The Economics of Sustainability in Asia
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General Manager  
Aeon Topvalu (Thailand) Co., Ltd.

WAKAO HANAOKA  
CEO  
Seafood Legacy
Global Seafood Consumption Per Capita

Average expansion of 1.5% per annum

1961: 9 kg
2015: 20.2 kg
2030: 21.5 kg

Source: Food and Agriculture Organization of the United Nations (FAO)
China, by far the world’s leading fish consuming country, accounted for 38 percent of the global total in 2015, with its per capita consumption reaching about 41 kg.
Global Seafood Consumption Footprint

*Top 6 countries ranked according to consumption in 2011*

The seafood consumption footprint is expressed as the biomass of domestic and imported seafood production required to satisfy national seafood consumption, and is estimated using a multi-regional input output model.

Per capita consumption footprint (kg) in absolute terms for the top 6 countries ranked according to their consumption in 2011.

1\textsuperscript{st} column of each country refers to the total per capita consumption footprint
2\textsuperscript{nd} column refers to total per capita consumption footprint satisfied with domestic production
3\textsuperscript{rd} column refers to total per capita consumption footprint satisfied with external trade
“It is ground-breaking, cleverly simple and will influence positive behavior change.”
– Group Executive Chef Florian Trento
End Goal

- Healthy competition
- Transparency
- Efficiency
- Stakeholder engagement
Where we are now

- There are too few service providers of certified sustainable seafood.
- No one provider has good enough coverage.
- Providers are, in general, not collaborating.
- Not enough common language & transparency.
UK SSC Model

- Started in 2011. Now covers over **75% of retail** seafood market in UK.
- **Industry-led.**
- Defined by **voluntary codes of conduct.**
- Members of the UK SSC have **ownership** of the issue.
Online Tendering Platform within HKSSC

1. Search the database in any language of common use.
2. Buyers choose the specification they want.
3. Database returns member suppliers who can meet that specification.
4. Buyers choose suppliers according to their own wishes.
Advantages of the System

**TRANSPARENT**
Opens up a transparent market for all.

**COLLABRATION**
HKSSC members collaborate to agree on terms.

**COMPETITION**
Allows for healthy competition.

**SHARED COSTS**
Costs, such as audits, can be shared amongst members.
Sustainability in Asia – the consumer view

*SeaWeb Seafood Summit 2019*

Umesh Madhavan
June 2019
Consumers in Asia
The growing middle class will influence food consumption patterns

As the middle class grows in Asia ...

Global middle class

Middle class population (bn)

- 3.2 (2016)
- 4.2 (2022f)
- 5.2 (2028f)

...so will protein consumption

Source: Brookings Institution 2017, FAO, Rabobank 2019
Consumer trends are changing at an accelerated pace

Asia’s increasing share of global retail F&B value

18% 2013

20% 2017

25% 2025f

Food businesses need to adopt to dynamic consumer trends

- Health at the forefront
- Connected consumers
- Growing desire for convenience
- Values not just value

Source: Euromonitor 2018, Rabobank 2019
Consumers inclined to change shopping habits in favor of the environment...

Q: Which statement best describes the likelihood that you would change your purchase/consumption habits to reduce your impact on the environment? (n=7,058)

Source: Nielsen Sustainability Survey, 2018
...with an intent to pay more...

% of internet users in Asia who say they would pay more for sustainable/eco-friendly products

<table>
<thead>
<tr>
<th>Year</th>
<th>Gen Z (16-21)</th>
<th>Millennials (22-35)</th>
<th>Gen X (36-54)</th>
<th>Baby boomers (55-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>57%</td>
<td>60%</td>
<td>63%</td>
<td>60%</td>
</tr>
<tr>
<td>2012</td>
<td>59%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>2013</td>
<td>63%</td>
<td>60%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>2014</td>
<td>60%</td>
<td>60%</td>
<td>63%</td>
<td>64%</td>
</tr>
<tr>
<td>2015</td>
<td>63%</td>
<td>60%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>2016</td>
<td>64%</td>
<td>60%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>2017</td>
<td>63%</td>
<td>60%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>2018</td>
<td>63%</td>
<td>60%</td>
<td>63%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Note: Internet users in Asia aged 16-64, n= 483,618 for total and n= 143,404 for age groups
Source: GlobalWebIndex, 2019
...which may not always be followed through

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1%</td>
<td>F&amp;B with environment &amp; sustainable sourcing or animal welfare labels in Asia¹</td>
<td>(2018)</td>
</tr>
<tr>
<td>2.8%</td>
<td>F&amp;B with organic labels in Asia</td>
<td>(2015)</td>
</tr>
<tr>
<td>0.5%</td>
<td>Organic F&amp;B of F&amp;B sales in Asia</td>
<td>(2018)</td>
</tr>
<tr>
<td>0.4%</td>
<td>Organic F&amp;B of F&amp;B sales in Asia</td>
<td>(2015)</td>
</tr>
</tbody>
</table>

Note: For eight countries
Source: Euromonitor, 2019
Consumers have high expectations of the role companies should play

83% of respondents feel that it is extremely important or very important that companies implement programs to improve the environment.

Q: How important is it for you that companies implement programs to improve the environment? (n=7,058)
Source: Nielsen Sustainability Survey, 2018
CPG corporate strategies - sustainability in practice
Increasing transparency in reporting – slowly, but steadily

Average disclosure rates across 91 environmental and social practices

<table>
<thead>
<tr>
<th>Region</th>
<th>Disclosure Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>19%</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>12%</td>
</tr>
<tr>
<td>Japan, Taiwan</td>
<td>31%</td>
</tr>
<tr>
<td>South Korea, India, India, Indonesia, Thailand, Malaysia, Pakistan</td>
<td>1%</td>
</tr>
</tbody>
</table>

Key subject areas for sustainability reporting

<table>
<thead>
<tr>
<th>Country</th>
<th>Subject Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Emissions/pollution, Product and service responsibility, Climate change</td>
</tr>
<tr>
<td>India</td>
<td>Waste, Emissions/pollution, Energy</td>
</tr>
<tr>
<td>Japan</td>
<td>Emissions/pollution, Climate change, Resources</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>Waste, treatment, disposable and storage</td>
</tr>
</tbody>
</table>

Note: (1) For the 250 largest public listed companies
Partnerships becoming more commonplace

Collaboration between Mars and Tata Trusts to provide affordable nutrition to children in India

Collaboration between 30+ organizations to reduce single-use beverage packaging in Hong Kong

Source: Mars, https://drinkwithoutwaste.org
Multiple approaches being adopted to reduce plastic waste

- Cooperation along and beyond the immediate supply chain
- Innovation – reduced input, reverse vending machine, smarter designs, new raw materials
- Companies are setting clear targets to reduce, reuse and recycle plastic packaging
- New end-use applications for recyclates
Tech being leveraged to solve demand-linked sustainability challenges

- Alternative sources of protein
- Blockchain solutions to improve food safety, traceability and provenance
- Personalized nutrition to tackle the double burden
- AI to reduce food wastage
“Purpose” can be a competitive moat

For Unilever, Sustainable Living Brands have to contribute to the Unilever Sustainable Living Plan (USLP) by, for example, reducing their greenhouse gases (GHG), water or waste footprint or increasing their health, wellbeing or nutrition profile.

46% sustainable brand’s growth in comparison to other brands (2017)

Source: Unilever

Unilever’s five “Golden Rules” to develop Sustainable Living Brands and to connect with consumers

1. Define purpose
2. Take action
3. Talk my world
4. Friends and family matter
5. Build touchpoints

Source: Rabobank
Rabobank’s role
Our Mission

Growing a better world together

We believe that sustainable growth makes the world better, and that with courage and purpose, we as a bank—in cooperation with our clients and partners—can help bring it about in a meaningful way.

Growing
stands for sustainable, healthy growth and for development and progress. Especially in times of transformation, we want to help and challenge our clients, partners and colleagues, and move them toward healthy growth.

A better world
We want to improve the society we live on different levels. That could include families, neighborhoods, cities, communities, clubs, bank branches, value chains, countries—even the whole world.

Together
means that we’re working with clients, employees, partners, governments, knowledge institutions and even our competitors. As a cooperative bank, we believe in the power of coalitions.
Rabobank and the UN Sustainable Development Goals

As a cooperative bank that wants to achieve social impact, Rabobank has a duty to make a meaningful contribution to attaining the 17 Social Development Goals (SDGs). Rabobank is helping to realize the SDGs through financial support, knowledge-sharing, and bringing parties together.

**ESG ratings**

89 out of 100 points  
*Industry ESG Leader*

79 out of 100 points

*We are Sustainability Investing.*
Sustainable Seafood As a Retailor

Nobukazu Furuya
Aeon TOPVALU (Thailand) Co., Ltd.
June 11, 2019
Aeon Group

¥8,391 billion

AEON Earns the Highest Operating Revenue in Japan’s Retail Industry

Through organically linking the diverse businesses to a strong synergy effect, we have earned the highest operating revenue in Japan’s retail industry for five consecutive fiscal years.

Creation of an environment in which consumers are able to contribute to society through their typical shopping activities

Changing the Future through Shopping

We are planting trees

For children in the future

3.6 billion shop visitors annually

550,000 employees

21,742 shops/locations
Increasing Demand for Seafood in the World

**Background**

- Transportation technology has been developed and internationalized.
- Retail stores connecting to international food systems.
- Changing of dietary habit in developing countries.
- Health consciousness.
1. Realization of Low Carbon Society
2. Conservation of Biological Diversity
3. Utilization of Resources
4. Corresponding to Social Issues
<table>
<thead>
<tr>
<th>Policy of Procurement</th>
<th>Target in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Risk assessment on a regular basis. (Protecting resources and biodiversity)</td>
<td>● 100% of GMS and SM stores of consolidated companies to be certified with CoC of MSC and ASC (Distribution and Processing)</td>
</tr>
<tr>
<td>● We will make the best effort to procure sustainable marine products. (By considering feasible countermeasures)</td>
<td>● Providing products of private labeled brand of all popular marine species with evidence of sustainability. (MSC, ASC etc.)</td>
</tr>
</tbody>
</table>
CoC Certification at 1,300 AEON Stores

CoC Acquisition by 12 Companies and 1,372 Stores As of Dec. 2018

◇ Processing Centers [Marine Product Processing (19) Cooked Rice Processing (15)]
Distribution Centers [Transit (24)]
### MSC Certification

<table>
<thead>
<tr>
<th>Fish Type</th>
<th>MSC Certification Sales Results</th>
<th>23 Fish Types 42 Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern red shrimp</td>
<td>Halibut</td>
<td>Red salmon</td>
</tr>
<tr>
<td>Tiger shrimp</td>
<td>Kamchatka flounder</td>
<td>White salmon</td>
</tr>
<tr>
<td>Lobster</td>
<td>Yellowfin sole</td>
<td>Trout</td>
</tr>
<tr>
<td>Snow crab</td>
<td>Dusky sole</td>
<td>Bonito</td>
</tr>
<tr>
<td>Mackerel</td>
<td>Flathead flounder</td>
<td>Albacore</td>
</tr>
</tbody>
</table>

### ASC Certification

<table>
<thead>
<tr>
<th>Fish Type</th>
<th>ASC Certification Sales Results</th>
<th>9 Fish Types 18 Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic salmon</td>
<td>White leg shrimp</td>
<td>Tilapia</td>
</tr>
<tr>
<td>Trout salmon</td>
<td>Pangasius</td>
<td>Mussel</td>
</tr>
<tr>
<td>Raw oysters</td>
<td></td>
<td>Yellow tail</td>
</tr>
</tbody>
</table>
March 2011 in Japan: North-east coast line was devastated by the massive earthquake and Tsunami.
ASC Oyster Farming in Minamisanriku, Miyagi Prefecture
Recovery from 2011 Tsunami Disaster

Restoration of Oyster Culture Industry
To relay our fish food culture to future generations

1. Recognition
Deplete of marine products’ resources

2. Understanding and Consent
Sympathy to the activity

3. Purchase
“Awareness” We can contribute to environment through shopping.
Fish Baton – Importance of communicating with Consumers

Bonito  Mackerel
Crab    Scallops
Oysters  Salmon
Shrimp   Yellowtail

*FIP/AIP Eal
*Completely Farm-raised Tuna
Japanese Menu - Protecting Food Culture -

- Winter
- Spring
- Autumn
- Summer
Sustaining Japan’s Seafood Legacy

Wakao Hanaoka, Founder/CEO, Seafood Legacy
Seafood Legacy

PURPOSE:
- Designing seafood sustainability in Japan, together

BUSINESS:
- A Tokyo-based social venture provides sustainable seafood consulting and platforming service to retailers, distributors, producers, government, and NGOs in Japan and elsewhere.

FOUNDER: Wakao Hanaoka
- Expert Advisor of the Cabinet Office Council for Promotion of Regulatory Reform Fishery Working Group
- Committee Member of the Fishery Agency Wide Sea-area Fisheries Adjustment Commission
- Steering board member of Global Sustainable Seafood Initiative
- Member of Global Seafood Rating Alliance
- Collaborator member of the Conservation Alliance for Seafood Solutions
Japan
Japan fisheries status

- Pelagic fishery
- Offshore fishery
- Coastal fishery
- Aquaculture

### Table 27: PROJECTED ISH PRODUCTION, 2030 (live weight equivalent)

<table>
<thead>
<tr>
<th>Region/country</th>
<th>Fisheries and aquaculture</th>
<th>Production (1,000 tons)</th>
<th>Growth 2016 to 2030 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td></td>
<td>123,776</td>
<td>144,666</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td>88,938</td>
<td>79,134</td>
</tr>
<tr>
<td>India</td>
<td></td>
<td>10,762</td>
<td>13,407</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
<td>11,492</td>
<td>15,159</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td>972</td>
<td>9,427</td>
</tr>
<tr>
<td>Philippines</td>
<td></td>
<td>2,821</td>
<td>3,229</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td></td>
<td>1,894</td>
<td>1,831</td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td>2,413</td>
<td>2,757</td>
</tr>
<tr>
<td>Viet Nam</td>
<td></td>
<td>6,109</td>
<td>6,087</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td>11,360</td>
<td>13,556</td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
<td>1,705</td>
<td>2,657</td>
</tr>
<tr>
<td>Morocco</td>
<td></td>
<td>1,441</td>
<td>1,712</td>
</tr>
<tr>
<td>Nigeria</td>
<td></td>
<td>1,041</td>
<td>1,231</td>
</tr>
<tr>
<td>South Africa</td>
<td></td>
<td>618</td>
<td>599</td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td>16,444</td>
<td>17,954</td>
</tr>
<tr>
<td>European Union</td>
<td></td>
<td>6,463</td>
<td>7,025</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td>3,360</td>
<td>3,909</td>
</tr>
<tr>
<td>Russian Federation</td>
<td></td>
<td>4,972</td>
<td>5,544</td>
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<tr>
<td>North America</td>
<td></td>
<td>9,763</td>
<td>6,478</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td>1,043</td>
<td>1,099</td>
</tr>
<tr>
<td>United States of America</td>
<td></td>
<td>5,364</td>
<td>5,371</td>
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<td>Latin America and Caribbean</td>
<td></td>
<td>12,911</td>
<td>14,033</td>
</tr>
<tr>
<td>Argentina</td>
<td></td>
<td>739</td>
<td>855</td>
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<tr>
<td>Brazil</td>
<td></td>
<td>1,286</td>
<td>1,882</td>
</tr>
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<td>Chile</td>
<td></td>
<td>2,335</td>
<td>3,665</td>
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<td>Mexico</td>
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<td>1,273</td>
<td>1,993</td>
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<tr>
<td>Peru</td>
<td></td>
<td>3,897</td>
<td>4,450</td>
</tr>
<tr>
<td>Tunisia</td>
<td></td>
<td>1,440</td>
<td>1,973</td>
</tr>
<tr>
<td>Australia</td>
<td></td>
<td>369</td>
<td>289</td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td>532</td>
<td>560</td>
</tr>
<tr>
<td>World</td>
<td></td>
<td>170,941</td>
<td>200,955</td>
</tr>
</tbody>
</table>

### Graphs

- Imported
- Domestic

Source: FAO Food and Agriculture Organization (FAO)

Designing seafood sustainability in Japan, together.
"Designing seafood sustainability in Japan, together"
Inspiring actions
Improved business and policy engagement
Sustaining Japan’s Seafood Legacy