The Chilean Fishing Industry and the effects of a regulation in constant change

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Importance of fishing & aquaculture

- According to the UN, fishing is essential in the livelihoods and food security of 200 million people throughout the world; one in five people on the planet depends on marine resources as the main source of protein in their diet.

- Since 1961, the average annual increase in world fish consumption of 3.2%, has doubled the population growth rate (1.6%) and exceeded the increase in meat consumption of all land animals combined (2.8%).

Source FAO
Importance of fishing & aquaculture

- Fishing and aquaculture play a primary role as sources of food, nutrition, income and livelihoods for a large number of people worldwide.

- The increase in global fish consumption is directly related to the development of aquaculture. The sector grows faster than other food production sectors. The average annual growth during the 2000-2016 period was 5.8% worldwide.

### Marine Capture Production

<table>
<thead>
<tr>
<th>Country</th>
<th>Avg 2005 - 2014 M Tons</th>
<th>Avg %</th>
<th>2016 M Tons</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 China</td>
<td>13.189 17%</td>
<td></td>
<td>15.246 19%</td>
<td>16%</td>
</tr>
<tr>
<td>2 Indonesia</td>
<td>5.074 6%</td>
<td></td>
<td>6.109 8%</td>
<td>20%</td>
</tr>
<tr>
<td>3 USA</td>
<td>4.757 6%</td>
<td></td>
<td>4.897 6%</td>
<td>3%</td>
</tr>
<tr>
<td>4 Russia</td>
<td>3.601 5%</td>
<td></td>
<td>4.466 6%</td>
<td>24%</td>
</tr>
<tr>
<td>5 Peru</td>
<td>6.438 8%</td>
<td></td>
<td>3.774 5%</td>
<td>-41%</td>
</tr>
<tr>
<td>6 India</td>
<td>3.218 4%</td>
<td></td>
<td>3.599 5%</td>
<td>12%</td>
</tr>
<tr>
<td>7 Japan</td>
<td>3.992 5%</td>
<td></td>
<td>3.167 4%</td>
<td>-21%</td>
</tr>
<tr>
<td>8 Vietnam</td>
<td>2.081 3%</td>
<td></td>
<td>2.678 3%</td>
<td>29%</td>
</tr>
<tr>
<td>9 Norway</td>
<td>2.348 3%</td>
<td></td>
<td>2.033 3%</td>
<td>-13%</td>
</tr>
<tr>
<td>10 Phillipines</td>
<td>2.155 3%</td>
<td></td>
<td>1.865 2%</td>
<td>-13%</td>
</tr>
<tr>
<td>11 Malaysia</td>
<td>1.387 2%</td>
<td></td>
<td>1.574 2%</td>
<td>-13%</td>
</tr>
<tr>
<td>12 Chile</td>
<td>3.157 4%</td>
<td></td>
<td>1.499 2%</td>
<td>-53%</td>
</tr>
<tr>
<td>13 Morocco</td>
<td>1.074 1%</td>
<td></td>
<td>1.431 2%</td>
<td>33%</td>
</tr>
<tr>
<td>14 Korea</td>
<td>1.746 2%</td>
<td></td>
<td>1.377 2%</td>
<td>-21%</td>
</tr>
<tr>
<td>15 Thailand</td>
<td>1.830 2%</td>
<td></td>
<td>1.343 2%</td>
<td>-27%</td>
</tr>
<tr>
<td>16 Mexico</td>
<td>1.401 2%</td>
<td></td>
<td>1.311 2%</td>
<td>-6%</td>
</tr>
<tr>
<td>17 Myanmar</td>
<td>1.159 1%</td>
<td></td>
<td>1.185 1%</td>
<td>2%</td>
</tr>
<tr>
<td>18 Iceland</td>
<td>1.281 2%</td>
<td></td>
<td>1.067 1%</td>
<td>-17%</td>
</tr>
<tr>
<td>Others</td>
<td>19.890 25%</td>
<td></td>
<td>20.655 26%</td>
<td>-4%</td>
</tr>
<tr>
<td>Total</td>
<td>79.778 100%</td>
<td></td>
<td>79.276 100%</td>
<td>-1%</td>
</tr>
</tbody>
</table>

Source: FAO
Catch levels in Chile dropped while value of exports remained
Industrial fishing fleet made all the adjustment effort

**Industrial fleet:**
- Operate out from the first 5 miles
- Fully integrated from catch to processing
- Aprox 139 operating vessels in 2017
- Operates with Individual Transferable Quotas (ITQs)
- Pay high royalty for their quotas (approx. 10% of the expected turnover)
- Auction of 15% of their ITQs
- Very poor political “support”
- Very strict authority supervision & control

![Purseiner for pelagic fishing](image1)
![Trawler for demersal fishing](image2)

![Bar graph showing the number of industrial vessels over years](image3)
Chilean Fishing Industry

+ 400 processing plants
+ 35,000 direct workers (fleet & plants)
Sharp increase in Taxes for the fishing industry

- Vessel license
- Specific Tax
- Auction
- Certification

**Industry Fishing Taxes (USD million)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38.5</td>
<td>38.8</td>
<td>33.6</td>
<td>34.5</td>
<td>37.0</td>
<td>41.0</td>
<td>75.5</td>
</tr>
</tbody>
</table>

**Horse Mackerel (USD / ton)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018-2027</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.0</td>
<td>25.8</td>
<td>26.9</td>
<td>30.1</td>
<td>312.5</td>
</tr>
</tbody>
</table>

**Sardine (USD / Ton)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2016-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.4</td>
<td>9.4</td>
<td>24.6</td>
<td>23.9</td>
<td>240.6</td>
</tr>
</tbody>
</table>
While artisanal fishing fleet increased its effort.....

**Artisanal fleet:**
- Exclusivity of the first 5 miles
- 3 categories (< 12 mts, 12 – 15 mts, 15-18 mts)
- > 9,000 registered vessels
- They can be grouped in associations (RAE) to get “individual quotas”
- In RAE they can transfer their fishing quotas to other artisanal or to industrials
- No royalty for their quotas
- Informal labor relation between vessel owner and the crew (partnership agreement)
- No auction
- Great political “support”
- Poor authority supervision & control

![Number of artisanal vessels](chart)
Fishing adjustment done only by industrial fleet

Industry v/s Artisanal landings evolution (Mtons)

![Graph showing the evolution of industrial and artisanal landings over time.](image)

Industry v/s Artisanal landings evolution (%)

![Pie charts showing the percentage of landings by industrial and artisanal fleets from 1988 to 2018.](image)
Evolution of the Chilean fishing industry legislation

- High demand of fishing resources
- High level of fishing landings
- Threat of sustainability

1990
Law # 18.892

- Regulation on fishing effort
- Close of fishing access
- First 5 miles exclusive for artisanal fleet
- Artisanal Fishing Registry
- Permanent fishing rights

2001
Law # 19.713

- Maximum Fishing Limit per company (LMCA), based on track record and fishing rights
- Regularization of the Artisanal Fishing Registry

2002
Law # 19.849

- Extension of LMCA for 10 years
- Artisanal-industrial distribution (%) in main fisheries
Evolution of the Chilean fishing industry legislation

- Overexploited fisheries
- Continuous decline in fishing landings

2012

Law # 20.657

- Fishing quotas set with scientific & technical criteria
- Creation of scientific and management committees
- Individual Transferable Quotas (ITQ) for 20 años renewable
- Auction of 15% of industrial ITQs

2019

New fishing law change under discussion in the Parliament

- Fisheries with sound recovery signs

- No renovation of ITQs after 20 years (2032)
- Auctions on 100% of Industrial ITQs
- Change in Artisanal/Industrial distribution (%) in fisheries
In 2017 Chile requested to FAO to analyse its fishing law and make recommendations, the report indicated what we need to move forward.....

Focus on the Recovery of Fisheries

- Fight illegal fishing
- Improve scientific information
- Artisanal Fishing Management
Thanks…