Fisheries, aquaculture utilization and trade: Challenges and opportunities

Trade and Environment Review 2016

UNCTAD Briefing on High Level UN Oceans Conference
16 January 2017, Geneva
## Comparison of Omega-3 levels in fish and other meats

<table>
<thead>
<tr>
<th></th>
<th>HERRING</th>
<th>CARP, common</th>
<th>TILAPIA</th>
<th>CHICKEN</th>
<th>BEEF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protein</strong></td>
<td>g/100g</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td><strong>Lipids</strong></td>
<td>g/100g</td>
<td>9.0</td>
<td>5.6</td>
<td>1.7</td>
<td>15</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>g/100g</td>
<td>72</td>
<td>76</td>
<td>78</td>
<td>66</td>
</tr>
<tr>
<td><strong>Ash</strong></td>
<td>g/100g</td>
<td>1.5</td>
<td>1.5</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>DHA + EPA (ω-3)</strong></td>
<td>mg/100g</td>
<td>1571</td>
<td>350</td>
<td>91</td>
<td>40</td>
</tr>
</tbody>
</table>

USDA National Nutrient Database (USDA, 2012)
56 million people are engaged in capture fisheries and aquaculture production,

However, 10% of global population directly or indirectly relies on this sector for livelihoods.
Total value of global supply chain
(818 billion U.S. dollars)

Fisheries
US $ 100 billion

Primary processing
US $ 90 billion

Secondary processing
US $ 180 billion

Distribution
US $ 350 billion

Aquaculture
US $ 98 billion
GLOBAL CAPTURE FISHERIES AND AQUACULTURE PRODUCTION TO 2025

MILLION TONES (LIVE WEIGHT EQUIVALENT)


- Blue dots: Total capture fisheries
- Orange line: Capture fisheries for human consumption
- Green line: Aquaculture for human consumption

SOURCE: OECD and FAO.
Projections of fish production
1980 to 2023 (OECD-FAO Agricultural Outlook 2014)

Capture
Aquaculture

Million tonnes

Growing importance of fish trade

US$ billion

Developed countries or areas
Developing countries or areas

2015-2016: estimates
Trends in marine fish stocks

GLOBAL TRENDS IN THE STATE OF WORLD MARINE FISH STOCKS SINCE 1974

Notes: Dark shading = within biologically sustainable levels; light shading = at biologically unsustainable levels. The light line divides the stocks within biologically sustainable levels into two subcategories: fully fished (above the line) and underfished (below the line).
2009 PSMA blocks undocumented fish landing at ports:

- stops IUU fish products from entering supply chains
- removes economic incentives for IUU fishing
- entered into force on 5 June 2016
FAO Code of Conduct for Responsible Fisheries
Voluntary Certification (eco-labels)

Certified vs conventional seafood production, latest year, 2015

(Potts, Lynch Wilkings, TER 2016 ch. 2.3)

EVOLUTION FROM CONVENTIONAL FISHERIES AND AQUACULTURE MANAGEMENT TO CROSS-SECTORAL INTEGRATED APPROACHES

- **Conventional Fisheries/Aquaculture Management**
  (main focus on target species and maximizing production and economic results)

- **Ecosystem Approach**
  (holistic approach that considers sustainability in ecological, social and economic terms, and considers drivers)

- **Full Integration of Fisheries and Aquaculture into Ecosystem-Based Management or Integrated Coastal Zone Management**
  (fisheries and aquaculture are part of integrated governance systems across multiple sectors within a given region/eco-system)
THANK YOU

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