

RED SNAPPER: NEW STUDY, SAME PLIGHT

The new South Atlantic red snapper assessment documents some changes in red snapper's condition but the story remains the same: The fish are still at critically low population levels and in urgent need of protection.

This is a comparison between the 2008 red snapper study, Southeast Data Assessment and Review 15, and SEDAR 24 finalized in October 2010. In December 2010, the South Atlantic Fishery Management Council could use the new study to modify the red snapper recovery plan, which includes a moratorium on red snapper fishing and a 4,827-square-mile ocean area closed to bottom fishing to protect red snapper caught accidentally when fishermen target other deep-dwelling species.



National Oceanic and Atmospheric Administration

SAME STORY FOR RED SNAPPER

The fish are still:

- At critically low population levels
- Depleted from decades of overfishing
- Dying too often from being caught accidentally
- Caught faster than they can replenish themselves
- Overwhelmingly young; too few fish are more than 10 years old, although they can live to 53
- Unable to benefit from the best breeders—old fish are mostly gone.

RED SNAPPER POPULATION STATUS

2008	3% of a healthy population
TODAY	11-14% of a healthy population

WHY THE DIFFERENCE?

Scientists incorporated additional data about red snapper ages and sizes and determined they reproduce faster and more efficiently than first thought, perhaps in reaction to intense fishing rates. Researchers now think it may take fewer red snapper to sustain a healthy population. Additionally, the fish were helped by unexplained years of good reproduction in 2005 and 2006.

WHAT IT MEANS

Red snapper remain at dangerously low levels and are severely overfished. But with more efficient reproduction, not as many red snapper are needed to replenish the species. Recovery time could be shorter, allowing closed ocean areas to reopen and controlled red snapper fishing to resume much sooner.

PERCENT OF RED SNAPPER THAT DON'T SURVIVE CATCH AND RELEASE

2008	TODAY
40% recreational	39% recreational
90% commercial	48% commercial

Percent of red snapper that die when caught accidentally and thrown back

WHY THE DIFFERENCE?

The 2008 assessment relied on fishermen's logbooks for records of what was caught at what depths. The log entries were not uniform or consistent, leaving scientists to conclude fishermen were fishing in deeper waters. The deeper red snapper are caught, the more likely they will die from internal injuries due to the pressure change or hook injuries. In the current study, fishermen input show they catch most red snapper in shallower water.

WHAT IT MEANS

Too many red snapper still die accidentally—sometimes days after they are released even though they appear initially to be fine. But fewer accidental deaths could possibly mean closure of a smaller ocean area for bottom fishing where red snapper are now most often caught by mistake.

2008

Old, big fish are just as likely to be caught as young, small fish

TODAY

Old, big fish are not caught as often as young, small fish

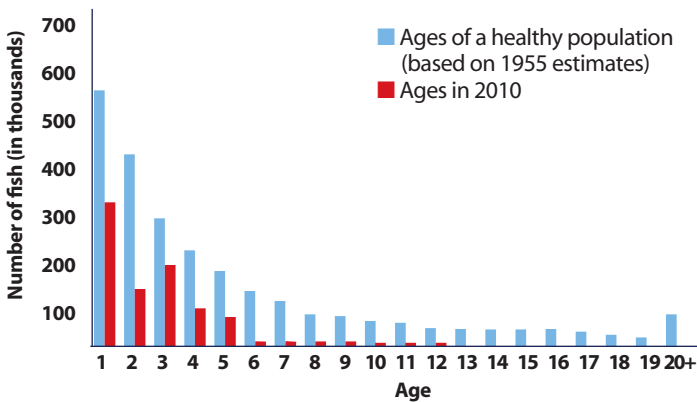
WHY THE DIFFERENCE?

Although scientists do not have conclusive evidence of this phenomenon, some fishermen believe old, big fish move to deeper water where they are less vulnerable to fishing gear. Left alone, these fish—the best breeders that produce healthier offspring—may be helping to replenish the population. Scientists partially incorporated this theory to address fishermen concerns and because evidence now shows fishermen catch red snapper mainly in shallower water.

WHAT IT MEANS

This factor does not change the overall red snapper status because age studies show 87 percent of the fish, which can live to 54, are younger than 5. The age studies included red snapper from deeper waters. They examined 13,000 fish ear bones, including more than 4,000 from 2009, to ensure samples would address any recent changes in red snapper's age range. Those results were incorporated in the overall 2010 red snapper assessment.

TIME TO SPAWN



The newest assessment confirms few red snapper reach their best breeding years. Although young fish may be large, spawning ability depends on age as well as size.

WHAT'S NEXT

Fishery scientists are using new techniques to collect more red snapper information for the next study, which is expected in five years. Scientists at the National Oceanic and Atmospheric Administration are using video cameras and working with commercial long-line fishermen to sample fish at various depths to determine if old, big fish—the best breeders—move to deep water where they are less vulnerable to fishing gear. All of the new information will help determine changes to the red snapper recovery plan.



National Oceanic and Atmospheric Administration

2008

Scientists used historical recreational catch numbers as one factor in estimating the red snapper population size

TODAY

Scientists adjusted their use of historical recreational catch numbers in estimating the red snapper population size

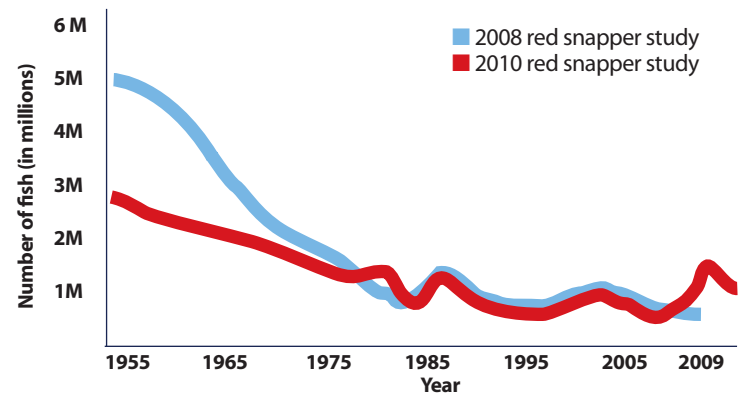
WHY THE DIFFERENCE?

Recreational catch numbers are one piece of information that scientists use to estimate the overall size of a fish population. Fishermen claim red snapper recreational catch numbers before 1976 are unreliable and inflated, making the historical population seem larger and the declines today seem even worse. To come up with a more accurate estimate, scientists agreed to adjust the amount of red snapper caught by recreational fishermen before 1976 to a proportion of the amount of the fish caught at that time by commercial fishermen. Historic records of commercial red snapper catch are more extensive and uniform.

WHAT IT MEANS

Recreational catch numbers before 1976 did not significantly affect the overall outcome of the study. The severe overfishing during the past four to five decades caused today's critically low population level. As far back as the 1970s, the red snapper population was most likely in poor condition.

POPULATION DECLINE



The new study shows red snapper in severe decline. Scientists adjusted their use of pre-1976 catch numbers, although the new study shows unsustainable fishing rates during the last half a century have taken their toll. The population has increased in recent years because red snapper occasionally and unpredictably produce vast numbers of offspring. But they can go years without a major population boost. Bag and size limit restrictions begun in 1992 did not appear to have the intended effect and were not enough to help the species rebound from such depleted levels.

THE PEW SOUTH ATLANTIC FISH CONSERVATION CAMPAIGN

The campaign works to bring scientific expertise to bear on fishery management plans and seeks common ground with fishermen to find solutions that balance human and environmental needs and raise awareness about overfishing and potential remedies.

For more information, visit www.PewEnvironment.org/SouthAtlanticFish or contact project manager Holly Binns at Fishinfo@PewTrusts.org or call 850-727-8241.

The Pew Environment Group is the conservation arm of The Pew Charitable Trusts.