CBSAC

2013 Blue Crab Advisory Report

Figures

Figure 1. Winter dredge survey index of total blue crab abundance (density of males and females, all sizes combined) in Chesapeake Bay, 1990 through 2013. Error bars represent 95% confidence intervals.
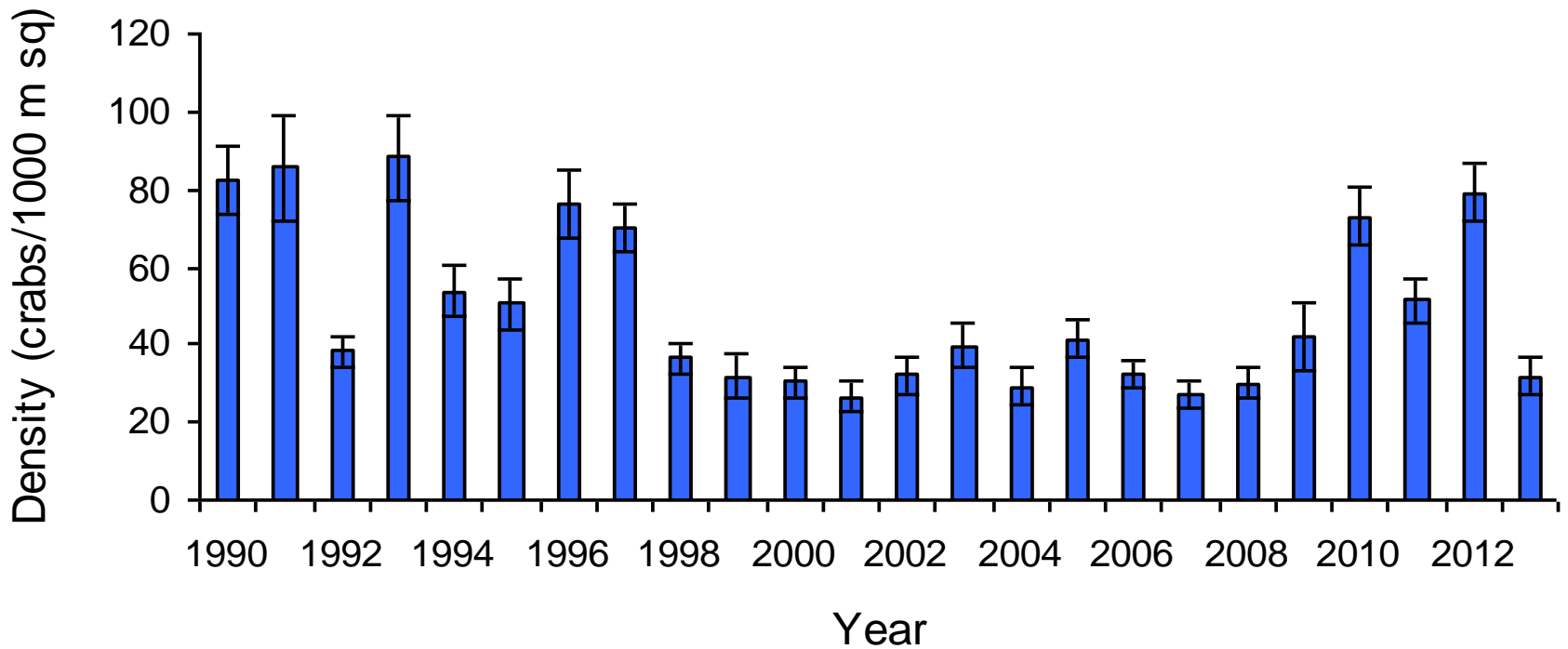
Figure 2. The female-specific control rule for the Chesapeake Bay blue crab fishery. In 2012, abundance was below the overfished target, while the exploitation rate was below the overfishing target. Reference points were derived from a statistical assessment model incorporating multiple surveys.

Exploitation: target is 25.5%, threshold is 34%

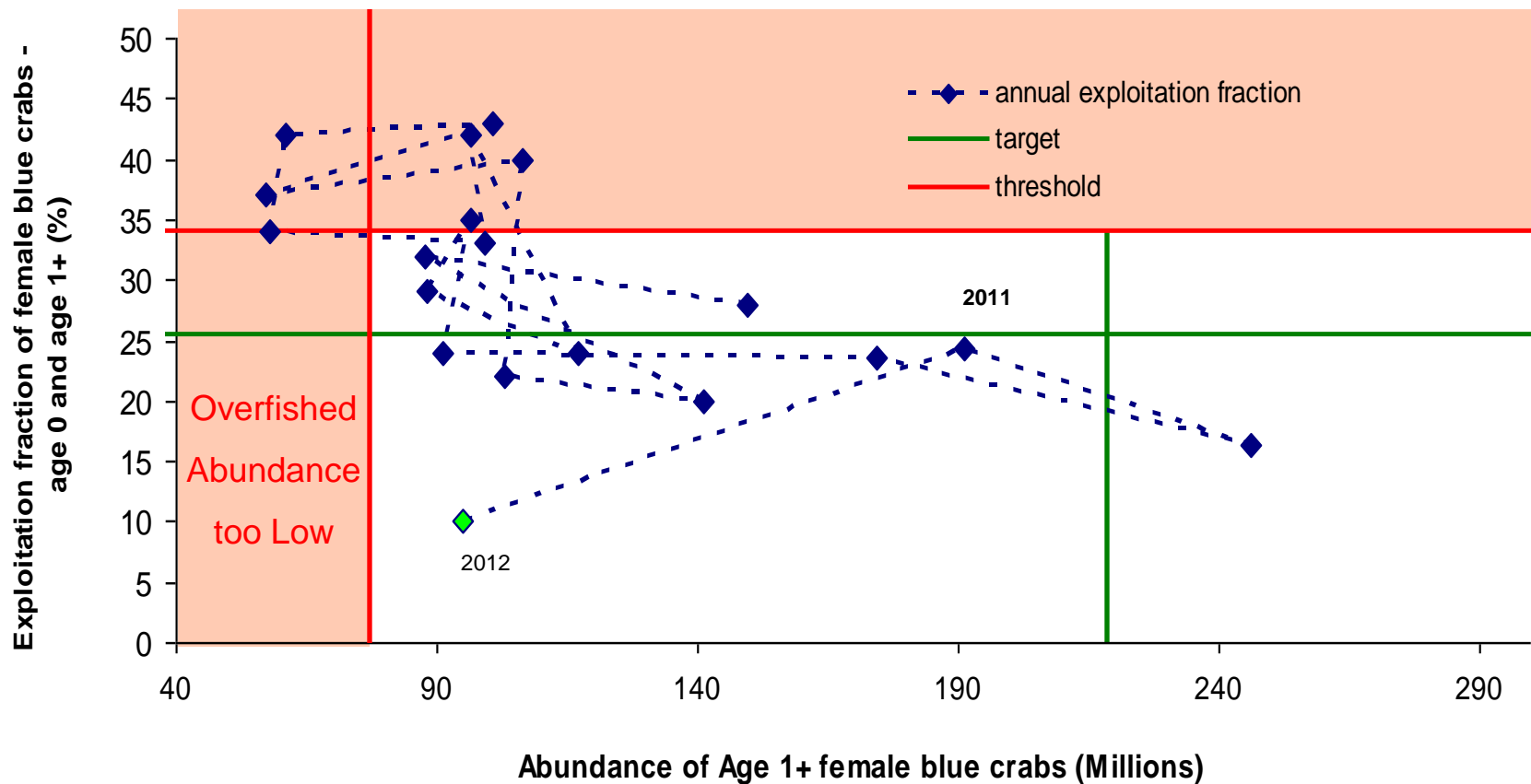Abundance: target is 215 million crabs, threshold is 70 million crabs

Figure 3. One of two male-specific triggers for the Chesapeake Bay blue crab fishery. The percentage of male crabs removed from the population each year by fishing, 1990 through 2012. Exploitation rate (% removed) is the number of male crabs harvested within a year divided by the male population estimate (age 0 and age 1+) at the beginning of the year.
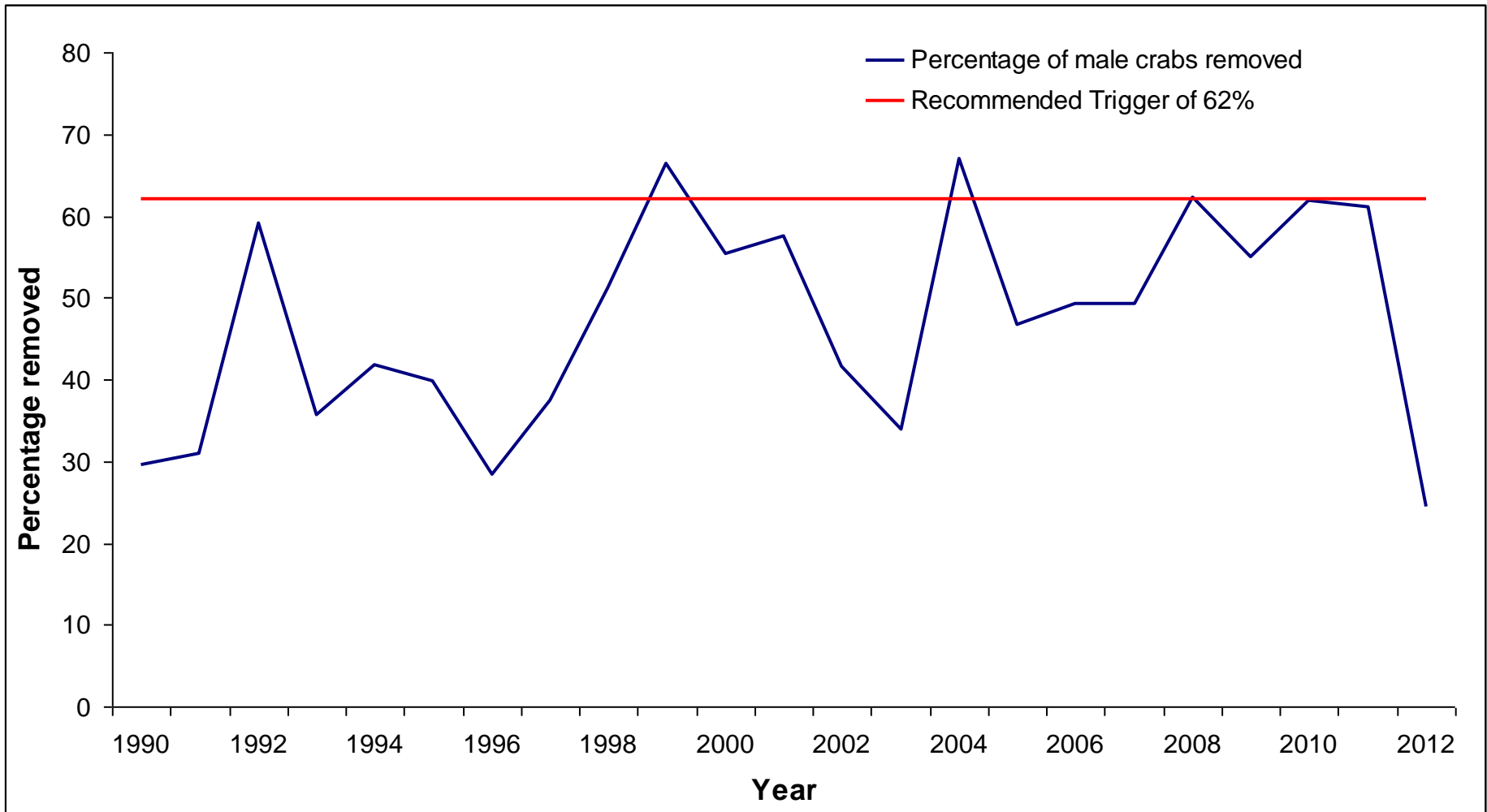
Figure 4. One of two male-specific triggers for the Chesapeake Bay blue crab fishery. The percentage of male and female crabs removed from the population each year by fishing relative to previously used target (46%) and threshold (53%) exploitation rates, 1990 through 2012. Exploitation rate (% removed) is the number of crabs harvested within a year divided by the population of all crabs estimate at the beginning of the year.
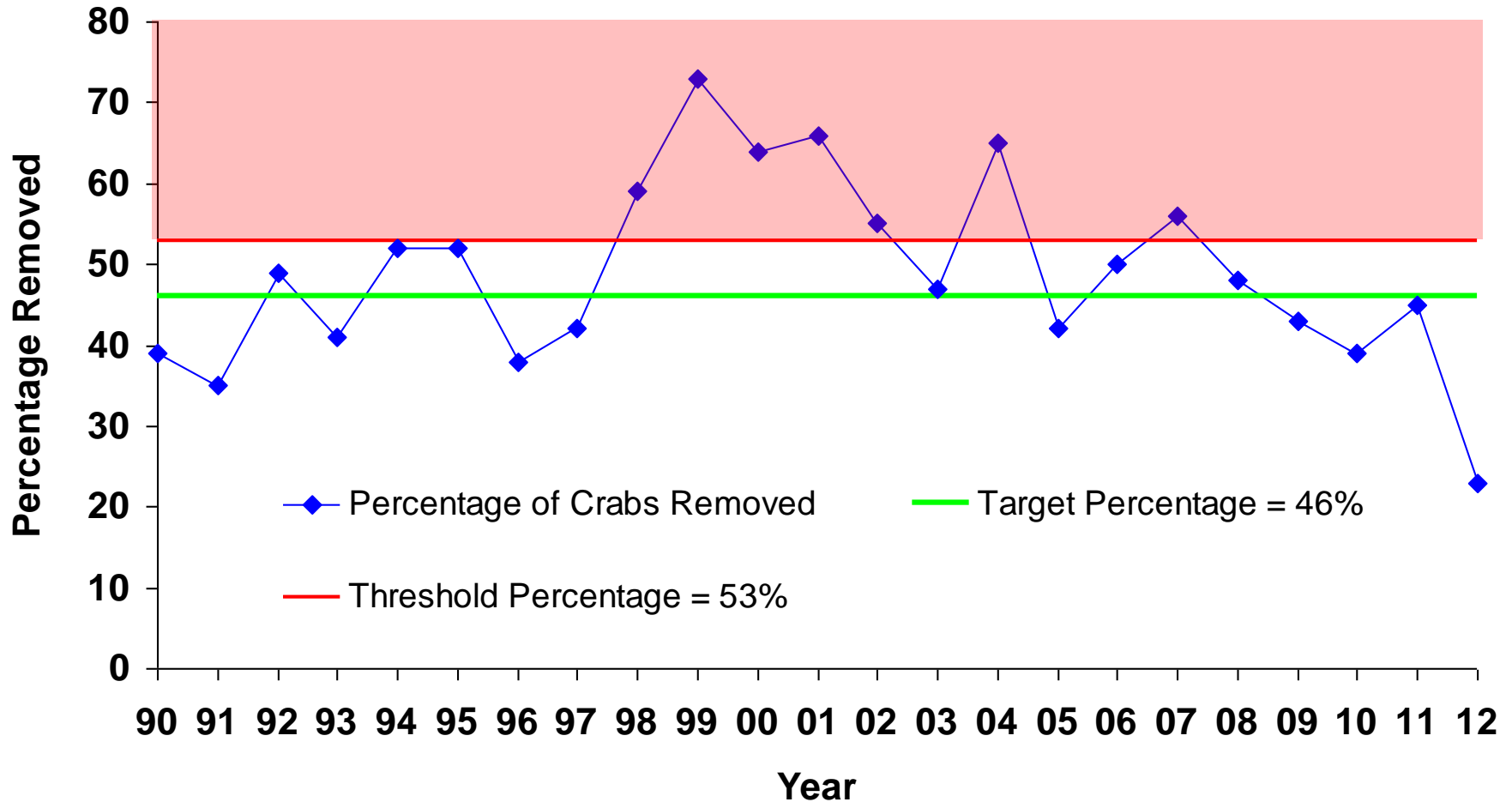
Figure 5. Winter dredge survey estimate of **abundance of female blue crabs age one year and older** (age 1+) 1990-2013 with female-specific reference points. These are female crabs measuring greater than 60mm across the carapace and are considered the 'exploitable stock' that will spawn within the coming year.
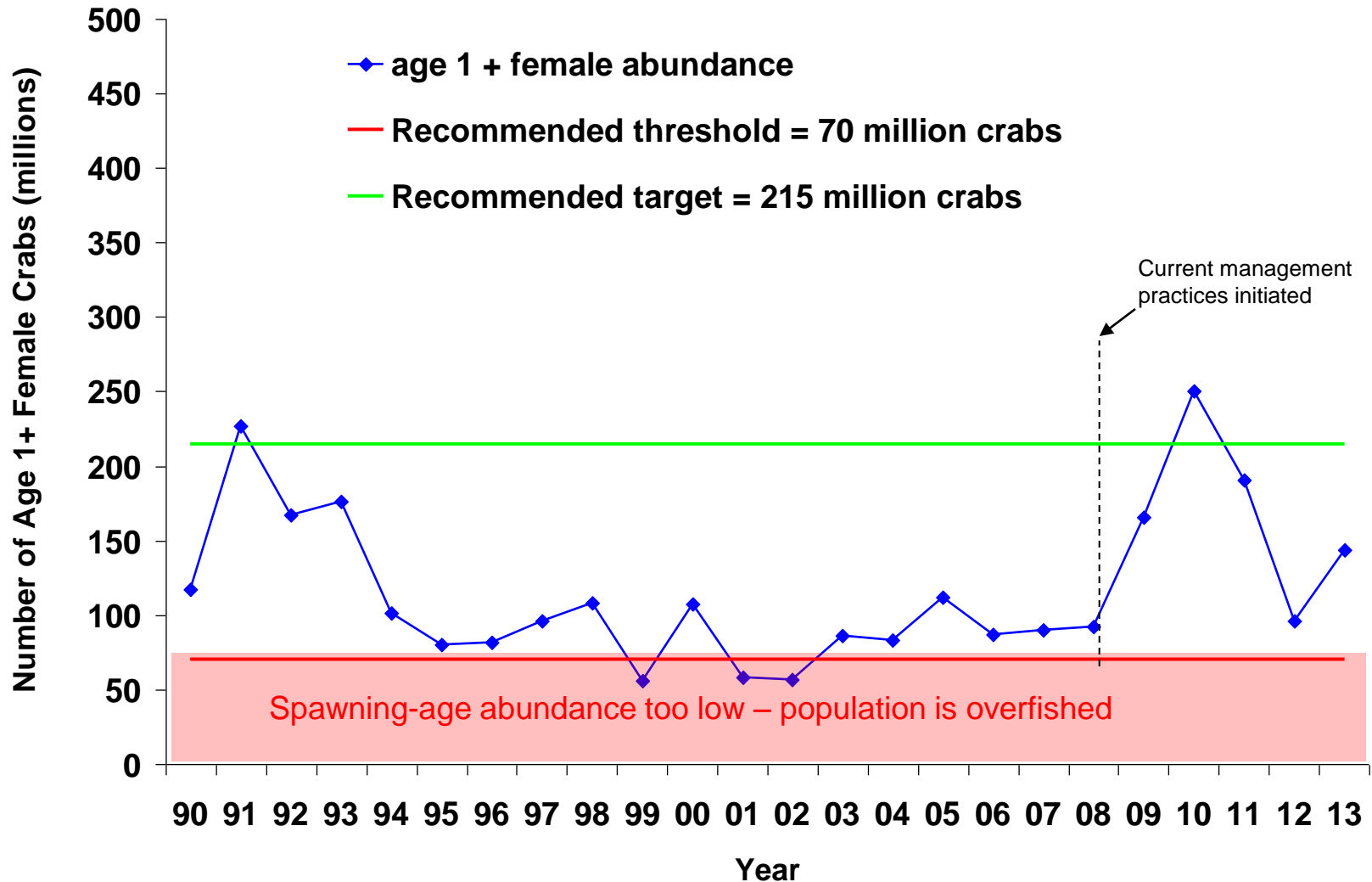
Figure 6. The percentage of female blue crabs removed from the population each year by fishing relative to the female-specific target (25.5%) and threshold (34%) exploitation rates, 1990 through 2012. Exploitation rate (% removed) is the number of female crabs harvested within a year divided by the female population (age 0 and age 1+) estimated at the beginning of the year.
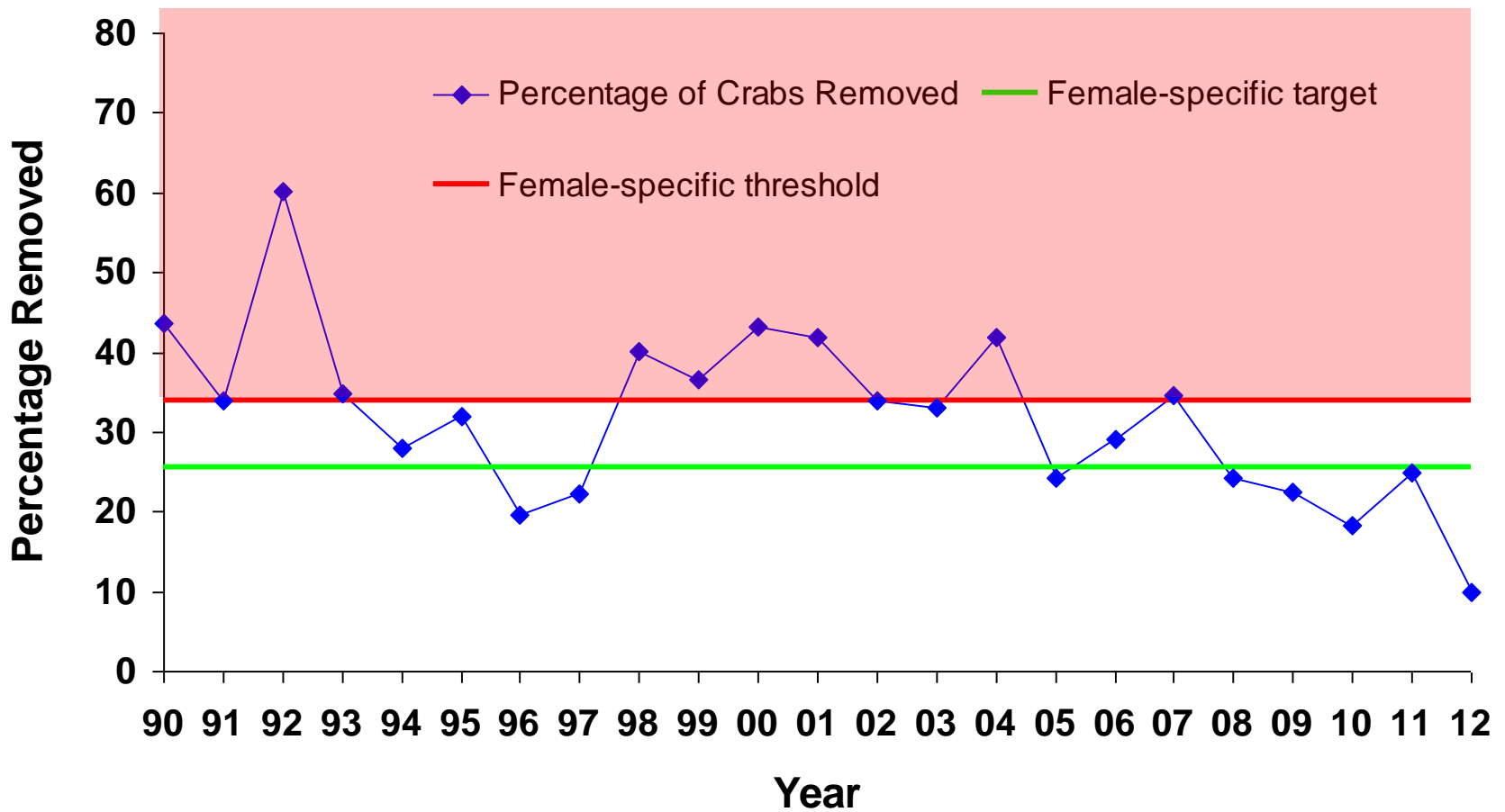
Figure 7. Winter dredge survey estimate of **abundance of all female blue crabs (age 0 and age 1+ combined)** 1990-2013. This estimate includes a catchability scalar for juvenile blue crabs, and is the basis of female exploitation rate calculations. Error bars represent 95% confidence intervals.
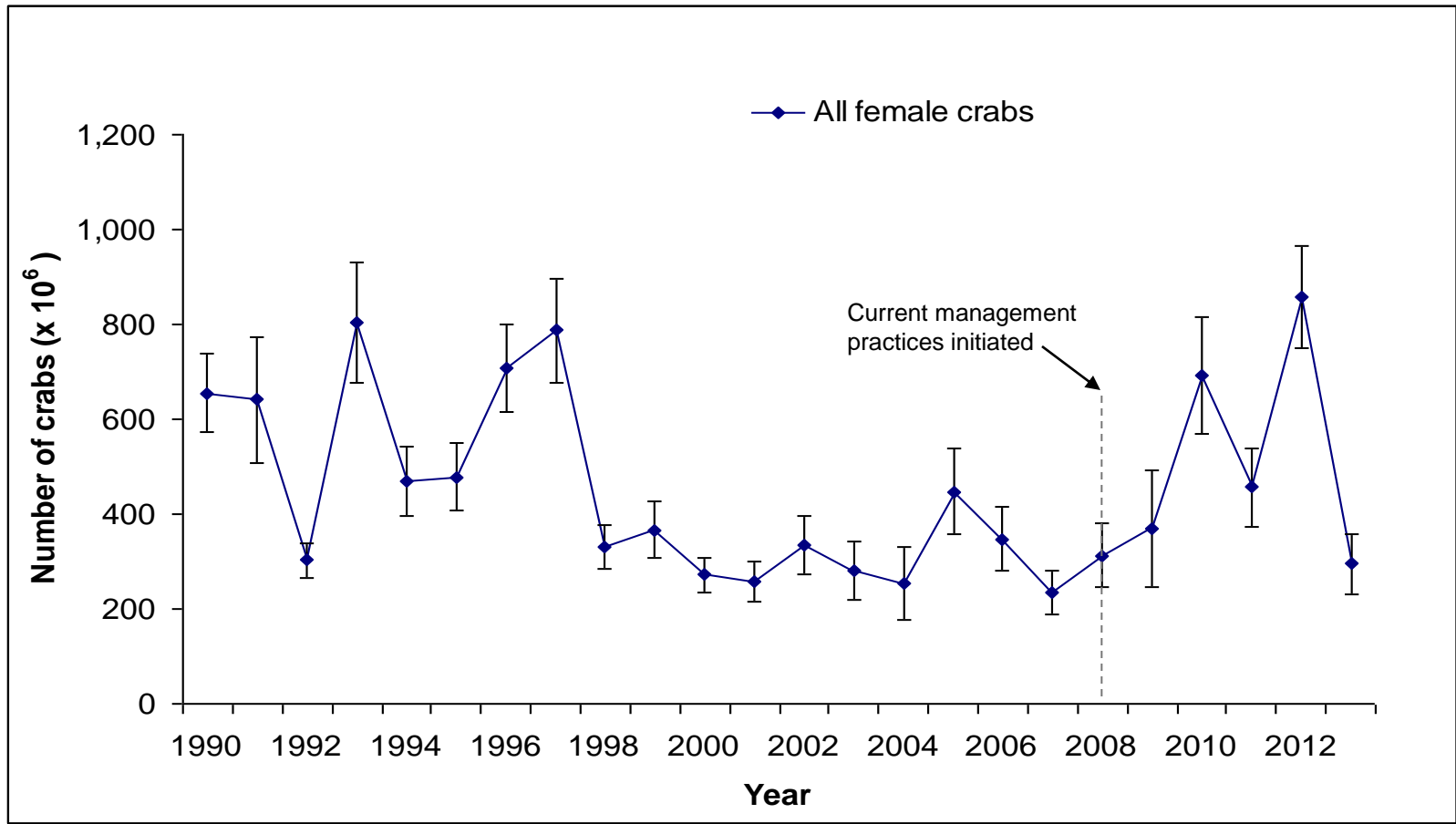
Figure 8. Winter dredge survey estimate of **abundance of male blue crabs age one year and older (age 1+)** 1990-2013. These are male crabs measuring greater than than 60mm across the carapace and are considered the 'exploitable stock' capable of mating within the coming year. Error bars represent 95% confidence intervals.
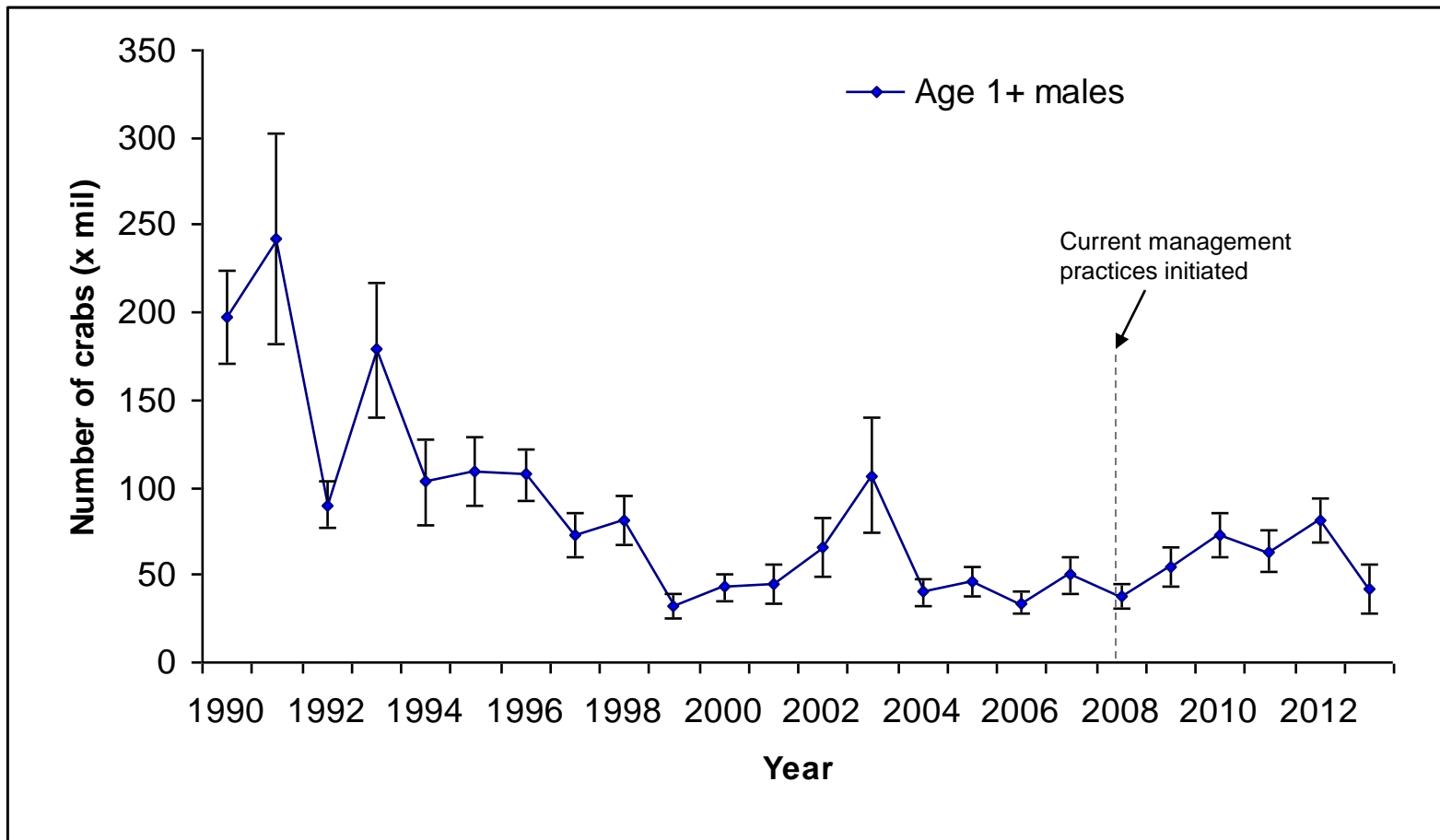
Figure 9. Winter dredge survey estimate of **abundance of juvenile blue crabs (age 0)**, 1990-2013. These are male and female crabs measuring less than 60mm across the carapace. Error bars represent 95% confidence intervals.
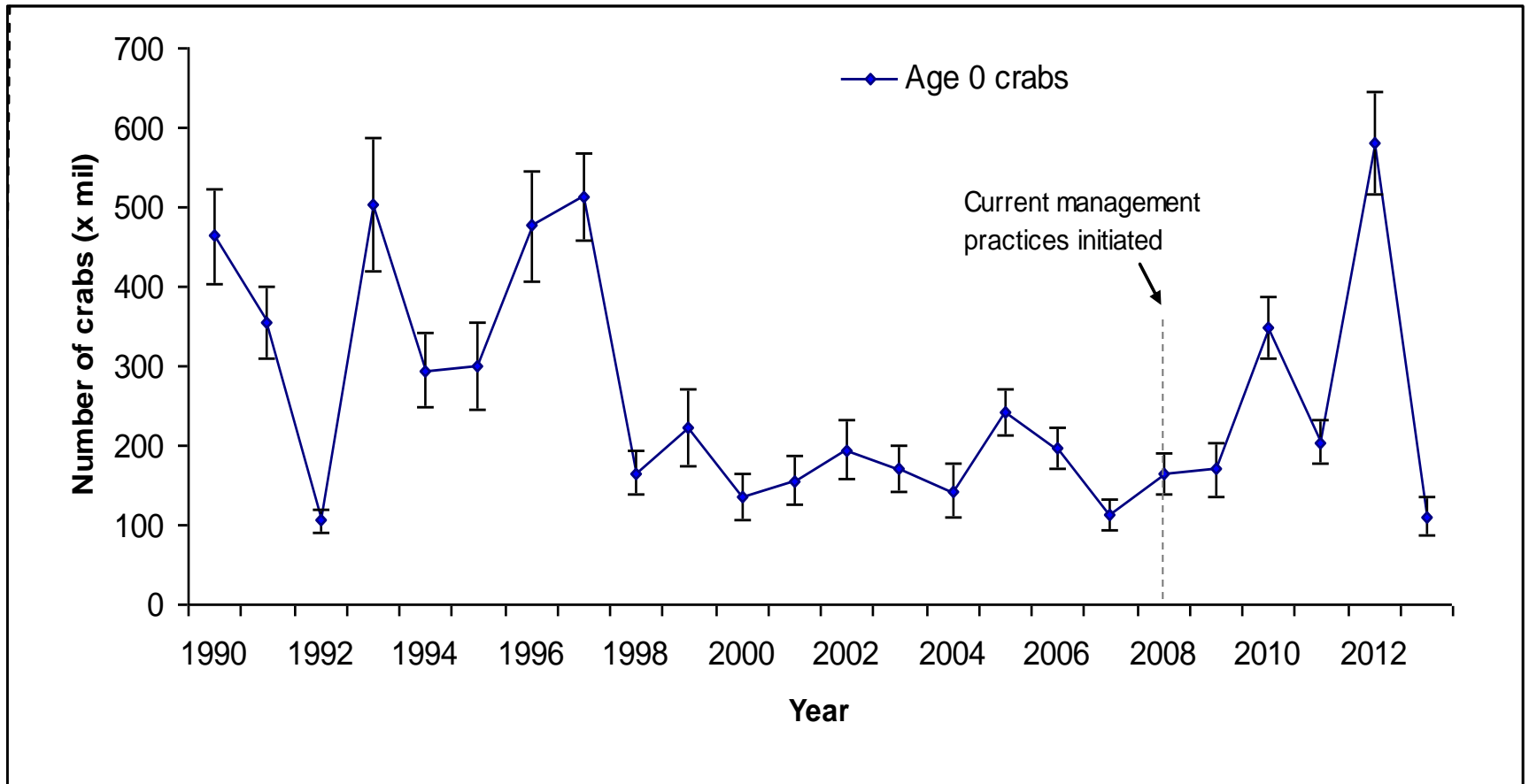
Figure 10. Maryland , Virginia and PRFC Chesapeake Bay commercial blue crab harvest in millions of pounds, 1993-2012.