

# Wreckfish MSY, OFL and ABC Options

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## I. Maximum Sustainable Yield (MSY)

- a. **Option 1. No action. There is no MSY specified for wreckfish**, and this is a requirement of the MSA. The Council has used maximum yield by yield-per-recruit analyses as the best available proxy for MSY. In the Comprehensive SFA Amendment (1998) the Council specified 30% Static SPR as the MSY proxy for wreckfish.
- b. **Option 2. MSY = 1.946 million pounds.** This figure is the average landings from 1988-1994 which represent the years of high landings.
- c. **Option 3. MSY = 0.835 million pounds.** This figure is the average landings from 1988-2007 which represent all years of landings with the exception of 2001 and 2003 when landings are confidential.
- d. **Option 4. Others???**

## II. Overfishing Level (OFL)

- a. **Option 1. No action.** The Maximum Fishing Mortality Threshold (MFMT) = the fishing mortality rate that produces maximum sustainable yield ( $F_{MSY}$ ) and  $F_{30\%SPR}$  is the proxy for  $F_{MSY}$  (Comprehensive SFA Amendment, 1998). The Minimum Stock Size Threshold (MSST) is defined as a ratio of current biomass ( $B_{CURRENT}$ ) to biomass at MSY or  $(1-M)*B_{MSY}$ , where  $1-M$  should never be less than 0.5 (Comprehensive SFA Amendment, 1998). Wreckfish would be overfished if current biomass was less than MSST and would be recovered when current biomass ( $B_{CURRENT}$ ) was equal or greater than the biomass at MSY.
- b. **Option 2. OFL =  $F_{MSY} = F_{30\%SPR} = 0.25$**  based on  $M = 0.10$  and combined indices (Vaughan et al., 2001; Table 6).
- c. **Option 3. OFL =  $F_{MSY} = F_{40\%SPR} = 0.14$**  based on  $M = 0.10$  and combined indices (Vaughan et al., 2001; Table 6).
- d. **Option 4. Others??**

### **III. Allowable Biological Catch (ABC)**

- a. **Option 1. No action. There is no ABC specified for wreckfish.** The Total Allowable Catch (TAC) has been set at 2 million pounds since 1990 first through an emergency rule and then through Snapper Grouper Amendment 3 (1991).
- b. **Option 2.** ABC = 1.75 million pounds. This is 197,000 pounds less than MSY Alternative 2 (1.946 million pounds).
- c. **Option 3.** ABC = 1.5 million pounds. This is 447,000 pounds less than MSY Alternative 2 (1.946 million pounds).
- d. **Option 4.** Others??