Dear Jeremy,

Thank you sincerely for submitting assessments to the Myers II database. We have entered 12 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.

Contents

Assessment of Hecate Strait english sole (*Parophrys vetulus*)

Assessment ID:DFO-PAC-ESOLEHS-1944-2005-COLLIE

Area ID: Canada-DFO-HS

General assessment details.

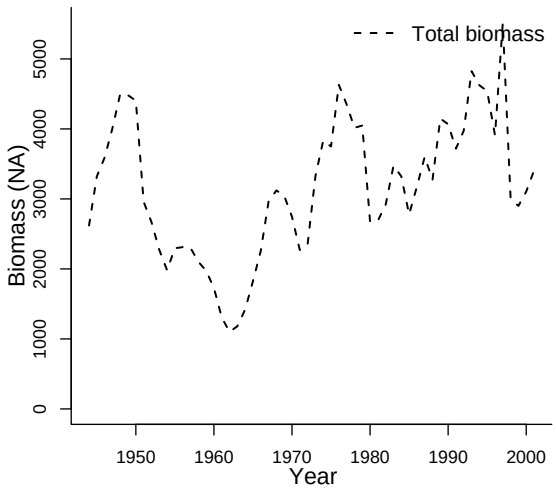
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	Fargo, Jeff
Assessment method	State-space catch at age time series analysis
Publication year	1999
Timeseries span	1944-2005
Document	Flat99.pdf (pdf not in database)
Recorder	COLLIE
Date entered	2009-03-10

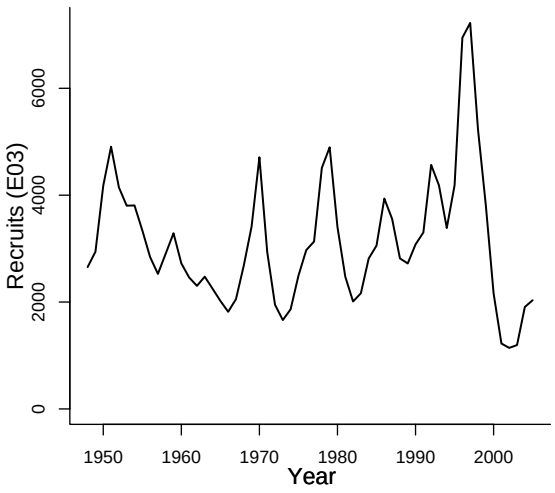
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

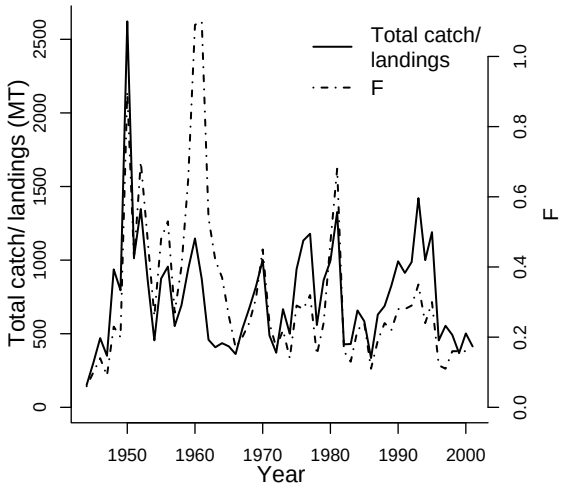
Parameter	Value	Units
M-1/yr	0.2	1/yr
REC-AGE		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
F0.1-1/yr (F)	0.25	1/yr

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year		1948	1944	1944	1944
Maximum year		2005	2001	2001	2001
Time series minimum		1142	0.06	1101	152
Time series maximum		7223	1.1	5514	2622
Units		E03	1/T	MT	MT







No SSB−recruit data available

Assessment of Central Coast pacific herring (*Clupea pallasii*)

Assessment ID:DFO-PAC-HERRCC-1951-2007-COLLIE

Area ID: Canada-DFO-CC

General assessment details.

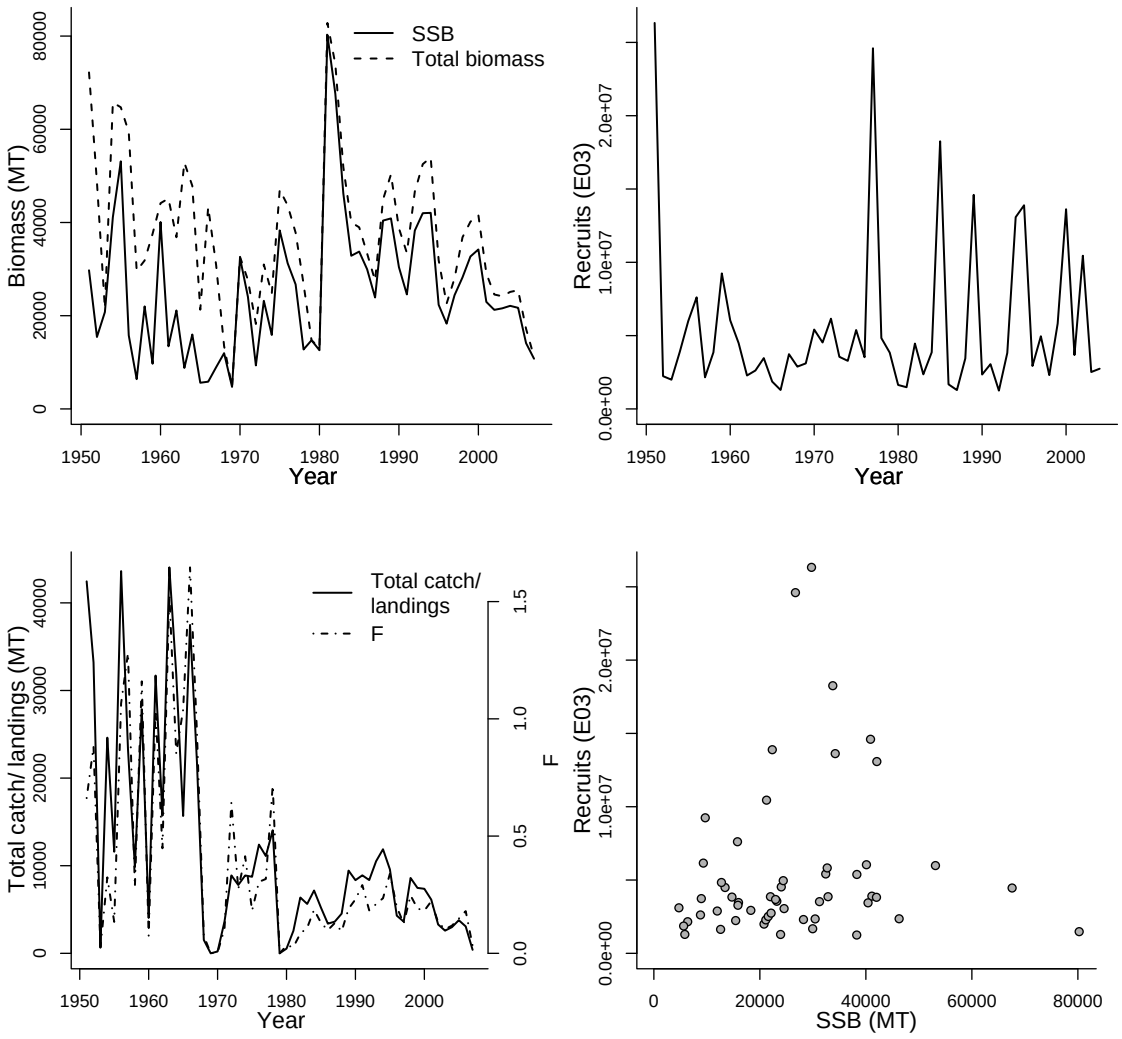
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	NULL
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	NULL
Timeseries span	1951-2007
Document	RES2007_002_e.pdf (pdf not in database)
Recorder	COLLIE
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		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1951	1951	1951	1951	1951
Maximum year	2007	2004	2007	2007	2007
Time series minimum	4728	1249000	0	4728	0
Time series maximum	80245.06	26327000	1.646	82818.06	44054
Units	MT	E03	1/yr	MT	MT



Assessment of Central Coast pacific herring (*Clupea pallasii*)

Assessment ID:DFO-PAC-HERRPRD-1951-2007-COLLIE

Area ID: Canada-DFO-CC

General assessment details.

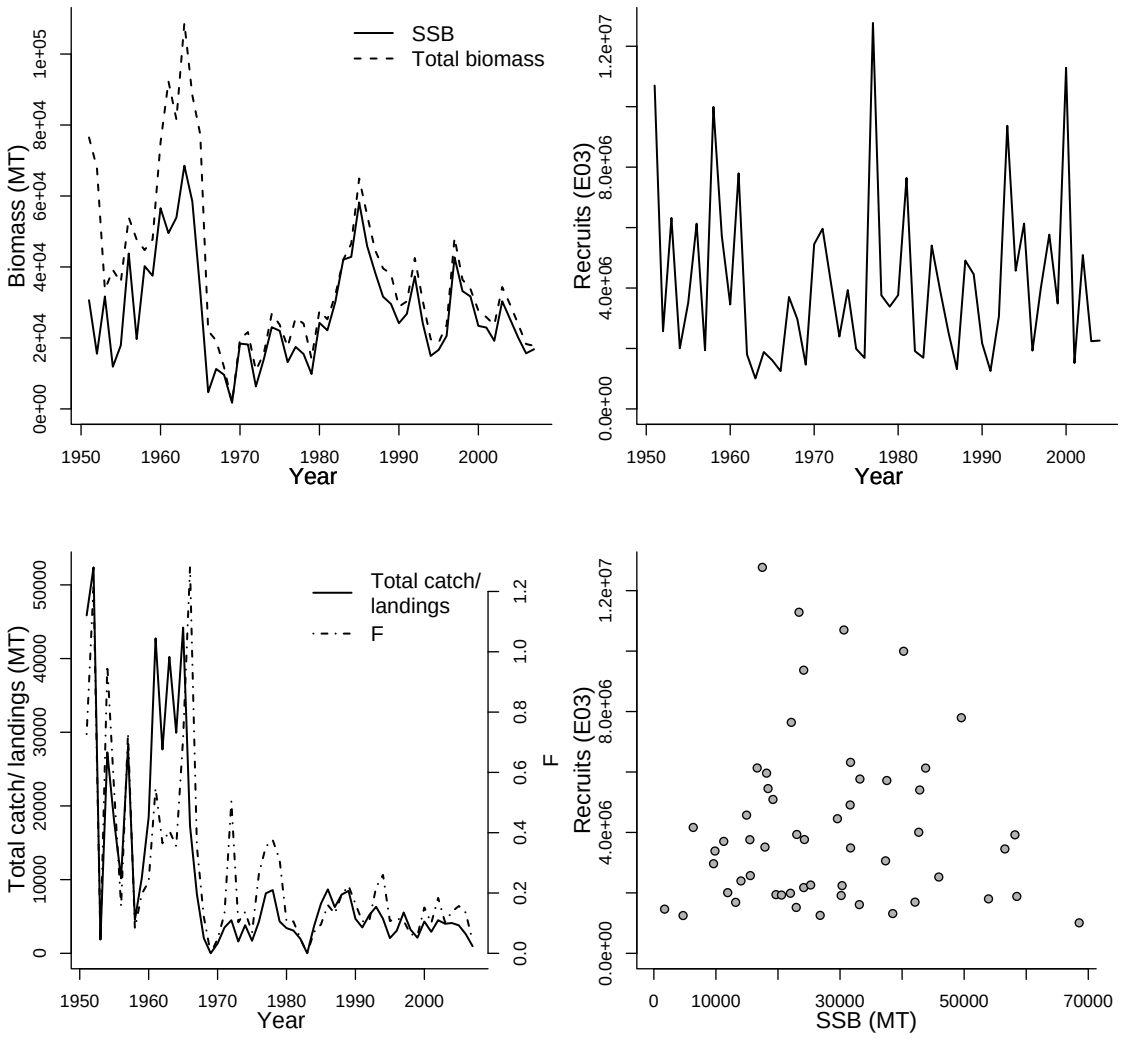
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	NULL
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	NULL
Timeseries span	1951-2007
Document	RES2007_002_e.pdf (pdf not in database)
Recorder	COLLIE
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		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1951	1951	1951	1951	1951
Maximum year	2007	2004	2007	2007	2007
Time series minimum	1727.74	1009000	0	1727.74	0
Time series maximum	68535.03	12771000	1.28	108763.03	52379
Units	MT	E03	1/yr	MT	MT



Assessment of Queen Charlotte Islands pacific herring (*Clupea pallasii*)

Assessment ID:DFO-PAC-HERRQCI-1951-2007-COLLIE

Area ID: Canada-DFO-QCI

General assessment details.

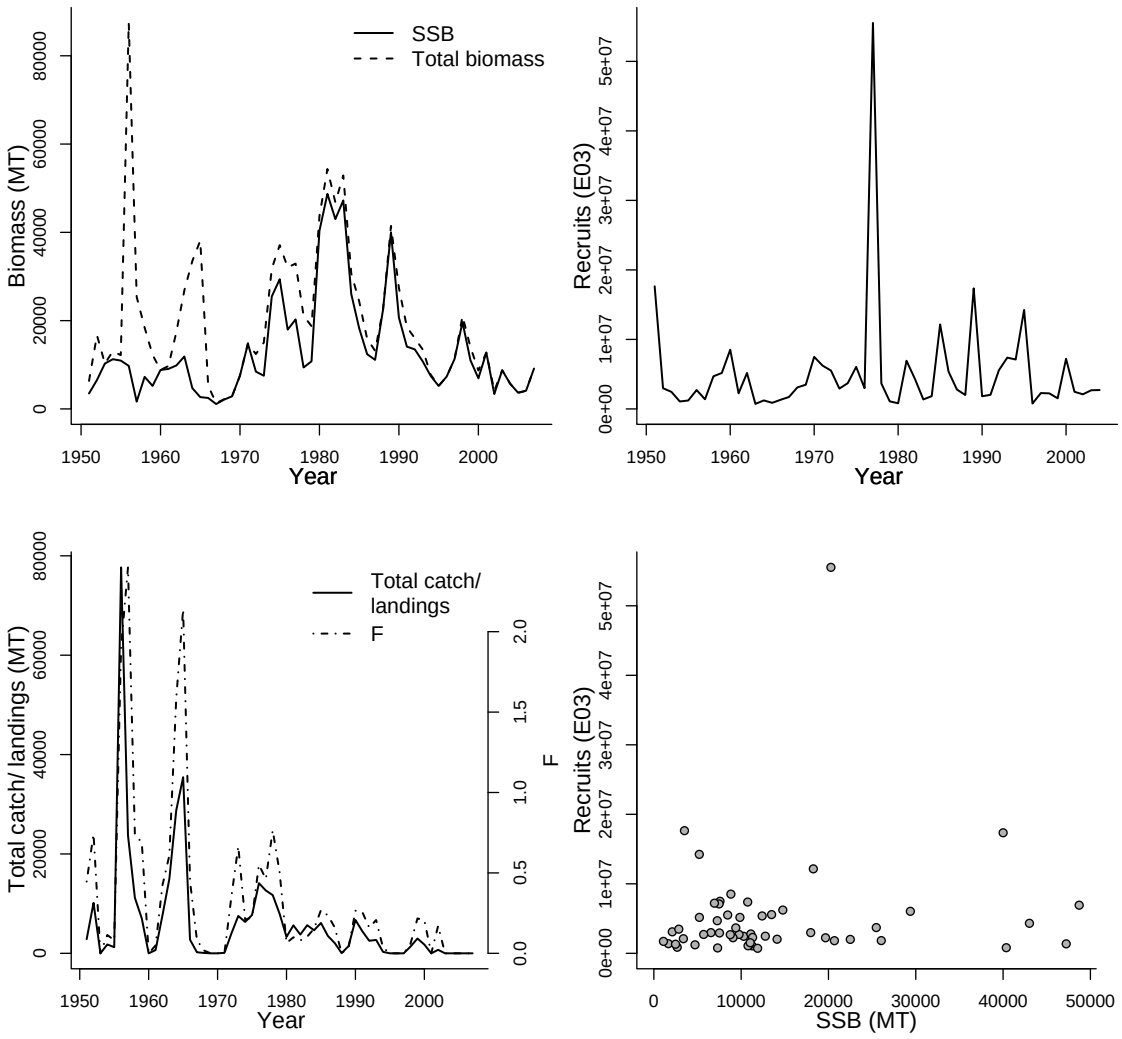
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	NULL
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	NULL
Timeseries span	1951-2007
Document	RES2007_002_e.pdf (pdf not in database)
Recorder	COLLIE
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		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1951	1951	1951	1951	1951
Maximum year	2007	2004	2007	2007	2007
Time series minimum	1098.02	724000	0	1311.02	0
Time series maximum	48715.62	55530000	2.4	87437.09	77681
Units	MT	E03	1/yr	MT	MT



Assessment of Straight of Georgia pacific herring (*Clupea pallasii*)

Assessment ID:DFO-PAC-HERRSOG-1951-2007-COLLIE

Area ID: Canada-DFO-SOG

General assessment details.

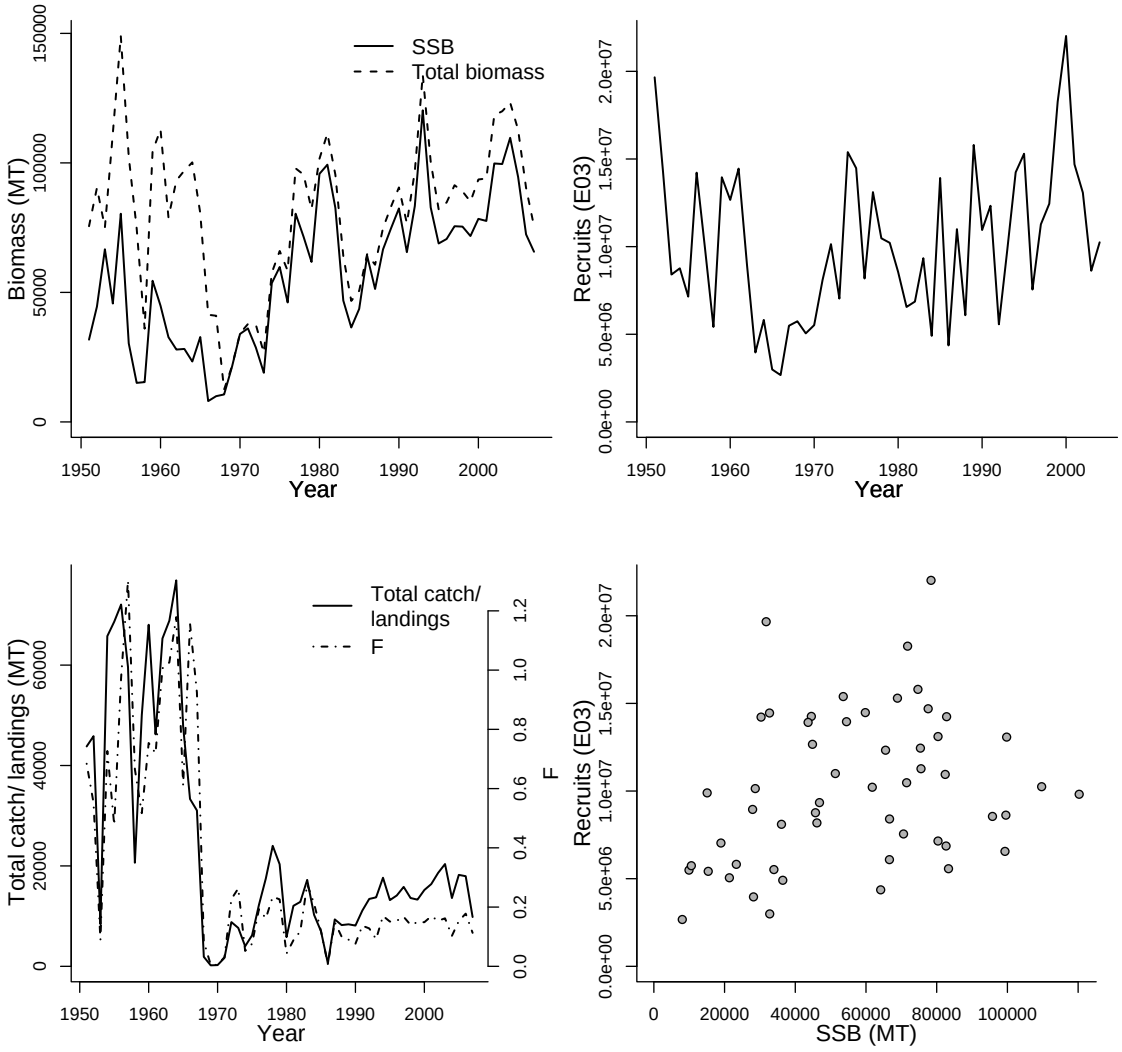
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	NULL
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	NULL
Timeseries span	1951-2007
Document	RES2007_002_e.pdf (pdf not in database)
Recorder	COLLIE
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		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1951	1951	1951	1951	1951
Maximum year	2007	2004	2007	2007	2007
Time series minimum	8039.02	2672000	0.005	12492.81	194
Time series maximum	120297.96	22020000	1.303	149010.43	76881
Units	MT	E03	1/yr	MT	MT



Assessment of West Coast of Vancouver Island pacific herring (*Clupea pallasii*)

Assessment ID:DFO-PAC-HERRWCVANI-1951-2007-COLLIE

Area ID: Canada-DFO-WCVANI

General assessment details.

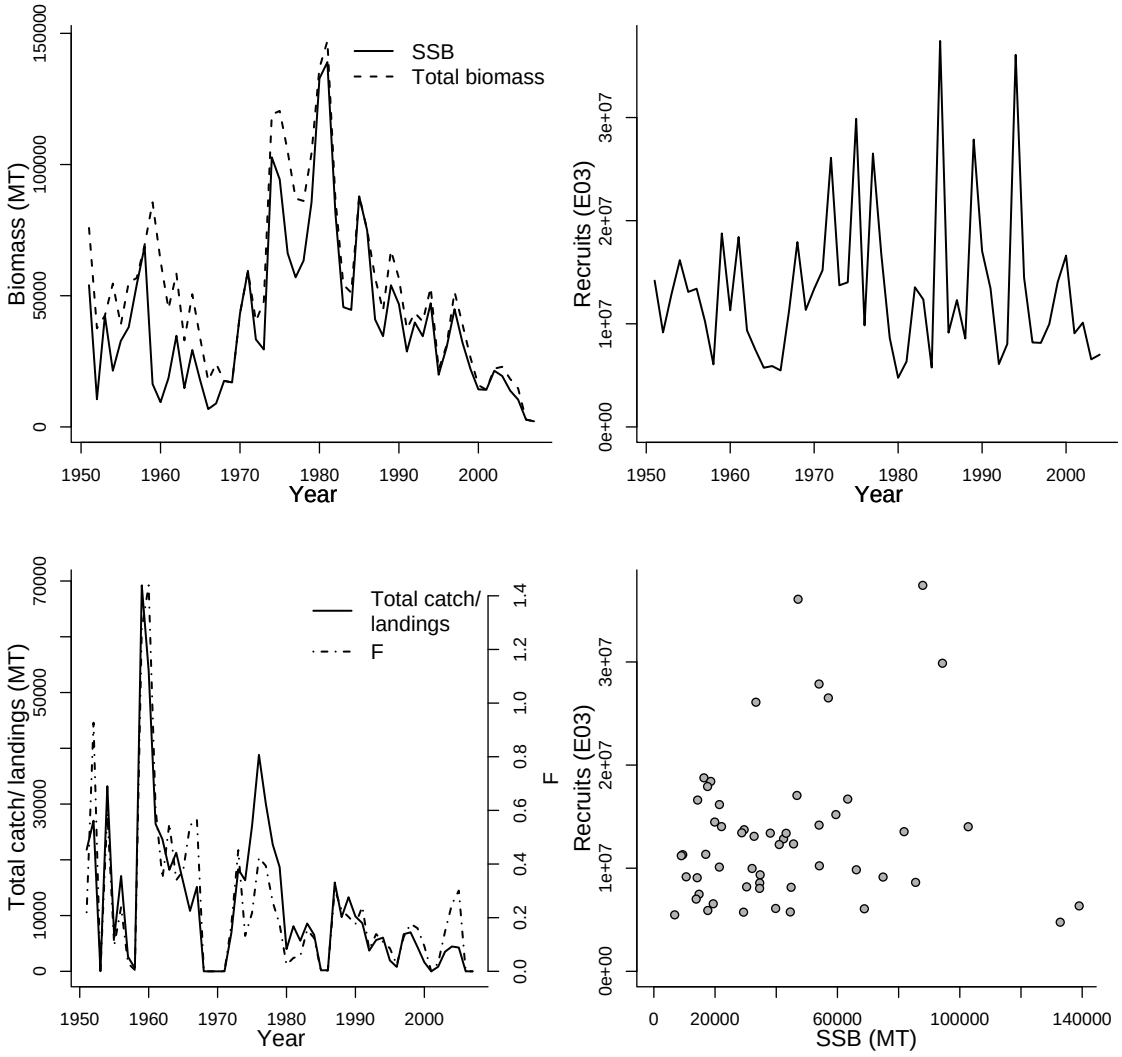
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	NULL
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	NULL
Timeseries span	1951-2007
Document	RES2007_002_e.pdf (pdf not in database)
Recorder	COLLIE
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		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1951	1951	1951	1951	1951
Maximum year	2007	2004	2007	2007	2007
Time series minimum	2144.14	4764000	0	2144.14	0
Time series maximum	139015.21	37428000	1.439	147104.21	69223
Units	MT	E03	1/yr	MT	MT



Assessment of Hecate Strait pacific cod (*Gadus macrocephalus*)

Assessment ID:DFO-PAC-PCODHS-1956-2005-COLLIE

Area ID: Canada-DFO-HS

General assessment details.

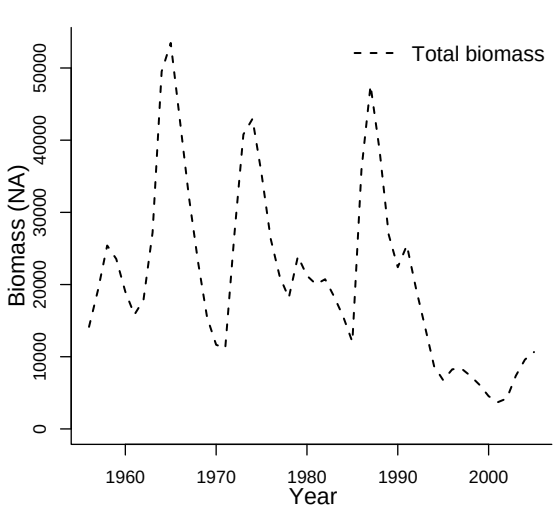
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	Sinclair, A.F.
Assessment method	Delay difference model
Publication year	2005
Timeseries span	1956-2005
Document	RES2005_026_Cod.pdf (pdf not in database)
Recorder	COLLIE
Date entered	2009-03-10

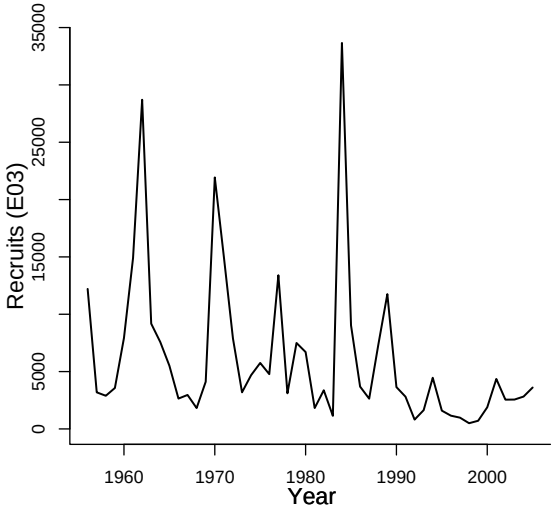
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

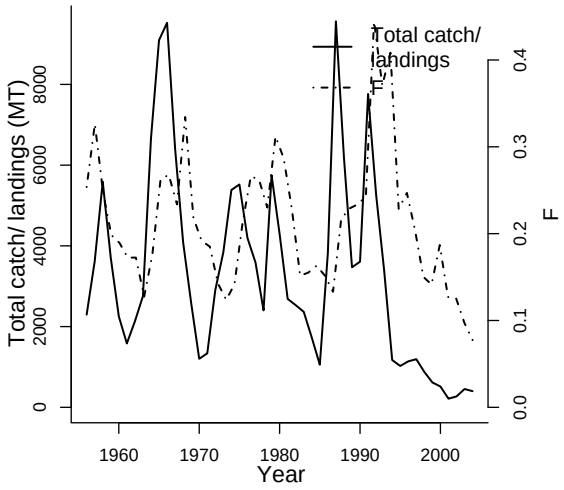
Parameter	Value	Units
M-1/yr	0.567	1/yr
SSB-AGE-yr	2+	yr
REC-AGE-yr	2	yr
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
Bmsy-MT (TB)	7584	MT
Blim-MT (SSB)	11165	MT
Bmsy-MT (TB)	8861	MT
Fmsy-1/yr (F)	0.354	1/yr
Fext-1/yr (F)	1.586	1/yr
TB_{2005}/B_{msy}	1.404	
F_{2003}/F_{msy}	0.219	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year		1956	1956	1956	1956
Maximum year		2005	2003	2005	2004
Time series minimum		498	0.0775	3695	214
Time series maximum		33659	0.4445	53470	9562
Units		E03	1/T	MT	MT







No SSB−recruit data available

Assessment of West Coast of Vancouver Island pacific cod (*Gadus macrocephalus*)

Assessment ID:DFO-PAC-PCODWCVANI-1956-2002-COLLIE

Area ID: Canada-DFO-WCVANI

General assessment details.

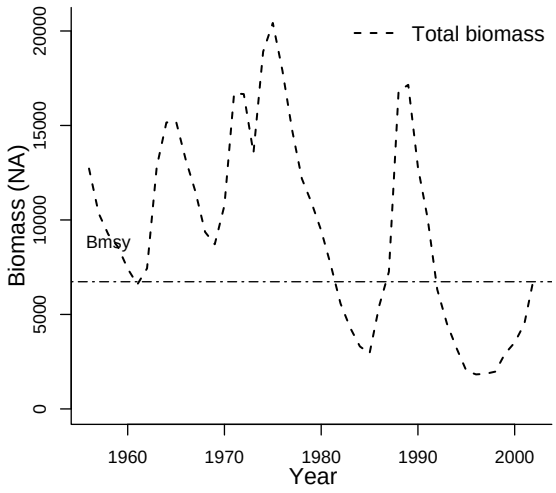
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	Sinclair, A.F.
Assessment method	Delay difference model
Publication year	2002
Timeseries span	1956-2002
Document	2002-113.pdf (pdf not in database)
Recorder	COLLIE
Date entered	2009-03-10

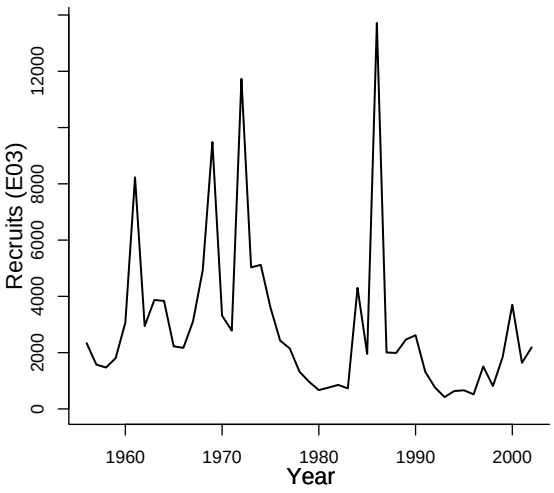
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

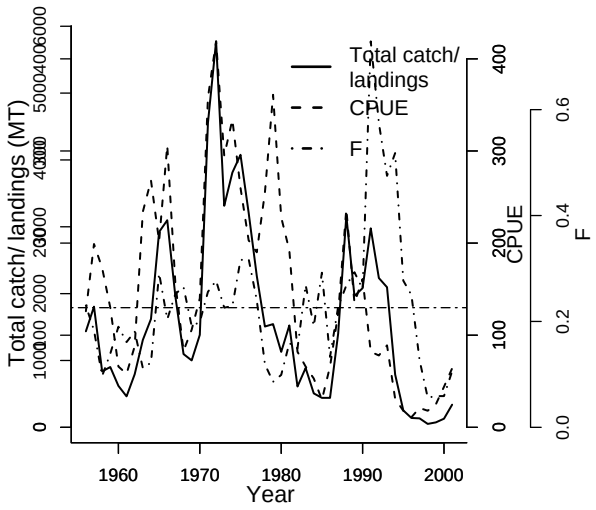
Parameter	Value	Units
M-1/yr	0.579	1/yr
SSB-AGE-yr	2+	yr
REC-AGE-yr	2	yr
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
Bmsy-MT (TB)	6731	MT
Fmsy-1/yr (F)	0.226	1/yr
Fext-1/yr (F)	0.539	1/yr
TB_{2002}/B_{msy}	1.037	
F_{2001}/F_{msy}	0.469	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year		1956	1956	1956	1956
Maximum year		2002	2001	2002	2001
Time series minimum		420	0.056	1827	51
Time series maximum		13718	0.729	20426	5774
Units		E03	1/T	MT	MT







No SSB−recruit data available

Assessment of Hecate Strait rock sole (*Lepidopsetta bilineata*)

Assessment ID:DFO-PAC-RSOLEHSTR-1945-2001-COLLIE

Area ID: Canada-DFO-HS

General assessment details.

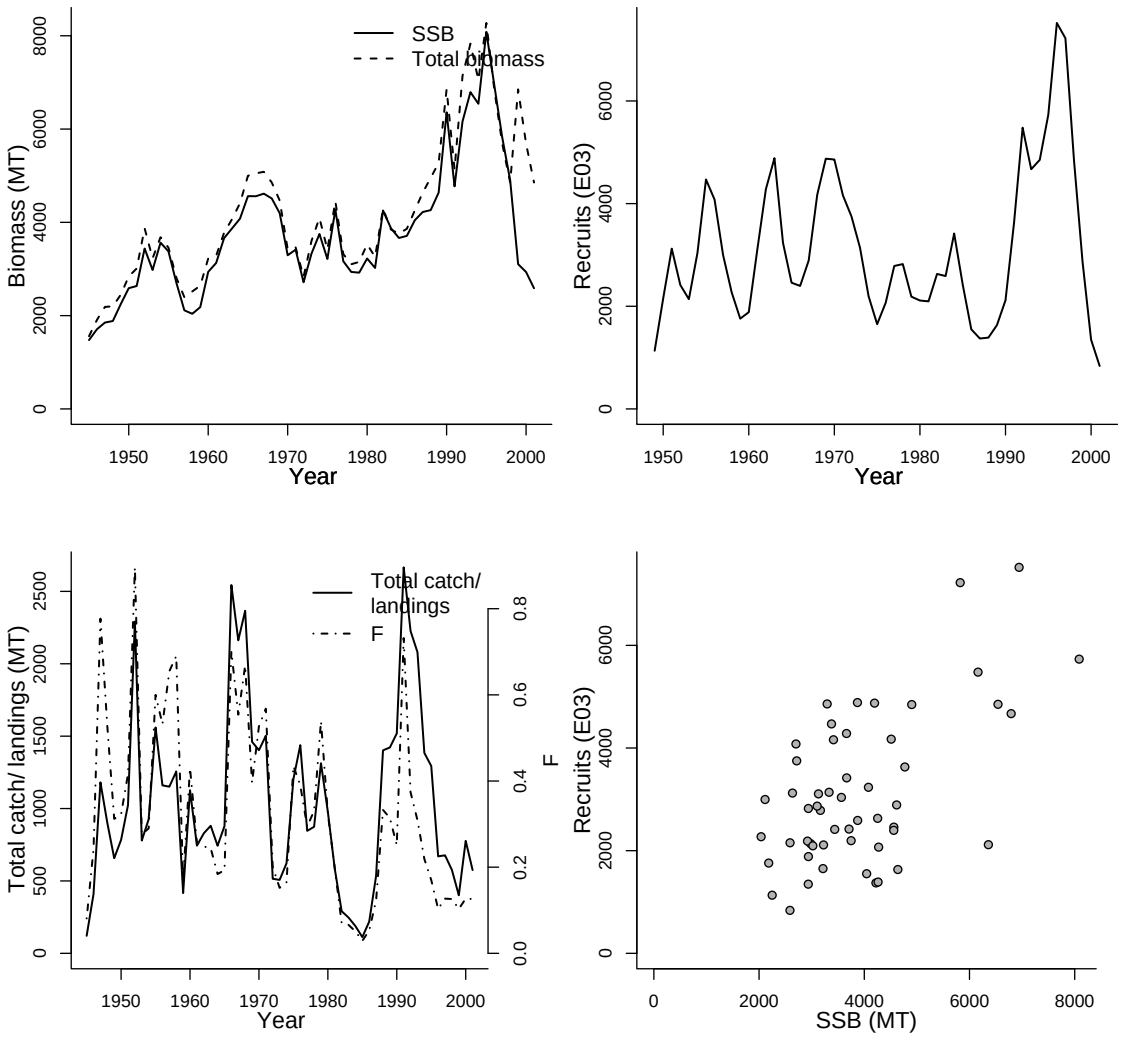
Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Pacific Region
Assessment authors	Fargo, Jeff
Assessment method	State-space catch at age time series analysis
Publication year	1999
Timeseries span	1945-2001
Document	Flat99.pdf (pdf not in database)
Recorder	COLLIE
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
M-1/yr	0.2	1/yr
REC-AGE		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
F0.1-1/yr (F)	0.22	1/yr

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1945	1949	1945	1945	1945
Maximum year	2001	2001	2001	2001	2001
Time series minimum	1476	837	0.029	1559	112
Time series maximum	8085	7520	0.896	8275	2666
Units	MT	E03	1/T	MT	MT



Assessment of Rhode Island american lobster (*Homarus americanus*)

Assessment ID:RIDEM-LOBSTERRI-1959-2007-COLLIE

Area ID: USA-US State-RI

General assessment details.

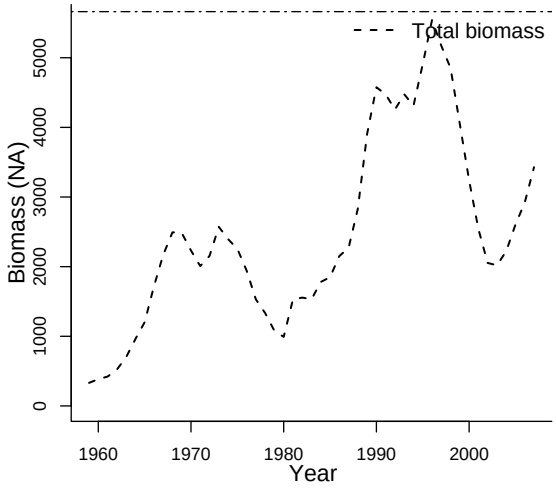
Detail	Value
Management body	US State
Assessment group	Rhode Island Department of Environmental Management
Assessment authors	Gibson, Mark
Assessment method	Age-structured surplus production model
Publication year	2008
Timeseries span	1959-2007
Document	/home/ (pdf not in database)
Recorder	COLLIE
Date entered	2009-03-10

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

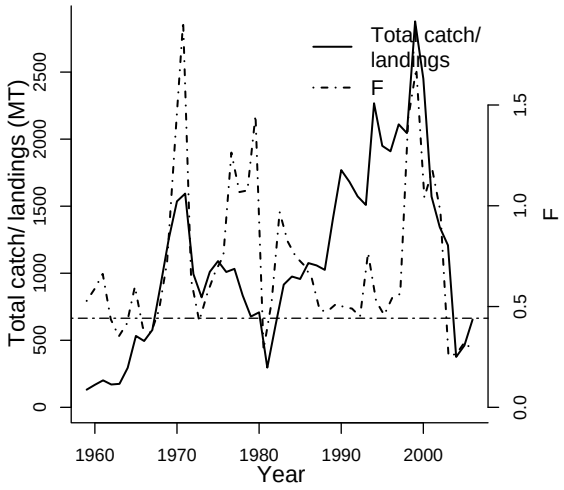
Parameter	Value	Units
REC-AGE		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
Bmsy-MT (TB)	5662	MT
Fmsy-1/yr (F)	0.442	1/yr
TB_{2007}/B_{msy}	0.606	
F_{2007}/F_{msy}	0.640	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year			1959	1959	1959
Maximum year			2007	2007	2006
Time series minimum			0.255	330.892	131.581
Time series maximum			1.915	5542.814	2878.455
Units			1/T	MT	MT



No recruitment data available



No SSB−recruit data available

Assessment of Rhode Island tautog (*Tautoga onitis*)

Assessment ID:RIDEM-TAUTOGRI-1959-2007-COLLIE

Area ID: USA-US State-RI

General assessment details.

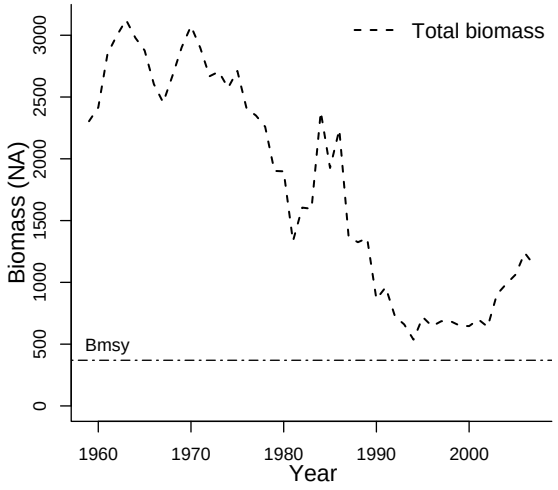
Detail	Value
Management body	US State
Assessment group	Rhode Island Department of Environmental Management
Assessment authors	Gibson, Mark
Assessment method	Age-aggregated surplus production model
Publication year	2008
Timeseries span	1959-2007
Document	/home/ (pdf not in database)
Recorder	COLLIE
Date 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		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
Bmsy-MT (TB)	369.56	MT
Fmsy-1/yr (F)	0.292	1/yr
TB_{2007}/B_{msy}	3.083	
F_{2006}/F_{msy}	0.620	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year			1959	1959	1959
Maximum year			2006	2007	2006
Time series minimum			0.016	536.293	30.997
Time series maximum			1.118	3123.86	1093.669
Units			1/T	MT	MT



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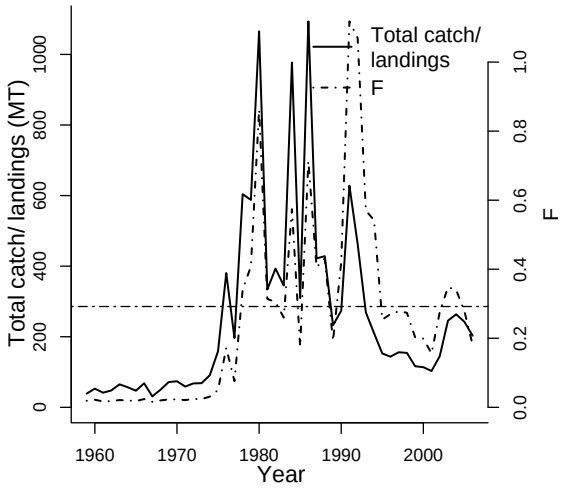


No SSB−recruit data available

Assessment of Rhode Island winter flounder (*Pseudopleuronectes americanus*)

Assessment ID:RIDEM-WINFLOUNDRI-1959-2007-COLLIE

Area ID: USA-US State-RI

General assessment details.

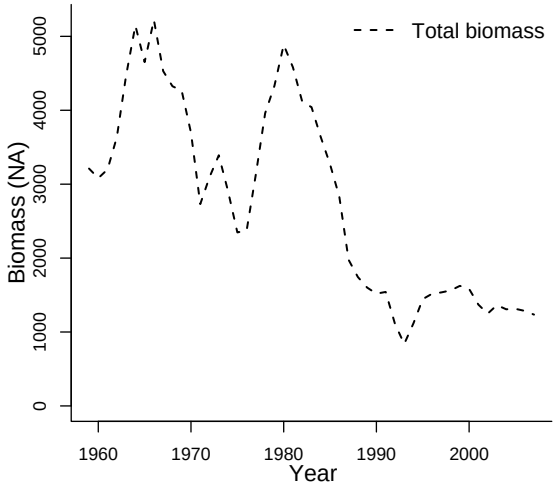
Detail	Value
Management body	US State
Assessment group	Rhode Island Department of Environmental Management
Assessment authors	Gibson, Mark, Rhode Island Department of Environmental Management, ¡mark.gibson@dem.ri.gov¿
Assessment method	Age-structured surplus production model
Publication year	2008
Timeseries span	1959-2007
Document	/home/ (pdf not in database)
Recorder	COLLIE
Date entered	2009-03-10

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

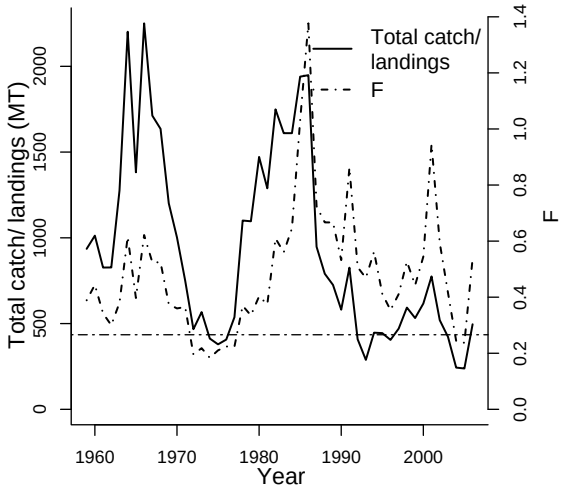
Parameter	Value	Units
M-1/T	0.2	1/T
REC-AGE		
SSB-AGE-yr		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		
MORATOR-yr-yr		
LME		

Reference points		
Parameter	**Value**	**Units**
Bmsy-MT (TB)	5478	MT
Fmsy-1/yr (F)	0.266	1/yr
TB_{2007}/B_{msy}	0.225	
F_{2006}/F_{msy}	2.022	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year			1959	1959	1959
Maximum year			2006	2007	2006
Time series minimum			0.1836	837.8442	238.1142
Time series maximum			1.3767	5222.0217	2250.6061
Units			1/T	MT	MT

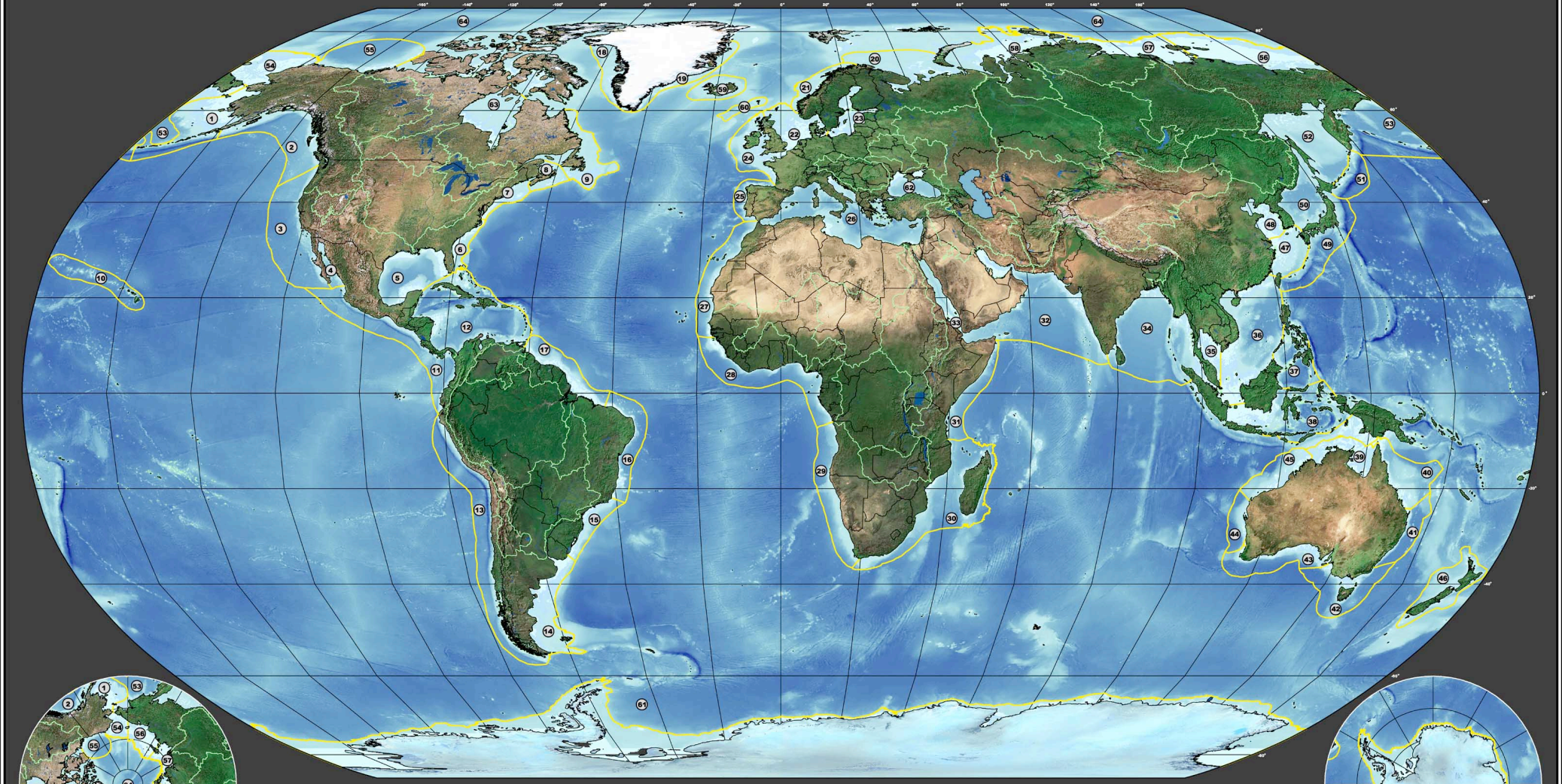


No recruitment data available



No SSB−recruit data available

Large Marine Ecosystems of the World
and Linked Watersheds



MAP KEY:

LME Numbers:

1 East Bering Sea
2 Gulf of Alaska
3 California Current
4 Gulf of California
5 Gulf of Mexico
6 Southeast U.S. Continental Shelf
7 Northeast U.S. Continental Shelf
8 Scotian Shelf
9 Newfoundland-Labrador Shelf
10 Insular Pacific-Hawaiian
11 Pacific Central-American Coastal
12 Caribbean Sea
13 Humboldt Current
14 Patagonian Shelf
15 South Brazil Shelf
16 East Brazil Shelf
17 North Brazil Shelf
18 West Greenland Shelf
19 East Greenland Shelf
20 Barents Sea
21 Norwegian Shelf
22 North Sea
23 Baltic Sea
24 Celtic-Biscay Shelf
25 Iberian Coastal
26 Mediterranean Sea
27 Canary Current
28 Guinea Current
29 Benguela Current
30 Agulhas Current
31 Somali Coastal Current
32 Arabian Sea
33 Red Sea
34 Bay of Bengal
35 Gulf of Thailand
36 South China Sea
37 Sulu-Celebes Sea
38 Indonesian Sea
39 North Australian Shelf
40 Northeast Australian Shelf - Great Barrier Reef
41 East-Central Australian Shelf
42 Southeast Australian Shelf
43 Southwest Australian Shelf
44 West-Central Australian Shelf
45 Northwest Australian Shelf
46 New Zealand Shelf
47 East China Sea
48 Yellow Sea
49 Kuroshio Current
50 Sea of Japan
51 Oyashio Current
52 Sea of Okhotsk
53 West Bering Sea
54 Chukchi Sea
55 Beaufort Sea
56 East Siberian Sea
57 Laptev Sea
58 Kara Sea
59 Iceland Shelf
60 Faroe Plateau
61 Antarctic
62 Black Sea
63 Hudson Bay
64 Arctic Ocean

Large Marine Ecosystems
Watershed Bounds
Political Borders

DEPTH

Feet (ft)	Meters (m)
-36,080	-11,000
-32,800	-10,000
-29,520	-9,000
-26,240	-8,000
-22,960	-7,000
-19,680	-6,000
-16,400	-5,000
-13,120	-4,000
-9,840	-3,000
-6,560	-2,000
-3,280	-1,000
-1,640	-500
-246	-75
0	0

N W E S

SCALE = 1 : 31,700,000
Robinson Projection
Units Meters

Miles
0 300 600 900 1200

Kilometers
0 400 800 1200 1600 2000 2400

Data Sources:
Bathymetry (2-minute) : Smith and Sadnwell, 1997
Bathymetry (5-minute) : NAVOCEANO, DBDB5
Watersheds (HYDRO 1k) : USGS Eros Data Center
Terrestorial Image, Political Boundaries : ESRI

IUCN

***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