Retrospective BCA of Federally-Funded Buyback Programs for SE Alaska Salmon Purse Seine Permits

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Ruminations

Fisheries managers often attempt to address the race-for-catch through stinting the number of fishermen or fishing vessels. Unfortunately, such caps do little to prevent changes to how vessels are used or preclude substitution of unregulated input factors. Consequently, economic rents consequent to initiation of input limitation programs often dissipate through intensification of unconstrained margins.

Fisheries managers are often importuned to use public funds to retire “excess capacity”—to buy out boats or permits. Such buyback programs result in ephemeral gains to those who remain in the fishery and generously compensate the capitalized value of permits and vessels of those who sell out.

Ruminations

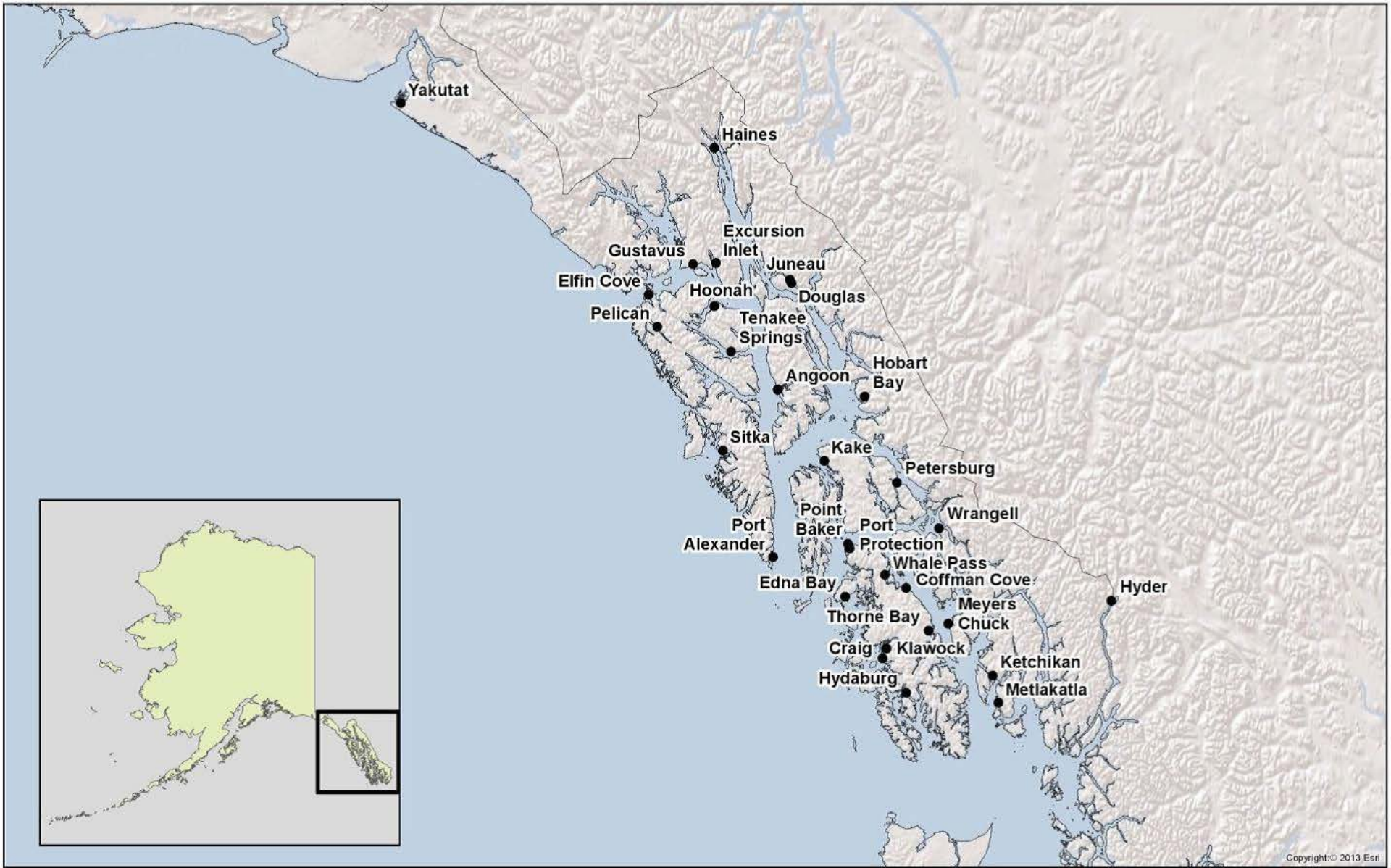
Because buybacks fail to resolve the individually sensible but mutually irrational incentive to race-for-catch, they often engender further intensification of unconstrained margins, thereby dissipating rents and precipitating requests for additional buybacks.

One might be excused for wondering at the sensibility of using public funds to buy back use rights to a public trust resource.

When there is latent capacity (unfished or inefficiently fished permits), buyback programs may not diminish effective capacity or the intensity of the race-for-catch.

Bristol Bay drift gillnet fishery— © Bart Eaton

SE Alaska


Yakutat
Haines
Excursion Inlet
Gustavus
Juneau
Elfin Cove
Hoonah
Douglas
Pelican
Tenakee Springs
Hobart Bay
Angoon
Sitka
Kake
Petersburg
Point Baker
Port Protection
Wrangell
Port Alexander
Whale Pass
Coffman Cove
Edna Bay
Hyder
Meyers Chuck
Thorne Bay
Craig
Klawock
Ketchikan
Hydaburg
Metlakatla
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Alaska's Salmon Fisheries

- From prehistoric times, Pacific Northwest natives have exercised territorial use rights (TURFs) to salmon resources.
- These subsistence harvests were usurped in the late 1800's by commercial harvesters using more efficient technologies.
- Federal management of fisheries in the Alaska Territory, fostered development of regional monopsonies that:
  - Deprived Alaska Native fishers of access to traditional grounds,
  - Exploited fishermen, and
  - Depleted salmon stocks.

Alaska's Salmon Fisheries

Following statehood in 1959, Alaska banned the use of salmon traps to disrupt the monopsony power of the salmon canneries.

A rush of new entrants led to congestion on fishing grounds and made it difficult for managers to control catches.

Alaska's Salmon Fisheries

To staunch the influx of entrants, Alaska passed the Limited Entry Act in 1972.

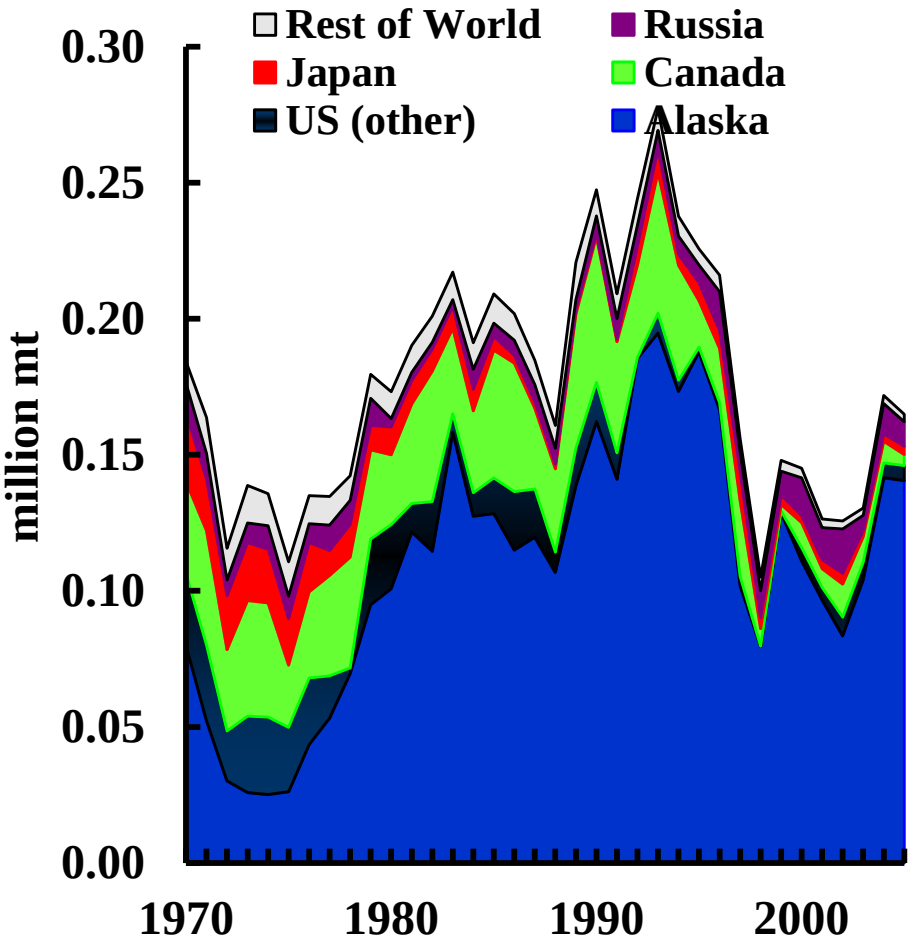
Limited entry capped the number of boats, but failed to prevent continued escalation of fishing power and associated pathologies of the race-for-fish.

Alaska's Salmon Fisheries

The race-for-fish resulted in individually sensible but collectively irrational excess investment in harvesting and processing capacity

Alaska's Salmon Fisheries

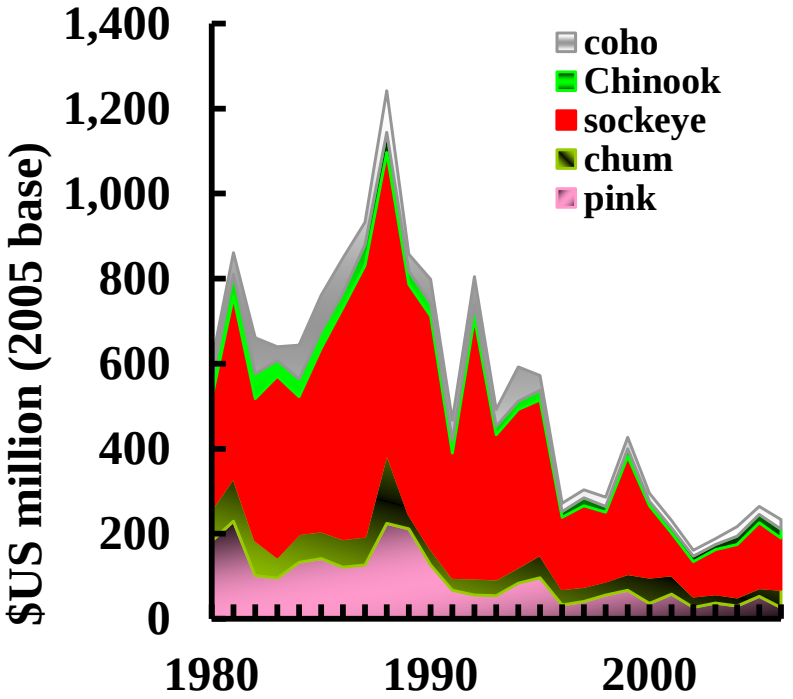
Buoyed by strong prices caused by declines in salmon production in other regions, Alaskan salmon fishery exvessel revenues and the price of limited entry permits soared through the mid-1980s.

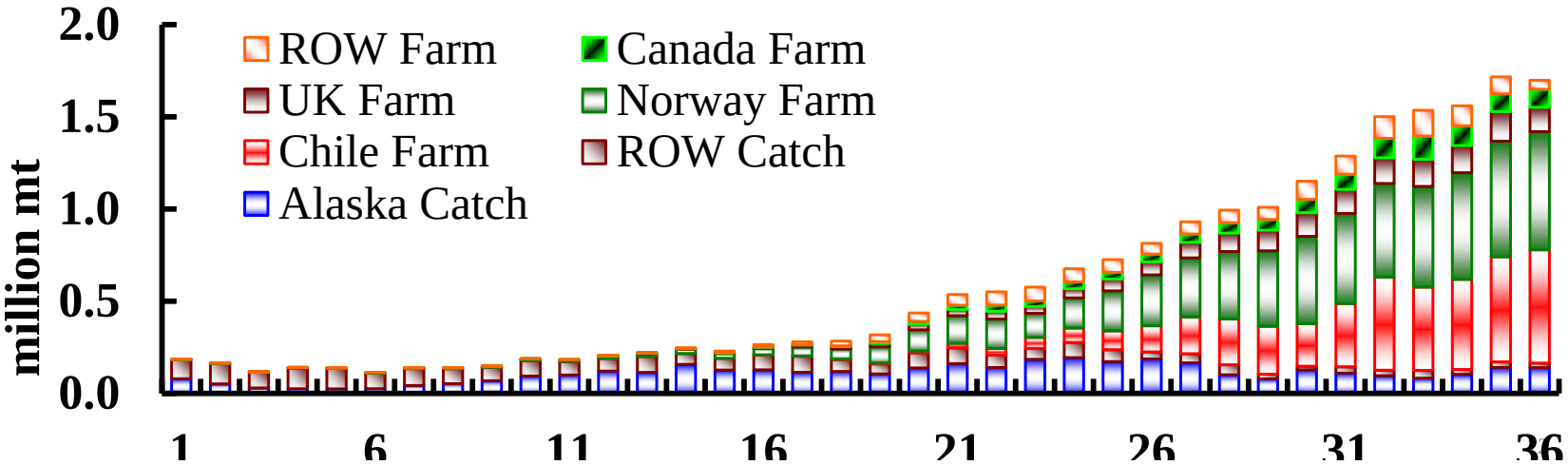


World catches of Chinook, coho, sockeye, and steelhead.

Alaska's Salmon Fisheries

By the early 1990s, high volumes of salmon from Norway, Chile, the UK, and Canada began to depress Alaskan exvessel prices and revenues.





Alaska's Salmon Fisheries

Adoption of harvest and management strategies that foster a race-for-fish led to unsustainable investment in processing capacity and infrastructure in remote communities.

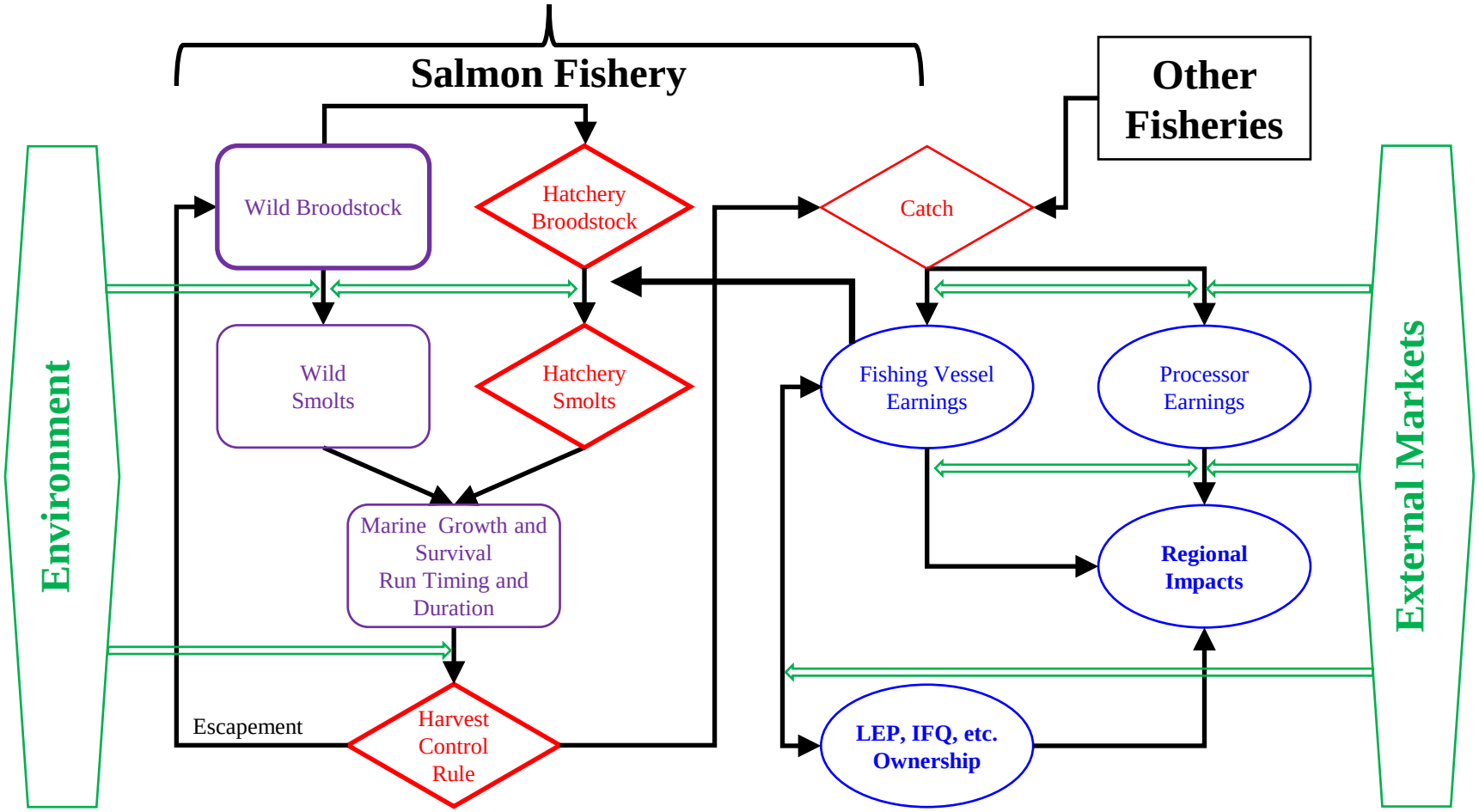
Contraction of revenues resulted in closure of processing facilities in communities adjacent to small or highly variable runs, or runs of low-value species.

The loss of wage income and tax receipts has compromised the economic viability of these communities.

Alaska's Salmon Fisheries

The collapse of exvessel prices created social and economic turmoil in salmon fishing communities because it reduced annual revenues by 80% **and** reduced the asset value of limited entry permits to well below outstanding loan balances, bankrupting many salmon fishermen.

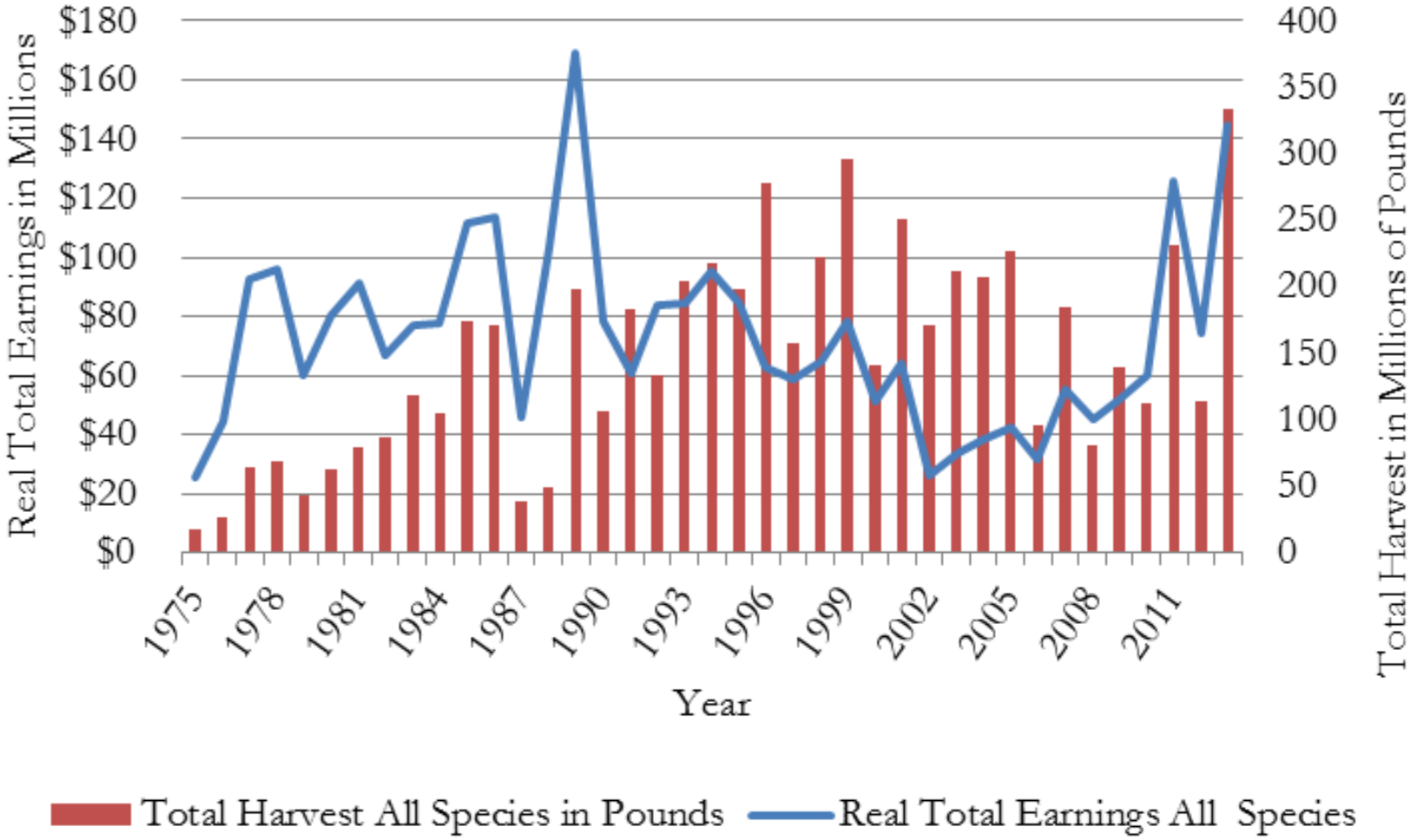
Southeast Alaska's Salmon Social-Ecological System



The SE Alaska Salmon Purse Seine (S01A) Fishery

- 419 LEPs initially issued in this fishery.
- 58ft vessel length limit: in 1978, 4.8% of the vessels in the fishery were 58ft; by 2008, over 50% of the vessels were at the maximum permissible length.

Harvests and Revenues in the S01A Fishery, 1975 – 2013.

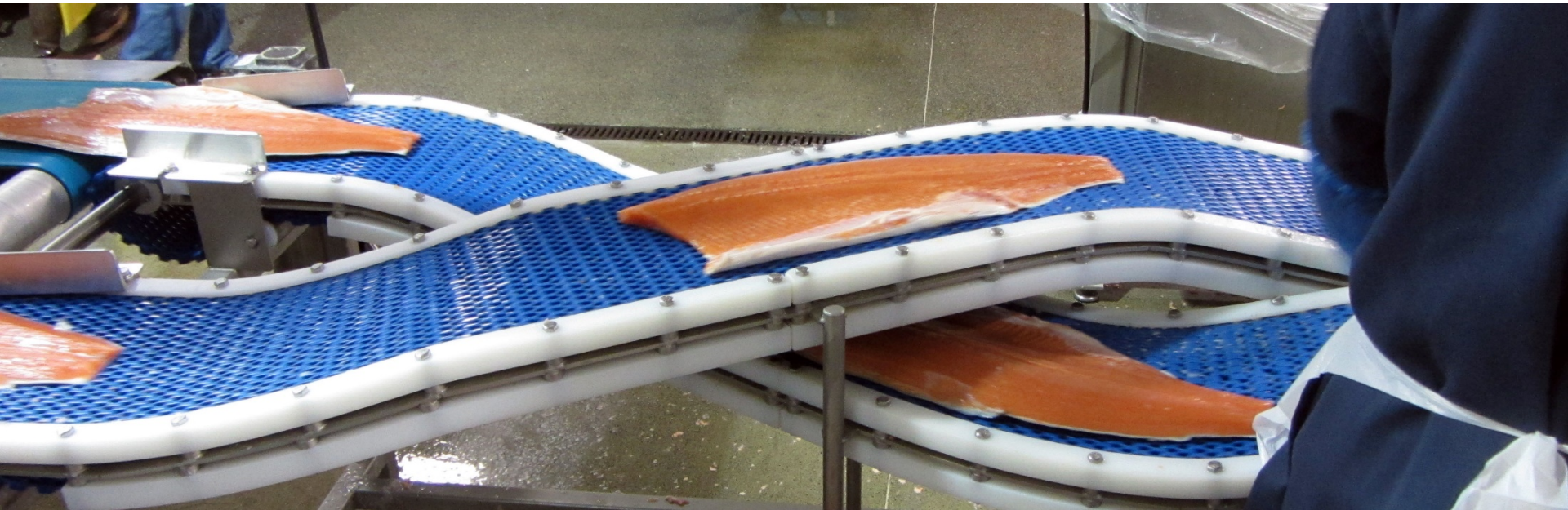


LEP Buyback in the S01A Fishery

- In response to the collapse of exvessel prices, fishermen, policy makers, and processors explored ways to improve markets, increase quality, and restructure the fisheries.
- In Southeast Alaska, Southeast Revitalization Association (salmon purse seine LEP holders) worked with state and federal government to pursue changes in state law to allow a private buyback of S01A LEPs.
- The SRA secured a federal grant ($3 million) to finance one round of buybacks and a federally backed loan ($25 million) to finance additional buyback rounds.

Goals of S01A Buyback Programs

1. Reduce fishing capacity by retiring a substantial number of permits.
2. Promote economic efficiency.
3. Improve flexibility in the conservation and management of the fishery.
4. Obtain the maximum reduction in permits at the least cost.



2008 Buyback Auction

- The SRA used federal grant money in a voluntary reverse auction to purchase and retire 35 LEPs (8.5% of permits).
- Bids were not binding.

- 82 bids were received, greatly exceeding the available grant funds ($3 million).
- Bids ranged from $44,000 to $700,000.
- CFEC estimated permit value of $65,600 at time of bidding.
- Over 80% of the LEPs retired during this buyback auction were latent (no landings in the five years prior to the buyback).

2012 Buyback Auction

- Congressional loan authorization.
- November 2011, bid packets sent.
- Bids were irrevocable.
- Voluntary reverse auction that had to be approved by NMFS and a majority of the permit holders.

- 74 bids received, 64 accepted for a total of $13.1 million.
- Accepted bids ranged from $175,000 to $240,000.
- Non-accepted bids ranged from $248,000 to $350,000.
- Over 70% of the LEPs acquired during this auction were latent (no landings in the five years prior to the buyback).

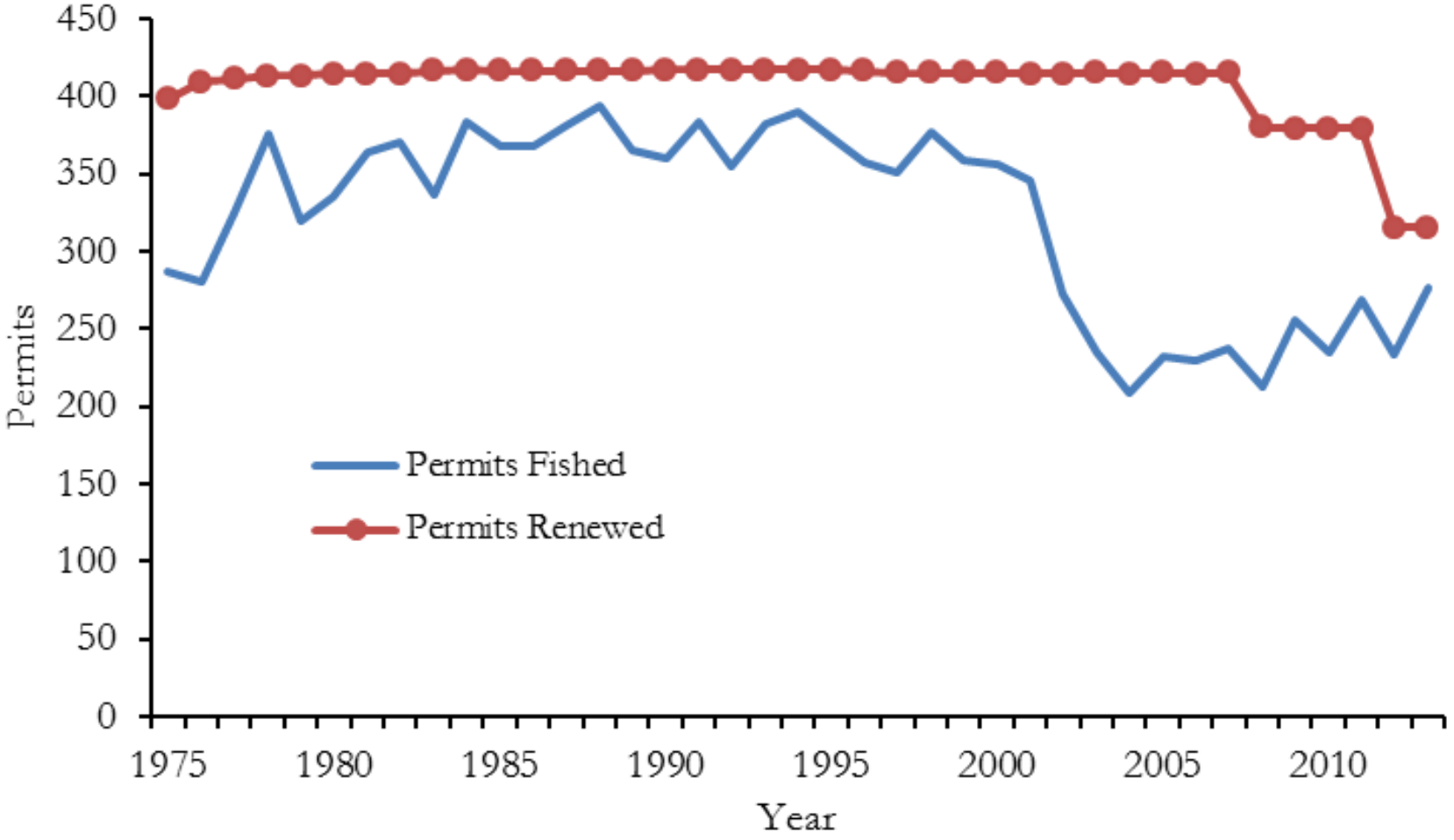
2013, 2014 Buyback Auctions

Same structure as 2012 Auction:

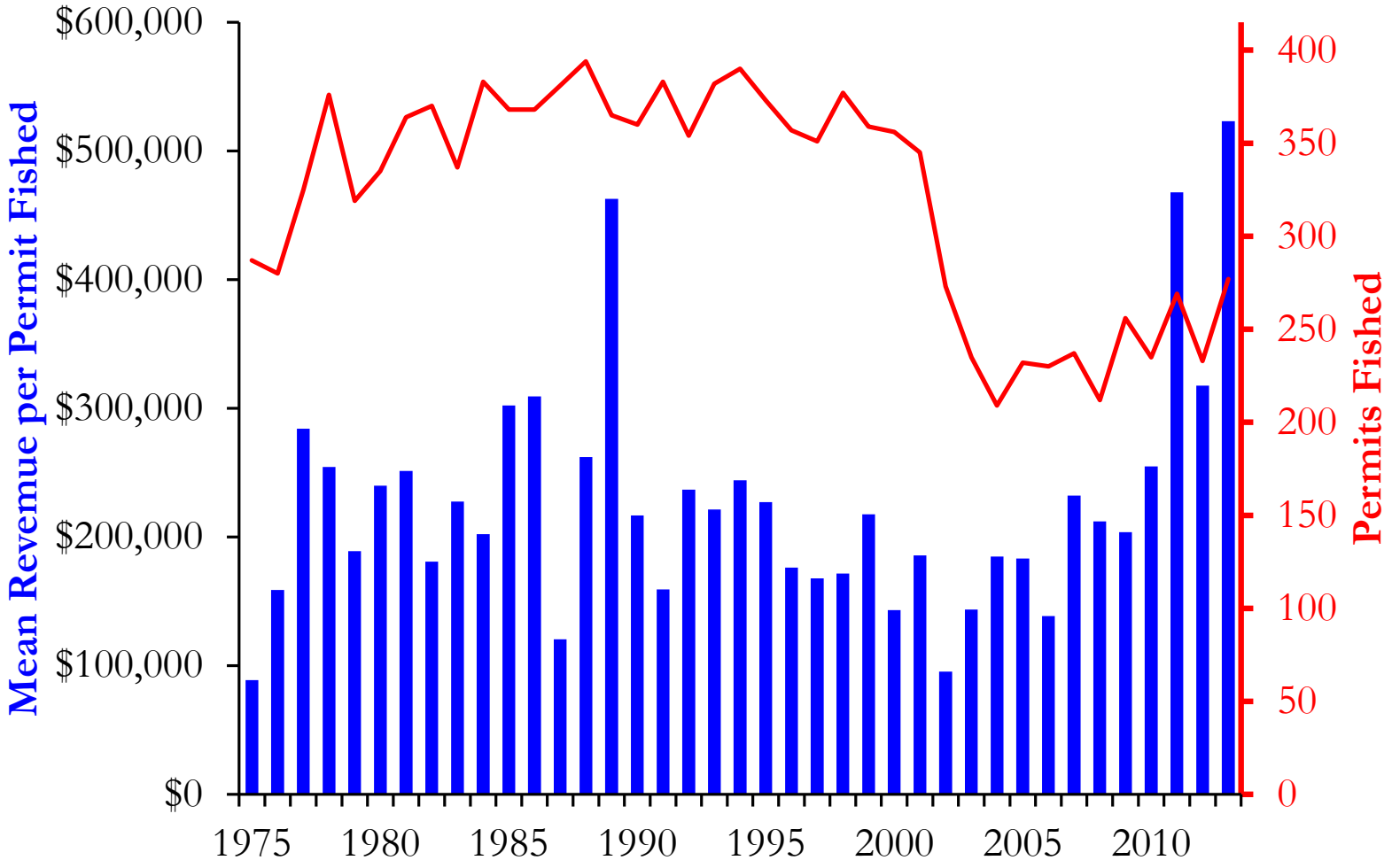
- Bids were irrevocable.
- Voluntary reverse auction that had to be approved by NMFS and a majority of the permit holders.

- 2013: 11 bids received, none accepted.
- 2014: 9 bids received, none accepted.
- Non-accepted bids ranged from $265,000 to $450,000.

Permits Renewed and Fished in the S01A Fishery, 1975 – 2013



Mean Revenue per Permit Fished

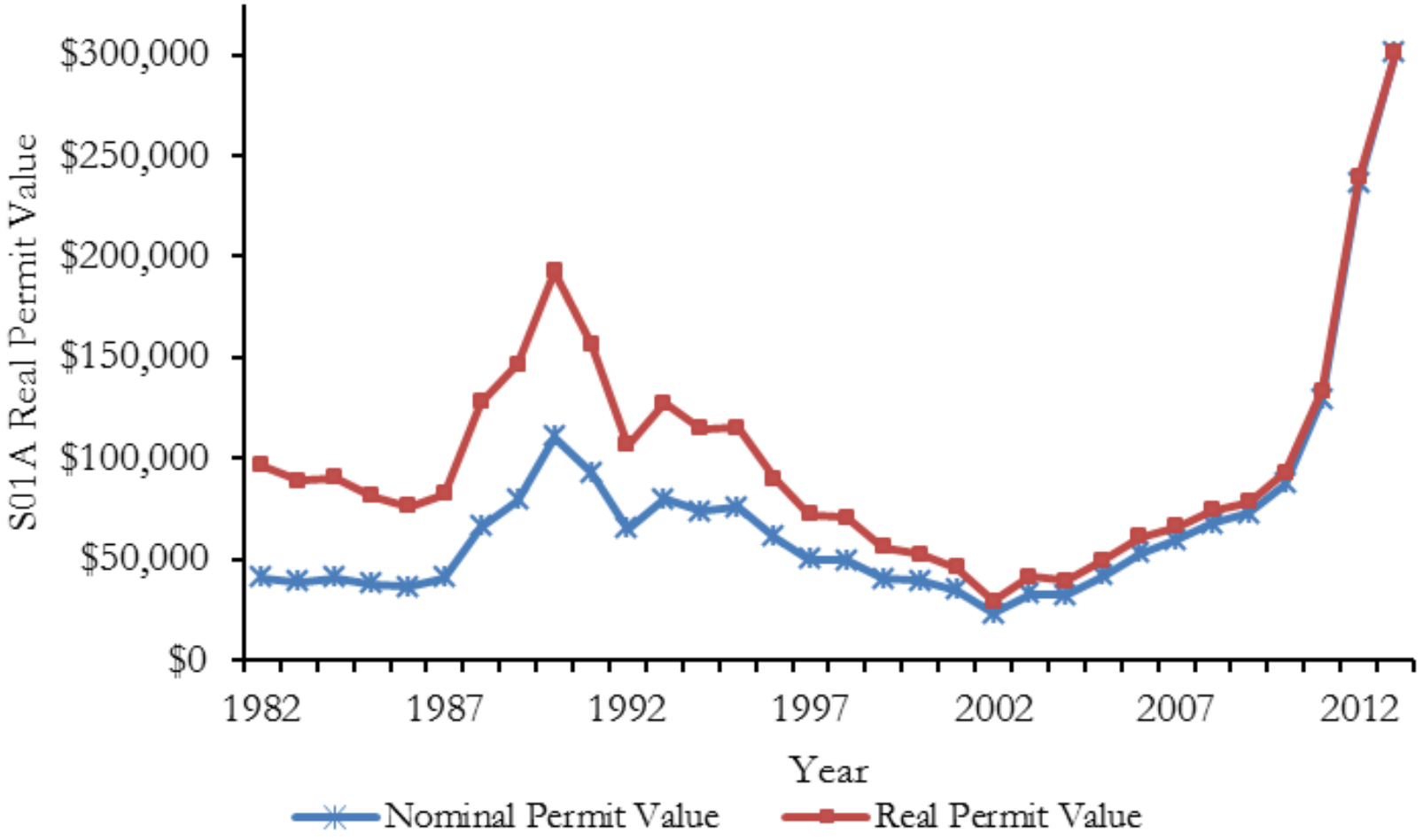


Permit Value

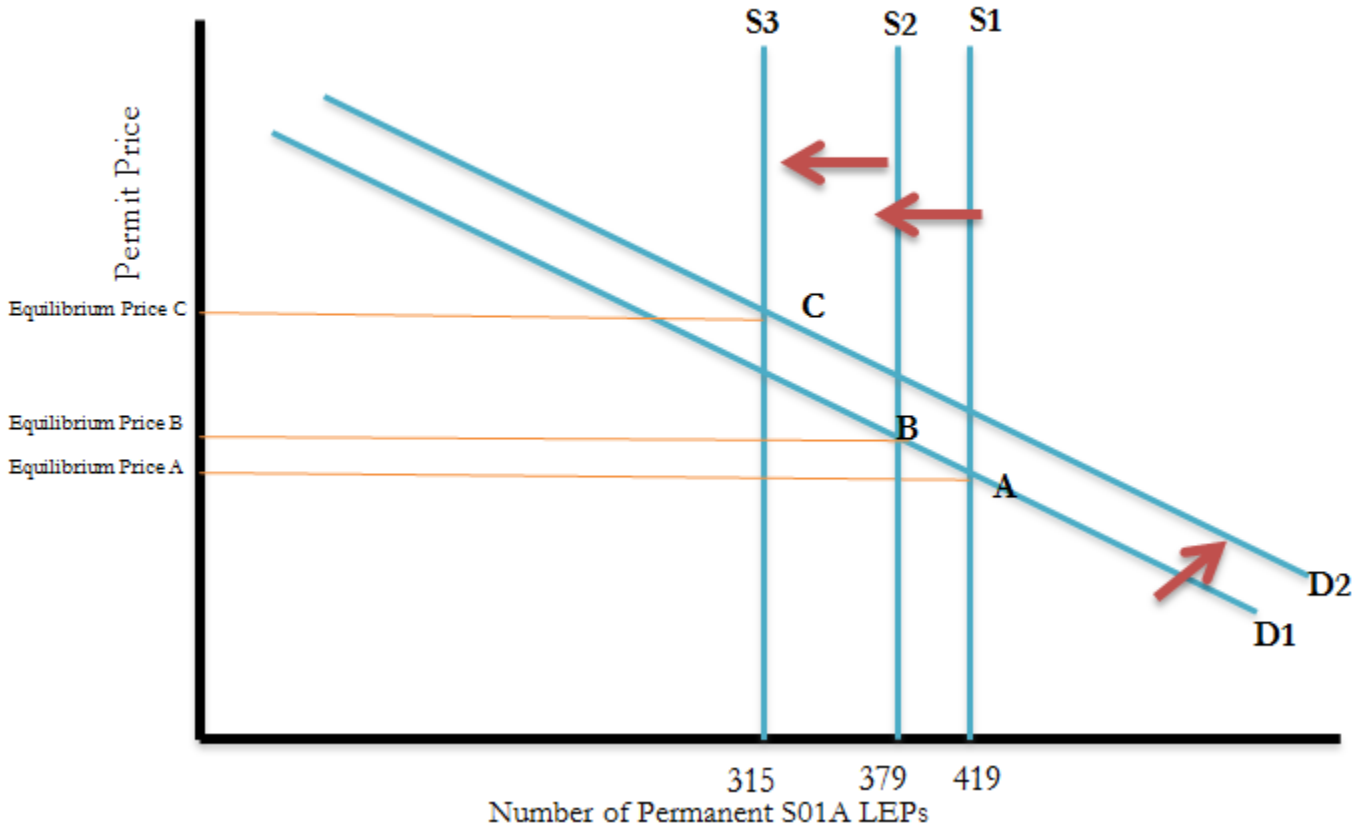
- Information on LEP prices is readily available.
- LEP prices are determined in the open market through willing exchanges between individuals.

- Asset value of LEPs reflects the discounted net present value of expect earnings in perpetuity.
- Expected earnings are informed by past earnings.
- Sales prices of LEPs can be used as a measure of changes in LEP holder expectations about future earnings.

Real and nominal LEP value S01A fishery, 1982 – 2013



Changes in the equilibrium price of LEPs in response to increased (D1 to D2) long-run demand and reductions in the supply of permits occasioned by two buybacks.



Models of SR Impact of Buyback

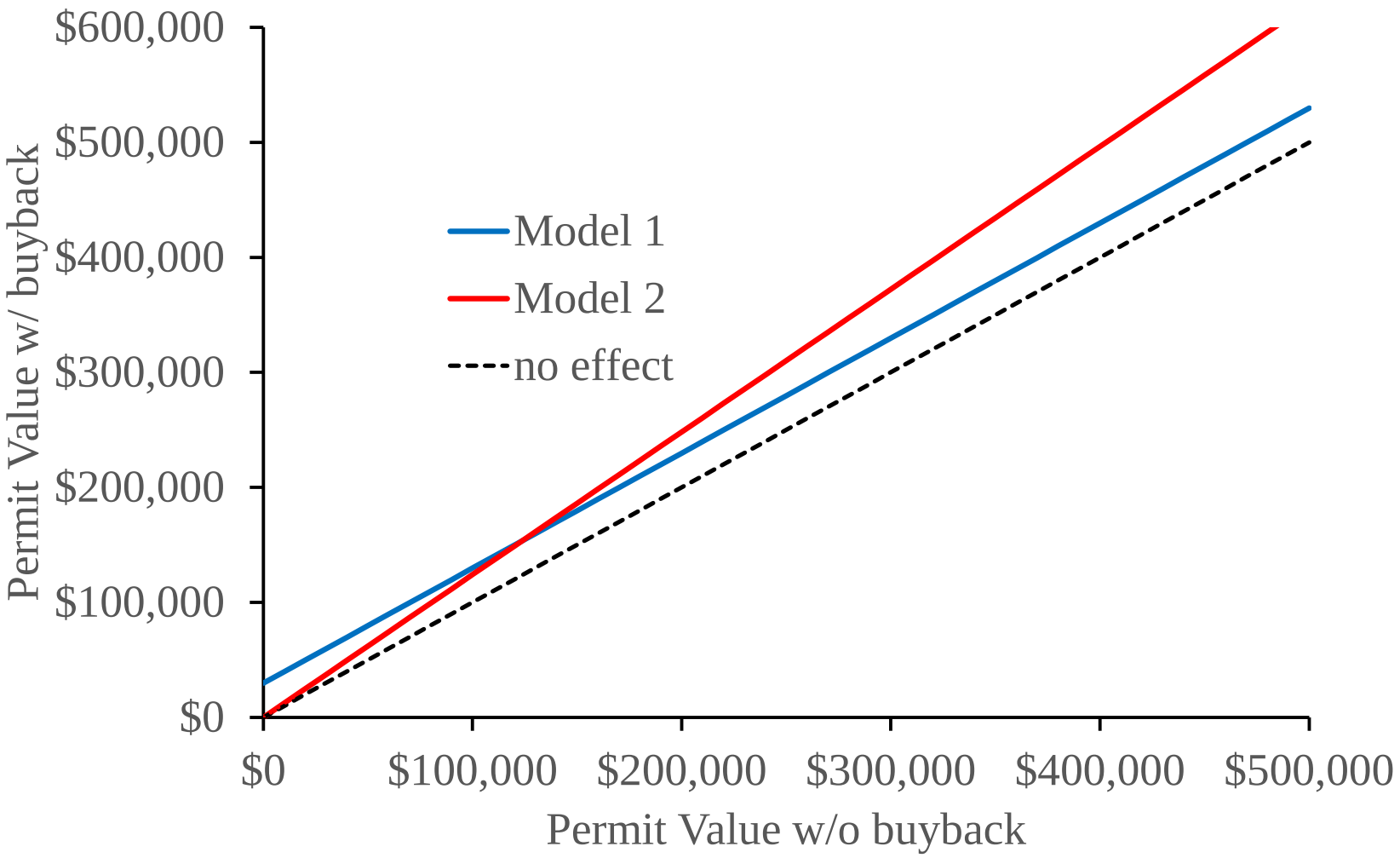
Model 1: Linear

$$PP_t = \beta_0 + \beta_1 (PP_{t-1}) + \beta_2 D_t + \beta_3 (AvgRev_{t-1}) + u_t$$

Model 2: Log-Log

$$ln(PP_t) = \beta_0 + \beta_1 ln(PP_{t-1}) + \beta_2 D_t + \beta_3 ln(AvgRev_{t-1}) + u_t$$

SR Influence of Buyback on Permit Price



Cost and Benefit of 2008 Buyback

	Permit numbers	Value per Permit	Total Value
Before buyback	415	$70,979	$29.4M
After buyback (Model 1)	380	$100,758	$38.3M
After buyback (Model 2)	380	$88,085	$33.5M
Premium to sellers		$11,031	
Premium to remaining fishermen (Model 1)		$29,779	$8.8M
Premium to remaining fishermen (Model 2)		$17,106	$4.0M
Program cost		$82,010	$2.9M
Net Benefits (Model 1)			$6.0M
Net Benefits (Model 2)			$1.1M

Recap of Buybacks

Effort Spillover:

- Most sellers did not buy LEPs in other fisheries.

Cost Burden

- 2008 borne by U.S. taxpayers. (avg $82,000 per permit)
- 2012 borne by residual permit holders. (avg $216,000 per permit)

No bids were accepted in the 2013 or 2014 auctions. A possible 2016 buyback auction was rejected by fishermen.

Vulnerabilities

- State constitution tasks CFEC with determining “Optimum Number” of LEPs for each fishery. This has not been done, so CFEC could be required to release new permits in this fishery.

Thank you for your attention

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