

Supplementary Materials

Table S1. 1995–2016 Hong Kong’s per capita ecological footprint by land categories
(unit: gha/cap)

| Years | Arable land | Forest land | Grazing land | Water area | Fossil land | Built-up land | Ecological footprint |
|--------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|--------------------------|---------------------------------|
| 1995 | 1.088 | 0.075 | 0.430 | 1.661 | 1.578 | 0.010 | 4.842 |
| 1996 | 1.107 | 0.075 | 0.420 | 1.515 | 1.528 | 0.010 | 4.655 |
| 1997 | 1.185 | 0.080 | 0.449 | 1.273 | 1.318 | 0.010 | 4.315 |
| 1998 | 1.219 | 0.079 | 0.396 | 1.316 | 1.604 | 0.010 | 4.624 |
| 1999 | 1.403 | 0.080 | 0.331 | 1.144 | 1.930 | 0.010 | 4.898 |
| 2000 | 1.390 | 0.085 | 0.318 | 1.338 | 1.795 | 0.011 | 4.937 |
| 2001 | 1.282 | 0.079 | 0.285 | 1.420 | 1.888 | 0.011 | 4.965 |
| 2002 | 1.241 | 0.079 | 0.251 | 1.463 | 1.951 | 0.011 | 4.996 |
| 2003 | 1.240 | 0.080 | 0.227 | 1.399 | 2.007 | 0.012 | 4.965 |
| 2004 | 1.042 | 0.083 | 0.232 | 1.488 | 2.136 | 0.012 | 4.993 |
| 2005 | 1.017 | 0.085 | 0.237 | 1.476 | 2.174 | 0.013 | 5.002 |
| 2006 | 1.096 | 0.088 | 0.245 | 1.529 | 2.298 | 0.012 | 5.268 |
| 2007 | 1.230 | 0.091 | 0.240 | 1.466 | 2.422 | 0.012 | 5.461 |
| 2008 | 1.591 | 0.090 | 0.227 | 1.347 | 2.268 | 0.012 | 5.535 |
| 2009 | 1.679 | 0.087 | 0.246 | 1.385 | 2.532 | 0.012 | 5.941 |
| 2010 | 1.846 | 0.092 | 0.260 | 1.529 | 2.612 | 0.012 | 6.351 |
| 2011 | 1.985 | 0.096 | 0.290 | 1.552 | 2.522 | 0.012 | 6.457 |
| 2012 | 1.611 | 0.093 | 0.333 | 1.545 | 2.402 | 0.012 | 5.996 |
| 2013 | 1.757 | 0.086 | 0.346 | 1.665 | 2.439 | 0.012 | 6.305 |
| 2014 | 1.976 | 0.083 | 0.368 | 1.646 | 2.377 | 0.012 | 6.462 |
| 2015 | 1.636 | 0.086 | 0.345 | 1.576 | 2.481 | 0.012 | 6.136 |
| 2016 | 1.758 | 0.089 | 0.378 | 1.468 | 2.518 | 0.012 | 6.223 |

Table S2. 1995–2016 Hong Kong’s ecological footprint of energy
(unit: gha/cap)

| Years | Kerosene | Gasoline | Diesel oil | Coal | Fuel oil | LPG | Natural gas | Gas | Electricity |
|--------------|-----------------|-----------------|-------------------|-------------|-----------------|------------|--------------------|------------|--------------------|
| 1995 | 0.262 | 0.027 | 0.291 | 0.552 | 0.117 | 0.014 | 0.002 | 0.038 | 0.241 |
| 1996 | 0.277 | 0.026 | 0.259 | 0.390 | 0.124 | 0.017 | 0.121 | 0.037 | 0.242 |
| 1997 | 0.230 | 0.017 | 0.150 | 0.329 | 0.069 | 0.017 | 0.189 | 0.039 | 0.244 |
| 1998 | 0.232 | 0.015 | 0.337 | 0.405 | 0.088 | 0.014 | 0.176 | 0.039 | 0.26 1 |
| 1999 | 0.269 | 0.025 | 0.627 | 0.361 | 0.111 | 0.012 | 0.192 | 0.039 | 0.257 |
| 2000 | 0.292 | 0.025 | 0.447 | 0.339 | 0.148 | 0.034 | 0.159 | 0.041 | 0.271 |
| 2001 | 0.303 | 0.027 | 0.393 | 0.445 | 0.164 | 0.035 | 0.164 | 0.042 | 0.276 |
| 2002 | 0.309 | 0.024 | 0.383 | 0.479 | 0.202 | 0.035 | 0.160 | 0.041 | 0.279 |
| 2003 | 0.284 | 0.023 | 0.398 | 0.585 | 0.218 | 0.024 | 0.111 | 0.042 | 0.281 |
| 2004 | 0.348 | 0.022 | 0.373 | 0.557 | 0.299 | 0.031 | 0.144 | 0.040 | 0.283 |
| 2005 | 0.386 | 0.023 | 0.280 | 0.592 | 0.337 | 0.033 | 0.152 | 0.042 | 0.287 |
| 2006 | 0.392 | 0.021 | 0.283 | 0.620 | 0.398 | 0.037 | 0.169 | 0.042 | 0.292 |
| 2007 | 0.439 | 0.023 | 0.263 | 0.660 | 0.473 | 0.034 | 0.155 | 0.041 | 0.294 |
| 2008 | 0.418 | 0.022 | 0.196 | 0.606 | 0.438 | 0.038 | 0.175 | 0.042 | 0.292 |
| 2009 | 0.402 | 0.024 | 0.407 | 0.656 | 0.458 | 0.037 | 0.169 | 0.041 | 0.296 |
| 2010 | 0.450 | 0.024 | 0.351 | 0.538 | 0.628 | 0.038 | 0.205 | 0.041 | 0.296 |
| 2011 | 0.480 | 0.025 | 0.286 | 0.653 | 0.498 | 0.039 | 0.163 | 0.041 | 0.296 |
| 2012 | 0.452 | 0.026 | 0.240 | 0.643 | 0.469 | 0.038 | 0.150 | 0.042 | 0.299 |
| 2013 | 0.476 | 0.026 | 0.228 | 0.672 | 0.481 | 0.036 | 0.141 | 0.042 | 0.295 |
| 2014 | 0.466 | 0.023 | 0.216 | 0.710 | 0.402 | 0.038 | 0.135 | 0.042 | 0.302 |
| 2015 | 0.490 | 0.032 | 0.316 | 0.571 | 0.483 | 0.036 | 0.170 | 0.041 | 0.299 |
| 2016 | 0.521 | 0.031 | 0.353 | 0.567 | 0.456 | 0.034 | 0.174 | 0.041 | 0.298 |

Table S3. 1995–2016 Hong Kong’s per capita biocapacity by land categories
(unit: gha/cap)

| Years | Arable land | Forest land | Grazing land | Water land | Built-up land | Biocapacity |
|--------------|------------------------|------------------------|-------------------------|-----------------------|--------------------------|--------------------|
| 1995 | 0.0042 | 0.0043 | 0.0192 | 0.0007 | 0.0101 | 0.0385 |
| 1996 | 0.0039 | 0.0041 | 0.0183 | 0.0007 | 0.0099 | 0.0369 |
| 1997 | 0.0038 | 0.0041 | 0.0182 | 0.0007 | 0.0099 | 0.0367 |
| 1998 | 0.0037 | 0.0041 | 0.0180 | 0.0007 | 0.0100 | 0.0364 |
| 1999 | 0.0036 | 0.0040 | 0.0178 | 0.0007 | 0.0100 | 0.0362 |
| 2000 | 0.0034 | 0.0066 | 0.0103 | 0.0007 | 0.0112 | 0.0322 |
| 2001 | 0.0033 | 0.0066 | 0.0102 | 0.0007 | 0.0113 | 0.0320 |
| 2002 | 0.0032 | 0.0065 | 0.0101 | 0.0007 | 0.0114 | 0.0319 |
| 2003 | 0.0034 | 0.0077 | 0.0074 | 0.0007 | 0.0116 | 0.0307 |
| 2004 | 0.0034 | 0.0071 | 0.0080 | 0.0007 | 0.0123 | 0.0315 |
| 2005 | 0.0035 | 0.0071 | 0.0082 | 0.0007 | 0.0125 | 0.0321 |
| 2006 | 0.0032 | 0.0070 | 0.0086 | 0.0007 | 0.0122 | 0.0318 |
| 2007 | 0.0031 | 0.0071 | 0.0082 | 0.0007 | 0.0121 | 0.0313 |
| 2008 | 0.0032 | 0.0070 | 0.0082 | 0.0007 | 0.0120 | 0.0311 |
| 2009 | 0.0031 | 0.0069 | 0.0083 | 0.0007 | 0.0121 | 0.0312 |
| 2010 | 0.0031 | 0.0081 | 0.0056 | 0.0007 | 0.0121 | 0.0297 |
| 2011 | 0.0031 | 0.0078 | 0.0060 | 0.0007 | 0.0121 | 0.0298 |
| 2012 | 0.0031 | 0.0076 | 0.0062 | 0.0007 | 0.0120 | 0.0296 |
| 2013 | 0.0031 | 0.0075 | 0.0062 | 0.0007 | 0.0119 | 0.0295 |
| 2014 | 0.0030 | 0.0076 | 0.0058 | 0.0007 | 0.0119 | 0.0291 |
| 2015 | 0.0030 | 0.0075 | 0.0060 | 0.0007 | 0.0119 | 0.0290 |
| 2016 | 0.0030 | 0.0075 | 0.0058 | 0.0007 | 0.0122 | 0.0292 |

Table S4. 1995–2016 Singapore’s per capita ecological footprint by land categories
(unit: gha/cap)

| Years | Arable land | Forest land | Grazing land | Water area | Fossil land | Built-up land | Ecological footprint |
|--------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|--------------------------|---------------------------------|
| 1995 | 0.441 | 0.698 | 0.244 | 0.189 | 4.940 | 0.006 | 6.518 |
| 1996 | 0.441 | 0.665 | 0.209 | 0.182 | 5.115 | 0.007 | 6.618 |
| 1997 | 0.410 | 0.557 | 0.221 | 0.186 | 5.859 | 0.008 | 7.241 |
| 1998 | 0.280 | 0.470 | 0.195 | 0.144 | 4.787 | 0.009 | 5.885 |
| 1999 | 0.491 | 0.497 | 0.230 | 0.161 | 5.189 | 0.010 | 6.578 |
| 2000 | 0.475 | 0.479 | 0.235 | 0.159 | 6.952 | 0.010 | 8.311 |
| 2001 | 0.518 | 0.366 | 0.209 | 0.161 | 6.145 | 0.011 | 7.411 |
| 2002 | 0.460 | 0.340 | 0.258 | 0.186 | 5.349 | 0.013 | 6.604 |
| 2003 | 0.472 | 0.443 | 0.180 | 0.243 | 4.509 | 0.022 | 5.869 |
| 2004 | 0.455 | 0.557 | 0.238 | 0.226 | 5.592 | 0.025 | 7.093 |
| 2005 | 0.445 | 0.444 | 0.229 | 0.248 | 5.273 | 0.026 | 6.665 |
| 2006 | 0.439 | 0.565 | 0.214 | 0.260 | 5.708 | 0.029 | 7.215 |
| 2007 | 0.458 | 0.569 | 0.224 | 0.258 | 5.366 | 0.025 | 6.900 |
| 2008 | 0.507 | 0.489 | 0.199 | 0.250 | 6.148 | 0.029 | 7.623 |
| 2009 | 0.509 | 0.366 | 0.212 | 0.250 | 5.633 | 0.030 | 7.000 |
| 2010 | 0.563 | 0.433 | 0.215 | 0.247 | 5.258 | 0.032 | 6.748 |
| 2011 | 0.609 | 0.735 | 0.252 | 0.247 | 5.779 | 0.034 | 7.655 |
| 2012 | 0.668 | 0.759 | 0.236 | 0.220 | 5.667 | 0.035 | 7.585 |
| 2013 | 0.584 | 0.543 | 0.242 | 0.220 | 5.008 | 0.040 | 6.638 |
| 2014 | 0.591 | 0.350 | 0.264 | 0.238 | 4.476 | 0.042 | 5.961 |
| 2015 | 0.610 | 0.330 | 0.281 | 0.218 | 4.657 | 0.043 | 6.140 |
| 2016 | 0.578 | 0.260 | 0.250 | 0.221 | 4.528 | 0.042 | 5.879 |

(Reference source: Global Footprint Network, <https://www.footprintnetwork.org/licenses/public-data-package-free/>)

Table S5. 1995–2016 Singapore’s per capita biocapacity by land categories
(unit: gha/cap)

| Years | Built-up land | Arable land | Water area | Forest land | Grazing land | Biocapacity |
|--------------|----------------------|--------------------|-------------------|--------------------|---------------------|--------------------|
| 1995 | 0.006 | 0.000 | 0.021 | 0.004 | 0.000 | 0.031 |
| 1996 | 0.007 | 0.000 | 0.020 | 0.004 | 0.000 | 0.031 |
| 1997 | 0.008 | 0.000 | 0.020 | 0.004 | 0.000 | 0.032 |
| 1998 | 0.009 | 0.000 | 0.019 | 0.004 | 0.000 | 0.033 |
| 1999 | 0.010 | 0.001 | 0.019 | 0.004 | 0.000 | 0.033 |
| 2000 | 0.010 | 0.001 | 0.019 | 0.003 | 0.000 | 0.033 |
| 2001 | 0.011 | 0.001 | 0.018 | 0.003 | 0.000 | 0.034 |
| 2002 | 0.013 | 0.001 | 0.018 | 0.003 | 0.000 | 0.034 |
| 2003 | 0.022 | 0.001 | 0.017 | 0.003 | 0.000 | 0.043 |
| 2004 | 0.025 | 0.001 | 0.017 | 0.003 | 0.000 | 0.045 |
| 2005 | 0.026 | 0.001 | 0.016 | 0.003 | 0.000 | 0.046 |
| 2006 | 0.029 | 0.001 | 0.016 | 0.003 | 0.000 | 0.049 |
| 2007 | 0.025 | 0.001 | 0.015 | 0.003 | 0.000 | 0.044 |
| 2008 | 0.029 | 0.001 | 0.015 | 0.003 | 0.000 | 0.047 |
| 2009 | 0.030 | 0.001 | 0.015 | 0.003 | 0.000 | 0.048 |
| 2010 | 0.032 | 0.001 | 0.014 | 0.003 | 0.000 | 0.050 |
| 2011 | 0.034 | 0.001 | 0.014 | 0.003 | 0.000 | 0.051 |
| 2012 | 0.035 | 0.001 | 0.014 | 0.003 | 0.000 | 0.052 |
| 2013 | 0.040 | 0.001 | 0.013 | 0.002 | 0.000 | 0.057 |
| 2014 | 0.042 | 0.001 | 0.013 | 0.002 | 0.000 | 0.059 |
| 2015 | 0.043 | 0.001 | 0.013 | 0.002 | 0.000 | 0.060 |
| 2016 | 0.042 | 0.001 | 0.013 | 0.002 | 0.000 | 0.059 |

(Reference source: Global Footprint Network, <https://www.footprintnetwork.org/licenses/public-data-package-free/>)