OBSERVER DATA ANALYSIS STATUS REPORT
MARCH 2003, NWFSC

MATCHING LOGBOOKS AND FISH TICKETS WITH OBSERVER DATA

The primary goal of the observer program is to estimate discard as accurately as possible. In order to develop information on total catch, the amount of retained catch must be known as well. Our plan is to use logbook and/or fish tickets for an estimate of retained catch. The observers do record a measure of retained catch. In most cases this reflects the boat's hail weight. These numbers must be reconciled with the fish ticket information by much the same process as the states now use to adjust logbook data.

Status of matching observer data with logbooks

The simplest way to get retained catch on a tow-by-tow basis would be to use the adjusted logbooks that the states produce. Unfortunately, all the state logbooks will not be available until at least the end of March. After they become available, we expect there to be a considerable amount of work involved in matching observed tows to the appropriate logbook records, and defining protocols that will be used where matches are not possible. Before modeling of management options for 2004 can begin, these bycatch rates must be available.

Status of matching observer data with fish tickets

In order to start the bycatch modeling before the logbook information is available we are attempting to use the fish tickets (in lieu of logbooks) with observer data to make calculations of total catch. In order to do so we must match fish tickets with the appropriate observed trip. The matching has proven to be complicated and as of the middle of March is partially completed. We subjected the data to a two-stage evaluation. First, we matched each observed trip to landings records with the same fish ticket numbers recorded by the observer. Next, we compared the retained tonnage recorded by the observer with the associated fish ticket tonnage in four broad species categories: all groundfish except whiting, all DTS, all flatfish, and all *Sebastes* species. The percentage difference between the fish ticket tonnage and the observer tonnage was calculated in each of these categories. In cases where both the fish ticket and observer amounts were less than 0.2 mt within a category, the percentage difference between the values was ignored (i.e. set to zero). For 237 of the 619 observer trips reviewed, this percentage difference was no greater than 10% in <u>every</u> category. These were viewed as good matches and subsequently adjusted using the fish ticket/logbook ratio. In another 133 cases, the percentage difference fell to between 10% and 20%. All of these were reviewed manually and determined to be good matches and subsequently adjusted according to the fishticket/logbook ratio. The remaining 249 trips were then reviewed manually with respect to the above general poundage categories. Of this group, 224 were felt to be good matches, leaving a total of 25 trips (4% of the total) that require additional research to determine whether a match with the fish ticket data is possible. Because of the limited total number of observed trips, it is important to find matches in as many of these cases as possible.

PROGRESS ON OTHER RELATED ANALYSES

Several analyses must be completed before the observer information can be used in the existing bycatch management model.

Analyses to look at how representative the observer data are

It is important to know if the observed trips accurately represent the catches and fishing patterns of the entire fleet. Based on a preliminary matching of fish tickets and observer records, a comparison of observed and unobserved trips was developed. This comparison focuses on three types of concerns regarding the representativeness of the data. One involves average landings per trip and per vessel-period between observed and unobserved vessels, at several levels of geographic stratification. Another focuses on differences in each vessel's average landings when observed and when unobserved. And the third involves the percentages of grouped-species landings associated with observed and unobserved vessels, within subregions of the coast. These results are still undergoing internal review and are likely to be revised as the matching of observer and fishticket data improves.

Develop database that includes only trips that target groundfish.

The bycatch management model only uses information from fishing trips that target groundfish. Therefore, the data were examined to remove non-groundfish trips. Procedures were developed for removing tows from the analytical data set where retained non-groundfish poundage exceeds retained groundfish poundage. Due to tows with a high percentage of CA halibut, there will be roughly 60% fewer groundfish tows from the area south of 40°10' and shallower than 60 fm than reflected in the preliminary counts presented at the bycatch workshop. The information from the trips which target California halibut will be analyzed separately in the future.

Examination of stratification schemes for use of observer data in bycatch management model

Based on a preliminary matching of fish tickets and observer records, variances for bycatch ratios under some alternative post-stratifications of the data were calculated and summarized for discussion with the SSC at the March Council meeting. With the level of stratification used for modeling the 2003 fishery, the variances were high in many instances. Reducing the number of strata in the bycatch management model reduces the variances of the bycatch rate estimates.

CONTINUING DATA ANALYSES

At our presentation to the Council in April the result of the analyses described above will be updated and a summary of results of additional analyses will be presented.