

**Supplementary material for manuscript entitled:** Review: Phytoplankton Primary Production in the World's Estuarine-Coastal Ecosystems

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Table A1. Inventory of median annual phytoplankton primary production computed from 1148 measurements made in 131 estuarine-coastal ecosystems. Forty-seven of these values are single measurements made at one site during one year; the others represent the medians of measurements made at multiple sites and/or during multiple years (see Fig. 5 and text for details). The overall median primary production is 183 and the mean is 254 g C m<sup>-2</sup> y<sup>-1</sup>. GPP = gross primary production; NPP = net production; U = unreported. **n** = number of annual measurements made.

Ecosystem	Country	Region	Measure	Method	Median Primary Production g C m <sup>-2</sup> y <sup>-1</sup>	n	Reference
Øresund	DENMARK/ SWEDEN	Baltic	GPP	14C	39	1	Steeman Nielsen, 1958
Øresund	DENMARK/ SWEDEN	Baltic	U	14C	130	37	Rydberg et al., 2006; Ærtebjerg, 1981
Aarhus Bay	DENMARK	Europe	GPP	14C	437	1	Jørgensen, 1996
Aarhus Bay	DENMARK	Europe	NPP	14C	260	1	Jørgensen, 1996
Adriatic Sea coastal	ITALY	Europe	U	14C	208	3	Zoppini et al., 1995
Adyar Estuary	INDIA	Asia	GPP	O2	83	1	Purvaja and Ramesh, 2000
Akkeshi Bay	JAPAN	Asia	GPP	14C	416	1	Taguchi et al., 1977
Akkeshi Bay	JAPAN	Asia	NPP	14C	146	1	Taguchi et al., 1977
Altamaha River Mouth	USA	North America	U	14C	546	1	Thomas, 1966
Apalachicola Bay	USA	North America	U	14C	261	3	Mortazavi et al., 2000
Arcachon Bay	FRANCE	Europe	U	14C	103	1	Glé et al., 2008
Arkona Basin	DENMARK/ SWEDEN	Baltic	U	14C	131	8	Ærtebjerg, 1981
Balsforden	NORWAY	Europe	U	14C	110	3	Eilertsen and Taasen, 1984
Baltic Sea	FINLAND/SWEDEN	Baltic	U	14C	57	1	Fonselius, 1972
Barataria Bay	USA	North America	GPP	O2	300	1	Brkich, 1972 cited in Day et al., 1973
Barataria Bay	USA	North America	NPP	O2	210	1	Brkich, 1972 cited in Day et al., 1973
Barra de Navidad	MEXICO	South-Central America	GPP	O2	324	1	Sandoval-Rojo, 1988
Barra de Navidad	MEXICO	South-Central America	NPP	O2	242	1	Sandoval-Rojo, 1988

Bay of Brest	FRANCE	Europe	U	14C	148	1	Del Amo et al., 1997; Y. Del Amo, pers. comm. 03/29/2011
Bedford Basin	CANADA	North America	U	14C	213	1	Platt, 1975
Biscayne Bay	USA	North America	U	14C	22	4	Roman et al., 1983
Bissel Cove	USA	North America	GPP	O2	121	1	Nixon and Oviatt, 1973 cited in Welsh et al., 1982
Bissel Cove	USA	North America	NPP	O2	56	1	Nixon and Oviatt, 1973 cited in Welsh et al., 1982
Boston Harbor	USA	North America	U	14C	494	11	Oviatt et al., 2007
Bristol Channel	UNITED KINGDOM	Europe	U	14C	49	3	Joint and Pomroy, 1981
Burrard Inlet	CANADA	North America	U	14C	358	10	Stockner et al., 1979
Cananéia Lagoon	BRAZIL	South-Central America	U	14C	125	1	Tundisi, 1973
Charlestown-Green Hill Pond	USA	North America	U	14C	32	1	Nixon and Lee, 1981 cited in Nixon, 1982
Chesapeake Bay	USA	North America	GPP	O2	90	24	Flemer, 1970
Chesapeake Bay	USA	North America	GPP	14C	456	8	Harding et al., 2002
Chesapeake Bay	USA	North America	NPP	14C	423	11	Harding et al., 2002
Chesapeake Bay	USA	North America	U	14C	501	6	Boynton, 1982
Chincoteague Bay	USA	North America	GPP	O2	431	3	Boynton, 1973
Chincoteague Bay	USA	North America	NPP	O2	178	3	Boynton, 1973
Cienaga Grande de Santa Marta	COLOMBIA	South-Central America	NPP	O2	990	1	Hernandez and Gocke, 1990
Cienaga Grande de Santa Marta	COLOMBIA	South-Central America	GPP	O2	1690	1	Hernandez and Gocke, 1990
Cochin Backwater	INDIA	Asia	GPP	O2	280	1	Qasim, 1970
Cochin Backwater	INDIA	Asia	NPP	14C	124	1	Qasim, 1970
Colne Estuary	UNITED KINGDOM	Europe	GPP	14C	5	4	Kocum et al., 2002
Columbia River Estuary	USA	North America	NPP	14C	50	9	Anderson, 1964; Small et al., 1990; Lara-Lara et al., 1990
Core-Bogue Estuarine System	USA	North America	GPP	O2	99	31	Williams, 1966; Williams and Murdoch, 1966
Core-Bogue Estuarine System	USA	North America	NPP	O2	45	31	Williams, 1966; Williams and Murdoch, 1966
Core-Bogue Estuarine System	USA	North America	U	14C	104	12	Fisher et al., 1982; Sanders and Kuenzler, 1979; Thayer, 1969, 1971
Dabob Bay	USA	North America	U	14C	194	1	Welschmeyer and Lorenzen, 1985
Delaware Bay	USA	North America	NPP	14C	175	8	Pennock and Sharp, 1986
Dokai Bay	JAPAN	Asia	U	13C	180	1	Tada et al., 2001
Douro Estuary	PORTUGAL	Europe	NPP	14C	106	3	Azevedo et al., 2006

Dumbell Bay	CANADA	North America	GPP	O2	12	1	Apollonio, 1980
Dumbell Bay	CANADA	North America	NPP	14C	9	1	Apollonio, 1980
Duplin River Estuary	USA	North America	GPP	O2	231	3	Ragotzkie, 1959
Dutch Wadden Sea	NETHERLANDS	Europe	GPP	O2	146	1	Loebl et al., 2007
Dutch Wadden Sea	NETHERLANDS	Europe	U	14C	213	10	Cadée and Hegeman, 1979, 1993; Philippart et al., 2007
Dybsø Fjord	DENMARK	Baltic	GPP	14C	6	2	Steeman Nielsen, 1957, 1958
El Verde Lagoon	MEXICO	South-Central America	NPP	O2	521	1	Flores-Verdugo et al., 1988
Ems-Dollard Estuary	GERMANY/ NETHERLANDS	Europe	U	14C	136	33	Colijn and Ludden, 1983
Ennore Creek	INDIA	Asia	GPP	O2	157	1	Purvaja and Ramesh, 2000
Estero de Morales	COSTA RICA	South-Central America	GPP	O2	457	1	Gocke et al., 2001b
Estero de Morales	COSTA RICA	South-Central America	NPP	O2	278	1	Gocke et al., 2001b
Estero Pargo	MEXICO	South-Central America	NPP	O2	285	1	Rivera-Monroy et al., 1998
Etang de Berre	FRANCE	Europe	U	14C	290	2	Kim, 1983
Fehmarn Belt	DENMARK	Baltic	U	14C	170	6	Ærtebjerg, 1981
Flax Pond	USA	North America	NPP	14C	12	1	Moll, 1977
Fourleague Bay	USA	North America	GPP	O2	418	2	Randall and Day Jr, 1987
Fourleague Bay	USA	North America	NPP	O2	219	2	Randall and Day Jr, 1987
Funka Bay	JAPAN	Asia	NPP	14C	100	1	Maita and Yanada, 1978
German Wadden Sea	GERMANY	Europe	GPP	14C	150	2	Tillman et al., 2000
German Wadden Sea	GERMANY	Europe	NPP	14C	119	2	Tillman et al., 2000
Golfe du Lion	FRANCE	Europe	GPP	14C	145	1	Conan et al., 1998
Golfo de Nicoya	COSTA RICA	South-Central America	GPP	O2	747	1	Gocke et al., 2001b, a
Golfo de Nicoya	COSTA RICA	South-Central America	NPP	O2	444	1	Gocke et al., 2001b, a
Great Belt	DENMARK	Baltic	GPP	14C	59	4	Steeman Nielsen, 1958
Great Belt	DENMARK	Baltic	U	14C	170	9	Ærtebjerg, 1981
Great South Bay	USA	North America	NPP	14C	450	1	Lively et al., 1983
Gulf of Bothnia	FINLAND/SWEDEN	Baltic	U	14C	78	1	Fonselius, 1972
Gulf of Finland	FINLAND	Baltic	U	14C	45	42	Lehmusluoto and Pesonen, 1973
Gulf of Trieste	ITALY	Europe	U	14C	150	3	Umani et al., 2007
Gullmar Fjord	SWEDEN	Europe	U	14C	235	24	Lindahl et al., 1998, and O. Lindahl, personal communication, 25 June 2009
High Venice Lagoon	ITALY	Europe	U	14C	147	1	Vatova, 1961

Howe Sound	CANADA	North America	U	14C	106	20	Stockner, 1977
Huizache-Caimanero Lagoon	MEXICO	South-Central America	U	O2	894	1	Edwards, 1978
Ilkwang Bay	KOREA	Asia	U	14C	200	1	Kang and Kang, 2005
Indian Arm Fjord	CANADA	North America	GPP	O2	609	1	Gilmartin, 1964
Indian Arm Fjord	CANADA	North America	NPP	O2 & 14C	455	1	Gilmartin, 1964
Isefjord	DENMARK	Baltic	GPP	14C	175	1	Steeman Nielsen, 1958
Kaneohe Bay	USA	North America	NPP	14C	230	8	Smith et al., 1981 cited in Heip et al., 1995
Karrebæksminde Bugt	DENMARK	Baltic	GPP	14C	60	1	Steeman Nielsen, 1957
Kattegat	DENMARK/ SWEDEN	Baltic	GPP	14C	142	118	Steeman Nielsen, 1958; Carstensen et al., 2003, <a href="http://mads.dmu.dk">http://mads.dmu.dk</a>
Kattegat	DENMARK/ SWEDEN	Baltic	NPP	14C	121	117	Steeman Nielsen, 1958; Carstensen et al., 2003, <a href="http://mads.dmu.dk">http://mads.dmu.dk</a>
Kattegat	DENMARK/ SWEDEN	Baltic	U	14C	105	14	Ærtebjerg, 1981
Kungsbacka Fjord	SWEDEN	Europe	GPP	14C	100	1	Olsson and Ölundh, 1974
Kviturdvickpollen	NORWAY	Europe	U	14C	230	1	Wassman and Aadnesen, 1984
Laholm Bay	SWEDEN	Europe	U	14C	167	10	Rydberg et al., 2006
Lake Grevelingen	NETHERLANDS	Europe	U	14C	196	6	Vegter and de Visscher, 1984
Limfjord	DENMARK	Baltic	GPP	14C	105	1	Steeman Nielsen, 1958
Loch Etive	SCOTLAND	Europe	U	14C	70	2	Wood et al., 1973
Loch Thurnaig	SCOTLAND	Europe	U	14C	111	1	Davies, 1975 cited in Boynton, 1982
Logan River	AUSTRALIA	Australia-New Zealand	U	14C	212	1	O'Donohue and Dennison, 1997
Long Island Sound	USA	North America	GPP	O2	470	1	Riley, 1956
Long Island Sound	USA	North America	NPP	O2	400	3	Riley, 1956; Goebel et al., 2006
Lower St. Lawrence Estuary	USA / CANADA	North America	U	14C	100	29	Therriault and Lavoie, 1985
Lynher Estuary	UNITED KINGDOM	Europe	U	14C	82	1	Joint, 1978
Manahawkin Estuary	USA	North America	GPP	O2	198	5	Durand et al., 1979
Manahawkin Estuary	USA	North America	NPP	O2	31	5	Durand et al., 1979
Mandovi-Zuari Estuarine Complex	INDIA	Asia	NPP	14C	300	3	Krishna Kumari et al., 2002
Massachusetts Bay	USA	North America	U	14C	481	22	Oviatt et al., 2007
Mecklenburg Bight	DENMARK	Baltic	U	14C	134	7	Ærtebjerg, 1981
Mikawa Bay	JAPAN	Asia	U	O2	770	1	Marba et al., 2006 cited in Ara et al., 2011

Mississippi Sound	USA	North America	U	14C	468	1	Moncreiff et al., 1992
Morlaix Bay	FRANCE	Europe	U	14C	314	1	Wafar et al., 1983
Nanaimo Estuary	CANADA	North America	U	14C	97	4	Brown et al., 1976
Narragansett Bay	USA	North America	GPP	14C	237	17	Keller, 1988; Oviatt, 2002
Narragansett Bay	USA	North America	NPP	O2 & 14C	236	8	Keller, 1988; Oviatt et al., 1981
Neuse River Estuary	USA	North America	U	14C	358	12	Boyer et al., 1993; Mallin et al., 1991; Mallin et al., 1993; Fisher et al., 1982
New York Bight	USA	North America	U	14C	370	1	Malone, 1976
Nordësvannet	NORWAY	Europe	U	14C	190	1	Wassman et al., 1986 cited in Heip et al., 1995
North San Francisco Bay	USA	North America	GPP	14C	130	4	Cole and Cloern, 1984
North San Francisco Bay	USA	North America	NPP	14C	104	4	Cole and Cloern, 1984
Oosterschelde	NETHERLANDS	Europe	U	14C	280	26	Vegter and De Visscher, 1987; Wetsteyn and Kromkamp, 1994
Osaka Bay	JAPAN	Asia	U	13C	825	1	Yamaguchi and Imai, 1996 cited in Ara et al., 2011
Pamlico River	USA	North America	U	14C	500	6	Kuenzler et al., 1979
Patuxent River Estuary	USA	North America	GPP	14C	126	26	Flemer, 1970
Peconic Bay Estuary	USA	North America	U	14C	177	2	Bruno et al., 1980
Petalion Gulf	GREECE	Europe	GPP	14C	33	1	Becacos-Kontos, 1977
Phanga Bay	THAILAND	Asia	GPP	14C	468	1	Wium-Anderson, 1979
Pichavaram	INDIA	Asia	GPP	O2	113	1	Purvaja and Ramesh, 2000
Port Hacking Estuary	AUSTRALIA	Australia-New Zealand	U	14C	237	1	Scott, 1979
Puget Sound	USA	North America	U	14C	370	4	Winter et al., 1975
Raunefjorden	NORWAY	Europe	U	14C	230	1	Wassman and Aadnesen, 1984
Rhode River Estuary	USA	North America	U	14C	402	20	Gallegos, 2012; and C.L. Gallegos, personal communication, 28 May 2013
Riá de Vigo	SPAIN	Europe	GPP	O2	520	1	Cermeño et al., 2006
Riá de Vigo	SPAIN	Europe	U	14C	260	1	Fraga, 1976
Roskeeda Bay	IRELAND	Europe	GPP	O2	74	1	Raine and Patching, 1980
Roskeeda Bay	IRELAND	Europe	NPP	O2	4	1	Raine and Patching, 1980
Saanich Inlet	CANADA	North America	GPP	13C	460	2	Grundle et al., 2009
Sagami Bay	JAPAN	Asia	NPP	13C	366	3	Ara and Hiromi, 2009, 2007; Ara et al., 2011
Samsø Belt	DENMARK	Baltic	U	14C	218	2	Ærtebjerg, 1981

Scheldt Estuary	BELGIUM	Europe	GPP	O2	153	5	Gazeau et al., 2005
Scheldt Estuary	BELGIUM	Europe	NPP	O2	-105	5	Gazeau et al., 2005
Seto Inland Sea of Japan	JAPAN	Asia	U	14C	120	1	Endo, 1970
Shijiki Bay	JAPAN	Asia	U	O2	292	1	Page et al., 1999 Cited in Ara et al., 2011
South San Francisco Bay	USA	North America	GPP	14C	185	2	Cole and Cloern, 1984
South San Francisco Bay	USA	North America	NPP	14C	150	2	Cole and Cloern 1984
St. Lawrence System	CANADA	North America	U	14C	212	5	Steven, 1974; Mclver, 1972
St. Margaret's Bay	CANADA	North America	U	14C	253	2	Platt, 1971
Strait of Georgia	CANADA	North America	U	14C	346	16	Stockner and Cliff, 1979
Swan River Estuary	AUSTRALIA	Australia-New Zealand	GPP	14C	803	9	Thompson, 1998
Swartvlei	SOUTH AFRICA	Africa	U	14C	100	1	Robarts, 1976 cited in Boynton, 1982
Sylt-Rømø Bight	GERMANY	Europe	GPP	O2	161	1	Asmus et al., 1998
Tagus Estuary	PORTUGAL	Europe	GPP	14C	85	2	Gameiro et al., 2011
Tamagawa Estuary	JAPAN	Asia	NPP	14C	1890	1	Yamaguchi et al., 1991
Tampa Bay	USA	North America	GPP	14C	432	68	Johansson, 2009 and J.O.R. Johansson, personal communication, 21 August 2013
Tasman Bay	NEW ZEALAND	Australia-New Zealand	U	14C	146	2	Mackenzie and Gillespie, 1986
Terminos Lagoon	MEXICO	South-Central America	NPP	O2	222	3	Day et al., 1982; Day et al., 1988
Tokyo Bay	JAPAN	Asia	GPP	13C	482	6	Bouman et al., 2010
Tomales Bay	USA	North America	U	14C	414	10	Cole, 1989
Tosa Bay	JAPAN	Asia	U	13C	274	2	Ichikawa and Hirota, 2004 cited in Ara et al., 2011, Yokouchi et al., 2007
Tvärminne Archipelago	FINLAND	Baltic	U	14C	61	10	Niemi, 1975; Lignell, 1990
Vågsbøpollen	NORWAY	Europe	U	14C	180	1	Wassman and Aadnesen, 1984
Venø Bugt	DENMARK	Baltic	GPP	14C	105	1	Steeman Nielsen, 1957
Wassaw Sound	USA	North America	NPP	14C	90	6	Turner et al., 1979
Westerschelde	NETHERLANDS/ BELGIUM	Europe	GPP	14C	190	14	Kromkamp et al., 1995a; Kromkamp et al., 1995b
Westerschelde	NETHERLANDS/ BELGIUM	Europe	U	14C	180	11	Van Spaendonk et al., 1993
Young Sound	GREENLAND	Europe	U	14C	10	1	Rysgaard et al., 1999

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