

Summary of water quality statistics for the Southern WCZ in 2005

Parameter	Hong Kong Island (South)			East Lamma Channel	
	SM1	SM2	SM19	SM3	SM4
Number of samples	12	12	12	12	12
Temperature (°C)	22.6 (16.0 - 27.8)	22.7 (16.0 - 28.1)	22.6 (16.5 - 27.9)	22.7 (16.0 - 28.1)	22.9 (16.0 - 28.1)
Salinity	32.4 (27.5 - 34.0)	32.3 (29.3 - 34.0)	32.6 (27.9 - 34.3)	32.2 (29.2 - 33.8)	31.8 (27.9 - 33.7)
Dissolved Oxygen (mg/L)	6.4 (5.2 - 7.3)	6.1 (4.8 - 7.4)	6.4 (4.6 - 9.7)	6.2 (4.7 - 8.1)	6.3 (4.8 - 8.3)
Bottom	6.0 (3.4 - 7.5)	5.9 (3.6 - 7.5)	6.2 (3.3 - 11.6)	5.9 (2.7 - 7.9)	5.9 (3.8 - 7.7)
Dissolved Oxygen (% Saturation)	89 (74 - 102)	86 (71 - 103)	89 (66 - 122)	86 (69 - 112)	88 (71 - 115)
Bottom	83 (50 - 101)	82 (50 - 99)	86 (48 - 148)	81 (38 - 109)	83 (57 - 107)
pH	8.2 (7.8 - 8.4)	8.1 (7.7 - 8.4)	8.2 (7.8 - 8.4)	8.1 (7.5 - 8.4)	8.1 (7.6 - 8.4)
Secchi Disc Depth (m)	2.4 (1.4 - 3.5)	2.4 (1.3 - 4.2)	2.9 (1.2 - 5.0)	2.2 (1.4 - 3.4)	2.2 (1.3 - 3.5)
Turbidity (NTU)	10.3 (3.8 - 15.7)	9.9 (4.1 - 19.8)	10.4 (4.3 - 21.8)	10.0 (4.4 - 17.0)	8.7 (3.9 - 13.4)
Suspended Solids (mg/L)	4.6 (1.8 - 7.8)	5.1 (1.4 - 13.0)	5.1 (1.8 - 12.5)	5.0 (1.7 - 9.8)	3.7 (1.6 - 6.0)
5-day Biochemical Oxygen Demand (mg/L)	0.7 (0.3 - 1.7)	0.6 (0.2 - 1.2)	0.7 (0.1 - 1.7)	0.7 (0.3 - 1.4)	0.7 (0.3 - 1.7)
Ammonia Nitrogen (mg/L)	0.02 (0.01 - 0.04)	0.03 (0.01 - 0.06)	0.02 (0.01 - 0.03)	0.04 (0.01 - 0.09)	0.05 (0.01 - 0.11)
Unionised Ammonia (mg/L)	0.001 (<0.001 - 0.003)	0.002 (<0.001 - 0.004)	0.001 (<0.001 - 0.002)	0.002 (<0.001 - 0.004)	0.003 (<0.001 - 0.006)
Nitrite Nitrogen (mg/L)	0.02 (<0.01 - 0.07)	0.03 (<0.01 - 0.07)	0.02 (<0.01 - 0.06)	0.03 (<0.01 - 0.07)	0.03 (<0.01 - 0.08)
Nitrate Nitrogen (mg/L)	0.07 (<0.01 - 0.24)	0.08 (0.01 - 0.20)	0.06 (0.01 - 0.27)	0.10 (0.01 - 0.24)	0.11 (0.01 - 0.31)
Total Inorganic Nitrogen (mg/L)	0.10 (0.02 - 0.32)	0.14 (0.02 - 0.29)	0.10 (0.02 - 0.34)	0.17 (0.03 - 0.33)	0.20 (0.05 - 0.42)
Total Kjeldahl Nitrogen (mg/L)	0.16 (0.09 - 0.58)	0.16 (0.09 - 0.56)	0.15 (0.08 - 0.58)	0.19 (0.10 - 0.57)	0.19 (0.09 - 0.56)
Total Nitrogen (mg/L)	0.24 (0.10 - 0.66)	0.27 (0.12 - 0.66)	0.23 (0.09 - 0.65)	0.31 (0.15 - 0.67)	0.34 (0.13 - 0.66)
Orthophosphate Phosphorus (mg/L)	0.01 (<0.01 - 0.01)	0.01 (0.01 - 0.02)	0.01 (0.01 - 0.01)	0.01 (0.01 - 0.02)	0.01 (0.01 - 0.02)
Total Phosphorus (mg/L)	0.02 (0.02 - 0.03)	0.02 (0.02 - 0.03)	0.02 (0.02 - 0.03)	0.02 (0.02 - 0.03)	0.03 (0.02 - 0.04)
Silica (as SiO ₂) (mg/L)	0.6 (0.1 - 1.3)	0.7 (0.1 - 1.4)	0.7 (0.2 - 1.6)	0.8 (0.1 - 1.5)	0.8 (0.1 - 1.6)
Chlorophyll- <i>a</i> (µg/L)	3.2 (0.8 - 12.5)	2.6 (0.8 - 8.9)	2.5 (0.6 - 10.4)	3.1 (0.7 - 13.5)	3.9 (0.7 - 18.4)
<i>E. coli</i> (count/100mL)	2 (1 - 71)	71 (7 - 510)	2 (1 - 8)	36 (3 - 140)	35 (2 - 360)
Faecal Coliforms (count/100mL)	4 (1 - 140)	140 (15 - 1000)	3 (1 - 19)	67 (8 - 360)	73 (9 - 900)

Note : 1. Unless otherwise specified, data presented are depth-averaged (A) values calculated by taking the means of three depths: Surface (S), Mid-depth (M), Bottom (B).

2. Data presented are annual arithmetic means of the depth-averaged results except for *E. coli* and faecal coliforms which are annual geometric means.

3. Data in brackets indicate the ranges.

Summary of water quality statistics for the Southern WCZ in 2005 (continued)

Parameter	West Lamma Channel				
	SM5	SM6	SM7	SM9	SM18
Number of samples	12	12	12	12	12
Temperature (°C)	23.1 (15.9 - 28.2)	22.9 (15.9 - 28.2)	23.0 (15.7 - 28.3)	23.0 (15.9 - 29.1)	22.7 (16.0 - 27.9)
Salinity	31.2 (19.4 - 33.9)	31.7 (23.6 - 33.7)	31.1 (23.2 - 33.2)	30.7 (22.9 - 33.2)	32.1 (26.0 - 34.1)
Dissolved Oxygen (mg/L)	6.7 (5.2 - 8.2)	6.5 (4.4 - 8.9)	6.5 (4.7 - 8.6)	6.1 (4.3 - 7.3)	6.3 (4.7 - 7.9)
Bottom	6.4 (4.5 - 7.7)	6.0 (2.9 - 8.0)	6.3 (4.3 - 8.4)	5.9 (3.5 - 7.4)	5.8 (3.1 - 7.6)
Dissolved Oxygen (% Saturation)	94 (75 - 115)	91 (62 - 124)	91 (67 - 118)	84 (60 - 101)	88 (68 - 101)
Bottom	89 (63 - 104)	83 (43 - 111)	88 (61 - 115)	82 (50 - 99)	80 (43 - 100)
pH	8.2 (7.9 - 8.4)	8.2 (7.9 - 8.5)	8.1 (7.8 - 8.4)	8.1 (7.8 - 8.4)	8.2 (7.9 - 8.4)
Secchi Disc Depth (m)	2.1 (1.1 - 2.8)	2.3 (1.1 - 3.2)	2.1 (1.4 - 3.3)	1.7 (1.0 - 3.2)	2.8 (2.1 - 5.5)
Turbidity (NTU)	11.3 (4.6 - 23.3)	12.0 (4.3 - 22.6)	10.5 (5.1 - 17.5)	10.9 (6.1 - 17.7)	11.0 (5.3 - 18.2)
Suspended Solids (mg/L)	5.6 (1.2 - 16.7)	6.7 (1.5 - 17.0)	5.2 (2.1 - 12.9)	6.4 (2.5 - 18.0)	4.9 (2.2 - 11.5)
5-day Biochemical Oxygen Demand (mg/L)	0.9 (0.3 - 2.7)	0.9 (0.2 - 2.4)	1.3 (0.5 - 2.7)	0.8 (0.3 - 1.3)	0.7 (0.2 - 2.5)
Ammonia Nitrogen (mg/L)	0.03 (0.01 - 0.08)	0.03 (0.01 - 0.09)	0.06 (0.02 - 0.13)	0.11 (0.04 - 0.21)	0.02 (0.01 - 0.04)
Unionised Ammonia (mg/L)	0.002 (<0.001 - 0.009)	0.002 (<0.001 - 0.006)	0.003 (0.001 - 0.006)	0.005 (0.002 - 0.010)	0.001 (<0.001 - 0.003)
Nitrite Nitrogen (mg/L)	0.03 (<0.01 - 0.09)	0.03 (<0.01 - 0.09)	0.04 (0.01 - 0.09)	0.05 (0.01 - 0.12)	0.02 (<0.01 - 0.08)
Nitrate Nitrogen (mg/L)	0.11 (0.01 - 0.45)	0.11 (0.01 - 0.43)	0.16 (0.03 - 0.54)	0.19 (0.05 - 0.48)	0.09 (0.01 - 0.34)
Total Inorganic Nitrogen (mg/L)	0.17 (0.02 - 0.63)	0.17 (0.04 - 0.56)	0.26 (0.11 - 0.64)	0.35 (0.15 - 0.80)	0.14 (0.02 - 0.44)
Total Kjeldahl Nitrogen (mg/L)	0.18 (0.09 - 0.53)	0.16 (0.09 - 0.55)	0.25 (0.14 - 0.65)	0.25 (0.16 - 0.34)	0.15 (0.08 - 0.56)
Total Nitrogen (mg/L)	0.32 (0.13 - 0.77)	0.30 (0.13 - 0.73)	0.44 (0.21 - 0.88)	0.49 (0.27 - 0.93)	0.26 (0.10 - 0.66)
Orthophosphate Phosphorus (mg/L)	0.01 (0.01 - 0.02)	0.01 (<0.01 - 0.02)	0.02 (<0.01 - 0.03)	0.02 (0.01 - 0.03)	0.01 (0.01 - 0.01)
Total Phosphorus (mg/L)	0.02 (0.02 - 0.04)	0.02 (0.02 - 0.03)	0.03 (0.02 - 0.04)	0.04 (0.03 - 0.06)	0.02 (0.02 - 0.03)
Silica (as SiO ₂) (mg/L)	0.9 (0.1 - 2.4)	0.9 (0.1 - 2.5)	1.0 (0.1 - 2.5)	1.2 (0.3 - 3.6)	0.8 (0.2 - 2.2)
Chlorophyll- <i>a</i> (µg/L)	3.5 (1.0 - 13.3)	4.0 (0.8 - 13.3)	7.1 (1.0 - 23.3)	3.6 (0.7 - 13.2)	2.2 (0.9 - 7.6)
<i>E. coli</i> (count/100mL)	3 (1 - 780)	4 (1 - 240)	69 (1 - 1200)	260 (3 - 3400)	2 (1 - 28)
Faecal Coliforms (count/100mL)	5 (1 - 1600)	7 (1 - 580)	130 (1 - 2200)	500 (4 - 4300)	2 (1 - 64)

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2. Data presented are annual arithmetic means of the depth-averaged results except for *E. coli* and faecal coliforms which are annual geometric means.

3. Data in brackets indicate the ranges.

Summary of water quality statistics for the Southern WCZ in 2005 (continued)

Parameter	Lantau Island (East)		Lantau Island (South)			Soko Islands
	SM10	SM11	SM12	SM13	SM17	SM20
Number of samples	12	12	12	12	12	12
Temperature (°C)	23.2 (15.3 - 29.3)	23.1 (15.4 - 29.1)	22.9 (15.7 - 28.9)	22.9 (15.6 - 29.0)	22.6 (15.6 - 29.0)	22.9 (15.4 - 29.0)
Salinity	29.8 (18.9 - 33.2)	30.5 (22.9 - 33.3)	30.8 (21.6 - 33.2)	31.1 (23.4 - 33.3)	31.9 (25.5 - 33.8)	30.5 (15.3 - 33.2)
Dissolved Oxygen (mg/L)	7.2 (5.5 - 9.1)	7.1 (4.5 - 9.7)	6.7 (4.9 - 9.6)	6.5 (4.0 - 8.3)	6.4 (3.7 - 8.3)	6.3 (3.4 - 9.0)
	Bottom					
	7.1 (5.2 - 9.1)	6.7 (2.6 - 9.2)	6.5 (3.5 - 9.2)	6.0 (1.9 - 7.5)	5.9 (2.6 - 7.5)	6.1 (2.3 - 8.5)
Dissolved Oxygen (% Saturation)	101 (78 - 129)	99 (65 - 137)	93 (69 - 134)	90 (57 - 117)	88 (52 - 117)	88 (49 - 125)
	Bottom					
	98 (73 - 128)	92 (37 - 129)	90 (50 - 129)	84 (28 - 100)	82 (37 - 110)	85 (32 - 119)
pH	8.2 (7.8 - 8.6)	8.2 (7.9 - 8.6)	8.2 (7.8 - 8.6)	8.2 (7.8 - 8.5)	8.2 (7.9 - 8.4)	8.2 (7.8 - 8.5)
Secchi Disc Depth (m)	1.4 (0.9 - 2.6)	1.6 (1.0 - 2.1)	1.7 (1.0 - 2.5)	1.8 (1.0 - 3.0)	2.1 (0.5 - 3.0)	1.6 (0.2 - 2.8)
Turbidity (NTU)	13.1 (4.9 - 26.6)	10.4 (4.2 - 16.3)	12.8 (5.1 - 24.3)	12.3 (5.4 - 19.3)	12.3 (3.7 - 22.1)	15.6 (5.0 - 34.6)
Suspended Solids (mg/L)	7.1 (3.8 - 14.5)	5.3 (2.8 - 9.5)	7.7 (3.1 - 19.3)	8.1 (3.4 - 13.0)	5.8 (2.1 - 9.4)	10.4 (2.3 - 30.6)
5-day Biochemical Oxygen Demand (mg/L)	1.2 (0.5 - 2.9)	1.2 (0.5 - 3.1)	1.0 (0.5 - 2.6)	1.0 (0.5 - 3.4)	0.6 (0.3 - 1.2)	0.7 (0.4 - 1.8)
Ammonia Nitrogen (mg/L)	0.09 (0.02 - 0.20)	0.09 (0.02 - 0.17)	0.07 (0.01 - 0.14)	0.05 (0.01 - 0.10)	0.03 (0.01 - 0.07)	0.04 (0.01 - 0.14)
Unionised Ammonia (mg/L)	0.005 (<0.001 - 0.012)	0.005 (0.001 - 0.010)	0.004 (<0.001 - 0.007)	0.003 (<0.001 - 0.006)	0.002 (<0.001 - 0.004)	0.003 (<0.001 - 0.006)
Nitrite Nitrogen (mg/L)	0.05 (0.01 - 0.12)	0.05 (<0.01 - 0.12)	0.05 (<0.01 - 0.12)	0.04 (<0.01 - 0.11)	0.03 (<0.01 - 0.08)	0.03 (0.01 - 0.10)
Nitrate Nitrogen (mg/L)	0.21 (0.06 - 0.58)	0.19 (0.03 - 0.52)	0.17 (0.02 - 0.48)	0.14 (0.01 - 0.43)	0.11 (0.01 - 0.38)	0.15 (0.03 - 0.51)
Total Inorganic Nitrogen (mg/L)	0.35 (0.10 - 0.89)	0.32 (0.07 - 0.73)	0.28 (0.05 - 0.71)	0.24 (0.05 - 0.63)	0.17 (0.02 - 0.51)	0.23 (0.07 - 0.75)
Total Kjeldahl Nitrogen (mg/L)	0.27 (0.17 - 0.40)	0.26 (0.16 - 0.32)	0.21 (0.13 - 0.27)	0.18 (0.11 - 0.23)	0.14 (0.11 - 0.21)	0.17 (0.10 - 0.28)
Total Nitrogen (mg/L)	0.53 (0.30 - 1.10)	0.49 (0.28 - 0.91)	0.43 (0.19 - 0.83)	0.36 (0.19 - 0.76)	0.28 (0.12 - 0.64)	0.35 (0.16 - 0.89)
Orthophosphate Phosphorus (mg/L)	0.02 (<0.01 - 0.03)	0.02 (0.01 - 0.03)	0.02 (<0.01 - 0.03)	0.02 (<0.01 - 0.02)	0.01 (<0.01 - 0.02)	0.01 (0.01 - 0.03)
Total Phosphorus (mg/L)	0.04 (0.03 - 0.06)	0.04 (0.02 - 0.05)	0.03 (0.02 - 0.05)	0.03 (0.02 - 0.04)	0.02 (0.02 - 0.03)	0.03 (0.02 - 0.05)
Silica (as SiO ₂) (mg/L)	1.3 (0.1 - 4.2)	1.2 (0.1 - 3.6)	1.1 (0.1 - 3.4)	1.1 (0.2 - 3.2)	0.9 (0.1 - 2.8)	1.1 (0.2 - 3.9)
Chlorophyll- <i>a</i> (µg/L)	9.1 (0.8 - 31.0)	7.7 (0.7 - 26.3)	5.9 (0.6 - 25.7)	4.3 (0.7 - 19.7)	2.2 (0.6 - 6.9)	3.5 (0.6 - 14.0)
<i>E. coli</i> (count/100mL)	9 (1 - 180)	10 (1 - 120)	19 (1 - 230)	6 (1 - 140)	2 (1 - 46)	2 (1 - 93)
Faecal Coliforms (count/100mL)	23 (1 - 400)	17 (1 - 490)	38 (4 - 550)	12 (1 - 280)	3 (1 - 75)	3 (1 - 220)

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3. Data in brackets indicate the ranges.