

time series for all size categories. The largest percentage declines were for vessels less than 30' (75%) and for vessels 50' to >75' (49.6%; Table 43). For non-groundfish trips, revenue per day across all size categories was similar to 2012 levels (Table 44).

## 8.2. Average Owner and Crew Shares per Vessel

Average owner and crew shares of net revenues may also be expressed at the vessel level rather than per day (Table 45). For all vessel size categories, the average owner and crew shares declined from 2012 levels and were the lowest in the time series for all size categories except for vessels 50' to >75'. It should be noted that the average crew share values are independent of the number of crew; these are average amounts paid to the entire crew regardless of size. Also, crew shares are an expense for vessel owners and represent earnings for crew. It is possible that these declining crew earnings were shared by fewer crew.

## 8.3. Aggregate Owner and Crew Shares

Owner and crew shares of net revenues aggregated by fleet segments (vessel size and homeport state) are presented in Table 46 and Table 47, and reflect the combined result of shifts in average vessel performance and the shifts of activity among fleet segments. Total owner shares decreased from their 2011 four-year high of \$149.4 million to \$122.2 million in 2013. Total crew shares similarly declined from their 2011 four-year high of \$88.6 million to \$71.6 million in 2013. For all size categories, total aggregate owner and crew shares were the lowest in the time series (Table 46).

Aggregate owner and crew shares in Massachusetts, the state with the most groundfish activity, declined to the lowest levels in the four-year time series. For owners in Massachusetts, aggregate share declined by \$7.6 million (11.5%) from 2012 to 2013. Over the same time period, aggregate crew share in Massachusetts fell by \$5.0 million (12.2%) (Table 47).

## 9. CONCLUDING REMARKS

Our analyses of fishery performance measures of the limited access Northeast Multispecies (Groundfish) Fishery showed mostly negative trends in the fishery during 2012-2013, with a continuation of many of the declines seen in our last annual economic performance report.

Landed pounds of groundfish are at their lowest point in 2010-2013 for all vessels. Non-groundfish landings are at a four-year high but grew less than 1% from their 2012 levels. Non-groundfish landings and revenues did not compensate for losses in groundfish landings and revenues. This is because non-groundfish landings have not increased significantly and because average non-groundfish price has fallen to its lowest level in the past four years. Overall, total landings have fallen by 1.6% and total gross all species revenue declined by 8.8% from 2012.

Fishermen actively groundfishing in the Northeast are a shrinking group. The total number of active groundfish vessels continues to fall, with a reduction of 120 vessels over 2010-2013, with 119 fewer vessels taking groundfish trips in 2013 than in 2010. From 2012 to 2013, the fleet decreased by 28 vessels overall, with 73 fewer vessels having revenues from at least one groundfish trip. In addition, there are 130 fewer active vessel affiliations in 2013 than there were in 2010. Opportunities for vessel crew are decreasing except for a few limited instances. Overall, there is less effort targeting groundfish in the fishery: fewer boats taking groundfish trips and

fewer groundfish trips. However, when fishermen are able to fish, in many cases, their trips appear to be somewhat longer. Economic indicators of net revenue suggest that what was an increasing trend in average earnings per day for vessel owners on groundfish trips has declined substantially in 2013 to a four-year low, accompanied by continued declines in crew earnings. Values on non-groundfish trips are more stable. In aggregate, however, total owner and crew shares of net revenue have continued to decline.

Consolidation in the fishery continues, as all species and groundfish revenues are earned by smaller numbers of vessels and vessel affiliations. The high level of concentration of revenues earned by fishermen for all species, and especially for groundfish, continues to persist.

The NEFSC continues its work to provide more and better information on the impacts occurring in the groundfish fishery, as well as other Northeast fisheries. NEFSC staff economists are analyzing data recently collected from our survey of commercial fishing vessels for costs incurred in 2011 and 2012 and are making those data available to NEFMC staff for the analysis of proposed management actions. Those data are especially important because they contain information about the fixed, or non-trip, costs (including leasing costs) associated with running a commercial fishing business, which is necessary to understand profit. Fixed costs may vary considerably depending on vessel size and primary gear type, among other factors. The NEFSC has also recently collected socioeconomic data from vessel owners and vessel crew across fisheries to better understand how regulations across fisheries affect fishermen in their work and also in their daily lives as individuals and community members. These data will enable further development of governance, stewardship, and well-being performance indicators. In addition, the socioeconomic survey of vessel crew will provide needed demographic data on crew (which currently do not exist) and help to better understand how compensation to crew may be changing as fishing regulations change. NEFSC staff are also engaged in work to automate the production of basic performance measures for the Northeast's catch share and non-catch share fisheries, which will enable us to provide basic performance indicators for the other fisheries in the region in a more widespread and timely manner.

Finally, these findings apply to the active participants who have remained in the groundfish fishery. However, they tell us little about the participants who are no longer actively fishing. The NEFSC is currently finishing up a series of ethnographic interviews to be able to report on the social and economic experiences of fishermen who have transitioned out of the active groundfish fishery into other fishing and non-fishing related activities.

## **10. ACKNOWLEDGMENTS**

The authors would like to acknowledge the work of the Analysis and Program Support Division at the Northeast Regional Office for their role in preparing the groundfish data using the Data Matching Imputation Tool (DMIS) tool. We also thank the following reviewers for their valuable suggestions: Paul Rago and Gregory Ardini. Finally, we thank the sector managers and members for their willingness to prepare the year end sector reports, and all the fishermen that have participated in the NEFSC's recent data collection efforts. The cooperation of these groups allows the NEFSC to expand its ability to report on performance in the groundfish fishery.