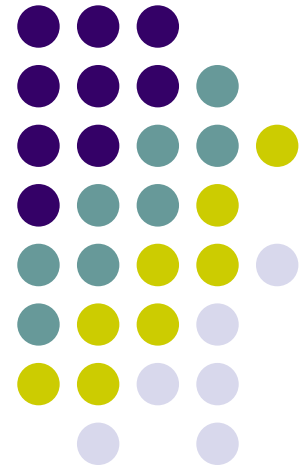


HERRING MANAGEMENT MARITIMES REGION

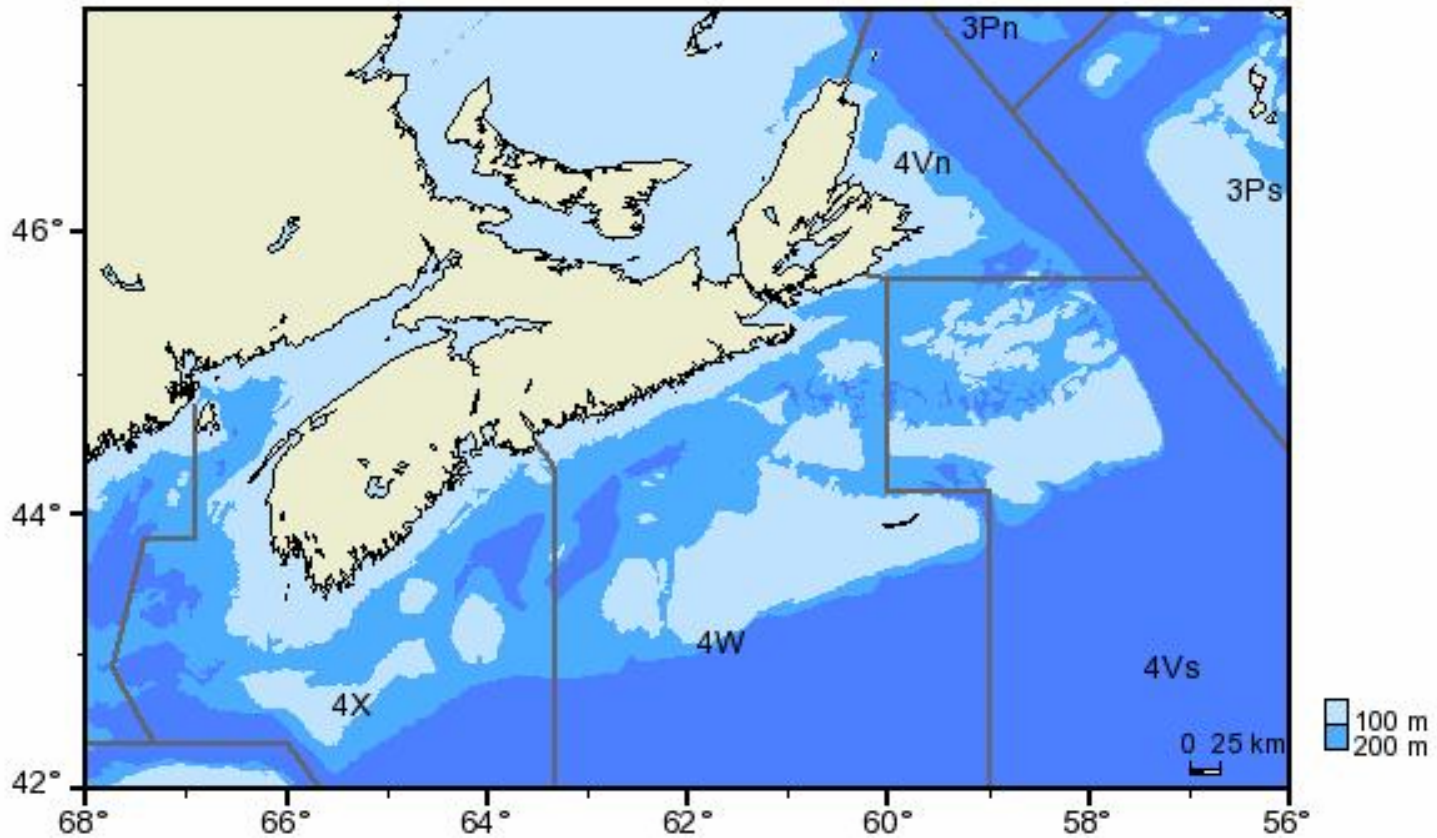
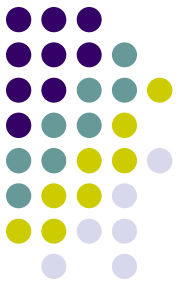
Presented to the Fisheries Resource
Conservation Council

January 16-17, 2008

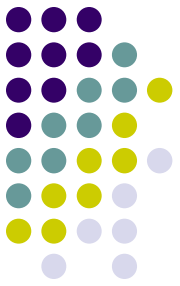
Montréal, QC



Area of Consideration

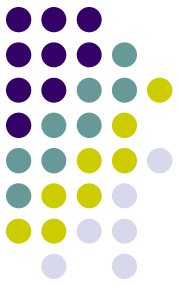


HISTORY



- Throughout the 17th and 18th century the herring fishery was largely a subsistence fishery.
- At the turn of the 19th century, weirs and gillnets in the Bay of Fundy began to supply herring for salted, pickled and smoked local and export markets.
- During the latter half of the 19th century, Bay of Fundy herring began to be used locally for bait in other developing fisheries.
- An American consortium perfected a technique for canning juvenile herring known as 'sardines'. This resulted in the first sardine cannery being established in the Passamaquoddy Bay region in southwestern New Brunswick.
- Between 1900 and 1960 annual herring catches were mostly caught by weirs and averaged 25,000t.

HISTORY (CON'T)



- During WWII the disruption of the North Sea and Baltic Sea herring fisheries created a demand for Canadian herring. Purse seiners entered the fishery but were restricted to fishing in the winter months so as not to interfere with the traditional summer weir fishery.
- In the 1960's the use of whole fish for meal and oil emerged amidst an expanding world economy and enhanced technologies for harvesting large quantities of schooling herring using purse seiners.

HISTORY (CON'T)



- At the peak of the fish meal expansion in 1968, more than 225,000t of Bay of Fundy herring was landed to meal plants in Nova Scotia and New Brunswick predominately by purse seiners.
- By 1970 the Federal government limited purse seine catches and world markets for meal declined, resulting in low incomes for the purse seine harvesters.

HISTORY (CON'T)



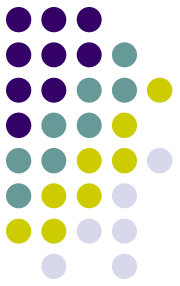
- The collapse of the world's largest herring stocks in the North Sea in the mid-1970's provided a temporary opportunity for Canadian seiners to remain viable.
- In 1976, in an effort to avoid a similar collapse, the federal government banned the use of whole herring for meal and provided financial assistance to herring seiners and herring processors to convert their plants towards food production.

HISTORY (CON'T)

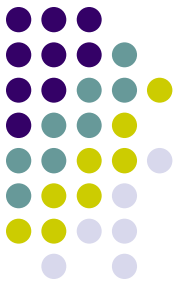


- In 1983, a 10-year fleet restructuring program for the purse seine fleet (the “10 Year Plan”) was introduced. Gulf and Scotia-Fundy fleets were separated and vessels received transferable quotas in order to encourage fleet reduction.
- In 1995 “in-season” management was introduced and the “survey, assess and then fish” protocol became an important management tool.
- Protocol still most important tool until Framework is completed.

4VWX Participants

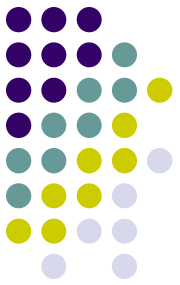


- Limited entry fishery
- 2260 licences overall
 - 266 fixed gear (247 weir and 19 trap net)
 - 1707 vessel based (40 purse seine, 1MWT, 43 drag seine and 1623 gill net)
 - 87 transport
 - 190 recreational
- 25 of these are Aboriginal licences
- 1101 bait licences



Timeframe

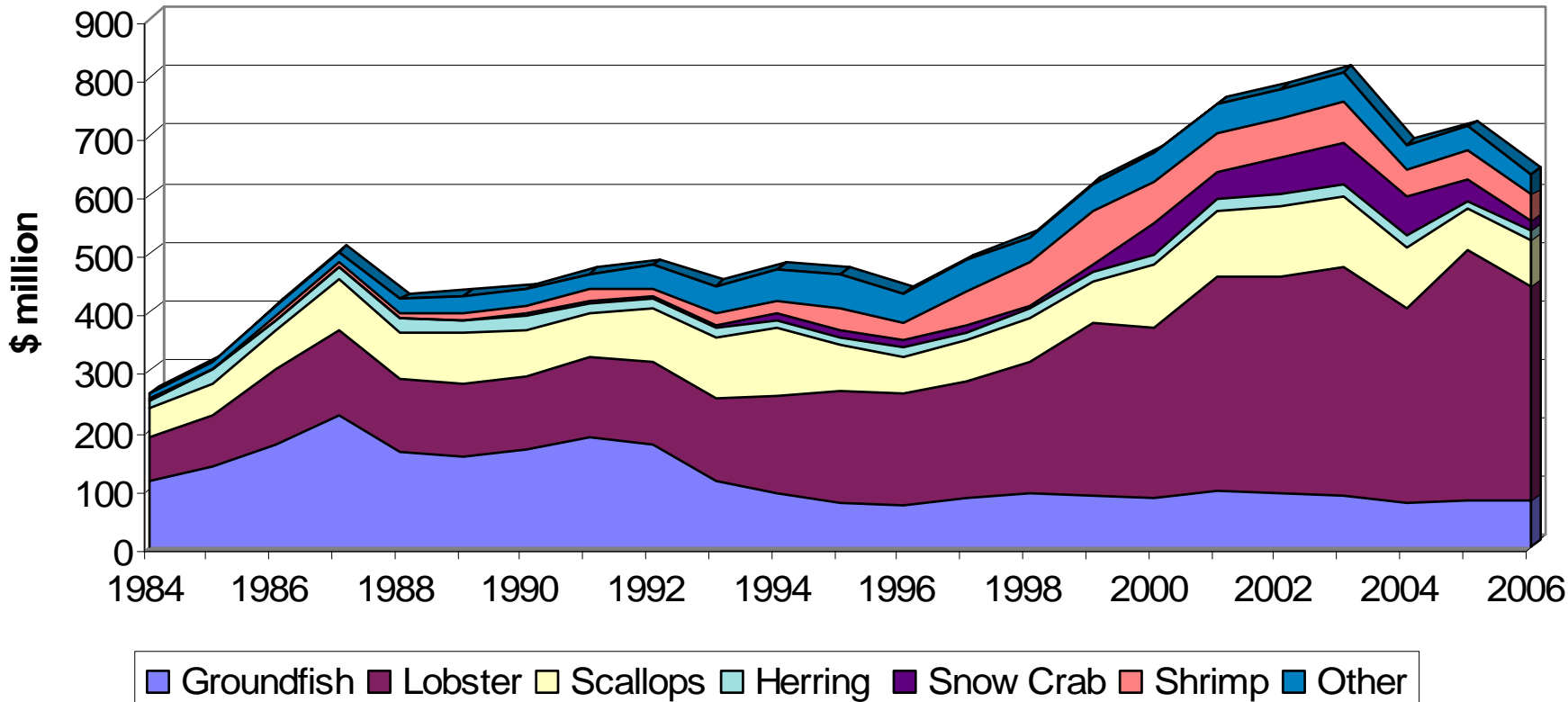
- SWNS/Bay of Fundy and N.B. Coastal season is October 15 – October 14 of following year. The majority of catches occur from June – October.
- 4VWX Coastal and Outer Scotian Shelf Banks season is Jan 1 – December 31st.
- 4VWX coastal fishery occurs primarily in fall and winter.
- Outer Banks occurs primarily in summer.



Markets

- Herring products are exported to over 40 countries around the world. Japan, Germany and the US purchase over 80% of the total.
 - Germany – frozen fillets
 - US – smoked, salted and canned herring and sardines
 - Japan – herring roe but this market has decreased dramatically over last 10 years due to availability of cheaper Russian roe and the fact that the younger Japanese population do not consume herring roe as their elders traditionally did.
- Sardines have a substantial market in other countries as well as in Canada.

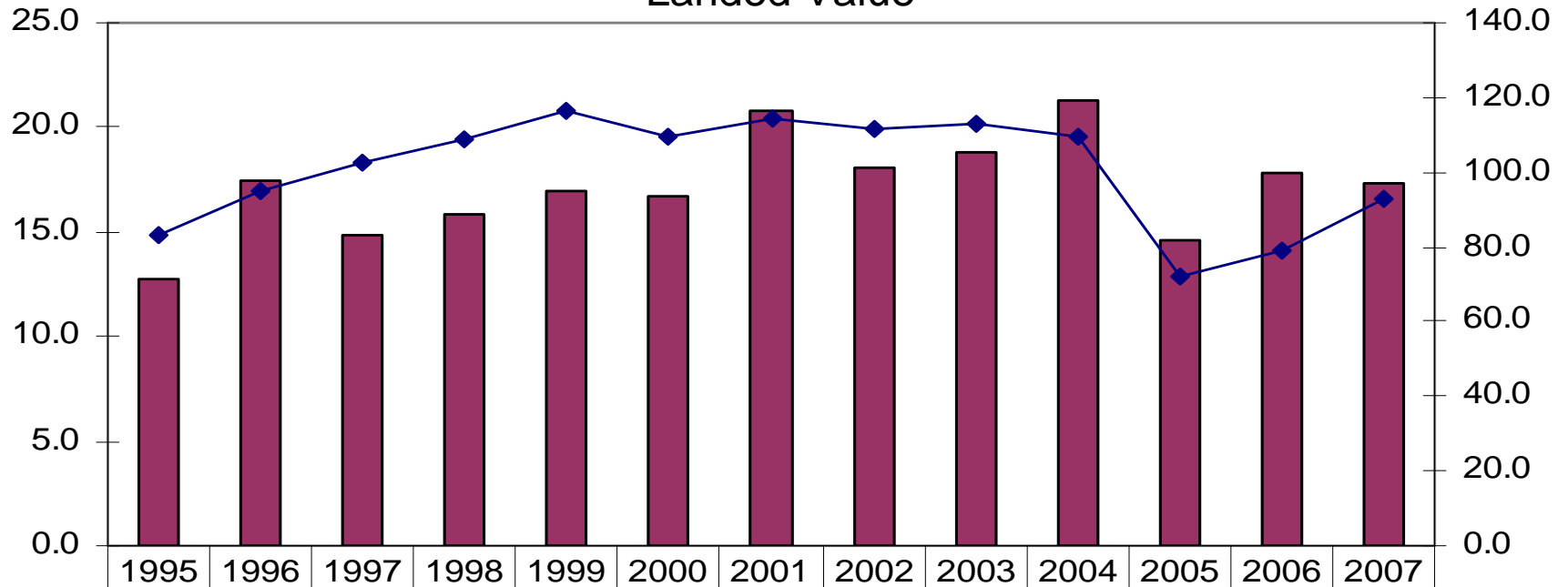
Commercial Landed Values by Major Species Maritimes Region (1984-2006)





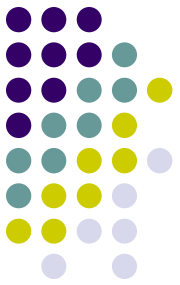


Herring, Maritimes Region (1995-2007)

Landed Value



 \$ million	12.8	17.4	14.9	15.9	16.9	16.7	20.8	18.0	18.9	21.3	14.6	17.8	17.3
 ('000) mt	83.0	95.2	102.7	108.6	116.1	109.4	114.5	111.4	112.7	109.4	71.8	79.2	92.7



4VWX Management

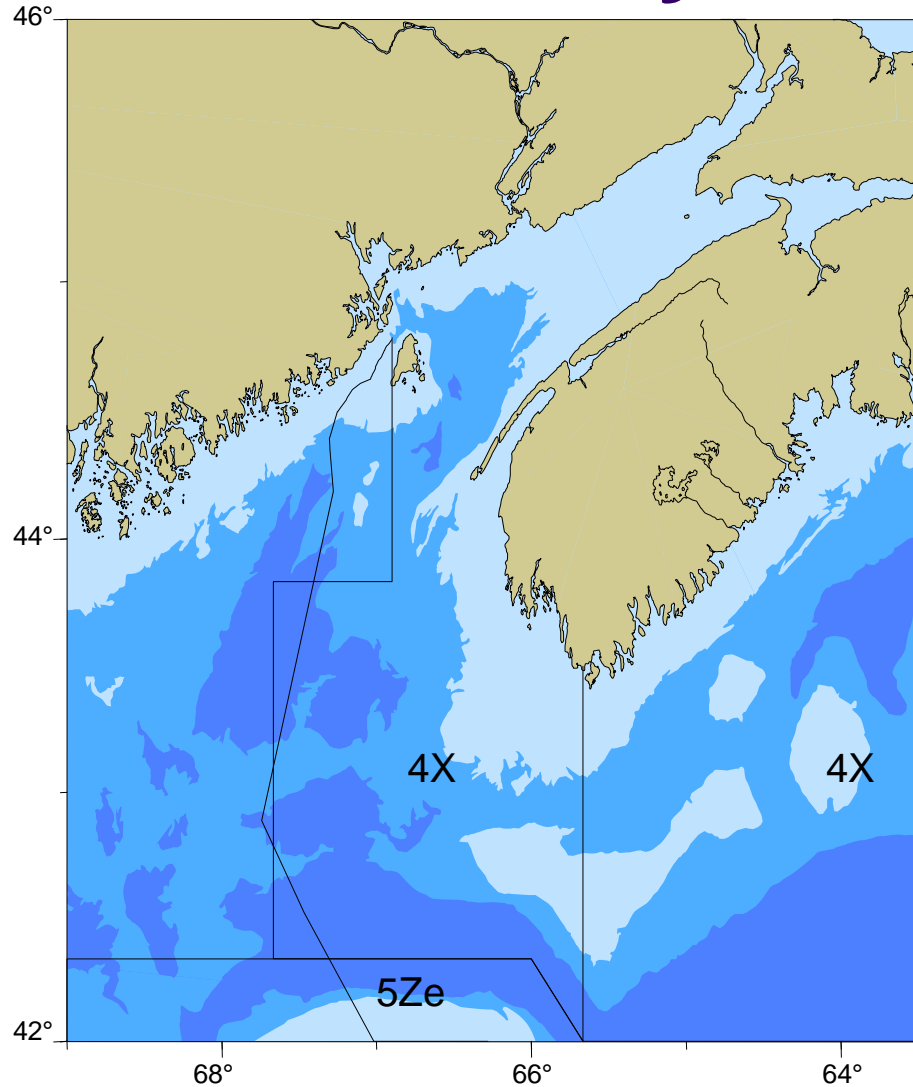
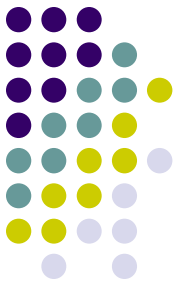
<u>Conservation Objectives</u>	<u>Strategies</u>	<u>Management Measures</u>
Maintain productivity of the population by managing exploitation and preventing growth overfishing	Keep exploitation rates at moderate levels	<ul style="list-style-type: none"> - Control fishing mortality (F) through annual TACs - Control fishing mortality at or below F0.1
	Maintain biomass of each spawning component above a minimum threshold	<ul style="list-style-type: none"> - Implement survey, assess and then fish protocol - Control fishing mortality at or below F0.1
	Maintain a broad age composition for each spawning component	<ul style="list-style-type: none"> - Ensure ongoing sampling protocol - Implement appropriate mesh sizes for fixed gear
Maintain population diversity	Maintain spawning component by <ul style="list-style-type: none"> - Having a long spawning period for each spawning component - Maintaining spatial and temporal diversity 	<ul style="list-style-type: none"> - Define spawning areas - Limit the fishing during the spawning season in spawning areas (e.g. Trinity Ledge, Scots Bay, etc.) using the survey, assess, then fish protocol

Control and Monitoring

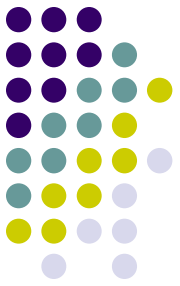


- Detailed **logbook** records of catch and fishing activity required for herring fishers operating vessels
- Mobile gear licence holders are required to carry an **at-sea observer** intermittently throughout the fishery at the request of the Department.
 - Georges Bank has 100% at-sea observer coverage
- Commercial herring landings are subject to a **dockside monitoring** program.
 - 100% for purse seine fishery
 - 100% for gill net fishery during roe season

SW Nova Scotia/Bay of Fundy

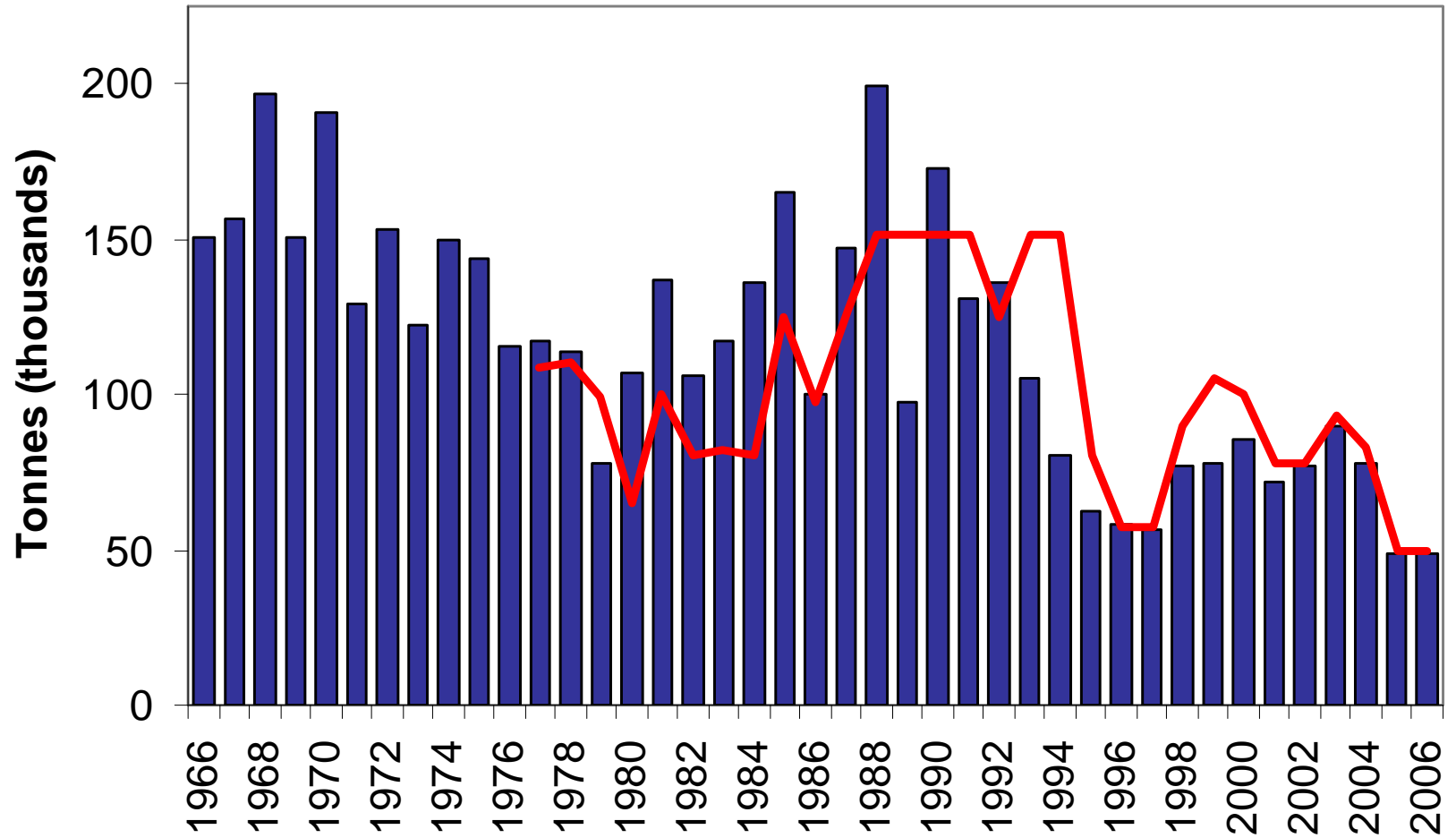


SW Nova Scotia/Bay of Fundy

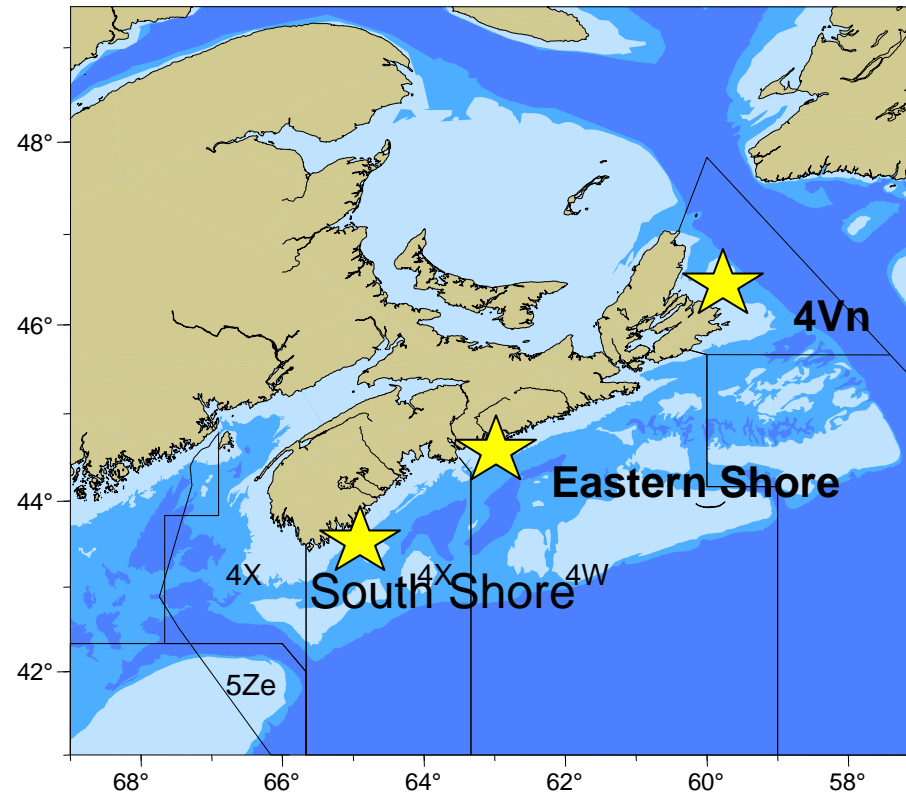
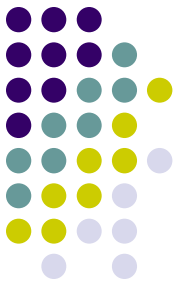


- Purse seiners - 80% of the TAC.
 - Managed by ITQs
 - 40 licences of which 17-19 are presently active
 - All but 2 vessels are >65'
 - Exempted from fleet separation policy
 - Large degree of vertical integration between harvesters and processors
- Fixed gear – 20% of TAC
 - Primarily gill net with 28 weir & 9 trap net licences
 - 1300 gill net licences of which 42 were active.
 - Fished competitively but quota is rarely caught
 - IFMP has transfer protocol to mobile sector for uncaught quota

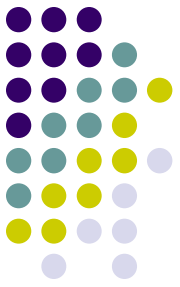
SW Nova/BOF Landings and TAC (quota)



Nova Scotia Coastal Herring

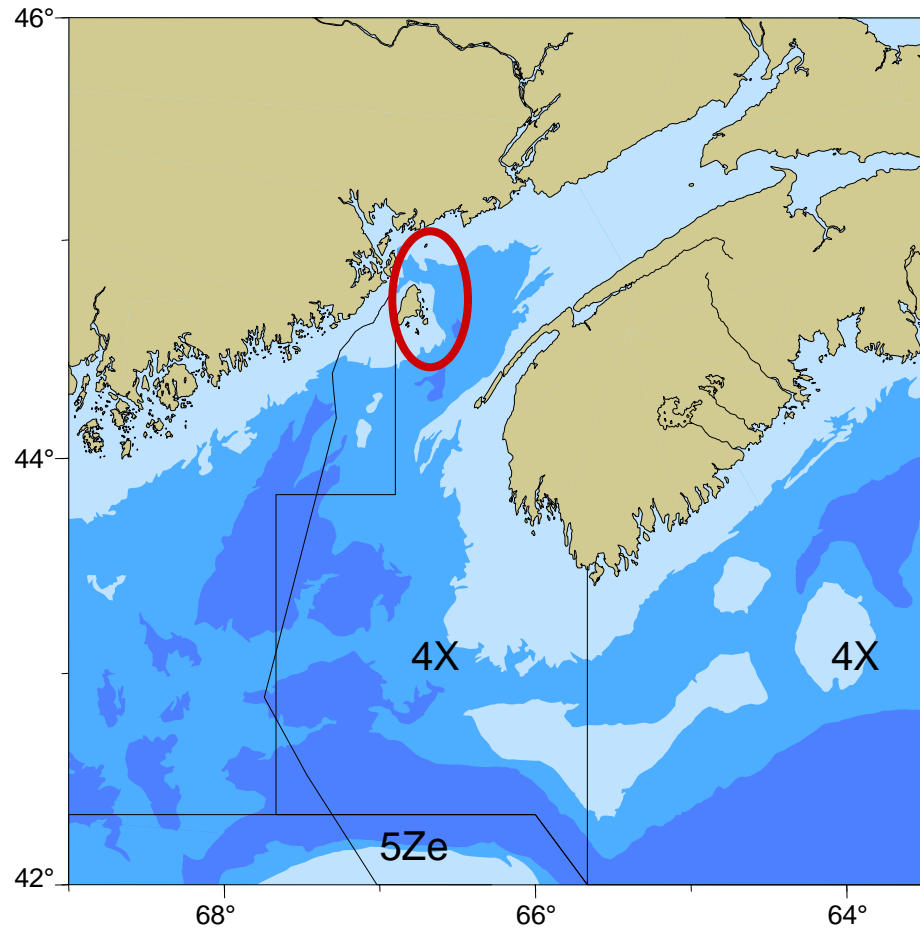
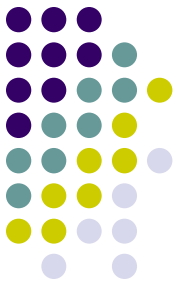


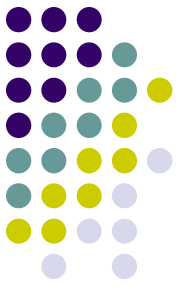
NS Coastal Herring Gill Net



- Managed by allocation (average of previous 5 years acoustic surveys) and community imposed trip limits.
- South Shore (3000t in 2007)
 - 485 licences with 58 active in 2007
- Eastern Shore (4600t in 2007)
 - 239 licence with 40 active in 2007
- 4VN (1000t in 2007)
 - 246 licence with 10 active in 2007
- Bras d'Or Lakes
 - Closed since 1997

N.B. Coastal

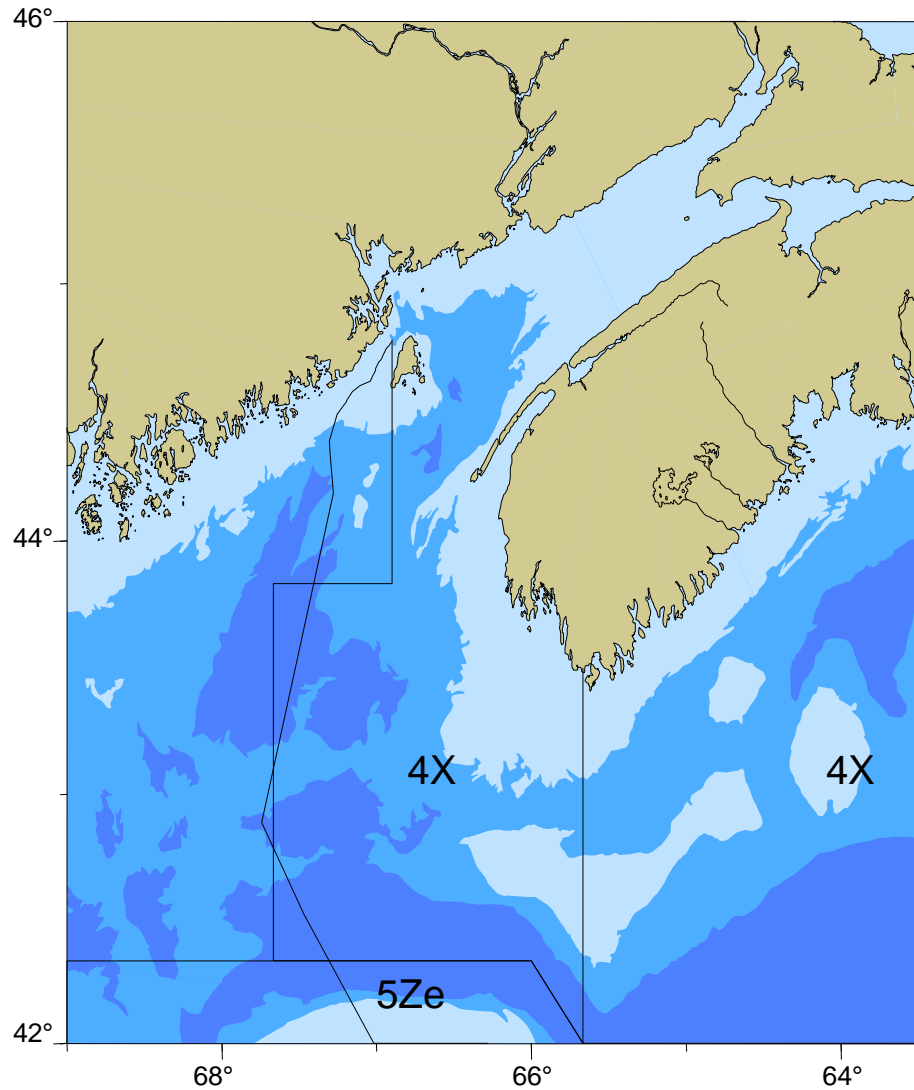




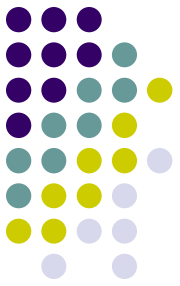
N.B. Coastal

- Since juvenile herring caught in weirs along the NB coast are understood to originate in 5Y or 5Z they are not subject to quota controls.
- 215 licences with 89 active in 2007.

Georges Bank

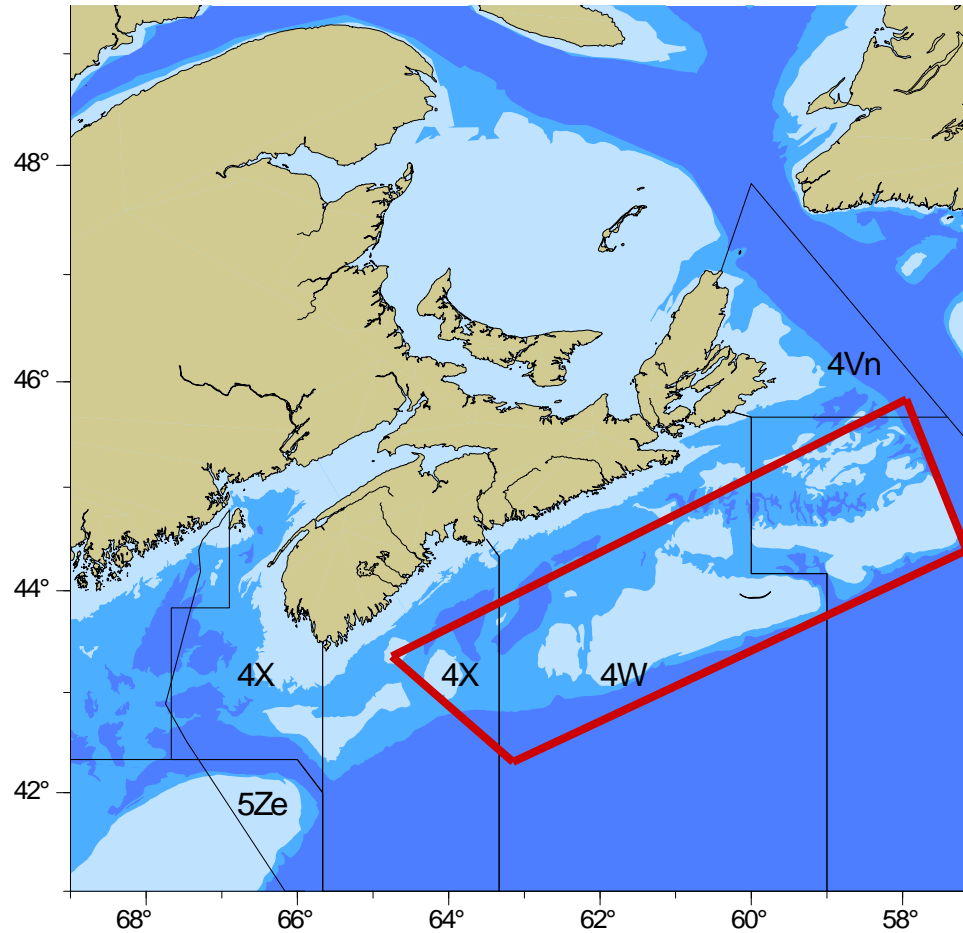


Georges Bank

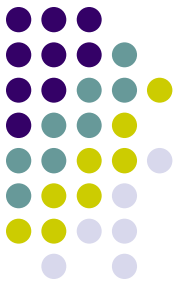


- Season is from January 1- December 31 with fishery occurring in summer months.
- 5Z allocation (20,000t.) is fished competitively.
- Canada/US Transboundary Resource Assessment Committee provides advice to the joint Industry/DFO Gulf of Maine Advisory Committee (GOMAC) which advises the Minister on Canadian quotas and other management measures.

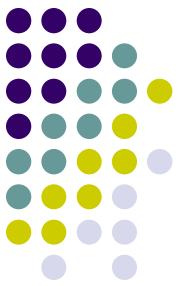
Outer Scotian Shelf Banks



Outer Scotian Shelf Banks



- Managed by allocation (12,000t since 1996).
- Fished competitively by purse seine fleet outside 25 miles and midwater trawl (4 exploratory licences) outside 50 miles.



Management Challenges & Issues

- Framework vs. FRCC
- Lack of resources for scientific research priorities.
- Excess licence capacity relative to TAC and other allocations.
- Reporting needs improvement for fixed gear & bait fishery.