Dear Daniel,

Thank you sincerely for submitting assessments to the Myers II database. We have entered 5 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 Western Scotian Shelf cusk (*Brosme brosme*)

Assessment ID:DFO-MAR-CUSK4X-1970-2007-RICARD
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/476

Area ID: Canada-DFO-4X

General assessment details.

Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Maritimes Region
Assessment authors	Davies, Trevor D.
Assessment method	Bayesian Surplus Production Model
Publication year	
Timeseries span	1970-2007
Document	Davies-Jonsen-CJFAS-2011.pdf (pdf in database)
Recorder	RICARD
Date entered	2011-03-01
Date last loaded	2011-03-01
QA/QC complete	NO
Date approved	

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

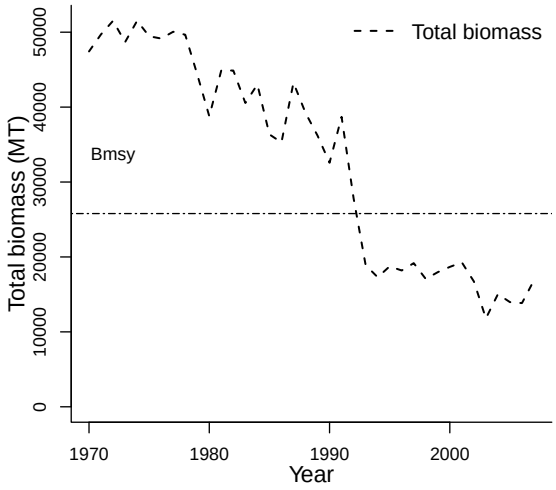
primary LME	secondary LME	tertiary LME
7 - Northeast U.S. Continental Shelf	na	na

Parameter	Value	Units
REC-AGE		
SSB-AGE-yr		
SSB-SEX-sex		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		

Reference points

Parameter	Value	Units
B0-MT	51580	MT
MSY-MT (TB)	1482.925	MT
Bmsy-MT (TB)	25790	MT
Umsy-ratio (U)	0.0575	ratio
TB_{2007}/B_{msy}	0.655	

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year				1970	
Maximum year				2007	
Time series minimum				11800	
Time series maximum				51520	
Units				MT	



No recruitment data available

No exploitation data available

No SSB−recruit data available

Assessment of Southern Labrador-Eastern Newfoundland atlantic cod (*Gadus morhua*)

Assessment ID:DFO-NFLD-COD2J3KL-1850-2005-RICARD
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/474

Area ID: Canada-DFO-2J3KL

General assessment details.

Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Newfoundland Region
Assessment authors	
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	
Timeseries span	1850-2005
Document	DFO-COD2J3KL-2006.pdf (pdf not in database)
Recorder	RICARD
Date entered	2011-02-11
Date last loaded	2011-02-11
QA/QC complete	NO
Date approved	

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

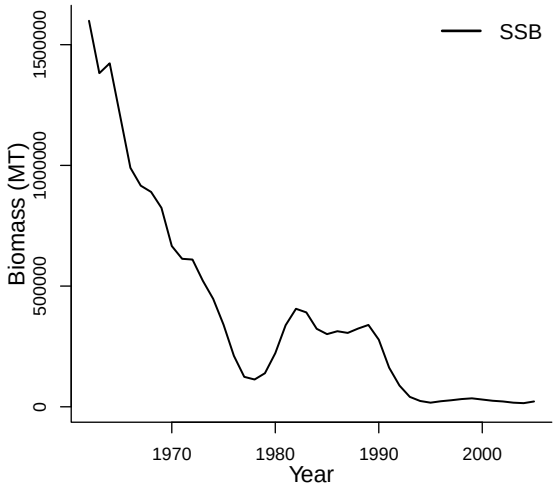
primary LME	secondary LME	tertiary LME
9 - Newfoundland-Labrador Shelf	na	na

Parameter	Value	Units
REC-AGE-yr	3	yr
F-AGE-yr-yr	2-10	yr-yr
A50-yr	6-7	yr
M-1/T	0.4	1/T
SSB-AGE-yr		
SSB-SEX-sex		
TB-AGE-yr		
M		
L50-cm		

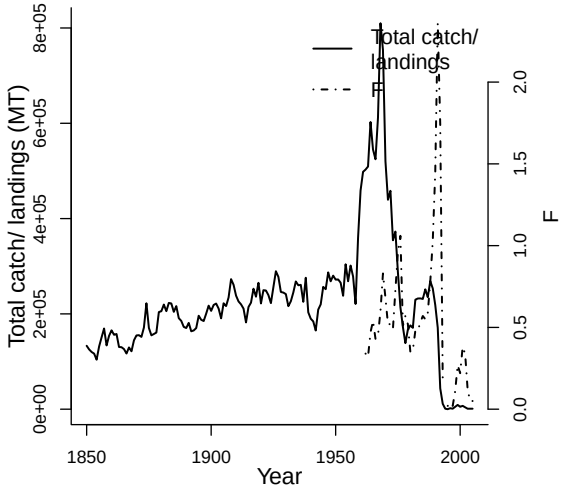
Reference points

Parameter	Value	Units
MORATOR-yr-yr	1992-2005	yr-yr

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1962		1962		1850
Maximum year	2005		2005		2005
Time series minimum	15000		0.02		0
Time series maximum	1599000		2.36		810000
Units	MT		1/T		MT



No recruitment data available



No SSB−recruit data available

Assessment of Southern Gulf of St. Lawrence atlantic cod (*Gadus morhua*)

Assessment ID:DFO-SG-COD4TVn-1965-2009-RICARD
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/156

Area ID: Canada-DFO-4T

General assessment details.

Detail	Value
Management body	DFO
Assessment group	Department of Fisheries and Oceans - Southern Gulf Region
Assessment authors	Swain, D.P.
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	2009
Timeseries span	1965-2009
Document	Swain2009-Assessment-of-Southern-Gulf-Cod.pdf (pdf in database)
Recorder	RICARD
Date entered	2011-03-01
Date last loaded	2011-03-01
QA/QC complete	YES
Date approved	2011-03-01

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

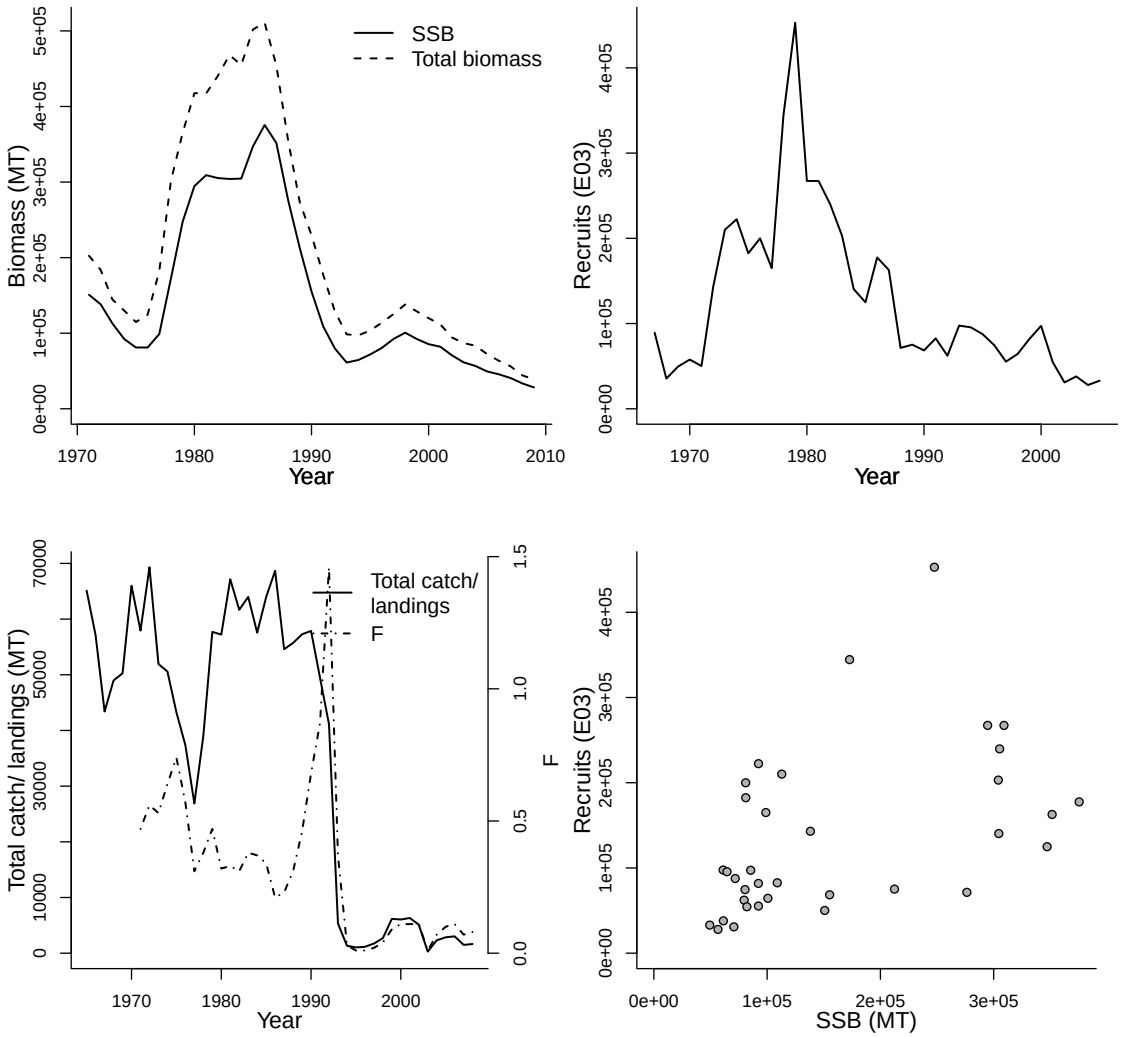
primary LME	secondary LME	tertiary LME
8 - Scotian Shelf	na	na

Parameter	Value	Units
F-AGE-yr-yr	7+	yr-yr
A50-yr	4-5	yr
M-1/T	SEE TIMESERIES	1/T
REC-AGE		
SSB-AGE-yr		
SSB-SEX-sex		
TB-AGE-yr		
M		
L50-cm		

Reference points

Parameter	Value	Units
Bcrp-MT	80000	MT

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1971	1967	1971	1971	1965
Maximum year	2009	2005	2008	2009	2008
Time series minimum	28235	27883	0.01	38776	289
Time series maximum	375498	452876	1.46	510714	69317
Units	MT	E03	1/T	MT	MT



Assessment of North-Central Peruvian coast peruvian anchoveta (*Engraulis ringens*)

Assessment ID:IMARPE-PANCHPERUNC-1963-2004-RICARD
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/458

Area ID: Peru-IMARPE-NC

General assessment details.

Detail	Value
Management body	IMARPE
Assessment group	Instituto del Mar del Peru
Assessment authors	Cahuin, Sandra M.
Assessment method	Virtual Population Analysis
Publication year	2009
Timeseries span	1963-2004
Document	Cahuin_etal_2009.pdf (pdf in database)
Recorder	RICARD
Date entered	2010-07-21
Date last loaded	2010-07-21
QA/QC complete	YES
Date approved	2010-07-21

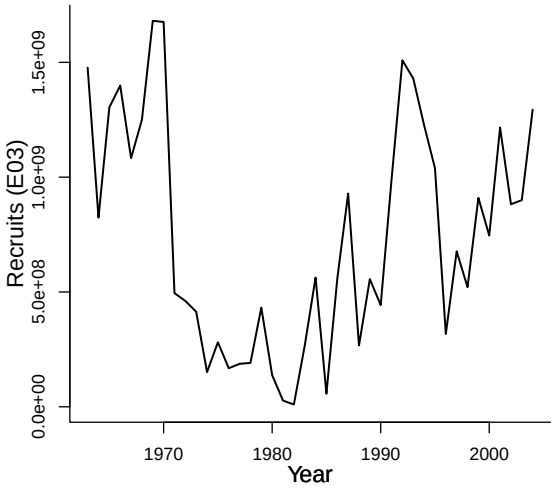
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

primary LME	secondary LME	tertiary LME
13 - Humboldt Current	na	na

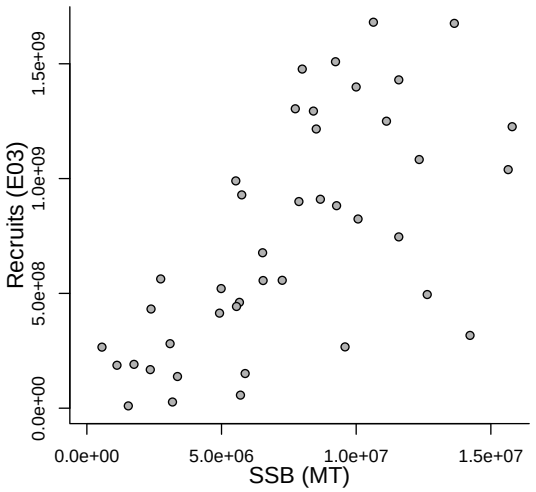
Parameter	Value	Units
REC-AGE-yr	0	yr
SSB-AGE-yr		
SSB-SEX-sex		
TB-AGE-yr		
F-AGE-yr		
M		
A50-yr		
L50-cm		

Reference points		
Parameter	Value	Units

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1963	1963			
Maximum year	2004	2004			
Time series minimum	561000	10000000			
Time series maximum	15792000	1681000000			
Units	MT	E03			



No exploitation data available



Assessment of Chilean EEZ and offshore chilean jack mackerel (*Trachurus murphyi*)

Assessment ID:SPRFMO-CHTRACCH-1950-2010-RICARD
Issue URL: http://www.marinebiodiversity.ca/RAMlegacy/ramlegacy-bug-reporting/424

Area ID: multinational-SPRFMO-CH

General assessment details.

Detail	Value
Management body	SPRFMO
Assessment group	South Pacific Regional Fisheries Management Organization
Assessment authors	South Pacific Regional Fisheries Management Organisation
Assessment method	Joint Jack Mackerel
Publication year	2010
Timeseries span	1950-2010
Document	9th-SWG-Report-Final-Adopted-28Oct2010.pdf (pdf in database)
Recorder	RICARD
Date entered	2011-02-28
Date last loaded	2011-02-28
QA/QC complete	YES
Date approved	2011-02-28

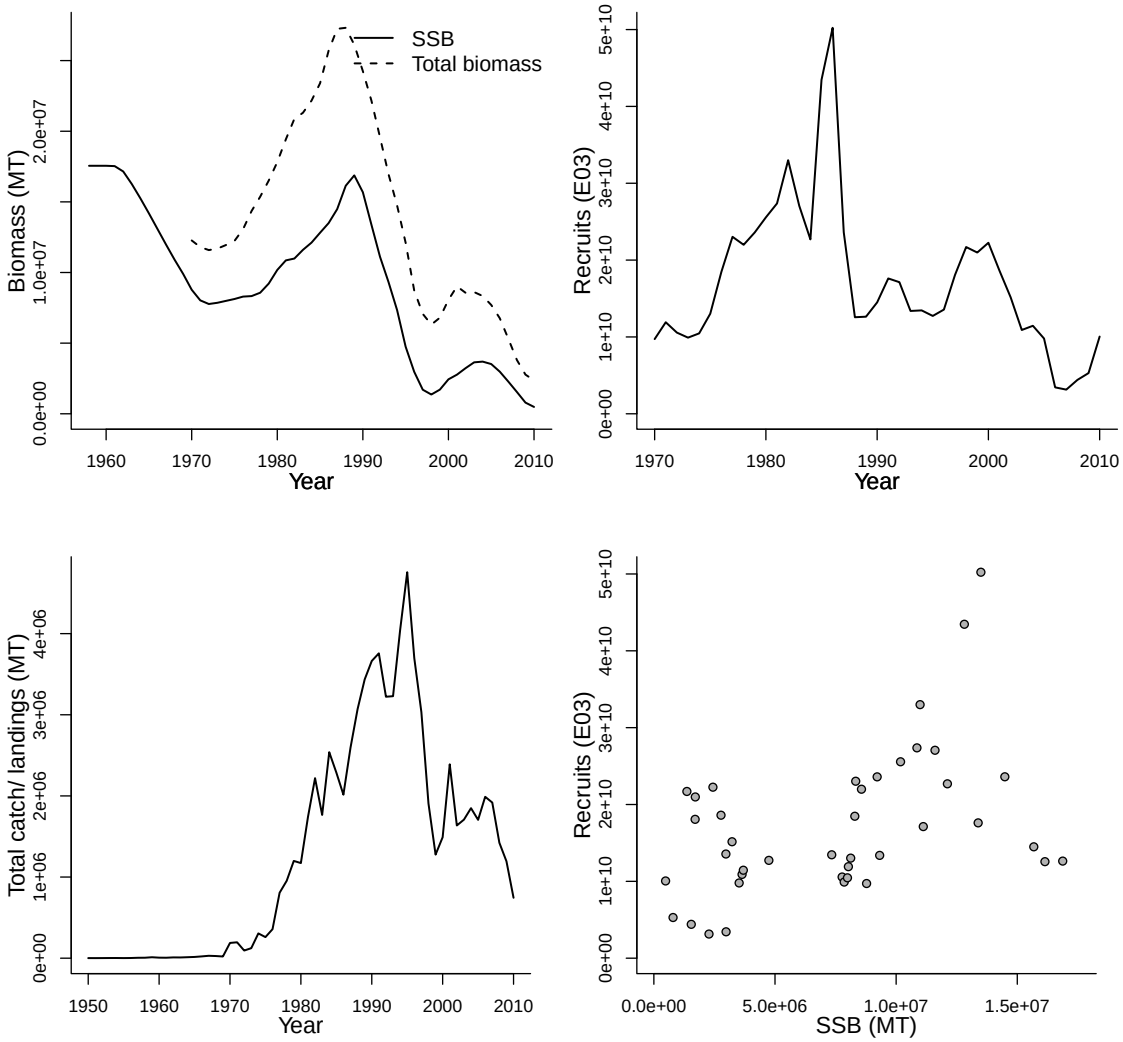
Biometrics provided. Note that the assumed timeseries to which the reference point pertains is indicated in parentheses.

primary LME	secondary LME	tertiary LME
13 - Humboldt Current	na	na

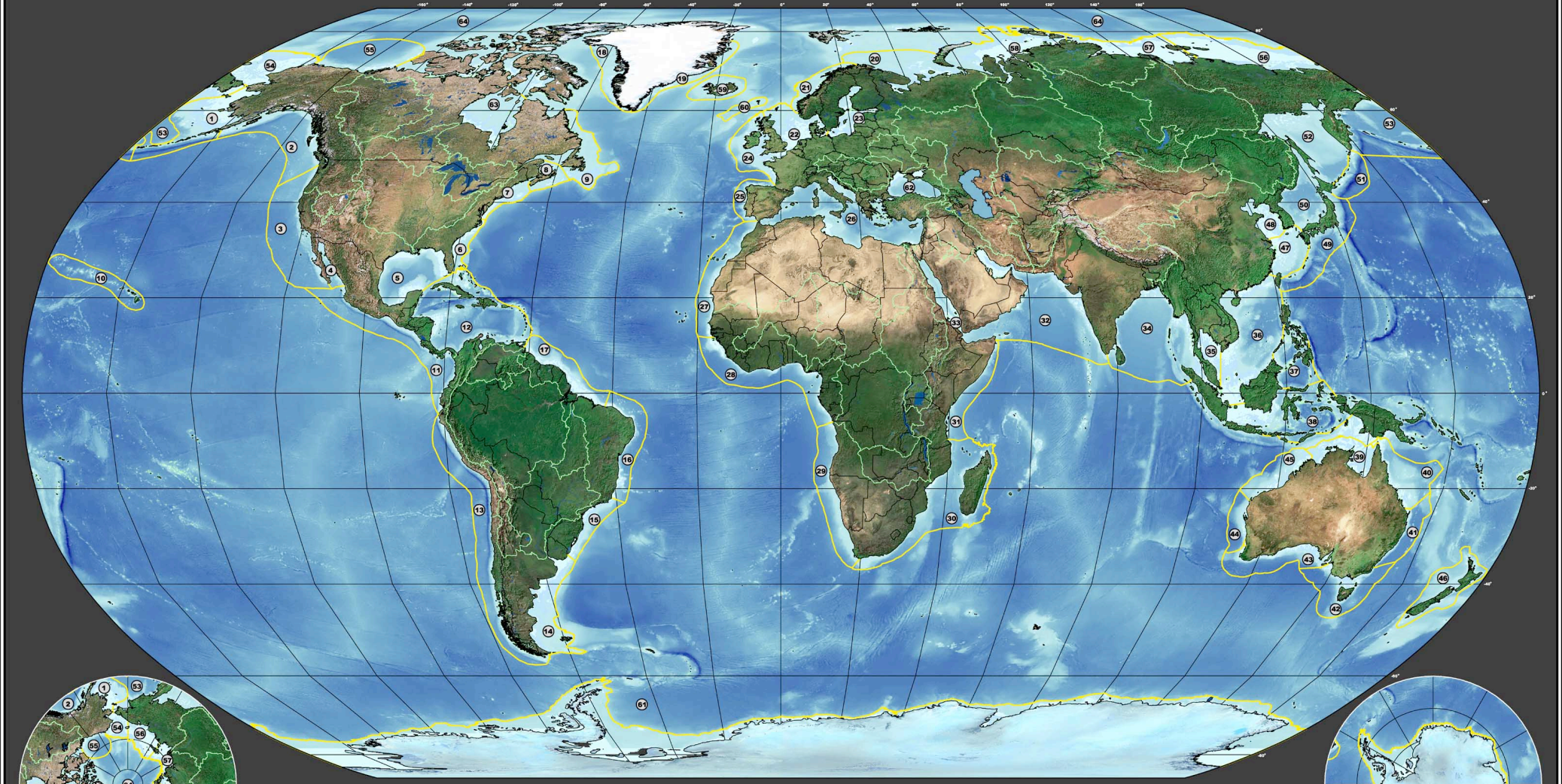
Parameter	Value	Units
A50-yr	5	yr
M-1/yr	0.23	1/yr
REC-AGE		
SSB-AGE-yr		
SSB-SEX-sex		
TB-AGE-yr		
F-AGE-yr		
M		
L50-cm		

Reference points		
Parameter	Value	Units

Time series minima and maxima					
	SSB	R	F	TB	Catch
Minimum year	1958	1970		1970	1950
Maximum year	2010	2010		2010	2010
Time series minimum	484120	3143930000		2362660	800
Time series maximum	17554500	50229100000		27321000	4756979
Units	MT	E03		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

SOUTH POLAR REGION