

Dear Julia,

Thank you sincerely for submitting assessments to the Myers II database. We have entered 7 of your assessments, and now wish to quality assure/quality control (QA/QC) these data for a release version of the database. Please follow the steps below to ensure that your assessments have been dutifully represented:

QA/QC steps

For each assessment:

1. Ensure that the General assessment details are correct.
2. Ensure that the units for all Biometrics and Time Series shown are correct. To aid in this, we have included the minimum, maximum, first year, and last year of the spawning stock biomass, recruitment, fishing mortality, total biomass, and catch (where provided).
3. If there are blank values in the Biometrics table, please include these in your response (see below), where they are available. Please note that in the Biometrics table, the following abbreviations are used:
 - SSB-AGE-yr = Ages for which the spawning stock biomass is defined
 - REC-AGE = Age at recruitment
 - F-AGE-yr = Ages for which the fishing mortality is defined
 - TB-AGE-yr = Ages for which the total biomass is defined
 - M = Natural mortality
 - A50-yr = The age at 50% maturity
 - L50-cm = The length at 50% maturity
 - MORATOR-yr-yr = Moratorium years
 - LME = Large Marine Ecosystem
4. To ensure that the recruitment time series has been offset by the age at recruitment so that yearclass matches up with spawner biomass, please make sure that the difference between the last year of the recruitment and last year of the SSB time series is equal to the age at recruitment supplied (unless there is another reason, e.g. estimates unavailable).
5. Provide Large Marine Ecosystem (LME) designation(s) for your stock (unless it is a high seas stock). Please enter a primary, secondary and tertiary LME (if they exist) in the issue you submit (see below). A map of the LMEs is provided on the last page of this document.

QA/QC submission process

If you (or someone else) submitted the assessments via the RAM legacy site, please log into : <http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting> and locate the issue(s) associated with your spreadsheet submission(s). Once you locate your assessment, open the associated issue and choose 'Add response'. At the top of this response write:

QAQC: Assessment ID (this ID is located at the top of each assessment in the current document)

If you did not submit via the RAM Legacy site, please go to the url above and click "Submit a new issue" with the title: *QAQC: Assessment ID* (located at the top of each assessment in this pdf).

If you found no issues with the QA/QC document, please type:

"QA/QC correct". If you have found issues, please update the assessment spreadsheet accordingly or write the details of corrections to be made in the dialogue box. Once we have received and processed your response, the assessment will be flagged as quality controlled and the data it contains will be used for analyses.

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Assessment of Gulf of Alaska pacific cod (*Gadus macrocephalus*)

Assessment ID:AFSC-PCODGA-1977-2007-BAUM

Area ID: USA-NMFS-GA

General assessment details.

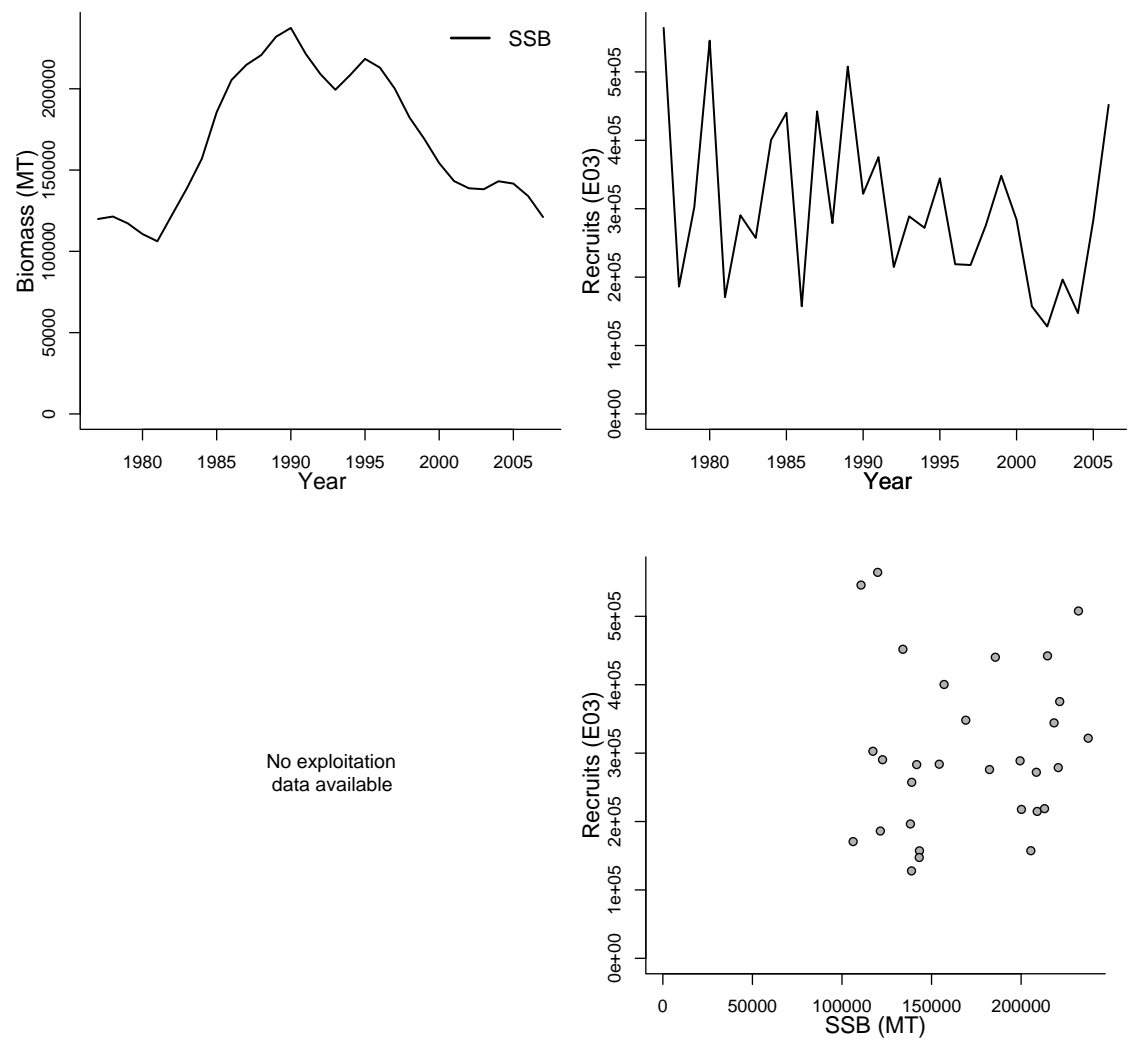
Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Thompson, Grant G.
Assessment method	Virtual Population Analysis
Publication year	2007
Timeseries span	1977-2007
Document	AFSC-GOA-Gadusmacrocephalus-2007.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units
A50-yr	4.35	yr
SSB-AGE-yr	3+	yr
REC-AGE-yr	0	yr
TB-AGE-yr		
F-AGE-yr		
M		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	Value	Units

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1977	1977			
Maximum year	2007	2006			
Time series minimum	106210	127850			
Time series maximum	237430	564300			
Units	MT	E03			



Assessment of Georges Bank atlantic cod (*Gadus morhua*)

Assessment ID:NEFSC-COD5Z-1960-2007-BAUM

Area ID: USA-NMFS-5Z

General assessment details.

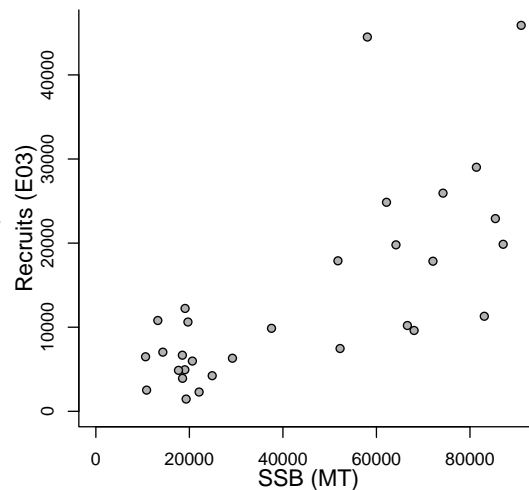
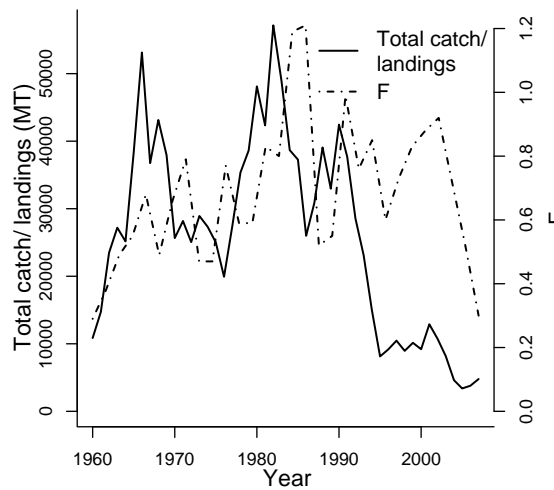
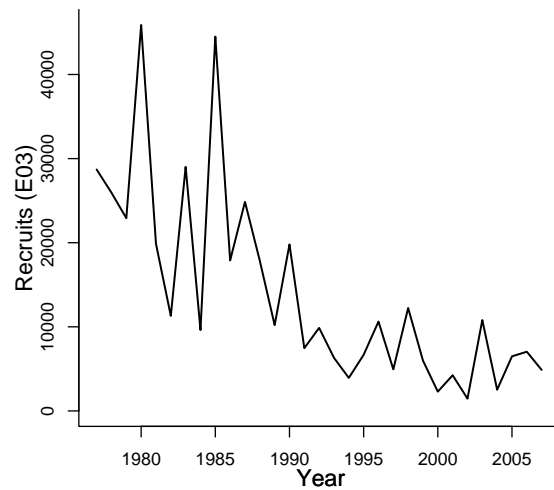
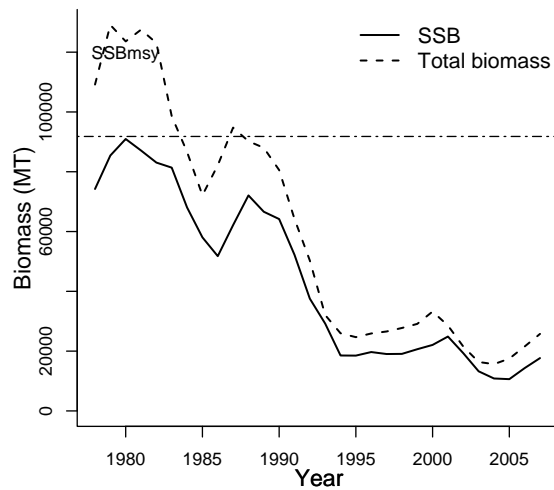
Detail	Value
Management body	NMFS
Assessment group	Northeast Fisheries Science Center
Assessment authors	Northeast Fisheries Science Center
Assessment method	A general approach to fitting VPA models. ADAPT is based on minimising the sum-of-squares over any number of indices of abundance to find best-fit parameters.
Publication year	2008
Timeseries span	1960-2007
Document	NAFO-5Z-Gadusmorhua-2008.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units
SSB-AGE-yr	1+	yr
REC-AGE-yr	1	yr
TB-AGE-yr	1+	yr
M-1/T	0.2	1/T
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	Value	Units
F40%-1/T	0.25	1/T
SSB _{msy} -MT (SSB)	91806	MT
SSB_{2007}/SSB_{msy}	0.192	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1978	1977	1978	1978	1960
Maximum year	2007	2007	2007	2007	2007
Time series minimum	10627	1461	0.29	15652	3384
Time series maximum	90951	45891	1.21	129103	57149
Units	MT	E03	1/T	MT	MT



Assessment of Gulf of Maine atlantic cod (*Gadus morhua*)

Assessment ID:NEFSC-CODGOM-1893-2008-BAUM

Area ID: USA-NMFS-5Y

General assessment details.

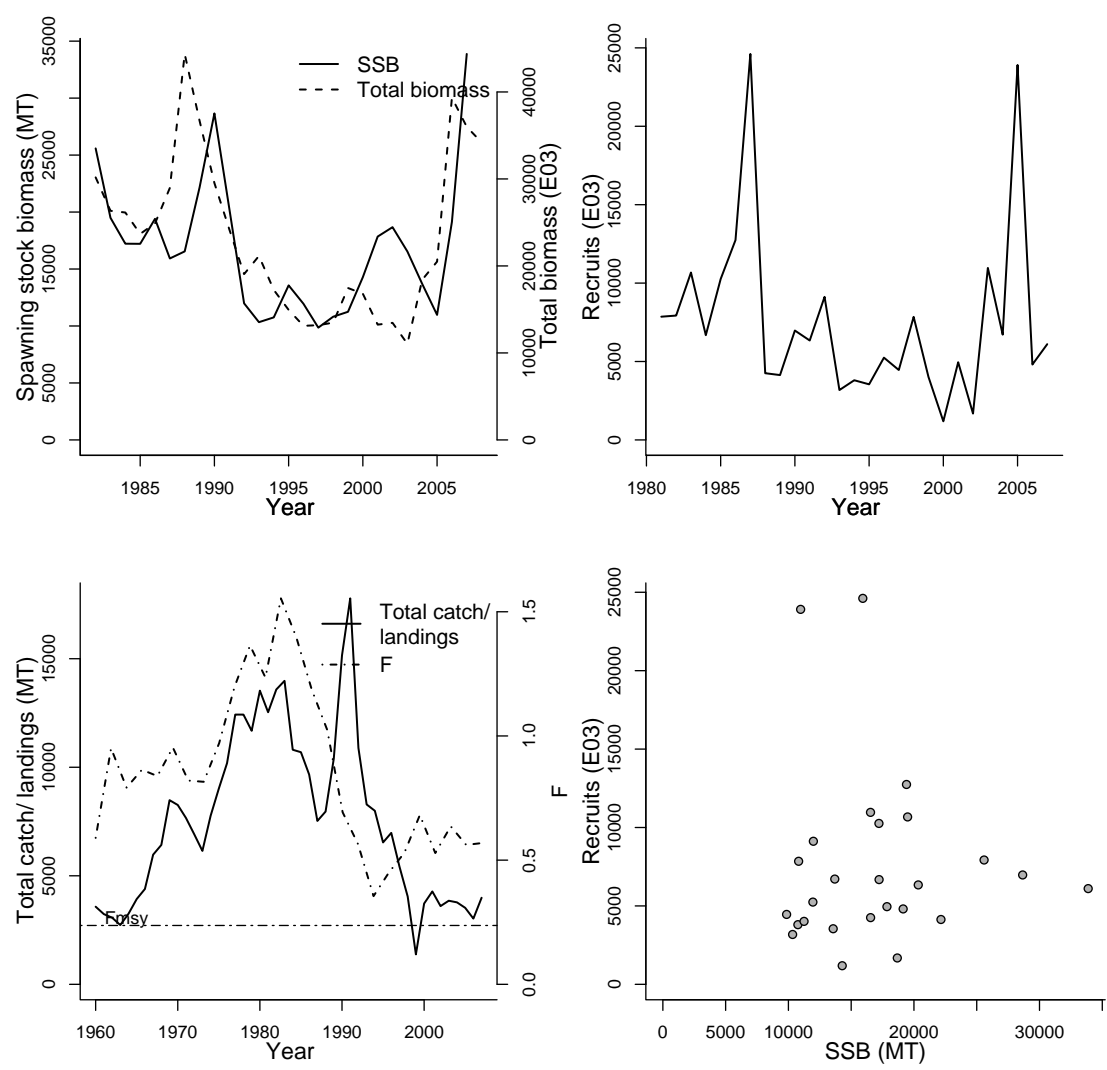
Detail	Value
Management body	NMFS
Assessment group	Northeast Fisheries Science Center
Assessment authors	Northeast Fisheries Science Center
Assessment method	A general approach to fitting VPA models. ADAPT is based on minimising the sum-of-squares over any number of indices of abundance to find best-fit parameters.
Publication year	2008
Timeseries span	1893-2008
Document	NMFS-GOM-Gadusmorhua-2008.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units
REC-AGE-yr	1	yr
A50-yr	AVAILABLE	yr
M-1/T	0.2	1/T
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	Value	Units
Bmsy-MT (TB)	82830	MT
Fmsy-1/T (F)	0.237	1/T
MSY-MT (TB)	16600	MT
TB_{2008}/B_{msy}	0.413	
F_{2007}/F_{msy}	2.399	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1982	1981	1982	1982	1960
Maximum year	2007	2007	2007	2008	2007
Time series minimum	9856	1187	0.355	11046	1380
Time series maximum	33877	24612	1.554	44369	17781
Units	MT	E03	1/T	E03	MT



Assessment of Georges Bank haddock (*Melanogrammus aeglefinus*)

Assessment ID:NEFSC-HADGB-1930-2008-BAUM

Area ID: USA-NMFS-5Z

General assessment details.

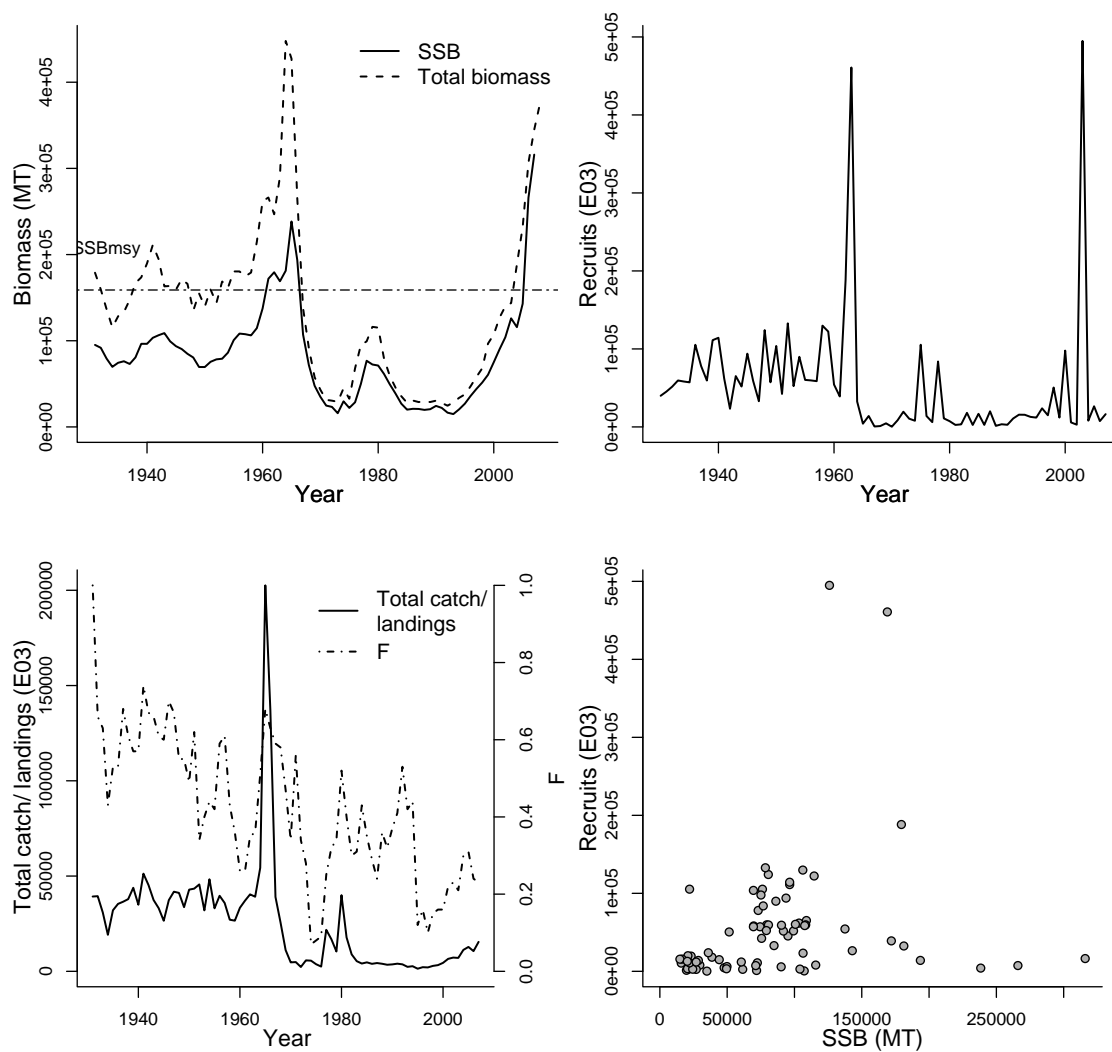
Detail	Value
Management body	NMFS
Assessment group	Northeast Fisheries Science Center
Assessment authors	Northeast Fisheries Science Center
Assessment method	VPA/ADPAT version 2.3.2 NOAA Fisheries
Publication year	2008
Timeseries span	1930-2008
Document	NMFS-5Z-Melanogrammus aeglefinus-2008.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units
REC-AGE-yr	1	yr
A50-yr	AVAILABLE	yr
L50-cm	AVAILABLE	cm
M-1/T	0.2	1/T
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	Value	Units
F40%-1/T	0.35	1/T
SSB _{msy} -MT (SSB)	158873	MT
SSB_{2007}/SSB_{msy}	1.989	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1931	1930	1931	1931	1931
Maximum year	2007	2007	2007	2008	2007
Time series minimum	14907	267	0.07	24608	1370
Time series maximum	315975	494868	1	447882	202584
Units	MT	E03	1/T	MT	E03



Assessment of Mid-Atlantic Coast summer flounder (*Paralichthys dentatus*)

Assessment ID:NEFSC-SFLOUNMATLC-1940-2007-BAUM

Area ID: USA-NMFS-MATLC

General assessment details.

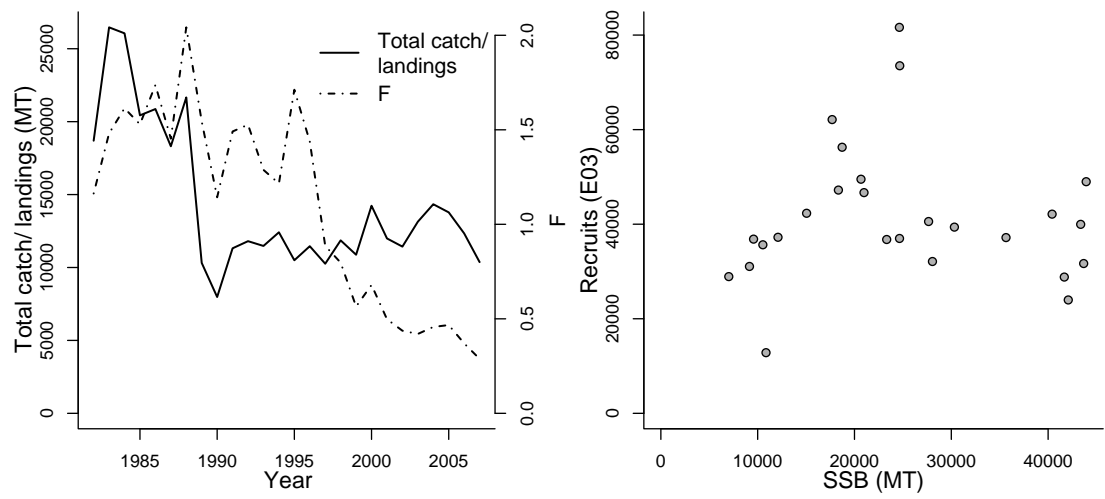
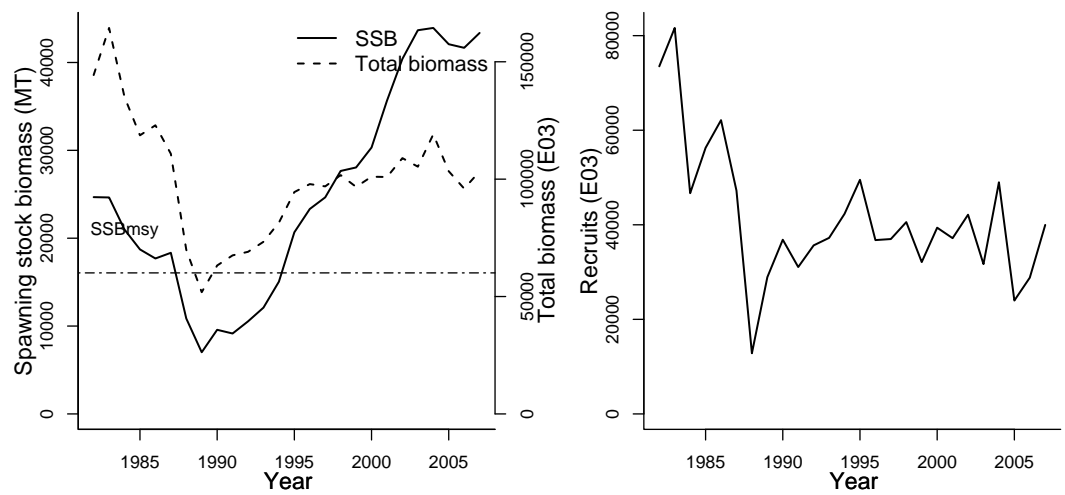
Detail	Value
Management body	NMFS
Assessment group	Northeast Fisheries Science Center
Assessment authors	Northeast Fisheries Science Center
Assessment method	Age Structured Assessment Program
Publication year	2008
Timeseries span	1940-2007
Document	NMFS-MATLC-Paralichthysdentatus-2008.pdf.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units
REC-AGE-yr	0	yr
A50-yr	AVAILABLE	yr
L50-cm	AVAILABLE	cm
M-1/T	0.25	1/T
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	Value	Units
F40%-1/T	0.255	1/T
SSB _{msy} -MT (SSB)	60074	MT
F35%-1/T	0.31	1/T
Frebuild-1/T (F)	0.274	1/T
SSB_{2007}/SSB_{msy}	0.722	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1982	1982	1982	1982	1982
Maximum year	2007	2007	2007	2007	2007
Time series minimum	7017	12831	0.288	51853	7976
Time series maximum	43932	81631	2.042	164410	26466
Units	MT	E03	1/T	E03	MT



Assessment of Georges Bank yellowtail flounder (*Limanda ferruginea*)

Assessment ID:NEFSC-YELLGB-1935-2008-BAUM

Area ID: USA-NMFS-5Z

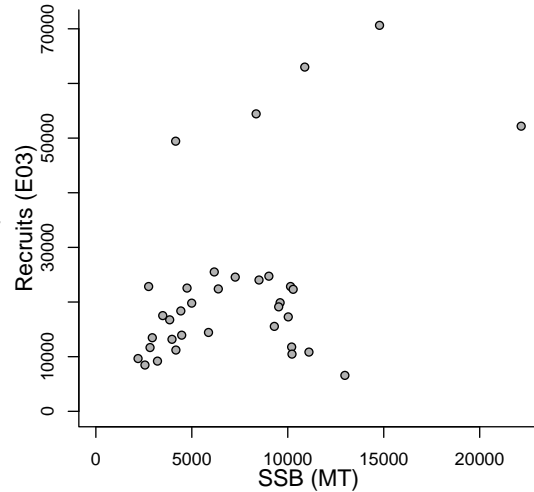
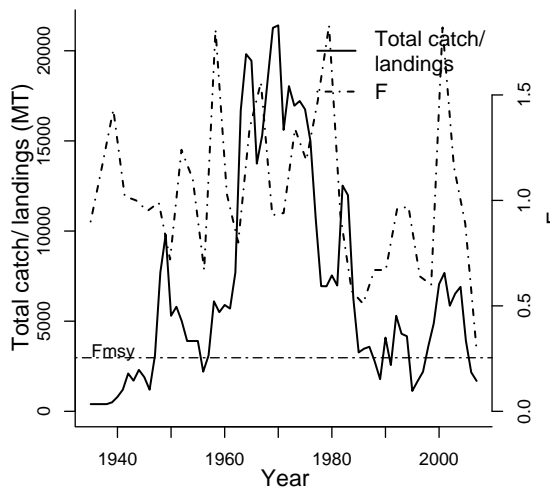
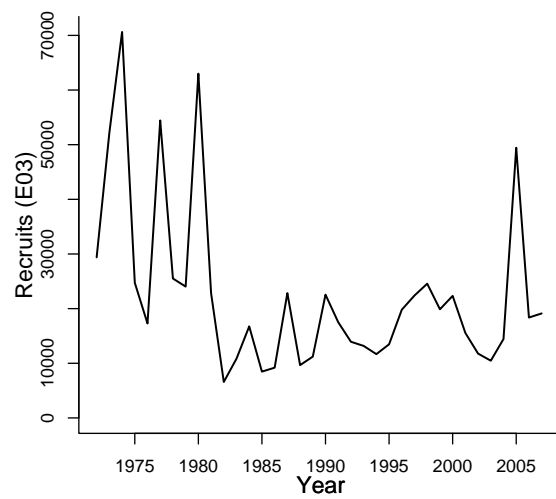
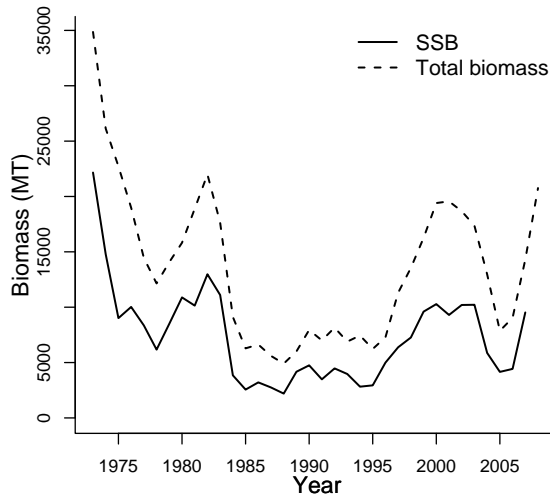
General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Northeast Fisheries Science Center
Assessment authors	Northeast Fisheries Science Center
Assessment method	Virtual Population Analysis
Publication year	2008
Timeseries span	1935-2008
Document	NMFS-GB-Limandaferruginea-2008.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units	Reference points		
			Parameter	Value	Units
REC-AGE-yr	1	yr	F _{msy} -1/T (F)	0.254	1/T
A50-yr	2	yr	F40%-1/T	0.254	1/T
SSB-AGE-yr			SSB _{msy} -MT (SSB)	43200	MT
TB-AGE-yr			MSY-MT (TB)	9400	MT
F-AGE-yr			F_{2007}/F_{msy}	1.142	
M			SSB_{2007}/SSB_{msy}	0.221	
L50-cm					
MORATOR-yr-yr					
LME					

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1973	1972	1973	1973	1935
Maximum year	2007	2007	2007	2008	2007
Time series minimum	2198	6581	0.29	4904	400
Time series maximum	22161	70632	1.83	34860	21410
Units	MT	E03	1/T	MT	MT



Assessment of Southern New England /Mid Atlantic yellowtail flounder (*Limanda ferruginea*)

Assessment ID:NEFSC-YELLSNEMATL-1935-2008-BAUM

Area ID: USA-NMFS-SNEMATL

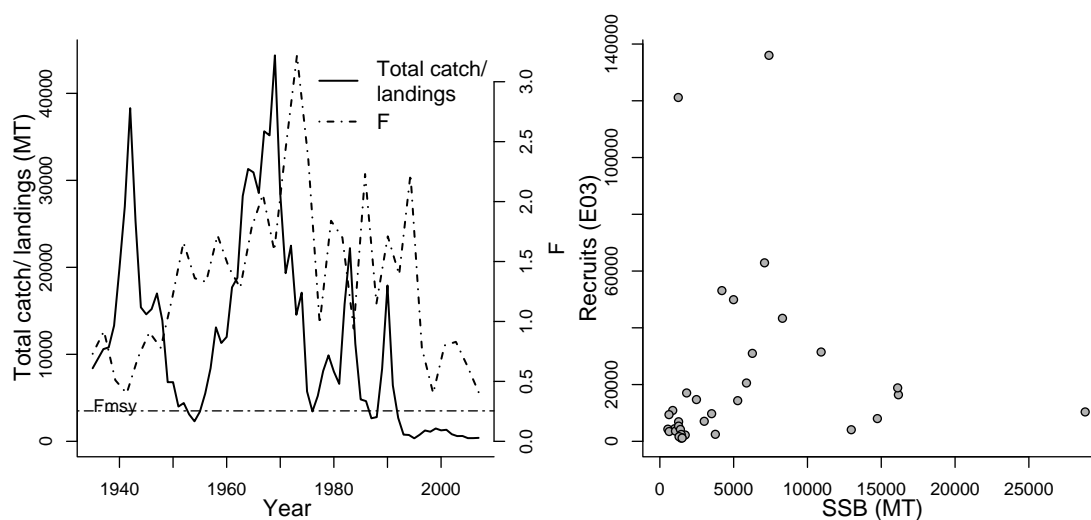
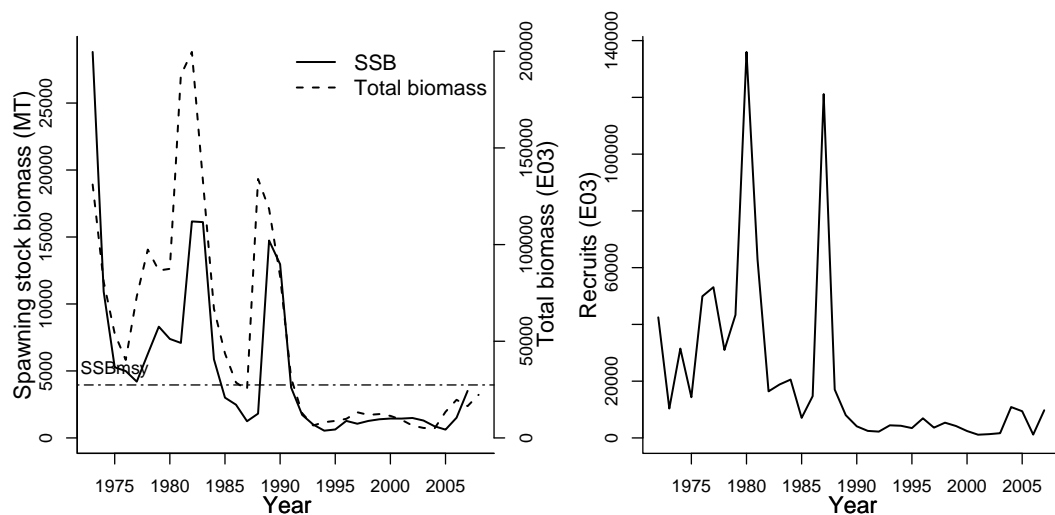
General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Northeast Fisheries Science Center
Assessment authors	Northeast Fisheries Science Center
Assessment method	Virtual Population Analysis
Publication year	2008
Timeseries span	1935-2008
Document	NMFS-SNEMATL-Limandaferruginea-2008.pdf (pdf not in database)
Recorder	BAUM
Date entered	2009-03-10

Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

Parameter	Value	Units	Reference points		
			Parameter	Value	Units
REC-AGE-yr	1	yr	Fmsy-1/T (F)	0.254	1/T
A50-yr	2	yr	F40%-1/T	0.254	1/T
SSB-AGE-yr			SSBmsy-MT (SSB)	27400	MT
TB-AGE-yr			MSY-MT (TB)	6100	MT
F-AGE-yr			F_{2007}/F_{msy}	1.614	
M			SSB_{2007}/SSB_{msy}	0.128	
L50-cm					
MORATOR-yr-yr					
LME					

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1973	1972	1973	1973	1935
Maximum year	2007	2007	2007	2008	2007
Time series minimum	542	1133	0.4	4853	345
Time series maximum	28815	136011	3.22	199647	44369
Units	MT	E03	1/T	E03	MT



MAP KEY:

- | LME Number | LME Name |
|------------|---------------------------|
| 1 | East Baltic Sea |
| 2 | North Sea |
| 3 | Gulf of California |
| 4 | California Current |
| 5 | Chukchi Sea |
| 6 | South Sea |
| 7 | Indian Ocean |
| 8 | South East Labrador Shelf |
| 9 | East Greenland Shelf |
| 10 | Central Indian Ocean |
| 11 | Indian Pacific Ocean |
| 12 | Indian Pacific Ocean |
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LARGE MARINE ECOSYSTEMS are areas of the ocean characterized by distinct bathymetry, hydrography, productivity, and trophic interactions. They annually produce 95 percent of the world's fish catch. They are national and regional focal areas of a global effort to reduce the degradation of linked watersheds, marine resources, and coastal environments from pollution, habitat loss, and over-fishing.

For More Information Visit: www.edc.uri.edu/lme

NORTH POLAR REGION

SOUTH POLAR REGION