Table S1. The total coliform (TC), faecal coliform (FC) and faecal streptococcus (FS) counts (CFU/100 mL) in water samples in nine sites along the Rawan-Oya Tributary of Mahaweli River during dry and wet seasons from June 2020 to March 2022

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2020 |  |  |  |  | 2021 |  |  |  |  |  |  |  |  |  |  | 2022 |  |  |
|  | Jun | Jul | Aug | Sep | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Oct | Nov | Dec | Jan | Feb | Mar |
|  | dry | dry | wet | wet | wet | dry | dry | dry | wet | wet | wet | wet | wet | wet | wet | dry | dry | dry | dry |
| TC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S1 | 1900 | 1080 | 2010 | 2040 | 1340 | 710 | 270 | 560 | 1350 | 2450 | 2150 | 1660 | 1780 | 1940 | 2010 | 990 | 780 | 850 | 930 |
| S2 | 4500 | 5600 | 3600 | 82000 | 13000 | 4100 | 3600 | 4100 | 12300 | 15600 | 17200 | 14600 | 11400 | 16900 | 13700 | 6900 | 5900 | 5600 | 4200 |
| S3 | 17000 | 14000 | 17000 | 11550 | 16900 | 13600 | 12600 | 11900 | 17600 | 18400 | 16500 | 15700 | 19700 | 16300 | 18200 | 15900 | 14700 | 16100 | 11200 |
| S4 | 20600 | 19600 | 18900 | 34000 | 25400 | 17700 | 15300 | 16800 | 24300 | 21100 | 20300 | 22600 | 17800 | 19600 | 21600 | 19500 | 13400 | 17500 | 16200 |
| S5 | 24000 | 37000 | 27000 | 67000 | 51000 | 22950 | 24300 | 19600 | 98000 | 92000 | 83000 | 89000 | 94000 | 76000 | 81000 | 23600 | 29000 | 57000 | 41000 |
| S6 | 32000 | 49500 | 96500 | 159000 | 132500 | 101000 | 134000 | 146000 | 164000 | 148000 | 126000 | 98000 | 76000 | 66000 | 72000 | 93000 | 115000 | 99000 | 83000 |
| S7 | 15300 | 9850 | 14350 | 11000 | 10650 | 32500 | 24300 | 9500 | 12600 | 16200 | 7500 | 11200 | 9800 | 11100 | 9600 | 7200 | 8700 | 9300 | 7100 |
| S8 | 25000 | 12400 | 14850 | 38500 | 21500 | 19500 | 17400 | 15200 | 19900 | 24300 | 18600 | 23600 | 13700 | 17600 | 21300 | 6900 | 15700 | 11300 | 16300 |
| S9 | 12900 | 19700 | 11200 | 23500 | 22600 | 14100 | 11600 | 10100 | 21400 | 22100 | 19600 | 18400 | 20600 | 18500 | 16600 | 9900 | 8700 | 10300 | 11400 |
| FC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S1 | 49 | 32 | 66 | 150 | 54 | 37 | 16 | 39 | 59 | 172 | 137 | 78 | 92 | 101 | 105 | 43 | 40 | 44 | 51 |
| S2 | 110 | 130 | 89 | 580 | 360 | 125 | 91 | 98 | 240 | 310 | 390 | 270 | 248 | 330 | 206 | 109 | 123 | 139 | 157 |
| S3 | 5900 | 3250 | 9700 | 4800 | 7300 | 2500 | 2100 | 1970 | 6400 | 7200 | 6100 | 5200 | 9900 | 4900 | 5300 | 3800 | 2460 | 3100 | 1980 |
| S4 | 2050 | 1690 | 1410 | 3600 | 2900 | 2490 | 1990 | 1870 | 2470 | 2310 | 1850 | 1920 | 1630 | 1880 | 2070 | 2020 | 1270 | 1420 | 1650 |
| S5 | 2600 | 4650 | 2900 | 14200 | 10300 | 2030 | 2280 | 1030 | 23100 | 21600 | 19700 | 18900 | 22100 | 15900 | 17400 | 1960 | 1750 | 9800 | 7300 |
| S6 | 6200 | 6700 | 8500 | 22100 | 11100 | 10800 | 20200 | 24000 | 32000 | 24600 | 23100 | 20400 | 20700 | 19300 | 19900 | 23700 | 30000 | 18700 | 16500 |
| S7 | 3100 | 380 | 2450 | 1755 | 1150 | 3220 | 3000 | 280 | 2110 | 2260 | 204 | 2280 | 210 | 1020 | 1170 | 194 | 233 | 241 | 166 |
| S8 | 3150 | 940 | 1015 | 4105 | 2650 | 1790 | 1420 | 1510 | 1660 | 2050 | 1490 | 2230 | 1120 | 1630 | 1940 | 780 | 970 | 860 | 1010 |
| S9 | 1730 | 2020 | 730 | 3900 | 2640 | 1640 | 1220 | 990 | 2080 | 2350 | 2190 | 1480 | 2410 | 2080 | 1950 | 1040 | 630 | 960 | 990 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S1 | 540 | 720 | 1390 | 1100 | 1120 | 750 | 630 | 590 | 1190 | 1570 | 1420 | 990 | 1090 | 880 | 830 | 870 | 810 | 720 | 660 |
| S2 | 1020 | 1250 | 1710 | 1920 | 890 | 980 | 770 | 680 | 1970 | 1720 | 1860 | 1680 | 1920 | 1710 | 1590 | 1220 | 1090 | 850 | 940 |
| S3 | 1410 | 1150 | 2700 | 1110 | 1790 | 940 | 810 | 610 | 1660 | 1430 | 1690 | 1230 | 2030 | 1950 | 1240 | 1060 | 970 | 710 | 870 |
| S4 | 2150 | 1395 | 1760 | 4400 | 2350 | 1610 | 930 | 840 | 1530 | 1280 | 1030 | 1320 | 1150 | 940 | 1030 | 980 | 1130 | 790 | 980 |
| S5 | 3100 | 2370 | 3900 | 4200 | 2470 | 2190 | 990 | 1070 | 4800 | 4400 | 3800 | 3400 | 4300 | 4100 | 5100 | 1240 | 1070 | 2150 | 1690 |
| S6 | 1920 | 2150 | 2040 | 4600 | 3100 | 2260 | 2900 | 3900 | 5900 | 6100 | 5400 | 5100 | 4500 | 5200 | 4800 | 3800 | 5700 | 6200 | 5100 |
| S7 | 1450 | 975 | 4700 | 1900 | 1340 | 960 | 1040 | 810 | 3200 | 1510 | 1080 | 970 | 1170 | 910 | 1040 | 1120 | 1190 | 890 | 1020 |
| S8 | 2950 | 2070 | 3050 | 1875 | 2450 | 1530 | 1260 | 1180 | 3600 | 2800 | 1990 | 1640 | 1860 | 1910 | 1720 | 1350 | 1160 | 1080 | 1160 |
| S9 | 3450 | 1640 | 5100 | 3000 | 970 | 1285 | 950 | 1130 | 1940 | 1730 | 1050 | 1110 | 870 | 1010 | 930 | 960 | 830 | 970 | 910 |

Table S2. Positive/present (1) and negative/absent (0) results for the microbial source tracking markers at nine sites along the Rawan-Oya Tributary during dry and wet seasons from June 2020 to March 2022; Bac32- Universal Bacteroides marker, HF183- Human-specific Bacteroides marker, CF193- Cattle specific Bacteroides marker, Ed-1- Dog-specific Faecalibacterium marker

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2020 |  |  |  |  | 2021 |  |  |  |  |  |  |  |  |  |  | 2022 |  |  |
|  | Jun | July | Aug | Sep | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Oct | Nov | Dec | Jan | Feb | Mar |
|  | dry | dry | wet | wet | wet | dry | dry | dry | wet | wet | wet | wet | wet | wet | wet | dry | dry | dry | dry |
| Bac32 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| H183 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S3 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| S4 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| S5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S7 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| S8 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| S9 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| C193 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| S2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S3 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| S4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| S5 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| S6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S7 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| S8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S9 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| ED1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| S2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| S3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| S4 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S5 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| S6 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S7 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| S8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| S9 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |