Correction

Correction for "Global increase in major tropical cyclone exceedance probability over the past four decades," by James P. Kossin, Kenneth R. Knapp, Timothy L. Olander, and Christopher S. Velden, which was first published May 18, 2020; 10.1073/pnas.1920849117 (*Proc. Natl. Acad. Sci. U.S.A.* **117**, 11975–11980).

The authors note, "We have become aware of an error in some of our calculations of exceedance probability and these errors affect some of the numbers published in Table 1 of the manuscript. We were first alerted to this by a reader of the paper. None of the errors alter any of the key results or messages of the manuscript. None of the numbers or statistics related to any of the time series analyses are affected and these remain unchanged. Specifically, some of our threshold values were inadvertently shifted in our code, and this affected the calculation of exceedance probability. The error affects the numbers shown in Table 1.

"The error also affects some of the numbers stated within the article text:

"On page 11975, the text in the Abstract that states 'Between the early and latter halves of the time period, the major TC exceedance probability increases by about 8% per decade, with a 95% CI of 2 to 15% per decade' should instead read 'Between the early and latter halves of the time period, the major TC exceedance probability increases by about 5% per decade, with a 95% CI of about 0.4 to 11% per decade.'

"On page 11976, right column, second full paragraph, the text that reads 'The probability of major hurricane exceedance increases from 0.27 to 0.31, which represents about a 15% increase. The centroids of the early and latter subperiods are around 1988 and 2007, respectively, with a separation of about 19 y. This represents an increase in probability of major hurricane intensity of about 8% per decade' should instead read 'The probability of major hurricane exceedance increases from 0.3399 to 0.3725, which represents about a 10% increase. The centroids of the early and latter subperiods are around 1988 and 2007, respectively, with a separation of about 19 y. This represents an increase in probability of major hurricane intensity of about 5% per decade.'

"On page 11976, right column, second full paragraph, the text that states 'The CIs for the early and latter halves are [0.25 0.28] and [0.29 0.32], respectively. The range of exceedance probability increases within these 95% CIs is then about 2 to 15% per decade' should instead read 'The CIs for the early and latter halves are [0.32 0.36] and [0.36 0.39], respectively. The range of exceedance probability increases within these 95% CIs is then about 0.4 to 11% per decade.'

"On page 11976, right column, fourth paragraph, the text that states 'For comparison, the change in best-track intensities over the same period is roughly 17% per decade...or about twice the increase in major hurricane intensity exceedance found in the homogenized ADT-HURSAT data' should instead read 'For comparison, the change in best-track intensities over the same period is roughly 10% per decade...or about twice the increase in major hurricane intensity exceedance found in the homogenized ADT-HURSAT data.'

"Table 1 and its legend have been updated and appear below."

Table 1. Differences in major hurricane intensity exceedance probability (P_{maj}) between the early and later halves of the period of analysis

	ADT-HURSAT							Best-track global
	Global	NA	EP	WP	NI	SI	SP	
Early (1979–1997)	P_{maj} = 0.3399	P_{maj} = 0.2306	P_{maj} = 0.3145	P_{maj} = 0.4341	P_{maj} = 0.1841	P_{maj} = 0.2750	P_{maj} = 0.3068	P_{maj} = 0.2895
	CI=[0.3243,0.3555]	CI=[0.1829,0.2783]	CI=[0.2851,0.3438]	CI=[0.4067,0.4615]	CI=[0.1039,0.2643]	CI=[0.2362,0.3138]	CI=[0.2627,0.3509]	CI=[0.2767,0.3023]
	N_{tot} = 9420	N_{tot} = 798	N_{tot} = 2560	N_{tot} = 3345	N_{tot} = 239	N_{tot} = 1360	N_{tot} = 1118	N_{tot} = 12855
	N_{maj} = 3202	N_{maj} = 184	N_{maj} = 805	N_{maj} = 1452	N_{maj} = 44	N_{maj} = 374	N_{maj} = 343	N_{maj} = 3722
Late (1998–2017)	P_{maj} = 0.3725	P_{maj} = 0.3965	P_{maj} = 0.3309	P_{maj} = 0.4129	P_{maj} = 0.1911	P_{maj} = 0.3543	P_{maj} = 0.3577	P_{maj} = 0.3461
	CI=[0.3559,0.3891]	CI=[0.3568,0.4363]	CI=[0.2967,0.3651]	CI=[0.3839,0.4419]	CI=[0.1072,0.2750]	CI=[0.3114,0.3973]	CI=[0.3018,0.4137]	CI=[0.3330,0.3591]
	N_{tot} = 9275	N_{tot} = 1551	N_{tot} = 1940	N_{tot} = 2962	N_{tot} = 225	N_{tot} = 1270	N_{tot} = 752	N_{tot} = 13567
	N_{maj} = 2842	N_{maj} = 615	N_{maj} = 642	N_{maj} = 1223	N_{maj} = 43	N_{maj} = 450	N_{maj} = 269	N_{maj} = 4695
Change	+5% decade^{-1}	+38% decade^{-1}	+3% decade^{-1}	−3% decade^{-1}	+2% decade^{-1}	+15% decade^{-1}	+9% decade^{-1}	+10% decade^{-1}
Sig.lev.	95%	99%	n/s	n/s	n/s	90%	n/s	99%
Triad time series	+6% decade^{-1}	+42% decade^{-1}	+7% decade^{-1}	+2% decade^{-1}	−15% decade^{-1}	+31% decade^{-1}	+8% decade^{-1}	
	P = 0.02	P = 0.02	P = 0.25	P = 0.58	P = 0.71	P = 0.004	P = 0.13	

CI is the pointwise 95% confidence interval on P_{maj}. The significance level (Sig. lev.) of the difference is also shown (n/s = not significant at the 90% level or higher). N_{tot} and N_{maj} are the total number of hurricane and major hurricane estimates, respectively, in each period. The bottom row shows the Theil–Sen trend amplitudes and Mann–Kendall significance levels (P values) for the triad time series shown in Figs. 2 and 3 of the manuscript.