

Adaptive Management Program Proposal

presented by

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This presentation is derived from a joint work with Levis Kochin¹. The proposal originated from Daniel Holland².

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The Adaptive Management Program (AMP)

- Objectives:

- 1) Community stability

- 2) Processor stability

- 3) Conservation

- 4) Unintended/unforeseen consequences of ITQ management

- 5) Facilitating new entrants

Current situation

- One of the unintended consequences of the ITQ program is stranded fish, which translates into revenue losses for the whole industry.
- AMP pounds could be used as a means to decrease strandings and thus increase revenue and financial stability as specified in AMP objectives.

Table 1. Species shown in red are valuable groundfish species for which attainment was lower in the U.S. than BC in 2012. Sources: Sean E. Matson, 2013. Department of Fisheries and Oceans Canada, 2012-2013.

	U.S. non-whiting ITQ fishery	BC non-whiting ITQ fishery		
Species (Coastwide)	2012 Attainment	2012 Attainment	2012 U.S. Industry Revenue	2012 U.S. Industry Revenue Loss
Arrowtooth flounder	26.12%	39.24%	\$2,656,219	\$1,334,224
Canary rockfish	27.60%	74.54%	\$16,718	\$28,434
Dover sole	32.74%	61.46%	\$15,450,151	\$13,550,837
English sole	1.54%	50.41%	\$276,675	\$8,794,429
Lingcod	21.02%	22.73%	\$1,037,928	\$84,350
Longspine thornyheads	47.71%	18.96%	\$2,681,830	-\$1,615,976
Pacific cod	34.92%	43.42%	\$1,009,443	\$245,866
Pacific ocean perch	44.85%	70.66%	\$120,552	\$69,394
Petrale sole	100.28%	98.72%	\$4,749,129	-\$73,695
Sablefish	82.32%	76.15%	\$15,915,622	-\$1,192,301
Shortspine thornyheads	48.61%	73.38%	\$1,970,653	\$1,003,973
Widow rockfish	45.04%	67.30%	\$337,529	\$166,782
Yelloweye rockfish	5.74%	91.14%	\$80	\$1,185
Yellowtail rockfish	32.03%	93.76%	\$2,362,998	\$4,554,219
Total	30.84%	53.61%	\$48,585,527	\$26,951,721

Dover sole and shortspine thornyheads

■ ***Dover sole:***

- Landings

35% decrease (2008–2012), 7% decrease (2011–2012)

- Ex-vessel price

11% increase (2008–2012), 2% increase (2011–2012)

- Ex-vessel revenue

28% decrease (2008–2012), 5% decrease (2011–2012)

■ ***Shortspine thornyheads:***

- Landings

49% decrease (2008–2012), 1% decrease (2011–2012)

- Ex-vessel price

11% decrease (2008–2012), 8% increase (2011–2012)

- Ex-vessel revenue

55% decrease (2008–2012), 6% increase (2011–2012)

Fig. 1. Dover sole landings and ex-vessel prices in CA, OR and WA during 2008-2012.

Sources: Sean E. Matson, 2013. PacFIN all W-O-C species report, 2008-2010 Commercial Landed Catch.

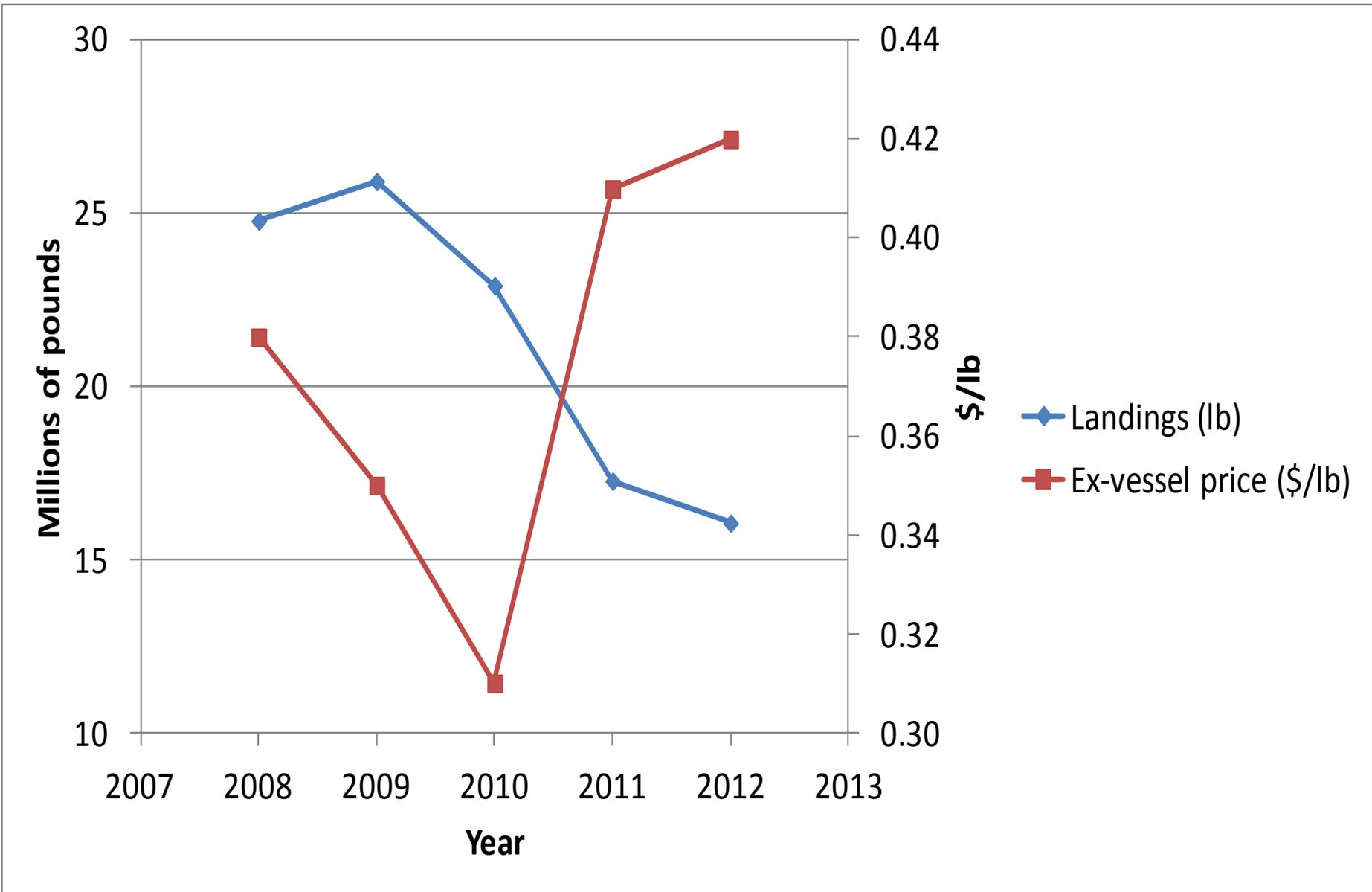
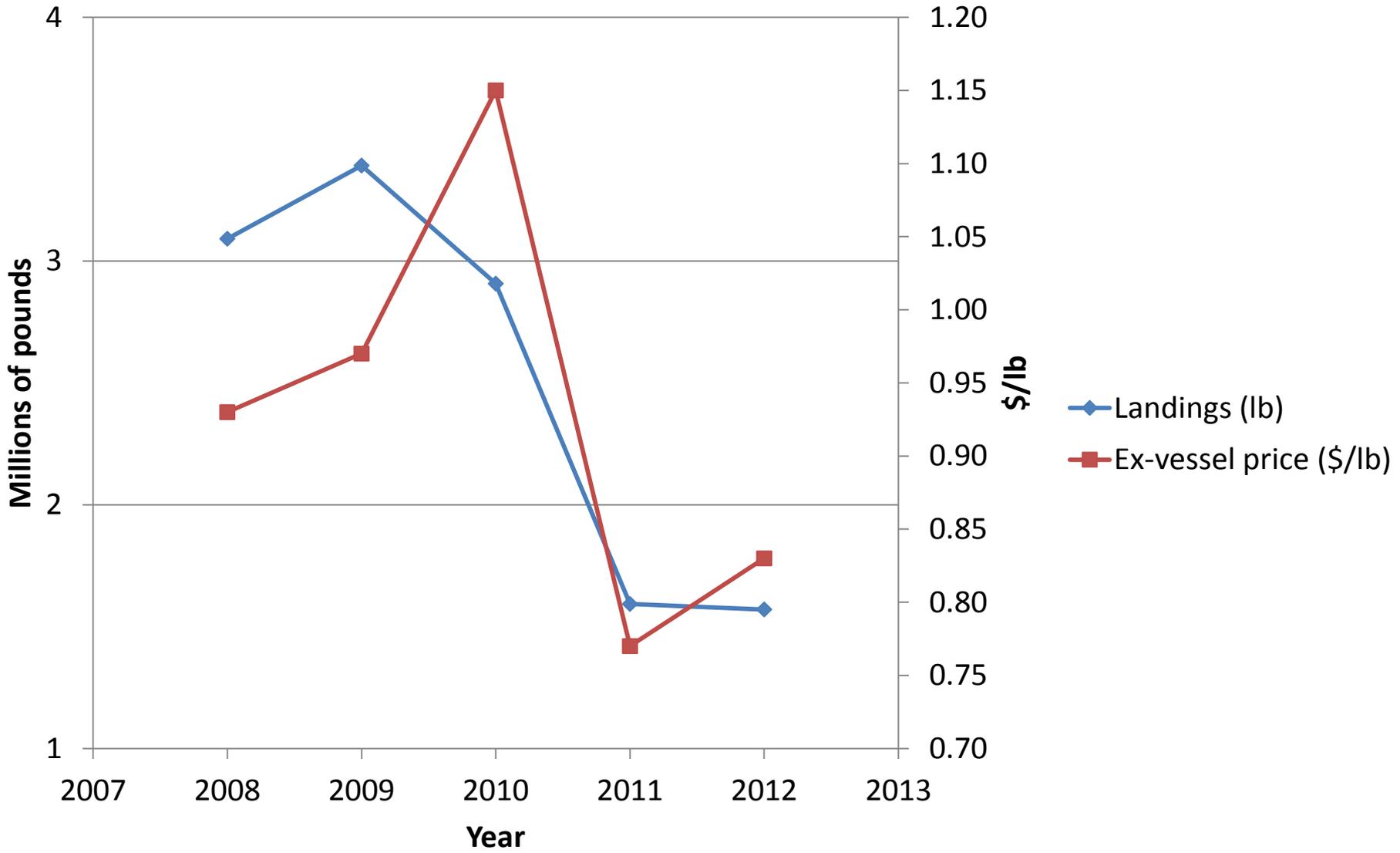


Fig. 2. Shortspine thornyheads landings and ex-vessel prices in CA, OR and WA during 2008-2012. Sources: Sean E. Matson, 2013. PacFIN all W-O-C species report, 2008-2010 Commercial Landed Catch.



“Deemed value” proposal to mitigate strandings problem

- Use AMP quota pounds to create a “deemed value” system.
- A fisherman would be charged a fee (deemed value) for landing fish for which he does not have sufficient quota pounds.
- A fisherman could get a refund of the deemed value if he later acquires quota pounds in order to balance the catch on which he previously paid deemed value.
- Deemed value rates can be set higher for some species and lower for others.
- The event of ACLs being exceeded is unlikely since landings that can be covered by deemed value would be limited to the AMP QS pool.

Benefits of a deemed value system

- For the individual fisherman:
 - Allows him to keep fishing
 - Reduces his transaction costs of covering bycatch events
 - Reduces uncertainty and fear of a “lightning” tow
 - Provides some certainty over out-of-pocket costs
- For the quota market:
 - More flexibility for fishermen to balance incidental catch (efficiency)
 - The system would facilitate better reallocation of quota among the participants
 - More fishing opportunities for new entrants until they obtain quota pounds via market transactions

In summary: Use AMP for Deemed value

- The strandings problem stems from relative catch rates, especially for jointly caught species (e.g. DTS complex, canary and yelloweye rockfish).
- Strandings are exacerbated by a thin quota market, addressed by the deemed value proposal.
- AMP objectives will more likely be met by having a more efficient quota market, making quota prices less volatile and quota pounds more liquid.
- Deemed value is effective when applied to species with low attainment rates.
- In combination with other changes (gear regulation and RCA modifications), deemed value should increase attainment rates and make the fishery more profitable.

References

- J. N. Sanchirico et al. Catch-quota balancing in multispecies individual fishing quotas. *Marine Policy* 2006;30:767-785.
- Bess R. Expanding New Zealand's quota management system. *Marine Policy* 2005;29(4):339-47.
- Arnason R. A review of international experiences with ITQs. Report to the Department for the Environment, Food and Rural Affairs. CEMARE, University of Portsmouth, June 2002.
- K. Kroetz and J.N. Sanchirico. Economic insights into the costs of design restrictions in ITQ programs. *Resources for the Future* report, January 2010.
- Grafton RQ, Nelson HW, Turriss B. How to resolve the class II common property problem? The case of British Columbia's multispecies groundfish trawl fishery. 2004.
- Sean E. Matson 2013. Annual Catch report for the Pacific Coast Groundfish, Shorebased IFQ Program in 2012. National Marine Fisheries Service and NWR, Sustainable Fisheries Division.
- Department of Fisheries and Oceans Canada, 2012-2013 Groundfish Trawl Summary of Catch vs. Available Weight.

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