**Table S1** Kendall’s tau correlation coefficients between pairs of microbial and physicochemical parameters. Only values with significant correlation (*p*<0.05) are presented.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sample type | Variable 1 | Variable 2 | tau-a | p-value |
| Pig feces sample | SP25 | RYC2056 | 0.329 | 0.001 |
|  | total coliforms | *E. coli* | 0.909 | 0.000 |
| Human sewage | total coliforms | *E. coli* | 0.952 | 0.000 |
| Urban canal | RYC2056 | total coliforms | 0.663 | 0.000 |
|  |  | *E. coli* | 0.705 | 0.000 |
|  |  | BOD | 0.342 | 0.038 |
|  | total coliforms | *E. coli* | 0.821 | 0.000 |
|  |  | BOD | 0.342 | 0.037 |
|  | *E. coli* | BOD | 0.458 | 0.005 |
|  | pH | BOD | 0.458 | 0.005 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Table S2** Summary statistics of microbial and physicochemical parameters in human sewage and surface water samples | | | |
| Description | Human sewage | Urban canals | Ponds near swine farms |
| Total coliforms |  |  |  |
| No. of pooled samples | 21 | 20 | 7 |
| Max (log10 CFU 100 ml-1) | 9.74 | 6.99 | 5.72 |
| Median (log10 CFU 100 ml-1) | 6.77 | 6.17 | 5.54 |
| Min (log10 CFU 100 ml-1) | 5.39 | 4.30 | 4.43 |
| Mean (log10 CFU 100 ml-1) | 8.45 | 6.43 | 5.46 |
| S.E. (log10 CFU 100 ml-1) | 8.42 | 5.80 | 4.85 |
| *E. coli* |  |  |  |
| No. of pooled samples | 21 | 20 | 7 |
| Max (log10 CFU 100 ml-1) | 9.65 | 6.43 | 5.59 |
| Median (log10 CFU 100 ml-1) | 6.70 | 5.77 | 5.10 |
| Min (log10 CFU 100 ml-1) | 5.10 | 3.93 | 3.90 |
| Mean (log10 CFU 100 ml-1) | 8.36 | 5.97 | 5.15 |
| S.E. (log10 CFU 100 ml-1) | 8.32 | 5.32 | 4.75 |
| pH |  |  |  |
| No. of pooled samples | 21 | 20 | 7 |
| Max | 7.67 | 7.59 | 7.91 |
| Median | 6.97 | 7.44 | 7.04 |
| Min | 6.20 | 6.99 | 6.99 |
| Mean | 6.90 | 7.42 | 7.27 |
| S.E. | 0.09 | 0.03 | 0.14 |
| BOD |  |  |  |
| No. of pooled samples | 21 | 20 | 7 |
| Max (mg l−1) | 345.0 | 68.0 | 105.0 |
| Median (mg l−1) | 97.0 | 36.0 | 24.5 |
| Min (mg l−1) | 5.50 | 17.0 | 14.0 |
| Mean (mg l−1) | 107.9 | 37.0 | 52.4 |
| S.E. (mg l−1) | 20.4 | 3.2 | 15.2 |
| TSS |  |  |  |
| No. of pooled samples | 21 | 20 | 7 |
| Max (mg l−1) | 136.0 | 96.0 | 723.0 |
| Median (mg l−1) | 54.0 | 25.0 | 79.0 |
| Min (mg l−1) | 3.0 | 10.0 | 17.0 |
| Mean (mg l−1) | 54.0 | 32.1 | 191.7 |
| S.E. (mg l−1) | 10.6 | 5.0 | 93.9 |