**Table S2**. Outcomes of the Function Accuracy.R: absolute mean error (AME), root-mean-square-error (RMSE), and the original, modified and refined Willmott’s indices of agreement (d, dmod and dref, respectively) and Pearson’ s coefficient of determination (R2). The confidence intervals are presented between brackets.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | AME (mm) | RMSE (mm) | Dorig | Dmod | Dref | R2 (mm) |
| *Adamantina* | | | | | | |
| Rain | 31.28 (29.48:33.20) | 46.01  (42.98:49.22) | 0.92  (0.91:0.93) | 0.76  (0.75:0.78) | 0.76  (0.75:0.78) | 0.85  (0.83:0.87) |
| PE | 11.38  (10.85:11.95) | 14.95  (14.30:15.59) | 0.94  (0.93:0.95) | 0.79  (0.78:0.80) | 0.79  (0.78:0.80) | 0.92  (0.91:0.93) |
| PPE | 35.10  (33.13:37.11) | 50.54  (47.14:54.07) | 0.89  (0.87:0.91) | 0.71  (0.69:0.73) | 0.71  (0.69:0.73) | 0.81  (0.78:0.83) |
| SPI | 0.48  (0.46:0.51) | 0.66  (0.62:0.70) | 0.87  (0.85:0.89) | 0.69  (0.67:0.71) | 0.69  (0.67:0.71) | 0.76  (0.73:0.79) |
| SPEI | 0.48  (0.46:0.51) | 0.67  (0.62:0.71) | 0.87  (0.85:0.89) | 0.70  (0.68:0.71) | 0.70  (0.68:0.72) | 0.76  (0.73:0.79) |
| *Capão Bonito* | | | | | | |
| Rain | 35.95  (33.69:38.26) | 54.28  (50.08:58.59) | 0.88  (0.86:0.90) | 0.71  (0.70:0.73) | 0.73  (0.71:0.75) | 0.79  (0.76:0.82) |
| PE | 8.84  (8.48:9.21) | 11.06  (10.61:11.52) | 0.97  (0.96:0.98) | 0.84  (0.83:0.85) | 0.84  (0.83:0.85) | 0.95  (0.94:0.96) |
| PPE | 39.25  (37.00:41.59) | 56.98  (52.93:61.10) | 0.84  (0.81:0.86) | 0.65  (0.63:0.67) | 0.67  (0.65:0.69) | 0.73  (0.69:0.76) |
| SPI | 0.53  (0.51:0.56) | 0.74  (0.70:0.78) | 0.83  (0.81:0.85) | 0.66  (0.63:0.68) | 0.66  (0.64:0.68) | 0.70  (0.66:0.73) |
| SPEI | 0.54  (0.51:0.57) | 0.75  (0.70:0.79) | 0.83  (0.81:0.85) | 0.66  (0.63:0.68) | 0.66  (0.63:0.68) | 0.70  (0.66:0.73) |
| *Monte Alegre do Sul* | | | | | | |
| Rain | 28.18  (26.38:30.00) | 42.71  (39.84:45.65) | 0.95  (0.94:0.96) | 0.83  (0.82:0.84) | 0.84  (0.83:0.85) | 0.92  (0.91:0.93) |
| PE | 16.14  (15.46:16.38) | 20.20  (19.43:20.95) | 0.88  (0.87:0.89) | 0.70  (0.68:0.71) | 0.71  (0.69:0.72) | 0.84  (0.82:0.85) |
| PPE | 34.78  (33.00:36.55) | 47.00  (44.43:49.49) | 0.93  (0.92:0.93) | 0.76  (0.75:0.77) | 0.76  (0.74:0.77) | 0.88  (0.87:0.89) |
| SPI | 0.45  (0.43:0.47) | 0.59  (0.56:0.62) | 0.89  (0.88:0.91) | 0.71  (0.69:0.72) | 0.71  (0.69:0.73) | 0.80  (0.78:0.82) |
| SPEI | 0.46  (0.44:0.48) | 0.61  (0.58:0.64) | 0.89  (0.88:0.90) | 0.71  (0.69:0.72) | 0.71  (0.69:0.72) | 0.80  (0.78:0.82) |
| *Ribeirão Preto* | | | | | | |
| Rain | 23.34  (21.83:24.89) | 36.10  (33.71:38.46) | 0.96  (0.95:0.97) | 0.84  (0.83:0.85) | 0.84  (0.83:0.85) | 0.93  (0.92:0.94) |
| PE | 13.47  (12.91:14.04) | 16.90  (16.30:17.48) | 0.92  (0.91:0.93) | 0.74  (0.73:0.76) | 0.74  (0.72:0.75) | 0.91  (0.90:0.92) |
| PPE | 27.39  (25.73:29.02) | 40.56  (38.08:42.93) | 0.95  (0.94:0.93) | 0.79  (0.78:0.81) | 0.79  (0.77:0.87) | 0.90  (0.89:0.92) |
| SPI | 0.41  (0.39:0.43) | 0.56  (0.53:0.60) | 0.91  (0.89:0.92) | 0.74  (0.72:0.75) | 0.74  (0.72:0.75) | 0.82  (0.80:0.84) |
| SPEI | 0.41  (0.38:0.42) | 0.57  (0.54:0.61) | 0.91  (0.89:0.92) | 0.74  (0.72:0.76) | 0.74  (0.72:0.76) | 0.82  (0.80:0.85) |
| *Votuporanga* | | | | | | |
| Rain | 25.61  (23.94:27.35) | 40.26  (37.17:43.44) | 0.96  (0.95:0.97) | 0.85  (0.84:0.86) | 0.85  (0.84:0.86) | 0.93  (0.92:0.94) |
| PE | 12.17  (11.70:12.64) | 14.86  (14.31:15.41) | 0.93  (0.92:0.94) | 0.75  (0.74:0.77) | 0.76  (0.75:0.78) | 0.87  (0.86:0.89) |
| PPE | 29.03  (27.36:30.76) | 42.09  (39.31:44.93) | 0.95  (0.94:0.96) | 0.80  (0.79:0.82) | 0.80  (0.79:0.82) | 0.90  (0.89:0.91) |
| SPI | 0.43  (0.41:0.45) | 0.56  (0.54:0.59) | 0.91  (0.90:0.92) | 0.73  (0.71:0.74) | 0.73  (0.71:0.75) | 0.83  (0.81:0.85) |
| SPEI | 0.40  (0.38:0.42) | 0.54  (0.51:0.57) | 0.92  (0.91:0.93) | 0.75  (0.73:0.76) | 0.75  (0.73:0.76) | 0.84  (0.82:0.86) |