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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Japan Fisheries Research & Education Agency (FRA)
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.
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.
U.S. fisheries are among the world's largest and most sustainable

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.

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.

“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)
Evaluation structure (social and ecological)

- Research / monitoring
- Stock level & trend
- Influence of fisheries

- Environmental & ecological consideration

- Research / monitoring
- Bycatch species
- Ecosystem & environment

- Management measure
- Management scheme
- Co-management

- Fishery production
- Processing / distribution
- Regional situation

Status of stock

- Fishery management

Regional sustainability

SH“U”N Fish recommendation list

Health & seafood safety

- Nutrition
- Monitoring
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

<table>
<thead>
<tr>
<th>Evaluation reports on 10 species have been published;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chub mackerel (Pacific)</td>
</tr>
<tr>
<td>Japanese sardine (Pacific)</td>
</tr>
<tr>
<td>Jack Mackerel (Pacific)</td>
</tr>
<tr>
<td>Small-scale sillago (Ohita)</td>
</tr>
<tr>
<td>Round herring (Pacific)</td>
</tr>
<tr>
<td>sand lance (Seto inland sea)</td>
</tr>
<tr>
<td>Amberjack (Japan Sea)</td>
</tr>
<tr>
<td>Japanese flying squid (Japan Sea)</td>
</tr>
<tr>
<td>Pacific saury (Pacific)</td>
</tr>
<tr>
<td>Japanese anchovy (Pacific, Seto inland sea)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>In review (stakeholder consultation); 5 species</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal review; 12 species</th>
</tr>
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<tbody>
<tr>
<td>7 demersal species (Northwestern Pacific), 5 pelagic species (High seas)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th># species</th>
<th># organizations</th>
<th>#response</th>
<th># comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>33</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>62</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>118</td>
<td>78</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>101</td>
<td>40</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th># species</th>
<th>#response</th>
<th># comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Fish are born in the sea and caught by fishers, then processed and distributed on land, for human consumption. 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".
あなたのはじめ評価


第3管区海上保安本部 (2016a) 平成27年の東北地方における海上犯罪の状況について (報文便)。

第3管区海上保安本部 (2016b) 平成27年の海洋汚染の状況。

田中 克之、真名（2016）平成27年地球温暖化対策、平成27年研究課題は、地球温暖化対策、第2分冊、水産庁・水産総合研究所センター、115-8-113。

独立行政法人海洋総合研究センター（2011）平成21年度海洋資源調査事業報告書（システム対応型：単一型まき細工・北部太平洋海域）」、ISBN 40-82。

独立行政法人海洋総合研究センター（2012）平成22年度海洋資源調査事業報告書（システム対応型：単一型まき細工・北部太平洋海域）」、ISBN 64-82。

海洋汚染センター（2014）北太平洋海洋調査機における水質情報を利用したカタクチイシ調査状況について、水質汚染研究43-1-8。


辻口哲司、森田明宏、中村浩二『1985』山本丈夫（編）日本の赤鳥、山と渓谷社、pp931


長谷川博（1998）アホトリ、日本の特有野生物種に関する基礎資料(V)、69-74

長谷川博男（2010） depict野鳥の魚類捕食とCO2排出量の状態、水産技術、2, 111-121。
Smartphone platform for consumers

Background

The global population continues to rise, and according to United Nations (UN) projections, the population will increase to 9.7 billion people by 2050. This growth is largely attributed to a reduction in death rates and an increase in birth rates in developing regions. The consumption of seafood, including fish, is expected to increase significantly to meet the nutritional needs of this growing population. Therefore, improving the efficiency and sustainability of seafood production is crucial.

Purposes of our project

About the “Fisheries System”

SH‘U’N aims to develop a smartphone platform that promotes sustainable seafood consumption. The platform will provide consumers with information on the origin, sustainability, and nutritional value of seafood products. By empowering consumers to make informed decisions, SH‘U’N contributes to the conservation of marine resources and the promotion of a sustainable seafood market.

About the criteria of SH‘U’N

For the future of sustainable seafood

SH‘U’N selects regions that have implemented sustainable fishing practices and have a track record of responsible management. These regions are expected to contribute significantly to the conservation of marine resources and the promotion of sustainable seafood consumption.

Select the region

Please select the region on the map of Japan to obtain information on sustainable seafood products.
Cost and effort of the SH”U”N project

<table>
<thead>
<tr>
<th>Year</th>
<th>Outreach program</th>
<th>Main research Stock assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>FRA 13,298,000 yen*</td>
<td>JFA 2,033,000 yen</td>
</tr>
<tr>
<td>2017</td>
<td>FRA 13,000,000 yen*</td>
<td>23 researchers (3.25 person-year)</td>
</tr>
<tr>
<td>2018</td>
<td>FRA 6,950,000 yen*</td>
<td>JFA 20,000,000 yen</td>
</tr>
<tr>
<td></td>
<td>-- researchers**</td>
<td>(-- person-year)</td>
</tr>
</tbody>
</table>

* 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.
Outreach program needs publicity activities

Exhibition booth at the open house of regional research institutes, seafood show held 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