Supporting Information for "Performance of GPCP Products Over Oceans: Evaluation Using Passive Aquatic Listeners"

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Additional Supporting Information (Files uploaded separately)

1. Overview of Passive Aquatic Listeners (PALs) used in this study (see the uploaded pals_info_summary.xlsx)

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Table S1.   Monthly evaluation statistics for GPCP v1.3 and v3.2 over different regions. Values outside and in the parentheses are the mean and interquartile range (IQR, i.e., 25% and 75% quantiles), respectively.

Region	RB [%]	RMSE [mm]	CC [-]
TNEP	$-8.1\ (-24.6,\ 5.6)^a$	92.5 (52.3, 113.1)	0.83 (0.78, 0.88)
	$-17.6\ (-34.1,\ 6.5)^b$	90.8 (51.5, 108.5)	0.80 (0.77, 0.89)
TSEP	$-66.1\ (-89.8,\ -80.0)$	35.1 (24.0, 35.2)	0.01 (−0.19, 0.04)
	$-63.7\ (-88.5,\ -73.9)$	37.7 (24.0, 35.8)	0.16 (−0.06, 0.17)
TNWP	17.5 (2.86, 21.2)	63.1 (32.8, 91.4)	0.75 (0.70, 0.83)
	31.5 (15.0, 56.9)	79.3 (49.5, 103.2)	0.48 (0.50, 0.84)
ETNP	106.2 (78.5, 125.2)	66.4 (45.9, 89.0)	0.52 (0.37, 0.68)
	100.9 (56.1, 158.6)	68.0 (56.2, 85.4)	0.56 (0.42, 0.65)
TNIO	$-19.2\ (-11.9,\ 6.2)$	68.5 (27.3, 37.8)	0.75 (0.72, 0.76)
	$-17.4\ (4.2,\ 24.8)$	68.7 (28.8, 37.1)	0.80 (0.76, 0.85)
STNA	$-4.9\ (-26.2,\ -11.3)$	34.5 (60.8, 79.1)	0.72 (0.73, 0.79)
	$13.0\ (-23.4,\ -12.9)$	34.4 (60.0, 77.4)	0.81 (0.79, 0.81)

a. for each ocean, the upper row is for GPCP v1.3.
b. for each ocean, the lower row is for GPCP v3.2.

Table S2. Daily evaluation statistics for GPCP v1.3 and v3.2 over different regions. Values outside and in the parentheses are the mean and interquartile range (IQR, i.e., 25% and 75% quantiles), respectively. Here, RB, RMSE, and CC are unconditional statistics that complement the conditional statistics as shown in Figure 4.

Region	RB [%]	RMSE [mm/day]	CC [-]
TNEP	−8.1 (−25.2, 1.4)[a]	11.3 (8.3, 14.0)	0.42 (0.39, 0.50)
	−16.3 (−30.6, 5.9)[b]	11.8 (9.0, 14.5)	0.61 (0.59, 0.70)
TSEP	−66.5 (−90.2, −72.5)	3.8 (2.4, 3.4)	0.1 (−0.01, 0.06)
	−63.5 (−88.7, −73.5)	3.9 (2.3, 3.4)	0.19 (0.05, 0.16)
TNWP	10.6 (−5.2, 19.2)	9.8 (5.9, 13.1)	0.48 (0.44, 0.53)
	30.7 (14.4, 56.8)	9.8 (5.3, 13.9)	0.70 (0.65, 0.77)
ETNP	104.2 (76.9, 131.7)	6.5 (5.2, 7.0)	0.29 (0.26, 0.33)
	104.6 (69.5, 161.8)	6.6 (5.7, 6.9)	0.45 (0.43, 0.49)
TNIO	−19.4 (−26.4, −11.4)	10.6 (8.9, 12.7)	0.43 (0.38, 0.47)
	−17.4 (−23.3, −12.6)	10.3 (9.0, 11.8)	0.62 (0.59, 0.64)
STNA	−5.6 (−12.3, 5.5)	5.0 (4.1, 5.0)	0.50 (0.49, 0.54)
	13.0 (5.4, 25.3)	5.2 (4.4, 5.5)	0.69 (0.66, 0.75)
	POD [-]	FAR [-]	HSS [-]
TNEP	0.65 (0.57, 0.80)	0.32 (0.19, 0.45)	0.24 (0.12, 0.29)
	0.61 (0.49, 0.77)	0.21 (0.12, 0.30)	0.36 (0.21, 0.49)
TSEP	0.15 (0.03, 0.06)	0.72 (0.59, 0.82)	0.04 (−0.03, 0.03)
	0.21 (0.10, 0.13)	0.46 (0.41, 0.54)	0.16 (0.10, 0.16)
TNWP	0.67 (0.48, 0.81)	0.48 (0.35, 0.58)	0.19 (0.15, 0.23)
	0.70 (0.65, 0.78)	0.38 (0.26, 0.49)	0.36 (0.32, 0.39)
ETNP	0.60 (0.51, 0.69)	0.62 (0.59, 0.65)	0.15 (0.13, 0.18)
	0.61 (0.51, 0.76)	0.61 (0.60, 0.62)	0.18 (0.16, 0.23)
TNIO	0.39 (0.34, 0.45)	0.45 (0.44, 0.46)	0.09 (0.07, 0.11)
	0.35 (0.30, 0.41)	0.37 (0.35, 0.37)	0.16 (0.13, 0.21)
STNA	0.37 (0.31, 0.39)	0.54 (0.49, 0.59)	0.21 (0.18, 0.25)
	0.48 (0.44, 0.51)	0.42 (0.39, 0.45)	0.36 (0.33, 0.38)

a. for each ocean, the upper row is for GPCP v1.3.
b. for each ocean, the lower row is for GPCP v3.2.

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