

Supporting Information

Reed et al. 10.1073/pnas.1513127112

Full Results of PCA

The PCA analyzing the types of TCs that explain the greatest variance in storm surge heights was performed in Matlab by first creating an array of the variables we were interested in (RMW, storm pressure, and maximum winds at landfall) for

each model, and then using the built-in function “princomp” with this array. In this way, we were able to perform the PCA for each model. The full results from our PCA, including the percent variance explained by each component, are included in Table S1.

Table S1. Full results of principle component analysis

Model	Characteristic	Component 1	Component 2	Component 3
MPI	RMW	0.8025	0.5966	0.0074
	minimum pressure	0.2118	-0.2964	0.0313
	maximum wind	-0.5577	0.7458	0.3643
	explained variance	80.69%	16.91%	2.4%
CCSM4	RMW	0.8175	0.5720	0.0672
	minimum pressure	0.1537	-0.3292	0.9317
	maximum wind	-0.5550	0.7513	0.3570
	explained variance	87.71%	10.60%	1.69%
IPSL	RMW	0.7622	0.6331	0.1349
	minimum pressure	0.1972	-0.4256	0.8831
	maximum wind	-0.6165	0.6465	0.4493
	explained variance	86.23%	12.12%	1.65%