

Supplement of Biogeosciences, 11, 2477–2501, 2014
<http://www.biogeosciences.net/bg-11-2477-2014/>
doi:10.5194/bg-11-2477-2014-supplement
© Author(s) 2014. CC Attribution 3.0 License.



Supplement of

Phytoplankton primary production in the world's estuarine-coastal ecosystems

J. E. Cloern et al.

Correspondence to: J. E. Cloern (jecoern@usgs.gov)

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

Authors: James E. Cloern, Sarah Q. Foster, Amy E. Kleckner

Table S1. Inventory of median annual phytoplankton primary production (APPP) 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). GPP = gross primary production; NPP = net primary production; U = unreported; n = number of annual measurements made for each region and measurement type.

Ecosystem	Country	Region	Measure	Method	Median APPP g C m ⁻² yr ⁻¹	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 et al., 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 et al., 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 1960s	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)
Ciénaga Grande de Santa Marta	COLOMBIA	South-Central America	NPP	O2	990	1	(Hernandez and Gocke, 1990)
Ciénaga 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	(Steehan 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 et al., 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., 2001a)
Golfo de Nicoya	COSTA RICA	South-Central America	NPP	O2	444	1	(Gocke et al., 2001a)
Great Belt	DENMARK	Baltic	GPP	14C	59	4	(Steehan Nielsen, 1958)
Great Belt	DENMARK	Baltic	U	14C	170	9	(Ærtebjerg et al., 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), http://mads.dmu.dk
Kattegat	DENMARK/ SWEDEN	Baltic	NPP	14C	121	117	(Steeman Nielsen, 1958; Carstensen et al., 2003), http://mads.dmu.dk
Kattegat	DENMARK/ SWEDEN	Baltic	U	14C	105	14	(Ærtebjerg et al., 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 (Boynnton, 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 Levasseur, 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 et al., 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, 2014); 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 et al., 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	(Kimoto et al., 1987) 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; McIver, 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, 2010) 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., 1995)
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)

References

- Ærtebjerg, G., T.S. Jacobsen, E. Gargas and E. Buch: The Belt Project. Evaluation of the physical , chemical and biological measurements, The National Agency of Environmental Protection, Denmark, 122 pages, ISBN 8750335324 9788750335320, 1981.
- Anderson, G. C.: The Seasonal and Geographic Distribution of Primary Productivity Off the Washington and Oregon Coasts, *Limnology and Oceanography*, 9, 284-302, 1964.
- Apollonio, S.: Primary production in Dumbell Bay in the Arctic Ocean, *Marine Biology*, 61, 41-51, 1980.
- Ara, K., and Hiromi, J.: Temporal variability in primary and copepod production in Sagami Bay, Japan, *Journal of Plankton Research*, 29, Supplement 1, i85-i96, 2007.
- Ara, K., and Hiromi, J.: Seasonal Variability in Plankton Food Web Structure and Trophodynamics in the Neritic Area of Sagami Bay, Japan, *Journal of Oceanography*, 65, 757-779, 2009.
- Ara, K., Yamaki, K., Wada, K., Fukuyama, S., Okutsu, T., Nagasaka, S., Shiimoto, A., and Hiromi, J.: Temporal variability in physicochemical properties, phytoplankton standing crop and primary production for 7 years (2002–2008) in the neritic area of Sagami Bay, Japan, *Journal of Oceanography*, 67, 87-111, 10.1007/s10872-011-0010-y, 2011.
- Asmus, R., Jensen, M. H., Murphy, D., and Doerffer, R.: Primary Production of Microphytobenthos, Phytoplankton and the Annual Yield of Macrophytic Biomass in the Sylt-Rømø Wadden Sea, in: *The Wadden Sea Ecosystem: Exchange, Transport, and Transformation Processes*, edited by: Gätje, C. and Reise, K., Springer, Berlin, 367-392, 1998.
- Azevedo, I., Duarte, P., and Bordalo, A.: Pelagic metabolism of the Douro estuary (Portugal) – Factors controlling primary production, *Estuarine, Coastal and Shelf Science*, 69, 133-146, 10.1016/j.ecss.2006.04.002, 2006.
- Becacos-Kontos, T.: Primary production and environmental factors in an oligotrophic biome in the Aegean Sea, *Marine Biology*, 42, 93-98, 1977.
- Bouman, H. A., Nakane, T., Oka, K., Nakata, K., Kurita, K., Sathyendranath, S., and Platt, T.: Environmental controls on phytoplankton production in coastal ecosystems: A case study from Tokyo Bay, *Estuarine, Coastal and Shelf Science*, 87, 63-72, 10.1016/j.ecss.2009.12.014, 2010.
- Boyer, J. N., Christian, R. R., and Stanley, D. W.: Patterns of phytoplankton primary productivity in the Neuse River estuary, North Carolina, USA, *Marine Ecology Progress Series*, 97, 287-297, 1993.

- Boynton, W. R.: Phytoplankton Production in Chincoteague Bay, Maryland-Virginia, PhD Thesis, University of North Carolina, Chapel Hill, 284 pp., 1973.
- Boynton, W. R., W. M. Kemp, and C. W. Keefe.: A comparative analysis of nutrients and other factors influencing estuarine phytoplankton production, in: *Estuarine Comparisons*, edited by: Kennedy, V. S., Academic Press, New York, 69-90, 1982.
- Brkich, W. S.: Phytoplankton productivity in the Barataria Bay area of Louisiana, Ph.D. dissertation, Louisiana State University, Baton Rouge, Louisiana, 1972.
- Brown, T. J., Sibert, J., and Stephens, K.: Data pertaining to the lower trophic levels of Nanaimo River Estuary and adjacent waters from March 1974 to March 1975, Department of Fisheries and Oceans, Fisheries and Marine Service Data Record No. 20, Nanaimo, B.C., 1976.
- Bruno, S. F., Staker, R. D., and Sharma, G. M.: Dynamics of Phytoplankton Productivity in the Peconic Bay Estuary, Long Island, *Estuarine and Coastal Marine Science*, 10, 247-263., 1980.
- Cadée, G. C., and Hegeman, J.: Phytoplankton primary production, chlorophyll, and composition in an inlet of the western Wadden Sea (Marsdiep), *Netherlands Journal of Sea Research*, 13, 224-241, 1979.
- Cadée, G. C., and Hegeman, J.: Persisting High Levels of Primary Production at Declining Phosphate Concentrations in the Dutch Coastal Area (Marsdiep), *Netherlands Journal of Sea Research*, 31, 147-152, 1993.
- Carstensen, J., Conley, D., and Muller-Karulis, B.: Spatial and temporal resolution of carbon fluxes in a shallow coastal ecosystem, the Kattegat, *Marine Ecology-Progress Series*, 252, 35-50, 2003.
- Cermeño, P., Marañón, E., Pérez, V., Serret, P., Fernández, E., and Castro, C. G.: Phytoplankton size structure and primary production in a highly dynamic coastal ecosystem (Ría de Vigo, NW-Spain): Seasonal and short-time scale variability, *Estuarine, Coastal and Shelf Science*, 67, 251-266, DOI: 10.1016/j.ecss.2005.11.027, 2006.
- Cole, B. E., and Cloern, J. E.: Significance of biomass and light availability to phytoplankton productivity in San Francisco Bay, *Marine Ecology Progress Series*, 17, 15-24, 1984.
- Cole, B. E.: Temporal and Spatial Patterns of Phytoplankton Production in Tomales Bay, California, U.S.A., *Estuarine, Coastal and Shelf Science*, 28, 103-115, 1989.
- Colijn, F., and Ludden, E.: The primary production of phytoplankton in the Ems-Dollard estuary, in: *Primary Production in the Ems-Dollard Estuary*, edited by: F. Colijn, PhD Thesis, Rijksuniversiteit, Groningen, 38-99, 1983.

- Conan, P., Pujo-Pay, M., Raimbault, P., and Leveau, M.: Hydrological and biological variability in the Gulf of Lions. I. Nitrogen fluxes and potential productivity, *Oceanologica Acta*, 21, 751-765, 1998.
- Davies, J. M.: Energy flow through the benthos in a Scottish Sea Loch, *Marine Biology*, 31, 353-362, 1975.
- Day, J. W., Smith, W. B., Stowe, W., and Wagner, P.: Community structure and carbon budget in a salt marsh and shallow bay estuarine system in Louisiana, Center for Wetland Resources, Louisiana State University Publication Number LSU-SG-72-04, 1973.
- Day, J. W., Day, R. H., Barreiro, M. T., Ley-Lou, F., and Madden, C. J.: Primary production in the Laguna de Terminos, a tropical estuary in the Southern Gulf of Mexico, *Oceanologica Acta*, 269-276, 1982.
- Day, J. W., Ley-Lou, F., Wetzel, R. L., and Machado, A.: Aquatic primary productivity in Terminos Lagoon, in: *Ecology of Coastal Ecosystems in the Southern Gulf of Mexico: The Terminos Lagoon Region*, edited by: A. Yanez-Arancibia and J.W. Day, Instituto de Ciencias del Mar y Limnologia, Universidad Nacional Autonoma de Mexico, Editorial Universitaria, Mexico D.F., 221-235, 1988.
- Del Amo, Y., Le Pape, O., Treguer, P., Queguiner, B., Menesguen, A., and Aminot, A.: Impacts of high-nitrate freshwater inputs on macrotidal ecosystems. I. Seasonal evolution of nutrient limitation for the diatom-dominated phytoplankton of the Bay of Brest (France). *Marine Ecology Progress Series*, 161, 213-224, 1997.
- Durand, J. B., Sugihara, T., and Yearsley, C. E.: Estuarine evaluation study: primary aquatic production and nitrogen. Four year report, 1973-1977, Comparison of natural and altered estuarine systems: The field data - Volumes I and II, edited by: Sugihara, T., Psuty, N. P., and Durand, J. B., Center for Coastal and Environmental Studies, Rutgers University, New Brunswick, N.J., 1979.
- Edwards, R. R. C.: Ecology of a coastal lagoon complex in Mexico, *Estuarine and Coastal Marine Science*, 6, 75-92., 1978.
- Eilertsen, H. C., and Taasen, J. P.: Investigations on the plankton community of Balsforden, northern Norway. The phytoplankton 1976-1978. Environmental factors, dynamics of growth, and primary production., *Sarsia*, 69, 1-15, 1984.
- Endo, T.: On primary production in the Seto Inland Sea, *Journal of the Faculty of Fisheries and Animal Husbandry, Hiroshima University*, 9, 177-221, 1970.
- Fisher, T. R., Carlson, P. R., and Barber, R. T.: Carbon and nitrogen primary productivity in three North Carolina estuaries, *Estuarine, Coastal and Shelf Science*, 15, 621-644, 1982.
- Flemer, D. A.: Primary Production in the Chesapeake Bay, *Chesapeake Science*, 11, 117-129, 1970.

Flores-Verdugo, F. J., Day, J. W., Mee, L., and Briseño-Dueñas, R.: Phytoplankton production and seasonal biomass variation of seagrass, *Ruppia maritima* L., in a tropical Mexican lagoon with an ephemeral inlet, *Estuaries*, 11, 51-56, 1988.

Fonselius, S. H.: On biogenic elements and organic matter in the Baltic, *Ambio Special Report*, 1, 29-36, 1972.

Fraga, F.: FOTOSÍNTESIS EN LA RIA DE VIGO, *Inv. Pesq.*, 40, 151-167, 1976.

Gallegos, C. L.: Long-term variations in primary production in a eutrophic sub-estuary: 1. Seasonal and spatial variability, *Marine Ecology Progress Series* (in press, doi:10.3354/meps10712), 2014.

Gameiro, C., Zwolinski, J., and Brotas, V.: Light control on phytoplankton production in a shallow and turbid estuarine system, *Hydrobiologia*, 669, 249-263, 10.1007/s10750-011-0695-3, 2011.

Gazeau, F., Gattuso, J.-P., Middelburg, J., Brion, N., Schiettecatte, L.-S., Frankignoulle, M., and Borges, A.: Planktonic and whole system metabolism in a nutrient-rich estuary (the Scheldt estuary), *Estuaries and Coasts*, 28, 868-883, 10.1007/bf02696016, 2005.

Gilmartin, M.: The primary production of a British Columbia fjord, *Journal of the Fisheries Research Board of Canada*, 21, 505-538., 1964.

Glé, C., Del Amo, Y., Sautour, B., Laborde, P., and Chardy, P.: Variability of nutrients and phytoplankton primary production in a shallow macrotidal coastal ecosystem (Arcachon Bay, France), *Estuarine, Coastal and Shelf Science*, 76, 642-656, DOI: 10.1016/j.ecss.2007.07.043, 2008.

Gocke, K., Cortés, J., and Murillo, M. M.: The annual cycle of primary productivity in a tropical estuary: The inner regions of the Golfo de Nicoya, Costa Rica, *Revista de Biología Tropical*, 49, 289-306, 2001a.

Gocke, K., Cortés, J., and Murillo, M. M.: Planktonic primary production in a tidally influenced mangrove forest on the Pacific coast of Costa Rica, *Revista de Biología Tropical*, 49, 279-288, 2001b.

Goebel, N. L., Kremer, J. N., and Edwards, C. A.: Primary production in Long Island Sound, *Estuaries and Coasts*, 29, 232-245, 2006.

Grundle, D. S., Timothy, D. A., and Varela, D. E.: Variations of phytoplankton productivity and biomass over an annual cycle in Saanich Inlet, a British Columbia fjord, *Continental Shelf Research*, 29, 2257-2269, 10.1016/j.csr.2009.08.013, 2009.

Harding, L. W. Jr., Mallonee, M. E., and Perry, E. S.: Toward a Predictive Understanding of Primary Productivity in a Temperate, Partially Stratified Estuary, *Estuarine, Coastal and Shelf Science*, 55, 437-463, DOI: 10.1006/ecss.2001.0917, 2002.

- Heip, C. H. R., Goosen, N. K., Herman, P. M. J., Kromkamp, J., Middelburg, J., and Soetaert, K.: Production and consumption of biological particles in temperate estuaries., *Oceanogr Mar Biol Ann Rev*, 33, 1-149, 1995.
- Hernandez, C. A., and Gocke, K.: Productividad primaria en la Ciénaga Grande de Santa Marta, Colombia., *Anales del Instituto de Investigaciones Marinas de Punta de Betin.*, 19-20, 101-119, 1990.
- Ichikawa, T., and Hirota, Y.: Seasonal changes of primary productivity in Tosa Bay, Japan, *Oceanogr Japan*, 13, 259–269, 2004.
- Johansson, J. O. R.: Long-term and seasonal trends in phytoplankton production and biomass in Tampa Bay, Florida, in: *Proceedings, Tampa Bay Area Scientific Information Symposium, BASIS 5: 20–23 October 2009*, edited by: Cooper, S. T., available at: <http://www.tbepotech.org/BASIS/BASIS5/BASIS5.pdf>, (last access: 2 November 2013), 73–94, 2010.
- Joint, I. R.: Microbial production of an estuarine mudflat, *Estuarine and Coastal Marine Science*, 7, 185-195, Doi: 10.1016/0302-3524(78)90074-9, 1978.
- Joint, I. R., and Pomroy, A. J.: Primary production in a turbid estuary, *Estuarine, Coastal and Shelf Science*, 13, 303-316, 1981.
- Jørgensen, B. B.: Case study – Aarhus Bay, in: *Eutrophication in Coastal Marine Ecosystems*, edited by Jørgensen, B. B. and Richardson, K., American Geophysical Union, *Coastal and Estuarine Studies*, 52, 137-154, 1996. DOI: 10.1029/CE052
- Kang, H.-K., and Kang, Y. J.: Production of *Acartia steueri* (Copepoda: Calanoida) in Ilkwang Bay, Southeastern Coast of Korea, *Journal of Oceanography*, 61, 327-334, 10.1007/s10872-005-0043-1, 2005.
- Keller, A. A.: Estimating Phytoplankton Productivity from Light Availability and Biomass in the MERL Mesocosms and Narragansett Bay, *Marine Ecology-Progress Series*, 45, 159-168, 1988.
- Kim, K. T.: Production primaire pélagique de l'Etang de Berre en 1977 et 1978. Comparaison avec le milieu marin (Méditerranée nord-occidentale), *Marine Biology*, 73, 325-341, 1983.
- Kimoto K., Nakashima J., Morioka Y.: Standing stock of chlorophyll a and primary productivity in a small inlet of Kyushu, *Bull Seikai Reg Fish Lab* 64, 35–46, 1987.
- Kocum, E., Underwood, G. J. C., and Nedwell, D. B.: Simultaneous measurement of phytoplanktonic primary production, nutrient and light availability along a turbid, eutrophic UK east coast estuary (the Colne Estuary), *Marine Ecology Progress Series*, 231, 1-12, 2002.
- Krishna Kumari, L., Bhattathiri, P. M. A., Matondkar, S. G. P., and John, J.: Primary productivity in Mandovi-Zuari estuaries in Goa, *J. mar. biol. Ass. India*, 44, 1-13, 2002.

- Kromkamp, J., Peene, J., Rijswijk, P., Sandee, A., and Goosen, N.: Nutrients, light and primary production by phytoplankton and microphytobenthos in the eutrophic, turbid Westerschelde estuary (The Netherlands), *Hydrobiologia*, 311, 9-19, 10.1007/bf00008567, 1995.
- Kuenzler, E. J., Stanley, D. W., and Koenings, J. P.: Nutrient kinetics of phytoplankton in the Pamlico River, North Carolina, Water Resources Research Institute of the University of North Carolina, Report 79-139, available at: <http://repository.lib.ncsu.edu/dr/bitstream/1840.4/1755/1/NC-WRRI-139.pdf> (last access 8 March 2014) ,1979.
- Lara-Lara, J. R., Frey, B. E., and Small, L. F.: Primary production in the Columbia River Estuary II. Grazing losses, transport, and a phytoplankton carbon budget, *Pacific Science*, 44, 1990.
- Lehmusluoto, P. O., and Pesonen, L.: Eutrophication in the Helsinki and Espoo Sea areas measured as phytoplankton primary production, *Oikos Supplementum*, 15, 202-208., 1973.
- Lignell, R.: Excretion of organic carbon by phytoplankton: its relation to algal biomass, primary productivity and bacterial secondary productivity in the Baltic Sea, *Marine Ecology Progress Series*, 68, 85-99, 1990.
- Lindahl, O., Belgrano, A., Davidsson, L., and Hernroth, B.: Primary production, climatic oscillations, and physico-chemical processes: The Gullmar Fjord time-series data set (1985-1996), *ICES Journal of Marine Science*, 55, 723-729, 1998.
- Lively, J. S., Kaufman, Z., and Carpenter, E. J.: Phytoplankton ecology of a barrier island estuary: Great South Bay, New York, *Estuarine, Coastal and Shelf Science*, 16, 51-68, 1983.
- Loebl, M., Dolch, T., and van Beusekom, J. E. E.: Annual dynamics of pelagic primary production and respiration in a shallow coastal basin, *Journal of Sea Research*, 58, 269-282, DOI: 10.1016/j.seares.2007.06.003, 2007.
- Mackenzie, A. L., and Gillespie, P. A.: Plankton ecology and productivity, nutrient chemistry, and hydrography of Tasman Bay, New Zealand, 1982-1984, *New Zealand Journal of Marine and Freshwater Research*, 20, 365-396, 1986.
- Maita, Y., and Yanada, M.: Particulate protein in coastal waters, with special reference to seasonal variation, *Marine Biology*, 44, 329-336, 1978.
- Mallin, M. A., Paerl, H. W., and Rudek, J.: Seasonal phytoplankton composition, productivity and biomass in the Neuse River estuary, North Carolina, *Estuarine, Coastal and Shelf Science*, 32, 609-623, 1991.

- Mallin, M. A., Paerl, H. W., Rudek, J., and Bates, P. W.: Regulation of estuarine primary production by watershed rainfall and river flow, *Marine Ecology Progress Series*, 93, 199-203, 1993.
- Malone, T. C.: Phytoplankton productivity in the apex of the New York Bight: Environmental regulation of productivity/chlorophyll *a*, in: *Proceedings of the Symposium, Middle Atlantic Continental Shelf and the New York Bight*, edited by: M.G. Gross, American Society of Limnology and Oceanography, Special Symposia 2, 260-272, 1976.
- Marba, N., Hemminga, M. A., and Duarte, C. M.: Resource translocation within seagrass clones: allometric scaling to plant size and productivity, *Oecologia*, 150, 362-372, 10.1007/s00442-006-0524-y, 2006.
- McIver, A. H.: Primary and secondary production of Malpeque Bay, Prince Edward Island, compared with one of its tributaries and the nearby Gulf of St. Lawrence., M.Sc. Thesis, Department of Biology, McGill University, Montreal, Quebec, 83p. pp., 1972.
- Moll, R. A.: Phytoplankton in a temperate-zone salt marsh: Net production and exchanges with coastal waters., *Marine Biology*, 42, 109-118, 1977.
- Moncreiff, C., Sullivan, M., and Daehnick, A.: Primary production dynamics in seagrass beds of Mississippi Sound - The contributions of seagrass, epiphytic algae, sand microflora, and phytoplankton., *Marine Ecology Progress Series*, 87, 161-171, 1992.
- Mortazavi, B., Iverson, R. L., Landing, W. M., Lewis, F. G., and Huang, W.: Control of phytoplankton production and biomass in a river-dominated estuary: Apalachicola Bay, Florida, USA, *Marine Ecology Progress Series*, 198, 19-31, 2000.
- Niemi, A.: Ecology of phytoplankton in the Tvarminne area, SW coast of Finland., *Acta Botanica Fennica*, 1975.
- Nixon, S. W., and Oviatt, C. A.: Ecology of a New England salt marsh, *Ecological Monographs*, 43, 463-498, 1973.
- Nixon, S. W., and Lee, V.: The flux of carbon, nitrogen and phosphorous between coastal lagoons and offshore waters, *Seminar on Coastal Lagoon Research, Present and Future*. 29 Aug 1978, Beaufort, N.C., 1981.
- Nixon, S. W.: Nutrient dynamics, primary production and fisheries yields of lagoons, *Oceanologica Acta*, 357-371, 1982.
- O'Donohue, M. J. H., and Dennison, W. C.: Phytoplankton productivity response to nutrient concentrations, light availability and temperature along an Australian estuarine gradient, *Estuaries*, 20, 521-533, 1997.
- Olsson, I., and Ölundh, E.: On plankton production in Kungsbacka Fjord, an estuary on the Swedish west coast, *Marine Biology*, 24, 17-28, 1974.

- Oviatt, C., Buckley, B., and Nixon, S.: Annual Phytoplankton Metabolism in Narragansett Bay Calculated from Survey Field Measurements and Microcosm Observations, *Estuaries*, 4, 167-175, 1981.
- Oviatt, C.: Annual Primary Production in Narragansett Bay with no Bay-Wide Winter–Spring Phytoplankton Bloom, *Estuarine, Coastal and Shelf Science*, 54, 1013-1026, 10.1006/ecss.2001.0872, 2002.
- Oviatt, C. A., Hyde, K. J. W., Keller, A. A., and Turner, J. T.: Production patterns in Massachusetts Bay with outfall relocation, *Estuaries and Coasts*, 30, 35-46, 2007.
- Pennock, J. R., and Sharp, J. H.: Phytoplankton production in the Delaware Estuary: temporal and spatial variability, *Marine Ecology Progress Series*, 34, 143-155, 1986.
- Philippart, C. J. M., Beukema, J. J., Cadée, G. C., Dekker, R., Goedhart, P. W., Iperen, J. M., Leopold, M. F., and Herman, P. M. J.: Impacts of Nutrient Reduction on Coastal Communities, *Ecosystems*, 10, 96-119, 10.1007/s10021-006-9006-7, 2007.
- Platt, T.: The annual production by phytoplankton in St. Margaret's Bay, Nova Scotia, *J. Cons. int. Explor. Mer*, 33, 324-333, 1971.
- Platt, T.: Analysis of the importance of spatial and temporal heterogeneity in the estimation of annual production by phytoplankton in a small, enriched, marine basin, *Journal of Experimental Marine Biology and Ecology*, 18, 99-109, 1975.
- Purvaja, R., and Ramesh, R.: Natural and anthropogenic effects on phytoplankton primary productivity in mangroves, *Chemistry and Ecology*, 17, 41-58, 2000.
- Qasim, S. Z.: Some problems related to the food chain in a tropical estuary, in: *Marine food chains*, edited by: Steele, J. H., Oliver and Boyd, Edinburgh, 45-51, 1970.
- Ragotzkie, R. A.: Plankton productivity in estuarine waters of Georgia, *Publications of the Institute of Marine Science*, 6, 146-158, 1959.
- Raine, R. C. T., and Patching, J. W.: Aspects of carbon and nitrogen cycling in a shallow marine environment, *Journal of Experimental Marine Biology and Ecology*, 47, 127-139, Doi: 10.1016/0022-0981(80)90107-0, 1980.
- Randall, J. M., and Day J. W. Jr.: Effects of river discharge and vertical circulation on aquatic primary production in a turbid Louisiana (USA) estuary, *Netherlands Journal of Sea Research*, 21, 231-242, 1987.
- Riley, G. A.: Production and utilization of organic matter, *Bulletin of the Bingham Oceanographic Collection: Oceanography of Long Island Sound, 1952-1954*, XV, 324-344, 1956.

- Rivera-Monroy, V., Madden, C., Day, J., Twilley, R., Vera-Herrera, F., and Alvarez-Guillén, H.: Seasonal coupling of a tropical mangrove forest and an estuarine water column: enhancement of aquatic primary productivity, *Hydrobiologia*, 379, 41-53, 10.1023/a:1003281311134, 1998.
- Robarts, R. D.: Primary Productivity of the Upper Reaches of a South African Estuary (Swartvlei), *J. exp. mar. Biol. Ecol.*, 24, 93-102, 1976.
- Roman, M. R., Reeve, M. R., and Froggatt, J. L.: Carbon production and export from Biscayne Bay, Florida. I. Temporal patterns in primary production, seston and zooplankton, *Estuarine, Coastal and Shelf Science*, 17, 45-59, Doi: 10.1016/0272-7714(83)90044-6, 1983.
- Rydberg, L., Ærtebjerg, G., and Edler, L.: Fifty years of primary production measurements in the Baltic entrance region, trends and variability in relation to land-based input of nutrients, *Journal of Sea Research*, 56, 1-16, DOI: 10.1016/j.seares.2006.03.009, 2006.
- Rysgaard, S., Nielsen, T. G., and Hansen, B. W.: Seasonal variation in nutrients, pelagic primary production and grazing in a high-Arctic coastal marine ecosystem, Young Sound, Northeast Greenland, *Marine Ecology Progress Series*, 179, 13-25, 1999.
- Sanders, J., and Kuenzler, E.: Phytoplankton population dynamics and productivity in a sewage-enriched tidal Creek in North Carolina, *Estuaries*, 2, 87-96, 10.2307/1351632, 1979.
- Sandoval-Rojo, L. C., F. J. F. Verdugo, U. Zaragoza-Araujo, J. W. Day, A. Estrada-Mercado: Phytoplankton productivity in the Barra De Navidad coastal Lagoon on the Pacific coast of Mexico, *Revue d'hydrobiologie tropicale.*, 21, 101-108, 1988.
- Scott, B. D.: Seasonal Variation of Phytoplankton Production in an Estuary in Relation to Coastal Water Movements, *Australian Journal of Marine and Freshwater Research*, 30, 449-461, 1979.
- Small, L. F., McIntire, C. D., MacDonald, K. B., Lara-Lara, J. R., Frey, B. E., Amspoker, M. C., and Winfield, T.: Primary production, plant and detrital biomass, and particle transport in the Columbia River Estuary, *Prog. Oceanogr.*, 25, 175-210, Doi: 10.1016/0079-6611(90)90007-o, 1990.
- Smith, S. V., Kimmerer, W. J., Laws, E. A., Brock, R. E., and Walsh, T. W.: Kaneohe Bay sewage diversion experiment: perspectives on ecosystem responses to nutritional perturbation, *Pacific Science*, 35, 279-395, 1981.
- Steeman Nielsen, E.: Investigations on the phytoplankton in sheltered Danish marine localities. II. Production of organic matter, *Meddelelser fra Kommissionen for Danmarks fiskeri- og havundersogelser. Serie, plankton.*, 5, 42-52, 1957.
- Steeman Nielsen, E.: Experimental methods for measuring organic production in the sea., *Rapport et Proces-Verbaux des Reunions Conseil Permanent International pour l'Exploration de la Mer*, 144, 38-46, 1958.

Steven, D. M.: Gulf of St. Lawrence Project: Final Report, McGill University, Montreal, 113p., 1974.

Stockner, J. G., and Cliff, D. D.: Phytoplankton Ecology of Vancouver Harbor, Journal of the Fisheries Research Board of Canada, 36, 1-10, 1979.

Stockner, J. G., Cliff, D. D., and Shortreed, K. R. S.: Phytoplankton of the Strait of Georgia, British Columbia, Journal of the Fisheries Research Board of Canada, 36, 657-666, 1979.

Stockner, J. G., Cliff, D.D., and Buchanan, D. B.: Phytoplankton production and distribution in Howe Sound, British Columbia: a coastal marine embayment-fjord under stress, Journal of the Fisheries Research Board of Canada, 34, 907-917, 1977.

Tada, K., Morishita, M., Hamada, K.-I., Montani, S., and Yamada, M.: Standing Stock and Production Rate of Phytoplankton and a Red Tide Outbreak in a Heavily Eutrophic Embayment, Dokai Bay, Japan, Marine Pollution Bulletin, 42, 1177-1186, 2001.

Taguchi, S., Iseki, K., and Kawamura, T.: The estimate of annual production by phytoplankton in Akkeshi Bay, Japan, Journal of the Oceanographical Society of Japan, 33, 97-102, 1977.

Thayer, G. W.: Phytoplankton production and factors influencing production in the shallow estuaries near Beaufort, North Carolina, Ph.D., Department of Zoology, North Carolina State University, Raleigh, 170 pp., 1969.

Thayer, G. W.: Phytoplankton production and the distribution of nutrients in a shallow unstratified estuarine system near Beaufort, N.C, Chesapeake Science, 12, 240-253, 1971.

Therriault, J. C., and Levasseur, M.: Control of phytoplankton production in the Lower St. Lawrence Estuary: light and freshwater runoff, Naturaliste Canadien, 112, 77-96, 1985.

Thomas, J. P.: Influence of the Altamaha River on primary production beyond the mouth of the river, M.Sc. Thesis, University of Georgia, Athens, 1966.

Thompson, P. A.: Spatial and Temporal Patterns of Factors Influencing Phytoplankton in a Salt Wedge Estuary, the Swan River, Western Australia, Estuaries, 21, 801-817, 1998.

Tillman, U., Hesse, K.-J., and Colijn, F.: Planktonic primary production in the German Wadden Sea, Journal of Plankton Research, 22, 1253-1276, 2000.

Tundisi, J., Tundisi, T. M., Kutner, M.B.: Plankton studies in a mangrove environment: VIII. Further investigations on primary production, standing-stock of phyto- and zooplankton and some environmental factors, Int Rev Gestamen Hydrobiol., 58, 925-940, 1973.

- Turner, R. E., Woo, S. W., and Jitts, H. R.: Phytoplankton production in a turbid, temperate salt marsh estuary, *Estuarine and Coastal Marine Science*, 9, 603-613, 1979.
- Umani, S. F., Del Negro, P., Larato, C., De Vittor, C., Cabrini, M., Celio, M., Falconi, C., Tamberlich, F., and Azam, F.: Major inter-annual variations in microbial dynamics in the Gulf of Trieste (northern Adriatic Sea) and their ecosystem implications, *Aquatic Microbial Ecology*, 46, 163-175, 2007.
- Van Spaendonk, J. C. M., Kromkamp, J. C., and De Visscher, P. R. M.: Primary production of phytoplankton in a turbid coastal plain estuary, the Westerschelde (the Netherlands), *Netherlands Journal of Sea Research*, 31, 267-279, 1993.
- Vatova, A.: Primary Production in the High Venice Lagoon, *Journal du Conseil*, 26, 148-155, 10.1093/icesjms/26.2.148, 1961.
- Vegter, F., and de Visscher, P. R. M.: Phytoplankton primary production in brackish Lake Grevelingen (SW Netherlands) during 1976-1981, *Netherlands Journal of Sea Research*, 18, 246-259, 1984.
- Vegter, F., and De Visscher, P.: Nutrients and phytoplankton primary production in the marine tidal Oosterschelde estuary (The Netherlands), *Aquatic Ecology*, 21, 149-158, 10.1007/bf02255440, 1987.
- Wafar, M. V. M., Le Corre, P., and Birrien, J. L.: Nutrients and primary production in permanently well-mixed temperate coastal waters, *Estuarine, Coastal and Shelf Science*, 17, 431-446, Doi: 10.1016/0272-7714(83)90128-2, 1983.
- Wassman, P., and Aadnesen, A.: Hydrography, nutrients, suspended organic matter, and primary production in a shallow fjord system on the west coast of Norway, *Sarsia*, 69, 139-153, 1984.
- Wassman, P., Naas, K. E., and Johannessen, P. J.: Annual supply and loss of particulate organic carbon in Nordasvannet, a eutrophic, land -locked fjord in western Norway, *Rapport et Proces-Verbaux des Reunions Conseil Permanent International pour l'Exploration de la Mer*, 186, 423-431, 1986.
- Welschmeyer, N. A., and Lorenzen, C. J.: Chlorophyll budgets: Zooplankton grazing and phytoplankton growth in a temperate fjord and the Central Pacific gyres, *Limnology and Oceanography*, 30, 1-21, 1985.
- Welsh, B. L., Whitlatch, R. B., and Bohlen, W. F.: Relationship between physical characteristics and organic carbon sources as a basis for comparing estuaries in southern New England, in: *Estuarine Comparisons*, edited by: Kennedy, V. S., Academic Press, New York, 53-67, 1982.
- Wetsteyn, L. P. M. J., and Kromkamp, J. C.: Turbidity, nutrients and phytoplankton primary production in the Oosterschelde (The Netherlands) before, during and after a large-scale coastal engineering project (1980–1990), *Hydrobiologia*, 282-283, 61-78, 10.1007/bf00024622, 1994.

Williams, R. B.: Annual phytoplanktonic production in a system of shallow temperate estuaries, in: Some Contemporary Studies in Marine Science, edited by: Barnes, H., and George Allen, Unwin Ltd., London, 699-716, 1966.

Williams, R. B., and Murdoch, M. B.: Phytoplankton Production and Chlorophyll Concentration in the Beaufort Channel, North Carolina, *Limnology and Oceanography*, 11, 73-82, 1966.

Winter, D. F., Banse, K., and Anderson, G. C.: The Dynamics of Phytoplankton Blooms in Puget Sound, a Fjord in the Northwestern United States, *Marine Biology*, 29, 139-176, 1975.

Wium-Anderson, S.: Plankton Primary Production in a tropical mangrove bay at the south-west coast of Thailand, *Ophelia International Journal of Marine Biology*, 18, 53-60, 1979.

Wood, B. J. B., Tett, P. B., and Edwards, A.: An Introduction to the Phytoplankton, Primary Production and Relevant Hydrography of Loch Etive, *Journal of Ecology*, 61, 569-585, 1973.

Yamaguchi, M., and Imai, I.: Size fractionated phytoplankton biomass and primary productivity in Osaka Bay, eastern Seto Inland Sea, Japan, *Bull Nansei Natl Fish Res Inst* 29, 59-73, 1996.

Yamaguchi, Y., Satoh, H., and Aruga, Y.: Seasonal Changes of Organic Carbon and Nitrogen Production by Phytoplankton in the Estuary of River Tamagawa, *Marine Pollution Bulletin*, 23, 723-725, 1991.

Yokouchi, K., Tsuda, A., Kuwata, A., Kasai, H., Ichikawa, T., Hirota, Y., Adachi, K., Asanuma, I., and Ishida, H.: Simulated *in situ* measurements of primary production in Japanese waters. *In Global Climate Change and Response of Carbon Cycle in the Equatorial Pacific and Indian Oceans and Adjacent Landmasses*, edited by: Kawahata, K., and Awaya, Y., Elsevier, Amsterdam., pp. 65-88, 2007.

Zoppini, A., Pettine, M., Totti, C., Puddu, A., Artegiani, A., and Pagnotta, R.: Nutrients, standing crop and primary production in western coastal waters of the Adriatic Sea, *Estuarine and Coastal and Shelf Science*, 41, 493-513, 1995.