Regulating fleet capacity - the Norwegian experience

Towards sustainable European Fisheries
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The Norwegian Directorate of Fisheries
Outline

• Background for the need for capacity reduction
• Current instruments for capacity reduction
  - Focusing on Structural Quotas (SQ)
• Summing up
Marine life—our common responsibility

NORWAY:

Population: 4.7 million
Mainland: 323.802 sq.km
Spitsbergen: 62.020 sq.km
Jan Mayen: 377 sq.km
Mainland coastline: 25.000 km
Total coastline (including islands): 92.000 km
Mainland EEZ: 968.700 sq.km
Spitsbergen FPZ: 804.000 sq.km
Jan Mayen FZ: 296.600 sq.km
Norwegian catches versus fishermen
1945 - 2008
Background for introducing tools to regulate capacity

- **1970s**: establishment of Exclusive Economic Zones (EEZ)
  - Closing of "The Commons" for the ocean-going fleet

- **1980s**: establishment of Total Allowable Catch (TAC), allocation on nations, and fleets within each nation

- **1990s**: closing of "The Commons" for the coastal fleet
  - The introduction of Individual Vessel Quotas (IVQ) for vessel groups in an increasing number of fisheries

- Since then; overcapacity is still evident and a general acceptance on the need to find tools to reduce number of fishing vessels
Number of vessels scrapped and costs in million NOK.

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</thead>
<tbody>
<tr>
<td>Vessels</td>
<td>115</td>
<td>55</td>
<td>190</td>
<td>33</td>
<td>393</td>
</tr>
<tr>
<td>Million NOK</td>
<td>15</td>
<td>11</td>
<td>470</td>
<td>96</td>
<td>592</td>
</tr>
</tbody>
</table>
Number of vessels scrapped and costs in million NOK.
Coastal vessels. Period: 1960-2002

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</tr>
</thead>
<tbody>
<tr>
<td>Vessels</td>
<td>1760</td>
<td>540</td>
<td>490</td>
<td>143</td>
<td>97</td>
<td>3030</td>
</tr>
<tr>
<td>Million NOK</td>
<td>21</td>
<td>13</td>
<td>130</td>
<td>150</td>
<td>200</td>
<td>514</td>
</tr>
</tbody>
</table>
Objectives and target fleets

• Objectives
  - A fleet size more in balance with sustainable yields from fish stocks
  - A diversified fleet, being able to harvest in various parts of the ocean
  - A fleet that provides activity along the various municipalities along the coast

• Target fleets
  - Multiple fleets of ocean-going vessels holding a specific license and IVQ
  - Coastal vessels holding specific license and an IVQ

• Non-target fleets
  - Coastal vessels not holding an IVQ
# Current Instruments

<table>
<thead>
<tr>
<th>Denomination</th>
<th>Number of vessels*</th>
<th>Licences/ Annual permits</th>
<th>IVQ**</th>
<th>Buy-back programs</th>
<th>SQS***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocean-going vessels</td>
<td>240</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Coastal vessels; 15-28m</td>
<td>410</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Coastal vessels; 11-15m</td>
<td>661</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Coastal vessels; 0-11m</td>
<td>1309</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 14 October 2009
** Individual Vessel Quotas
*** Structural Quota System
Structural Quota System – Offshore Fleet

- Structural quota; 20 years duration
- Only for vessels holding a valid license
- One vessel must be scrapped
Structural Quota (SQ) for Ocean-Going Fleet

- 6 different groups (cod trawlers, purse seiners, pelagic trawlers etc)
- Fixed allocation of national quota between vessel groups
- Ceiling on SQ per vessel, to monitor degree of capacity reduction
- Special arrangement to prevent unbalanced reduction of capacity between regions;
  - E.g: Prohibited or less favourable to transfer quota if scrapped vessel is registered in northern part of Norway and receiving vessel is registered in southern Norway.
Structural Quota System – Coastal Fleet

- Structural quota; 20 years duration
- Licensed vessels and mandatory scrapping

Length groups
- 21 - 28 m
- 15 - 21 m
- 11 - 15 m
- < 11 m
Structural Quota (SQ) for Coastal Fleet – special arrangements

- Vessels being scrapped and vessels receiving SQ must be in the same length group (11-15, 15-21 or 21-28 metres length)
- Vessels fishing cod, haddock and saithe being scrapped and vessel receiving SQ must have been registered in the same county in at least 12 months before the system can be used
- Ceiling on number of SQ per vessel
- Exemption for scrapping if vessel can be considered to have historical value or can be used in service of the public good
Decommissioning Fund – Coastal Fleet, vessels below 11 m.

- Five year program (2003-2008)
- 50% state funding, 50% industry funding (all vessels, tax: 0.05-0.35% of catch value)
- So far 404 vessels (15%) have been scrapped, with a total cost of 207 million NOK
Instruments used:

• Economic incentives to scrap vessel
  - Buy-out by other vessel owners in Structural Quota System (no public money)
  - Grants from decommissioning fund (2003-2008). Financed by public money and industry

• Tools to avoid undesired side effects, like;
  1. Geographical concentration of quotas
     - Market restrictions (counties or group of counties)
     - Economic incentives (less favourable conditions for scrapping in some areas)
  2. Fleet concentration of quotas
     - Market restrictions (within fleet segments and size groups of vessels)
  3. Concentration on factory vessels
     - Market restrictions
  4. Concentration of quotas on owners
     - Ceiling on quotas per vessel
Have the instruments had the desired effects, with regard to:

- Profitability?
- Fleet capacity?
- To avoid concentration of fleet in geographical areas?
- To avoid concentration of fleet in specific segments?

Difficult to identify the effects of SQ from other factors like:
- Changes in fish stocks and available quotas
- Changes in prices of fish
- Changes in costs of fishing
- Competition from other sectors
- But...
The instruments have been used:
Structural Quotas as share of total quota in various fleet segments (30 June 09)

<table>
<thead>
<tr>
<th>Fleet</th>
<th>Quota Species</th>
<th>SQ as share of Total Quota</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ocean-going vessels</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purse seiners</td>
<td>Mackerel</td>
<td>18%</td>
</tr>
<tr>
<td>Long-line, nets</td>
<td>Cod</td>
<td>56%</td>
</tr>
<tr>
<td>Cod trawlers</td>
<td>Cod</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Coastal vessels</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal purse seiners</td>
<td>Mackerel</td>
<td>38%</td>
</tr>
<tr>
<td>Coastal vessels</td>
<td>Cod</td>
<td>22%</td>
</tr>
</tbody>
</table>
Profitability
Average operating margin, vessels above 8 metres
Profitability

Operating margin, by vessel 8 metres and above targeting a) groundfish species (blue line) and b) pelagic species (red line)
## Consequences for various Counties

Reduction in number of fishermen and vessels during the period 2003-2008

<table>
<thead>
<tr>
<th>County (from North to South)</th>
<th>Reduction in number of vessels</th>
<th>Reduction in number of fishermen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finnmark</td>
<td>29%</td>
<td>18 %</td>
</tr>
<tr>
<td>Troms</td>
<td>32%</td>
<td>18 %</td>
</tr>
<tr>
<td>Nordland</td>
<td>33%</td>
<td>22 %</td>
</tr>
<tr>
<td>Nord-Trøndelag</td>
<td>41%</td>
<td>22 %</td>
</tr>
<tr>
<td>Sør-Trøndelag</td>
<td>10%</td>
<td>2 %</td>
</tr>
<tr>
<td>Møre og Romsdal</td>
<td>35%</td>
<td>26 %</td>
</tr>
<tr>
<td>Sogn og Fjordane</td>
<td>39%</td>
<td>29 %</td>
</tr>
<tr>
<td>Hordaland</td>
<td>31%</td>
<td>15 %</td>
</tr>
<tr>
<td>Rogaland</td>
<td>30%</td>
<td>32 %</td>
</tr>
<tr>
<td>Others</td>
<td>28%</td>
<td>24 %</td>
</tr>
<tr>
<td><strong>I alt/Total</strong></td>
<td><strong>32%</strong></td>
<td><strong>22 %</strong></td>
</tr>
</tbody>
</table>
Value of catch, as registered on vessels from Northern and Southern Norway
Value of catch on various fleet segments (in % of total value)

<table>
<thead>
<tr>
<th>Fleet segment</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>(+/-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 11 metres</td>
<td>9.3</td>
<td>8.9</td>
<td>8.0</td>
<td>8.5</td>
<td>9.6</td>
<td>10.6</td>
<td></td>
</tr>
<tr>
<td>11-15 metres</td>
<td>8.0</td>
<td>7.9</td>
<td>7.7</td>
<td>8.7</td>
<td>9.1</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>15-21 metres</td>
<td>7.2</td>
<td>6.3</td>
<td>5.7</td>
<td>5.7</td>
<td>5.4</td>
<td>5.1</td>
<td>-</td>
</tr>
<tr>
<td>21-28 metres</td>
<td>11.4</td>
<td>13.1</td>
<td>14.9</td>
<td>14.0</td>
<td>13.2</td>
<td>13.6</td>
<td></td>
</tr>
<tr>
<td>28 metres and above</td>
<td>64.1</td>
<td>63.8</td>
<td>63.7</td>
<td>63.1</td>
<td>62.7</td>
<td>62.0</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
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Socio-economic elements

- Access to fish
- The value of licenses
- Barriers to enter fishery
- Ownership to fish resources
Ecological/environmental elements

- Effect on exploitation pattern
- Effect of larger quotas in regulated fisheries on unregulated fisheries
- Effects of larger mortgages/debts per vessel
The Norwegian capacity reduction programme: Some concluding remarks

- Reduction in number of fishermen and vessel has been inevitable
- Capital replaces labour
- For structural program in Norway to work;
  - Strong economic incentives to utilise the program
    - User pays
    - Stability in allocation keys with regard to fleet quota
- To avoid undesired effects
  - Delimitation of markets
    - With regard to fleet groups
    - With regard to geographical areas
- Consequences
  - Increased profitability for remaining fleet
  - Still a diversified structure, both with regard to fleet and geographical areas
Capacity reduction through Structural Quota Programmes

Lessons learned:

A. Divide (heterogenous) vessels in a fleet into more "homogenous" groups with regard to how "active" they are in the fishery and split the quota on the fleet on the various groups

B. Establish individual vessel quotas for the vessels in the "active" group

C. Allow concentration of quotas (SQ) given policy restrictions as to the "markets"
   - E.g. SQ only accepted for vessels within a specific size category, geographical area, etcetera
   - E.g. Ceiling on SQ due to degree of target capacity reduction within each vessel group

D. Keep allocation of national quota on fleet groups constant

E. Give a signal that resource rent may be introduced in the future

• Do the process stepwise with close consultation with the industry!
Marine life – our *common* responsibility

Thank you for your attention