

Industry Monitoring Costs for At-Sea Monitoring

The majority of human observer (hereafter ASM) expenses are associated with seaday costs. Other expenses associated with ASM include travel, training, and meal reimbursement. By applying the terms of the sector/provider ASM contracts to ASM observed trips, the seaday portion of total costs can be calculated. This allows for aggregation along different fishery dimensions such as single day vs. multi-day trips and mobile gear vs. fixed gear, as presented in Ardini et al. (2020)¹.

ASM contracts from fishing years (FYs) 2016-2018 were previously applied to fishing activity in Ardini et al. (2020). This time period represents the before A23 part of the analysis in which sectors first started contracting directly with ASM providers. During this period, coverage rates were quite low, ranging from 15%-17% on an annual basis. A total of four ASM providers contracted with sectors in each FY from 2016 through 2018.

For the A23 period, sector/provider contracts were applied to ASM-observed trips from FYs 2023-2025. During this period, realized coverage rates ranged from 81%-87% on an annual basis. A total of four ASM providers contracted with sectors in each FY from 2023 through 2025. Three ASM providers were active in both time periods (FYs 2016-2018 and FYs 2023-2025).

The results for both periods are shown in Table 1 and Table 2. Table 1 provides at-sea costs in nominal and real (2025) USD as well as costs per ASM observed day absent. The substantial increase in costs for the A23 period can primarily be attributed to the increase in coverage rate compared to 2016-2018. Seaday costs per ASM days absent increased from \$826 during FYs 2016-2018 to \$879 during FYs 2023-2025, a 6% increase. At-sea costs averaged \$0.7M on an annual basis during FYs 2016-2018 and \$4.5M during FYs 2023-2025. Total costs for human observers are also included, where available, from the dollar amounts reimbursed to sectors.

Table 2 provides seaday costs per total day absent and ASM eligible day absent. Notably, as the number of ASM trips and days absent greatly increased during the A23 period, the number of total sector days absent decreased rather substantially. During FYs 2016-2018, the annual average number of days absent in the sector fishery was 11,318. That dropped to 8,884 during FYs 2023-2025, representing a decline of 22%.

For EM services, costs can be more difficult to disaggregate. For example, sector/provider EM contracts generally include a variety of cost categories such as data storage, data processing, field technical support, hardware installation, software development, and training. Costs associated with both the human observer component and electronic monitoring component of comprehensive monitoring can be best tracked through the dollar amounts reimbursed to sectors. These amounts include all of the costs that sectors pay to providers for human observer and EM services. For more information on ASM vs. EM costs, see the Cost Efficiency section.

¹ Ardini, G., C. Demarest, and K. McArdle. 2020. Costs of at-sea monitoring under government and private contracts in the groundfish fishery of the northeastern United States Fish. Bull. 118(3):284-296.

Groundfish Sector Monitoring Program Review: M13 Industry Monitoring Costs

	2016	2017	2018	2023	2024	2025
At-Sea Cost (Nominal)	\$680,409	\$450,188	\$524,356	\$4,579,150	\$4,559,789	\$4,031,528
At-Sea Cost (2025 USD)	\$887,961	\$577,540	\$656,424	\$4,789,287	\$4,649,203	\$4,009,381
ASM Observed Days Absent	1,113	667	791	5,417	5,313	4,574
At-Sea Cost per ASM Observed Day Absent (Nominal)	\$611	\$675	\$663	\$845	\$858	\$881
At-Sea Cost per ASM Observed Day Absent (2025 USD)	\$798	\$866	\$830	\$884	\$875	\$877
Total Cost of Human Observers (Nominal)				\$6,427,856	\$6,003,993	
Realized Coverage Rate	15%	17%	16%	82%	87%	81%

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At-Sea Cost (2025 USD)	\$887,961	\$577,540	\$656,424	\$4,789,287	\$4,649,203	\$4,009,381
Total Sector Days Absent	12,089	11,289	10,578	9,019	9,269	8,365
At-Sea Cost per Total Day Absent (2025 USD)	\$73	\$51	\$62	\$531	\$502	\$479
ASM Eligible Days Absent (filtering out exemption trips and EM trips)	11,937	11,048	9,944	7,976	7,765	6,993
At-Sea Cost per ASM Eligible Day Absent (2025 USD)	\$74	\$52	\$66	\$600	\$599	\$573
Realized Coverage Rate	15%	17%	16%	82%	87%	81%