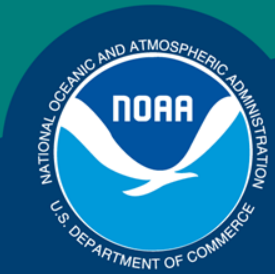


Science, Service, Stewardship



Evaluating the Economic Benefits of Catch Share Management in the Gulf of Mexico Reef Fish Fishery: Preliminary Results

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NAAFE

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La Paz, Mexico

**NOAA
FISHERIES
SERVICE**



Goals / Preliminary results

- Removing Tragedy of Commons AND regulated open access leads to serious societal benefits
- Estimate and report the value of fishery “rationalization”
- PRELIMINARY RESULT! Much work ahead

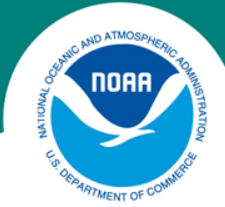


Outline

- Background: Gulf of Mexico Reef Fish Fishery
- Data Collection, Processing, and Quality
- Trip-level Economics
- Annual, vessel-level Economics
- Fishery-level Economic Results
- Comparison before and after IFQ (2006 vs. 2014)
- Some Conceptual Issues
- External Validity Check: IFQ transfer prices
- Comparing Results to Literature



Gulf of Mexico Reef Fish Fishery



Gulf of Mexico Reef Fish Fishery

- Complex of bottom dwelling species, incl Red Snapper, Red Grouper, 50 others...
- Florida west coast: Groupers
- West of Panama City: Red Snapper
- Red Snapper Fishery pre-IFQ: Poster child biological “command and control” regulated open access: 2006 open for 126 days; race to fish; market gluts
- IFQ in 2007; but also quota cut in half!
- (49% recreational fishery)



Data: Trip Logbooks

- SE Coastal Fisheries Vessels Logbook for:
 - Gulf of Mexico Reef Fish
 - South Atlantic Snapper-Grouper
 - King and Spanish Mackerel
 - Shark
 - Atlantic Dolphin/Wahoo
- Near Census

Signature: _____	Phone No.: () - _____	Schedule No. <i>NMFS Use Only</i>
Vessel Name: _____	Trip Start Date: <input type="text"/> <input type="text"/> <input type="text"/>	County or Parish: _____ State: <input type="text"/>
Vessel No.: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MM DD YY	Dealer Name: _____
Operator Name: _____	Trip Unload Date: <input type="text"/> <input type="text"/> <input type="text"/>	SE Federal Dealer Number: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Operator Number: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Days at Sea: <input type="text"/> <input type="text"/> No. of Crew: <input type="text"/> <input type="text"/>	State Trip Ticket No.: _____
Check box if landings sold to multiple dealers: <input type="checkbox"/> Yes		

GEAR SECTION: See Instructions on Page 2. Check gear box and fill in all the boxes below.

Traps (T) <input type="checkbox"/> Fish <input type="checkbox"/> Other	Longline(L) <input type="checkbox"/> Bottom <input type="checkbox"/> PLL	Gill Net (GN) <input type="checkbox"/> Strike <input type="checkbox"/> Other	Drift <input type="checkbox"/> Anchor	Hook & Line <input type="checkbox"/> (H) <input type="checkbox"/> (E) <input type="checkbox"/> (TR) <input type="checkbox"/> (B)	Divers <input type="checkbox"/> (S) <input type="checkbox"/> (P)	Other Gear (O)
Total # Trap Hauls	# Sets	# Sets	# Lines	# of Divers	Spear Power	Type
# Traps Used	# Hooks per Line	Length (yards)	# Hooks per Line	Total Hrs Fished		Total Hrs Fished
Trap Soak Time (hrs)	Set Soak Time (hrs)	Depth (yards)	Total Hrs Fished	SE VTR #: R		
Total Soak Time (hrs)	Total Soak Time (hrs)	Set Soak Time (hrs)	Date Received: _____ <i>NMFS use only</i>			
Mesh: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Length (miles)	Mesh:				

CATCH SECTION: See Instructions on Page 3.

Weight- Record POUNDS kept gutted or whole (DO NOT include fractions of pounds).
 Gear- Record gear used for MAJORITY of catch as T, L, GN, H, E, TR, B, S, P or O. (Do not use multiple gears).
 Area- Areas can be found on maps in logbook (page 6). Do not use state area codes.
 Depth- Record bottom depth where the MAJORITY of fish were caught in FEET.

Species Name	Code	Gutted-lbs	Whole-lbs	Gear	Area	Depth	Species Name	Code	Gutted-lbs	Whole-lbs	Gear	Area	Depth
Amberjack-Great	1812	#	#				P Jolthead	3312	#	#			
Amberjack-Lesser	1815	#	#				O Knobbed	3308	#	#			
Almaco	1810	#	#				R Red	3302	#	#			
Banded Rudder	1817	#	#				G Whitebone	3306	#	#			



Data: Trip-level Economics (Sample)

- Stratified sample of permitted **vessels** at start of year
- Supposed to report econ data for ALL logbook trips:

TRIP EXPENSE SECTION:		MANDATORY FOR SELECTED VESSELS.				See Instructions on Pages 3-4.			
Owner Operated?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Gallons of Fuel Used on This Trip	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Price per Gallon	\$ <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	Bait Expense	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00	Ice Expense	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00
Grocery Expense	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00	Misc. Trip Expenses	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00	IFQ Allocation Purchased for This Trip	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00				
Has the payment for your catch been determined?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If Yes	Total Trip Revenue	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00	Total Payment to HIRED Crew and Captain	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> .00			



Supplemental Annual Cost Survey

OMB Control No. 0848-0016

Expiration Date: 09/30/2019

- Same sample vessels
- Sent after the year is over
- Fixed costs
- Many activities:
 - Logbook fisheries
 - Other commercial seafooo
 - Charter fishing
 - Other business

2016 Survey of Annual Expenses for Snapper-Grouper, Reef Fish, Dolphin-Wahoo, Shark and Mackerel Permit Holders

Vessel Name: <VESSEL>		Vessel ID: <VESSEL_ID>	
Please report financial expenses (actual dollar payments) paid in 2016 for this vessel across all fisheries and activities. Enter "0" if you did not have any expenses in a category. PLEASE DO NOT LEAVE BLANK!			
ACTIVITY REPORT FOR THIS VESSEL IN 2016			
1. Vessel INACTIVE all year: <input type="checkbox"/> No <input type="checkbox"/> Yes (if Vessel was inactive all year, you can skip to Q9)			
Please enter the number of days spent away from port and the total gross revenues generated by this vessel for the following activities in 2016:			
2. Commercial fishing/seafood sales:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	days	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
3. Chartering/for-hire fishing:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	days	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
4. Vessel active but NOT fishing:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	days	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
TOTAL TRIP-RELATED EXPENSES FOR THIS VESSEL IN 2016			
5. Total paid for fuel:	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
6. Total paid for other trip-related expenses: (bait, ice, groceries, oil, lubricants, tackle, etc.)	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
7. Total paid for IFQ allocation transferred FROM another IFQ account:	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
8. (a) Did the vessel employ HIRED crew and/or HIRED captains?	<input type="checkbox"/> Yes <input type="checkbox"/> No (go to Q9)		
(b) Total paid to HIRED crew and HIRED captain(s) of this vessel: (Not to Owner! For example: from IRS Form(s) 1099-MISC or equivalent)	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
TOTAL ANNUAL EXPENSES FOR THIS VESSEL IN 2016			
9. (a) Total paid for any vessel maintenance, repair, replacement, new purchase or upgrade (include hull, engine, gear, electronics, etc.)	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
(b) Does the amount in Question 10. (a) include a haul-out?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10. (a) Vessel insurance in 2016 (please check all that apply):	<input type="checkbox"/> Nnne <input type="checkbox"/> Hull <input type="checkbox"/> P&I		
(b) Total paid for vessel insurance in 2016 (insurance premium):	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
11. Total loan payments for this vessel in 2016:	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
12. Overhead applicable to this vessel such as dockage, professional services, licenses, (share of) rent, utilities, office and vehicle expenses, etc. (Please exclude: insurance and loan payments, depreciation and income taxes.)	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		
13. Please estimate the current market value of this vessel and its associated gear and equipment (do NOT include IFQ quota share):	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		



Data Processing and Quality

- Problems:
 - Heterogeneous fisheries, vessels, trips
 - Ex-ante selection, fishery participation unknown
 - Fisheries data (!)
- Built **System** with Liz Overstreet:
 - Extraction, Consolidation and Transformation
 - Cleaning, cleaning, cleaning
 - Post-Stratification: Segment of Interest (SOI)





Questions?