

## Water quality of the Tung Ping Chau Marine Park in Year 2001

|                                                   | Ma Kok Tsui            |                        |                        | Cheung Sha Wan         |                        |                        |
|---------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| No. of sample                                     | 4                      |                        |                        | 4                      |                        |                        |
| Depth                                             | Surface                | Middle                 | Bottom                 | Surface                | Middle                 | Bottom                 |
| Temperature (°C)                                  | 24.88<br>(17.1-31.81)  | 24.57<br>(17.1-31)     | 24.29<br>(17.1-29.96)  | 24.76<br>(17.1-31.55)  | 24.56<br>(17.1-30.89)  | 24.14<br>(17.1-29.66)  |
| Salinity (ppt)                                    | 29.55<br>(26.7-31.6)   | 29.65<br>(26.8-31.6)   | 30.08<br>(28.3-31.7)   | 29.68<br>(26.8-31.7)   | 29.68<br>(26.8-31.7)   | 30.25<br>(28.5-31.7)   |
| Dissolved Oxygen (mg/L)                           | 6.47<br>(6.09-7.2)     | 6.43<br>(5.96-7.18)    | 6.20<br>(5.48-7.18)    | 6.36<br>(6.1-7.11)     | 6.40<br>(5.98-7.14)    | 5.79<br>(4.79-7.14)    |
| pH                                                | 8.43<br>(8.2-8.6)      | 8.38<br>(8-8.6)        | 8.35<br>(8-8.6)        | 8.45<br>(8.3-8.6)      | 8.38<br>(8.1-8.6)      | 8.40<br>(8.2-8.6)      |
| Secchi Depth (m)                                  | 4.55<br>(2.4-8)        |                        |                        | 4.45<br>(2.7-8.4)      |                        |                        |
| Turbidity (NTU)                                   | 0.98<br>(0-2)          | 1.33<br>(0.1-2.8)      | 1.80<br>(1.3-2.6)      | 1.03<br>(0-2.1)        | 1.35<br>(0.3-2.5)      | 4.78<br>(2.1-10.4)     |
| Suspended Solids (mg/L)                           | 1.63<br>(0.23-2.81)    | 1.75<br>(0.09-3.43)    | 1.91<br>(0.52-2.84)    | 1.61<br>(0.42-2.98)    | 1.84<br>(0.34-3.3)     | 1.62<br>(0.36-2.75)    |
| BOD (mg/L)                                        | 0.99<br>(0.23-1.63)    | 0.56<br>(0.14-1.31)    | 0.49<br>(0.02-1.09)    | 0.64<br>(0.05-1.47)    | 0.59<br>(0.12-1.45)    | 0.51<br>(0.03-1.19)    |
| Ammoniacal Nitrogen (mg/L)                        | 0.016<br>(0.00-0.04)   | 0.009<br>(0.01-0.02)   | 0.009<br>(0.00-0.02)   | 0.012<br>(0.00-0.03)   | 0.007<br>(0.00-0.01)   | 0.008<br>(0.00-0.01)   |
| Unionized Ammonia (mg/L)                          | 0.001<br>(0.00-0.00)   | 0.001<br>(0-0.00)      | 0.001<br>(0.00-0.00)   | 0.001<br>(0-0.00)      | 0.001<br>(0-0.00)      | 0.001<br>(0-0.00)      |
| Nitrite Nitrogen (mg/L)                           | 0.056<br>(0.00-0.20)   | 0.077<br>(0.00-0.20)   | 0.056<br>(0.00-0.20)   | 0.081<br>(0.00-0.21)   | 0.050<br>(0.00-0.17)   | 0.133<br>(0.00-0.48)   |
| Nitrate Nitrogen (mg/L)                           | 0.797<br>(0.04-1.77)   | 0.729<br>(0.01-1.71)   | 1.093<br>(0.03-2.69)   | 0.711<br>(0.11-1.77)   | 0.774<br>(0.08-1.68)   | 0.962<br>(0.03-2.41)   |
| Total Inorganic Nitrogen (mg/L)                   | 0.859<br>(0.02-1.93)   | 0.791<br>(0.02-1.88)   | 1.213<br>(0.24-2.88)   | 0.765<br>(0.03-1.98)   | 0.829<br>(0.02-1.89)   | 0.999<br>(0.02-2.49)   |
| Total Kjeldahl Nitrogen (mg/L)                    | 1.358<br>(0.6-3.06)    | 1.128<br>(0.5-2.18)    | 1.085<br>(0.42-2.15)   | 1.068<br>(0.5-2.21)    | 0.873<br>(0.05-2.18)   | 1.158<br>(0.4-2.58)    |
| Total Nitrogen (mg/L)                             | 2.563<br>(1.19-4.98)   | 2.220<br>(1.14-4.05)   | 2.580<br>(1.06-5.02)   | 2.278<br>(0.9-4.19)    | 1.963<br>(0.37-4.06)   | 2.453<br>(1.02-5.07)   |
| Orthophosphate Phosphorus (mg/L)                  | 0.054<br>(0.00-0.17)   | 0.052<br>(0.00-0.17)   | 0.067<br>(0.00-0.21)   | 0.052<br>(0.00-0.17)   | 0.060<br>(0.00-0.18)   | 0.048<br>(0.00-0.13)   |
| Total Phosphorus (mg/L)                           | 0.025<br>(0.02-0.05)   | 0.040<br>(0.02-0.12)   | 0.028<br>(0.02-0.11)   | 0.031<br>(0.02-0.08)   | 0.055<br>(0.02-0.12)   | 0.030<br>(0.02-0.07)   |
| Silica (mg/L)                                     | 0.298<br>(0.05-0.5)    | 0.298<br>(0.04-0.5)    | 0.320<br>(0.08-0.51)   | 0.298<br>(0.04-0.53)   | 0.303<br>(0.04-0.53)   | 0.333<br>(0.08-0.57)   |
| Chlorophyll-a (µg/L)                              | 1.338<br>(0.74-1.85)   | 1.345<br>(0.82-1.82)   | 1.235<br>(0.79-1.63)   | 1.365<br>(0.91-1.63)   | 1.238<br>(0.69-1.84)   | 1.148<br>(0.67-1.57)   |
| Phaeopigment (µg/L)                               | 0.850<br>(0.49-1.4)    | 1.120<br>(0.62-2.1)    | 2.445<br>(0.66-5.8)    | 0.908<br>(0.59-1.6)    | 0.885<br>(0.56-1.5)    | 0.968<br>(0.43-1.9)    |
| <i>E. coli</i> (CFU/100 mL)                       | 6.3<br>(4-10)          | 6.3<br>(0-20)          | 12.0<br>(5-25)         | 4.0<br>(0-10)          | 1.9<br>(0-5)           | 17.5<br>(1.5-18.5)     |
| Faecal Coliforms (CFU/100 mL)                     | 75.1<br>(0-150)        | 88.4<br>(5-200)        | 89.0<br>(15-200)       | 134.3<br>(0-495)       | 170.5<br>(5-585)       | 143.8<br>(5-450)       |
| No. of sample                                     | 3                      |                        |                        | 3                      |                        |                        |
| Phytoplanktons- Diatoms (cell/mL)                 | 12422<br>(3300-23703)  | 16233<br>(3600-29704)  | 15645<br>(5101-27903)  | 13767<br>(3900-26403)  | 12755<br>(3600-22203)  | 8911<br>(3900-17702)   |
| Phytoplanktons- Dinoflagellates (cell/mL)         | 244<br>(0-733)         | 344<br>(0-733)         | 733<br>(0-2199)        | 833<br>(0-2199)        | 200<br>(0-600)         | 444<br>(0-733)         |
| Phytoplanktons- Others (cell/mL)                  | 27364<br>(17402-43988) | 26498<br>(14102-39589) | 29132<br>(21903-41789) | 28031<br>(19502-41789) | 28164<br>(15602-50587) | 33219<br>(18302-56452) |
| Zooplankton - Biomass (mg/m <sup>3</sup> )        | 31<br>(5.3-74.5)       |                        |                        | 40<br>(9.8-86)         |                        |                        |
| Zooplankton - Copepoda (numbers/m <sup>3</sup> )  | 11858<br>(2725-18714)  |                        |                        | 19514<br>(5823-32424)  |                        |                        |
| Zooplankton - Cladocera (numbers/m <sup>3</sup> ) | 13492<br>(89-39624)    |                        |                        | 8657<br>(138-25308)    |                        |                        |
| Zooplankton - Larvae (numbers/m <sup>3</sup> )    | 1201<br>(611-2101)     |                        |                        | 1065<br>(153-1834)     |                        |                        |
| Zooplankton - Noctiluca (numbers/m <sup>3</sup> ) | 904<br>(0-2674)        |                        |                        | 1447<br>(0-4340)       |                        |                        |
| Zooplankton - Others (numbers/m <sup>3</sup> )    | 2090<br>(1044-2960)    |                        |                        | 1384<br>(611-2690)     |                        |                        |

\* Data presented in mean value (range)