



Annual Review of White Seabass Fishery Management For 2001-2002 and 2002-2003

as established in the Marine Life Management Act, Fish and Game Code Section 7070,
and Section 51.02, Title 14, California Code of Regulations

Department of Fish and Game
Marine Region

Issue

The White Seabass Fishery Management Plan (WSFMP) was adopted in 2002 by the Commission. Included in the WSFMP is an annual review requirement that incorporates recent fishery-independent data (e.g., recruitment surveys) and fishery-dependent data (e.g., commercial and recreational landings and length frequencies), along with information about the harvest of white seabass in Mexico. The review is based on the fishing season, September 1 through August 31 of the following year. Although this report combines the reviews from two seasons (2001-2002 and 2002-2003), future reports will be produced annually. Annual reviews are conducted so that any changes to management, or to the WSFMP, can be considered by the Commission in accordance with the requirements of the Marine Life Management Act.

Background

The White Seabass Scientific and Constituent Advisory Panel (Panel) met in 2003 and 2004 to consider if current management measures were providing adequate protection for the white seabass resource. Regulations adopted to implement the WSFMP established a Points of Concern process to evaluate the status of the resource. Each year the Panel is to review current information relative to the Points of Concern. If a resource conservation issue exists based on the Points of Concern, the Panel will provide its recommendation, rationale, and analysis to the Department who will recommend to the Commission the appropriate management measure(s) that will address the issue(s). The Points of Concern include the following criteria:

- total catch is expected to exceed the current harvest guideline or Optimum Yield (OY);
- any adverse or significant change in the biological characteristics of white seabass (age composition, size composition, age at maturity, and/or recruitment) is discovered;
- an adverse or significant change is discovered in either the availability or the status of a forage species that white seabass is dependent upon;
- new information on the status of white seabass is discovered;
- an error in data or stock assessment is detected that significantly changes estimates of impacts due to current management; and
- an overfishing condition exists or is imminent.

Other regulations, also adopted to implement the WSFMP, establish a definition for "overfishing" for white seabass. The white seabass population is considered to be overfished when all three of the following criteria have been met:

- 1) A 20 percent decline in the total annual commercial landings of white seabass for the past two consecutive seasons, compared to the prior five-season average of landings, based on landing receipt data;
- 2) A 20 percent decline in both the number of fish and the average size of white seabass caught in the recreational fishery for the same two consecutive seasons, as determined by the best available data; and
- 3) A 30 percent decline in recruitment indices for juvenile white seabass compared to the prior five-season average of recruitment, as determined by the best available data.

Results

Analysis of the Points of Concern (Table 1) showed that none of the criteria were met in 2001-2002 or 2002-2003 periods. The first Point of Concern, whether the total catch exceeded the Optimum Yield (OY) (1.2 million pounds), was not met in 2001-2002 because the total catch was 1.196 million pounds. In 2002-2003 the total catch decreased 20 percent (total catch was 959,000 pounds), due primarily to a reduction in the catch from the recreational fishery. Since the total catch remained below the OY in both seasons, no action is necessary.

The next four Points of Concern consider new information regarding white seabass, including any changes in the biological characteristics (age composition, size composition, age at maturity, or recruitment), changes to the availability of a forage species upon which the white seabass depends, any new information about the status of white seabass, and whether any errors in the stock assessment were found. A review of the information on white seabass revealed no changes in the biological characteristics or the forage of white seabass. Additionally, there was no new information on the status of white seabass, nor were any errors found in the stock assessment.

Table 1. Analysis of the Points of Concern.

Criteria	Analysis	Result
Total catch is expected to exceed the current harvest guideline or quota.	2002-2003 total catch = 959,177 lbs 2001-2002 total catch = 1,196,673 lbs Both seasons were below Optimum Yield Optimum Yield = 1.2 million pounds	no action necessary
Any adverse or significant change in the biological characteristics of white seabass (age composition, size composition, age at maturity, or recruitment) is discovered.	No changes	no action necessary
An adverse or significant change is discovered in either the availability or the status of a forage species that white seabass is dependent upon.	No changes	no action necessary
New information on the status of white seabass is discovered.	No new information	no action necessary
An error in data or stock assessment is detected that significantly changes estimates of impacts due to current management.	No errors detected	no action necessary
An overfishing condition exists or is imminent.	See analysis in Table 2.	no action necessary

The final point of concern is whether an overfishing condition exists or is eminent and is based on three criteria (Table 2). For the commercial fishery, there must be a 20 percent decline in landings in each of two consecutive seasons compared to the five-season running average. Commercial landings of white seabass (Figure 1) have remained above the five-season running average during each of the last three seasons, thus the first criterion was not met.

For the recreational fishery, the overfishing criteria include a 20 percent decline in each of two consecutive seasons for both the average weight and average number of fish. The recreational fishery results were more variable than the commercial fishery results. In the recreational fishery, the number of fish caught in both the 2000-2001 and 2002-2003 seasons (38 percent and 41 percent, respectively) decreased compared to the previous season (Figure 2). The average weight of fish decreased in only the 2000-2001 season (4 percent) (Figure 3). The variability may be due to the small sample size as, on average, less than 100 white seabass are measured and weighed annually in the Marine Recreational Fishery Statistical Survey. Despite greater than 20 percent declines in the number of fish in two different seasons, the recreational criteria were not met because the seasons were not consecutive and average weights of fish never approached a 20 percent decline in any year.

The final criterion for determining if an overfishing condition exists is a 30 percent decline in the recruitment index for juvenile white seabass compared to the five-season average of recruitment (Figure 4). Each season, the Ocean Resources Enhancement and Hatchery Program (OREHP) conducts standardized field studies for juvenile recruitment. The results of these field studies show a 14 percent increase in the 2001-2002 index and a 13 percent decrease in 2002-2003 index. Although there was a decrease in the recruitment index in 2002-2003, it was not sufficient to meet the criterion.

Table 2. Analysis to determine if the white seabass resource is overfished.

Criteria	Analysis	Result
A 20 percent decline in the total annual commercial landings of white seabass for the past two consecutive seasons compared to the prior five-season average of landings, based on landing receipt data. Source: CFIS landing receipt data.	2002-2003 = 480,876 lbs = 92% increase five-season average = 250,798 lbs 2001-2002 = 422,560 lbs = 137% increase five-season average = 178,407 lbs 2000-2001 = 215,498 lbs = 39% increase five-season average = 155,433 lbs (Figure 1)	no action necessary
A 20 percent decline in both the number of fish and the average size of white seabass caught in the recreational fishery for the same two consecutive seasons, as determined by the best available data. Source: MFRSS survey data.	2002-2003 = 30,319 fish = 41% decrease average weight = 17.2 lbs = 19% increase 2001-2002 = 51,422 fish = 103% increase average weight = 14.5 lbs = 7% increase 2000-2001 = 25,326 fish = 38% decrease average weight = 13.6 lbs = 4% decrease 1999-2000 = 40,864 fish average weight = 14.1 lbs (Figures 2 & 3)	no action necessary
A 30 percent decline in recruitment indices for juvenile white seabass compared to the prior five-season average of recruitment, as determined by the best available data. Source: OREHP field study data.	2002-2003 = 1,031 fish = 13% decrease five-season average = 1,189 fish 2001-2002 = 1,205 fish = 14% increase five-season average = 1,060 fish (Figure 4)	no action necessary

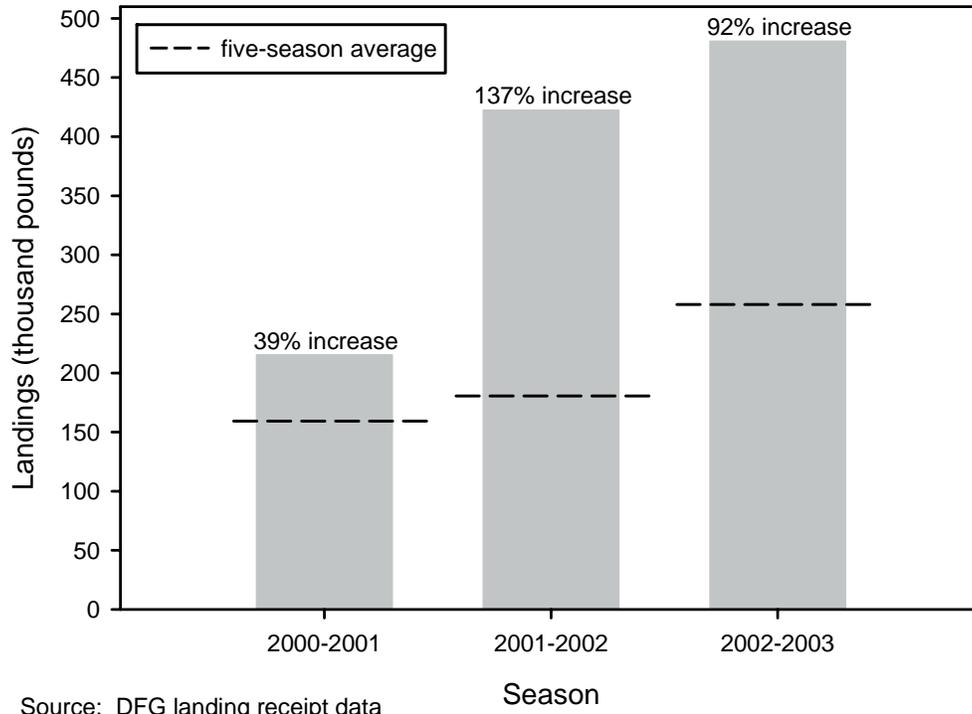


Figure 1. Commercial white seabass landings, 2000-2001 to 2002-2003.

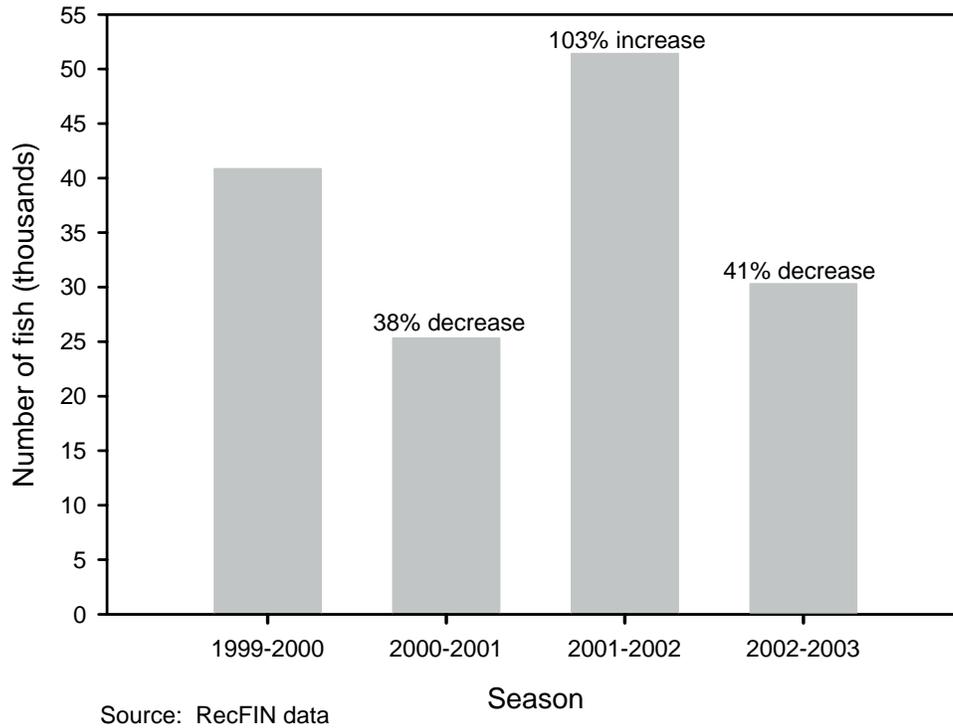


Figure 2. Recreational catch of white seabass, 1999-2000 to 2002-2003.

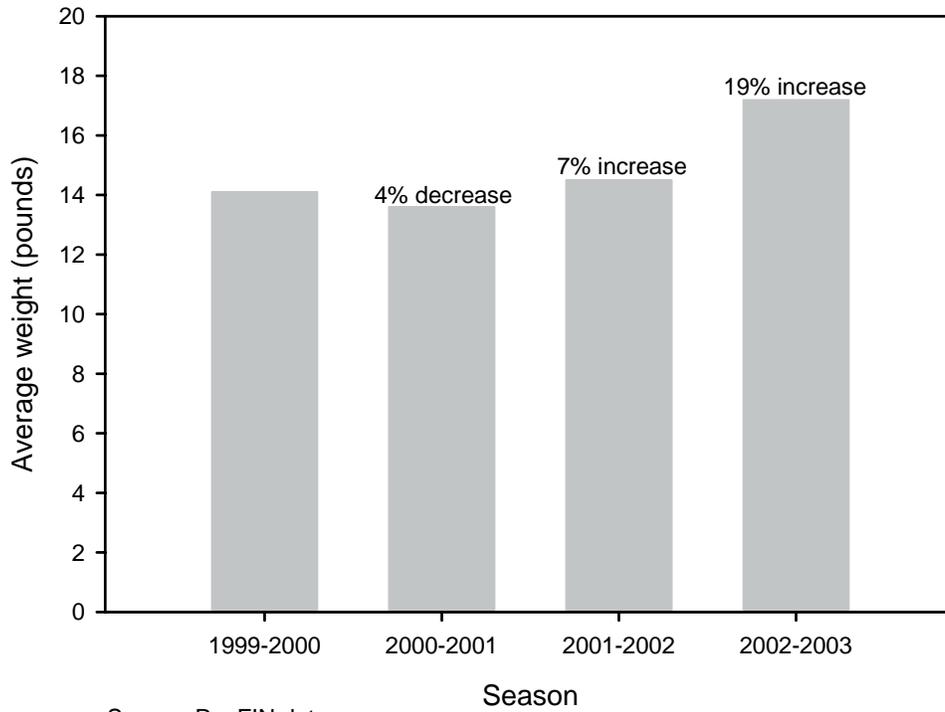


Figure 3. Average weight of recreationally-caught white seabass, 1999-2000 to 2002-2003.

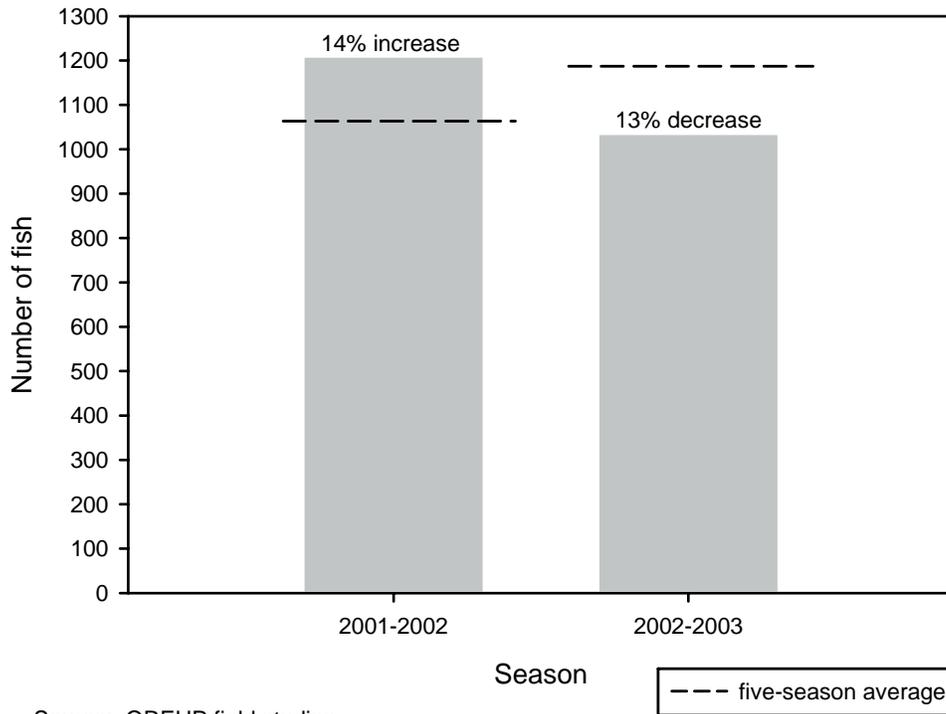


Figure 4. Juvenile white seabass recruitment survey, 2001-2002 and 2002-2003.

Summary

The Panel determined that none of the Points of Concern were met during the review of the 2001-2002 and 2002-2003 seasons. The Panel also reviewed fishery-dependent and fishery-independent data for the same time period and determined that the white seabass population was not overfished. As a result, the Department does not recommend any changes to the management of white seabass or to the WSFMP at this time.