

*Science, Service, Stewardship*



# Georges Bank Yellowtail Flounder Science Presentation

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Georges Bank Yellowtail Flounder Stakeholder Meeting

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**NOAA  
FISHERIES  
SERVICE**



## Why are 2012 GB YT ACE so low?

	<b>2011</b>			<b>2012</b>		
Pie is smaller	2,650	mt		1,150	mt	
US portion of pie is smaller	1,458	mt	55%	564	mt	49%
Groundfish slice of US portion is smaller	1,122	mt	77%	216	mt	38%

GB = Georges Bank

YT = Yellowtail flounder

ACE = Annual Catch Entitlements (sector quotas)



## Process

<http://www2.mar.dfo-mpo.gc.ca/science/TRAC/trac.html>

<http://www2.mar.dfo-mpo.gc.ca/science/tmgc/TMGC-e.html>

Annual assessments conducted by **TRAC**

**T**ransboundary **R**esources **A**ssessment **C**ommittee

Integrated peer review by US and Canadian scientists

Total quota set by **TMGC**

**T**ransboundary **M**anagement **G**uidance **C**ommittee

Management body with US and Canadian members

US-Canada quota split based on sharing agreement

US portion split between groundfish and scallop  
fisheries by Council



## Why is the pie smaller?

Stock size not as large

Low recent recruitment

Retrospective adjustment

Rebuilding no longer an issue

International Fisheries Clarification Act

Extended rebuilding time for GB YT

Allows US to base quotas on  $F_{ref}$  instead of  $F_{rebuild}$



## Low recent recruitment

1973-2010 average = 20.3 million

Age in 2012

2010 (lowest) = 0.9 million

3

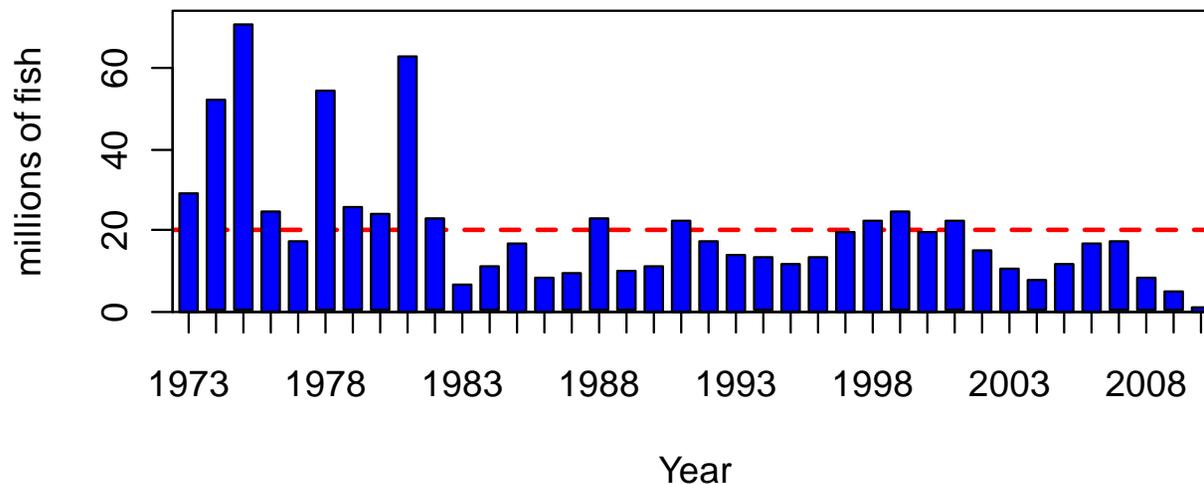
2009 (2<sup>nd</sup> lowest) = 4.7 million

4

2008 (4<sup>th</sup> lowest) = 8.0 million

5

Recruitment (age 1)





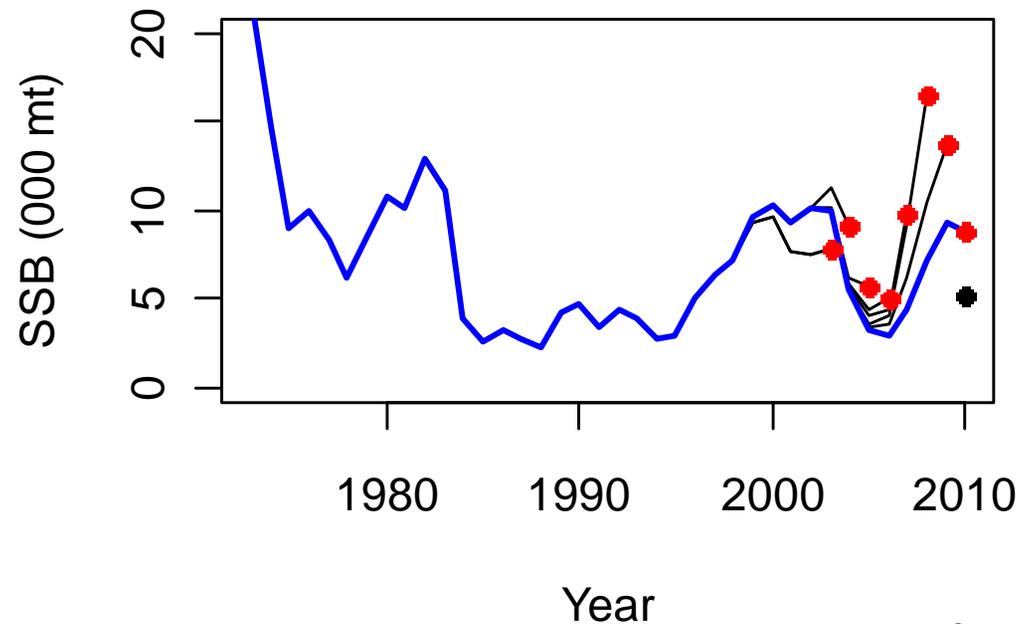
## Retrospective adjustment

Pattern of overestimating SSB in last year

Red dots compared to blue line

If pattern continues then final red dot likely to be near  
black dot instead

$SSB_{2010}$  8,800 mt  $\rightarrow$  5,170





## TRAC Projections

900 – 1,400 total quota implications:

Projection	P(F)	d(B)
Split series	<25%	12-18% increase
Split series with retrospective adjustment	>75%	1-16% increase
Single series with retrospective adjustment	<25%	3-9% decrease

P(F) = probability  $F_{2012} > F_{ref}$  (0.25)

d(B) = relative change in median biomass 2012 to 2013



## 2012 Total (US+Canada) Quota

TRAC recommended 900-1,400 mt	(June 2011)
TMGC negotiated 900 mt	(September)
SSC set ABC 1,150 mt	(September)
Council rejected 900 mt quota and replaced it with 1,150 mt quota	(September)
TMGC re-negotiated 1,150 mt	(October)
Council based decisions on 1,150 mt quota	(November)



## Why is US portion of pie smaller?

### US/Canada sharing agreement

Formulaic calculation – not negotiated

Historical catch (10%) Resource distribution (90%)

40:60 in 2003, 10:90 from 2008 onwards

### Historical catch

98% US, 2% Canada

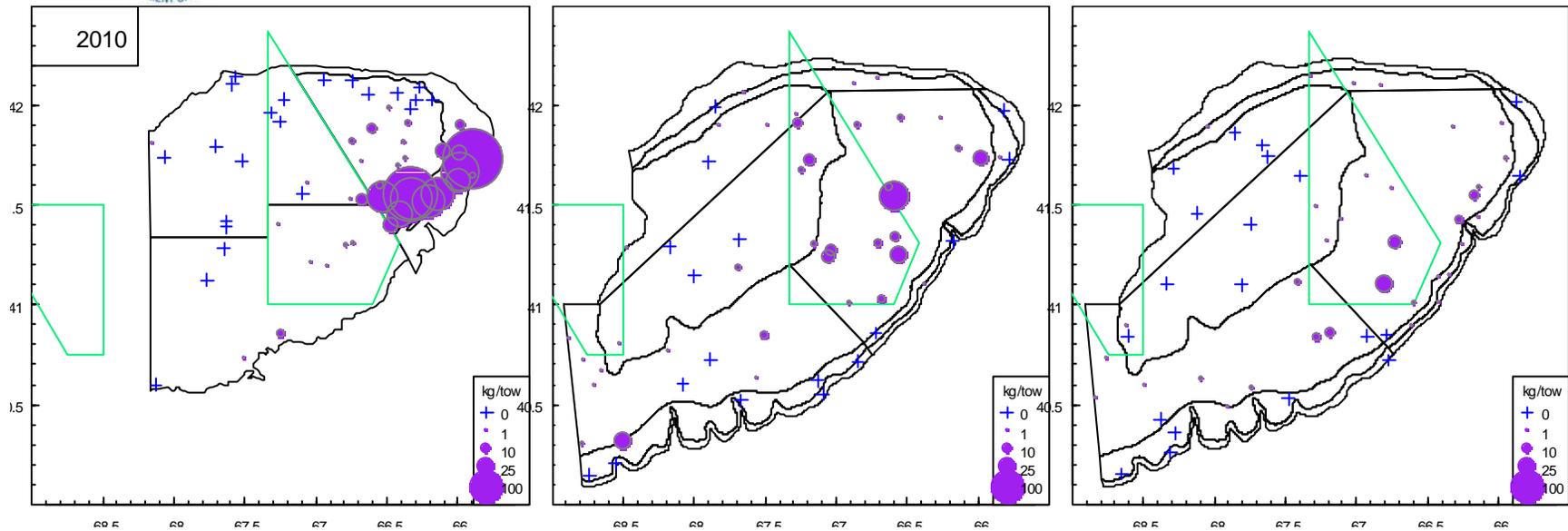
### Resource distribution

Compute annual proportion of yellowtail in US waters from  
3 surveys (DFO, US spring & fall), then average

Apply smoother through recent 33 years of averages



## Resource Distribution 2010



DFO  
6% US

NMFS Spring  
55% US

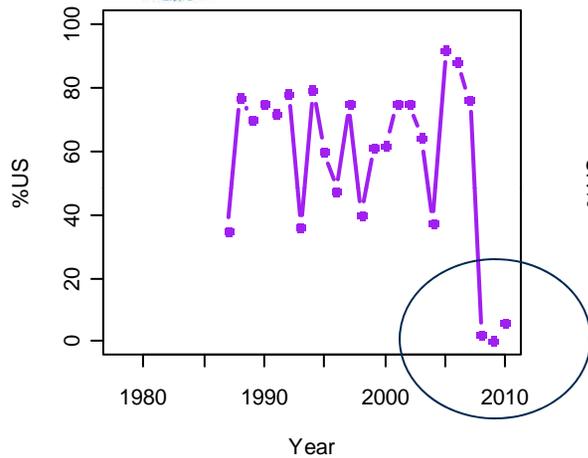
NMFS Fall  
72% US

Overall Average = 45% US

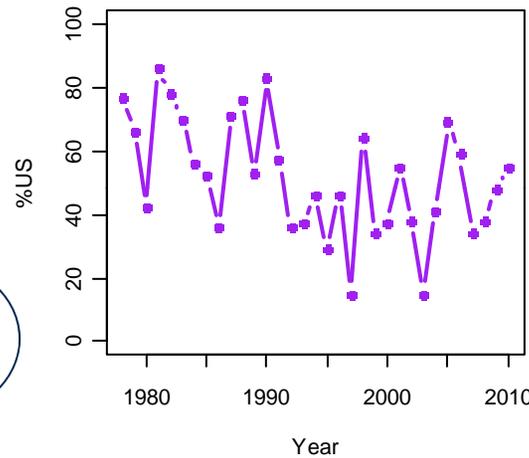


# Resource Distribution over Time

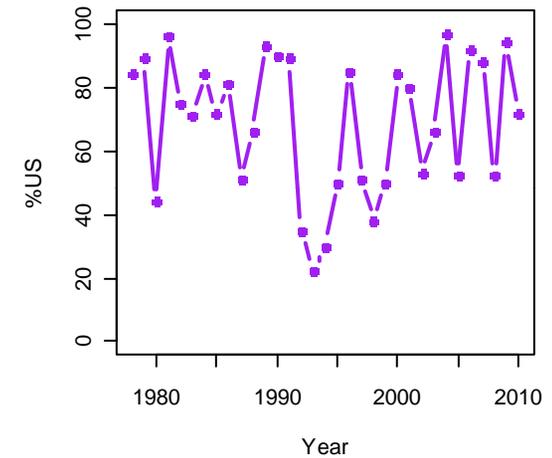
DFO



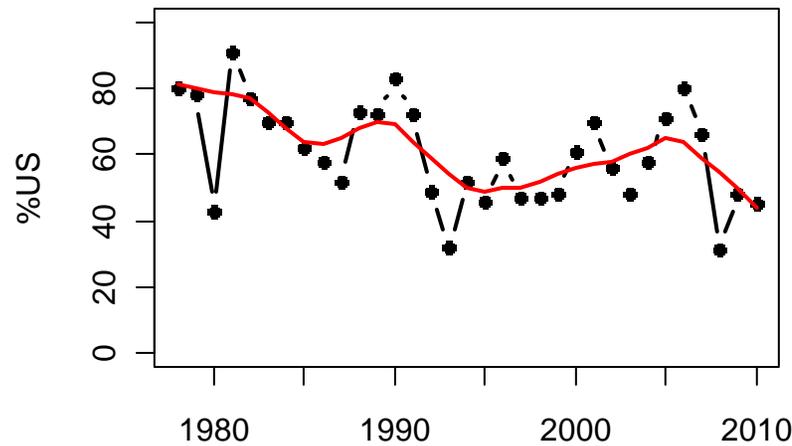
NMFS Spring



NMFS Fall



Combined



Black = average  
Red = smoothed  
2010 = 44%



## US Portion of the Pie

0.10 \* Historical Catch (98% US) = 9.8%

0.90 \* Resource Distribution (44% US) = 39.6%

9.8% + 39.6% = 49% (proportion of pie to US)

49% of 1,150 mt = 564 mt for US



## Why is groundfish slice smaller?

### **Council decision**

Ensure scallop fishery has enough yellowtail to prevent in-season closure

Based on calculated discard rate in scallop fishery

Area-specific calculations

Recent observed discard ratio modified by projected yellowtail and scallop abundance

Current allocation to scallop fishery based on 2009 discard ratio and 2010 yellowtail projections = 342 mt

Alternative used 2011 for both = 68 mt



## Why are 2012 GB YT ACE so low?

Stock size is down due to recent poor recruitment and retrospective adjustment – fewer fish means lower quota

US portion of total quota is down due to fish distribution

Groundfish allocation of US portion is down because of scallop allocation