

Science, Service, Stewardship



Red Snapper Projections

SAFMC

Jekyll Island, GA

1 March, 2010

**NOAA
FISHERIES
SERVICE**



Background

- Projections of spawning stock biomass, recruitment, landings, discards, and probability of stock recovery from 2007 to T_{MAX} under very high recruitment
 - Scenario P1: $F = F_{rebuild}$, the maximum fishing rate that allows 0.5 probability of rebuilding to the $F_{30\%}$ proxy for SSB_{MSY} by the start of 2042
 - Scenario P2: $F = 0.65F_{30\%}$
 - Scenario P3: $F = 0.75F_{30\%}$
 - Scenario P4: $F = 0.85F_{30\%}$
 - Scenario P5: $F = F_{30\%}$
 - Scenario P6: $F = F_{45\%}$



Assumptions

- assume that recruitment in 2006 was equal to the maximum level predicted by the stock assessment during the years 1974 - 2006. This maximum occurred in 1984 and was about 753,000 age-1 fish.



Table 5.1 Red Snapper Projections

Quantity	Units	$F_{40\%}$ Proxy	$F_{30\%}$ Proxy
F_{MSY}	y^{-1}	0.104	0.148
SSB_{MSY}	mt	8102.5	6025.1
D_{MSY}	1000 fish	39	54
Recruits at F_{MSY}	1000 fish	693	686
Y at 65% F_{MSY}	1000 lb	1984	2257
Y at 75% F_{MSY}	1000 lb	2104	2338
Y at 85% F_{MSY}	1000 lb	2199	2391
Y at F_{MSY}	1000 lb	2304	2431
MSST	mt	7470.5	5555.1
F_{2006}/F_{MSY}	-	7.67	5.39
SSB_{2006}/SSB_{MSY}	-	0.02	0.03
$SSB_{2006}/MSST$	-	0.03	0.04



Probability that SSB achieves the $F_{30\%}$ proxy for SSB_{MSY} with $F=0$

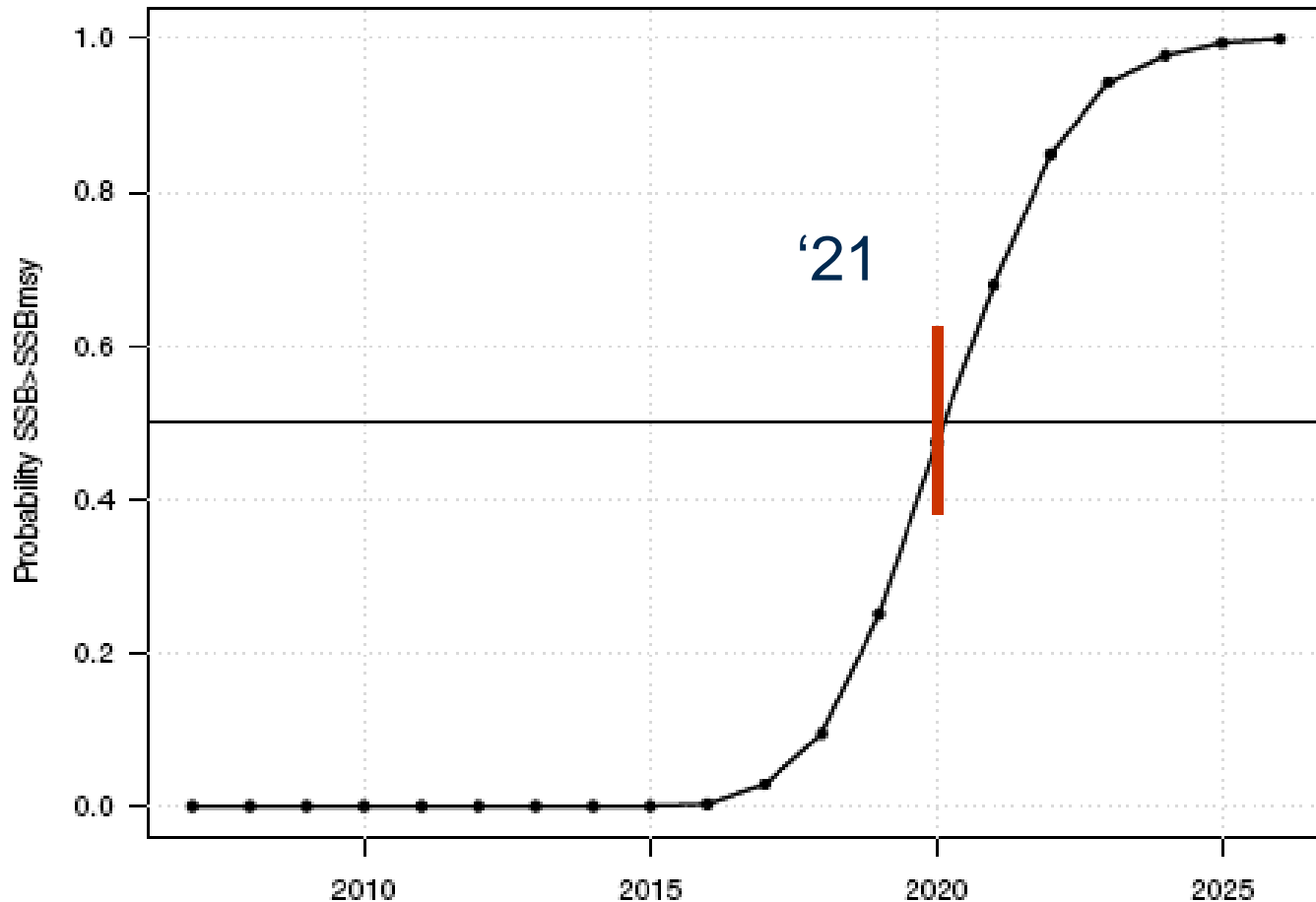


Fig. 6.1



Projections with $F = F_{\text{rebuild}}$

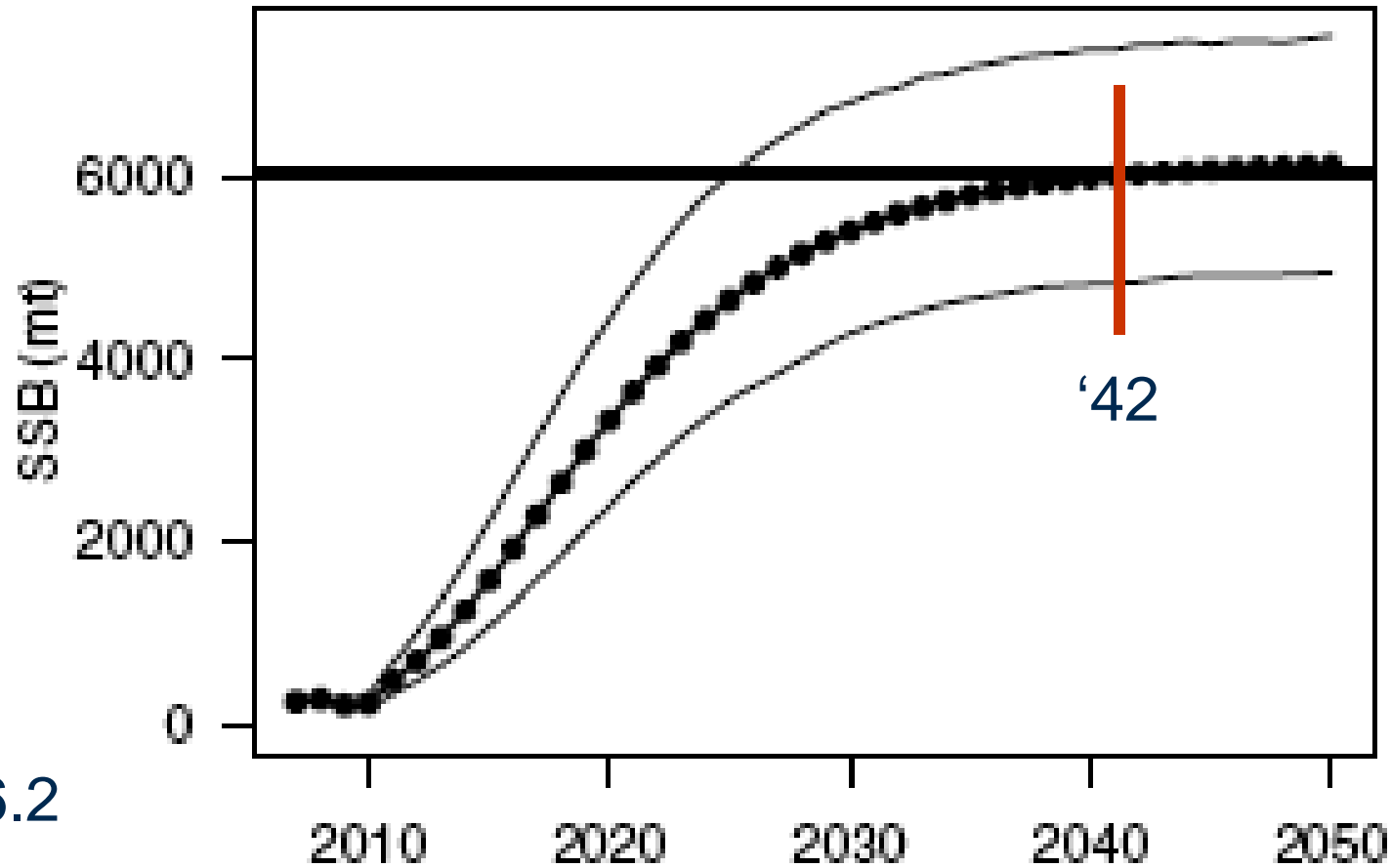


Fig 6.2



Projection for $F = 0.65\%F_{30\%}$

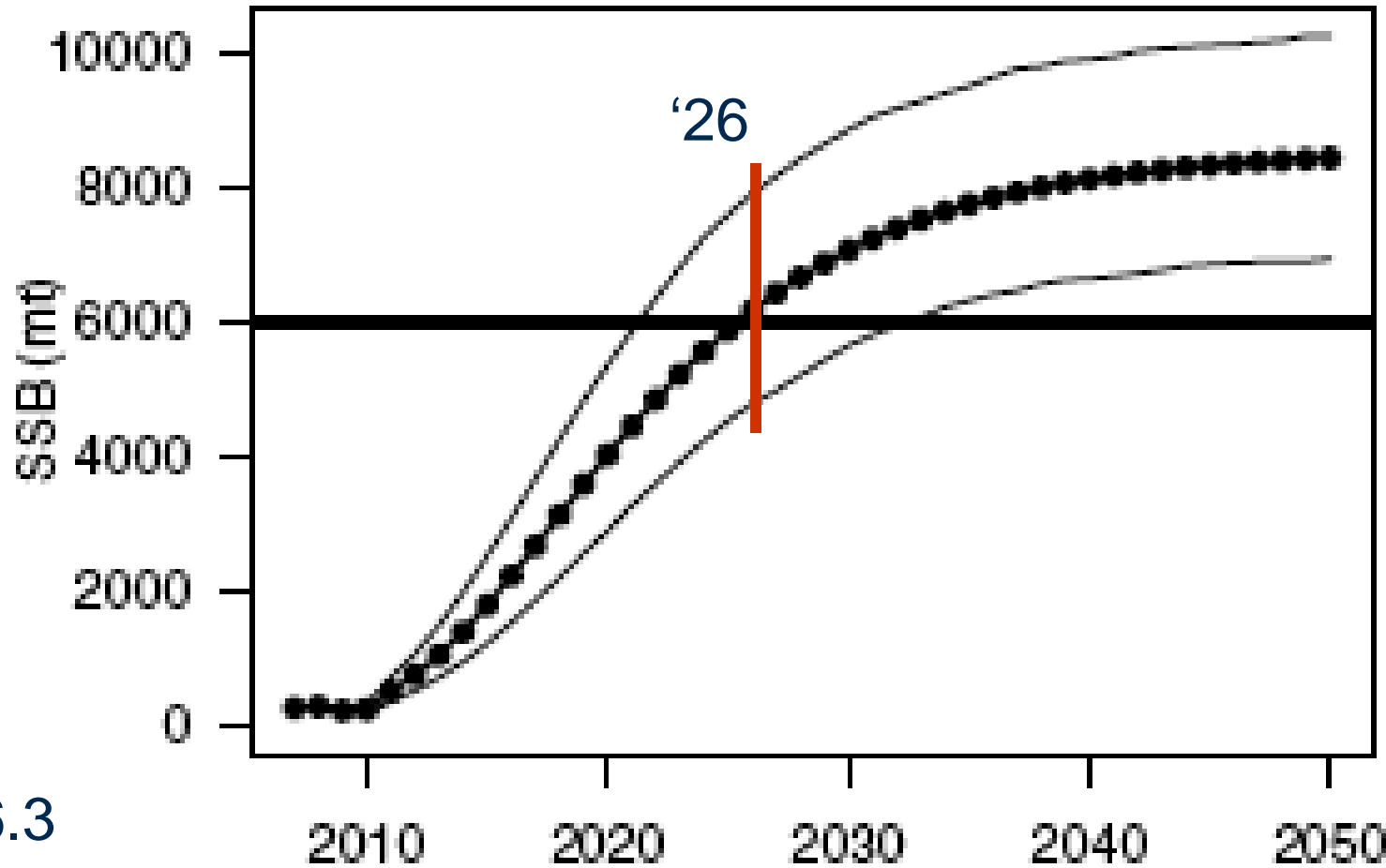


Fig. 6.3



Projection for $F = 0.75\%F_{30\%}$

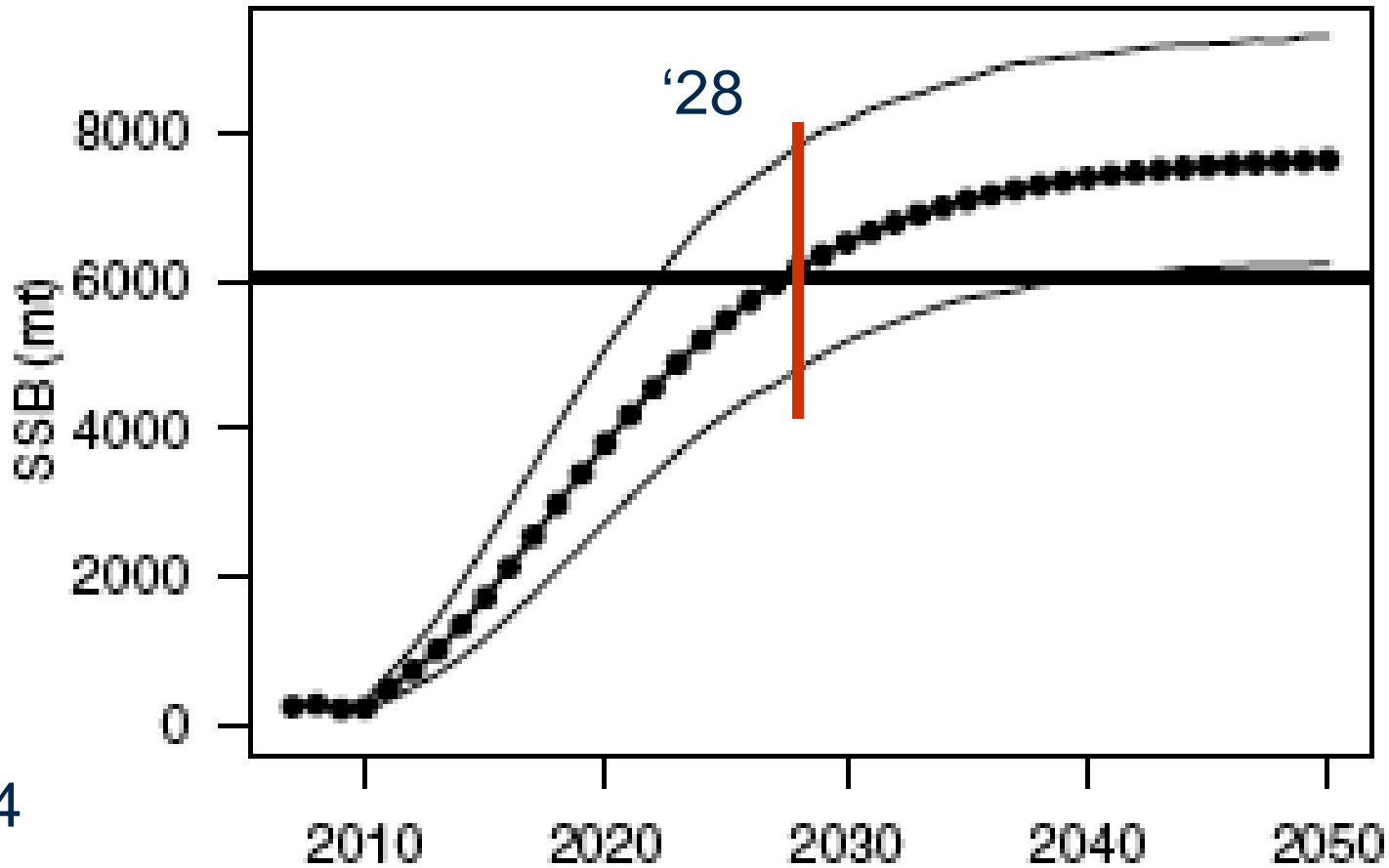


Fig. 6.4



Projection for $F = 0.85\%F_{30\%}$

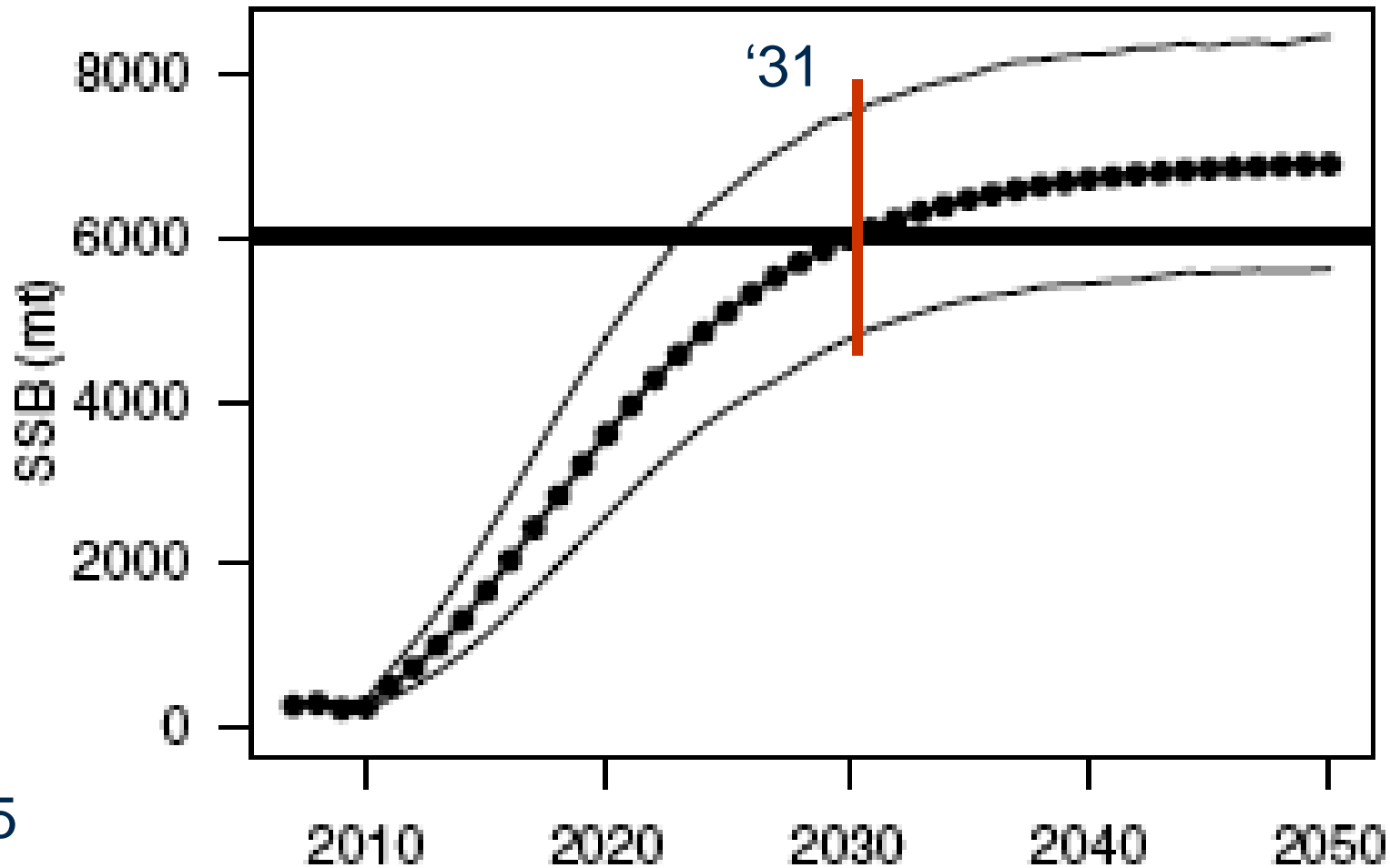


Fig. 6.5



Projection for $F = F_{30\%}$

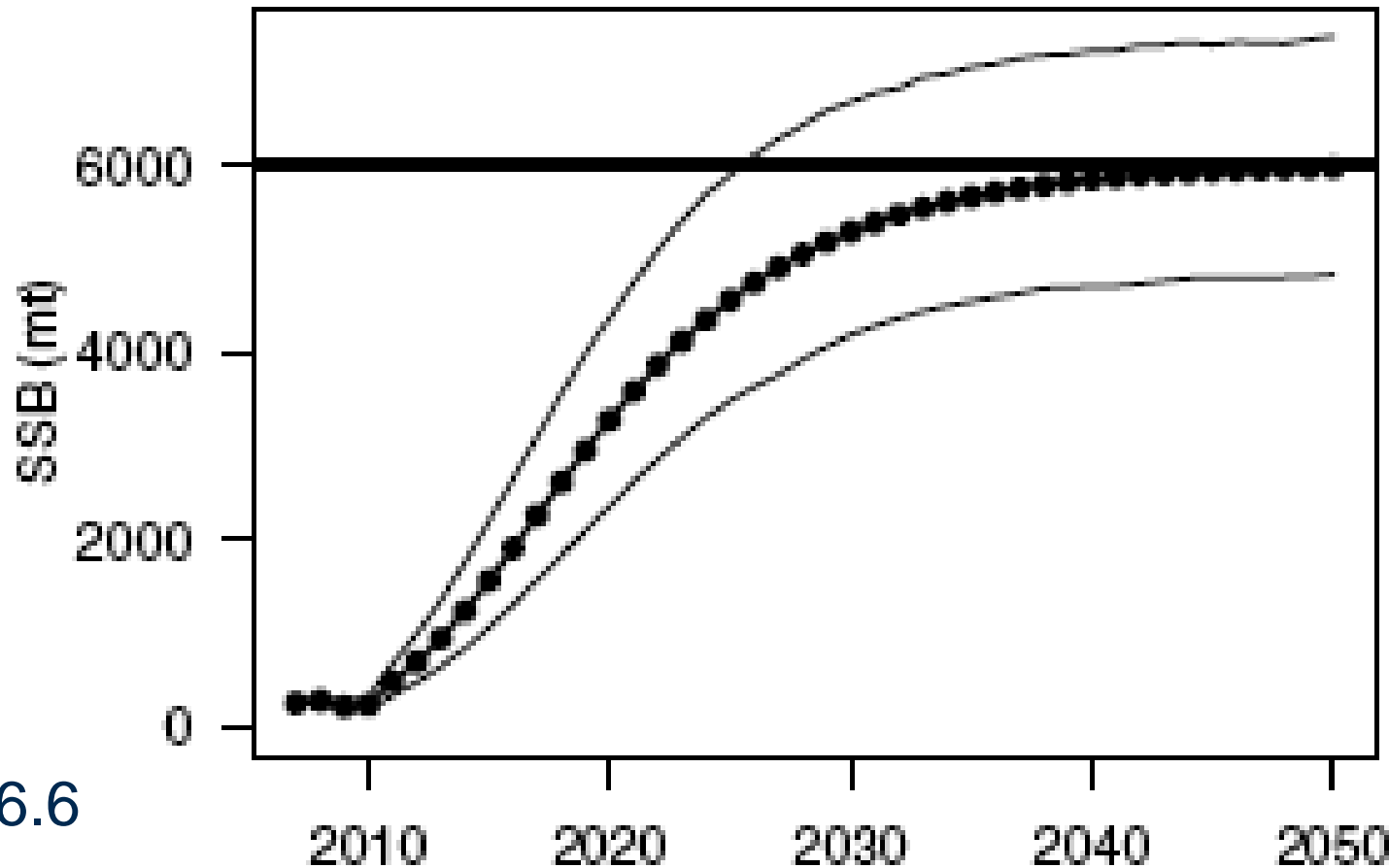


Fig. 6.6



Projection for $F = F_{45\%}$

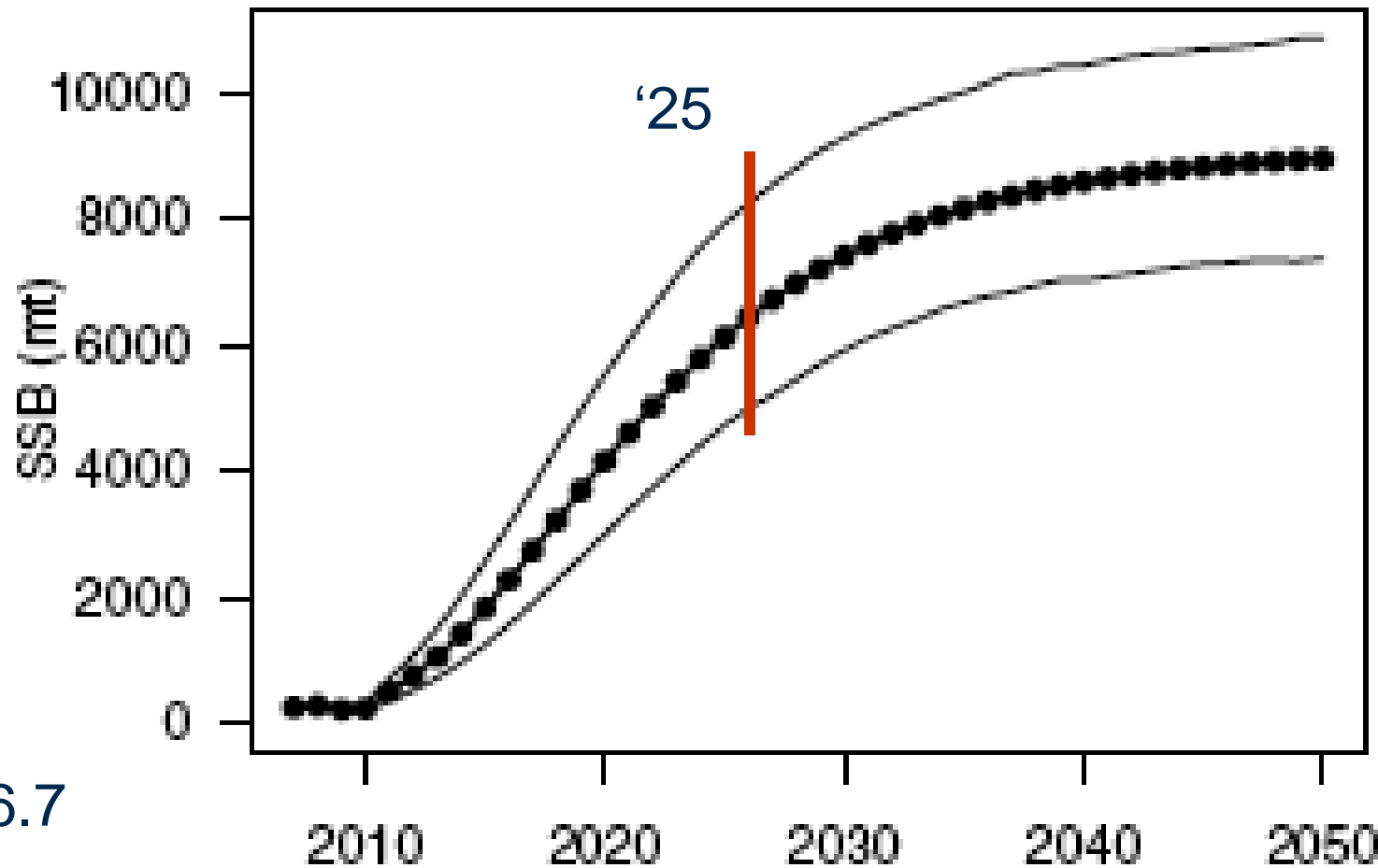


Fig. 6.7



Recreational Fishery Landings Statistics

- **MRFSS 2009 data will be updated for the February/March meeting in 2010.**
- **Headboat data will probably not be available at that time but will be updated for the May/June meeting.**



Southeast Shrimp Fishery Economic Data Collection

(An Extension of Gulf Shrimp Economic Survey)

- **Annually sample 20-33% of federally permitted shrimp fleet (in the SE), starting in 2010**
- **2-page mail survey collects annual economic data (variable and fixed costs and related data)**
- **Individual information is confidential**
- **Participation is required for permit renewal**
- **For more information on the survey: <http://www.sefsc.noaa.gov/shrimpecon.jsp>**



End of SEFSC Update



- **Additional Background Information on the Gulf Shrimp Fishery Economic Survey and the 2010 South Atlantic Survey:**

The Annual Economic Survey of Federal Gulf Shrimp Permit Holders collects data about operating expenses and the costs of owning and maintaining shrimp vessels. Each spring for the last 3 years, surveys have been sent by mail to a random sample of approximately 33% of all vessels with a federal moratorium permit for the harvest of Gulf of Mexico penaeid shrimp. Annual financial data for the years 2006, 2007, and 2008 have been collected, and the results for 2006 and 2007 are currently available on the web page in the form of a fact sheet (attached) and technical memorandum for each year. This information is used to assess trends in the financial and economic state of the fishery, and to determine the economic and social effects of regulations and other factors affecting the Gulf shrimp fishery. The individual information is confidential and only summary statistics are released to the public.

Starting with the 2010 survey (which collects 2009 annual data), we are planning to extend the survey into the S.Atlantic shrimp fisheries (OMB # 0648-0591). In addition to the federal Gulf shrimp moratorium permit holders, holders of the federal S.Atlantic penaeid shrimp and rock shrimp permits will also be sampled. We will randomly sample approximately 20-25% of the overall SE federally-permitted shrimp vessel population---roughly 500 vessels. Of these vessels, about 135 (27%) will have S.Atlantic penaeid shrimp permits; 55 (11%) S.Atlantic rock shrimp permits (either type); and 415 (83%) moratorium Gulf shrimp permits (numbers do not add to 100% since some vessels have multiple permits). A draft of the 2-page mail survey questionnaire is attached. Amendment 7 to the S.Atlantic shrimp FMP made participation in this survey a requirement for permit renewal (if selected).