



Table D1. A comparison of trends estimated in this study and in other studies using observations at North Stradbroke Island, Coffs Harbour, and Batemans Marine Park. We compare trends at and below the surface for different time periods. The trend time period, method, and data platforms used are also shown. The trends estimated by Wijffels et al. (2018) correspond to those shown in Fig. 1.

Site, Bottom Depth	Depth (m)	Study	Time Period	Trend ($^{\circ}$ C decade) ^{TSS}	Trend Method	Data Platform
NS Island 63 m	Surface	Wijffels et al. (2018)	1992–2016	0.05	Linear	Satellite
	Surface	Foster et al. (2014)	1993–2013	0.16	Linear	Satellite
	Surface	Malan et al. (2021)	1993–2017	0.16	Linear	Satellite
	Surface	This study	2010–2019	0	EEMD	Satellite
	Surface	This study	2010–2019	0.19	Linear (TSSE)	Satellite
	Surface	This study	2012–2022	−0.04	EEMD	Satellite
	Surface	This study	2012–2022	0.14	Linear (TSSE)	Satellite
	20	Malan et al. (2021)	2010–2019	0.1	Linear	Mooring
	22	This Study	2010–2019	0	Linear (TSSE)	Mooring
	22	This Study	2010–2019	0.14	EEMD	Mooring
	22	This Study	2012–2022	−0.02	Linear (TSSE)	Mooring
	22	This Study	2012–2022	0.04	EEMD	Mooring
	61	This study	2012–2022	−0.26	Linear (TSSE)	Mooring
	61	This study	2012–2022	−0.13	EEMD	Mooring
Coffs Harbour 100 m	Surface	Wijffels et al. (2018)	1992–2016	0.12	Linear	Satellite
	Surface	Foster et al. (2014)	1993–2013	0.07	Linear	Satellite
	Surface	Malan et al. (2021)	1993–2017	0.22	Linear	Satellite
	Surface	This study	2010–2019	0.28	Linear (TSSE)	Satellite
	Surface	This study	2010–2019	0.7	EEMD	Satellite
	Surface	This Study	2012–2022	0.03	Linear (TSSE)	Satellite
	Surface	This Study	2012–2022	0.3	EEMD	Satellite
	20	Malan et al. (2021)	2010–2019	0.33	Linear	Mooring
	20	This Study	2010–2019	0.1	Linear (TSSE)	Mooring
	20	This Study	2010–2019	0.57	EEMD	Mooring
	20	This Study	2012–2022	0.03	Linear (TSSE)	Mooring
	20	This Study	2012–2022	0.59	EEMD	Mooring
	91.5	This Study	2012–2022	−0.02	Linear (TSSE)	Mooring
	91.5	This Study	2012–2022	0.02	EEMD	Mooring
Batemans MP 120 m	Surface	Wijffels et al. (2018)	1992–2016	0.29	Linear	Satellite
	Surface	Foster et al. (2014)	1993–2013	0.11	Linear	Satellite
	Surface	Malan et al. (2021)	1993–2017	0.48	Linear	Satellite
	Surface	This study	2011–2019	0.78	Linear (TSSE)	Satellite
	Surface	This study	2011–2019	1.14	EEMD	Satellite
	Surface	This study	2012–2022	0.12	Linear (TSSE)	Satellite
	Surface	This study	2012–2022	0.08	EEMD	Satellite
	19	Malan et al. (2021)	2011–2019	1.6	Linear	Mooring
	18.5	This Study	2011–2019	0.94	Linear (TSSE)	Mooring
	18.5	This Study	2011–2019	0.8	EEMD	Mooring
	18.5	This Study	2012–2022	0.75	Linear (TSSE)	Mooring
	18.5	This Study	2012–2022	0.53	EEMD	Mooring
	107.5	This Study	2012–2022	0.39	Linear (TSSE)	Mooring
	107.5	This Study	2012–2022	0.46	EEMD	Mooring