Supplementary material

Regional ombrian curves: design rainfall estimation for a spatially diverse rainfall regime

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This is a supplementary file to the paper ‘Regional ombrian curves: design rainfall estimation for a spatially diverse rainfall regime’ by T. Iliopoulou, N. Malamos and D. Koutsoyiannis. Tables S1 and S2 provide detailed information on the daily and sud-daily raingauges used in the analysis. The data are obtained from the Public Power Corporation (PPC) of Greece, the Hellenic Ministry of Environment and Energy (HMEE), the Hellenic Ministry of Agricultural Development and Food (HMADF), the Hellenic Ministry of Agriculture (HMA), the Hellenic National Meteorological Service (HNMS) and the meteo network of the National Observatory of Athens.

**Table S1:** Properties of the daily raingauges (coordinates, elevation, source and record length) used in the analysis. Coordinates are based on the Greek Grid projection system.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Station Name | X (m) | Y (m) | Z (m) | Source | Record length |
| 1 | Agiofillo | 291 669 | 4 415 392 | 600 | HMEE | 1950-2011 |
| 2 | Agrelia | 322 649 | 4 397 952 | 700 | HMADF | 1972-1992 |
| 3 | Agchialos | 396 203 | 4 341 105 | 15 | HNMS | 1956-1993 |
| 4 | Amarantos | 315 620 | 4 342 587 | 800 | HMAF | 1972-2006 |
| 5 | Anavra | 372 327 | 4 327 101 | 208 | HMEE | 1950-2012 |
| 6 | Argithea | 288 679 | 4 358 079 | 992 | PPC | 1963-2003 |
| 7 | Verdikoussa | 327 102 | 4 405 255 | 863 | HMEE | 1949-2012 |
| 8 | Vrontero | 286 305 | 4 375 195 | 853 | PPC | 1990-2020 |
| 9 | Giannota | 333 296 | 4 427 329 | 500 | HMEE | 1950-2012 |
| 10 | Drakotrypa | 293 185 | 4 365 363 | 680 | PPC | 1960-2012 |
| 11 | Elassona | 344 494 | 4 417 838 | 314 | HMEE | 1950-2011 |
| 12 | Elati (PPC) | 313 872 | 4 427 213 | 664 | PPC | 1995-2020 |
| 13 | Elati (HMEE) | 287 748 | 4 376 618 | 900 | HMEE | 1950-2011 |
| 14 | Zappeio | 366 461 | 4 369 310 | 170 | HMEE | 1950-2012 |
| 15 | Zileuto | 349 557 | 4 310 404 | 120 | HMEE | 1954-2013 |
| 16 | Kallipefki | 368 844 | 4 424 784 | 1050 | PPC | 1970-1992 |
| 17 | Karoplesi | 306 849 | 4 337 245 | 910 | PPC | 1995-2012 |
| 18 | Karditsa | 321 757 | 4 359 103 | 103 | HMEE | 1950-2012 |
| 19 | Karpero | 296 204 | 4 424 125 | 504 | PPC | 1962-2020 |
| 20 | Katafyto | 263 784 | 4 390 276 | 980 | HMEE | 1953-2010 |
| 21 | Kipoyrgio | 274 279 | 4 425 745 | 828 | PPC | 1962-2020 |
| 22 | Koniskos | 311 401 | 4 405 624 | 860 | HMADF | 1972-2009 |
| 23 | Kryovrysi | 357 491 | 4 426 838 | 1030 | HMA | 1990-2009 |
| 24 | Larissa | 368 210 | 4 387 785 | 79 | HNMS | 1995-2005 |
| 25 | Livadi (HMA) | 342 182 | 4 443 797 | 1179 | HMA | 1989-2009 |
| 26 | Livadi (HMEE) | 342 182 | 4 443 797 | 1179 | HMEE | 1950-2012 |
| 27 | Liopraso | 314 719 | 4 393 282 | 688 | HMADF | 1972-2009 |
| 28 | Loutropigi | 331 211 | 4 331 131 | 730 | HMEE | 1970-2012 |
| 29 | Magoula | 343 055 | 4 343 956 | 170 | HMA | 1990-2009 |
| 30 | Makrinitsa | 412 260 | 4 361 258 | 690 | HMEE | 1950-2012 |
| 31 | Makryrachi | 340 691 | 4 327 788 | 603 | HMEE | 1983-2012 |
| 32 | Malakasio | 267 150 | 4 406 840 | 842 | HMEE | 1950-2012 |
| 33 | Megali Kerasia | 285 604 | 4 402 599 | 500 | HMEE | 1970-2013 |
| 34 | Meteora | 296 980 | 4 400 438 | 596 | HMEE | 1940-2013 |
| 35 | Molocha | 315 446 | 4 335 188 | 790 | PPC | 1960-2015 |
| 36 | Mouzaki | 298 972 | 4 367 063 | 226 | HMEE | 1960-2012 |
| 37 | Mpezoula | 301 465 | 4 352 189 | 901 | HMEE | 1950-1996, 2001-2012 |
| 38 | Myra | 375 034 | 4 367 317 | 320 | HMA | 1990-2010 |
| 39 | Neochori | 314 969 | 4 314 839 | 800 | PPC | 1960-1992 |
| 40 | Paleochori | 278 037 | 4 388 000 | 1050 | PPC | 1959-1992 |
| 41 | Pertouli | 282 121 | 4 380 478 | 1160 | HMEE | 1950-1996, 2001-2013 |
| 42 | Pitsiota | 317 985 | 4 320 322 | 800 | PPC | 1960-1992 |
| 43 | Pythio | 349 135 | 4 436 253 | 750 | HMA | 1990-2011 |
| 44 | Pylorοi | 299 746 | 4 439 832 | 715 | PPC | 1963-1993 |
| 45 | Pyrgetos | 380 116 | 4 417 196 | 31 | HMEE | 1958-2012 |
| 46 | Rachoula | 315 664 | 4 344 437 | 330 | PPC | 1960-1992 |
| 47 | Rentina | 325 324 | 4 325 708 | 903 | HMEE | 1950-2012 |
| 48 | Skopia | 367 299 | 4 334 140 | 450 | HMEE | 1970-2012 |
| 49 | Spilia | 384 223 | 4 406 031 | 813 | HMEE | 1950-2012 |
| 50 | Stournareika | 283 294 | 4 371 187 | 860 | PPC | 1959-2020 |
| 51 | Sotirio (HMA) | 389 455 | 4 372 649 | 51 | HMA | 1990-2012 |
| 52 | Sotirio (HMEE) | 389 455 | 4 372 649 | 54 | HMEE | 1960-2012 |
| 53 | Trikala | 307 901 | 4 379 795 | 114 | HNMS | 1973-2009 |
| 54 | Trilofo | 345 367 | 4 317 887 | 580 | HMEE | 1951-2013 |
| 55 | Tymfristos | 319 174 | 4 309 189 | 850 | HMEE | 1951-2012 |
| 56 | Tyrnavos | 352 688 | 4 399 169 | 92 | HMEE | 1950-2012 |
| 57 | Plastiras Hydro-Electric Station (HES) | 307 169 | 4 350 195 | 800 | PPC | 1967-1996 |
| 58 | Farkadona | 333 800 | 4 384 747 | 87 | HMEE | 1950-2013 |
| 59 | Farsala | 359 599 | 4 350 003 | 250 | HMADF | 1959-2009 |
| 60 | Plastiras Dam | 304 154 | 4 344 717 | 850 | PPC | 1967-2015 |
| 61 | Chrysomilia | 285 140 | 4 385 948 | 940 | HMEE | 1960-2013 |

**Table S2:** Properties (coordinates, elevation, source and record length) of the sub-daily raingauges (tipping-buckets) used in the analysis. Coordinates are based on the Greek Grid projection system.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Station name | X (m) | Y (m) | Z (m) | Source | Record length |
| 1 | Agchialos | 396 203 | 4 341 105 | 42 | HNMS | 1988-1994, 2007-2010 |
| 2 | Argithea | 288 679 | 4 358 079 | 980 | PPC | 1959-1995, 1999-2015 |
| 3 | Vrontero | 286 305 | 4 375 195 | 853 | PPC | 1990-2009 |
| 4 | Drakotrypa | 293 185 | 4 365 363 | 680 | PPC | 1985-2000, 2013-2020 |
| 5 | Elassona | 344 494 | 4 417 838 | 314 | HMEE | 1960-1998 |
| 6 | Karditsa | 321 757 | 4 359 103 | 103 | HMEE | 1959-2000 |
| 7 | Karpero | 296 204 | 4 424 125 | 504 | PPC | 1962-2012 |
| 8 | Larissa | 368 210 | 4 387 785 | 73 | HNMS | 1972-1986, 1995-2009 |
| 9 | Loutropigi | 331 211 | 4 331 131 | 730 | HMEE | 1970-1986, 1992-2002 |
| 10 | Megali Kerasia | 285 604 | 4 402 599 | 500 | HMEE | 1970-1980, 1986-2009 |
| 11 | Metaxas | 326 848 | 4 438 892 | 1076 | PPC | 1964-1995 |
| 12 | Paleochori | 278 037 | 4 388 000 | 1050 | PPC | 1962-1983 |
| 13 | Pertouli | 282 097 | 4 379 607 | 1170 | meteo | 2009-2021 |
| 14 | Pyloroi | 299 746 | 4 439 832 | 715 | PPC | 1962-1994 |
| 15 | Skopia | 367 299 | 4 334 140 | 450 | HMEE | 1971-1988, 1994-1996 |
| 16 | Trikala (HNMS) | 307 901 | 4 379 795 | 149 | HNMS | 1995-2009 |
| 17 | Trikala (meteo) | 307 843 | 4 381 060 | 163 | meteo | 2009-2021 |