The Business of Sustainable Seafood: Social Entrepreneurship in Action
Farmed Atlantic salmon ($2.99/lb) – no longer available at Costco

Copper River Wild Salmon $8.99/lb at Costco

Sustainably farmed Loch Duart salmon
Three Companies

• FishWise – a non-profit started by UCSC alumna Teresa Ish (started 2003)

• MRAG (Marine Resource Assessment Group) – a for profit company started by Prof John Beddington (Imperial College London and currently Chief Science Advisor to the Prime Minister of the UK (started 1986)

• Marine Stewardship Council – a non-profit started by Unilever (a global food corporation) (started 1999)
Teresa Ish, BS Environmental Studies and Marine Biology, 2000
MSc, Ocean Sciences, 2003
FishWise

Member of Conservation Alliance for Seafood Solutions
The Motivating Situation: Global Demand for Seafood is Increasing
U.S. Seafood Consumption

U.S. consumption below world average (~18 lbs) at 15.8 pounds per capita

Most popular U.S. seafood items: shrimp, pollock, salmon, tuna

84% of the seafood consumed in the U.S. is imported, half of which is produced by aquaculture
The Rise of Aquaculture

The fastest growing sector of global food production.

The demand for fish will continue to rise with:
• Population growth
• Increasing incomes
• Improved diets

Developing countries are the largest producers of farmed seafood.
The Rise of Aquaculture

Figure 3. Growth in seafood supply from wild fisheries has stagnated; aquaculture is taking the lead. Growth in global seafood supply has outpaced the world's population growth since 1950. Since wild fishery landings hit a plateau in the 1990s, a boom in aquaculture has supported the increase in global seafood supply (FAO FishStat, 2009; U.S. Census Bureau, 2009). These numbers do not include illegal fishery landings, which may account for another 11 to 26 million tons.
U.S. Seafood Consumption

U.S. consumption below world average (~18 lbs) at 15.8 pounds per capita

84% of the seafood consumed in the U.S. is imported

50% of which is produced by aquaculture
US Seafood Imports

- Shrimp: 34%
- Freshwater: 17%
- Tuna, Canned: 12%
- Tuna: 9%
- Salmon: 14%
- Groundfish: 6%
- Crabs: 5%
- Squid: 3%
There are problems with our current fishing methods and intensity.

How do we change these trends?

Many groups have targeted consumers, giving them pocket cards or placing eco labels on packages to help them make good choices.

Is it working?
The Monterey Bay Aquarium Has Tried to Guide People

<table>
<thead>
<tr>
<th>BEST CHOICES</th>
<th>GOOD ALTERNATIVES</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abalone (US farmed)</td>
<td>Basa/Pangasius/Swai (farmed)</td>
<td>Caviar, Sturgeon* (imported wild)</td>
</tr>
<tr>
<td>Arctic Char (farmed)</td>
<td>Caviar, Sturgeon (US farmed)</td>
<td>Chilean Seabass/Toothfish*</td>
</tr>
<tr>
<td>Barramundi (US farmed)</td>
<td>Clams, Oysters (wild)</td>
<td>Cod, Atlantic and imported Pacific</td>
</tr>
<tr>
<td>Catfish (US farmed)</td>
<td>Cod, Pacific (US bottom longline)</td>
<td>Cobia (imported farmed)</td>
</tr>
<tr>
<td>Crab (Dungeness)</td>
<td>Crab, King (US, Snow)</td>
<td>Crab King (imported)</td>
</tr>
<tr>
<td>Halibut (US)</td>
<td>Flounder, Sandbass, Soles (Pacific)</td>
<td>Dogfish (US)*</td>
</tr>
<tr>
<td>Lobster: Spiny (US)</td>
<td>Halibut: California*</td>
<td>Lobster: Spiny (Brazil)</td>
</tr>
<tr>
<td>Rockfish: Black (CA, OR, WA, hook &amp; line)</td>
<td>Rockfish (Alaska or BC, hook &amp; line)</td>
<td>Mahi Mahi/Dolphinfish (imported)</td>
</tr>
<tr>
<td>Sablefish/Black Cod (Alaska, BC)</td>
<td>Salmo (wild, WA* and north of</td>
<td>Makii Blue*, Striped*</td>
</tr>
<tr>
<td>Salmon (Alaska wild)</td>
<td>Portlock: Alaska</td>
<td>Monkfish</td>
</tr>
<tr>
<td>Sandrovoes: Pacific (US)</td>
<td>Rockfish (Alaska or BC, hook &amp; line)</td>
<td>Orange Roughy*</td>
</tr>
<tr>
<td>Scallops (farmed off-bottom)</td>
<td>Sablefish/Black Cod (CA, OR, WA)</td>
<td>Rockfish (trawled)</td>
</tr>
<tr>
<td>Shrimp: Pink (OR)</td>
<td>Salmon (wild, WA* and north of</td>
<td>Salmon (farmed, including Atlantic)*</td>
</tr>
<tr>
<td>Striped Bass (farmed or wild*)</td>
<td>Cape Falcon, OR)</td>
<td>Sharks*</td>
</tr>
<tr>
<td>Tilapia (US farmed)</td>
<td>Scallops: Sea</td>
<td>Shrimp (imported)</td>
</tr>
<tr>
<td>Trout: Rainbow (US farmed)</td>
<td>Shrimp (US, Canada)</td>
<td>Swordfish (imported)*</td>
</tr>
<tr>
<td>Tuna: Albacore including canned white tuna (troll/ pole, US and BC)</td>
<td>Spot Prawns (US)</td>
<td>Tilapia (Asia farmed)</td>
</tr>
<tr>
<td>Tuna: Skipjack including canned light tuna (troll/pole)</td>
<td>Squid</td>
<td>Tuna: Albacore, Bigneye, Yellowfin (longline)*</td>
</tr>
<tr>
<td>White Seabass</td>
<td>Swordfish (US)*</td>
<td>Tuna: Bluefin* and Togol</td>
</tr>
<tr>
<td>Tuna: Canned white/Albacore (troll/pole except US and BC)</td>
<td>Tilapia (Central &amp; South America farmed)</td>
<td>Tuna: Canned except (troll/pole)*</td>
</tr>
</tbody>
</table>

Support Ocean-Friendly Seafood

Best Choices are abundant, well-managed and caught or farmed in environmentally friendly ways.

Good Alternatives are an option, but there are concerns with how they’re caught or farmed — or with the health of their habitat due to other human impacts.

Avoid for now as these items are overfished or caught or farmed in ways that harm other marine life or the environment.

Key
- BC: British Columbia
- CA: California
- OR: Oregon
- WA: Washington
- A: All states

*Limit consumption due to concerns about mercury or other contaminants. Visit www.ezf.org/seafoodwatch

Contaminated information provided by:
ENVIRONMENTAL DEFENSE FUND

Seafood may appear in more than one column.
Usage in the U.S. Population

Nearly 4.9 million households are using some sort of reference for their seafood purchases.
Consumer Survey

When deciding what fresh seafood items to purchase from the supermarket or other store, how important are each of the following?

Results from the Perishables Group
Consumer Survey

When deciding what fresh seafood items to purchase from the supermarket or other store, which of the following is most important to you?

Results from the Perishables Group
Consumer Survey

If ‘sustainable seafood’ is defined as fish that is caught in a way that does not risk the species’ future or oceans, or farmed fish that is farmed in a way that does not harm the environment, which of the following statements best describes you?
When shopping for seafood at a market, I am willing to pay more for seafood that has been certified as healthy and sustainable

- Unaware: 63
- Aware: 70
- Adopter: 73

A scalar variable indicates a level of agreement with a proposition.
Would you ever change brands or service providers because of an organization’s association with a good cause?

Yes  93.4

No  6.6

A scalar variable indicates a level of agreement with a proposition.
If the consumers aren’t demanding sustainable products, how else can/will the industry change?
What is Sustainable Seafood?

*Sustainable seafood* comes from sources, whether fished or farmed, that can maintain or increase production in the long-term without jeopardizing the structure or function of affected ecosystems.

Factors to evaluate:

- Species
- Ecology
- Management
- Resource Use
- Social Issues
Determining Sustainability

• Monterey Bay Aquarium Rankings:
  – Inherent Vulnerability
    • $r$, age at 1\textsuperscript{st} maturity, $k$, max age, fecundity
  – Status of Wild Stocks
    • Management status, abundance relative to MSY, level of uncertainty, fishing mortality, long-term trend, skewness of age/size distribution
  – Nature of Bycatch
    • Quantity, consequence of bycatch, overall trends
  – Habitat Effects
    • Effect on biogenic habitat, resilience of habitat, scale
  – Management Effectiveness
    • Stock assessments are used, quota at appropriate level
Determining Sustainability

• Marine Stewardship Council:
  
  – A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.
  
  – Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.
  
  – The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.
Sustainability Criteria

FishWise and the Monterey Bay Aquarium's Seafood Watch program use five sustainability criteria to evaluate wild fisheries and aquaculture and develop a seafood recommendation:

• Species
• Ecology
• Management
• Social
• Resource Use
Sustainability Criteria

- Orange Roughy
  - Inherent Vulnerability – High Concern
  - Status of Stocks – High
  - Nature of Bycatch - Moderate
  - Habitat Effects - High
  - Management Effectiveness - Moderate
Sustainability Criteria

• Alaskan Salmon
  • Inherent Vulnerability – Low Concern
  • Status of Stocks – Low
  • Nature of Bycatch - Low
  • Habitat Effects - Low
  • Management Effectiveness - Low
Sustainability Criteria

• Farmed Salmon
  • Risk of escaped fish to wild stocks – Critical Concern
  • Risk of disease transfer to wild stocks - High
  • Use of marine resources - High
  • Risk of pollution and habitat effects - High
  • Effectiveness of management regime - Moderate
Sustainability Criteria

- Farmed Shellfish
  - Risk of escaped fish to wild stocks – Low Concern
  - Risk of disease transfer to wild stocks - Low
  - Use of marine resources - Low
  - Risk of pollution and habitat effects - Low
  - Effectiveness of management regime - Low
Sustainability Rankings and Pioneering with New Leaf

Green – Best Choice

Yellow – Good Alternative

Red - Unsustainable
The FishWise Garage
FishWise Elevator Spiel

FishWise promotes the health and recovery of ocean ecosystems by providing innovative market-based tools to the seafood industry to support sustainability through environmentally responsible business practices.
What is FishWise?

• FishWise is a non-profit sustainable seafood consultancy dedicated advancing leadership in sustainable seafood

• Partner with industry to affect change on the water

• Member of Conservation Alliance for Seafood Solutions
Seafood Supply Chain

Graphic from Magera and Beaton, 2009
Who We Work With
Producers

Assess sustainability of their products
Who We Work With
Producers

Assess sustainability of their products

Establish improvement programs to document progress towards certification or rankings
Who We Work With
Producers

Assess sustainability of their products

Establish improvement programs to document progress towards certification or rankings

Facilitate market access through FishWise distributor and retail partners
Who We Work With Distributors

Develop marketing strategies to capitalize on sustainability initiatives
Who We Work With
Distributors

Develop marketing strategies to capitalize on sustainability initiatives

Produce assessments with resulting recommendations
Who We Work With Distributors

Develop marketing strategies to capitalize on sustainability initiatives

Produce assessments with resulting recommendations

Access to sustainably minded businesses
Who We Work With
Retailers

Comprehensive seafood policy development and implementation
Who We Work With
Retailers

Comprehensive seafood policy
development and
implementation

Sourcing support to increase
number of sustainable
seafood offerings
Who We Work With

Retailers

Comprehensive seafood policy development and implementation

Sourcing support to increase number of sustainable seafood offerings

Develop staff training modules and promotional materials
FishWise Educates Seafood Staff and Customers

- Outreach Materials
- Staff Reference Materials
- Staff Training
- On-call Support Anytime
- Advertising & Promotional Assistance
- Website & Newsletter Copy Writing
Sustainable Choices and Responsible Business Practices

• Informed customer decisions drive our market based approach to conservation
• Knowledgeable consumers buy more seafood
FishWise Results

- Seafood sales have increased as much as 20% using the FW program
- Improved consumer confidence and trust
- Increased purchasing of sustainable options (smaller change in unsustainable options)
Greenpeace work has led to many retailers partnering with NGOs for help on their sustainable seafood policies.

Percent of total sales (of top 20 U.S. retailers) partnered with NGOs
Safeway’s Sustainability Goal

• By 2015, all seafood will be sustainable and traceable, or in a credible time-bound improvement project
FishWise Results

• Seafood sales have increased using the FW program
• Improved consumer confidence and trust
• Increased purchasing of sustainable options (smaller change in unsustainable options)
• High ranking for retailers (and subsequent press) in Greenpeace Campaign
Another Important Result: The Greenpeace Scorecard

Greenpeace has ranked the top 20 retailers in the U.S. according to their sustainable seafood policies and purchasing for several years.

This allows for public pressure to be put directly on the companies, regardless of consumer demand at the seafood cases.
Illegal Fishing

Billions of dollars and sometimes the majority of fisheries are illegal.

$4 billion bluefin tuna black market

Photo by Greenpeace
Managing Sustainability, Traceability, and IUU Risks

MRAG Americas
St. Petersburg, Florida
Tel: 727-563-9070
www.mragamericas.com
Sustainability is a Multidimensional Optimization Problem

- Status of fish stocks
- Ecosystem
- Management
- Socio-economic
- Fair Trade
- Animal welfare
- IUU
- Food miles / carbon
- Dolphins
- Free-range
- Bycatch / discards
- Organic
Purchasing decisions

1. Choose materials originating from certified, green-listed or traceable sources
   - Is there a reliable assessment process?
   - Does the scheme meet your criteria?

2. Investigate your current supply chains
   - Transparency of the supply chain
   - Full-chain traceability verification
   - Risks of IUU entering
Sustainable Policies and Procedures

• Goals-objectives based - statements and commitments
• Lists of criteria / standards
• Detailed explanations of procedures / transparency
• Decision tree
• Risk assessment
Commercial Considerations

• Price
• Hygiene
• Taste and flavour
• Colour and texture
• Supplier relationships
• Value-added
• Quantity available and consistency of supply
• Health and nutrition
Illegal Unreported Unregulated Fishing (IUU)

• $10bn to $23bn value per year (11 to 25 million tonnes)
• Businesses are the perpetrators of and yet most affected by IUU fishing
• Undermines management and sustainability
• Lower price of fish, Limited access to markets, degradation of the resource
• The key risks are identifiable by assessment and mitigated through robust traceability implementation, verification and monitoring
1. Policy, Procedures and Criteria
2. Communication to supply chain / other
3. Assessment of risks - current supply chain
4. Identification of ‘approved’ supplies
5. Verification of compliance with criteria

Assessment & Verification Tools:
- Rapid fishery assessment
- Certification
- IUU Risk Assessment
- Traceability Audits

Decision Making:
- Fishery Improvement Plans
- Monitoring and Corrective Action
- Alternative sourcing
- Traceability schemes
Fishery Assessment

- Establish the best available scientific information on the fishery
- Rapid assessment of key indicators (criteria)
  - Level of fishery exploitation
  - Ecosystem
  - Management
  - Other
- Risks to sustainability criteria
- Reporting
- May lead to certification
Risk assessment

- Key weaknesses (incentives and disincentives to IUU) in fishery & chain
- Where are the entry points of illegal fish into the chain?
- What are the key documents to prove that the authority has approved the batch?

Internal and third party audit

- Audit facilities for conformance to traceability and mitigation factors
- Check product and raw material conformity and gather data
- Individual products as well as companies may need to be included
Traceability Assessment

- Opportunity for industry / market to provide positive evidence of source, clarity and transparency
- With a robust traceability system all product included in the system can be monitored
- Supplier audit
- Provides a marketing advantage
- Enables cooperation between participants / partners
- Reduce risks of handling IUU fish
- Internal systems based so may not need additional resources / investment
Effective Traceability

• Traceability to Legal Catch (Quota) and Vessel (Licence)
• Recording of the information - electronic means, VMS check, log book review
• Transfer of catch and vessel information to traders
• Recording of conversion factor when quantities are transformed
• Verification procedure… who checks?
• Guarantee traceability *but not* guarantee legality
Marine Stewardship Council
The MSC

- **Specific aim:** reverse the decline in global fish stocks through market pressure and reward good practices
- Non-profit organisation – independent since 1999
- Developed the only internationally recognised eco-label for fisheries
- A partnership based organisation that works *with* industry, government and NGOs

The best environmental choice in seafood
Third party, independent certification

ISO 59
WTO Code of Good Practice

ISEAL Alliance

monitors

Standard setter

Principles and Criteria for Sustainable Fishing

Accreditation body

ISO 17011
Accreditation Services International (ASI)

accredits

Certifier

ISO 65
E.g: Scientific Certification Systems

certifies

Fishery

E.g: Baja lobster fishery, Mexico

Scientific Certification Systems

E.g: Baja lobster fishery, Mexico
The best environmental choice in seafood

MSC Principles

1. The sustainability of the stock
2. Ecosystem Impact
3. Effective Management

The best environmental choice in seafood
Principle 1. A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.

Intent. The intent of this principle is to ensure that the productive capacities of resources are maintained at high levels and are not sacrificed in favour of short term interests. Thus, exploited populations would be maintained at high levels of abundance designed to retain their productivity, provide margins of safety for error and uncertainty, and restore and retain their capacities for yields over the long term.

Criterion 1. The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.

Criterion 2. Where the exploited populations are depleted, the fisheries will be executed such that recovery and rebuilding is allowed to occur to a specified level consistent with the precautionary approach and the ability of the populations to produce long-term potential yields within a specified time frame.

Criterion 3. Fishing is conducted in a manner that does not alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity.
**Principle 2. Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.**

*Intent. The intent of this principle is to encourage the management of fisheries from an ecosystem perspective under a system designed to assess and restrain the impacts of the fishery on the ecosystem.*

Criterion 1. The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes.

Criterion 2. The fishery is conducted in a manner that does not threaten biological diversity (at the genetic, species or population levels) and avoids or minimizes mortality of, or injuries to, endangered, threatened or protected species.

Criterion 3. Where exploited populations of non-target species are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level within specified time frames, consistent with the precautionary approach and considering the ability of the population to produce long-term potential yields.
Principle 3. The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

Intent. The intent of this principle is to ensure that there is an institutional and operational framework for implementing Principles 1 and 2, appropriate to the size and scale of the fishery.

Criterion 1. The management system has a clearly defined scope capable of achieving sustainable fisheries in accordance with MSC Principles 1 and 2 and their associated criteria, and includes short and long-term objectives, including those for mitigating ecological impacts of fishing.

Criterion 2. The management system recognizes applicable legislative and institutional responsibilities and coordinates implementation on a regular, integral and explicit basis.

Criterion 3. The management system includes a rational and effective process for acquisition, analysis and incorporation of new scientific, social, cultural, economic and institutional information.
**Principle 3. The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable (continued)**

Criterion 4. A comprehensive research program is conducted.

Criterion 5. The management system ensures that there is a high degree of compliance in the fisheries with management measures and directives regarding fishing practices required by the system.

Criterion 6. The performance of the management system is regularly and candidly evaluated in a systematic fashion and the system responds positively to appropriate recommendations for change.
<table>
<thead>
<tr>
<th>Principle</th>
<th>Component</th>
<th>Performance Indicator</th>
</tr>
</thead>
</table>
| **Principle 1.** | Outcomes: The current status of the target stock resource | 1.1.1 Stock status  
| | | 1.1.2 Reference Points  
| | | 1.1.3 Stock recovery and rebuilding  
| | Harvest Strategy (Management): A precautionary and effective harvest strategy | 1.2.1 Performance of harvest strategy  
| | | 1.2.2 Harvest control rules and tools  
| | | 1.2.3 Information / monitoring  
| | | 1.2.4 Assessment of stock status  
| **Principle 2.** | Retained species | 2.1.1 Outcome Status  
| | | 2.1.2 Management strategy  
| | | 2.1.3 Information / monitoring  
| | Bycatch species | 2.2.1 Outcome Status  
| | | 2.2.2 Management strategy  
| | | 2.2.3 Information / monitoring  
| | ETP species | 2.3.1 Outcome Status  
| | | 2.3.2 Management strategy  
| | | 2.3.3 Information / monitoring  
| | Habitats | 2.4.1 Outcome Status  
| | | 2.4.2 Management strategy  
| | | 2.4.3 Information / monitoring  
| | Ecosystem | 2.5.1 Outcome Status  
| | | 2.5.2 Management strategy  
| | | 2.5.3 Information / monitoring  
| **Principle 3** | Governance and policy | 3.1.1 Legal and/or customary framework  
| | Fishery- specific management system | 3.1.3 Long term objectives  
| | | 3.1.4 Incentives for sustainable fishing  
| | | 3.2.1 Fishery- specific objectives  
| | | 3.2.2 Decision-making processes  
| | | 3.2.3 Compliance and enforcement  
| | | 3.2.4 Research plan  
| | | 3.2.5 Monitoring and management performance evaluation |
### 1.1.1 Stock Status

The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing.

<table>
<thead>
<tr>
<th>SG 60</th>
<th>SG 80</th>
<th>SG 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is <strong>likely</strong> that the wild stock is above the point where recruitment would be impaired or fishery impacts are so small as to have no significant effect on the stock status.</td>
<td>It is <strong>highly likely</strong> that the wild stock is above the point where recruitment would be impaired or fishery impacts are so small as to have no significant effect on the stock status.</td>
<td>There is a <strong>high degree of certainty</strong> that the wild stock is above the point where recruitment would be impaired or fishery impacts are so small as to have no significant effect on the stock status.</td>
</tr>
<tr>
<td>The wild stock is at or fluctuating around its target reference point.</td>
<td></td>
<td>There is a <strong>high degree of certainty</strong> that the wild stock has been fluctuating around its target reference point, or has been above its target reference point, <strong>over recent years</strong>.</td>
</tr>
</tbody>
</table>
### 2.1.1 Retained Species – Outcome

The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species.

<table>
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<tr>
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<th>SG 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main retained species are likely to be within biologically based limits or if outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species. If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.</td>
<td>Main retained species are highly likely to be within biologically based limits, or if outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.</td>
<td>There is a high degree of certainty that retained species are within biologically based limits. Target reference points are defined and retained species are at or fluctuating around their target reference points.</td>
</tr>
</tbody>
</table>
### 3.1.1 Legal/Customary Framework

The management system exists within an appropriate and effective legal and/or customary framework which ensures that it:
- Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2;
- Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and
- Incorporates an appropriate dispute resolution framework.

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</td>
<td>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</td>
<td>The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.</td>
</tr>
<tr>
<td>The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system.</td>
<td>The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the fishery.</td>
<td>The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective.</td>
</tr>
<tr>
<td>Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.</td>
<td>The management system or fishery is attempting to comply in a timely fashion with binding judicial decisions arising from any legal challenges.</td>
<td>The management system or fishery acts proactively to avoid legal disputes or rapidly implements binding judicial decisions arising from legal challenges.</td>
</tr>
<tr>
<td>The management system has a mechanism to generally respect the legal rights created explicitly or established.</td>
<td>The management system has a mechanism to observe the legal rights created explicitly or established.</td>
<td>The management system has a mechanism to formally commit to the legal rights created explicitly.</td>
</tr>
</tbody>
</table>
The best environmental choice in seafood

Ongoing surveillance monitoring for the duration

MSC Assessment/Certification Process
MSC Chain of Custody requirements

- Confirmation of input
- Separation and demarcation
- Secure product labelling
- Identification of certified outputs
Only products with a certified supply chain will be eligible to carry the MSC eco-label; hence each member of the supply chain that gets ownership of the fish; including processors, wholesalers, retailers and restaurants must be certified up to the point of applying the label to the product.
Frozen
Smoked
MSC-labelled products – September 2008

The best environmental choice in seafood
MSC-labelled products – September 2008

MSC-labelled products as at 30th September 2008

The best environmental choice in seafood
Market Developments

- **ASDA** sets 100% MSC fish target for its range of fresh and frozen seafood.

- **Waitrose** - sustainable sources for feed fish by 2010, partnership with MSC, Soil Association, Aquascot. Counters certified – 5 different spp

- **Sainsbury’s** – MSC first check for buyers. Counters certified, 22 products & counting. Seafood Retailer of the Year

- **Tesco** – MSC is first check for buyers. 400+ counters certified, more products planned.

- **Young’s Bluecrest** strongly committed, major retail supplier, 17 own brand – "It would be a huge advantage to the whole industry if we could unite behind the MSC and drive it forward." - Wynne Griffiths, CEO

- **M&S** – public support for MSC process

- **Morrison**s – first product to launch next month

- **Co-op** – 2 products, **Somerfield** – 1st product launched

The best environmental choice in seafood
Market Developments

• **Wal-Mart** sets 100% MSC fish target for North America for its range of fresh and frozen seafood.
• 100% **Iglo** fish fingers in Germany and the Netherlands are from MSC certified fisheries.

• Other European examples: ICA Ahold, Coop (Sweden), Findus (Scandinavia, Italy), Metro, Frosta, Deutchesee, Friedrichs (Germany), Migros, Co-op (Switzerland), Delhaize (Belgium) → have all expressed support and interest in sourcing more MSC certified raw material.

USA:

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Benefits of the MSC Programme

for the commercial sector

• Reputation and or risk management
• Respond to customer/market concerns and expectations
• Brand recognition and enhanced brand value
• Innovation
• Contribution to market transformation

for society

• Contribution to global food security
• Protection of livelihoods
• Transition towards sustainable production and consumption in global seafood industry

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Benefits of the MSC Programme

**for the environment**

• Ecosystem based approach to fishery management implemented

• Environmental impacts identified and reduced

• Fish stocks managed sustainably – fish available today and for future generations

**for fisheries**

• Access to new markets, protection of existing markets, maintain ‘buyers’ preference

• Product differentiation in competitive global markets, improved traceability

• Third party confirmation of good management

• Potential price premium

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What Can You Do?

Short-Term

• Purchase only sustainable seafood
  – Monterey Bay Aquarium’s pocket card or phone app
  – Purchase only MSC certified products
What Can You Do?

Monterey Bay Aquarium

Tataki

GEISHA

Hyatt House

Safeway

Find a Retailer

[Map of California with locations marked]
What Can You Do?

• Ask about seafood sustainability at restaurants and retailers
  – Create the demand
What Can You Do?

• Rethink salmon, shrimp, tilapia, and tuna
• Think C footprint
• Eat smaller portions & pay more for better products
What Can You Do?

• Purchase only sustainable seafood
  – Monterey Bay Aquarium’s pocket card or phone app
• Ask about seafood sustainability at restaurants and retailers
  – Create the demand
• Reward those companies with a sustainable seafood policy in place with your business
  – Pay a premium for sustainable product
What Can You Do Long-Term?

Create the Field of Fisheries Value Chain Finance
The Common View of The Fishery

- Conservation/Preservation (it's about the fish)
- Economic Efficiency (it's about generation of wealth)
- Equity (it's about distribution of wealth)
- Social/Community (it's about the people)
The Value Chain Finance View of the Fishery

Basix livelihood triad

Institutional Development Services
- Organize producers
- Establish market linkages
- Facilitate know-how linkages
- Formalize the legal status
- Help set up operational systems
- Strengthen community organizations

Livelihood Financial Services
- Savings and credit
- Insurance for lives and livelihoods
- Fund transfers
- Commodity derivatives
- Financial development

Agricultural Business Development Services
- Productivity enhancement
- Risk mitigation (non-insurance)
- Local value addition
- Alternative input and sales linkages

Figure 2.3 BASIX livelihood services model
Two Examples from Agricultural Value Chain Finance

Figure 3.5 Market access financial service flowchart
Source: Farm Concern International (2008)
Figure 2.1 Product and financial flows within the value chain
Source: Adapted from Fries (2007) and Miller (2007a)