Achieving Equitable Sustainability:
Restructuring South Africa’s commercial fishing sector for sustainable and equitable exploitation

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South Africa: Fish and Fishing

- 3,000 km coastline
- Oceanic upwelling $\rightarrow$ nutrients, biodiversity
- National heritage and economic asset
- Recreational, subsistence, and commercial users
  - focus on commercial subsector
    - fewer, larger participants
    - history of quotas
Commercial Fishing Industry

- Industrial exploitation of fisheries c.1900
- 1960’s: catches exceed sustainable yields
  - Populations decline
- Need to limit total harvest to what fishery resources can sustain in the long run
- Finite resource $\rightarrow$ limit fishing $\rightarrow$ limit access
  - But how?
Ways to Control Harvesting

• Fishing technology
  – trawling, longlining, minimum net mesh size
  – capital, environmental, and socioeconomic impacts of choice

• Limit access to fishing areas by
  – Closing areas; exclude of foreign fishing vessels
  – Charging fees based on quota, catch, or effort
    • Company-allocated quotas
      – Total Allowable Catch, TAC
Commercial Fishing Industry

- Commercial Fishing Industry
  - Non-quota Sector
    - Technology, Effort Limitations
  - Quota Sector
    - Large Companies
    - Small Companies
## 1996 Quota Distribution in Some Key Fisheries

<table>
<thead>
<tr>
<th>Fishery</th>
<th>TAC (ton)</th>
<th>Quota Holders (#)</th>
<th>Top 3</th>
<th>Top 10</th>
<th>Top 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hake</td>
<td>148 300</td>
<td>49</td>
<td>72</td>
<td>82</td>
<td>87</td>
</tr>
<tr>
<td>W Coast Rock Lobster</td>
<td>1 500</td>
<td>104</td>
<td>23</td>
<td>51</td>
<td>73</td>
</tr>
<tr>
<td>S Coast Rock Lobster</td>
<td>427</td>
<td>6</td>
<td>82</td>
<td>100 (6 all)</td>
<td>-</td>
</tr>
<tr>
<td>Abalone</td>
<td>615</td>
<td>16</td>
<td>75</td>
<td>95</td>
<td>100 (16 all)</td>
</tr>
<tr>
<td>Pilchard</td>
<td>105 000</td>
<td>59</td>
<td>30</td>
<td>55</td>
<td>63</td>
</tr>
<tr>
<td>Anchovy</td>
<td>70 000</td>
<td>18</td>
<td>36</td>
<td>79</td>
<td>100 (18 all)</td>
</tr>
<tr>
<td>Sole</td>
<td>872</td>
<td>11</td>
<td>71</td>
<td>100 (11 all)</td>
<td>-</td>
</tr>
</tbody>
</table>

*Source: Sea Fisheries*
Problems with Current Quota Sector

• **Annual** allocation of permits by Quota Board
  – allocation viewed as arbitrary, unfair
  – time, money spent on lobby for permits—inefficient
  – uncertainty and insecurity throughout industry
  – overcapitalization: plants, machinery

• No payment appropriate to value acquired

• Current quota systems favors established, healthy fishers
  – Need to restructure industry
Proposed New Access Regime

• current rights holders encouraged to restructure to achieve industry empowerment objectives
• initial allocation of rights would promote firms of different sizes
  – also want to avoid too many firms, which would reduce the State’s ability to regulate the industry
• establish auction system to lease rights for shorter term (1-2 seasons)
S. Africa’s Ideas for Restructuring

• Commercial sector will pay a fee based on quota, catch, or effort
  – fee will be paid as a royalty or rate
  – clear link between catch and fee—easy to calculate
  – fee will fund fishery management and admin.

• Create **long-term rights** based on % of TAC
  – investment decisions will be based on the long run
    • will correct overcapitalization
  – will allow smaller-scale producers to negotiate fair prices with processors
Proposed Methods of Empowerment

• equity transfers to expand ownership in companies
  – broadens participation
  – allows for economies of scale and skill transfer
  – financing for previously disadvantaged operators

• increase proportion of quotas sold to small-scale operators
  – encourages transition to smaller-scale vessels and more affordable fishing technologies
Methods of Empowerment, cont.

- help small-scale operators improve efficiency
  - education; cooperative extension
- encourage vertical disintegration, mergers, and formal commercial cooperation
  - formation of cooperatives—economics of scale
  - contracts with fish-processing companies
Problems with S. Africa’s Plan

• Implementation and enforceability
  – Monitoring fishing levels and bycatch

• Allocation of permits will still have a human element and remain arbitrary and controversial
  – Permit “affirmative action,” even with bidding

• Environmental and biological uncertainties
  – Stock levels and annual harvest will always be somewhat uncertain
Other Considerations

• Quotas should be calculated using the marginal value (the value of NOT harvesting) instead of the maximum sustainable yield
  – Impossible to calculate
    • should you err on the side of caution? to what extent?
• Will allowing companies to restructure themselves may make the situation worse?
  – Large companies have minimal incentive to restructure or to help smaller producers
    • possibility of collusion when submitting bids for permits
    • may result in a dominant firm and fringe or monopsony
More Questions

• What incentive do producers have to purchase long term rights when there is still a spec market?
  – What are the implications in terms of price and industry structure?
• Would other mechanisms, like price controls or technological regulations be more effective?
• How many firms are ‘necessary’ to make the industry competitive, rather than an oligopoly?
• What are the tradeoffs (if any) between an equitable, competitive, or sustainable industry?
Take-Home Message

• South Africa has a wealth of marine resources
• Access must be limited to ensure continuation
• Vague goals for empowerment and sustainability won’t accomplish said objectives
• South Africa should rethink its strategy for restructuring its fishing industry to actually achieve sustainable and equitable exploitation

Reference/for more information: