



Shrimp in Canadian and NAFO Waters

Biology

- Found in the Northwest Atlantic from Davis Strait to the Gulf of Maine, usually in areas where the ocean floor is soft and muddy and where temperatures near the bottom range from about 2 to 6 C
- These conditions occur throughout the Newfoundland and Labrador offshore area within a depth range of roughly 150 - 600 m, thus providing a vast area of suitable habitat
- Protandrous hermaphrodites; first mature as males, mate as males for one to several years and then change sex and spend rest of lives as mature females
- Known to live for more than 8 years in some areas
- Some northern populations exhibit slower rates of growth and maturation but greater longevity results in larger maximum size
- Important prey for many species such as Atlantic cod, Greenland and Atlantic halibut, skates, wolffish, snow crab and harp seals





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Stocks

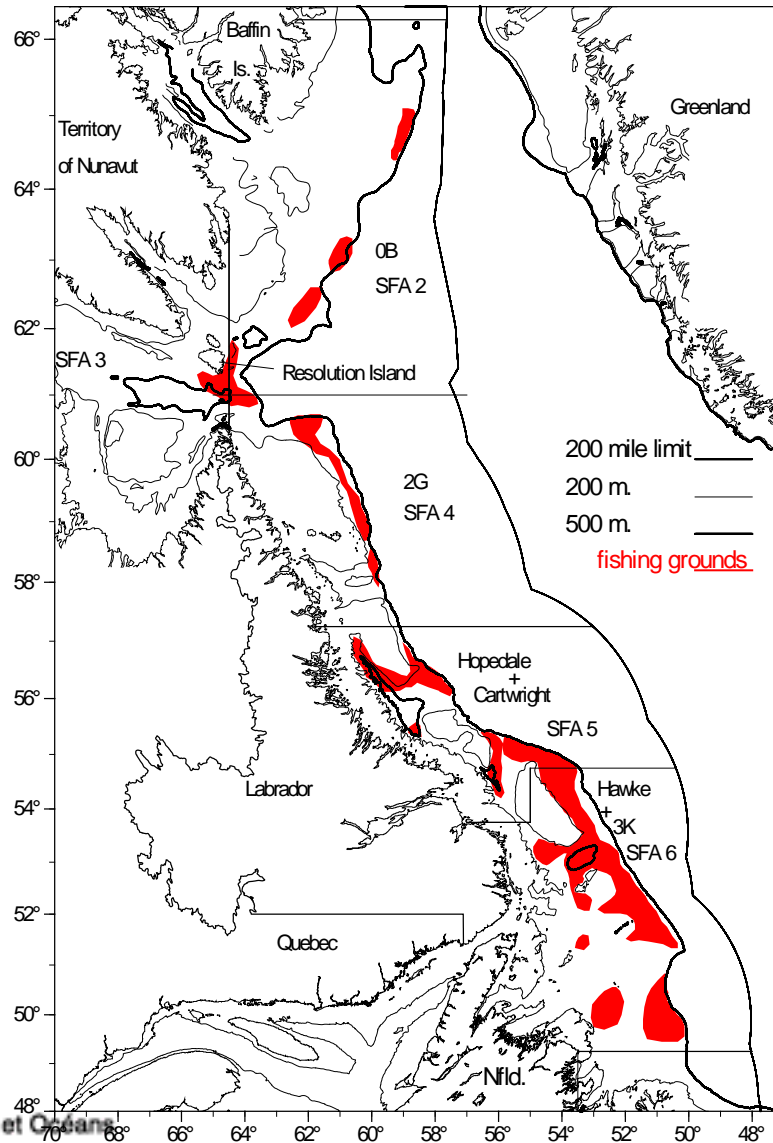
- Are 5 management areas from Baffin Island to the northern Grand Bank referred to as Shrimp Fishing Areas (SFA's)
 - SFA 6 - Hawke Channel +Div 3K
 - SFA 5 - Hopedale (2H) & Cartwright (2J) channels
 - SFA 4 - Div 2G
 - SFA 2 - Div 0B
 - SFA 1 - Div 0A – assessed by NAFO/managed by Canada and Denmark (Greenland)
 - SFA 7 - Div 3LNO – assessed and managed by NAFO
 - Flemish Cap (NAFO 3M)
- In SFA 2 is mixture of *P borealis* and *P montagui*





Stocks

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Assessment

- Status for each shrimp fishing area (SFA) determined by monitoring performance of the fishery within and between years, distribution of fishing effort and the size/ sex composition of the catches
- Research vessel (RV) trawl surveys since 1995 provide data on stock size and structure for SFA 5, 6 and 7
- Using both sources of information, inferences can be made on state of spawning stock (female abundance), potential for future recruitment to the fishery (male abundance) and an index of exploitation (ratio of commercial catch to lower 95% confidence interval of biomass index from the previous year's RV survey)
- Resource has increased significantly during 1990's, in part due to release from predation from groundfish
- Resource remains healthy in all areas despite increases in catches – catches do not seem to have had any negative impact to date



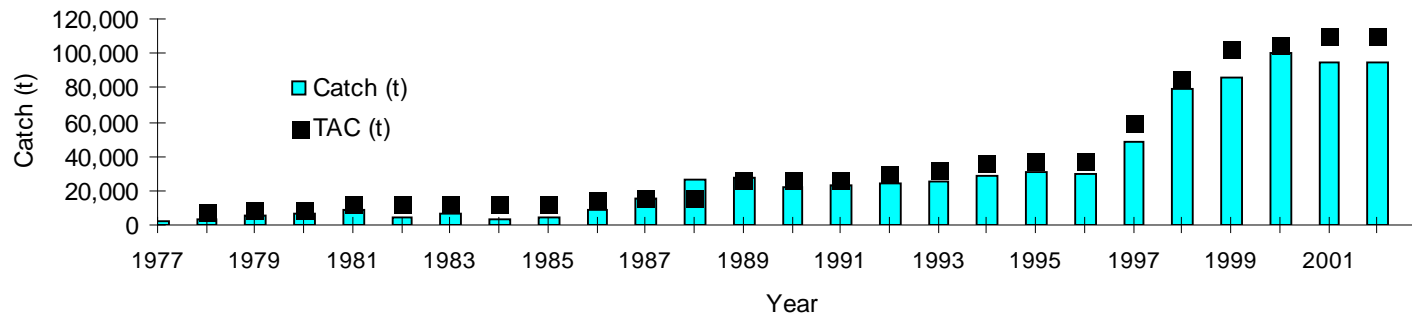


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Fishery

- Began in 1970's in SFA 1
- Began in late 1970's in SFA 4, 5 and 6
- Began in late 1980's in SFA 2
- Began in early 1990's on Flemish Cap
- Began in late 1990's in SFA 7

Northern shrimp TAC and catches (t) for Shrimp Fishing Areas 1,2,4,5,6 & 7 (SFAs) combined.





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Management

- Managed by annual quotas established by Canada (SFA 2, 4, 5, 6), Canada-Greenland (SFA 1) or NAFO (SFA 7, Flemish Cap (effort controls))
- Canadian objectives are to
 - maintain effective conservation, while providing for orderly long-term development of the fishery
 - continue to promote, at NAFO, a management scheme for the Flemish Cap shrimp fishery which is effective at controlling fishing effort
 - continue to promote, with Greenland, a management scheme for NAFO Division 0A and Subarea 1
- Failure of some NAFO members, namely the Faroese and Estonian flagged vessels, to abide by conservation measures resulted in Canada closing its ports to these vessels in 2002

