Bycatch Management in Fisheries – Impacts and Challenges

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Presentation Outline

1. Sustainability Criteria
2. Fisheries Management – Then & Now
3. Bycatch Management & Impacts
4. Definition of a Fisherman – Then & Now
5. Bycatch Management & the Challenge of Change
6. Meeting the Challenge in Pacific Canada
7. Conclusions
Sustainable Fishing Practices – Three Criteria

- sustainable harvest of target species & stocks (i.e., fish to a scientifically sound TAC)
- limit impacts on non-target species, habitats & ecosystems (i.e., limit and account for bycatch in TAC setting & catch accounting)
- an effective fisheries management system (inc. catch monitoring)

...and therefore bycatch management is key
### Fisheries Management - Then and Now

#### BEFORE/ THE PAST

<table>
<thead>
<tr>
<th>Circumstances &amp; Philosophy</th>
<th>Catch Monitoring Practices</th>
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<tbody>
<tr>
<td>fishery open unless closed</td>
<td>self-reporting systems - landings only covered</td>
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<tr>
<td>science one of many considerations</td>
<td>no at-sea monitoring</td>
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<tr>
<td>a business approach</td>
<td>post-season reporting acceptable</td>
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<td>nascent ENGOs, no certification</td>
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<td>TACs - landings only</td>
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<td>broad species group</td>
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#### NOW/ THE FUTURE

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<tr>
<td>fishery closed unless open</td>
<td>third party systems - landings plus discards</td>
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<td>science the main consideration</td>
<td>at-sea monitoring</td>
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<td>a precautionary approach</td>
<td>in-season reporting required</td>
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<td>strong ENGOs, certification required</td>
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<td>TACs - landings plus discard mortality</td>
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<td>- individual stocks</td>
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Bycatch Management in Practice

Measures

- command and control
- incentive-based

The Importance of At-Sea Monitoring

- needed for bycatch management (of total mortality)
- observers or electronic monitoring (EM)
Fisheries Bycatch Impact Framework

Potential Bycatch Management Actions
- command & control initiatives
- incentive-based initiatives

Changes in Activity & Behaviour
- fishing practices e.g. avoiding “hot spots”
- catch handling practices e.g. discard strategy
- other e.g. comanagement

IMPACTS - THE NATURAL ENVIRONMENT
- biological popns & habitats
- ecosystem dynamics
- scientific knowledge

IMPACTS - THE HUMAN ENVIRONMENT
- people
- businesses
- communities
- governments
- aboriginal people
Bycatch Management - Socio-Economic Impacts

Main Impact: sustaining a viable business model

- sales/quantity
- prices/market access
- costs

Impact: fisherman skills, attitude & relationships

- some traditional skills devalued e.g. finding fish fast
- some new skills required e.g. avoiding bycatch
- changed behaviour & relationships e.g. comanagement
“...many of these hard-drinking rogues live on the fringes of society and have chosen to turn their backs on the state and federal politics that will inevitably govern their world. They view life with a kind of proud obstinacy, and as staunch individualists, they care not at all for most politicians and their endless strategies.

these intractable characters look upon them, more or less with contempt, regarding them, one fisherman told me, as ‘slightly above a child molester, and well below a horse thief’.

fishermen do what they have always done, and what many believe they were born to do - catch fish. For within the chest of a dyed in the wool fin chaser beats the heart of a hunter. Each day, they arise and begin their satisfying labours, all the while suffering hangovers and enduring liens imposed on them for back child support, and dodging the eviscerating pen of some meticulous IRS accountant, hoping it will all work out, willing to face whatever comes.

They are men and women who refuse to fit in”.

One Definition of a Modern Fisherman

- a person with a business focus who has a long term planning horizon
- a person who works with other members of the seafood value chain to produce the quality, variety and other attributes of seafood that consumers want
- a person with an environmental ethic who sees sustainability in operations as critical to business success & continued access to a public resource
- a person who realizes that greater oversight/monitoring of fishing operations is necessary to meet the sustainability test
- a person who works with rather than against regulatory agencies and regulations & embraces co-management
- a person who embraces lifelong learning in response to challenges and changes in society at large & who is willing to adapt in response to change
Bycatch Management - Challenges

Main Challenge: the human element & change
Two Insights on Change

“...everything needs to change, so everything can stay the same”¹

“fishermen are slow to change but fast to adapt”²


² Bruce Turris, pers. comm.
The Pacific Canada Multi-species, Multi-fleet Groundfish Fishery - Lessons Learned re Addressing Bycatch

1. regulatory authority has to be sincere about the need for change i.e., no idle threats
2. flexible, incentive-driven management is desirable
3. trust-building is essential to problem solving but takes time
4. industry-driven process gives a pragmatic, credible result
5. tackle interconnected problems as a whole i.e., not piecemeal
6. 100% monitoring of total catch for all sectors is needed
7. individual accountability for all catch is key
8. catch shares for all sectors is needed
9. important to instill confidence that all fish caught is being counted
10. leadership from industry & government is critical
Conclusions

- **sustainability**
  - paramount to the modern fishery
  - provides access to economic & social benefits

- **public confidence**
  - provides social licence to operate in marine environment
  - bycatch management is key to acquiring this social licence

- **changed circumstances & changed relationships**
  - fishermen & managers
  - leadership required
  - greater cooperation & trust
  - incentive-based management shows promise