Monitoring Systems in United States Catch Share Programs

Fishery managers employ a diversity of monitoring approaches in order to accommodate unique fishery characteristics and meet the environmental, social and economic goals of the fishery. While there are a limited set of commonly used and tested monitoring strategies, such as at-sea and dockside monitoring approaches, they can be combined and applied in numerous ways. The chart below summarizes the monitoring programs for US catch share fisheries and allows for a comparison across different fisheries. By cataloguing the characteristics of each fishery—such as average vessel length, number of participating vessels, gear type, programs costs and funding sources—and detailing the type and amount of monitoring coverage, we highlight both the commonalities and differences in monitoring programs.

The utilization of monitoring options to meet the management demands of these fisheries yields creative monitoring solutions from the cage-tagging system used by the Surf Clam/Ocean Quahog Fishery to the combined dockside and at-sea observer program applied by the Northeast Multispecies Groundfish Fishery. The amount of coverage varies depending on the fishery characteristics and goals, such as whether the monitoring is intended for science, catch accounting or both. The range is large; for some fisheries there is 0% of either at-sea or dockside monitoring for catch accounting purposes and some fishery sectors have 100% coverage. Although there are differences between programs, shared fishery characteristics often call for similar monitoring tools. We found that fisheries that employed trawl and/or pot gear had some degree of at-sea observer coverage.

The cost of daily at-sea monitoring ranges from $365-800 and biological observer prices range from $800-$1200 in some fisheries. Prices vary based on the characteristics of the fishery; such as the number and location of landing sites and number of offloads, and delivery of the monitoring program, such as whether the government or industry contracts with the observer providers. Furthermore, experience from other countries shows the use of at-sea video or electronic monitoring could reduce costs. Funding for monitoring services has come from the industry, government, or a combination of the two. In the case of the relatively recent Bering Sea Aleutian Island Crab Rationalization program and the Atlantic Sea Scallop IFQ program, industry is able to assimilate some of the monitoring costs due to the high value of the fishery. Fisheries with a small number and/or size of vessels employ monitoring strategies other than at-sea observers for catch accounting. For example, the South Atlantic Wreckfish program employs a dockside coupon system to manage catch and quota and the Mid-Atlantic Golden Tilefish, which is managed by both the New England Fishery Management Council and the Mid-Atlantic Management Council, utilizes varying degrees of dockside monitoring depending on region, season, and port. Additionally, evolving combinations of industry and government funding for monitoring programs ensure that the appropriate monitoring measures have the necessary resources to monitor the fishery and fishing activity.

Monitoring Costs and Coverage of US Catch Share Programs

Fishery	Year established	At-sea Coverage	Dockside Coverage	At-sea Observer Cost Per Day	Observer Funding	Vessel Lengths	Gear Type	Number of Vessels
Alaska Groundfish Catch Share Vessels Less than 60' and all Halibut Vessels	-			-	Industry	30' - 60'	Trawl; Hook and Line; Longline; Pots	-
Alaska Groundfish Catch Share Vessels 60' to 125'	-			-	Industry	60' - 125'	Trawl; Hook and Line; Longline; Pots	-
Alaska Groundfish Catch Share Vessels Greater than 125'	-			$365	Industry	125' - 700'	Trawl; Hook and Line; Longline; Pots	-
Atlantic Sea Scallop IFQ Program	2010	Science	Landing Accounting	$750	Industry / Government	61' - 99'	Dredge	324
Atlantic Surfclam and Ocean Quahog ITQ Program	1990		Landing Accounting	Not Applicable	Not Applicable	60' - 120'	Dredge	43
Bering Sea Aleutian Island Crab IFQ Rationalization Program	2005			-	Industry / Government	85' - 125'+	Pots	90
Gulf of Mexico Commercial Grouper and Tilefish IFQ Program	2010	Science	Landing Accounting	-	Government	20' - 73'	Hook and Line, Longline, Pots	1,028
Gulf of Mexico Commercial Red Snapper IFQ Program	2007	Science	Landing Accounting	-	Government	20' - 73'	Hook and Line; Longline	294
Mid-Atlantic Golden Tilefish ITQ Program	2009		Landing Accounting	Not Applicable	Not Applicable	50' - 100'	Longline (mainly), Otter Trawls	13
New England Multispecies Sectors	2010	Science and Catch Accounting	Landing Accounting	$500 - $1200*	Government	30' - 75'+	Trawl; Gillnet; Hook and Line; Longline	453
Pacific Coast Groundfish Trawl Rationalization Program - Shoreside IFQ Fleet	2011	Catch Accounting	Landing Accounting	$365	Government	33' - 150'	Trawl; Pots; Hook and Line	177**
Pacific Sablefish Permit Stacking Program	2001	Science		-	Government	33' - 150'	Hook and Line; Pots	108**
Pacific Whiting Conservation Cooperative Program	1997	Catch Accounting		-	Industry	270' - 340'	Trawl	15
South Atlantic Wreckfish ITQ Program	1991			-	Government	44' - 76'	Hook and Line	5

Full coverage
Partial Coverage
No Coverage

* range includes scientific observer costs ($800-$1200) and catch accounting monitoring costs ($500-$800)
** number of permits