

# Outreach program for encouraging sustainable use of fish stock resources by consumers around Japan: Sustainable, Healthy and “Umai” Nippon seafood (SH“U”N) Project

- Science outreach project by FRA
- Facilitating fisheries eco-labels and responsible consumptions in Japan



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# Fisheries eco-labels in Japan

- "Sustainability" is one of the key themes of SDGs.
- Fisheries eco-label is a tool to attract consumers' attention to the "Sustainability" of fisheries products .
- In the Tokyo Olympic games 2020, several fisheries eco-labels such as MSC, Japanese programs (Marine Eco-Label Japan: MEL, etc.) or sufficient scientific information are required for the suppliers of fisheries products.



Version for public comments



Tokyo 2020 Olympic and Paralympic Games

Sustainable Sourcing Code

(Draft)

# Three categories of Fisheries eco-labels

## ➤ Individual certification system

Individual fishermen or processing factories request for a certification of Fisheries eco-label product after reviewing the activity by certification organizations.



## ➤ Recommendation list system

Certification organizations evaluate fisheries product in the market and publish lists of the results of evaluation.

Retailers and restaurants advertise themselves for dealing with sustainable products.



## ➤ Outreach program by governmental organization

Governmental research organizations provide scientific information on the sustainability of fisheries products.



# FISHWATCH program by NOAA, USA



The screenshot shows the NOAA FishWatch website homepage. At the top left is the NOAA FishWatch logo with the text 'FISHWATCH U.S. SEAFOOD FACTS'. To the right are navigation links for 'FISH FINDER', 'SUSTAINABLE SEAFOOD', and 'EATING SEAFOOD', along with a search icon. Below this is a search bar labeled 'FIND A FISH:' with a search icon and three filter buttons: 'WILD', 'FARMED', and 'ALL'. The main content area features a large image of salmon swimming underwater. Overlaid on the bottom of this image is the text: 'U.S. fisheries are among the world's largest and most sustainable'. Below the text are five small white dots, with the second dot from the left being filled, indicating the current slide in a carousel.

Fisheries Communications Office, NOAA (<http://www.fishwatch.gov/>)

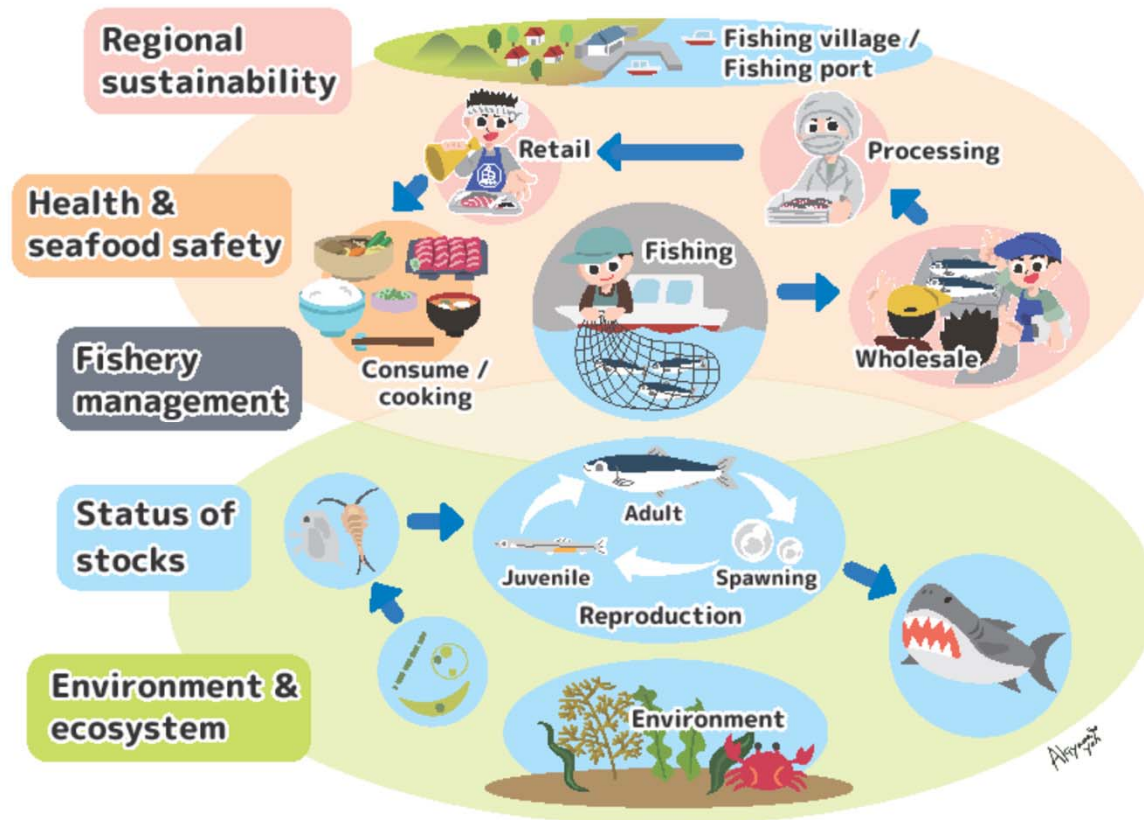
# Outreach program by FRA, Japan



- In order to promote the sustainable fisheries and responsible consumptions in Japan, Fisheries Research and Education Agency (FRA) has launched a science outreach project.
- In this project, FRA summarizes and provides relevant scientific information about the sustainability in order 1) to enhance the consumer's consciousness, and 2) to support the application to the eco-labels by fishers or companies.
- Named **SH“U”N Project**. SH“U”N stands for Sustainable, Healthy and “Umai (tasty)” Nippon (Japanese) seafood. At the same time, “*shun*” literally means “the best season for eating” in Japanese.



# The concept of “sustainability” in this project

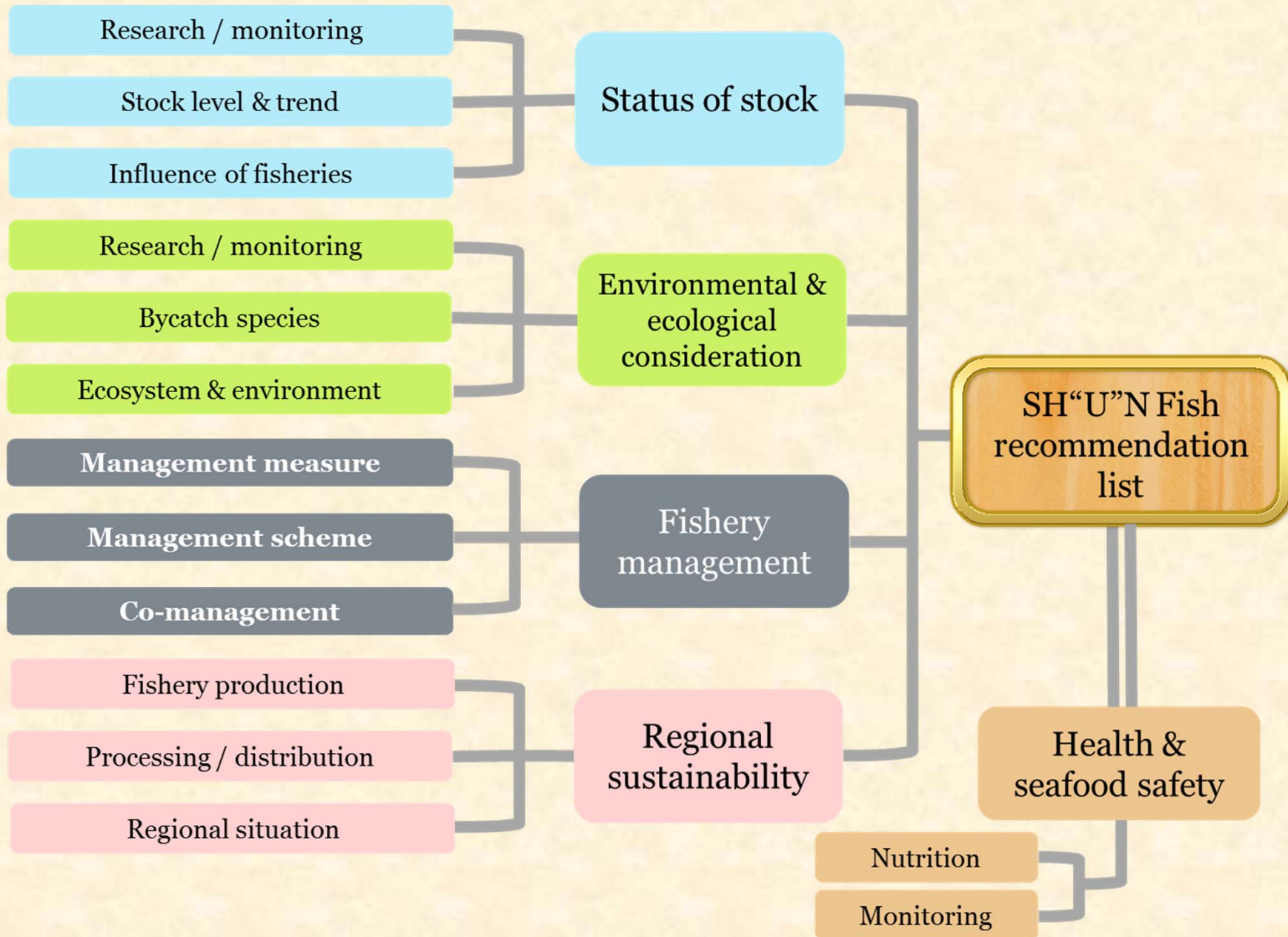


“Resources are highly dynamic functional concepts; they are not, they become, they evolve out of the triune interaction of nature, man, and culture...” (Zimmermann, 1933)

Fish are born and grow up in the sea and caught by fishers, then processed and distributed on land, and finally eaten as seafood: “fisheries social-ecological systems”.

The thick, robust and smooth interactions within fisheries social-ecological systems are important for sustainable fisheries.

# Evaluation structure (social and ecological)



# Evaluation reports (sorry, Japanese only yet)



SH'U'N プロジェクト  
ブリ 日本海西部 Ver 1.0.0

本評価報告書は、SH'U'N プロジェクト計画  
報告書案作成：2017年10月2日  
Stakeholder consultation：2017年10月14日  
パブリックコメント：2018年1月31日～  
報告書完成：2018年4月11日

境界、23千トンを中位と低位の境界とすると、2015年の漁獲量は51千トンであったことから、資源水準は高位と判断している。また、コホート解析による近年5年間（2011～2015年）の資源量の推移から、資源動向を増加と判断している。以上より5点を配点する。

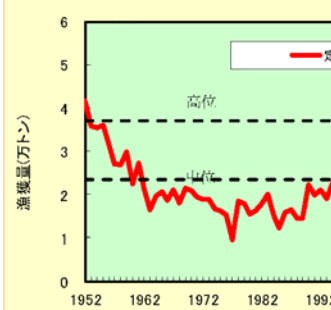


図 1.2.1 水準判断に使用した定置網の漁獲量の推移

1点	2点	3点	4点	5点
低位・減少 低位・横ばい 判定不能、不明	低位・増加 中位・増加	中位・横ばい	高位・減少 中位・増加	高位 高位

## 1.3 対象種に対する漁業の影響評価

### 1.3.1 現状の漁獲圧が対象資源の持続的生産に及ぼす影響

対象資源はコホート解析により現状の漁獲圧で漁獲を継続しても、 $F_{cur}$ と推定されており、 $F_{limit}$ は現状の漁獲圧 ( $F_{current}$ ) として ABC を算定し、 $F_{cur} > F_{limit}$  であることから  $B_{limit}$  は設定されていない (久保資源水準は高位であることから資源量は  $B_{limit}$  以上の水準にあると判断し、法1により判定し、5点を配点する。

評価手法	1点	2点	3点	4点
①	$B_{cur} \leq B_{limit}$ $F_{cur} > F_{limit}$	.	$B_{cur} > B_{limit}$ $F_{cur} > F_{limit}$ または $B_{cur} \leq B_{limit}$ $F_{cur} \leq F_{limit}$	.
②	$C_{cur} > ABC$	.	.	$C_{cur} \leq ABC$
③	漁業の影響が大	.	漁業の影響が小さい	.

年	2017
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資源の状態						
大項目	中項目	中項目評価点	中項目重み	大項目重み	大項目評価点	評価軸総合点
対象種の資源生物研究・モニタリング・評価手法	生物学的情報の把握	4.0	1.0	1.0	4.3	4.4
	モニタリングの実施体制	4.3	1.0			
	資源評価の方法と評価の客観性	4.5	1.0			
対象種の資源水準と資源動向	対象種の資源水準と資源動向	5.0	1.0	1.0	5.0	
対象種に対する漁業の影響評価	現状の漁獲圧が対象種資源の持続的生産に及ぼす影響	5.0	1.0	1.0	4.0	
	現状漁獲圧での資源枯渇リスク	4.0	1.0			
	資源評価結果の漁業管理への反映	3.0	1.0			

生態系・環境への配慮						
大項目	中項目	中項目評価点	中項目重み	大項目重み	大項目評価点	評価軸総合点
操業域の環境・生態系情報、科学調査、モニタリング	基盤情報の蓄積	4.0	1.0	1.0	3.7	3.5
	科学調査の実施	4.0	1.0			
	漁業活動を通じたモニタリング	3.0	1.0			
同時漁獲種	混獲利用種	2.2	1.0	1.0	2.4	
	混獲非利用種	1.2	1.0			
	希少種	3.8	1.0			
生態系・環境	食物網を通じた間接作用	2.0	1.0	1.0	4.4	
	生態系全体	4.0	1.0			
	海底環境(着底漁具を用いる漁業)	3.8	1.0			
	水質環境	4.0	1.0			
	大気環境	4.0	1.0			

漁業の管理						
大項目	中項目	中項目評価点	中項目重み	大項目重み	大項目評価点	評価軸総合点
管理施策の内容	インプット・コントロール又はアウトプット・コントロール	3.0	1.0	1.0	3.2	3.8
	テクニカル・コントロール	3.0	1.0			
	生態系の保全施策	3.5	1.0			
執行の体制	管理の執行	4.7	1.0	1.0	3.8	
	順応的管理	3.0	1.0			
共同管理の取り組み	集団行動	5.0	1.0	1.0	4.5	
	関係者の関与	4.0	1.0			

- In the report, you can see all the assessment, data, data sources, and evaluation scores (from 1 to 5).
- You can download the report from the project webpage (<http://sh-u-n.fra.go.jp/>)



# Present status and future activities



Evaluation reports on 10 species have been published;



Chub mackerel (Pacific)



Japanese sardine (Pacific)



Jack Mackerel (Pacific)



Small-scale sillago (Ohita)



Round herring (Pacific)



sand lance (Seto inland sea)



Amberjack (Japan Sea)



Japanese flying squid (Japan Sea)



Pacific saury (Pacific)



Japanese anchovy (Pacific, Seto inland sea)

In review (stakeholder consultation); 5 species

Japanese sardine (East China sea), Japanese anchovy (East China sea), Jack Mackerel (East China sea), Chub mackerel (East China sea), Spotted mackerel (Pacific, East China sea)

Internal review; 12 species

7 demersal species (Northwestern Pacific), 5 pelagic species (High seas)

More than 50 species will be evaluated until the end of 2019.

# Stakeholder consultation and Public comment



Internal review

Drafts are preliminary checked by the editorial board.

Stakeholder consultation

Opinions from stakeholders are collected and the steering board members check misunderstandings and lacks of evidences.

Stakeholders: JFA, Fishers organization (central, local), Prefectural government, Prefectural research institute

	# species	# organizations	#response	# comments
1	4	33	14	86
2	3	62	30	234
3	3	118	78	338
4	5	101	40	sorting

Public comments

Public comments are collected before publication via FRA homepage, but difficult to collect the comments.

	# species	#response	# comments
1	4	2	19
2	3	2	36
3	3	0	0

# Project web page (English version is available)

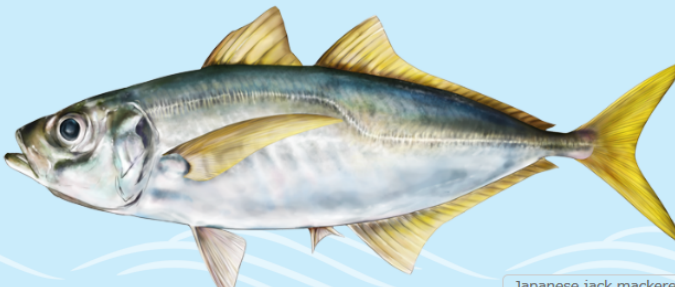


SH\*U\*N project - Mozilla Firefox

ae144198vv.smartrelease.jp/?lang=en

SH\*U\*N Provisional version  
Sustainable, Healthy and "Umai" Nippon seafood project

Search for fish Degree of your attention 日本語



Japanese jack mackerel

Home About SH\*U\*N What's new Search for fish

Fish are born in the sea and caught by fishers, then processed and distributed on land, as seafood. This process as a whole is called the "Fisheries System". The objective of the SH\*U\*N project is to provide consumers with an opportunity to consider the origin of their daily seafood in the "Fisheries System".

**Search for fish**  
We establish a priority ranking for evaluation work and publish evaluation results for individual seasonally-relevant fish species centered around oceanic boat fishing species.

Text Search  
Enter fish name or prefecture name

Select the region

FRA: SH\*U\*N project to be introduced at the SH\*U\*N project smartphone app

SH\*U\*N Provisional version  
Sustainable, Healthy and "Umai" Nippon seafood project

Search for fish Degree of your attention 日本語

Home About SH\*U\*N What's new Search for fish Glossary Contact

**Search for fish**  
We establish a priority ranking for evaluation work and publish evaluation results for individual seasonally-relevant fish species centered around oceanic boat fishing species.

Select the region List of fish names

sardi  
Japanese sardine  
Sardinops melanostictus

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# Project web page (Results of evaluation)



## あなたの総合評価

**資源の状態**  
マサハは我  
ホト解析に  
産研究・教育  
マサハは長  
るが、増加傾  
図るため更に  
い。  
資源評価結  
る。

**生態**  
生態系・環境  
評価対象であ  
系に関する情  
査などが毎年  
が義務づけら  
太平洋北区  
希少種に関し  
マサハを対  
に、太平洋北  
種の資源変動  
類、カジキ類  
低位でありな  
切である。大

**漁業**  
漁業の管理  
マサハ太平  
業を対象とし  
(オホーツク  
我が国の漁  
アップ的管理

態の悪化が懸念される魚種はないことから、これら小型浮魚類は全体として植物プランクトン等による基礎生産、動物プランクトン等による二次生産とマクロ類、カジキ類等の高次捕食者をつなぐ生態系機能を維持していると考えられる。ただし、マイワシは他の小型浮魚類よりも栄養段階が低く、1980年代に資源量が爆発的に増加した際には、捕食者の食性や食物網の構造や機能を大きく変化させたと考えられる。近年マイワシ資源が再び増加傾向にあることから、資源増大と生態系変化との関係や、その変化に漁業が影響を及ぼす程度をモニタリングしていくことが大切である。

[報告書](#) [引用文献▲](#) [詳細](#)

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[第2管区海上保安本部 \(2016b\) 平成27年の海洋汚染の現状](#)

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# Smartphone platform for consumers



ae144198vv.smartrelease.jp

SH\*U\*N Provisional version

Fish are born in the sea and distributed on land through a process as a whole is the objective of the SH\*U\*N project. It is an opportunity to consider the "Fisheries System".

About SH\*U\*N

- Background
- Purposes of our project
- About the "Fisheries System"
- About the criteria of SH\*U\*N project
- For the future of sustainable resource

Select the region

Please select the region on the map of Japan.

The global population continues to increase. According to United Nations (UN) estimates, the world population as of 2015 was 7.35 billion, a 2.2-fold increase in global population since 1965 (UN DESAPD 2015). At the same time, in nine people, or a total of approximately 8 billion individuals worldwide, are suffering from malnutrition. Of these individuals are in Asia (FAO).

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あなたの Fish Points

- 38 pt 資源
- 32 pt 生態系
- 41 pt 漁業
- 37 pt 地域

sustainable world

Sustainable, Healthy and Safe

いま、

あなたの Fish Points

- 38 pt 資源
- 32 pt 生態系
- 41 pt 漁業
- 37 pt 地域

マイワシ 4 消費レベル

10 日前

資源 生態系 漁業

紀伊水道外域鯖漁の解禁が「ハモ」は梅雨から夏場がカタクチイワシは今がオス

ブリ

北の方でもよくとれています

食べごろ予報

このさかなの状況

- 4 pt 資源
- 3 pt 生態系
- 3 pt 漁業
- 4 pt 地域

このさかなのみんなの動き (10 日前からの変化)

- 資源
- 生態系
- 漁業
- 地域

このさかなを たべた

SH\*U\*N

Japan Fisheries Research and Education Agency

# Cost and effort of the SH"U"N project



## Outreach program

## Main research Stock assessment

Preliminary results

\* Salaries of researchers are not included.

\*\* not yet counted.

- ca. 1% of the main research activities have been spent in the cost and effort .
- Increase in number of evaluation reports affect the cost of outreach activities.

# Publicity relations



Outreach program needs publicity activities

Exhibition booth at the open house of regional research institutes, seafood show hold at Tokyo & Osaka.



# Effectiveness of the outreach program



- Existence of the program

National fisheries research institution should maintain their outreach program on fisheries sustainability.

*ref.* Fish watch program (NOAA, USA),  
Healthcheck for Australian Fisheries (CSIRO, Australia)

- Annual questionnaire survey

Annual questionnaire surveys have been conducted from 2016, in order to evaluate the consumer consciousness on fisheries sustainability via internet.

Results will be reported in the web-page cumulatively.

Temporal changes of the consumer consciousness might be affected by the actions of mass-communication, NGOs and others.



# Present and future



- Ca. 20 species will be evaluated within this fiscal year, and 50 more species until the Tokyo Olympic in 2020.
- We hope the scientific information provided by this project will enhance the consciousness of consumers, and be utilized by fishermen or companies for applying to get the fisheries eco-labels such as MEL, MSC, etc.
- Communication with users (fisheries organization, local government, MSC, MEL, etc.) have been proceeded. Their opinions are the key for the better science outreach.



Thank you for your  
attention

