

1 Table S3. Ranges of total phosphorus concentrations in coastal sediments.

System	Study area	Layer	TP range ¹		AVG ²	Reference
		cm	Min.	Max.		
Bay	Firth of Thames, New Zealand	0-5	28	41	37	This study
Bay	Firth of Thames, New Zealand	30-35	23	50	34	This study
Bay	Akaroa Harbour, New Zealand	0-10	19	24	21	Fenwick, 2004 ³
Bay	Porirua Harbour, New Zealand	0-2	5	14	9	Sorensen and Milne, 2009
Tidal flat	Firth of Thames, New Zealand	0-5	31	33	32	This study
Tidal flat	Firth of Thames, New Zealand	30-35	25	34	31	This study
Tidal flat	Okains Bay, New Zealand	0-2	22	28	26	Lesley Bolton-Ritchie, 2008 ³
Tidal flat	Lyttelton Harbour, New Zealand	0-2	18	32	23	Lesley Bolton-Ritchie, 2013
Tidal flat	Robinsons Bay, New Zealand	0-2	17	27	22	Lesley Bolton-Ritchie, 2005
Tidal flat	Takamatua, New Zealand	0-2	17	18	18	Lesley Bolton-Ritchie, 2005
Tidal flat	Barrys Bay, New Zealand	0-2	16	21	18	Lesley Bolton-Ritchie, 2005
Tidal flat	Duvauchelle, New Zealand	0-2	13	17	15	Lesley Bolton-Ritchie, 2005
Tidal flat	Saigon River Delta, Vietnam	0-5	13	16	14	Oxmann et al., 2008, 2010 ⁴
Tidal flat	Saigon River Delta, Vietnam	30-35	14	15	15	Oxmann et al., 2008, 2010 ⁴
Tidal flat	Haldane Estuary, New Zealand	0-2	11	13	12	Robertson and Stevens, 2010
Tidal flat	Porirua Harbour, New Zealand	0-2	9	18	12	Sorensen and Milne, 2009
Tidal flat	Ratones mangrove, Brazil	0-5	7	12		Mater et al., 2004
Tidal flat	Mondego estuary, Portugal	0-37.5	15	20		Lillebo, 2007
Tidal river	Firth of Thames, New Zealand	30-35	23	34	27	This study
Tidal river	Ratones mangrove, Brazil	0-5	3	15		Mater et al., 2004
Tidal river	Itacorubi mangrove, Brazil	0-5	3	4		Mater et al., 2004
Mangrove	Firth of Thames, New Zealand	0-5	35	48	40	This study
Mangrove	Firth of Thames, New Zealand	30-35	27	55	39	This study
Mangrove	Saigon River Delta, Vietnam	0-5	10	19	15	Oxmann et al., 2008, 2010 ⁴
Mangrove	Saigon River Delta, Vietnam	30-35	8	14	11	Oxmann et al., 2008, 2010 ⁴
Mangrove	Whitford embayment, New Zealand	0-1.5	6	20	11	Ellis et al., 2004
Mangrove	Warri, Nigeria	0-150	11	23		Hesse, 1963
Mangrove	Hinchinbrook Island, Australia	0-5	11	17		Boto and Wellington, 1984
Mangrove	Hinchinbrook Island, Australia	95-100	7	12		Boto and Wellington, 1984
Mangrove	Sunderbans, India	0-25	3	15		Sahoo et al., 1985 ⁵
Mangrove	Queensland estuaries, Australia	0-2	4	22		Alongi, 1987; Alongi et al., 1992 ⁵
Mangrove	Iriomote Island, Japan	0-5	7	12		Kuraishi et al., 1985 ⁵
Mangrove	Sinnamary River, French Guiana	ND	19	26		Fabre, 1999
Salt marsh	Firth of Thames, New Zealand	0-5	35	43	39	This study
Salt marsh	Firth of Thames, New Zealand	0-5	37	44	40	This study
Salt marsh	Cooper River estuary, USA	0-20	ng	18		Sundareshwar and Morris, 1999
Salt marsh	Cooper River estuary, USA	10-20	ng	23		Sundareshwar and Morris, 1999
Salt marsh	Cooper River estuary, USA	0-100	5	15		Paludan and Morris, 1999
Salt marsh ⁶	Cooper River estuary, USA	0-100	10	20		Paludan and Morris, 1999
Salt marsh	Mondego estuary, Portugal	0-37.5	15	20		Lillebo, 2007

2 ¹Approximate total P range in $\mu\text{mol g}^{-1}$

3 ²Average concentrations given only for New Zealand sites and the Saigon River Delta site (partly not available
4 for other sites)

5 ³ $\mu\text{mol ml}^{-1}$

6 ⁴Oxmann, unpublished data

7 ⁵Taken from Alongi et al. (1992)

8 ⁶Salt marsh inlet

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