Dear Michael ,

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 Bering Sea and Aleutian Islands alaska plaice (*Pleuronectes quadrituberculatus*)

Assessment ID:AFSC-ALPLAICBSAI-1972-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/269

Area ID: USA-NMFS-BSAI

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Wilderbuer WT
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1972-2008
Document	AFSC-ALPLAICBSAI-2008-Alaska plaice BSAI.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-14
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

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

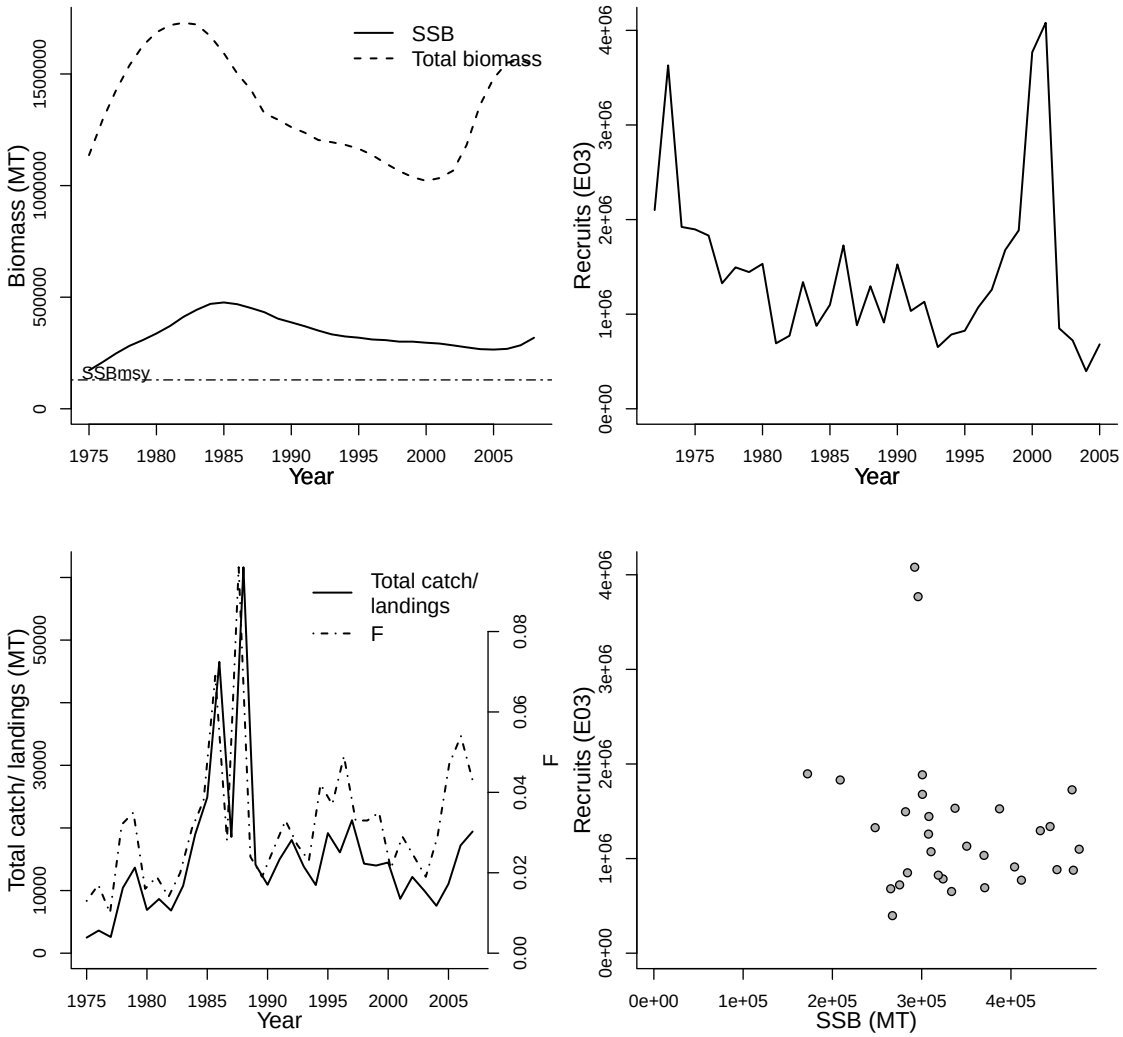
primary LME	secondary LME	tertiary LME
1 - East Bering Sea	na	na

Parameter	Value	Units
REC-AGE-yr	3	yr
F-AGE-yr-yr	3+	yr-yr
TB-AGE-yr	3+	yr
M-1/yr	0.25	1/yr
NATMORT-1/yr	0.25	1/yr
SSB-AGE-yr		
M		
A50-yr		
L50-cm		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.86	1/yr
NATMORT-1/yr (M)	0.25	1/yr
F40%-1/T	0.62	1/T
SSBmsy-MT (SSB)	129300	MT
SSBF40%-MT	147850	MT
F_{2008}/F_{msy}	0.050	
SSB_{2008}/SSB_{msy}	2.461	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1975	1972	1975	1975	1975
Maximum year	2008	2005	2008	2008	2007
Time series minimum	172125	397000	0.01	1021130	2492
Time series maximum	476423	4080000	0.096	1729330	61638
Units	MT	E03	1/yr	MT	MT



Assessment of Gulf of Alaska dusky rockfish (*Sebastes variabilis*)

Assessment ID:AFSC-DUSROCKGA-1973-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/283

Area ID: USA-NMFS-GA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Lunsford, C.R.
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1973-2008
Document	AFSC-DUSROCKGA-2008-Dusky rockfish GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-21
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

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

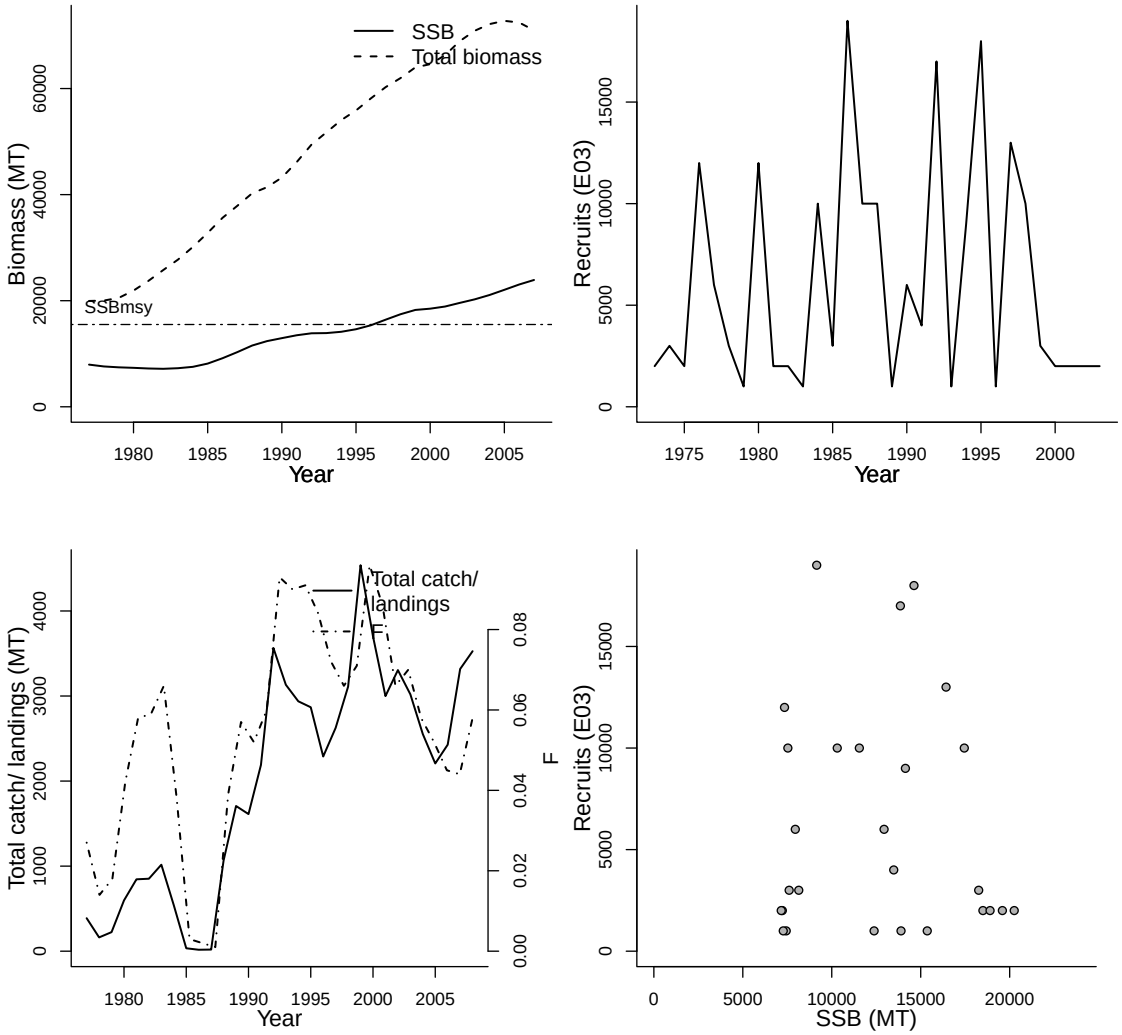
primary LME	secondary LME	tertiary LME
2 - Gulf of Alaska	na	na

Parameter	Value	Units
SSB-AGE-yr	11.3	yr
REC-AGE-yr	4	yr
TB-AGE-yr	4+	yr
A50-yr	11.3	yr
L50-cm	42.8	cm
M-1/yr	0.07	1/yr
NATMORT-1/yr	0.07	1/yr
F-AGE-yr		
M		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.107	1/yr
NATMORT-1/yr (M)	0.07	1/yr
F40%-1/T	0.087	1/T
SSBmsy-MT (SSB)	15511	MT
SSBF40%-MT	17727	MT
F_{2007}/F_{msy}	0.542	
SSB_{2007}/SSB_{msy}	1.541	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1977	1973	1977	1977	1977
Maximum year	2007	2003	2007	2007	2008
Time series minimum	7159	1000	0.001	19948	17
Time series maximum	23907	19000	0.096	72771	4538
Units	MT	E03	1/yr	MT	MT



Assessment of Gulf of Alaska northern rockfish (*Sebastes polyspinis*)

Assessment ID:AFSC-NROCKGA-1959-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/282

Area ID: USA-NMFS-GA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Heifetz, J
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1959-2008
Document	AFSC-NROCKGA-2008-Northern rockfish GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-17
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

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

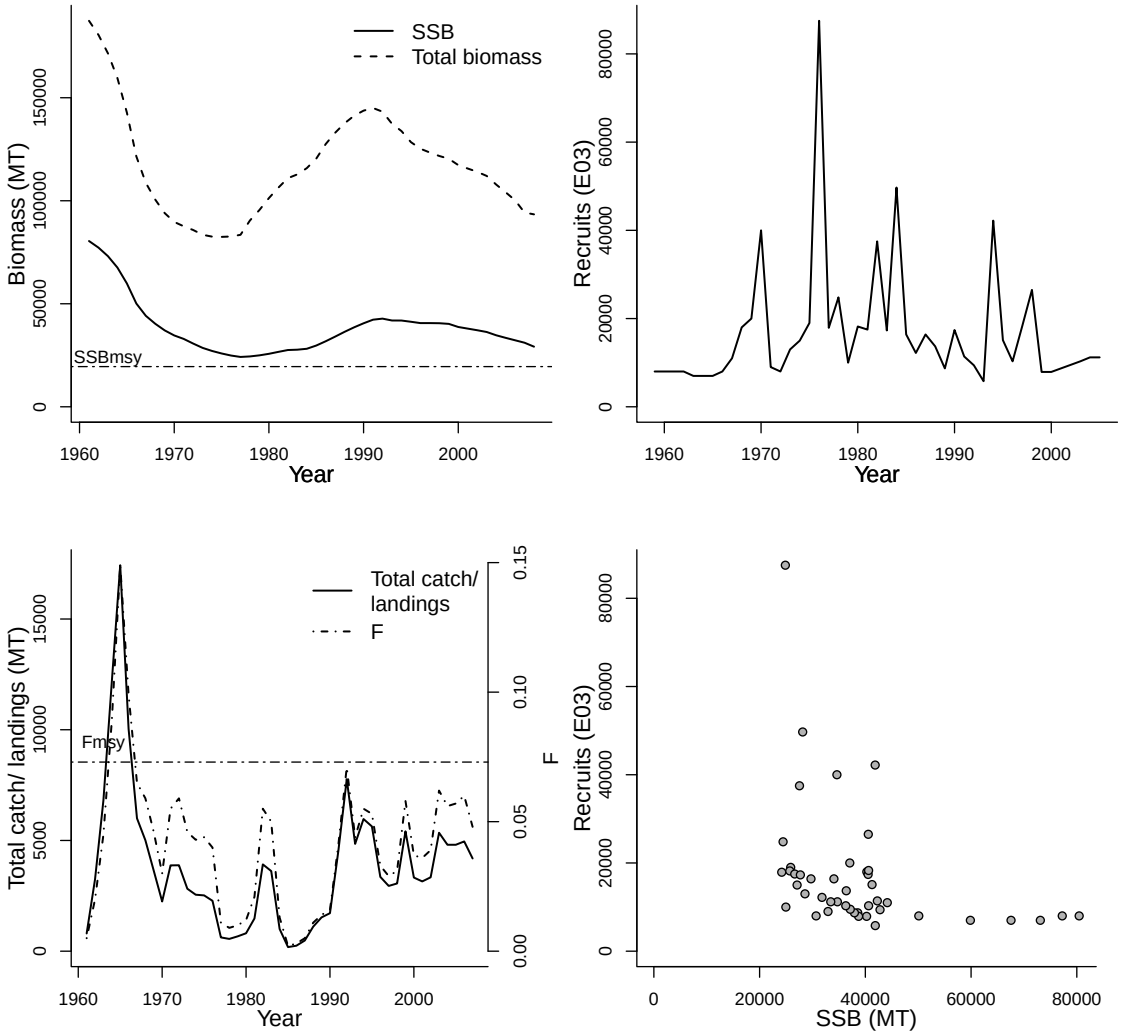
primary LME	secondary LME	tertiary LME
2 - Gulf of Alaska	na	na

Parameter	Value	Units
REC-AGE-yr	2	yr
F-AGE-yr-yr	2-22+	yr-yr
TB-AGE-yr	2+	yr
A50-yr	13	yr
L50-cm	36.1	cm
M-1/yr	0.06	1/yr
NATMORT-1/yr	0.06	1/yr
SSB-AGE-yr		
M		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.073	1/yr
NATMORT-1/yr (M)	0.06	1/yr
F40%-1/T	0.061	1/T
SSBmsy-MT (SSB)	19500	MT
SSBF40%-MT	22300	MT
F_{2007}/F_{msy}	0.658	
SSB_{2008}/SSB_{msy}	1.496	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1961	1959	1961	1961	1961
Maximum year	2008	2005	2007	2008	2007
Time series minimum	24187	5800	0.002	82464	185
Time series maximum	80449	87500	0.149	187340	17430
Units	MT	E03	1/yr	MT	MT



Assessment of Bering Sea and Aleutian Islands pacific cod (*Gadus macrocephalus*)

Assessment ID:AFSC-PCODBSAI-1964-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/268

Area ID: USA-NMFS-BSAI

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Thompson G
Assessment method	Stock Synthesis v2.0 model
Publication year	2008
Timeseries span	1964-2008
Document	AFSC-PCODBSAI-2008-Pacific cod BSAI.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-14
Date last loaded	2009-05-21
QA/QC complete	NO
Date approved	

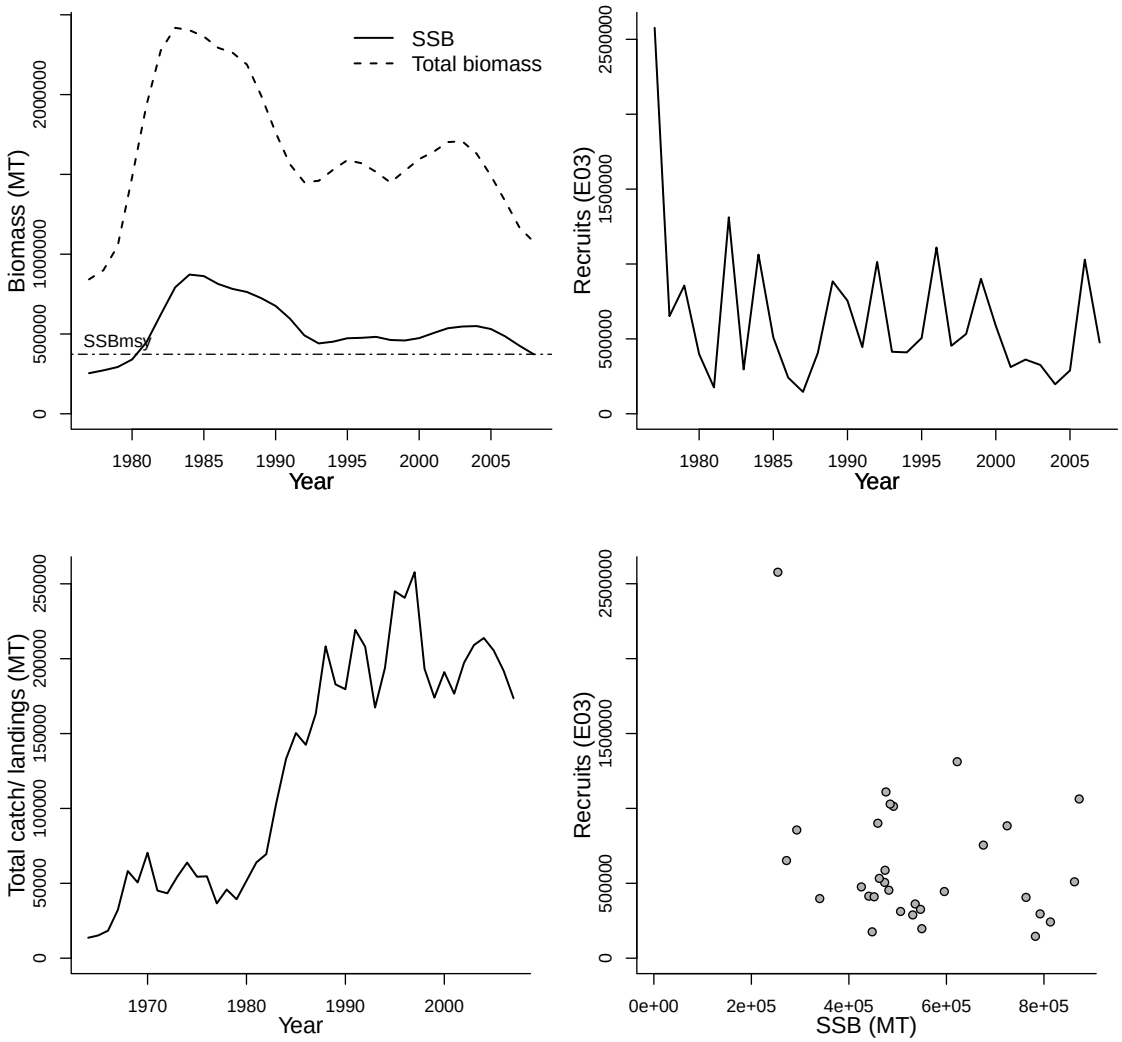
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

primary LME	secondary LME	tertiary LME
1 - East Bering Sea	na	na

Parameter	Value	Units
REC-AGE-yr	0	yr
F-AGE-yr-yr	0+	yr-yr
TB-AGE-yr	0+	yr
A50-yr	4.9	yr
L50-cm	58	cm
M-1/yr	0.34	1/yr
NATMORT-1/yr	0.34	1/yr
SSB-AGE-yr		
M		

Reference points		
Parameter	Value	Units
Fmsy-1/yr (F)	0.34	1/yr
NATMORT-1/yr (M)	0.34	1/yr
F40%-1/T	0.28	1/T
SSBmsy-MT (SSB)	373000	MT
SSBF40%-MT	426000	MT
SSB0-MT (SSB)	1066000.00	MT
SSB_{2008}/SSB_{msy}	0.997	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1977	1977		1977	1964
Maximum year	2008	2007		2008	2007
Time series minimum	254248	146000		842241	13649
Time series maximum	872225	2577000		2418520	257762
Units	MT	E03		MT	MT



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

Assessment ID:AFSC-PCODGA-1964-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/271

Area ID: USA-NMFS-GA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Thompson G
Assessment method	Stock Synthesis v2.0 model
Publication year	2008
Timeseries span	1964-2008
Document	AFSC-PCODGA-2008-Pacific cod GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-16
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

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

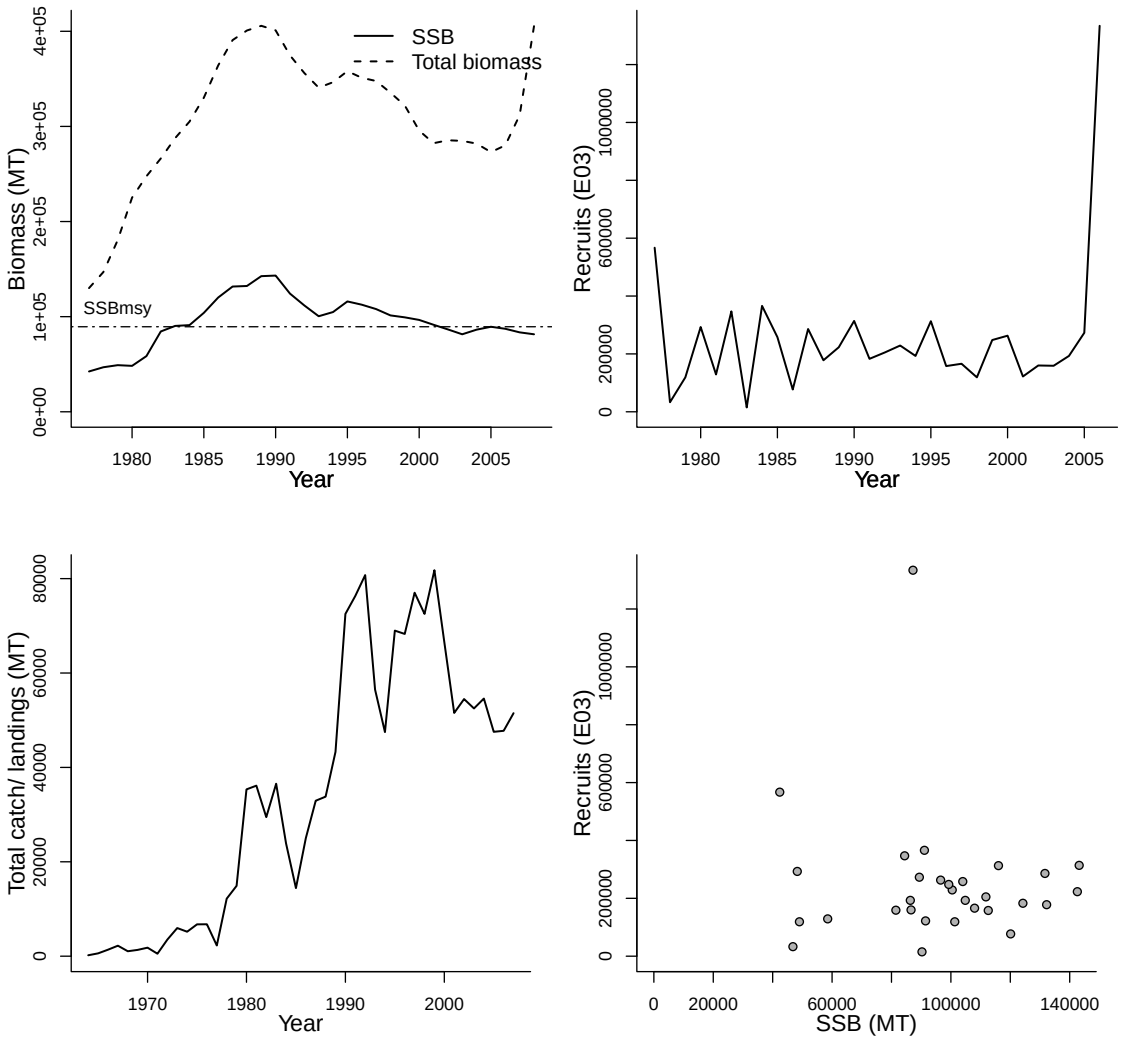
primary LME	secondary LME	tertiary LME
2 - Gulf of Alaska	na	na

Parameter	Value	Units
SSB-AGE-yr	4.3	yr
REC-AGE-yr	0	yr
TB-AGE-yr	0+	yr
A50-yr	4.3	yr
L50-cm	58	cm
M-1/yr	0.38	1/yr
NATMORT-1/yr	0.38	1/yr
F-AGE-yr		
M		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.64	1/yr
NATMORT-1/yr (M)	0.38	1/yr
F40%-1/T	0.52	1/T
SSBmsy-MT (SSB)	89400	MT
SSBF40%-MT	102200	MT
SSB_{2008}/SSB_{msy}	0.911	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1977	1977		1977	1964
Maximum year	2008	2006		2008	2007
Time series minimum	42383	15000		130021	196
Time series maximum	143190	1334000		405770	81784
Units	MT	E03		MT	MT



Assessment of Gulf of Alaska pacific ocean perch (*Sebastes alutus*)

Assessment ID:AFSC-POPERCHGA-1959-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/289

Area ID: USA-NMFS-GA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Hanselman, D.
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1959-2008
Document	AFSC-POPERCHGA-2008-Pacific ocean perch GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-17
Date last loaded	2009-05-26
QA/QC complete	NO
Date approved	

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

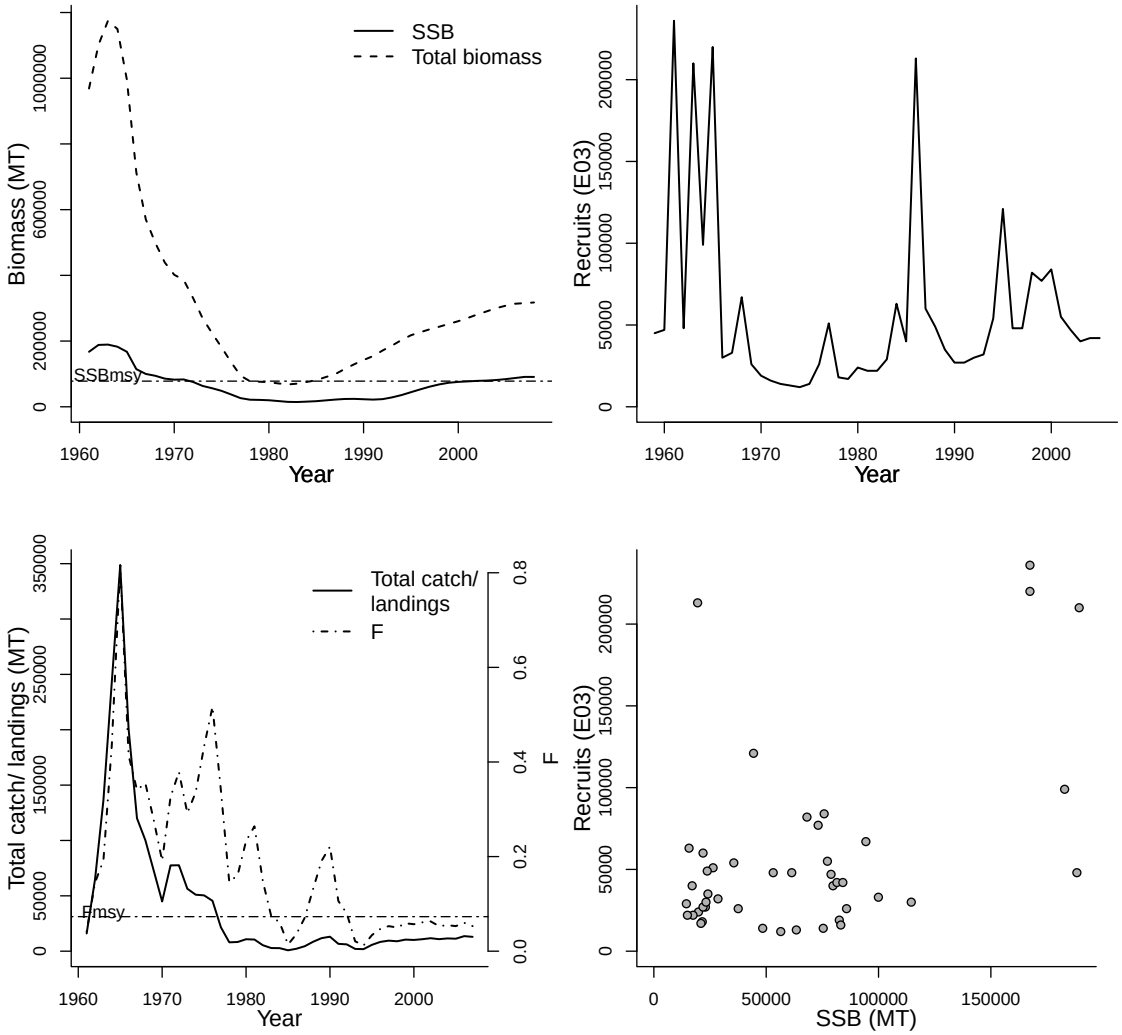
primary LME	secondary LME	tertiary LME
2 - Gulf of Alaska	na	na

Parameter	Value	Units
SSB-AGE-yr	10.5	yr
REC-AGE-yr	2	yr
TB-AGE-yr	2+	yr
A50-yr	10.5	yr
M-1/yr	0.06	1/yr
NATMORT-1/yr	0.06	1/yr
F-AGE-yr		
M		
L50-cm		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.073	1/yr
NATMORT-1/yr (M)	0.06	1/yr
F40%-1/T	0.061	1/T
SSBmsy-MT (SSB)	78045	MT
SSBF40%-MT	89195	MT
F_{2007}/F_{msy}	0.726	
SSB_{2008}/SSB_{msy}	1.165	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1961	1959	1961	1961	1961
Maximum year	2008	2005	2007	2008	2007
Time series minimum	14473	12000	0.012	68002	800
Time series maximum	189300	236000	0.816	1174760	348600
Units	MT	E03	1/yr	MT	MT



Assessment of Gulf of Alaska rougheye rockfish (*Sebastes aleutianus*)

Assessment ID:AFSC-REYEROCKGA-1974-2007-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/290

Area ID: USA-NMFS-GA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Shotwell, S. Kalei
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1974-2007
Document	AFSC-RYEROCKGA-2008-Rougheye rockfish GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-23
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

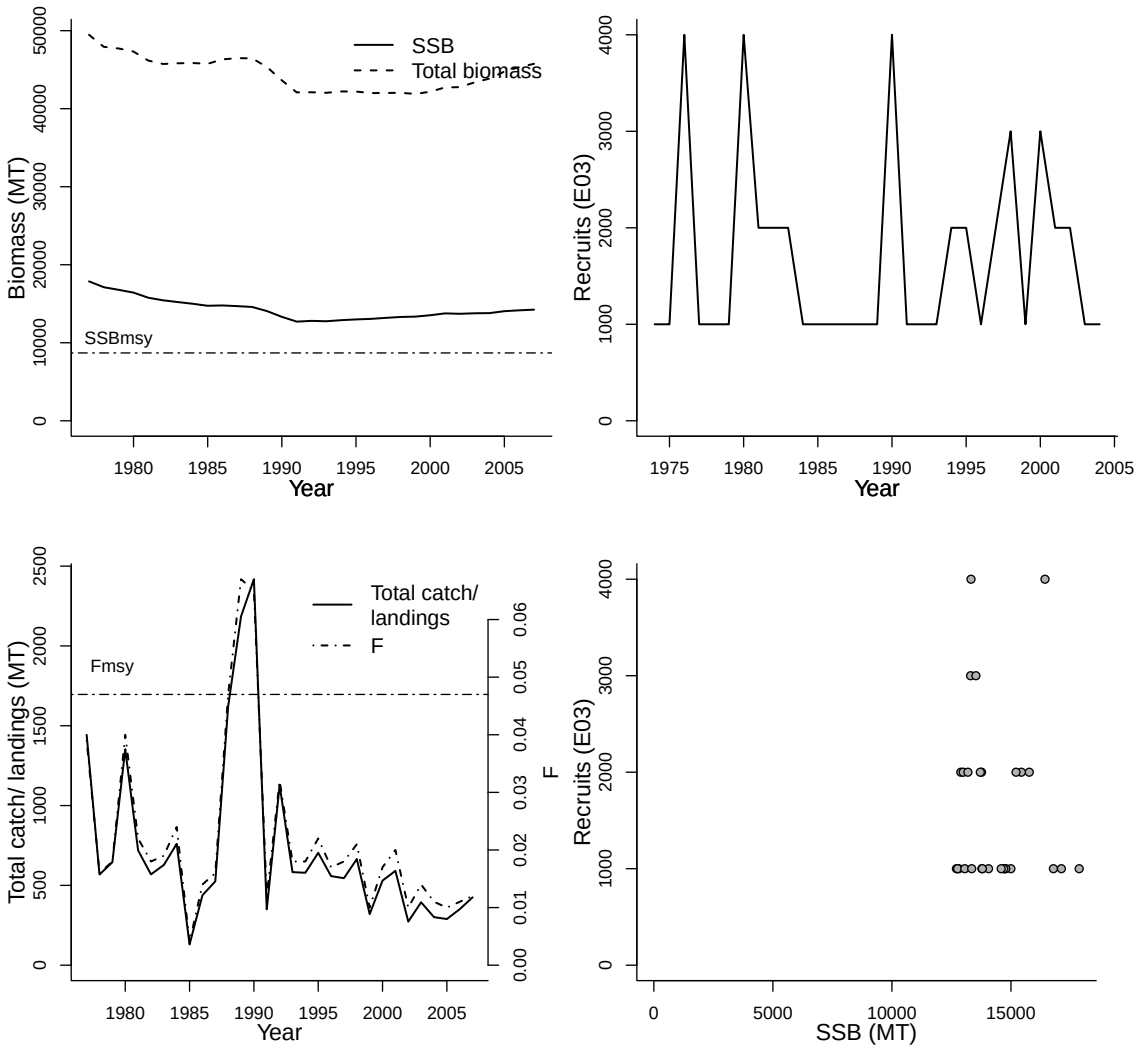
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

primary LME	secondary LME	tertiary LME
2 - Gulf of Alaska	na	na

Parameter	Value	Units
REC-AGE-yr	3	yr
TB-AGE-yr	3+	yr
A50-yr	19	yr
L50-cm	43.9	cm
M-1/yr	0.034	1/yr
NATMORT-1/yr	0.034	1/yr
SSB-AGE-yr	19	yr
F-AGE-yr		
M		

Reference points		
Parameter	Value	Units
Fmsy-1/T (F)	0.047	1/T
NATMORT-1/yr (M)	0.034	1/yr
F40%-1/T	0.039	1/T
SSBmsy-MT (SSB)	8694	MT
SSBF40%-MT	9935	MT
F_{2007}/F_{msy}	0.255	
SSB_{2007}/SSB_{msy}	1.638	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1977	1974	1977	1977	1977
Maximum year	2007	2004	2007	2007	2007
Time series minimum	12709	1000	0.004	41889	130
Time series maximum	17865	4000	0.067	49471	2418
Units	MT	E03	1/yr	MT	MT



Assessment of Eastern Bering Sea / Aleutian Islands / Gulf of Alaska sablefish (*Anoplopoma fimbria*)

Assessment ID:AFSC-SABLEFEBSAIGA-1956-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/266

Area ID: USA-NMFS-EBSAIGA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Hanselman D
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1956-2008
Document	AFSC-SABLEFEBSAIGA-2008-Sablefish EBS AI GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-14
Date last loaded	2009-05-20
QA/QC complete	NO
Date approved	

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

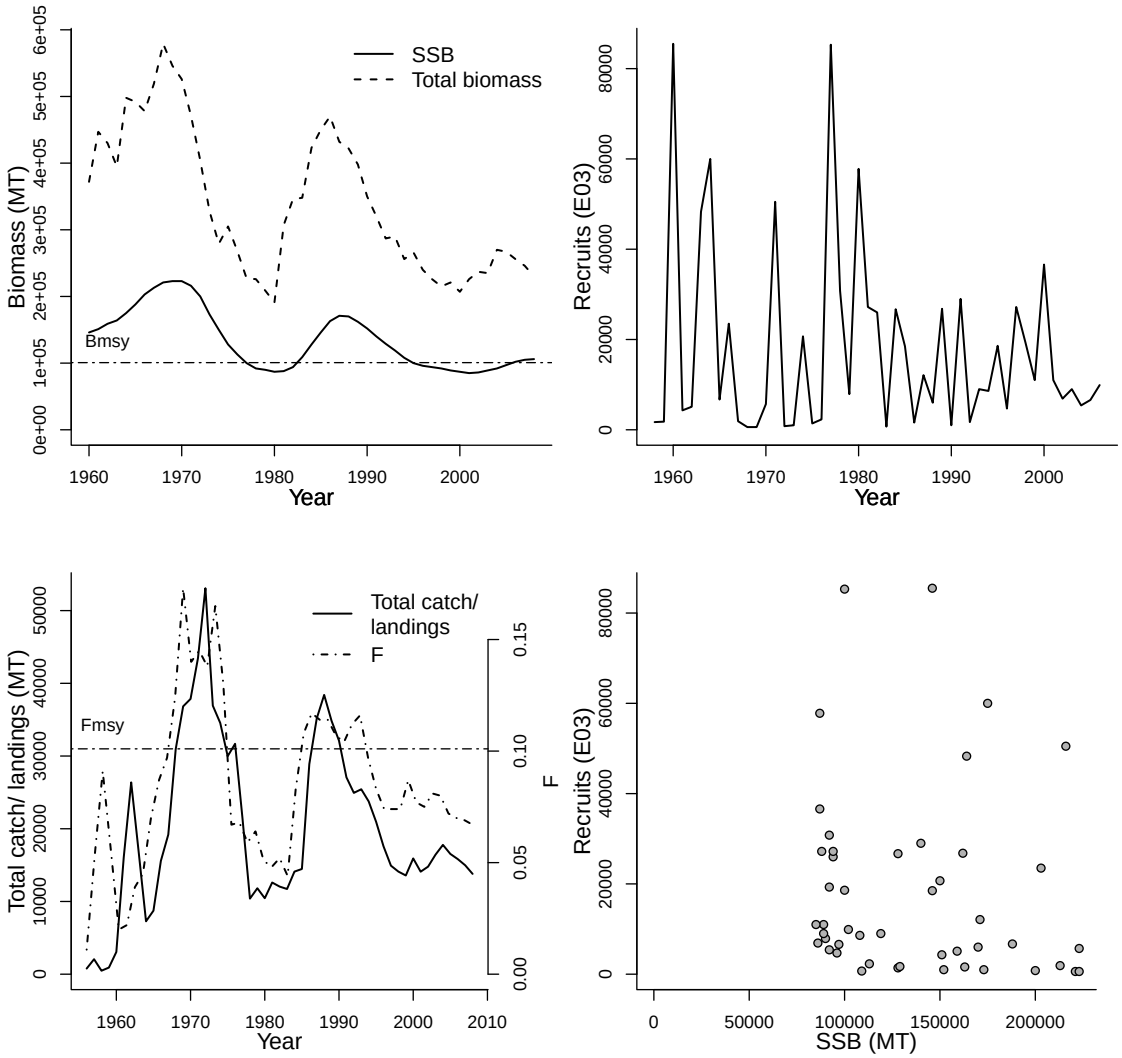
primary LME	secondary LME	tertiary LME
1 - East Bering Sea	2 - Gulf of Alaska	na

Parameter	Value	Units
SSB-AGE-yr	6.5	yr
REC-AGE-yr	2	yr
TB-AGE-yr	4+	yr
A50-yr	6.5	yr
L50-cm	65	cm
M-1/yr	0.1	1/yr
NATMORT-1/yr	0.1	1/yr
F-AGE-yr		
M		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.101	1/yr
NATMORT-1/yr (M)	0.1	1/yr
F40%-1/T	0.085	1/T
MSY-MT (TB)	19000	MT
Bmsy-MT (TB)	100730	MT
SSB0-MT (SSB)	287800	MT
SSBF40%-MT	115120	MT
TB_{2008}/B_{msy}	2.283	
F_{2008}/F_{msy}	0.663	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1960	1958	1960	1960	1956
Maximum year	2008	2006	2008	2008	2008
Time series minimum	85000	600	0.011	191000	477
Time series maximum	223000	85500	0.173	579000	53080
Units	MT	E03	1/yr	MT	MT



Assessment of Aleutian Islands walleye pollock (*Theragra chalcogramma*)

Assessment ID:AFSC-WPOLLAI-1976-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/284

Area ID: USA-NMFS-AI

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Barbeaux, S.
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1976-2008
Document	AFSC-WPOLLAI-2008-Walleye pollock AI.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-16
Date last loaded	2009-05-26
QA/QC complete	NO
Date approved	

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

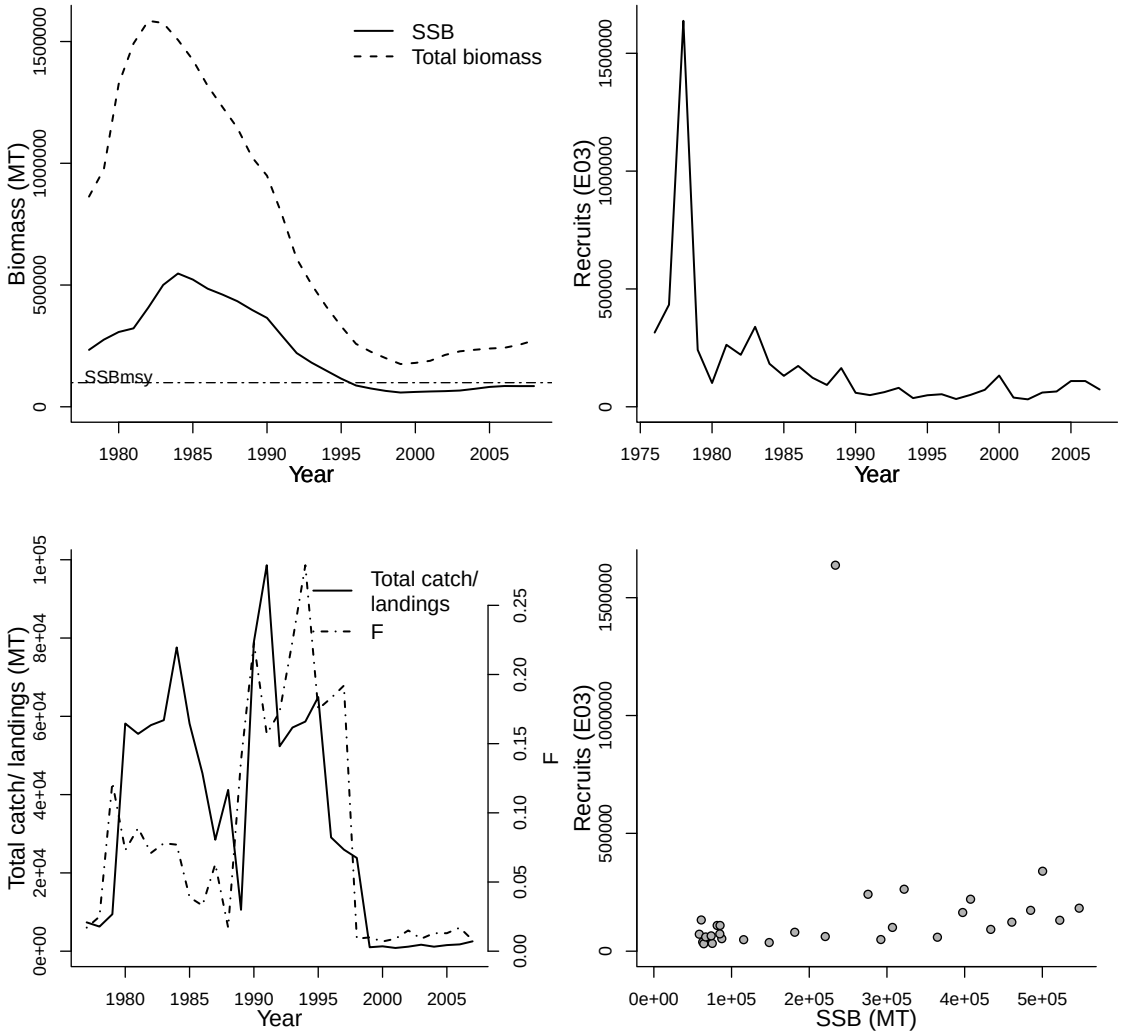
primary LME	secondary LME	tertiary LME
1 - East Bering Sea	na	na

Parameter	Value	Units
SSB-AGE-yr	4.5	yr
REC-AGE-yr	2	yr
F-AGE-yr-yr	2-15+	yr-yr
TB-AGE-yr	2+	yr
A50-yr	4.5	yr
M-1/yr	0.215	1/yr
NATMORT-1/yr	0.215	1/yr
M		
L50-cm		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.357	1/yr
NATMORT-1/yr (M)	0.215	1/yr
F40%-1/T	0.288	1/T
SSBmsy-MT (SSB)	98987	MT
SSBF40%-MT	113128	MT
F_{2008}/F_{msy}	0.022	
SSB_{2008}/SSB_{msy}	0.858	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1978	1976	1978	1978	1977
Maximum year	2008	2007	2008	2008	2007
Time series minimum	58489	31500	0.007	175420	824
Time series maximum	547400	1637800	0.279	1585100	98604
Units	MT	E03	1/yr	MT	MT



Assessment of Eastern Bering Sea walleye pollock (*Theragra chalcogramma*)

Assessment ID:AFSC-WPOLLEBS-1963-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/267

Area ID: USA-NMFS-EBS

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Ianelli JN
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1963-2008
Document	AFSC-WPOLLEBS-2008-Walleye pollock EBS.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-14
Date last loaded	2009-05-26
QA/QC complete	NO
Date approved	

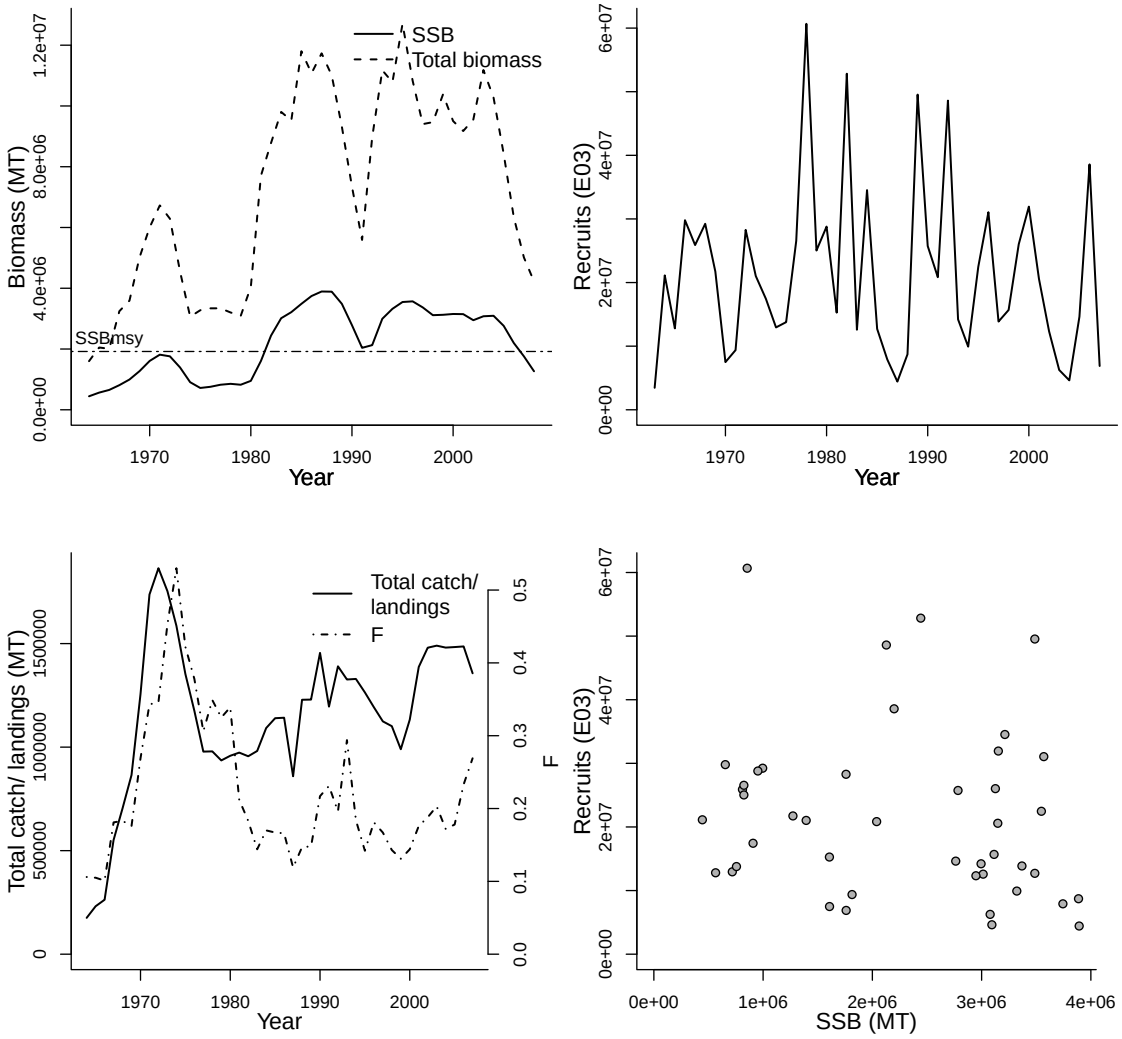
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

primary LME	secondary LME	tertiary LME
1 - East Bering Sea	na	na

Parameter	Value	Units
SSB-AGE-yr	3.5	yr
REC-AGE-yr	1	yr
F-AGE-yr-yr	1+	yr-yr
TB-AGE-yr	3+	yr
A50-yr	3.5	yr
M-1/yr	0.3	1/yr
NATMORT-1/yr	0.3	1/yr
M		
L50-cm		

Reference points		
Parameter	Value	Units
Fref-1/T (F)	0.398	1/T
NATMORT-1/yr (M)	0.3	1/yr
F40%-1/T	0.332	1/T
SSBmsy-MT (SSB)	1919000	MT
MSY-MT (TB)	977000	MT
SSB0-MT (SSB)	4,980,000	MT
SSBF40%-MT	2427000	MT
BH-h-dimless	0.67	dimless
SSB_{2008}/SSB_{msy}	0.660	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1964	1963	1964	1964	1964
Maximum year	2008	2007	2007	2008	2007
Time series minimum	444000	3455000	0.101	1600000	175375
Time series maximum	3893000	60673000	0.53	12704000	1864100
Units	MT	E03	1/yr	MT	MT



Assessment of Gulf of Alaska walleye pollock (*Theragra chalcogramma*)

Assessment ID:AFSC-WPOLLGA-1964-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/272

Area ID: USA-NMFS-GA

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Dorn, Martin
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1964-2008
Document	AFSC-WPOLLGA-2008-Walleye pollock GA.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-16
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

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

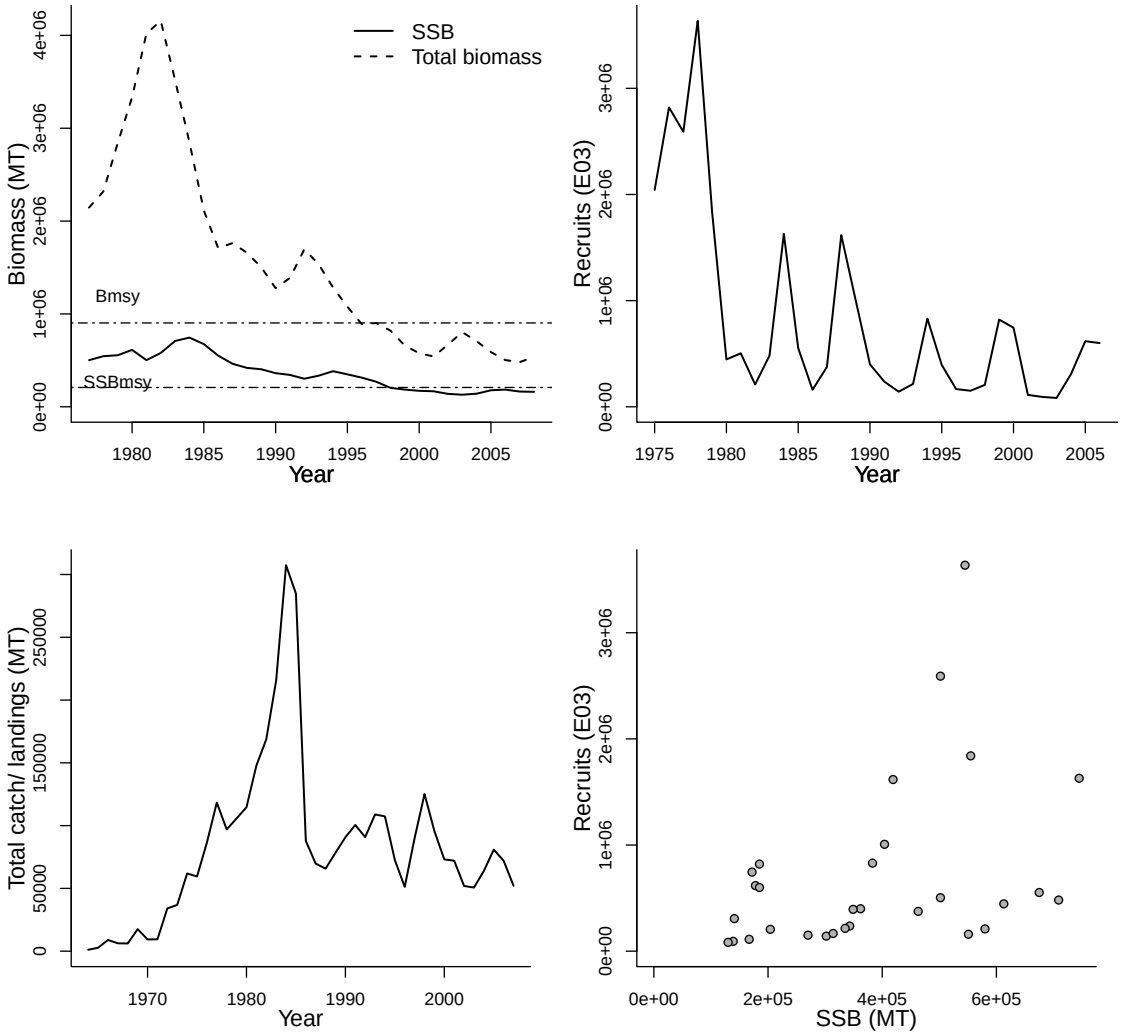
primary LME	secondary LME	tertiary LME
2 - Gulf of Alaska	na	na

Parameter	Value	Units
SSB-AGE-yr	4.9	yr
REC-AGE-yr	2	yr
TB-AGE-yr	3+	yr
A50-yr	4.9	yr
L50-cm	43	cm
M-1/yr	0.3	1/yr
NATMORT-1/yr	0.3	1/yr
F-AGE-yr		
M		

Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.286	1/yr
NATMORT-1/yr (M)	0.3	1/yr
F40%-1/T	0.245	1/T
SSBmsy-MT (SSB)	208000	MT
MSY-MT (TB)	169000	MT
Umsy-ratio (U)	0.187	ratio
Bmsy-MT (TB)	903000	MT
SSBF40%-MT	237000	MT
BF40%-MT	975000	MT
U40%-ratio	0.161	ratio
TB_{2008}/B_{msy}	2.582	
SSB_{2008}/SSB_{msy}	0.774	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1977	1975		1977	1964
Maximum year	2008	2006		2008	2007
Time series minimum	130000	83000		481000	1126
Time series maximum	745000	3636000		4157000	307401
Units	MT	E03		MT	MT



Assessment of Bering Sea and Aleutian Islands yellowfin sole (*Limanda aspera*)

Assessment ID:AFSC-YSOLEBSAI-1959-2008-MELNYCHUK
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/270

Area ID: USA-NMFS-BSAI

General assessment details.

Detail	Value
Management body	NMFS
Assessment group	Alaska Fisheries Science Center
Assessment authors	Wilderbuer T
Assessment method	an AD-Model builder statistical Catch at Age Model
Publication year	2008
Timeseries span	1959-2008
Document	AFSC-YSOLEBSAI-2008-Yellowfin sole BSAI.pdf (pdf in database)
Recorder	MELNYCHUK
Date entered	2009-04-14
Date last loaded	2009-05-22
QA/QC complete	NO
Date approved	

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

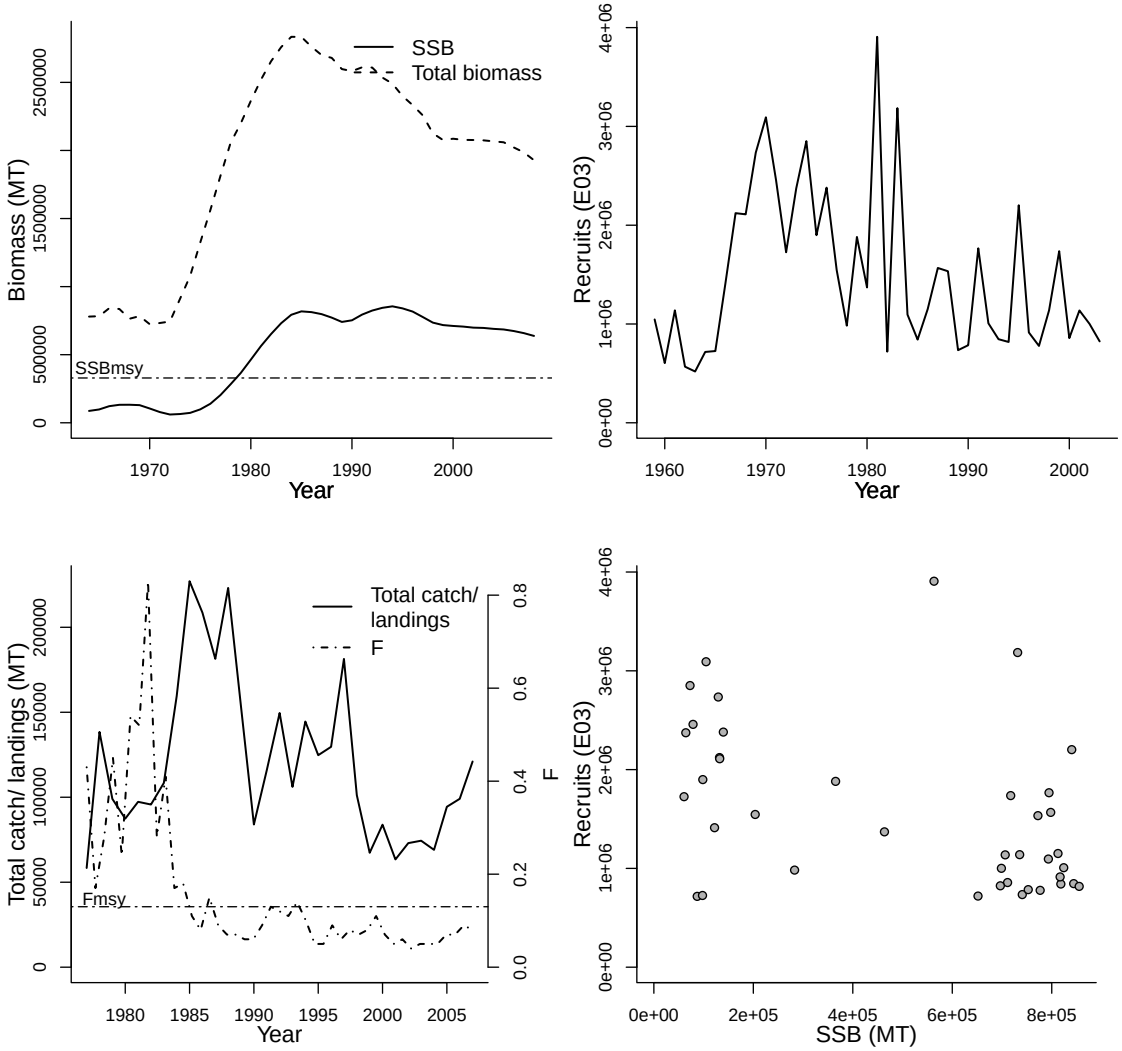
primary LME	secondary LME	tertiary LME
1 - East Bering Sea	na	na

Parameter	Value	Units
SSB-AGE-yr	10.5	yr
REC-AGE-yr	5	yr
TB-AGE-yr	2+	yr
A50-yr	10.5	yr
M-1/yr	0.12	1/yr
NATMORT-1/yr	0.12	1/yr
F-AGE-yr		
M		
L50-cm		

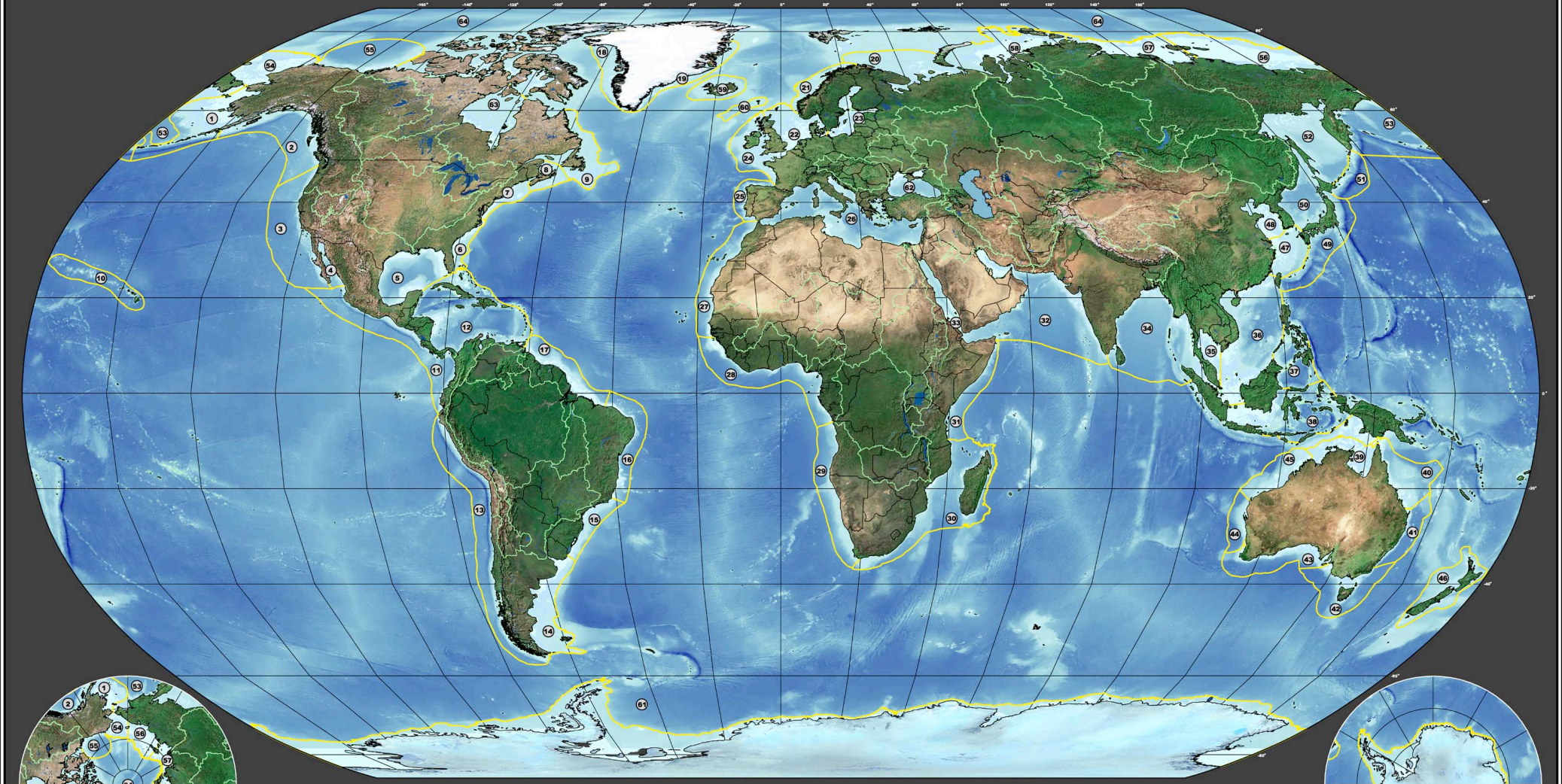
Reference points

Parameter	Value	Units
Fmsy-1/yr (F)	0.13	1/yr
NATMORT-1/yr (M)	0.12	1/yr
SSBmsy-MT (SSB)	329000	MT
F_{2008}/F_{msy}	0.615	
SSB_{2008}/SSB_{msy}	1.939	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1964	1959	1964	1964	1977
Maximum year	2008	2003	2008	2008	2007
Time series minimum	60692	519000	0.04	724283	58373
Time series maximum	855155	3907000	0.83	2834670	227107
Units	MT	E03	1/yr	MT	MT



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

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