

Southern Gulf of St. Lawrence Groundfish Fishery

Presentation to FRCC panel

February 17, 2010

Montréal, QC

Historical Overview

- Historically, groundfish fishery dominated by Cod, Redfish and, to a lesser extent, American Plaice. Fisheries now either under moratoria or facing important declines in biomass.
- Traditional secondary fisheries now more important.
- Some smaller fisheries also under moratoria.

Fishery Structure

- ❑ Commercial fisheries undertaken either by fixed gear or mobile gear.
- ❑ Mobile gear use for groundfish prohibited in northern Gulf.
- ❑ Use of mobile gear in southern Gulf on the decline.
- ❑ Recreational groundfish fishery also an important segment.
- ❑ Charter boat industry established in the Gulf, especially in P.E.I.

Fleet Sectors

- ❑ The majority of fixed gear fleet <45'. Most fishers are involved in other fisheries, groundfish is secondary.
- ❑ The mobile gear fleet has several vessel categories: < 45', 45-65', 65-100' and >100'.
- ❑ Number of active participants has decreased significantly.

Management Regime

- ❑ All groundfish fisheries quota-based; managed through output controls.
- ❑ Input controls used to manage bycatch and size of directed species.
- ❑ Both individual and competitive quota are used, depending on fishery.
- ❑ Management cycle runs from May 15th to May 14th the following year.

Governance Structure

- ❑ The Gulf Groundfish Advisory Committee (GGAC) is the main consultative process for majority of Gulf of St. Lawrence groundfish fisheries.
- ❑ GGAC membership comprised of commercial fisher associations, aboriginal groups, processing sector, five provincial representatives.
- ❑ Smaller working groups have been created to address specific issues.

Licences

Gear Type	Gulf	Québec	Western Newfoundland
Fixed	1871	852	906
Mobile	534	101	72
Total	2405	953	978

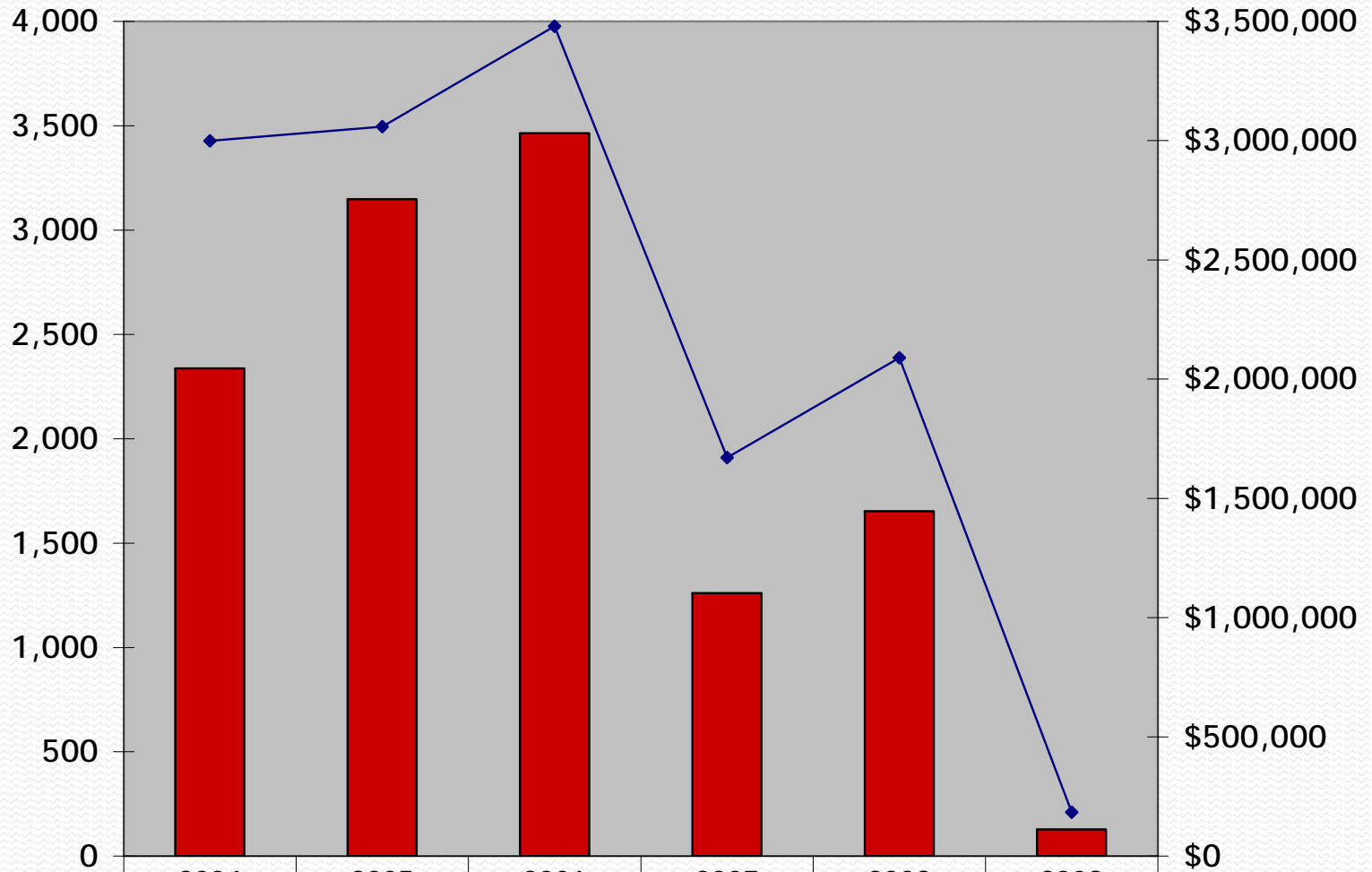
Southern Gulf Cod - Overview



- ❑ Fished commercially since 16th century.
- ❑ High landings in early 20th century, reaching a peak of 100,000t in 1958, then levelling off at end of century.
- ❑ First moratorium from 1993 to 1998, followed by further moratoria in 2003 and 2009.
- ❑ Both competitive and ITQ regimes.
- ❑ Both fixed and mobile gear.
- ❑ Small recreational and charter boat component.
- ❑ Rebuilding efforts have had little success to date.
- ❑ TAC Decision Rules compliant with the PA were developed, but never implemented.

Southern Gulf Cod - Recovery Efforts

- Efforts to rebuild Cod stocks have had only limited success. Biomass continues to decline even with minimal fishing effort.
- Long-term recovery vision published in 2005. Three main areas of action identified:
 - TAC Decision Rules
 - Predation Control
 - Maintain and Improve Research Capacity

Southern Gulf Cod - Landings & Value

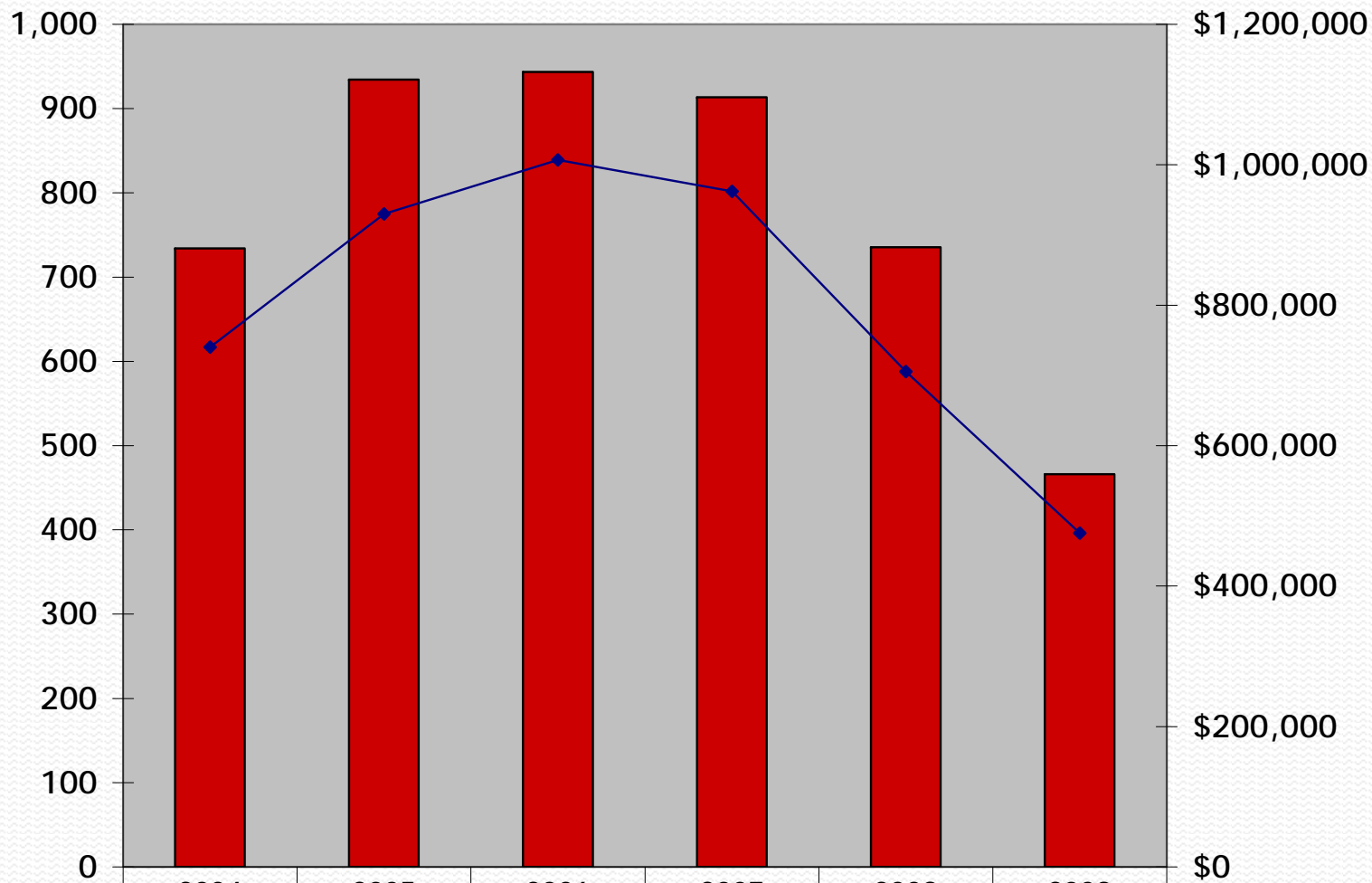




 Landings (MT)	2,337	3,149	3,464	1,261	1,652	127
 Landed Value	\$2,998,881	\$3,058,264	\$3,479,541	\$1,671,371	\$2,089,082	\$183,560

Witch Flounder - Overview

- ❑ Gulf of St. Lawrence commercial fishery began in the 1950s.
- ❑ Quota management started in 1977 for northern Gulf (4RS).
- ❑ During the 1980s, 4T landings increasingly dominated Gulf witch landings; however, the management unit remained as 4RS.
- ❑ Following FRCC recommendation in 1994, the management unit was extended to 4RST in 1995.
- ❑ Effort and landings have decreased considerably over past decade.
- ❑ All directed effort with mobile gear.

Witch Flounder - Landings & Value

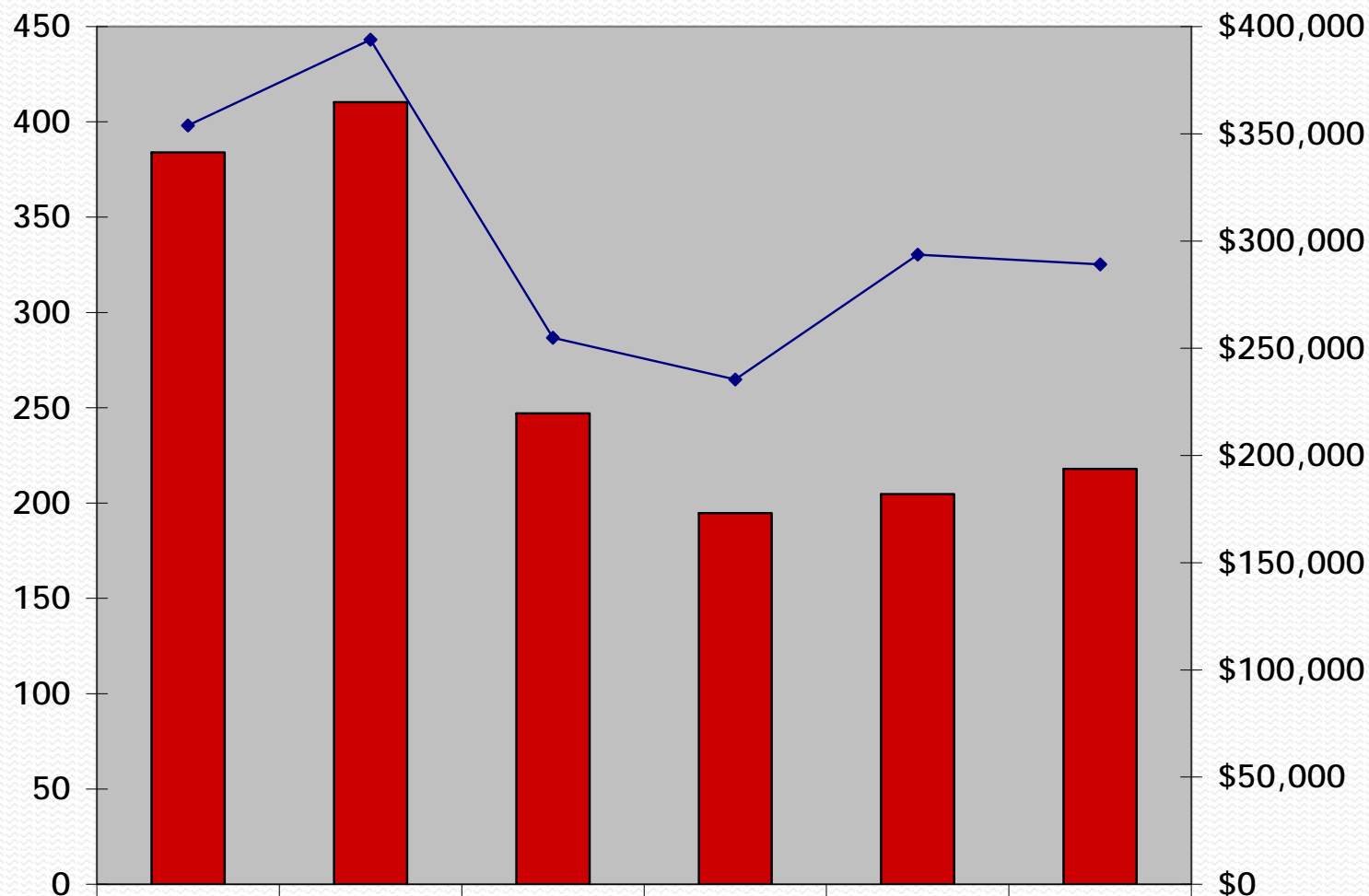


 Landings (MT)	734	934	944	914	735	466
 Landed Value	\$740,148	\$930,159	\$1,006,745	\$962,138	\$705,310	\$475,409

Winter Flounder - Overview

- ❑ Historically a bycatch of staple groundfish fisheries, now most landings are from directed fishery.
- ❑ Localized fisheries for Lobster bait and limited food markets prosecuted mainly by mobile gear operated from vessels < 45'.
- ❑ First assessment of the stock status in 1994.
- ❑ Came under quota management in 1996 with a TAC of 1,000 t.
- ❑ Landings have gone down considerably over the past decade.

Winter Flounder - Landings & Value

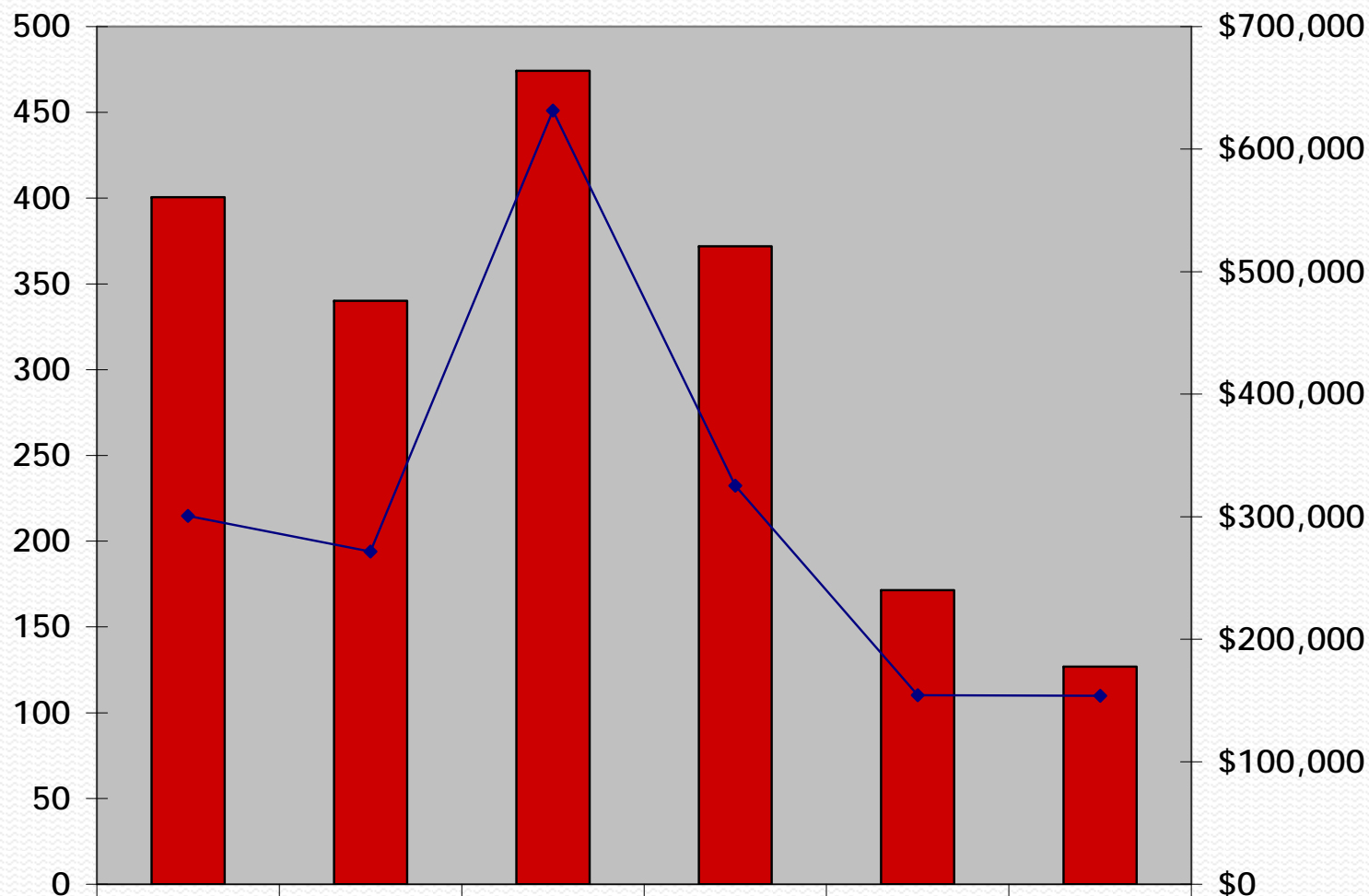


■ Landings (MT)	384	410	247	195	205	218
◆ Landed Value	\$353,823	\$393,875	\$254,808	\$235,406	\$293,607	\$289,112

American Plaice - Overview

- ❑ Was mainly a longline fishery in the early 1900's, but by 1960 most landings were by mobile gear.
- ❑ Now mostly a mobile fishery.
- ❑ Under quota management since 1977.
- ❑ Landings averaged 9,000 t in 60's & 70's, reaching a peak of over 11,000 t in 1976, after which a sharp decline was noted.
- ❑ In 2009, landings were 127 t.

American Plaice - Landings & Value

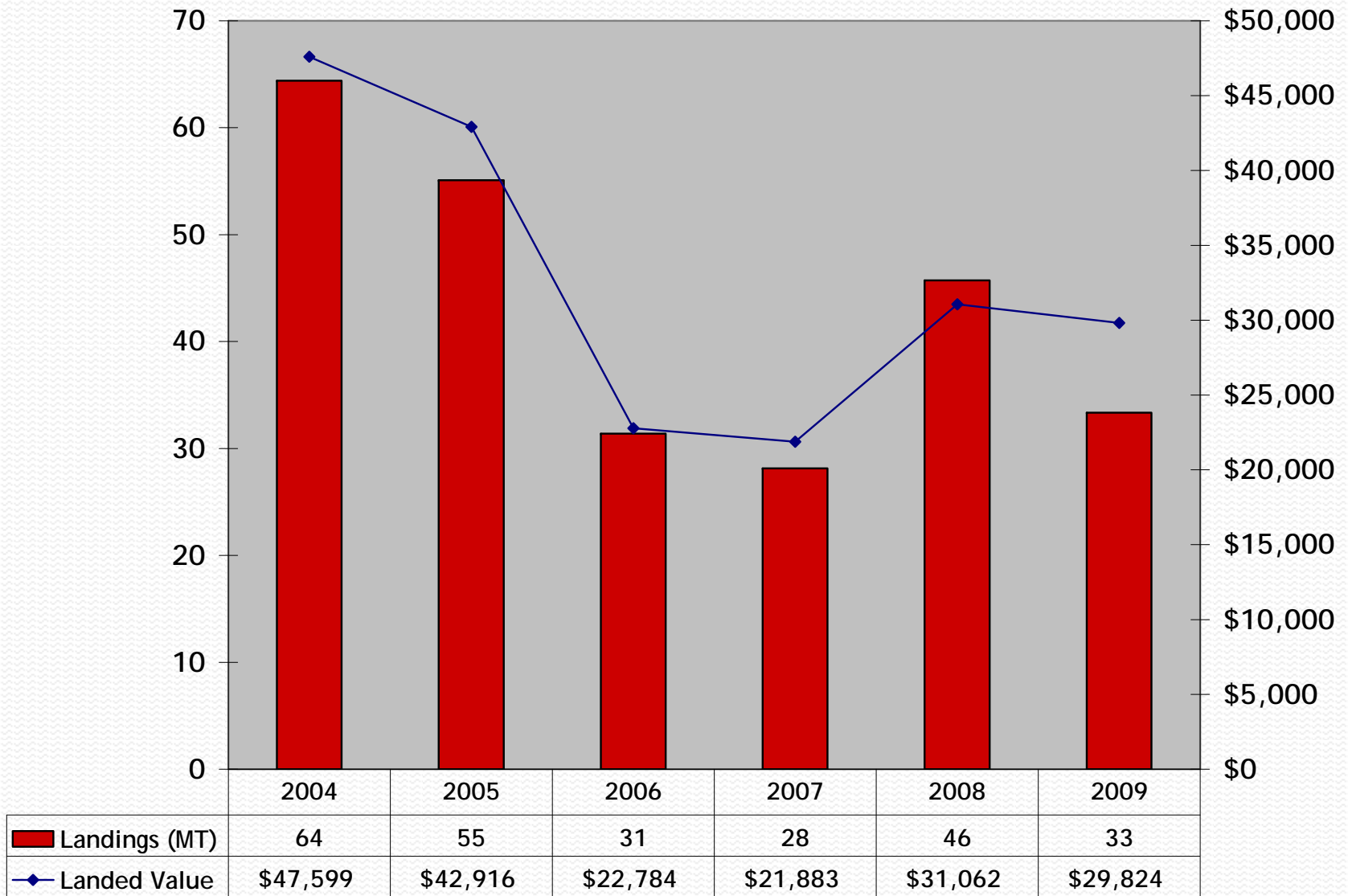


Landings (MT)	400	340	474	372	171	127
Landed Value	\$300,701	\$271,661	\$631,315	\$325,397	\$154,419	\$153,782

White Hake - Overview

- ❑ Historically amongst most important groundfish fisheries in Southern Gulf.
- ❑ Average landings over 5,600 t from 1960-1994.
- ❑ Was principally a localized fishery in the Northumberland Strait.
- ❑ TAC first applied in 1982 at 12,000 t; reduced to 2,000 t by 1994.
- ❑ Under moratorium since 1995.

White Hake - Landings & Values

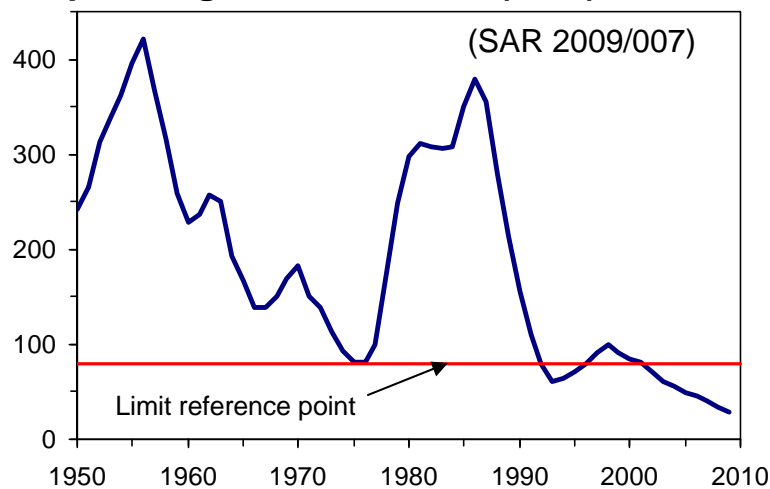


Management Challenges & Issues

- ❑ Grey Seal predation on Cod and other Groundfish stocks in the Southern Gulf.
- ❑ Low TACs and Quotas have lead to micromanagement of fisheries, greater risk of quota overruns.
- ❑ Closure of staple fisheries has lead to redirection of on other stocks.
- ❑ Still some unknown bycatches in non-DMP fisheries.
- ❑ Increased interest in traditional bycatch quotas.

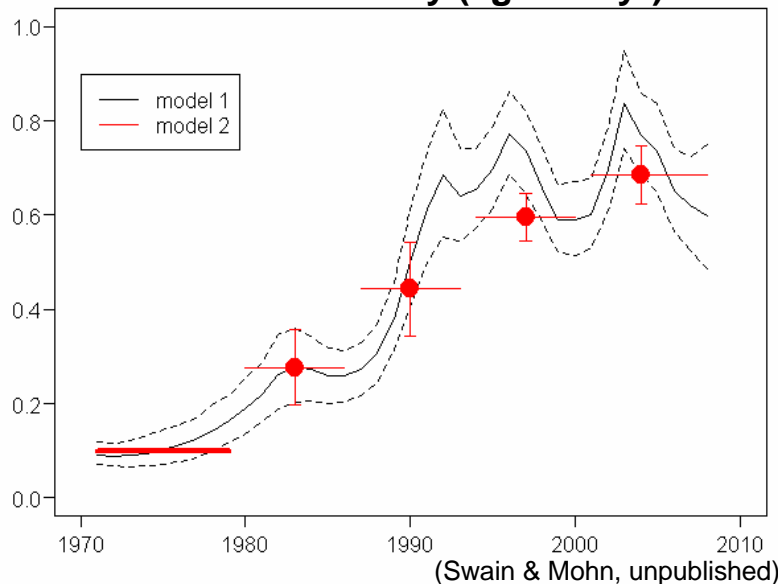
Science Overview - Atlantic Cod 4TVn

Spawning stock biomass (SSB) – '000t

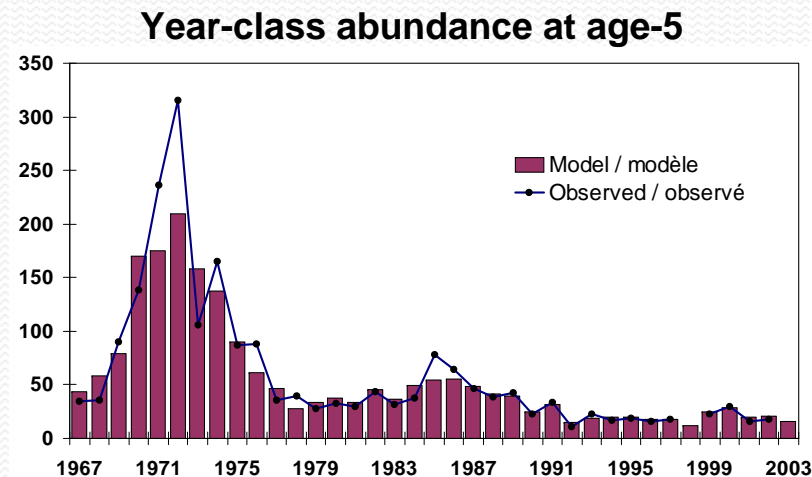
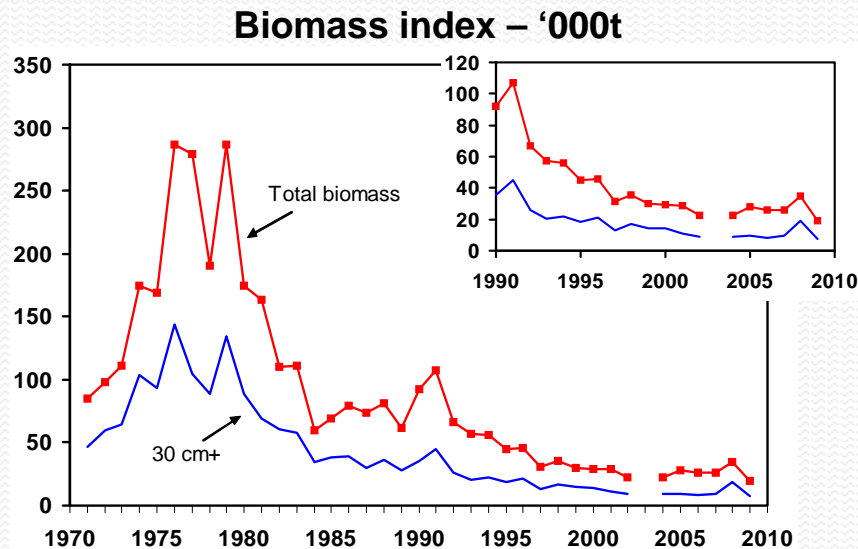


- SSB is at the lowest level in the 60-yr record and is declining
- SSB at the start of 2009 was estimated to be 28,000 t, well below the limit reference point of 80,000 t
- Productivity of the stock has been unusually low in the 1990s and 2000s
- Unusually high natural mortality of adult cod is the most important factor in this low productivity
- At its current productivity, the stock is expected to continue to decline even with no fishing

Natural mortality (ages 5+ yr)



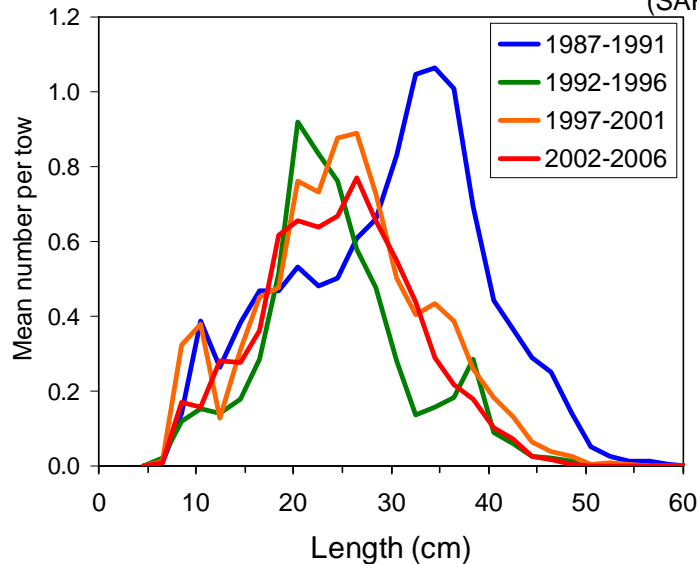
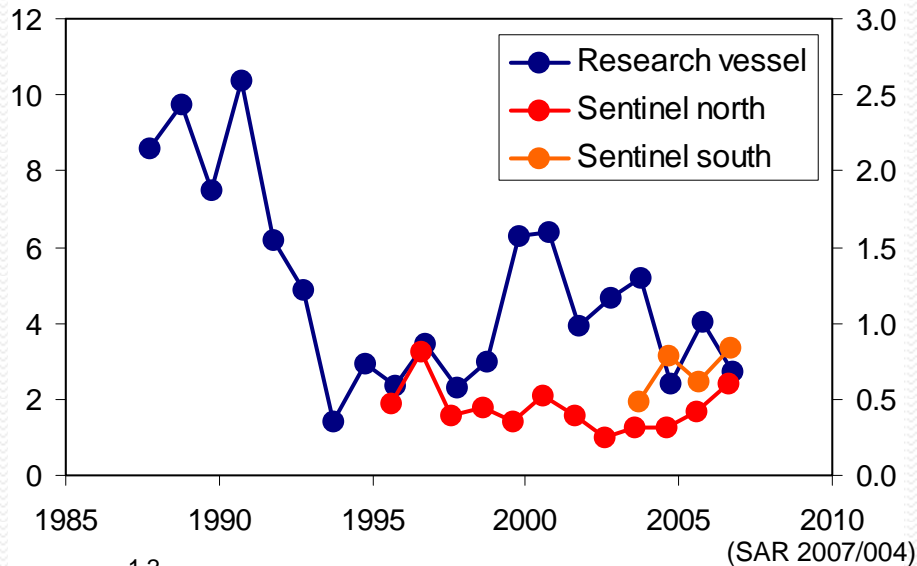
Science Overview - American Plaice 4T



- Stock biomass reached its lowest level in 2009 (survey index since 1971)
- Recruitment is poor
- Total mortality remains high (>0.5) despite recent declines in fishing effort (<200 tonnes in 2008 & 2009)
- Natural mortality is high and accounts for almost all of the total mortality (2008 assessment)
- The most recent assessment predicted a decline even without fishing
- April 2009: COSEWIC assessed Maritime population of plaice as “threatened”

Science Overview - Witch Flounder 4RST

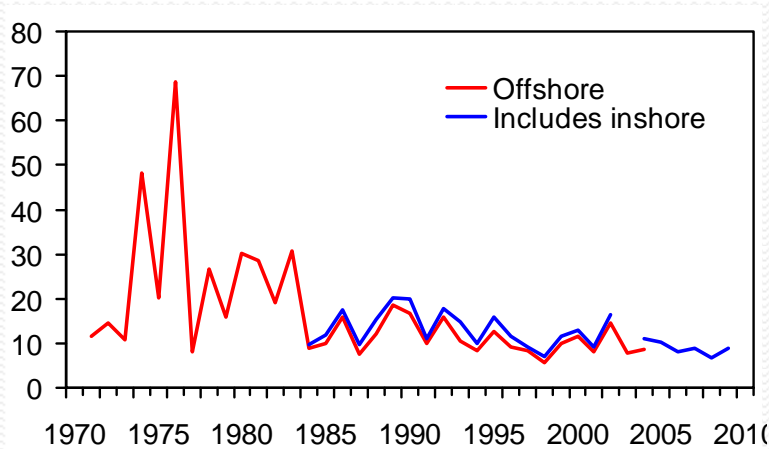
Biomass indices



- Biomass declined sharply in the early 1990s and currently appears to be low compared to the late 1980s
- Recent biomass trends are uncertain
- The abundance of large fish declined sharply in the early 1990s and has not recovered despite relatively high abundances of small fish. This suggests that mortality is high.
- It is unclear whether landings at the current level are sustainable given the stock's current productivity.

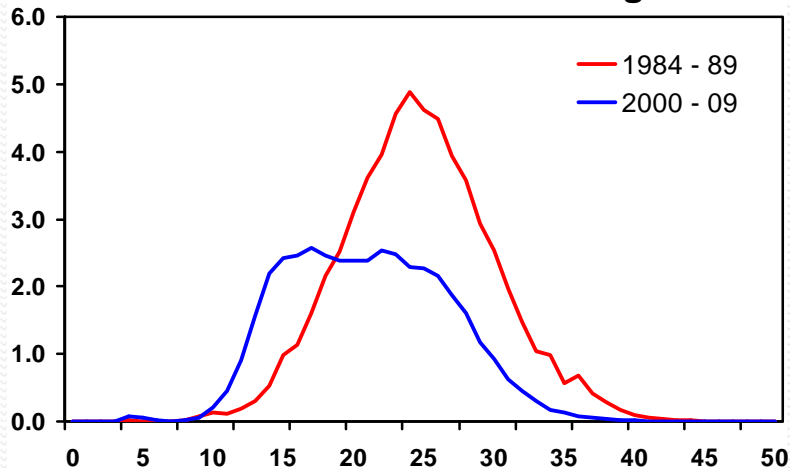
Science Overview - Winter Flounder 4RST

Biomass index – '000t

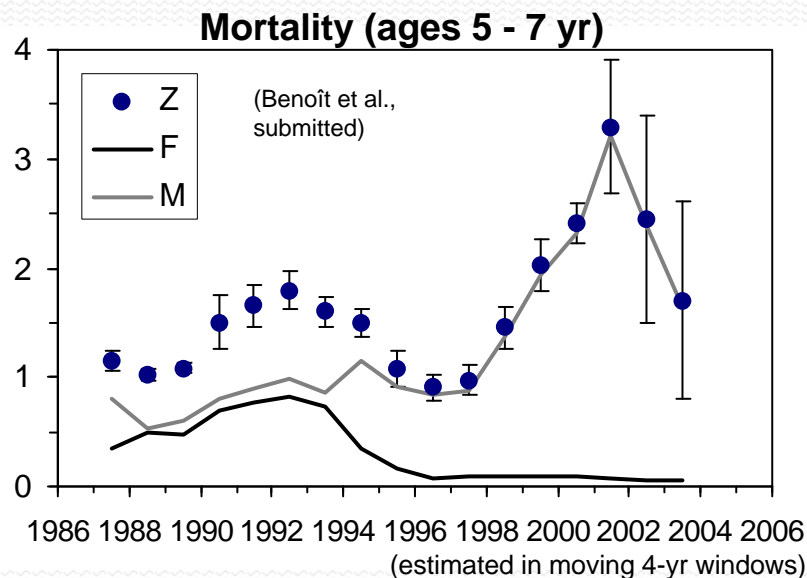
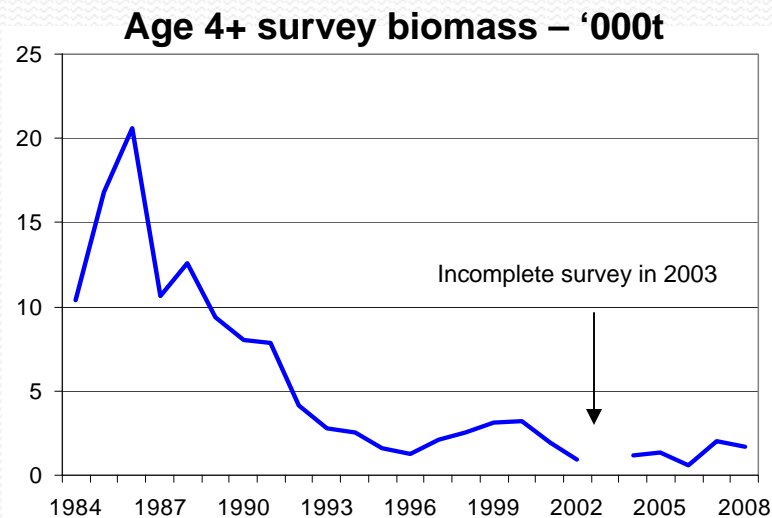


- Stock biomass stable and fluctuating at a low level relative to the 1970s & 1980s
- Inshore species with localized movements – may compose several local populations in the sGSL
- Groundfish survey provides main indicator of stock change; however, inshore survey coverage is limited to approx. 20 m depth
- Fishing effort declining but no evident recovery
- Changing population structure – abundance of large fish in decline; more small fish

Mean annual numbers at length



Science Overview - White Hake



- Moratorium on directed fishing has been in place since 1995, with only small incidental fishery catches since then
- Survey biomass of mature portion of the population (ages 4+) remains near the lowest level in time series (1984 - Present)
- Total mortality (Z) of adult white hake (ages 5-7) increased steadily since the mid-1990s
- High natural mortality (M) of adult white hake appears to be the likely cause of the high total mortality since the mid-1990s
- No improvement in short-term is anticipated