as a complement to traditional reliance on human observers and logbooks. This four-country technology project is being complemented by investments in computer vision that are yielding early gains in helping to rapidly translate hours and hours of raw video footage into useful information on fleet behavior.

Key words: Electronic Monitoring, Advanced Technology, Data Analytics, Traceability, Transparency

Mr. Thomas Kraft, CEO, Norpac Fisheries Export, USA

Norpac Fisheries Export and Insite Solutions have been working with industry, environmental NGO's, governments and fishers to bring transparency into the otherwise opaque supply chain of the seafood industry. Considerable effort by

governments, foundations and E-NGO's is being put into play to reduce or eliminate IUU fishery products from the seafood supply chain. These efforts include measures developed through multilateral conservation and management, bilateral arrangements, capacity building, accession to PSMA, and trade related regulations.

The recent U.S. "whole-of- government" initiative to combat IUU fishing focuses on, among other things, seafood traceability. Norpac and Insite Solutions have been working with The Nature Conservancy, Packard Foundation, Walton Family Fund, US AID, regional and national fisheries governance in Indonesia, as well as other nations, in support of capacity building around electronic seafood traceability. We focus on industry and fishers to electronically capture Key Data Elements that are shared real time up stream and across platforms.

The exciting opportunity is through electronic data capture, real time sharing of Key Data Elements enables civil society, consumers, business and governing agencies to access important fishery data. This same data is easily captured as part of the fishing and processing effort, improves data availability quantitatively and qualitatively, while vastly reducing the time to data access. This value adds the data! Transparency in the supply chain in real time enables regulators, enforcement and industry to better visualize the source and legitimacy of seafood currently in the supply chain.

This same data improves at sea safety by alerting shore based personnel of emergency situations at sea. Processors use the same data to make their operations more efficient, improve the value of their products, communicate product availability more quickly, which improves shelf life and therefore value in the marketplace.

Electronic traceability can be a strategic element in the capacity building that enhances international monitoring to combat IUU fishing and the movement of IUU fishery products. Linking the private and non-governmental sectors through enhanced data collection and transmission improves the efficacy of more broadly cast multilateral programs such as the PSMA and work of the Regional Fishery Management Authorities. Industry benefits from more efficient operation and facilitated compliance with programs such as the Seafood Import Monitoring Program (SIMP).

Keywords: electronic seafood traceability, capacity building, IUU Fishing

Mr. Yasuyuki Yamamoto, Merchandising Strategy Department, AEON Retail Co., Ltd.

1. To support people's dietary lifestyles and provide a continuous supply of food from all over the world that is proven to be safe and reassuring to consumers.

2. To encourage Japanese producers to meet international standards and disseminate internationally competitive Japanese produce/products to the world.

As the largest retailer in Japan and one of largest seafood retailers in the world, AEON has been undertaking sustainable procurement since the turn of the millennium in order to achieve these two objectives. We have introduced a third-party audit system to resolve issues pertaining to resource use, the environment, human and labour rights within our supply chain, and we are working to achieve accountability to consumers through the introduction of an eco-label system.

Mr. Wakao Hanaoka, CEO, Seafood Legacy

"IUU Countermeasures through Market Initiatives and the Pursuit of Sustainability"

What is the reason for the continued decline of the fisheries industry in Japan during a period in which the industry is experiencing steady growth in other major regions, and what approach should we adopt in order to tackle this issue? In this presentation, I will showcase successful implementations of traceability in leading seafood markets as a potential approach for resolving the developing global issue of IUU fishing. I will also explore leading market initiatives in Japan that conform to Sustainable Development Goals (SDGs). My presentation will propose various potential roles of stakeholder groups such as the government, the private sector, NGOs, the mass media and consumers, while also proposing the design of "Olympic Legacy", capitalising on opportunities arising from the 2020 Tokyo Summer Olympic and Paralympic Games.

Keywords: Olympic Legacy, Sustainable Development Goals (SDGs), Market initiatives, Non-competitive collaboration, Traceability

日本のIUU漁業：その現状と対策
IUU fisheries in Japan
Current status and counter measures

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共同通信社　井田徹治　　Tetsuji IDA, KYODO NEWS

密漁が多発する日本
Illegal fishing is rampant in Japan

ある全国新聞のデータベース検索
「密漁」をキーワードに

From news stories database on Japanese nation wide newspaper

過去１年間で少なくとも40件の摘発

at leased 40 cases raised by police or authorities

恐らくこれは「氷山の一角」

may be a tip of iceberg

密漁が多発する日本
Illegal fishing is rampant in Japan

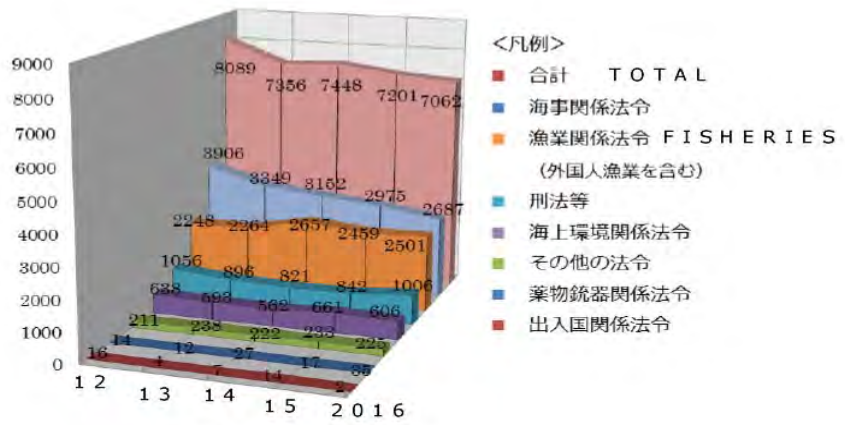
海上保安庁の海上犯罪統計　2015年
statistics of Japanese coast guard in 2015

海上犯罪の送致件数は7,062 件
7,062 criminal cases reported

漁業法関連が2,501 件(35.4％）、
fisheries related cases are 2,501 cases(35.4%)

密漁が多発する日本
Illegal fishing is rampant in Japan

合計が減る中で増加傾向にある
Total number of cases declining,
while fisheries related cases increasing



密漁が多発する日本
Illegal fishing is rampant in Japan

シラスウナギがほぼ半数
about a half of reported case is glass eel
その他、ナマコ、アワビ、エビ、サザエなど
sea cucumber, abalone, shrimp, turban shell…
資源減少→価格高騰→密漁の増加→資源減少
という悪循環
Vicious cycle of illegal fishing is ongoing
Less stocks ->high prices -> growing IUU -> less stocks

密漁が多発する日本
Illegal fishing is rampant in Japan

シラスウナギの例 ／ in the case of glass eel
中央大・海部健三博士らの解析
research done by Dr.Kaifu from CHUO Univ.
池入れ量と報告漁獲量に大きな差／2倍近く
discrepancies reported intake to farm pond and
reported catch / nearly 2 folds
シラス漁が存在しない香港から大量の輸入
Huge amount of import from Hong Kong,
Where no glass eel fisheries exists
禁輸をしている台湾からというのが業界の常識
Probably form Taiwan where export ban exists

密漁が多発する日本
Illegal fishing is rampant in Japan

日本で養殖されているニホンウナギ（2015年漁期）
Farmed eels in Japan (2015)

2015年に国内で池入れされたシラスウナギ18.5tの内訳（水産庁資料を改変）
Glass eels used in aquaculture in Japan in 2015 (modified from Fisheries Agency 2016)

不適切な漁獲・流通を経たと疑われるシラスウナギの割合：68.9%
Possible IUU & illegal trade: 68.9%

流通しているウナギの約70%がIUUシラスウナギ起源の可能性

密漁が多発する日本
Illegal fishing is rampant in Japan

香港のウナギ稚魚大量輸入　管理枠外「規制の抜け穴」

絶滅が懸念されるニホンウナギの大消費国日本は中国、韓国、台湾と協力して資源管理に取り組んでいるが、この協議に参加していない香港から稚魚（シラスウナギ）が日本に大量に輸入されていることが財務省の貿易統計などで２３日、分かった。

香港では今年、最終的に日本向けになるとみられる別種のウナギ稚魚の密輸が相次いで摘発されている。環境保護団体などは「各国の規制が強まる中、香港を中心としたウナギの不透明な取引が続き、規制の抜け穴になっている」と資源管理体制の強化を求めている。

貿易統計によると、昨年１１、１２月に計１６５７キロ、今年１、２月に４３６４キロのニホンウナギの稚魚が香港から輸入された。水産庁によると、この間に日本の養殖池に入れられた稚魚は１万５千キロで、約４０％が香港からの輸入だったことになる。残りは国産で中国、台湾などからの輸入はなかった。

香港からの輸入は、台湾が輸出を禁止した２００７年以降に急増。香港で大規模なウナギ漁はなく、実際の産地は台湾や中国の可能性が高いとみられる。

Glass eel import
from Hong Kong,
Huge amount,
Loop hole of management

23/04/2016 KYODO NEWS

日本の密漁対策は？
Measures to tackle IUU in Japan

★漁業法　138条

許可、規制に違反した漁業の禁止・罰則

「3年以下の懲役又は200万円以下の罰金」

★Fishery Act in 1949. CH.138

Gov. can introduce regulation and has a power to implement them

Jail term up to 3 years or fine up to 20,000 $

日本の密漁対策は？
Measures to tackle IUU in Japan

★外国人漁業の規制に関する法律、1967年

領海内の外国人の漁業規制、寄港、漁獲物の転載の禁止、犯人の漁獲物、船舶、漁具等を没収

3年以下の懲役あるいは3000万円以下の罰金

★Order for Enforcement of the Act on Regulation of Fishing Operation by Foreign Nationals in 1967

Regulation of fishing, and port calling, re-loading ban

Confiscation of catch, vessel, fishing gear etc.

Jail term up to 3 years or fine up to 300,000$

日本の密漁対策は？
Measures to tackle IUU in Japan

★FAOのIUU防止のための寄港国措置協定

外国人漁業法の改正案が審議中
今国会で可決、近く批准の見通し
寄港時に提出する情報の範囲の拡大
IUU漁船かどうかを判断できるようにする

★FAO Agreement on Port State Measures to Prevent, Deter and Eliminate IUU

Modification of Foreign Nationals Fishing Act
Widen a scope of information needed to provide to authority to identify IUU vessels at a time of entry
Proposal is under discussion at current diet session
Ratification very soon, within a month

日本の密漁対策は？
Measures to tackle IUU in Japan

★それでは・・・／ We nee to ask…

1)執行体制・監視制度は十分か？

Enforcement/monitoring working?

@密漁は横行している

IUU in Japanese water rampant

日本の密漁対策は？
Measures to tackle IUU in Japan

2)罰則は厳しいか？

Punishment severe enough?

@種の保存法の場合

５年以下の懲役又は500万円以下の罰金（個人）

１億円以下の罰金（法人）

Act for species conservation

Illegal trade of wildlife

Jail term up to 5 years or

fine up to 50,000$(individual) 1million$(company)

日本の密漁対策は？
Measures to tackle IUU in Japan

3)寄港国措置対応は十分か？

Effective measures taken to implement FAO agreement?

@性善説の情報提供だけで十分か？

based on information provided by operator

Are operators are basically good or evil

＠外国漁船対応だけで十分か？

日本漁業者の運搬船、転載は？

added new measures are only for foreign vessels

日本の密漁対策は？
Measures to tackle IUU in Japan

4)そもそも水産物のトレーサビリティがない
Effective traceability system for seafood lacking

＠牛肉などに比べて遅れている
far late behind compared to beef products

牛の個体識別のための情報の管理及び伝達に関する特別措置法
Act on Special Measures concerning the Management and Relay of Information for Individual Identification of Cattle

＠少ないMSC／ASC認証漁業・認証製品
MSC/ASC Fisheries and products are very much limited

結論
In conclusion

先進国標準としてのIUU対策のためには多くの課題

Many problems and huge task in front of us to reach global standard and to eliminate IUU activities in Japan

特にウナギ、マグロなど高価・大量な商品には特別の措置が必要

Specific measures needed for high price/high volume products like tuna, eel etc

MSC／ASCなど国際認証の一層の拡大

more reliable/international certification like MSC/ASC needed

結論
In conclusion

漁業者・行政・流通・消費者・研究者・メディア・NGOなどの取り組み強化が不可欠

All stakeholders ; fishermen, administrators, suppliers, consumers, researchers, media and NGO; must be engaged more

何よりも「政治的な意思」が足りない

And most of all we need clear political will which is currently lacking

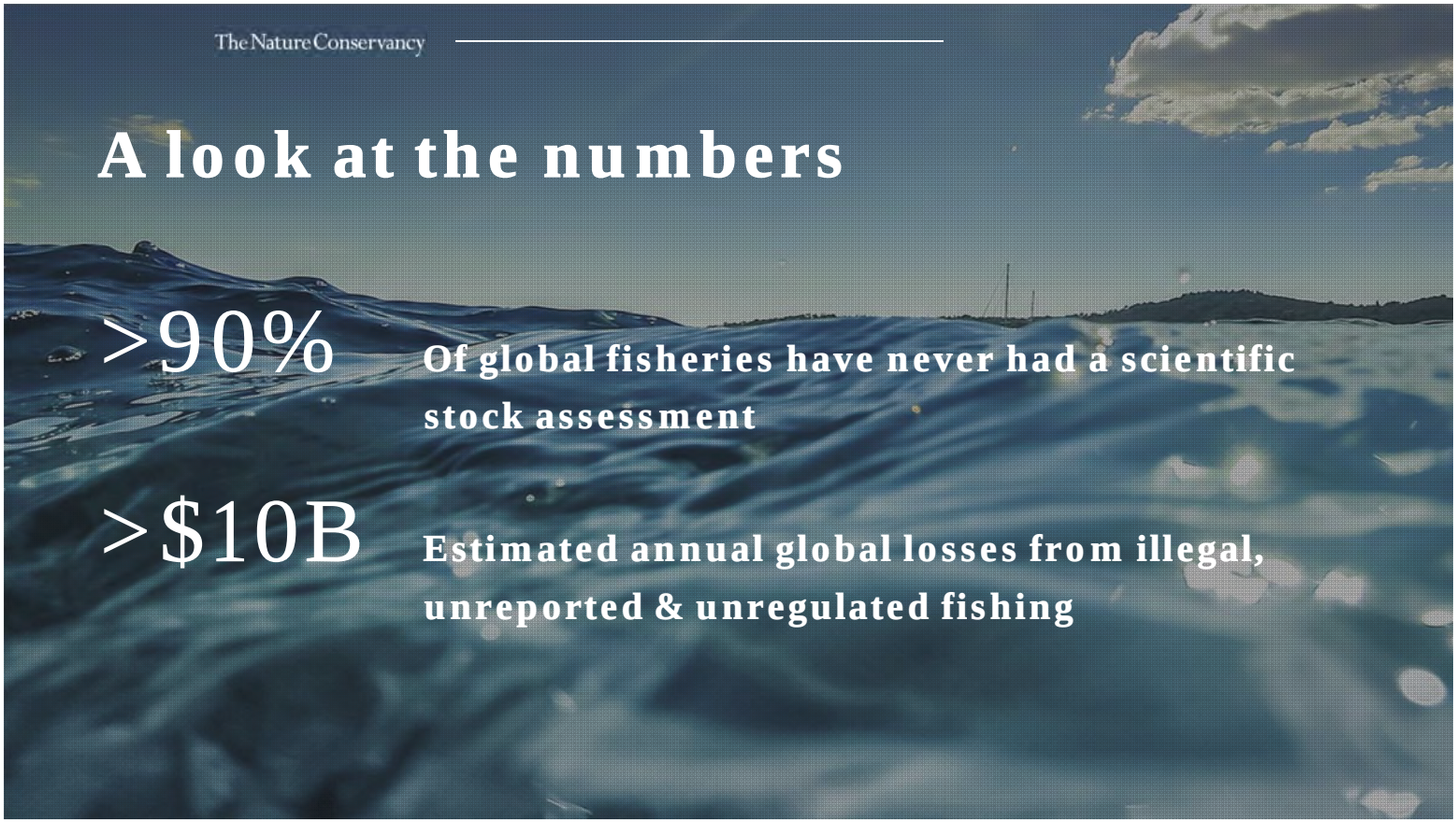
ご静聴ありがとうございます。
Thank you for your attention

さらに詳しいことは　for further information….
「ウナギ　地球環境を語る魚」（岩波新書）
「ウナギが食べられなくなる日」
（ナショナルジオグラフィック・ジャパン）
http://natgeo.nikkeibp.co.jp/nng/article/20120710/315508/

Mind the Gap

Tapping advanced technology & data analytics to fill key fisheries information gaps

Mark Zimring
Director, Global Tuna Program, The Nature Conservancy
International Symposium on Seafood Transparency and Sustainability
Wednesday, May 17th, 2017



The Nature Conservancy

A look at the numbers

>90% **Of global fisheries have never had a scientific stock assessment**

>$10B **Estimated annual global losses from illegal, unreported & unregulated fishing**

The Nature Conservancy

The status quo often isn't working

Human observers are the primary vehicle for independent collection of science data, and in some cases, compliance management information.

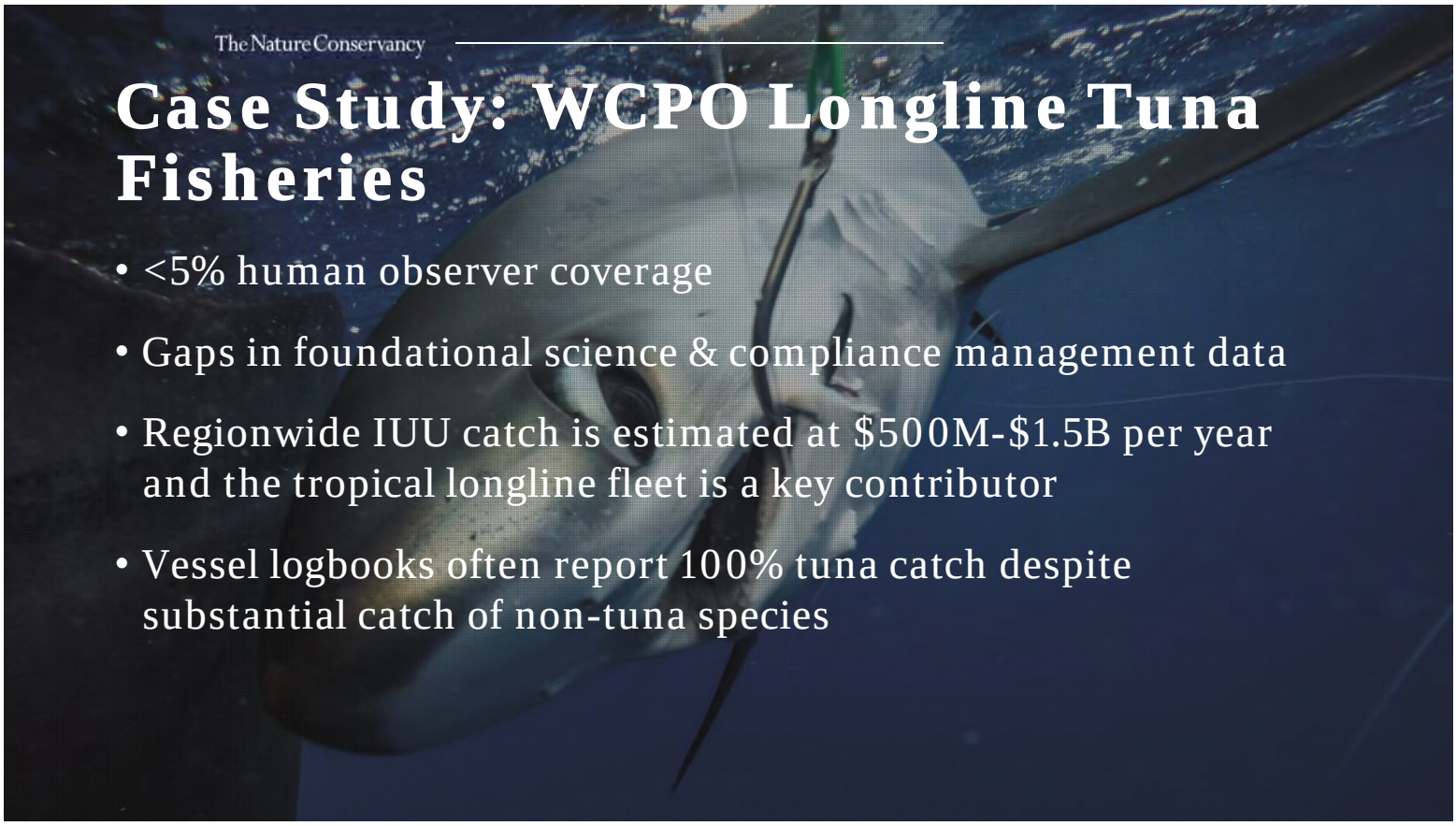
This can create challenges to accurate data collection:

- Safety risks
- Limited hours
- Susceptible to co-option/corruption
- Can be expensive
- Inability to scale in some geographies

The Nature Conservancy

E-Monitoring offers new prospects

- Video cameras, VMS & optional sensors that passively collect data on fishing vessel activities, including catch and effort.
- Numerous trials have demonstrated robust efficacy relative to human observers.
- E-Monitoring has been executed at scale (i.e., Australia longline, British Columbia Groundfish).
- Current E-Monitoring systems are "minimum viable products". There are substantial gains to be made their cost & functionality.



The Nature Conservancy

Case Study: WCPO Longline Tuna Fisheries

- <5% human observer coverage
- Gaps in foundational science & compliance management data
- Regionwide IUU catch is estimated at $500M-$1.5B per year and the tropical longline fleet is a key contributor
- Vessel logbooks often report 100% tuna catch despite substantial catch of non-tuna species

The Nature Conservancy

Sub-Regional Longline E-Monitoring Project

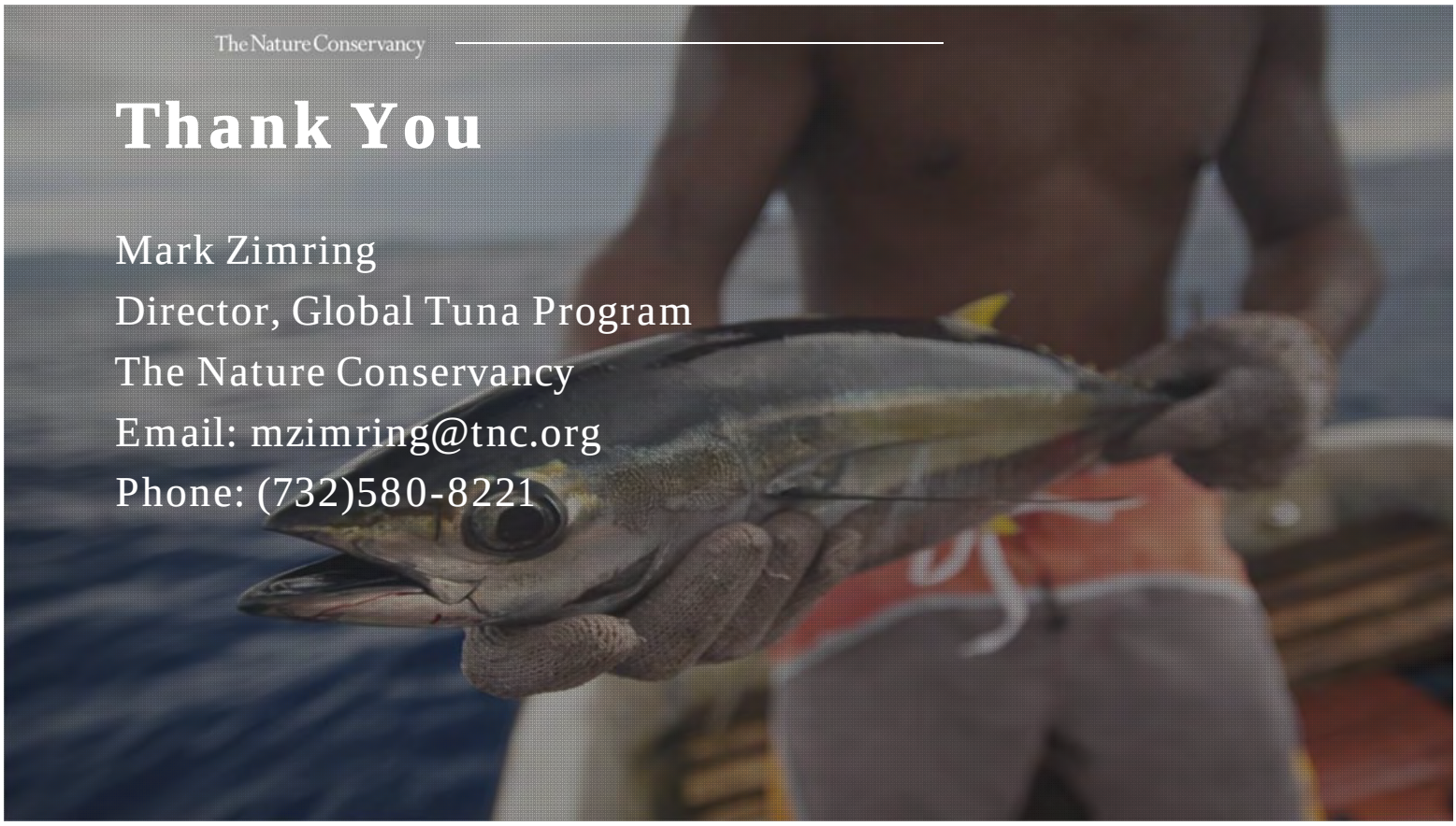
- Coordinated sub-regional longline e-monitoring project
- 26 total systems across Palau, Federated States of Micronesia, Republic of the Marshall Islands, and Solomon Islands
- Cooperation from a range of fishing companies, including those flagged to Japan, Taiwan and China

Kaggle Computer Vision Competition

- Goal: Compress the time between a fishing event and when useful information is available about it
- $150K challenge for the data science community to develop computer vision tools to accelerate and automate e-monitoring data analysis
- Results:
  - 2293 competing teams
  - Plan to deploy winning algorithms this summer
- We're looking to spur the development of "innovation ecosystem"

Wide-Ranging Implications

- Fishery management
- Global trade policy
- Market-based transparency & traceability initiatives
- Enhanced supply chain & fishing industry efficiency


The Nature Conservancy
Thank You
Mark Zimring
Director, Global Tuna Program
The Nature Conservancy
Email: mzimring@tnc.org
Phone: (732)580-8221

Export, Local Fishers and Processors, Foundations, The Nature Conservancy, Government

Electronic data capture supporting seafood traceability, fishery management and business data needs

122+ Species of Snappers and Groupers, undocumented

3.9 ft

Etelis sp.

Giant ruby snapper

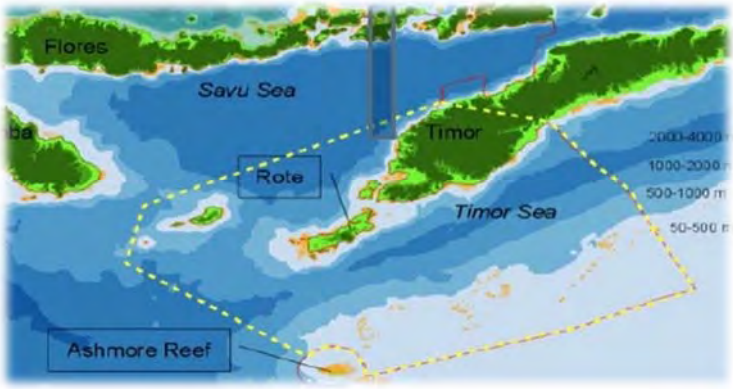
1.9 ft

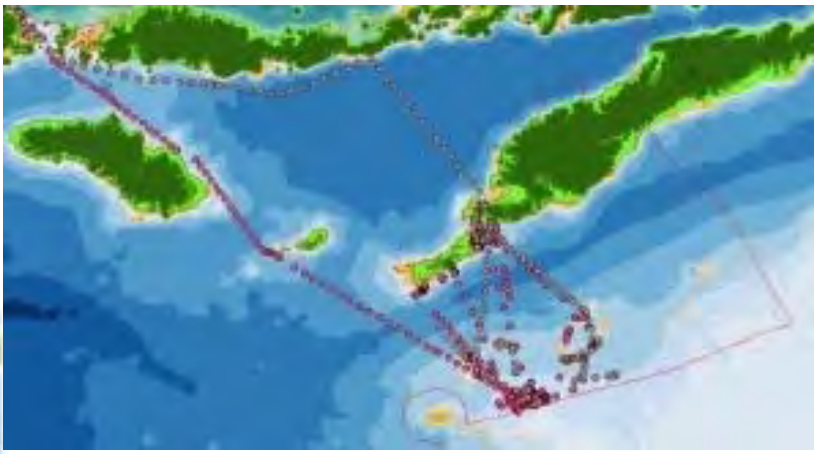
Etelis carbunculus

Ruby snapper

Unknown number of fishing vessels with little data on area & effort

Data Based Fishery Modeling and Management





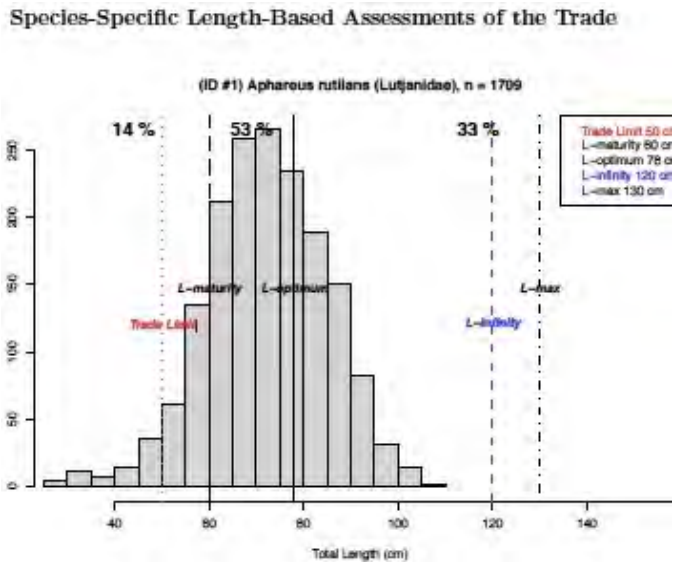
Integrating vessel tracking data with catch data improves understanding of fishing pressure, impact and potential solutions

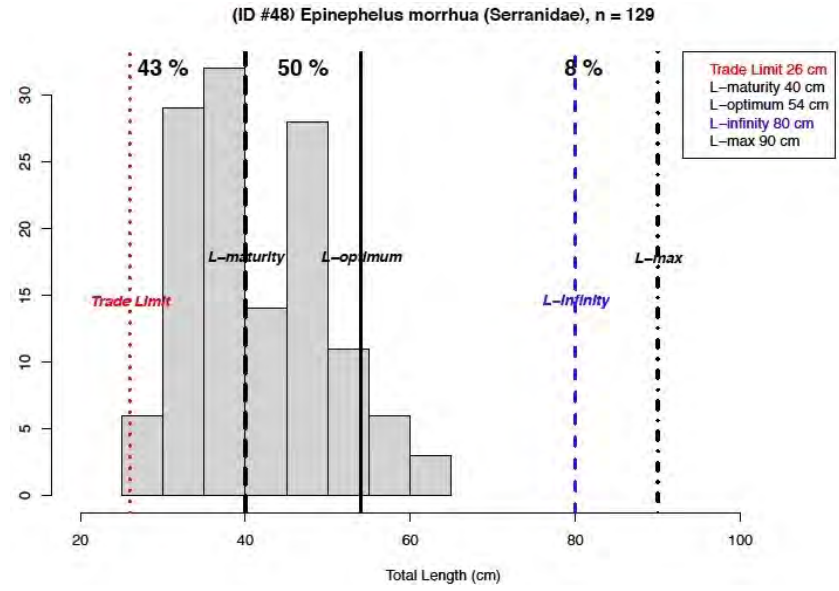
Implementing technology to capture and share Key Data Elements upstream and across platform in real time.

Integration data sharing across platforms reduces costs improves data access and timeliness

Data Based Fishery Modeling and Management

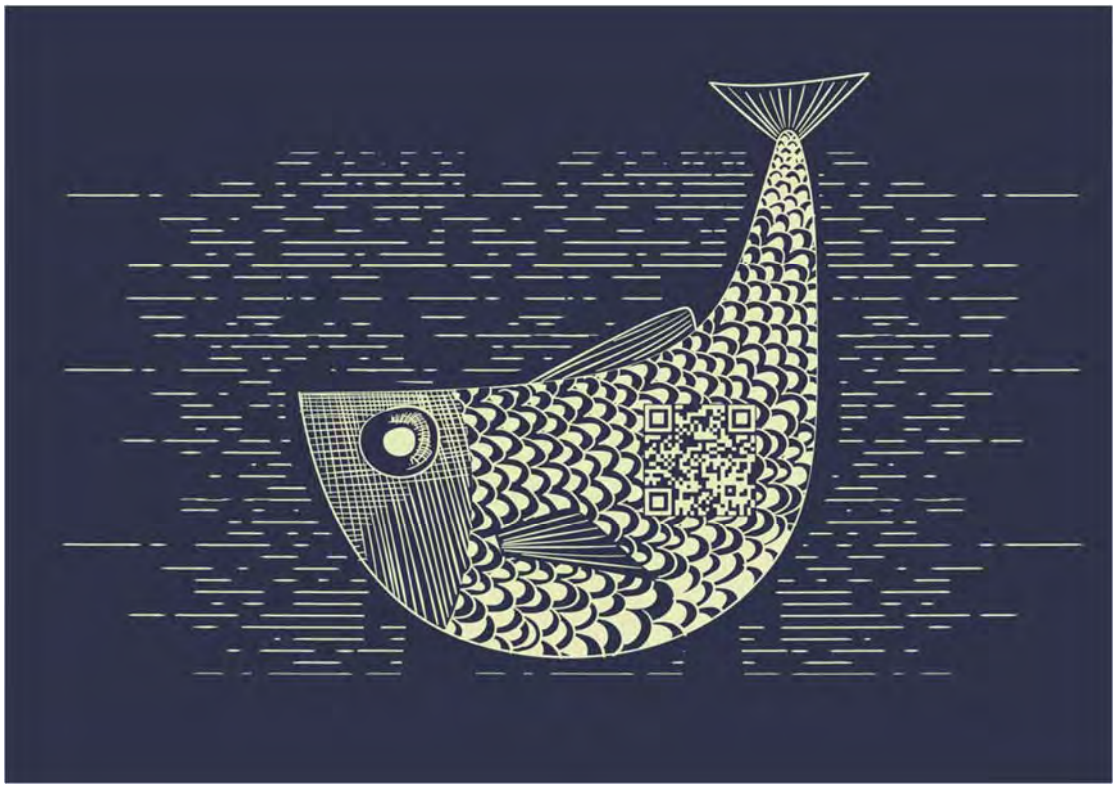
Species Specific Length-Based Assessment





Making It Traceable is Making it Real

Resent Consumer Surveys indicate a preference for Traceable Seafood over Certified Seafood. Storied Seafood is Value Added Product



イオンの方向性
「持続可能な水産物へシフトせよ」
〔養殖魚の場合〕

2017年４月１９日
イオン株式会社
グループ商品戦略
山本　泰幸

世界中から持続可能で安全な食材を調達

1.人々の食生活を支え、世界中から「安全」で、消費者の「安心」できる「裏付ある食材」を調達し継続的に提供する。
2.日本の生産者が国際基準を満たしている事を認識し、国際競争力ある日本産食材を世界に向け発信する。

キーワード：健康

健康の解釈：WHO憲章

健康の解釈に
精神的な側面が付加

自社：イオンの基本理念

お客さまを原点に
平和を追及し、
人間を尊重し、
地域社会に貢献する。

国の政策：健康日本２１

高齢化・生活習慣病増加
国が政策として
健康維持を推進

健康な 人
「健康WHO」
自由と安全が担保され
心身ともに健やかである

健康な 社会
「社会的責任」
多様性の歓迎、
自立・地域・文化の尊重

健康な 地球
「エコロジー」
多様性が維持できる
環境と多様な生態系の維持

2000年代	2010年代	2020年以降
・グリーンアイ水産物基準設定(2001) ・無投薬うなぎ販売開始(2002) ・サプライヤー取引行動規範制定(2003) ・ＭＳＣ認証導入(2006) ・TCGF GFSIに準拠した生産加工の工程管理を導入(2008) ・地域食文化を支えるフードアルチザン活動	・持続可能な調達原則制定(2014) ・ASC認証導入(2014) ・完全養殖マグロ販売開始(2016) ・フードロス店頭キャンペーン開始 ・東北復興支援商品販売開始 ・じものの日（地産池消）導入 ・サプライチェーン人権セミナー開催(2016)	新たな ライフ スタイル

イオンの水産物ブランド構造

「おいしさ」と
「安全・安心」は
絶対条件

グリーンアイ
ナチュラル
基準

トップバリュ
基準

水産資源に配慮
・ASC認証
・MSC認証
・完全養殖 他

一般的な水産物

TOPVALU グリーンアイ natural

【グリーンアイ基準】
※TV要件に加えて、
・成長ホルモン剤
・抗菌剤
・抗生物質を不使用
⇒ノンケミカル

TOPVALU

【トップバリュ要件】
・工場調査認定
・COC適合
※COCとはCodeOfContact
・商品仕様書

asc　MSC認証

完全養殖
その他

「持続可能な養殖」
環境配慮型養殖

「持続可能な漁業」
環境配慮型漁業

「鮮度＋鮮度感＋ローカル」
新鮮・旬・シズル感・地物・ライブ感

「安全・安心」
衛生面・コンプライアンス、
環境、社会面の基本的な取組

養殖水産物のリスク対応

イオンでは、天然資源を利用する漁業の持続可能な裏付けとして、ASC認証商品を積極的に販売。
消費者への情報提供および店舗による啓蒙活動を実施。

人権・労働課題

- 国内労働法・ILO条約順守
- 教育、職務体系、労働慣行や安全・衛生管理
- 教育体系の整備、人材育成
- サプライチェーン上の人権・労働問題（児童労働、外国人労働者、等）

動物の健康とアニマルウェルフェア

- 国内法規、FAO健康管理技術ガイドライン・OIE関連基準の健康管理プログラム
- 動物・遺伝物質移動による病気の移入伝染防止
- アニマルウエルフェア

食品安全

- 投薬の規制、管理
- フードテロ、フードフラウドといった食品リスクに対応
- 汚染リスク回避(農薬、化学物質、生物的汚染)
- トレーサビリティ.記録保管

環境

- 土壌管理、水質管理、廃棄物管理、CO2削減、生態系への配慮など
- 養殖の環境側面の要求事項網羅。

イオン持続可能な調達原則

イオン持続可能な調達原則

1. 自然資源の違法な取引・採取・漁獲を排除します。
2. 生物多様性保全、自然資源枯渇防止の観点で、イオン基準を設定・運用します。
3. 再生不可能な資源の利用については、最小限に留めます。
4. 農産物や漁業資源の産地、漁獲方法などのトレーサビリティを確立します。
5. 林産物において、保護価値の高い森林の破壊を防止します。

イオン水産物調達方針

資源の枯渇防止と生物多様性保全の観点から、定期的にリスク評価を行います。また、リスク低減のために、実行可能な対策を検討し、持続可能な水産物の調達に努めます。

〔2014年2月公表〕

取り組み

持続可能な商品の販売

- GSSIにベースに、持続可能な認証基準を採用
- MSC・ASC認証商品の積極的な販売
- 持続可能な生産技術の開発を支援
- 漁業改善プロジェクト（FIP）の支援

トレーサビリティの確立

- リスクの高いエリア・魚種の調達は、トレーサビリティ可能な水産物を優先的に取扱う。
- ASC認証を裏付けとするトレースバックの仕組み
- ｲｵﾝｻﾌﾟﾗｲﾔｰ行動規範による人権・労働課題解決

違法な取引の排除

- ワシントン条約などの国際条約の順守
- IUU漁業から漁獲されたものの非販売
- 人権・労働課題に関与しない商品の取扱い

定期的なリスク評価

- 組織を発足し、リスク評価を実施、取組の優先順位を特定している。
- 取組み改善、定量的評価への移行

水産物の持続可能な調達のための組織 〔2014年下期～〕

アセスメント会議 101 持続可能な調達推進委員会

世界の人が認める「国際基準」の「国産素材」で作る「和食」を

年間のべ36億人の日本国内＆13か国で展開するイオンのお店のお客さまに世界で通用する国際基準の国産原材料で作る「和食」「日本食」を提供

生産者とイオンによる取り組み

＊オーガニック
[国産農産物 2019 年 60 億計画]
[和食素材 (加工品) 種類豊富]

＊食品リサイクルループ
[店残渣⇒堆肥⇒直営農場]

＊ASC 認証
[2019 年 ASC・MSC・オーガニックのおすし完成]

＊MSC 認証
[2006 年開始。10 年間のノウハウ]

＊GLOBAL G.A.P.
[2015 年直営農場取得。パートナへの指導]

＊放射性物質
[震災後継続検査。データ蓄積]

＊生産履歴 DB システム
[青果物簡易記帳システム]

＊イオンサプライヤー行動規範
[第三者監査 3000 か所]

＊ハラル認証
[2016 年 3 月ハラル食品常設]

＊フェアトレード
[2014 年国際フェアトレード調達プログラム]

2020年 「ヘルス＆ウエルネス」

お客さまの「Healthy （身体的健康）」と
「Well-being（精神的な、そして社会と地球の健康）」を追求し
「Happiness（幸福感）」を実現する「ヘルス＆ウェルネス」のリーディング企業に

ウエルビーイング (グリーンアイ)

オーガニック(食品・化粧品・繊維 製品)
グローバルなオーガニック認証商品

ナチュラル(生鮮・卵)
オーガニック転換期間中の野菜・果物
抗生物質、成長ホルモン不使用の肉・魚、平飼いの卵

フリーフロム （加工品、H&BC)
お客さまが気にされる添加物・原材料に配慮した商品

生産・調達方法
サスティナブル・エシカル・エコロジー
(ﾌｪｱﾄﾚｰﾄﾞMSC・ASC・FSC・ﾚｲﾝﾌｫﾚｽﾄ・動物保護など)

セルフメディケーション

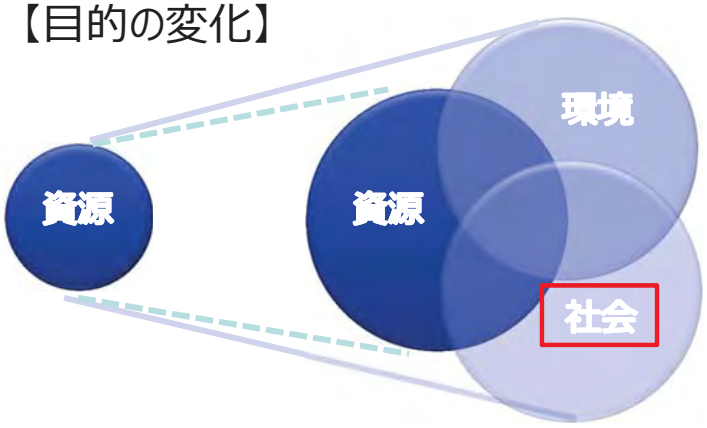
特定保健用食品 栄養機能食品 (ビタミン・ミネラル等) 機能性表示食品 (ｻﾌﾟﾘﾒﾝﾄ・加工食品等) 医薬部外品	スポーツソリューション
なくす・へらす (カロリー・塩分・脂肪酸など) おぎなう (ビタミン・カルシウム・タンパク質・ミネラル)	身体のケア
健康ニーズ対応食品	リラクシング （衣・住・H&BC）
スーパーフード	
メディケア食品	シニアサポート

イオンのASC認証拡大の意図

【テーマ】

- 水産サプライチェーンにおけるトレーサビリティ・持続可能性を確保
- 「(裏付けある=ASC認証制度)サステナブルシーフード」へシフト

【目的の変化】



【手段】

ASCによる「規範・法令遵守」「トレーサビリティ」「チェック監査」体制確立

生産者・加工	流通・小売	消費者
1. 水産資源管理 2. 環境保全 3. 人権・労働問題 4. トレーサビリティの向上 5. 企業の社会的責任への貢献	取り組みの可視化 裏付け・担保	消費者へ説明 消費者の理解

完全なトレーサビリティ　資源／環境／人権　諸項目の状況把握

人権・労働問題解決策

《水産物の、発覚している人権問題》

＊1 (2014.6英国ガーディアン報道)
【タイの漁船の奴隷労働】
飼料用の安価な小魚・雑魚を漁獲する漁船上。公海上で操業
ﾐｬﾝﾏｰ・ｶﾝﾎﾞｼﾞｱ出身移住労働者を人身売買により確保。奴隷扱いの労働

＊2(2015.12　AP通信報道)
【タイのえび工場の児童・強制労働】
えびの殻むき工場で、ﾐｬﾝﾏｰ出身移住労働者の中に児童が含まれていた。大人も悪環境の中強制労働を課せられていた。

＊3
【外国人研修生・技能実習制度】
安い労働力の確保の手段となっている。人権ＮＧＯ調査の調査等で、北関東(農業?)、西日本(水産?)等問題が発覚。米国で人権問題と指摘。

《サプライチェーン（養殖）》

親魚漁獲(漁船) → 集荷運搬 → 種苗生産 ﾊｯﾁｪﾘｰ
＊1 漁獲(漁船) → 集荷運搬 → 工場 魚粉飼料
→ 養殖 → 水揚運搬 → ＊2 工場 1次処理(殻むき) → 工場 製品冷凍 → 運搬 輸出 → ＊3 工場(最終製品)

《トップバリュの現状レベル》
トレースバック不可 → 生鮮○ 加工× → イオンCoC遵守宣言

《サプライチェーン（天然）》

漁獲(漁船) → 加工(船内) → 集荷 水揚 運搬 → 工場 1次処理 → 工場 製品冷凍 → 運搬 輸出 → 工場(最終製品)

水産物の人権・労働問題解決策（養殖魚）

《イオンのサプライチェーン上の資源・環境・人権問題の解決手段》

親魚漁獲（漁船） → 集荷運搬 → 種苗生産 → 養殖 → 水揚運搬 → 工場1次処理 → 製品工場 → 運搬輸出 → 組立工場包装

* 漁獲（漁船） → 集荷運搬 → 工場魚粉飼料

ASC　イオンサプライヤー行動規範　ASC-CoC [+α(人権労働)]

＊「ASC責任ある飼料規格基準」2017発行予定、それまではトレースバックの確認

完全なトレーサビリティ　資源／環境／人権　諸項目の状況把握

ASC

責任を持って運営されているか評価する⇒認証制度
[要求事項(７原則)]
１:包括的な法令順守
２:自然環境と生物多様性の保護
３:水資源の保全
４:逃亡を避けることによる種の多様性及び野生生物の保護
５:責任ある調達による餌と資材の利用
６:動物の健全性
（抗生物質と化学薬品の不必要な使用　をしない）
７:養殖場によって影響を受ける労働者と地域社会に対する社会的責任（例 児童労働の不可、労働者の健康と安全、結社の自由、地域社会との関係 ）

第3者認証　年次監査

イオン取引行動規範（イオンCoC）

[要求事項] 法令順守（製造・調達を行う国において法的に定められている、社会的責任標準に適合する。
１：児童労働　２：強制労働
３：安全衛生および健康
４：結社の自由および団体交渉の権利
５：差別　６：懲罰　７：労働時間
８：賃金および福利厚生　９：経営責任　１０：環境
１１：商取引　１２：認証・監査　１３：贈答禁止

第3者認証／2者監査

ASC認証の取組み『生アトランティックサーモン』

2014年2月、アジア・日本初となるＡＳＣ認証商品として販売開始

トップバリュ生アトランティックサーモン

アトランティックサーモンの養殖場の様子

- 冷たい北極海域で、大型の魚になるまで育て、臭みが少ないサーモンです。
- 養殖場周辺の環境保全のため、水質及び養分放出の調査を実施。
- 病害虫を予防し、化学薬品等の投薬を３種に限定。
- 天然魚への影響がでないように、養殖場からの魚の脱走を防止。

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日本発の技術：完全養殖クロマ

2015年6月、ＰＢ商品では初となる完全養殖クロマグロを発売。

トップバリュ　グリーンアイ　奄美うまれ生本まぐろ

- 親を天然の資源に頼らない完全養殖。
- エサには、加工品で使った残さやを規格外の魚も利用。資源の有効利用に配慮。
- 海底の水質検査等、奄美の自然環境を守るための取組を実施

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マーケットイニシアチブによる IUU対策とサステナビリティの追求

株式会社シーフードレガシー
代表取締役社長　花岡和佳男

シーフードレガシー

パートナーシップによる、持続する豊かな海の実現

私たちシーフードレガシーが目指すのは、豊かな海に子供達が夢と探究心を抱き、多様な水産物が並ぶ食卓を囲む家族に笑顔が溢れ、地域の沿岸漁業や海洋生態系サービスの恩恵を受ける関連産業に後継者が列をなし、母なる海に包まれ育つ幸せを全ての人が共有できる社会の実現です。

社名には、社会と海との繋がりを象徴する水産物（シーフード）を、豊かな状態で未来世代に継いでいきたい（レガシー）という想いが込められています。またロゴは、企業からNGOまで国内外の多様なステークホルダーが社会課題と当事者意識を共有し、輪（和）を生み重なりあって、自然、社会、ビジネスが持続できる解決策を共に生み出していく形をイメージしています。

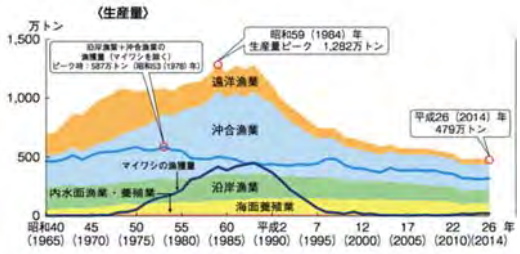
Designing Seafood sustainability in Japan, together

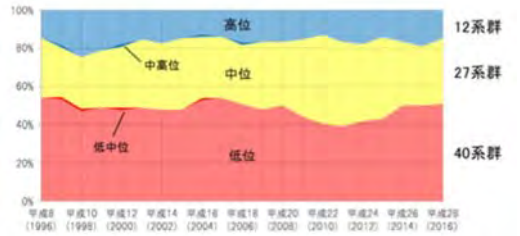
海洋環境における社会課題がますます複雑化・多様化してきている今日、行政を巻き込み社会課題を解決する鍵を握るのはビジネスであり、そのビジネスの成長を形作り支えるのがNGOの活動であるとの考えから、2015年7月、株式会社シーフードレガシーを設立しました。

当社は、持続する豊かな海を実現するために、企業に対しては水産物のサステナブル調達のサポートを、NGOには活動のサポートを行い、両者を戦略的にネットワーキング。多くの海外事例に学びつつ、日本のビジネススタイルに適した解決策を共に形作ることで、持続する豊かな海を実現していきます。

写真：シーフードレガシーが日経エコロジーと開催した
東京サステナブル・シーフード・シンポジウム「魚から考える日本の挑戦 2016」より

水産業
世界の成長/日本の衰退





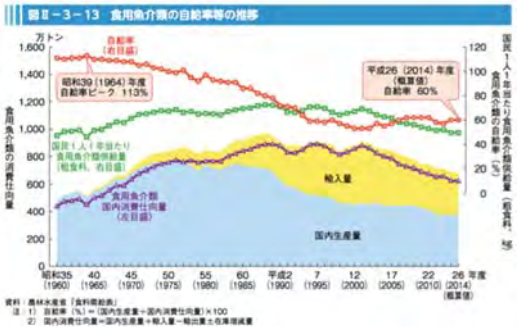


TABLE 3.1: Projected Total Fish Production by Region

	DATA (000 TONS)	PROJECTION (000 TONS)			SHARE IN GLOBAL TOTAL		% CHANGE
	2008	2010	2020	2030	2010 (PROJECTION)	2030 (PROJECTION)	2010–30
Global total	142,285	151,129	172,035	186,842	100.0%	100.0%	23.6%
ECA	14,564	14,954	15,369	15,796	9.9%	8.5%	5.6%
NAM	6,064	6,226	6,319	6,472	4.1%	3.5%	3.9%
LAC	17,427	19,743	20,957	21,829	13.1%	11.7%	10.6%
EAP	3,724	3,698	3,832	3,956	2.4%	2.1%	7.0%
CHN	49,224	52,482	62,546	68,910	34.7%	36.9%	31.4%
JAP	4,912	5,169	4,911	4,702	3.4%	2.5%	-9.0%
SEA	20,009	21,156	25,526	29,052	14.0%	15.6%	37.5%
SAR	6,815	7,548	9,210	9,975	5.0%	5.3%	32.1%
IND	7,589	7,940	10,346	12,731	5.3%	6.8%	60.4%
MNA	3,518	3,832	4,440	4,680	2.5%	2.5%	22.1%
AFR	5,614	5,692	5,865	5,936	3.8%	3.2%	4.3%
ROW	2,786	2,696	2,714	2,724	1.8%	1.5%	1.0%

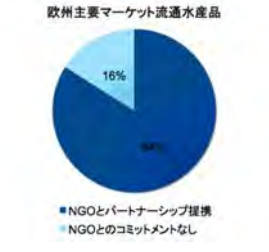
Sources: FishStat and IMPACT model projections.
Note: ECA = Europe and Central Asia; NAM = North America; LAC = Latin America and Caribbean; CHN = China; JAP = Japan; EAP = other East Asia and the Pacific; SEA = Southeast Asia; IND = India; SAR = other South Asia; MNA = Middle East and North Africa; AFR = Sub-Saharan Africa; ROW = rest of the world.

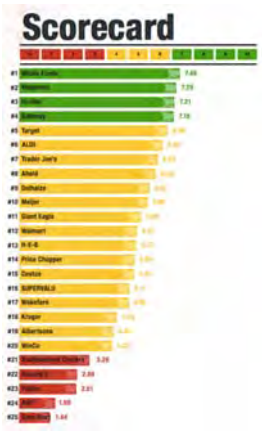
MAIN RESULTS OF THE FISH MODEL: COMPARISON 2025 VS 2013–15: PRODUCTION (LIVE WEIGHT EQUIVALENT)

	PRODUCTION			OF WHICH AQUACULTURE		
	AVERAGE 2013–15	2025	GROWTH OF 2025 VS 2013–15	AVERAGE 2013–15	2025	GROWTH OF 2025 VS 2013–15
	(Thousand tonnes)		(%)	(Thousand tonnes)		(%)
WORLD	166 889	195 911	17.4	73 305	101 768	38.8
DEVELOPED COUNTRIES	29 018	29 305	1.0	4 393	5 521	25.7
North America	6 582	6 617	0.5	584	717	22.9
Canada	1 020	1 011	–0.9	159	211	32.8
United States of America	5 562	5 606	0.8	425	506	19.1
Europe	16 637	17 362	4.4	2 911	3 737	28.4
European Union	6 654	6 810	2.3	1 273	1 385	8.9
Norway	3 586	4 263	18.9	1 325	1 963	48.1
Russian Federation	4 419	4 516	2.2	161	216	34.5
Oceania developed	778	815	4.8	183	237	29.5
Australia	228	229	0.4	76	91	20.6
New Zealand	550	586	6.5	108	146	35.8
Other developed	5 022	4 510	–10.2	716	830	15.9
Japan	4 318	3 728	–13.7	651	743	14.1
South Africa	549	601	9.5	4	4	–1.5
DEVELOPING COUNTRIES	137 871	166 606	20.8	68 911	96 247	39.7

http://www.jfa.maff.go.jp/j/kikaku/wpaper/H27/pdf/27suisan1-2-2.pdf
http://www.jfa.maff.go.jp/j/press/sigen/161028.html
http://www.jfa.maff.go.jp/j/kikaku/wpaper/H27/pdf/27suisan1-2-3.pdf
http://documents.worldbank.org/curated/en/458631468152376668/pdf/831770WP0P11260ES003000Fish0to02030.pdf
http://www.fao.org/3/a-i5555e.pdf

水産業成長の鍵
サステナビリティ進むマーケットイニシアチブ





NGO・メディア:
消費者を含むステイクホルダーへの啓蒙活動・情報提供

水産関連ビジネス
専門組織との連携で生産・調達を改善
- 国際基準の認証や改善プロジェクトの商品を優先調達
- IUUや過剰漁獲される種の商品を排除・減少

政治・行政:
独立科学と予防原則に準ずる資源や貿易の管理

http://cato.greenpeaceusa.org/Carting-Away-the-Oceans-9.pdf

水産ビジネスの
サステナビリティを脅かす
IUU（違法・無報告・無規制）漁業

持続可能な漁業とIUU漁業対策を徹底することで、世界の漁業は年間740億ドルの伸びしろがある。

2015年、奴隷労働に関与するタイの加工業者の製品が主要小売へ出荷されているスキャンダルが、ジャーナリストによって暴露。マーズ、P&G、ネスレ、コストコなど多くの大企業が、企業自体が奴隷労働に直接関与しているわけではないにも関わらず、奴隷労働に関与した商品を消費者に提供したとして、消費者から集団訴訟を起こされた。

国内需要の90%を輸入に頼る米国では、IUU由来の製品を国内市場から排除する動きを始め、非持続的な漁業を促進する補助金を排除。資源を保護しながら国産水産物のシェアを伸ばしている。

5

http://www.wsj.com/articles/working-toward-sustainable-global-fisheries-1435162817
http://encouragecapital.com/wp-content/uploads/2016/01/Executive_Summary_FINAL_1-11-16.pdf
http://www.fishwatch.gov/sustainable-seafood/by-the-numbers
https://www.undercurrentnews.com/2015/09/22/costco-faces-new-slavery-related-investigation/

水産ビジネスの
サステナビリティ担保の肝：
トレーサビリティの確立

調達方針の策定と公開

サステナビリティやトレーサビリティに関する調達方針をサプライチェーン上の多種ステイクホルダーと共有します。

漁獲水域から店頭まで

調達元が不明確な点、原料となる魚介類が不特定な点、奴隷労働や人権侵害に関与する可能性などの問題点を洗い出します。問題性のあるサプライヤーとの取引を直ちに中止することではなく、その取引先や多種ステイクホルダーと協力して改善に取り組むことが重要です。

情報の標準化と電子化

食品流通のグローバル化に伴うサプライチェーンの複雑化が進む中、口頭や紙面ベースでの情報伝達では限界があります。専門組織や社内外のIT技術との連携のもと、情報の標準化と電子化を行います。

情報の検証と担保

第三者による情報の検証と担保を行うメカニズムの構築が不可欠です。海洋管理協議会(MSC)などトレーサビリティを第三者専門機関が担保する認証商品の優先的調達や、専門組織とのパートナーシップの構築が、この要素を完備する手段として挙げられます。

情報の透明化

消費者やバイヤーに責任ある選択ができる手段を提供し健全なマーケットを構築していく上でも、また万が一の際に企業リスクを最小限に留めるためにも、関連企業は調達方針及びトレーサビリティ情報の開示体制を準備し、可能な範囲で公開することが重要です。

6

日本でも進む
マーケットイニシアチブ

2020東京オリパラ開催に向けて

- 国際基準の認証や改善プロジェクトの商品を優先調達
- IUUや過剰漁獲される種の商品を排除・減少
- トレーサビリティを確立
- 水産関連以外のビジネスも

株式会社シーフードレガシー
www.seafoodlegacy.com
www.facebook.com/seafoodlegacy/

代表取締役社長　花岡和佳男
wakao.hanaoka@seafoodlegacy.com
www.facebook.com/whanaoka

Session 4

Use of fisheries certification and labels to promote fisheries transparency and sustainable fisheries

Dr. Mitsutaku Makino

Mr. Josh Madeira

Mr. Kozo Ishii

Mr. Naoya Kakizoe

Prof. Isao Sakaguchi

Session 4: Biography

Dr. Mitsutaku Makino, Head, Fisheries Policy Research Group, FRA National Research Institute of Fisheries Science

Dr. Mitsutaku Makino graduated from Department of Fisheries, Faculty of Agriculture at Kyoto University and completed a Master's degree at University of Cambridge. He has received his PhD from Kyoto University. He is currently appointed to a number of positions, including: Vice-Chairman of the Human Dimension Committee at North Pacific Marine Science Organization (PICES), a member of the IUCN Fisheries Expert Group, an Editorial Board Member of the ICES Journal of Marine Science, a member of Shiretoko World Natural Heritage Site Scientific Council, a member of Fisheries Policy Committee at the Japanese Society of Fisheries Science, a member of the Science Committee at the Japan Society of Ocean Policy, Executive Director of the Japan Society of Fisheries Economics, and Visiting Associate Professor at Tokyo University of Marine Science and Technology. Dr. Makino specializes in fisheries and ocean policy science. His major publications include Fisheries Management in Japan (2011, Springer) and Analysis of Japanese Fisheries Systems (2013, Kouseisha-kouseikaku in Japanese).

Mr. Josh Madeira, Federal Policy Manager, Monterey Bay Aquarium

Mr. Josh Madeira is the Federal Policy Manager at the Monterey Bay Aquarium. Josh formulates policy positions, provides strategic guidance and builds partnerships to advance the aquarium's ocean conservation mission, with a focus on sustainable fisheries and aquaculture in the United States and internationally. In this capacity, Josh works closely with the Aquarium's Seafood Watch Program – a global leader in evaluating seafood sustainability.

Before joining the aquarium, Josh led government outreach and advised U.S. ocean conservation campaigns for The Pew Charitable Trusts in Washington, D.C. Prior to Pew, he served as a fellow on the Committee on Natural Resources in the U.S. House of Representatives.

Mr. Kozo Ishii, Program Director, MSC Japan Office

Mr. Kozo Ishii graduated from National Fisheries University. After working at various businesses including a food company, he completed a Master of Public Affairs (MPA) in Environmental Policy and Natural Resource Management at Indiana University. After graduation, Mr. Ishii was involved in projects on regional development and resource conservation in developing countries as Senior Researcher of the International Development Center of Japan. Mr. Ishii joined Marine Stewardship Council (MSC) Japan as Program Director when it was founded in May 2007, and since then he has dedicated to the promotion of the MSC certification and ecolabelling schemes in Japan. The MSC is an international non-profit organization promoting sustainable and environmentally conscious fisheries through certification and ecolabelling schemes to contribute to the preservation and recovery of globally declining fisheries resources. Currently, the total catch of MSC certified fisheries accounts for approximately 10% of the world's marine capture production for human consumption.

Mr. Naoya Kakizoe, President, Marine Eco-Label Japan Council

Mr. Naoya Kakizoe was born in Osaka in 1938. Mr. Kakizoe graduated from Tokyo University of Fisheries in manufacturing science and joined Nippon Suisan Kaisha, Ltd. in 1961. He has held various positions there, including: Director, Managing Director, Representative and Executive Director, President & CEO and Senior Advisor until his retirement in 2014. During his late career, Mr. Kakizoe also served as Chairperson for a number of associations, including: the Association for the Safety of Imported Food, Japan (ASIF), the Japan Frozen Food Association, the Japan Association of Refrigerated Warehouses and the Food Industry Central Association. He also served as External Director for Tokyo University of Marine Science and Technology. Since 2016, Mr. Kakizoe serves as President of Marine Eco-Label (MEL) Japan.

Prof. Isao Sakaguchi, Gakushuin University

Dr. Isao Sakaguchi is professor of the Faculty of Law at Gakushuin University and visiting scholar at the Middlebury Institute of International Studies at Monterey. He is a specialist of global environmental governance and has devoted himself to research on fisheries governance and seafood sustainability.

He approaches to overfishing from both top-down public regulation by governments and intergovernmental organizations and bottom-up private sustainability schemes such as MSC and Seafood Watch. Attending annual meetings of all five tuna management bodies including WCPFC, IATTC and ICCAT for years, he built a fisheries negotiation model that demonstrated importance of introducing harvest control measures in a precautionary manner when stock status is still healthy.

Very recently he has published a series of 15 articles at The Minato Shinbun on a variety of private seafood sustainability schemes in order to better guide nascent Japanese sustainable seafood market before Tokyo Olympic and Paralympic Games 2020.

Session 4: Abstract

Dr. Mitsutaku Makino, Head, Fisheries Policy Research Group, FRA National Research Institute of Fisheries Science

Information sharing by a national research institute and compendium of research needs by consumers: Introduction to the Japan Fisheries Research and Education Agency (FRA) SH"U"N project

The Sustainable, Healthy, and Umai[1] Nippon (SH"U"N) seafood project is an information-sharing project to be launched by the Japan Fisheries Research and Education Agency (FRA) as part of its outreach efforts. The project will evaluate seafood sold on Japanese markets based on four criteria: (1) the status of fish stocks, (2) consideration given to the marine ecosystems and the environment, (3) management of fisheries and (4) local sustainability. The results of this evaluation will be released to the public together with health and food safety-related information. All of the data and analysis that were used in evaluations of each criteria as well as results of the evaluation by members of an external review committee will also be published. The FRA expects local organizations and private sector businesses to utilize this information when applying for seafood certification and/or developing plans for boosting the sustainability of fisheries resources. A smart phone application for consumers is also under development. This application incorporates functionality to support the search and display of both seafood products recommended on the basis of the project evaluation results and purchase records. User data collected by this application will serve an important source of information in assessing consumer interest in seafood consumption and determining future research needs and will be used by FRA in developing mid to long-term plans.

Key words: research outreach, information disclosure, seafood certification, consumer needs

Mr. Josh Madeira, Federal Policy Manager, Monterey Bay Aquarium

Monterey Bay Aquarium's Seafood Watch Program began over 15 years ago to inform U.S. consumers on the sustainability of seafood products and influence their purchasing decisions. The program grew rapidly over the years, and today includes science-based sustainability recommendations for over 85% of seafood products (by volume) on the North American market. Seafood Watch relies on a strong foundation of science, consumer outreach and business partnerships to leverage market influence and drive sustainability improvements throughout the global supply chain. Illegal, unreported and unregulated (IUU) fishing poses

[1] *Umai* is a Japanese word meaning something tastes good.

serious threats to markets-based conservation strategies, governance and long-term ocean health. A diversity of approaches is necessary address IUU fishing, and there is a role for seafood certification and ratings programs to encourage transparency through industry commitments, partnerships and traceability improvements. Seafood Watch is engaged in a number of global initiatives to encourage transparency and traceability, and there are many opportunities to expand global coordination to combat IUU fishing.

Mr. Kozo Ishii, Program Director, MSC Japan Office

"Overview of MSC certification system and its contribution as an IUU fishing countermeasure"

Marine Stewardship Council (MSC)'s certification and eco-label system aim to popularize the concept of sustainable fisheries by displaying an MSC eco-label on seafood products that are responsibly harvested from a certified sustainable fisheries and encouraging consumers to selectively purchase seafood products bearing the eco-label.

There are two types of MSC certification: Fisheries Certification to certify sustainable fisheries and Chain of Custody (CoC) certification to minimize the risk of certified seafood products becoming undistinguishable with non-certified products during the distribution process. Fisheries engaged in IUU activities cannot be certified, and businesses that have dealings with IUU-related fisheries cannot gain the CoC certification. Because the supply chain of products that bear the MSC eco-label must be traced all the way to the source fishery under the CoC certification system, the system itself serves as a countermeasure against IUU fishing.

Key words: MSC certification system, MSC eco-label, fisheries certification, Chain of Custody (CoC) certification, traceability, sustainable fisheries

Mr. Naoya Kakizoe, President, Marine Eco-label Japan Council

Marine Eco-Label (MEL) Japan was first established in 2007 as a division within Japan Fisheries Association. In the past 10 years since its establishment, we have issued certificates to 76 fisheries and related businesses, but the amount of production by the MEL-certified fisheries remains at 4.5% of the total fishery production in Japan.

For the Japanese fisheries industry to respond to the demand from the public and bring about a new development to the industry, development of a marine eco-label that is understood by the public and has the world-standard transparency and reliability is essential. Based on this idea, Marine Eco-Label Japan Council was established in December 2016 and an initiative was launched to develop a certification system that meets international standards as well as

maintains the diversity in Japanese fisheries industry, which also covers fisheries, aquaculture, and processing and distribution.

MEL Japan Council is committed to contribute to expansion and deepening of Japanese food culture through conservation of nature and sustainable use of marine resources in collaboration with all stakeholders.

Key words:

1. To maintain diversity that characterizes Japanese fisheries industry
2. To protect Japanese food culture that is supported by diversity
3. To develop a system capable of garnering the understanding and participation of consumers and the Japanese public

Prof. Isao Sakaguchi, Professor, Gakushuin University, Visiting Scholar, Middlebury Institute of International Studies at Monterey

Among the private initiatives that have sprung up as an attempt to fill gaps in government regulation are international certification systems such as Marine Stewardship Council (MSC) and Aquaculture Stewardship Council (ASC) and seafood evaluation systems such as Seafood Watch. These initiatives have gained such popularity among major retailers in the US and Europe that they cannot be ignored by regulators and the fishing industry.

In Japan, the popularity of international certification systems has not kept pace with that of other countries, but changes are taking place in the lead-up to the Tokyo Olympic games, as indicated by the declaration that AEON will seek MSC and ASC certification for all seafood sold. Meanwhile, the number of fisheries certified under competing local certification systems such as Marine Eco Label (MEL) and Aquaculture Eco Label (AEL) is increasing rapidly, and a Japanese version of Seafood Watch, known as the SHUN Project, is currently preparing for launch. Yet, these local certification systems all have challenges to overcome in terms of stringency of their standards, and transparency and independence in assessment processes.

Competition between multiple certification systems should prove beneficial in the long run to the development of sustainable seafood markets. Constructive intervention by external stakeholders (such as the government, the Food and Agriculture Organization (FAO) of the United Nations, NGOs the private sector), a concept also known as meta-governance, will also prove important.

Key words: International certification system, seafood evaluation system, Tokyo Olympic games, FAO, meta-governance

国立研究開発法人
水産研究・教育機構

国立研究機関からの情報発信と消費者からの研究ニーズ収集：水産機構 SH“U”Nプロジェクト について

牧野光琢
（まきの　みつたく）

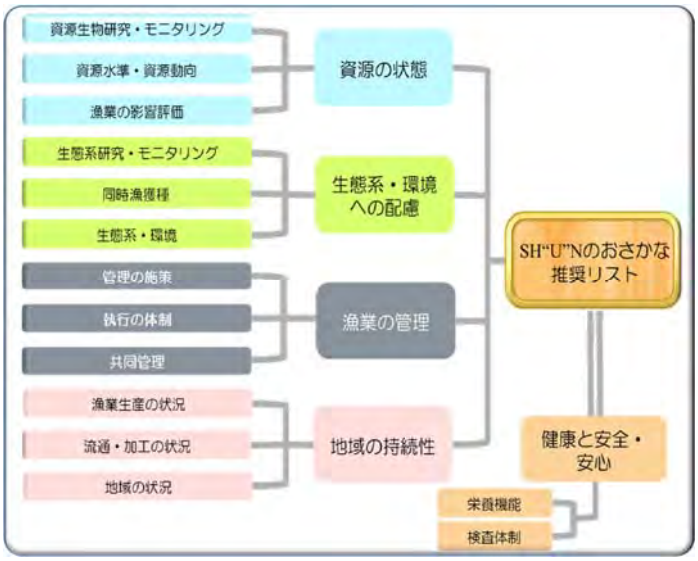
Sustainable, Healthy and “Umai” Nippon seafood

「持続して利用できる、健康によく“うまい”日本の魚」

資源や漁獲の状況、漁業管理などの情報を、魚種ごと、生産地ごとにまとめて、消費者のみなさまに理解していただくためのしくみです。また、水産物を購入するときに参考になる健康と安全・安心に関するや、旬の情報も加え、自然と体に優しいおさかな選びのガイドとなる「おさかな推奨リスト」も提供します。

自然と人間のかかわり全体を持続的に守っていく

- 資源とは「自然-人間-文化の相互作用からうまれるもの」（Zimmermann 1933）。
- 自然界にいくらたくさんのさかな（魚介類）がいても、それだけでは「水産資源」ではない。
- わたしたちの社会が、その価値を認め、漁獲し、加工・流通し、消費することによってはじめて「水産資源になる」。
- 消費者のみなさまにも、水産資源の状況を知っていただき、理解したうえで、“うまい”さかなをえらんで食べていただきたいというのが、わたくしたちの思いです。



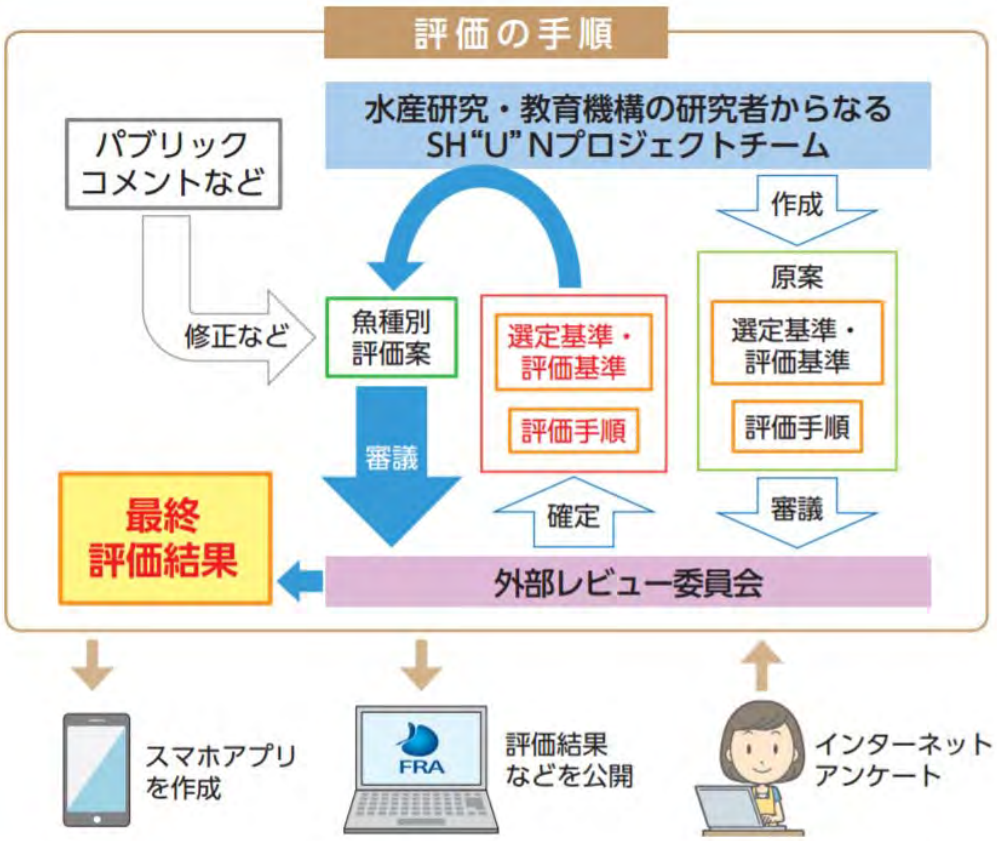
資源の状態　十分な調査研究がなされているか，海の中にどれくらいいるのか，増えているのか減っているのか，持続的な利用のために透明で適正な評価システムが確立されているか，などを評価

生態系・環境への配慮　生態系の仕組みを意識しつつ、漁業が他の生物や海洋生態系全体ならびに環境に与える影響について評価

漁業の管理　地域の漁業者と政府が協力して水産資源を管理するための工夫や、そこで行われている管理の内容について評価

地域の持続性　地域に根付く多様な水産文化を守り継承していく基盤である、日本各地の地域社会の持続性を評価

健康と安全・安心　栄養機能や、安全性に関する検査体制などの情報。



http://sh-u-n.fra.go.jp/

- 各評価に使用したすべてのデータ・解析結果や外部レビュー委員による評価結果等を公開いたします。
- 今後、各地の団体や企業等が水産認証に申請する際、あるいは地域の持続性を高めるための各種計画・戦略を立案する際などに、これらの情報が活用されることを期待しています。


SH"U"N
暫定公開版
サスティナブルでヘルシーなうまい日本の魚プロジェクト
Sustainable, Healthy and "Umai" Nippon seafood project
さかな検索
あなたの注目度
ホーム
SH"U"Nとは
お知らせ
用語集
お問い合わせ
さかな検索
海面漁船漁業を中心に評価作業優先順位を決定し、四季に対応して魚次魚種毎の評価結果を公表しています。
テキスト検索
アオギス
マアジ
マイワシ
マサバ
地域から選ぶ
魚名一覧
国立研究開発法人 水産研究・教育機構
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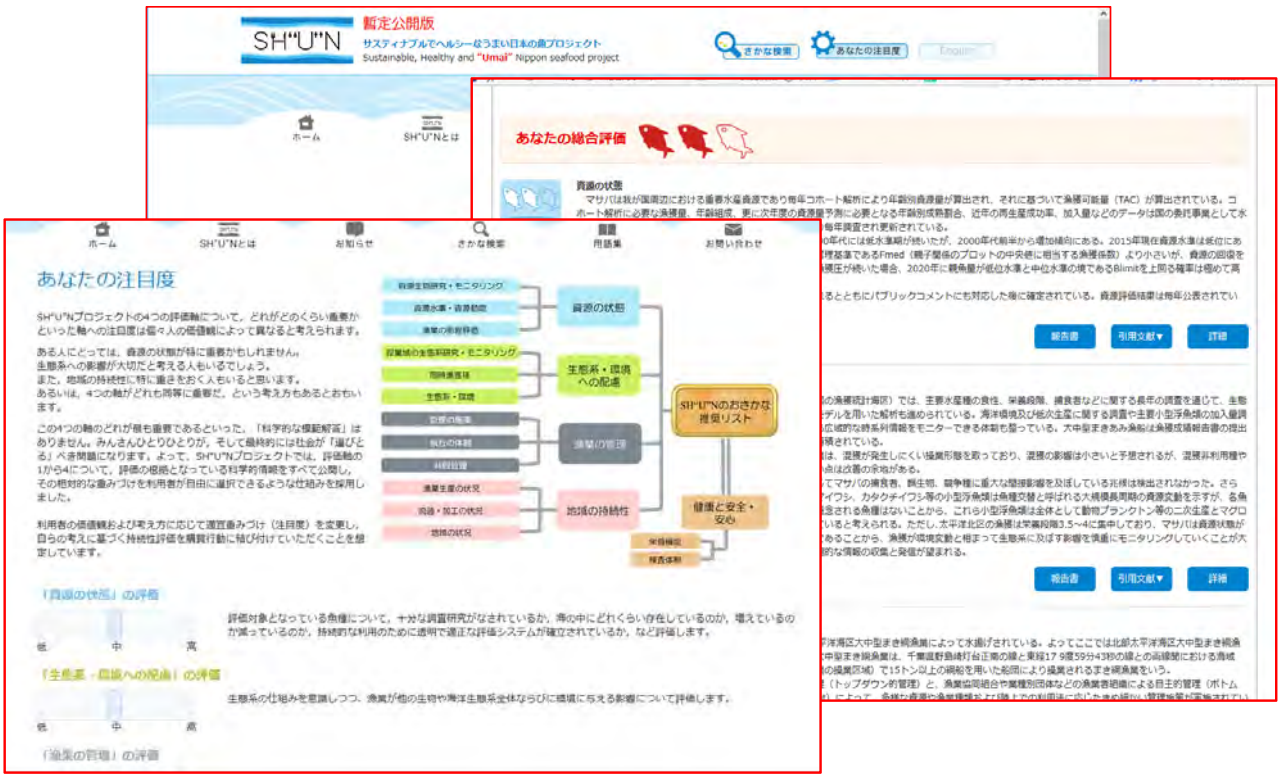

SH"U"N
暫定公開版
サスティナブルでヘルシーなうまい日本の魚プロジェクト
Sustainable, Healthy and "Umai" Nippon seafood project
あなたの総合評価
資源の状態
報告書
引用文献▼
詳細
あなたの注目度
SH"U"Nプロジェクトの4つの評価軸について、どれがどのくらい重要かといった軸への注目度は個々人の価値観によって異なると考えられます。
資源の状態
生態系・環境への配慮
漁業の管理
地域の持続性
SH"U"Nのおさかな推奨リスト
健康と安全・安心
「資源の状態」の評価
「生態系・環境への配慮」の評価
「漁業の管理」の評価
低
中
高

対象魚種選定の考え方

- 安定供給のニーズ
  合理的な価格で安定的な供給が望まれている水産物
- 消費者のなじみ
  消費者が直接手に取る可能性が高い水産物
- 漁獲量が多い
  国民の生活に大きくかかわり、漁業生産量の大きな割合を占める水産物
- 地域食文化と伝統
  地域限定の重要魚種もしくは地域で伝統的に食されている水産物
- 保護が必要
  資源枯渇が懸念されている水産物

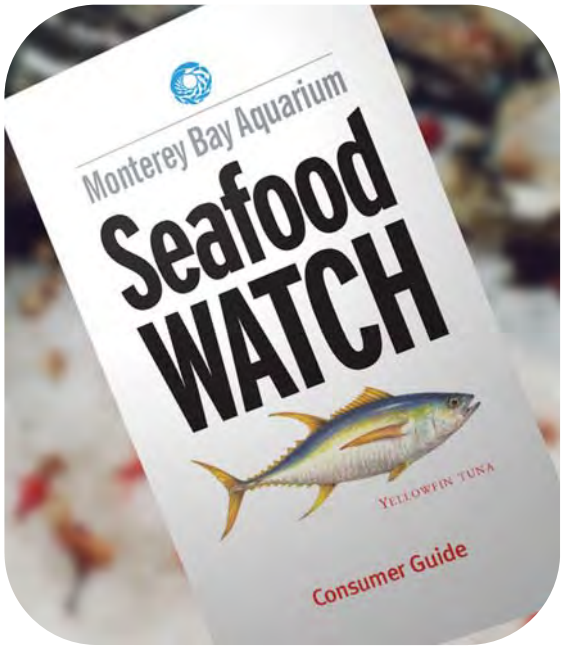
消費者のみなさまに向けて・・・


- スマートフォンアプリを開発中。
- 旬の魚、おすすめの魚、トリビアなどを表示。
- 興味のある魚を選ぶと、評価結果の概要も検索。
- その日食べたさかなを入力すると表示内容も変化。

水産物は、日本文化にとって、和食にとって、大切なたからもの。

- このアプリの利用データやインターネット・アンケートの結果は国民の皆様の水産物への関心（研究ニーズ）の現れと考えます。
- よってその結果は、水産研究・教育機構における中長期研究計画や、人材育成・教育方針等の立案にも活用させていただきます。
- このような、社会と国立研究機関との間の日常的な相互作用をつうじて「科学技術を使いこなす社会」の実現に寄与していきます。

Monterey Bay Aquarium®



Seafood Sustainability and Transparency in North America

Josh Madeira
Federal Policy Manager

International Conference on Seafood Transparency and Sustainability

17 May 2017

Monterey Bay Aquarium

Mission: To Inspire Conservation of the Ocean






Monterey Bay Aquarium

Is it sustainable?

Monterey Bay Aquarium

What is Seafood Watch?

Empowers consumers and businesses to make choices for healthy oceans.

Why Should I care?

What are the best choices for the environment?

What can I do?

Monterey Bay Aquarium Seafood Watch

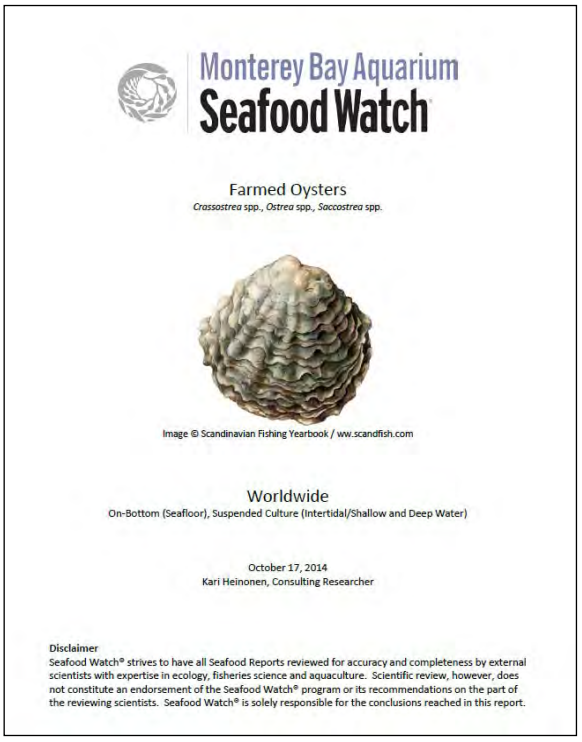
Monterey Bay Aquarium

Monterey Bay Aquarium
Seafood Watch

What Can I Buy?

Best Choice	Good Alternative	Avoid
• Abundant • Well-managed • Environmentally friendly	• Some concerns	• Harm to marine life or to the environment

Monterey Bay Aquarium



Monterey Bay Aquarium
Seafood Watch

Farmed Oysters
Crassostrea spp., Ostrea spp., Saccostrea spp.

Image © Scandinavian Fishing Yearbook / ww.scandfish.com

Worldwide
On-Bottom (Seafloor), Suspended Culture (Intertidal/Shallow and Deep Water)

October 17, 2014
Kari Heinonen, Consulting Researcher

Disclaimer
Seafood Watch® strives to have all Seafood Reports reviewed for accuracy and completeness by external scientists with expertise in ecology, fisheries science and aquaculture. Scientific review, however, does not constitute an endorsement of the Seafood Watch® program or its recommendations on the part of the reviewing scientists. Seafood Watch® is solely responsible for the conclusions reached in this report.

Monterey Bay Aquarium

Monterey Bay Aquarium
Seafood Watch

Wild Fisheries


Target Species


Other species


Management


Habitat & Ecosystem

Monterey Bay Aquarium

Monterey Bay Aquarium
Seafood Watch

Aquaculture


Data


Effluent


Habitat


Chemical Use


Wildlife Mortalities


Feed


Escapes


Disease


Source of Stock


Unintentional Introductions

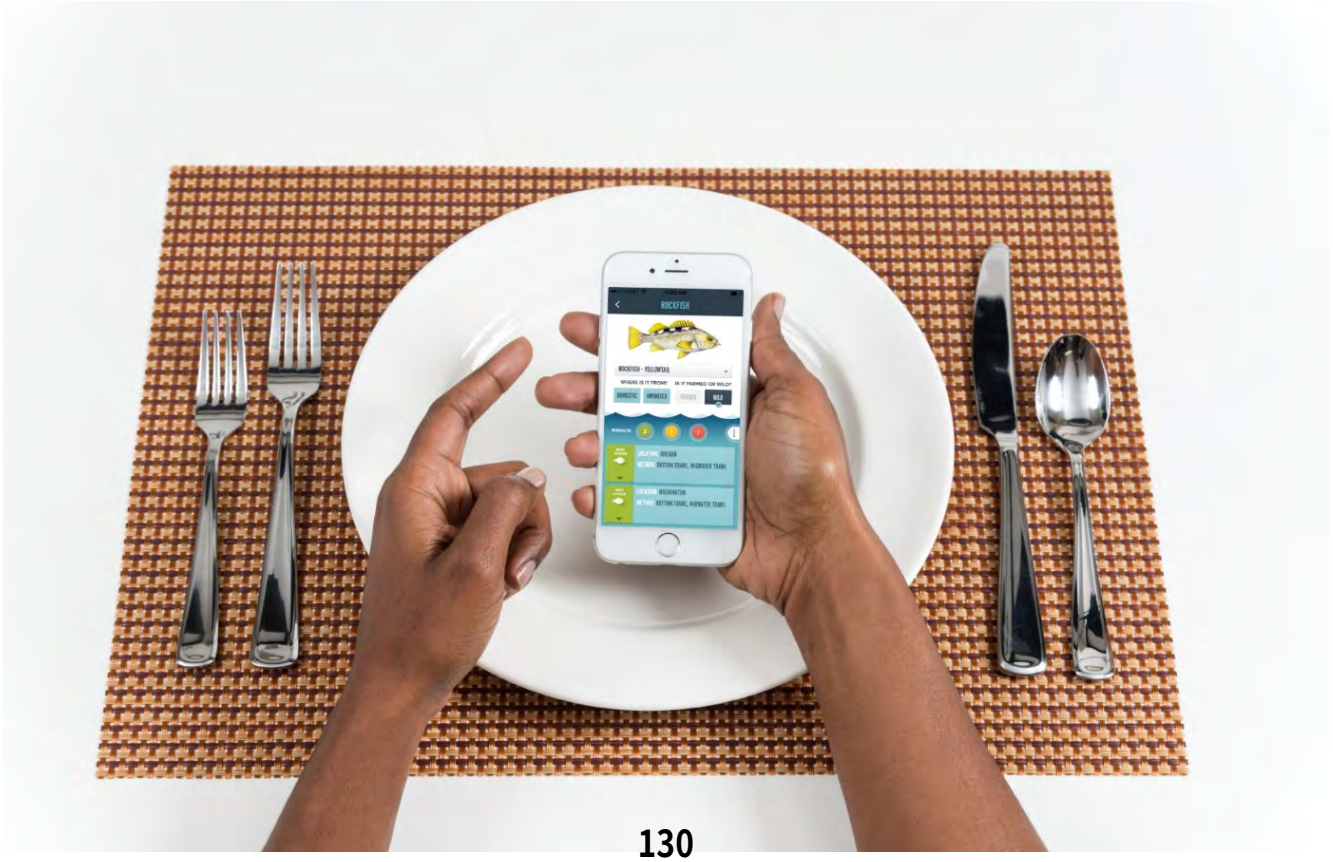
Monterey Bay Aquarium

Monterey Bay Aquarium
Seafood Watch

Over **85%** of the North American seafood market (by volume)

Monterey Bay Aquarium

Consumer Outreach



Culinary Spokespersons

Nathan Lyon
Emmy-nominated Culinary Host/Chef/Author, Los Angeles, CA

Mary Sue Milliken
Co-Chef/Owner, Border Grill Restaurants, Los Angeles, CA

Rick Moonen
Author and Chef/Owner, Rick Moonen's RM Seafood, Rx Boiler Room, Las Vegas, NV

Michel Nischan
CEO/President/Founder of Wholesome Wave

Rick Bayless
Chef/Owner
Frontera Grill, Toplobampo, Xoco
Chicago, IL

Richard Blais
Author and Chef/Owner
Juniper & Ivy, San Diego, CA
The Spence, Atlanta, GA

Chris Ivens Brown
VP of Culinary Development/Executive Chef
Eurest Dining Services
Charlotte, NC

Seth Caswell
Executive Chef
Seattle, WA

Business Partners and Collaborators

COMPASS GROUP

ARAMARK

SAFEWAY

WHOLE FOODS MARKET

Disney

MOM's Organic Market

TARGET

MARS

JAX Fish House & Oyster Bar

SANTA MONICA SEAFOOD
Family Owned Since 1939

L&B LUNDS&BYERLYS

Monterey Bay Aquarium

IUU Fishing – Business Risk

Monterey Bay Aquarium

Global Seafood Ratings Alliance

Monterey Bay Aquarium

Capacity Building

Industry Commitments & Traceability

Compass Group Targets 100% Sustainably Sourced Skipjack Tuna by 2015

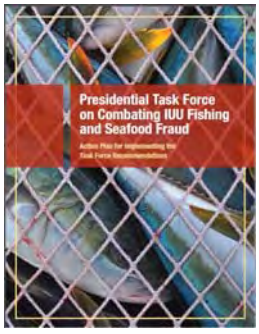
SHARE: f in

CHARLOTTE, NC (August 12, 2014) – Today Compass Group announced a commitment to sourcing 100% of canned Skipjack Tuna as Fish Aggregating Device (FAD)-Free beginning January 1, 2015. This change in sourcing will impact over 1.9 million pounds of skipjack tuna, more than 50% of Compass Group's total canned tuna purchases annually.

Aramark Transitions to 100% Sustainably Sourced Tuna

Aramark to purchase only sustainably sourced canned skipjack and albacore tuna in the U.S.

PHILADELPHIA, PA (October 15, 2015) – Aramark (NYSE:ARMK), the $15 billion global provider of food, facilities management, and uniforms, announced today that it will transition to 100% sustainably sourced canned skipjack and albacore tuna in the U.S. by April 1, 2016. Sustainably sourced tuna



Thank you.

STRAPLINE HERE IN CAPITALS AND ON ONE LINE

Marine Stewardship Council

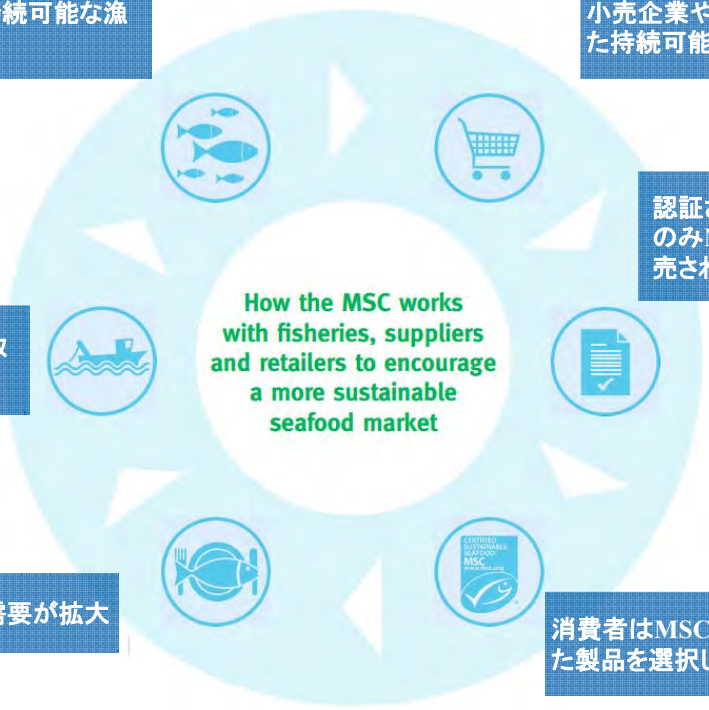
MSC認証制度及び IUU対策としての貢献

MSC日本事務所　石井幸造

MSC認証とエコラベルによる水産物市場の変革

基準を満たした漁業が持続可能な漁業として認証される

より多くの漁業が改善に取り組み、認証審査へ進む



MSC認証水産物の需要が拡大

小売企業やレストランが認証された持続可能な水産物を販売・提供

認証された漁業からの水産物のみMSCラベルが表示され販売されることを保証

消費者はMSCラベルの付いた製品を選択し購入

2種類の認証

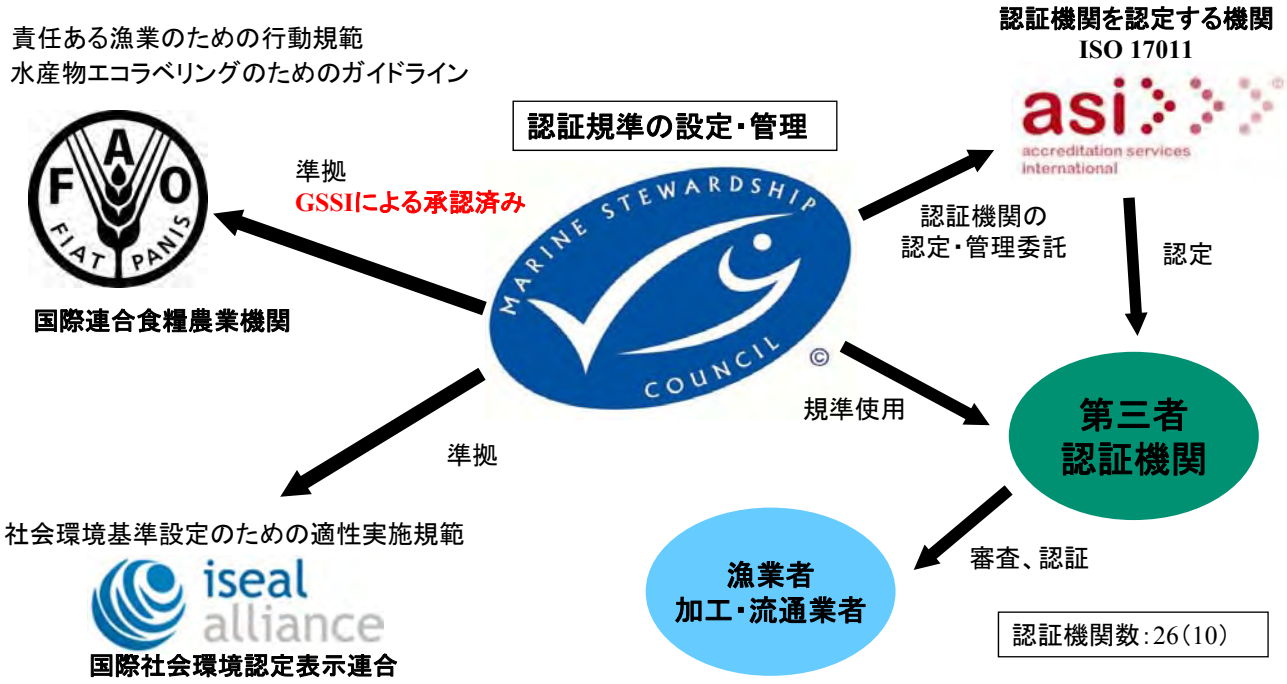
- 漁業に対する「**MSC漁業認証**」と…

最終パッケージに「海のエコラベル」が表示されるまでのサプライチェーン全域をカバー

- 水産物の水揚げ以降のサプライチェーンに対する
  「**MSC CoC（Chain of Custody）認証**」

第三者機関による独立した認証制度

- より中立性、独立性確保する仕組み

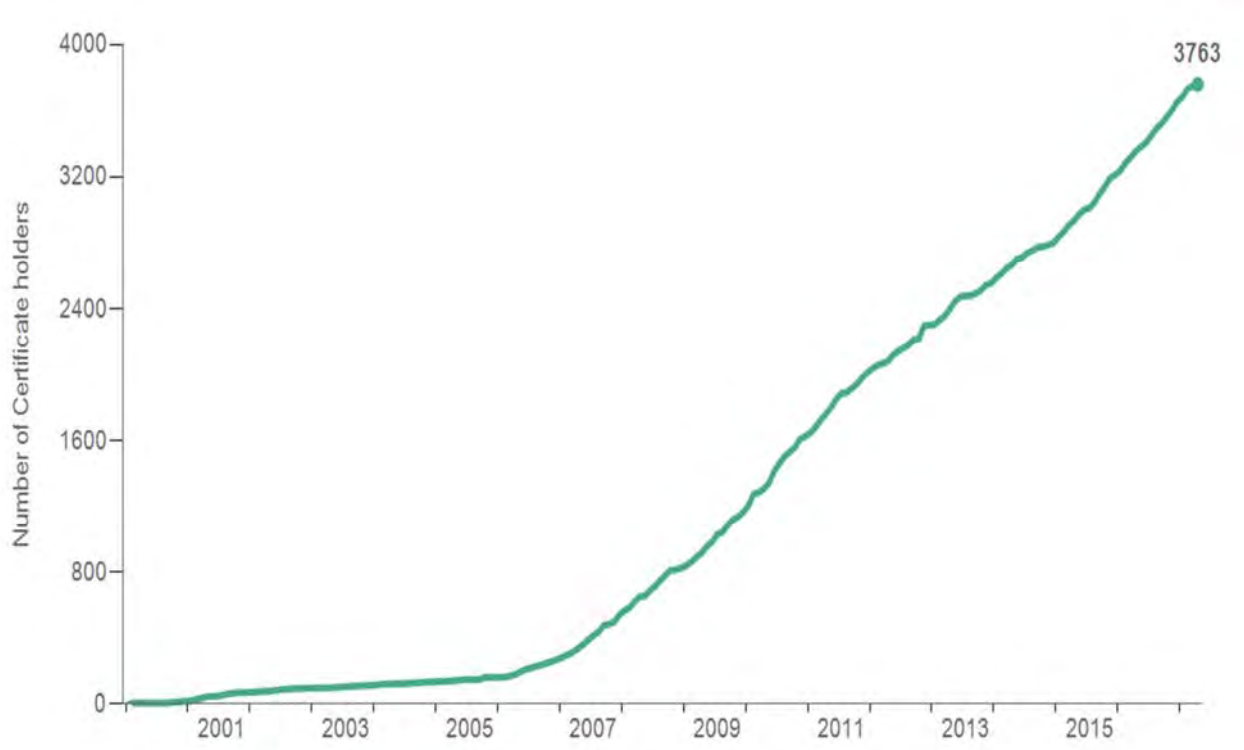


MSC認証取得漁業 （2017年5月8日現在）

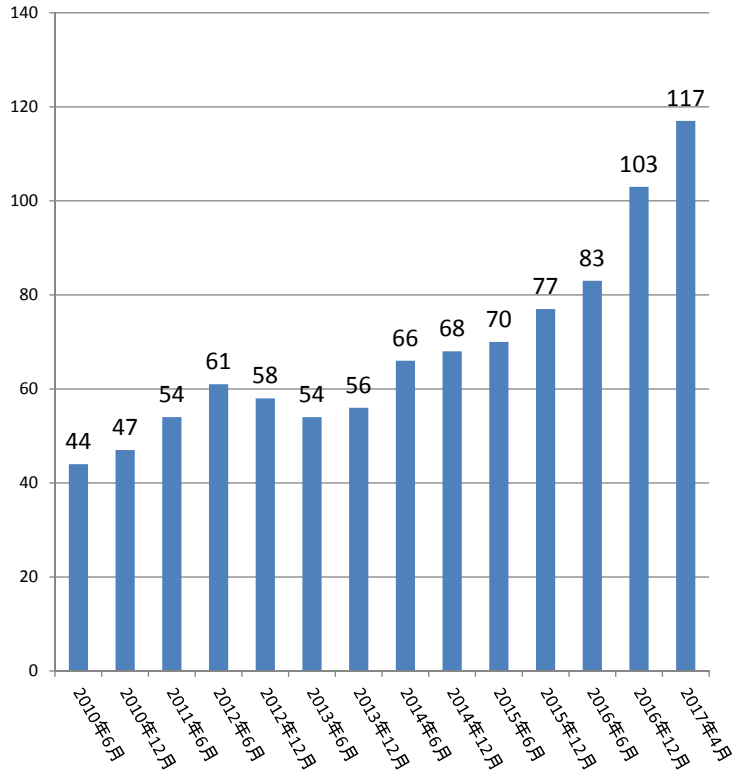
317 の認証取得漁業（日本は3漁業）
80 の認証審査中漁業

認証取得漁業による漁獲量は世界の食用向け天然魚漁獲量の**約10%**（**約900万トン**）

CoC認証取得企業数の推移 （2017年5月8日現在）

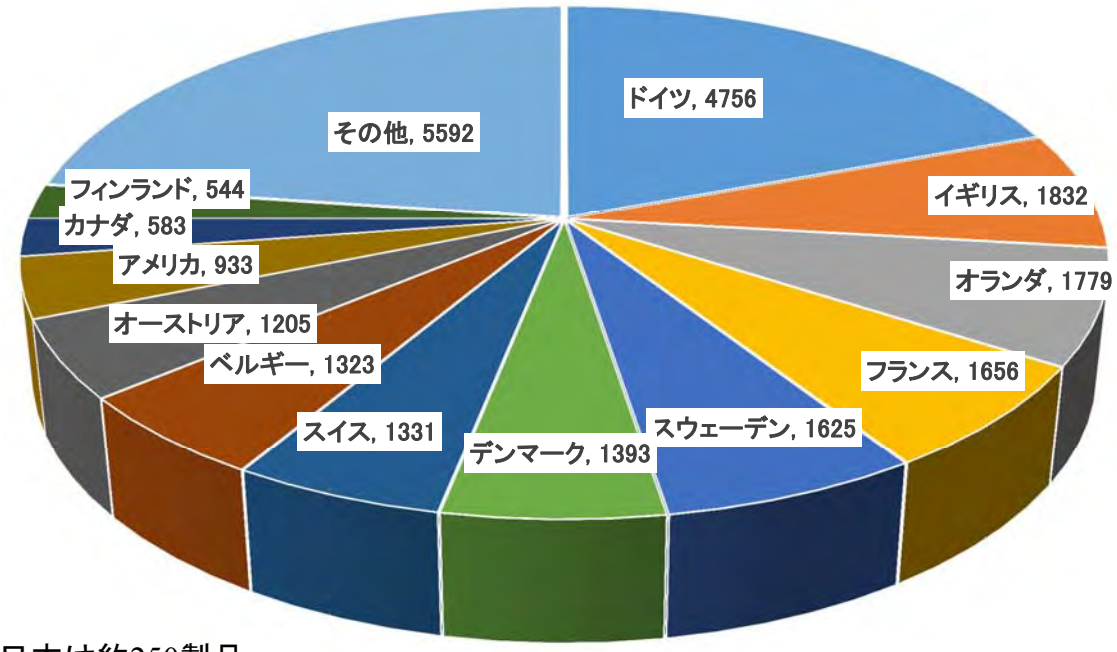


日本におけるCoC認証取得企業数の推移



MSCラベル付き製品 国別ラベル付き製品数(2017年3月21日現在)

世界101か国で約2万5千品目



日本は約250製品

IUU漁業対策としてのMSC認証

MSC漁業認証

- 審査対象の漁業にIUU漁業が含まれていてはならない（対象魚種、混獲種の漁獲を問わず）
- IUU漁業の影響により審査対象漁業の持続可能性が損なわれる場合は認証を取得できない

MSC CoC認証

- RFMOのIUUブラックリスト船舶での製品の輸送、あるいは同船舶から製品を受け取ってはならない
- 認証水産物と非認証水産物を混ぜてはならない（認証水産物として取り扱う場合）

  →IUU漁業からの水産物にMSCラベルが付けられることはない

IUU漁業対策としてのMSC認証　－事例－

南大西洋　メロ漁業

- かつてはIUU漁業が蔓延
- 6つのメロ漁業がIUU漁業の撲滅に取り組み、MSC認証を取得（世界のメロ漁獲量の50%超を漁獲）
  - 厳格なライセンスシステムと海上での積み替えの禁止
  - 水揚げ場所の制限と管理
  - 衛星技術による漁獲場所と漁獲重量のリアルタイムでの記録
  - 漁獲物へのバーコードの付与（IUU漁業による漁獲物がサプライチェーンに入ることを防止）

国際シンポジウム
水産物の透明性と持続可能性

「日本の水産業の新たな発展に資する水産エコラベルの構築に向けて」

2017年5月17日

（一社）マリン・エコラベル・ジャパン協議会

垣添　直也

1. 管理された漁業の夜明け

- 1992年のFAOの年次報告によると、1989年の世界の漁業収支は売上10兆円に対し、3.1兆円の赤字であった

売上	697億US$	平均単価	107.3円/Kg
操業コスト	922		141.9
収支	△ 225		△34.6

（漁獲量6500万トン、為替レート1US$=138円、原油価格20US$/Barrel）

- 国連海洋法条約　締結1982年、発効1994年
  「責任ある漁業のための行動規範」 FAOが採択1995年
  EU共通漁業政策（CFP） 施行1983年、以降10年ごとに見直し
  アメリカ人漁業法（AFA） 制定1998年
  日本　水産基本法　制定2001年

自国のEEZ内の海洋資源管理、生物的・環境的・経済的な持続可能性追求、消費者に安定的に良質な水産物の供給

2. 水産エコラベル定着への歩み

- 「責任ある漁業のための行動規範」の採択。 1995年第28回FAO総会
  水産資源の利用、生態系保全に関する理念、基本原則が合意
- 「MSC」が発足。 1997年。 水産エコラベル制度の誕生
- 社会の意識の変化。 2001年ISO理事会においてCSRの規格化を決定。
  （2010年ISO26000規格化）
- 「海洋漁業からの漁獲物と水産物のエコラベルのためのガイドライン」採択。
  2005年FAO水産委員会
- 「マリン・エコラベル・ジャパン」が大日本水産会の組織として発足。 2007年
- 「GSSI」が発足。 2013年。 水産エコラベルの認証スキームの信頼性を
  担保するためのグローバルプラットフォームの構築を目指した

3. 日本における動き

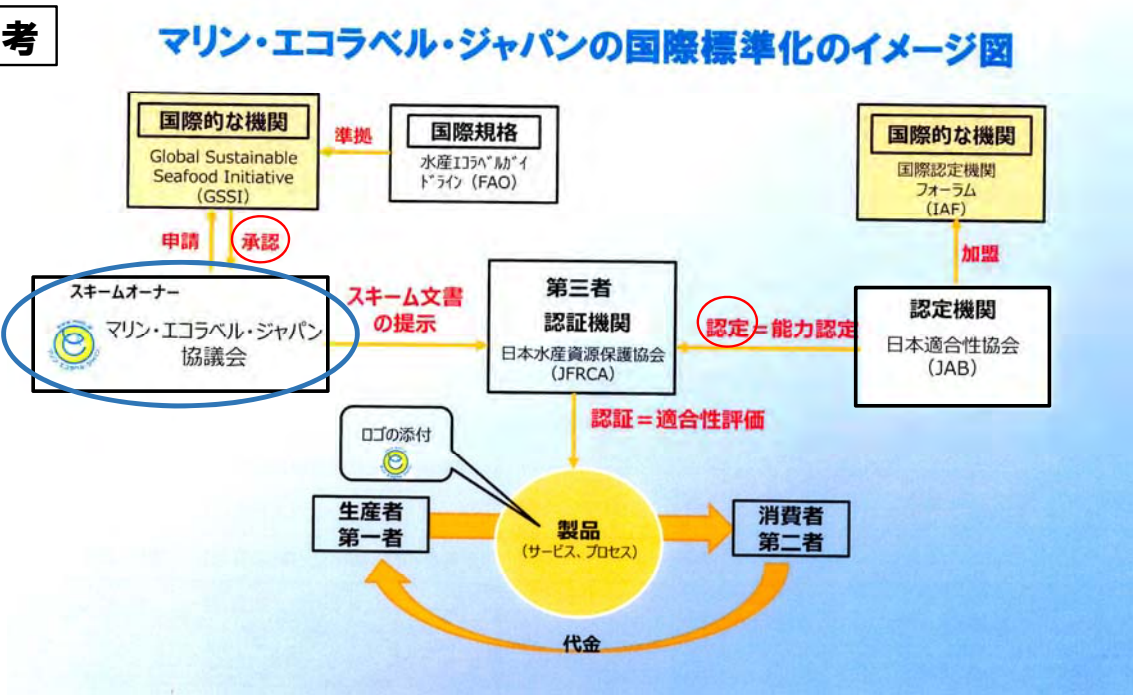
- ◆ 水産基本法の制定。 2001年。 水産物の持続的利用のため資源の
  適切な保存・管理を謳った
- ◆ MSCの日本への進出。 2006年からロゴつき商品流通、2008年9月
  に漁業認証第1号誕生。 2017年3月現在認証漁業者数3
- ◆ マリン・エコラベル・ジャパンが発足。 2007年。 2008年12月漁業認
  証とロゴつき製品流通開始 2017年3月現在の認証漁業者数22
- ◆ 水産物の輸出促進とオリンピック・パラリンピック用食材調達基準に対応
  する為、水産エコラベル制度改革に着手。 2016年5月
- ◆（一社）マリン・エコラベル・ジャパン協議会が発足。 2016年12月。
  国際標準化と共に透明性と信頼性のある制度つくりに着手。

水産基本計画（第4次、2017年）に水産エコラベルの推進を明示

4.（一社）マリン・エコラベル・ジャパン協議会の基本的な考え

- 国際標準化を進め、国際的に承認される仕組みとする。
  GSSIの承認を得ると共に、認証機関が日本適合性協会の認定を得る
- 日本の水産業の特長である多様性（生物的、産業的、流通上）を極力維持できる仕組みとする
- 漁業、増殖漁業、養殖（魚類、貝類、海藻類他）、加工・流通サプライチェーン全体をカバーする仕組みとする
- 消費者を巻き込み、水産資源の持続的利用を共有・共感できる仕組みとする
- 適用は、当面日本国内で営まれる事業とする

参考



具体的課題

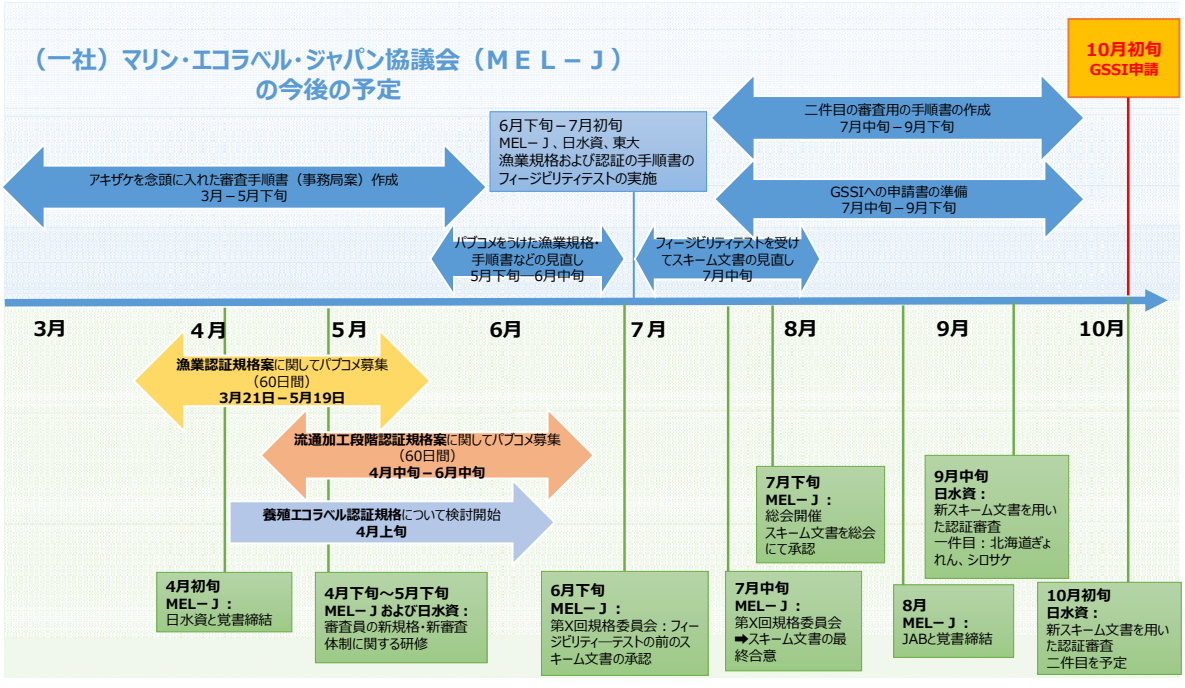
- MEL-J協議会の漁業認証規格（現在パブコメ中）
  - ✓ 増殖漁業を評価する仕組みつくり
  - ✓ 多魚種漁業を評価する仕組みつくり
- MEL-J協議会の流通加工段階認証規格（現在パブコメ準備中）
  - ✓ 日本における複雑な水産物加工・流通のサプライチェーンにおいて適応可能な仕組みつくり
  - ✓ 小規模な事業者でも認証が取得できる仕組みつくり
- MEL-J協議会の養殖認証規格（現在作成中）

- 事務局機能の強化
  - ✓ スキームの運営、管理、維持
  - ✓ 認定機関及び認証機関のモニタリング
  - ✓ 審査員研修の実施
  - ✓ 認証や規格に対する苦情処理
- ガバナンス上の透明性、信頼性の確保（漁業認証の場合）
  - ✓ スキームオーナーと認証機関の関係の整理
  - ✓ 認証機関と認証申請事業者の関係の整理
  - ✓ 認証審査の均質性の確保
  - ✓ 認証範囲は、日本の国あるいは都道府県知事の許可または免許を受けて操業する漁業もしくは日本の漁業法に定められた適格性を有すると認められた漁業
  - ✓ 認証単位は、同一管理規則の下で、対象漁獲種および漁法を特定して行われる漁業

5. 今後の取り組み

- 取り組みは漁業認証規格、流通加工認証規格、養殖認証規格の順を考えている。平行して認定機関及び認証機関とガバナンスの透明性確保の調整を行う。
- 現在パブコメ中の規格は基本的な内容に限定されており、今後規格を運営するための具体的な審査項目、審査方法、エビデンス等を記載した「手順書」の作成に入る。
- 日本の漁業の多様性に対応するため、手順書は漁業種毎にデータを収集しながら作成する作業が求められる。
- 作成された規格および手順書に基づいて、最低でも1件の審査を行い運営上の確認を行う。
  - ✓ 審査は漁業1件、増殖漁業1件を準備中

6. 今後のスケジュール



日本の複雑な自然環境と地域の人々の努力で生み出される豊かな生態系、生物的多様性、産業的多様性、食文化的多様性等々を生かす仕組みを目指し、もって日本の水産業の新たな発展に資することを期したい。

政治、国民、産学官およびMSC等の先発グループとも協働し信頼性の高い水産エコラベルの普及に貢献したい。

皆様のご理解とご支援をお願い申し上げます。

国際シンポジウム「水産物の透明性と持続可能性」

水産認証・評価制度の現状と課題

2017年5月16, 17日
早稲田大学

阪口　功

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学習院大学
&
Middlebury Institute of International Studies at Monterey

Outline

- 様々な水産認証制度と水産評価制度
- 世界と日本の水産業の現状
- 水産認証・評価制度のNuts and Bolts
- 各認証制度・評価制度の課題
- 日本のおける普及の課題
- 東京オリンピックの調達基準問題
- まとめ

水産・養殖認証制度一覧

天然ラベル	発足年本部	主導者	養殖ラベル	発足年本部	主導者
MSC	1996 ロンドン	WWF ユニリーバ	ASC	2010 ユトレヒト	WWF 持続可能な貿易イニシアティブ（IDH）
RFM	2010 アラスカ	アラスカ・シーフードマーケティング協会(ASMI)	BAP	2003 ポーツマス	世界水産養殖同盟（GAA）
IRF	2008 レイキャビック	アイスランド漁業協会(FAI)	GLOBALGAP養殖認証 GGN	1997/2004 ケルン	欧州小売業組合（EUREP）加盟大手リテイル
MEL	2007 東京	大日本水産会	AEL	2014 京都	日本食育者協会？

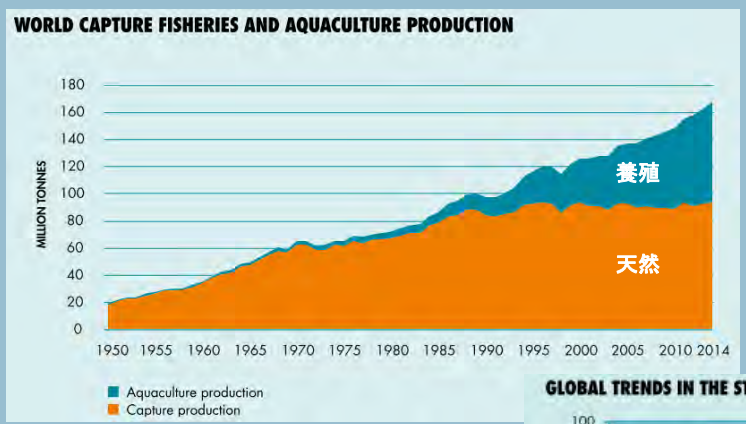
水産評価制度一覧

プログラム名	拠点国	運営者	プログラム名	拠点国	運営者
シーフード・ウオッチ	アメリカ	モントレーベイ水族館	ブルーシーフードガイド	日本	セイラーズ・フォ・ザ・シー日本支局
オーシャン・ワイズ	カナダ	バンクーバー水族館	サステイナブル・シーフード・ガイド	オーストラリア	オーストラリア海洋保全協会
VISwijzer *フィッシュ・ハンドブックの意	オランダ	グッドフィッシュ基金	ベストフィッシュ・ガイド	ニュージーランド	Forest & Bird
グッドフィッシュ・ガイド	イギリス	イギリス海洋保全協会	MarViva ガイド	パナマ コスタリカ コロンビア	MarViva基金
ミスターグッドフィッシュ	フランス	世界海洋ネットワーク 仏ノージカ水族館 伊ジェノア水族館	責任あるシーフード消費ガイド	ブラジル	Anima Educação

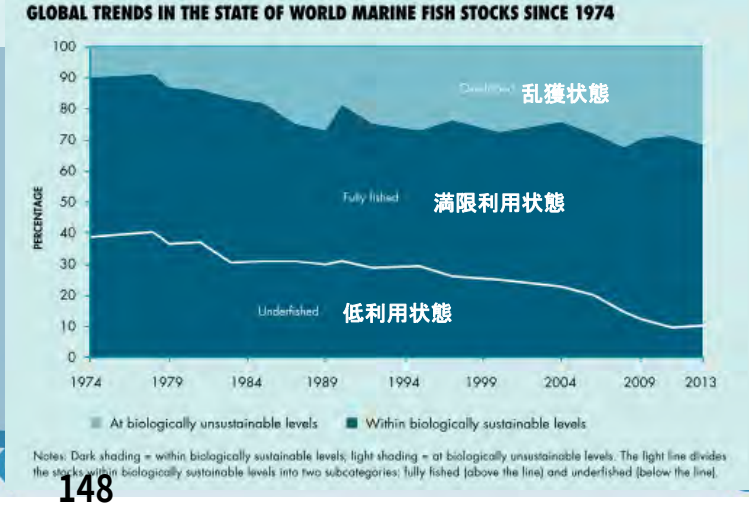
なぜ民間スキーム？

- **公規制の機能不全（政府、地域漁業管理機関）**
  - 世界的な水産資源の減少・枯渇
  - 世界的な養殖生産の急増： 生態系・環境の破壊と餌の持続性問題
- **民間の水産認証・評価制度の登場**
  - 水産認証制度： **第三者審査機関による審査、製品ラベルとCOC認証**
  - 水産評価制度： 制度運営者が評価、売場やアプリで標記
    ＊トレーサビリティの問題が課題
- **民間スキームの役割**
  - 「啓発されたマーケットの力」により政府、地域漁業管理機関および漁業者・養殖業者に資源管理を促すツール　※ 差別化！
  - 機能不全の公規制ないし管理枠組みを追認することではない

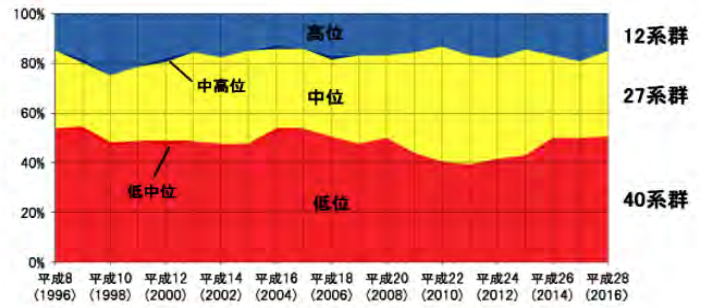
世界の水産生産量と資源状態

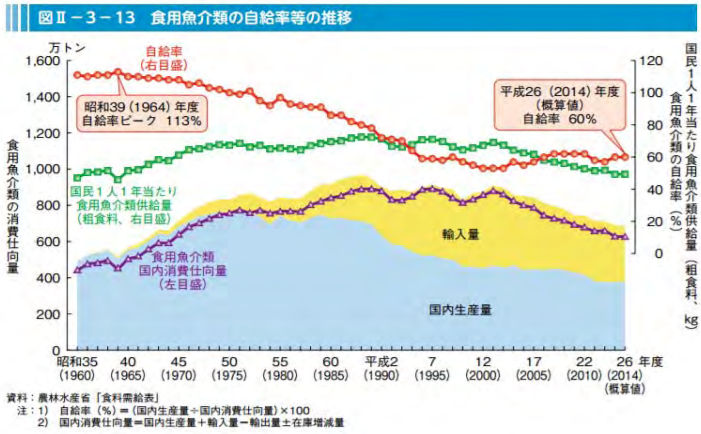


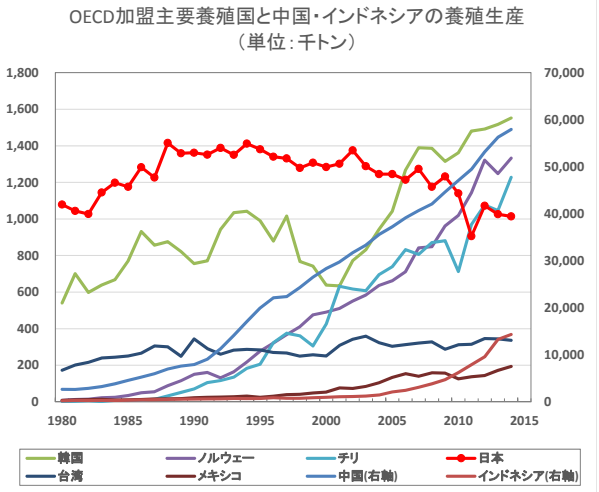
上下とも：FAO, 2016



日本の資源状態と生産量







左図上下：水産庁, 2016
上図：FAO FISHSTAT に基づき作成

水産認証・評価制度のNuts and Bolts

- 生命線
  - 非持続的な水産物に「認証」ないし「青信号」を与えないこと
  - ※ 甘い審査・評価を出すインセンティブの存在
- Blue Washingを避けるための必要事項
  - 基準の厳格性・合否条件の明確化
  - 審査過程の透明性：異議申立の機会、審査報告書の公開
  - 審査機関(ISO17065)と認定機関(ISO17011)の独立性 ＊認証制度のみ
- 制度の継続的な改善（ISO Guide 59の要求事項）
- ＦＡＯ水産認証ガイドライン ＊認証制度のみ
  - FAO責任ある漁業のための行動規範（1995）に準拠、非常に厳格
  - GSSIによるFAOガイドライン準拠認定制度（2015）
    （MSC、アラスカ・アイスランドの認証制度が認定済み）

日本における水産認証制度の普及の現状

- 国際認証制度
  - MSC：漁業認証3件、COC認証643件
  - ASC：養殖認証１件、COC認証51件

  ※ COC認証は、大手リテイル・水産会社も取得

  ※ 国際認証は輸出にメリット、MSCは地域漁業管理機関にも影響

- ローカル認証制度
  - MEL：漁業認証28件、COC認証55件
  - AEL：養殖認証19件、COC認証0件

  ※ COC認証は、中小企業・組合

水産認証制度とコスト

- 運営者の事業収入源
  - MSC・ASC：0.5%(卸売金額)のラベル使用料

    ※ 取扱が多くなると高額に。ラベルなしで流通するものが多い。
  - MEL：ラベル使用料無料、ロゴ管理手数料・年間3～10万円
  - AEL：ラベル使用料無料、ロゴ管理手数料・生産者のみ年間1万円

    ※ どうやって運営経費を捻出するのか？

- 審査機関（ＣＡＢ）の審査費用
  - ＭＳＣ認証：15000ドル～12万ドル　※ グループ認証で費用大幅減
  - ＭＥＬ認証：50万円～300万円　※ 厳格な審査が可能か？

- コスト
  - 運営者：積極的な認証制度の普及・啓発活動、継続的な改善の経費
  - ＣＡＢ：複数名での審査が基本、本体審査報告書は数百ページにも

    ※ 政府がしっかり資源管理していれば本来は不要なコスト

ＭＳＣのグループ認証の例

➢北海道のホタテ漁（2013）
- 水揚量・約40万トン、水揚高・約900億円
- 道漁連主導で北海道の全てのホタテ漁業について認証。
- コストは全体で負担

➢ 西豪州ロック・ロブスター漁（2000）
- 漁獲許容量は5554トン(2013-14年)、輸出額は3億5800万ドル。
- 約250隻でコストを分割

➢スペイン・アストゥリアス州のタコ漁（2016）
- 総漁獲は年30~60トン。
- ４漁業組合（零細27隻）が共同で取得。

➢ スペイン・カンタブリア海のアンチョビー巻網（2015）：
- 5年の禁漁措置により資源回復、7000トンの漁獲（2013）
- 2漁業組合が共同申請、シェアリングにより1組合追加（58隻）。

ＭＳＣ・ＡＳＣの課題

- MSC・ASC
  - 基準のローカリゼーションの仕組みの欠如
  - すべての国に「五輪Ａ基準」を求めるのが妥当なのか？
- 欧米主導のガバナンス
  - 欧米から選出された委員が大部分を占める。
  - ようやく多魚種漁獲基準・海藻基準を制定中
- 戦略的マーケッティングの欠如
  - 日本の漁業者・養殖業者への広報が消極的
  - 普及が遅れる日本では、ラベル使用料＞ラベルの効果
  - 東京オリンピックの2020年末までラベル使用料の無料化！
- 長期的にはラベルが不要となる可能性
  - 100%ＭＳＣ・ＡＳＣだとラベルをつけなくてもよくなる。

※ 消費者が啓発されていない状況ではラベルを通じた啓発が重要

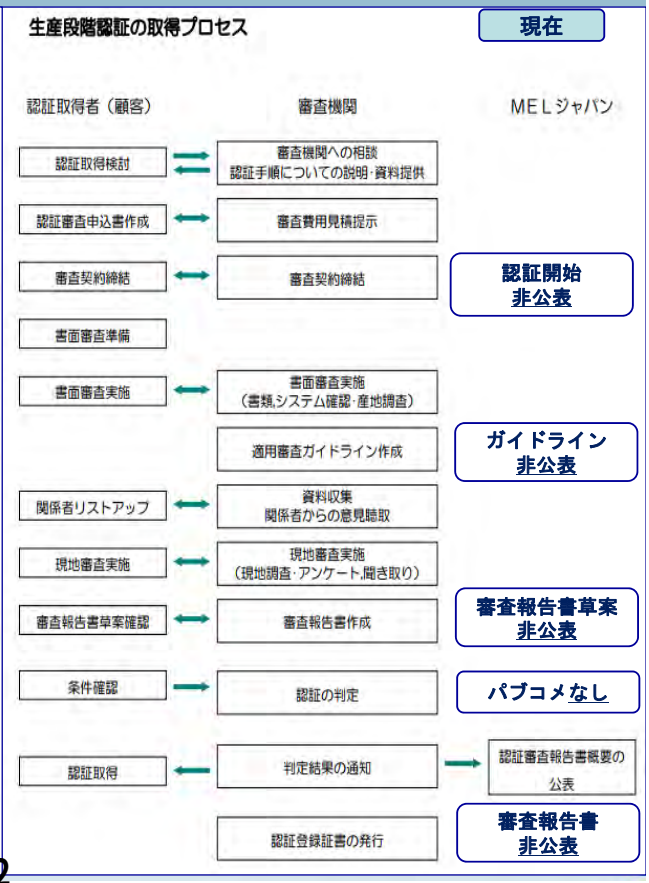
ＭＥＬ・ＡＥＬの課題

- 基準の緩さ
  - MEL：GSSI認定目指し基準改定中。基準の曖昧性、透明性が課題。
  - AEL：基準ある？　「審査項目例」公開
- 審査の透明性の欠如
  - 審査概要のみ公開、基準の適合性が読みとれない内容
  - 監査や再審査（5年に1度）が的確に行われているのか不明
- 審査機関の独立性問題
  - 水産資源保護協会・ISO17065未取得、国産水産物の販売促進補助事業実施、「国と特に密接な関係にある法人」に指定。
  - 新制MELではISO17065を要件化、認定は日本認定性適合協会
- 制度の継続的改善の取り組み
- 環境ＮＧＯの参画の欠如
- 普及啓発、認証製品の販路拡大
- 収入源の確保

新制MELの透明性の課題：過去・現在・未来？

(西村、2008に追記)

(MELウエブ掲載図に追記)



SH“U”N評価基準の問題点

資源状態

- データと資源評価が存在するだけで高い評価
- 低位・増加または中位・減少でも３点
- 資源量がB_{limit}以下で漁獲死亡係数がF_{limit}を上回っていても３点
- 資源枯渇リスクが中程度でも４点
- 環境変化を資源管理に反映しなくても、環境変化の存在の把握だけで３点。

生態系・環境への配慮

- 混獲、漁獲種の捕食者、海底環境等について部分的に情報があるだけで３点
- 海洋環境や生態系について部分的に調査が行われているだけで３点
- 希少種の混獲について悪影響が懸念される種が少数含まれていても３点
- 一部の捕食者に悪影響が懸念されても３点
- 一部物質の漁業からの排出が水質環境へ及ぼす悪影響が懸念されても３点

資源管理

- インプットまたはアウトプット・コントロールを導入しているだけで３点
- テクニカルコントロール（体長制限、特定漁法の禁止等）を一部導入で３点
- 機能は不十分でも生息域をカバーする管理体制があれば３点
- 機能は不十分でも罰則・制裁が設定されていれば３点
- 漁業者組織の一部が共同購入・共同販売等の活動を行っていれば３点

地域の持続性

- 漁協が経常黒字であるだけで５点
- 能力給、歩合以外の面での就労者の待遇が平等であるだけで５点
- 少数の買い受け人が存在するだけで３点
- 高級消費用であるだけで５点
- 港・空港またはそこに通ずる高速道路が近くにあるだけで５点
- 自治体の財政力指標が０．４～０．６（全国平均は０．５）で３点

SH“U”Nプロジェクト・パイロットテスト４漁業の評価

基準	アオギス（大分県）	マサバ（太平洋群）	マアジ（太平洋群）	マイワシ（太平洋群）
資源状態	２．４	４．２	４．２	４．７
生態系・環境への配慮	３．４	３．４	３．４	３．４
資源管理	１．７	４．６	４．６	４．６
地域の持続性	３．４	３．９	４．０	３．９
総合評価	２．７	４．０	４．０	４．１

日本における認証普及への課題

- マーケット・インセンティブの欠如
  - 大手リテイル・水産会社における持続性調達原則の普及の遅れ
  - マーケットリーダーが必要
  - イオン100%MSC・ASC宣言！（2017年4月）
- 国内における公的管理の著しい遅れ
  - 沿岸資源の半数は「低位」、高すぎるTAC(7種)・TAE(9種)
  - 養殖規模にかかわらず事前の「環境影響評価」が求められない

  ※ 公的管理の遅れが国際認証の取得を困難に
- 健全なメタ・ガバナンスの欠如
  - 水産庁：国際的に通用する我が国発の水産エコラベル認証取得推進事業　※ 現状のMEL・AELは国際的に通用しない
  - 東京オリンピックの著しく緩い水産調達基準

東京オリンピックの水産調達基準

1. ＭＥＬ・ＡＥＬ、ＭＳＣ・ＡＳＣ、その他ＦＡＯガイドラインに準拠した認証制度
2. 行政機関確認の「資源管理計画」と「漁場改善計画」
   - 漁業者、養殖業者が「指針」に基づき自発的に作成
   - 両計画を含めることで国産の9割が対象に。

   But「資源管理計画」の8割が不適切との報告（自民党行革本部）

   「漁場改善計画」は過去の養殖規模の「中庸」の5%下を基準
3. ＦＩＰとＡＩＰ
   - 認証取得を目指し改善中の漁業・養殖業

※ ロンドン以来のオリンピック運動の進歩を巻き戻し！

東京オリンピックのレガシーは「魚のいない海」？

ロンドン・オリンピック水産物調達コード	
必須基準	すべての水産物は持続性が証明されたものから調達し、天然はＦＡＯの責任ある漁業のための行動規範を満たしたものとし、以下の通り実施。 • **最善の魚を推奨**： ＭＳＣ認証（または同等のもの）水産物と海洋保護協会（ＭＣＳ）のグッドフィッシュ・ガイドの「食べてよい魚」を推奨 • **最悪の魚を排除**： ＭＣＳのグッドフィッシュ・ガイドの「回避すべき魚」は排除 • **残りの漁業を改善**： トレーサビリティと持続性への体系的アプローチを要求
推奨基準	• 脆弱な水産資源への圧力を軽減するために多様な魚貝類を利用 • 高い動物福祉基準を適用し持続性が証明された餌のみを利用した養殖 • 倫理的に取引・調達されたもの

リオ・オリンピック水産物調達コード	
手続きと認証	• 養殖はＡＳＣ • 天然はＭＳＣ
コミットメント	• ＡＳＣ認証を取得した小規模養殖業から優先して調達 • 養殖場まで追跡できるトレーサビリティーシステムの提供 • ＭＳＣとＡＳＣを全面的にサポートし、サプライヤーやステークホルダーにＭＳＣ・ＡＳＣ認証水産物を推奨

まとめ

- 水産ビジネスの危機：国内生産減少と海外での買い負け
- 資源管理強化による長期的な水揚最大化が処方箋
- 養殖管理強化により輸出市場の開拓に挑戦
- 政府は「新水産基本計画」で抜本的な改革の方向性
- ローカル・スキームは新しい流れにどう対応するのか？
- ＭＳＣ・ＡＳＣは、機会の窓を戦略的にどう生かす？
- SDG14を受け、リテイルや水産会社は、どのようにCSR上の責任を果たすのか？

東京オリンピックを「危機」ではなく「持続可能な漁業」実現の絶好の機会に！

Thank you for your attention!

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