BC SEAFOOD ALLIANCE

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SUSTAINABLE **FISHING** ISSUES

The Status of British Columbia's Rockfish Populations

WHAT IS THE CONCERN?

There are more than 35 different species of rockfish (*Sebastes*) in British Columbia waters. Rockfish, also known as snapper, red snapper or rock cod, typically inhabit areas with rocky bottoms and structures like kelp, corals or sponges that offer cover and protection.

Some rockfish are more sensitive to fishing pressure than others and it is important to distinguish between them when judging the overall health of rockfish.

Rockfish are very sensitive to fishing pressure for a number of reasons. Many rockfish species are territorial and do not migrate. They reach reproductive maturity at 5 to 20+ years and can have average life spans of more than 50 years; rougheye rockfish can live up to 200 years. For these longer-lived fish, reproduction occurs very slowly and depends on favourable oceanographic conditions that may occur only once in decades. As well, when caught and brought to the surface, a rockfish's large, gas-filled swim bladder expands greatly and prevents the fish from swimming back to depths when released. As a result of these attributes, a number of rockfish populations in BC have declined dramatically in recent years.

Rockfish can be grouped into one of two types based on their biology. Schooling rockfish feed above the bottom at night on pelagic invertebrates and fishes and form schools closer to hard and soft bottoms during the day. Some schooling species migrate and mature at an earlier age. Benthic rockfish species are territorial, live on the seabed in rocky reefs or other high relief areas. They feed on fish and invertebrates such as crabs and mature at later ages. In general, benthic rockfish species, being territorial, longer-lived and slower to reproduce are more sensitive to fishing pressure than schooling rockfish. Also those species of schooling rockfish (e.g. Pacific ocean perch) living in deeper water are only caught by regulated commercial fisheries while shallow water, bottom dwelling inshore rockfish, such as quillback and copper, are caught by both commercial and recreational fisheries which, when combined, may exceed sustainable levels.

Yelloweye and Widow rockfish are examples of benthic and schooling species which differ in their sensitivity to fishing pressure

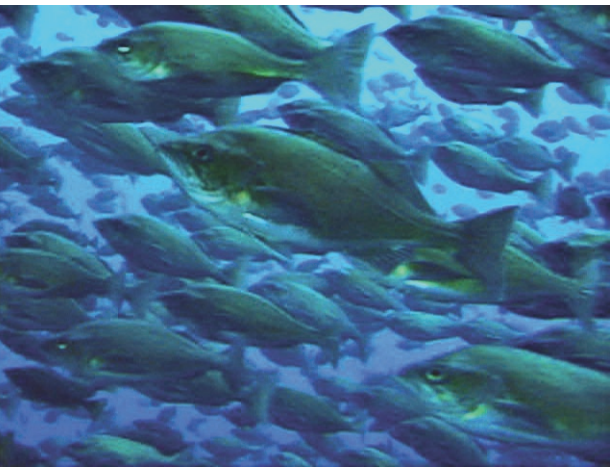
BENTHIC	SCHOOLING
Yelloweye rockfish	Widow rockfish
Territorial	Migrate
Live to 114 Years	Live to 28 years
Reproduce at 6 to 8 years	Reproduce at 4 to 5 years
Found from 25 to 550 meters	Found from 20 to 366 meters

WHY IS IT IMPORTANT?

Rockfish form a significant portion of recreational and commercial groundfish landings in BC; 40 to 60 million pounds of rockfish are landed annually. Because of their sensitivity to fishing pressure, rockfish are regarded as sentinel species by which we can measure the success of our efforts to fish responsibly and sustainably.

WHAT ARE WE DOING ABOUT IT?

Under the new integrated groundfish management program BC's commercial groundfish fisheries must now account for all fish caught. At-sea monitoring programs using fisheries observers or electronic catch monitoring together with dockside validation are designed to ensure that all catch, including rockfish, is reported and accounted for within the fishing quota system. In addition, the annual allowable catches for rockfish are conservative, set at an annual catch rate of two to five percent of the estimated population size. The fisheries monitoring programs work together with individual quotas to ensure that commercial harvests do not exceed these allowable catches.



SCHOOL OF WIDOW ROCKFISH
PHOTO BY K.L. YAMANAKA, DFO

Recently, 102 Rockfish Conservation Areas (RCAs) have been established in BC waters to protect rockfish and their habitat. More are expected in the future. In these areas, all forms of commercial or recreational fishing that might catch rockfish (hook and line, gillnets, etc.) are prohibited. Time and area closures have been established for the commercial groundfish fishery to ensure the protection of sensitive rockfish habitat and certain spawning populations. The monitoring programs established within the commercial fishery help ensure that these closures are effective.

WHAT MORE CAN BE DONE?

Managing BC's rockfish sustainably requires conservative harvest levels ensured by full catch accounting and closed areas that offer rockfish refuge from harvest pressure. Because rockfish are often caught when fishing for other species, fishers need to be able to transfer their rockfish quotas amongst each other so as not to exceed overall quotas for the various rockfish species. Furthermore, data reporting from the recreational sector must be strengthened to ensure that we know how many rockfish are caught by this sector.

Closures designed to protect rockfish and their habitat will have to remain in effect for many years to permit recovery of rockfish populations. More research needs to be conducted to identify critical rockfish habitat.

YELLOWEYE ROCKFISH ON HIGH RELIEF BOTTOM. PHOTO BY K.L. YAMANAKA, DFO

Due to the longevity and intermittent reproductive success of rockfish, programs that collect commercial fishing and research survey data are essential in making sound population assessments. The assessment of BC's rockfish populations should be expanded to include all species potentially impacted by fishing.

Because of the varying sensitivities of different rockfish to fishing, there is a need at the wholesale and retail level to distinguish the species and origins of rockfish. This would allow both vendors and consumers to have a role in the recovery of more sensitive species of rockfish and in the sustainability of this fishery.

FURTHER READING

Groundfish Stock Status Reports. Fisheries and Oceans Canada
http://www.pac.dfo-mpo.gc.ca/sci/psarc/SSRs/groundfish_ssrs_e.htm

AFSC Guide to rockfishes. Alaska Fisheries Science Center.
http://www.afsc.noaa.gov/groundfish/RockfishGuide/rockfishtoc.htm

The Rockfishes of the Northeast Pacific. Milton Love, Mary Yoklavich and Lyman Thorstein. University of California Press. 2002.