TABLE 1. Trop. Storm Freq. Projections	Version: Mar. 14, 2019											
Reference	Model/Type	Resolution	Experiment	Basin								
				Global	NH	SH	N Atl.	NW Pac.	NE Pac.	N Ind.	S. Ind.	SW Pac.
(Sugi et al., 2002)	JMA Timeslice [1]	T106 L21 (~120km)	10y 1xCO2, 2xCO2	**-34**	**-28**	**-39**	**+61**	**-66**	-67	+9	**-57**	**-31**
(McDonald et al., 2005)	HadAM3 Timeslice [1]	N144 L30 (~100km)	15y IS95a 1979-1994 2082-2097	**-6**	-3	**-10**	**-30**	**-30**	**+80**	**+42**	+10	**-18**
(Hasegawa and Emori, 2005)	CCSR/NIES/FRC AGCM timeslice [1]	T106 L56 (~120km)	5x20y at 1xCO2 7x20y at 2xCO2					-4				
(Yoshimura et al., 2006)	JMA Timeslice [1]	T106 L21 (~120km)	10y 1xCO2, 2xCO2	**-15**								
(Oouchi et al., 2006)	MRI/JMA Timeslice [1]	TL959 L60 (~20km)	10y A1B 1982-1993 2080-2099	**-30**	**-28**	**-32**	**+34**	**-38**	**-34**	**-52**	**-28**	**-43**
(Chauvin et al., 2006)	ARPEGE Climat Timeslice [1]	~50 km	Downscale CNRM B2 Downscale Hadley A2				 **+18** **-25**					
(Stowasser et al., 2007)	IPRC Regional [1]		Downscale NCAR CCSM2, 6xCO2					+19				
(Bengtsson et al., 2007)	ECHAM5 timeslice [1]	T213 (~60 km)	2071-2100, A1B		-13		-8	-20	+4	-26		
(Bengtsson et al., 2007)	ECHAM5 timeslice [1]	T319 (~40 km)	2071-2100, A1B		-19		-13	-28	+7	-51		
(Leslie et al., 2007)	OU-CGCM with high-res. Window [2]	Up to 50 km	2000 to 2050 control and IS92a (6 members)									~0
(Emanuel et al., 2008)	Statistical-deterministic [3]	---	Downscale 7 CMIP3 mods.: A1B, 2180-2200 Average over 7 models	-7	+2	-13	+4	+6	-5	-7	-12	-15
(Knutson et al., 2008)	GFDL Zetac regional [1]	18 km	Downscale CMIP3 ens. A1B, 2080-2100				-27					
(Gualdi et al., 2008)	SINTEX-G coupled model [2]	T106 (~120 km)	30 yr 1xCO2, 2xCO2, 4xCO2	**-16** (2x) **-44** (4x)			-14	-20	-3	-13	-14	**-22**
(Semmler et al., 2008)	Rossby Centre regional model [1]	28 km	16 yr control and A2, 2085-2100				-13					
(Zhao et al., 2009)	GFDL HIRAM timeslice [1]	50 km	Downscale A1B: CMIP3 n=18 ens. GFDL CM2.1 HadCM3 ECHAM5	 **-20** **-20** **-11** **-20**	 **-14** **-14** +5 **-17**	 **-32** **-33** **-42** **-27**	 **-39** -5 **-62** -1	 **-29** -5 **-12** **-52**	 +15 **-23** **+61** **+35**	 -2 **-43** -2 -25	 **-30** **-33** **-41** **-13**	 **-32** **-31** **-42** **-48**
(Sugi et al., 2009)	JMA/MRI global AGCM timeslice [1]	 20 km 20 km 20 km 20 km 60 km 60 km 60 km 60 km	Downscale A1B: MRI CGCM2.3 MRI CGCM2.3 MIROC-H CMIP3 n=18 ens. MRI CGCM2.3 MIROC-H CMIP3 n=18 ens. CSIRO	 **-29** **-25** **-27** **-20** **-20** -6 **-21** **-22**	 **-31** **-25** **-15** **-21** **-21** 0 **-19** **-29**	 **-27** **-25** **-42** **-19** **-17** **-16** **-25** -11	 +22 +23 -18 +5 **+58** +6 +4 **-37**	 **-36** **-29** **+28** **-26** **-36** **+64** -14 +13	 **-39** **-30** **-50** **-25** **-31** **-42** **-33** **-49**	 **-39** -29 +32 -15 -12 **+79** +33 -7	 **-28** **-25** **-24** -5 **-22** +10 -18 **-22**	 -22 **-27** **-90** **-42** -8 **-69** **-36** +10
(Yokoi and Takayabu, 2009)	CMIP3 ensemble [2]	various	A1B (2081-2100)					-1				
(Emanuel et al., 2010)	Statistical-deterministic [3]	--	Timeslice using CMIP3 A1B SST change, 1990-2090, NICAM model 14 km		+45 (global but June -Oct only)							
(Yamada et al., 2010)	NICAM timeslice [1]	14 km	Timeslice using CMIP3 A1B SST change, 1990-2090		-35 (global but June -Oct only)		-80	0	0	-77		

(Li et al., 2010)	ECHAM5 Timeslice [1]	40 km	A1B change (2080-2009)					**-31**	**+65**			
(Murakami et al., 2010a)	JMA/MRI global AGCM timeslice [1]	V3.1 20 km	Downscale A1B: CMIP3 n=18 ens.				+5					
(Murakami et al., 2010b)	JMA/MRI global AGCM timeslice [1]	V3.1 20 km 60 km 120 km 180 km	Downscale A1B: CMIP3 n=18 ens	**-16** **-19** **-29** -1.2	**-16** **-19** **-22** +9	**-16** **-19** **-43** **-15**	+6 +4 **-14** **+57**	**-27** -12 **-26** **-19**	-15 **-30** **-25** +17	-12 +18 -3 +22	-5 -9 **-33** **-17**	**-35** **-34** **-63** -14
(Murakami et al., 2011)	JMA/MRI global AGCM timeslice [1]	V3.1 20 km	Downscale A1B: CMIP3 n=18 ens.					**-23**				
(Murakami et al., 2012a)	JMA/MRI global AGCM timeslice [1]	V3.2 60 km	Downscale A1B: YS, CMIP3 ens. YS, Cluster 1 YS, Cluster 2 YS, Cluster 3 KF, CMIP3 ens. KF, Cluster 1 KF, Cluster 2 KF, Cluster 3 AS, CMIP3 ens. AS, Cluster 1 AS, Cluster 2 AS, Cluster 3	**-27** **-25** **-28** **-14** **-20** **-20** **-21** **-14** **-20** **-22** **-13** **-14**	**-27** **-25** **-30** -3 **-24** **-27** **-28** **-12** -11 **-22** **-11** 0	**-27** **-27** **-26** **-35** **-16** **-10** **-12** **-15** **-33** **-24** **-17** **-32**	**-44** -24 -23 **-31** **-39** **-40** -21 **-53** +1 -27 +28 -24	**-33** **-32** **-42** -2 **-28** **-33** **-44** -8 -19 -19 **-32** +8	-11 **-30** -9 +6 -3 -15 +5 +17 -22 **-42** +24 +15	-16 +19 -21 +1 **-42** **-28** **-50** **-48** +1 **-20** -5 -15	**-29** **-24** **-20** **-46** **-24** **-20** -10 **-26** **-31** **-25** -2 **-48**	**-31** **-37** **-42** **-25** -11 -6 **-24** -6 **-43** **-27** **-44** -11
(Villarini et al., 2011)	Statistical downscale of CMIP3 models [1]	---	24 CMIP3 model mean and +/-1 σ range; A1B scenario, 21st century trend				Basin: -10 +/- 29% US land: -3 +/-26					
(Lavender and Walsh, 2011)	CSIRO CCAM regional model nested in a suite of GCMs [1]	15 km	A2 1990, 2090 GFDL CM2.1 MPI ECHAM5 CSIRO Mk3.5									-38 -33 -27
(Yokoi et al. 2012)	CMIP5 ensemble [2]	Various	RCP4.5 (2061-2100): CNRM-CM5 CSIRO-Mk3.6.0 HadGEM2-CC INM-CM4 MIROC5 MPI-ESM-LR MRI-CGCM3					-5 **+19** **+10** **+15** **-23** **+7** **+4**				
(Murakami et al. 2013)	JMA/MRI global AGCM timeslice [1]	V3.2 60 km	As in Murakami et al. (2012a), but using different criteria for TC detection							-2		
(Murakami et al., 2012b)	JMA/MRI global AGCM timeslice [1]	V3.1 20 km V3.2 20 km V3.1 60 km V3.2 60 km	Downscale CMIP3 multi-model ens. A1B change (2075-2099 minus control)	**-23** **-15** **-23** **-24**	**-20** **-14** **-23** **-23**	**-25** **-18** **-24** **-25**	+8 **-29** -2 **-39**	**-27** **-23** -20 **-28**	**-24** +1 **-32** -10	-14 -2 +21 -14	-10 **-23** **-15** **-24**	**-45** -15 **-39** **-27**
(Villarini and Vecchi, 2012)	Statistical downscale of CMIP5 models [1]	--	17 CMIP5 models Mean and (min/max range) RCP2.6 RCP4.5 RCP8.5 (late 21st century)				+4 (-17,32) +4 (-30,57) +2 (-49,45)					
(Knutson et al., 2013)	GFDL Zetac regional [1]	18 km	Downscale (yr 2081-2100) CMIP3 ens. A1B CMIP5 ens Rcp45 Gfdl CM2.1 A1B MPI A1B HadCM3 A1B MRI A1B Gfdl CM2.0 A1B HadGEM1 A1B MIROC hi A1B CCMS3 A1B INGV A1B				**-27** **-23** -9 **-38** **-52** -25 +8 **-62** **-33** -28 -22					

			MIROC med A1B				**-43**					
xxxxxxxxx	xxxxxxxx	---	xxxxxxx	xxx								
(Emanuel 2013)	Statistical-dynamical downscaling [3]	---	Downscale A1B/CMIP3 (1981-2000 vs 2181-2200):									
			CCSM3	-3								
			CM2.0	-13								
			ECHAM5	-11								
			MIROC3.2	-12								
			MRI-CGCM	+2								
			RCP8.5 CMIP5									
			CCSM4	+11			+30	+14	-18	+48	+33	-2
			GFDL CM3	+41			+222	+44	+60	+42	+24	+7
			HADGEM2	+22			+27	+35	+58	+57	+14	-12
			MPI-ESM-MR	+29			+26	+25	+72	+26	+11	+11
			MIROC5	+38			+55	+33	+34	+187	+37	+6
			MRI-CGCM3	+13			+38	+23	+27	+71	+25	-11
			Ensemble Mean:	+25			+48	+28	+37	+75	+24	-1.5
			Periods: 1981-2000, 2081-2100									
(Mori et al. 2013)	Model:											
	MIROC ensemble	---	---					**-14**				
	MIROC3m	T42	CMIP3 A1B					**-10**				
	MIROC4h	T213	CMIP5 RCP4.5					**-15**				
	MIROC5	T85	CMIP5 RCP2.6					**-11**				
	MIROC5	T85	CMIP5 RCP4.5					**-17**				
	MIROC5	T85	CMIP5 RCP6.0					**-12**				
	MIROC5	T85	CMIP5 RCP8.5					**-12**				
	Type: global CGCM [2]		Periods: 1979-2007, 2016-2035									
(Camargo 2013)	Global CGCMs [2]											
	CMIP5 Model :											
	CSIRO		RCP4.5	**-25**								
	GFDL-CM3		(2071-2100 minus	**-20**								
	GFDL-ESM2M		1971-2000)	+1								
	MIROC5			**-25**								
	MPI			**+11**								
	MRI			**+11**								
	CSIRO		RCP8.5	**-27**								
	GFDL-CM3		(2071-2100 minus	**-29**								
	GFDL-ESM2M		1971-2000)	+9								
	MIROC5			**-26**								
	MPI			**+15**								
	MRI			**+32**								
(Tory et al. 2013)	Alternative detection method for climate model TCs [1]	---	CNRM-CM5	-8.9	-7.9	-10	+2.9	**-15**	-3.5	+6.2	-18	-3.3
			CCSR4	**-8.4**	**-6.9**	**-11**	**-60**	0.0	0.0	**-20**	-11	-11
			CSIRO-Mk3.6.0	**-11**	+2.3	**-33**	-25	-0.7	**+19**	+11	**-42**	-4.3
			GFDL-CM3	**-28**	**-25**	**-31**	-27	**-30**	-20	**-24**	**-34**	**-20**
			GFDL-ESM2M	-6.8	+3.9	**-22**	**+79**	+3.7	-11	-8.3	**-19**	**-28**
			GFDL-ESM2G	**-9.3**	-5.5	**-16**	**+40**	**-17**	+5.6	-6.3	**-13**	**-27**
			BCC-CSM1.1	**-12**	**-8.3**	**-16**	-24	-4.6	-13	-3.7	-12	**-18**
			MIROC5	**-23**	**-18**	**-30**	-12	**-31**	**-25**	**+23**	**-32**	**-27**
			CMIP5/RCP8.5 Periods: (1970-2000 vs. 2070-2100)									
(Murakami et al., 2014)	Model: MRI											
	AGCM3.1(AS)	20x20km	Timeslice using	**-16**			+6	**-27**	-15	-12	-5	**-35**
	AGCM3.1(AS)	60x60km	CMIP3 A1B	**-19**			+4	-12	**-31**	+18	-9	**-34**
	AGCM3.1(AS)	120x120km	multi model ens.	**-29**			-14	**-26**	**-25**	-3	**-33**	**-63**
	AGCM3.1(AS)	200x200km	mean SST change	-1			**+56**	**-19**	**+17**	+22	**-17**	**-14**
	AGCM3.2(YS)	20x20km	(2075-2099 minus	**-17**			**-21**	**-19**	-4	-11	**-24**	**-30**
	AGCM3.2(YS)	60x60km	1979-2003)	**-25**			**-45**	**-30**	-13	-16	**-25**	**-25**
	AGCM3.2(YS)	200x200km		**-23**			**-37**	**-23**	**-25**	-16	**-31**	**-20**
	AGCM3.2(KF)	60x60km		**-18**			**-29**	**-24**	-6	**-31**	**-24**	-5
	AGCM3.2(AS)	60x60km		**-17**			-13	-13	-18	+1	**-24**	**-32**

	AGCM3.3(YS) Type: global (AGCM) [1]	60x60km		-0			**-25**	+8	**+65**	+9	**-26**	-8
	Model:		CMIP5 RCP4.5									
	CCSM4	130x100km		**-7**			-27	+9	-7	-4	**-15**	-12
	CMCC-CM	80x80km		**-5**			-13	-1	**+28**	+3	**-21**	**-19**
	CNRM-CM5	150x150km		**-10**			**-21**	**-11**	-1	**-24**	**-12**	**-8**
	CSIRO Mk3.6.0	200x200km		**-16**			**-46**	+4	**-26**	**+21**	**-36**	**-19**
	HadGEM2-CC	200x130km		**-16**			-16	-2	+16	+21	**-30**	**-31**
	HadGEM2-ES	200x130km		**-16**			-19	**-15**	**+27**	-6	**-27**	**-26**
	MIROC5	150x150km		**-23**			-14	**-33**	**-27**	-4	**-22**	**-30**
	MPI-ESM-LR	200x200km		**-7**			**-28**	-5	+7	-2	-9	-8
	MPI-ESM-MR	200x200km		-3			**-30**	-2	**+31**	-14	**-14**	+10
	MRI-CGCM3	120x120km		-2			+14	+7	+13	+10	**-16**	-3
	BCC_CSN1.1 Type: global (CGCM) [2]	120x120km		-1			+15	+2	+1	-11	-6	+7
	Model:		CMIP5 RCP8.5									
	CCSM4	130x100km		**+8**			**-46**	+12	**+39**	-2	-1	-14
	CMCC-CM	80x80km		**+34**			+1.8	**+30**	**+102**	**+97**	**-15**	**+17**
	CNRM-CM5	150x150km		**-20**			-14	**-26**	**-14**	**-29**	**-22**	**-14**
	CSIRO Mk3.6.0	200x200km		**-22**			**-56**	-5	-1	+2	**-47**	-12
	HadGEM2-CC	200x130km		**-36**			**-41**	**-19**	-9	+2	**-52**	**-47**
	HadGEM2-ES	200x130km		**-40**			-23	**-26**	**-15**	**-36**	**-57**	**-50**
	MIROC5	150x150km		**-32**			-13	**-47**	**-35**	0	**-37**	**-35**
	MPI-ESM-LR	200x200km		**-15**			**-55**	**-12**	**+22**	**-28**	**-27**	**-16**
	MPI-ESM-MR	200x200km		**-13**			**-49**	**-16**	**+31**	**-37**	**-24**	+2
	MRI-CGCM3	120x120km		-2			+32	+2	**+23**	**+29**	**-24**	+6
	BCC_CSN1.1 Type: global (CGCM) [2]	120x120km	Periods: 1979-2003, 2075-2099	**+6**			-6	**+11**	+5	+13	-7	**+12**
(Manganello et al., 2014)	Model: IFS Type: global (AGCM) [1]	T1279(16km) T159(125km)	Timeslice using CMIP3 A1B CCSM3.0 ens. mean SST change (2065-2075 minus 1965-1975) Periods:1960-2007, 2070-2117					-4 +2 (NW Pac. but May - Nov only)				
(Scoccimarro et al., 2014)	Model: HiRAM2.2 Type: global (AGCM) [1]	50km	Clim. SST (1982-2005) 2xCO2 only SST+2K only 2xCO2&SST+2K Periods: 10yr	-10 +16 -9								
	ECHAM5 Type: global (AGCM) [1]	T159(~80 km)	2xCO2 only SST+2K only 2xCO2&SST+2K Periods: 10yr	-3 -10 -11								
(Kim et al. 2014)	Model: GFDL CM2.5 Type: global coupled climate model [2]	50 km (atm.); 25 km (ocean)	2xCO2 vs. control (fully coupled) 50-year periods	**-19**			**-30**	**-16**	**-16**	**-13**	**-24**	**-19**
(Wu et al. 2014)	Model: Zetac Type: regional [1]	18km	Downscale CMIP3 A1B multi model ens. Periods: 1980-2006, 2080-2099					-6.8				
(Walsh 2015)	Model: Zetac Type: regional [1]	18km	Downscale CMIP3 A1B multi model ens. Periods: 1981-2000, 2080-2099									**-26** **(** SW Pac. but Jan-Mar only**)**

(Wehner et al., 2015)	Model: CAM5.1 Type: global (AGCM) [1]	25km	Clim. SST (early 1990s) 2xCO2 only SST+2K only 2xCO2&SST+2K Periods: 13yr	 -17 -4 -18								
		100km	Clim. SST (early 1990s) 2xCO2 only SST+2K only 2xCO2&SST+2K Periods: 23yr	 -12 +33 +18								
(Knutson et al., 2015)	Model: GFDL HiRAM (global AGCM) [1]	50 km	Timeslice using CMIP5 RCP4.5 Late 21st century vs. 1982-2005 climatological SST	**-16**			-9	**-35**	**+16**	+20	**-26**	**-37**
(Roberts et al., 2015)	Model: HadGEM3 Type: global (AGCM) [1]	N96: 130 km	Timeslice using CMIP5 RCP8.5 HadGEM2-ES SST change (2090-2110 minus 1990-2010) Periods: 1985-2011, 2100s	-29	-12	-48	-59	-20	+14	-13	-65	-38
		N216: 60 km		-24	-4.6	-47	-54	-19	+22	-5.9	-56	-47
		N512: 25 km		-21	-1.2	-45	-65	-9.9	+24	+25	-54	-40
(Sugi et al., 2016)	JMA/MRI global AGCM3 CMIP3 Timeslice 25 years [1]		Control (1979-2003) vs. A1B (2075-2099)									
		60km, AGCM3.1	AS-convection CMIP3 ens SST									
			N=1	-24	-23	-24	-1	-20	-33	+17	-14	-41
			N=2	-24	-26	-19	-7	-19	-37	+22	-6	-39
			N=3	-27	-29	-23	-16	-33	-31	-28	-11	-43
			AS-convection CSIRO SST									
			N=1	-26	-33	-13	-36	+7	-50	-23	-22	+3
			N=2	-28	-33	-16	-37	-1	-47	-10	-20	-9
			N=3	-26	-29	-19	-40	-7	-36	-41	-22	-14
			AS-convection MIROC hi SST									
			N=1	-14	-8	-25	+13	+57	-43	+45	+3	-71
			N=2	-18	-16	-24	-9	+43	-47	+62	+5	-73
			N=3	-19	-18	-23	-32	+29	-40	+16	+7	-76
			AS-convection MRI SST									
			N=1	-21	-23	-18	+37	-31	-31	-23	-21	-14
			N=2	-23	-31	-8	+30	-46	-38	-10	-4	-14
			N=3	-27	-35	-10	+9	-58	-35	-33	-11	-7
		60km, AGCM3.2	YS- convection CMIP3 ens. SST									
			N=1	-24	-23	-25	-38	-27	-12	-16	-24	-26
			N=2	-23	-23	-21	-23	-33	-4	-13	-18	-26
			N=3	-19	-19	-18	-37	-16	-22	-5	-19	-18
			N=4	-24	-21	-30	-23	-23	-14	-20	-27	-35
			YS-convection									
			CMIP3, cluster 1	-23	-22	-25	-21	-25	-31	+12	-21	-30
			CMIP3, cluster 2	-25	-25	-25	-20	-34	-10	-21	-19	-35
			CMIP3, cluster 3	-12	-2	-32	-27	+1	+2	-2	-40	-18
			KF-convection									
			CMIP3 ens. SST	-20	-21	-18	-34	-25	-1	-34	-23	-11
			CMIP3, cluster 1	-20	-25	-13	-36	-30	-13	-17	-20	-4
			CMIP3, cluster 2	-21	-25	-15	-18	-36	+2	-47	-10	-23
			CMIP3, cluster 3	-13	-11	-17	-45	-4	+14	-46	-25	-5
			AS-convection									
			CMIP3 ens. SST	-17	-9	-29	-3	-10	-30	+1	-25	-38
			CMIP3, cluster 1	-20	-19	-21	-29	-12	-45	-18	-20	-24
			CMIP3, cluster 2	-11	-9	-14	+20	-21	+18	-4	-1	-38
			CMIP3, cluster 3	-12	0	-29	-23	+11	-4	-13	-38	-13
		20 km, AGCM3.1	AS-convection									
		20 km, AGCM3.2	CMIP3 ens SST	-22	-20	-24	+11	-24	-25	-22	-8	-46
			YS-convection									
			CMIP3 ens SST	-15	-13	-18	-30	-21	+3	-9	-19	-17

Bacmeister et al (2016)	Model: CAM5 Type: global AGCM [1]	28km	Bias-corrected CAM5 coupled model SSTs: RCP8.5 (2070-2090 vs 1985-2005)	-19			-42					
Kossin et al. (2016)	Model: Emanuel type: statistical-dynamical downscaling [3]		CMIP5 RCP8.5 (2006-2035 versus 2070-2099)					+22				
Ogata et al. (2016)	Atm. Model: MRI-AGCM3.2H Ocean:Model: MRI.COM3 [1] vs [2]	60 km grid Atm. Model	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003) Coupled: [2] Atm. Only: [1]	-33 -34	-32 -31	-36 -40	-30 -28	-43 -44	-19 -26	-8.1 22	-32 -39	-44 -44
Tsou et al. (2016)	Atm. Model: HiRAM Type: global AGCM [1]	20 km	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003)					-54				
Park et al. (2017)	Statistical downscale of CMIP5 models [1]	--	22 CMIP5 models Mean (and quartiles) RCP8.5 (late 21st century)				**-15**	**+28**				
(Yamada et al., 2017)	NICAM Type: global (AGCM) [1]	14km	Timeslice using CMIP3 A1B multi model ens. mean SST change (2075-2099 minus	**-23**	**-24**	**-21**	**-41**	**-11**	**-40**	-13	**-38**	3
(Yoshida et al., 2017)	JMA/MRI global AGCM Timeslice 60years Ensemble 90members Statistical downscale for TC intensity [1]	V3.2 60 km	RCP8.5 late 21st century CMIP5 6-model ensemble (n=90 min/max)	**-33** (-43,-27)	**-29** (-38,-17)	**-41** (-60,-23)	**-23** (-59,52)	**-42** (-78,-23)	-4 (-45,40)	**-20** (-46,3)	**-44** (-64,-25)	**-40** (-79,-13)
			CCSM4 (n=15 min/max)	**-33** (-35,-30)	**-34** (-38,-31)	**-29** (-34,-23)	**-48** (-59,-37)	**-37** (-44,-33)	**-33** (-45,-26)	-8 (-17, 2)	**-32** (-41, -25)	**-28** (-35,-18)
			GFDL-CM3 (n=15 min/max)	**-31** (-34,-28)	**-26** (-30,-23)	**-40** (-45,-36)	-9 (-25,6)	**-37** (-43,-32)	**-14** (-21,-2)	**-18** (-29,-3)	**-41** (-49, -34)	**-42** (-53,-33)
			HadGEM2-AO (n=15 min/max)	**-32** (-35,-29)	**-22** (-26,-17)	**-52** (-57,-46)	**-42** (-49,-36)	**-31** (-38,-23)	+5 (-14, 21)	-8 (-16, 3)	**-58** (-64, -53)	**-43** (-50,-29)
			MIROC5 (n=15 min/max)	**-41** (-43,-39)	**-33** (-36,-31)	**-55** (-60, -50)	**+41** (25,52)	**-74** (-78,-71)	**+29** (15,40)	**-38** (-46,-31)	**-44** (-52, -36)	**-74** (-79,-70)
			MPI-ESM-MR (n=15 min/max)	**-31** (-34,-28)	**-29** (-32,-26)	**-34** (-40,-28)	**-45** (-57,-37)	**-43** (-47,-38)	**+15** (3,24)	**-31** (-36, -22)	**-39** (-48,-32)	**-29** (-41,-23)
			MRI-CGCM3 (n=15 min/max)	**-32** (-35,-27)	**-29** (-34,-23)	**-38** (-44,-33)	**-37** (-47,-27)	**-30** (-34,-24)	**-27** (-35,-16)	**-14** (-32, -1)	**-49** (-57, -43)	**-24** (-37,-13)
(Zhang and Wang,2017)	Model: Modified WRF Type: regional climate model (RCM) [1]	20km	RCP4.5 (2080-2099 minus 1989-2010) RCP8.5 (2080-2099 minus 1979-2010)					0 **-16**				-34 -60
(Murakami et al. 2017a)	Model: FLOR Type: global (CGCM) [2]	50km	RCP4.5 (2021-2040 minus 1941Control)						**+9**			
(Murakami et al. 2017b)	Model: HiFLOR Type: global (CGCM) [2]	25km	2015 Control minus 1860 Control (historical warming)							0 (Arabian Sea)		
Choi et al. (2017)	Statistical downscale of CFSv2 free runs [1]	-	NCEP CFS decadal runs (2016–2030 minus 2002–2015)				-12					
Lok and Chan (2017)	Downscale of HadGEM2-ES into RegCM3 [1]	RegCM3: 50 km	RCP 8.5 (2090s vs. 2000)					-23%				

Wehner et al. (2018)	Model: CAM5.3 Type: global (AGCM) [1]	28km	+2K global warming; RCP2.6 Forcing changes 60 simulated yrs	-10	-6	-19	-9	-6	-8	-29	-18	-23
Bhatia et al., (2018)	Model: HiFLOR Type: global (CGCM) [2]	25km	RCP4.5 (2081-2100) vs.(1986-2005)	**+9**			**+23**	**+6**	**+23**	**-12**		

<u>Table 1. Projections of Tropical Storm Frequency</u>. Projected change in frequency of tropical storms in warm climate runs relative to control run in percent. Red and blue numbers/text denote projected increases and decreases, respectively. Bold text denotes where a statistical significance test was reported that showed significance. Black values denote no change. Green text denotes changes based on SST-increase-only or 2xCO2-only idealized experiments. The frequency projections from Emanuel et al. (2008) have been computed slightly differently from those shown in Fig. 8 of the original paper in order to facilitate intercomparison with projection results from other studies. Additional data from Roberts et al. (2015) are via M. Roberts, personal communication (2017). Type of ocean coupling for the study is indicated by the following Model/Type: [1] no ocean coupling (e.g., specified sea surface temperatures or statistical downscaling of tropical cyclones; [2] fully coupled ocean experiment; or [3] hybrid type, with uncoupled atmospheric model for storm genesis, but with ocean coupling for the dynamical or statistical/dynamical downscaling step.

TABLE 2. Intense TC Freq. Projections (%)												
Reference	Model/Type	Resolution: high to low	Experiment	Basin								
				Global	NH	SH	N Atl.	NW Pac.	NE Pac.	N Ind.	S. Ind.	SW Pac.
(Emanuel 2013)	Statistical-dynamical downscaling [3]	---	Downscale RCP8.5 CMIP5: CCSM4 GFDL CM3 HADGEM2 MPI-ESM-MR MIROC5 MRI-CGCM3 Ensemble Mean: Periods: 1981-2000, 2081-2100	# Cat 4-5: +13 +78 +33 +51 +98 +31 +50			# Cat 4-5: +123 +1290 +51 +78 +217 +67 +108	# Cat 4-5 +20 +60 +60 +33 +68 +39 +45	# Cat 4-5: -17 +140 +106 +166 +138 +75 +103	# Cat 4-5: +126 +116 +109 +62 +600 +84 +181	# Cat 4-5: +68 +134 +33 +38 +119 +112 +76	# Cat 4-5: -19 +16 -9 +11 +39 -2 +4
(Knutson et al., 2015)	Model: GFDL HiRAM (global AGCM) downscaled into GFDL Hurricane model w/ ocean coupling [3]	6 km	Timeslice using CMIP5 RCP4.5 Late 21st century vs. 1982-2005 climatological SST	# Cat 4-5: **+28** Cat 4-5 days: **+35**			# Cat 4-5: +42 Cat 4-5 days: +175	# Cat 4-5: -7 Cat 4-5 days: +10	# Cat 4-5: **+338** Cat 4-5 days: **+478**	# Cat 4-5: +200 Cat 4-5 days: **+405**	# Cat 4-5: +64 Cat 4-5 days: +55	# Cat 4-5: **-58** Cat 4-5 days: **-53**
(Bender et al., 2010)	GFDL Zetac (18 km atmospheric model), downscaled into GFDL Hurricane model with ocean coupling [3]	9 km	Downscale TCs from regional model (A1B) 18-mod ensemble; 2081-2100 minus 2001-2020: (range over 4 indiv. models)				# Cat 4-5: **+100** (-66 to +138)					
(Knutson et al., 2013)	GFDL Zetac (18 km atmospheric model), downscaled into GFDL Hurricane model with ocean coupling [3]	9 km	Downscale TCs (2081-2100) CMIP3 ens. A1B CMIP5 ens Rcp45 Gfdl CM2.1 A1B MPI A1B HadCM3 A1B MRI A1B Gfdl CM2.0 A1B HadGEM1 A1B MIROC hi A1B CCMS3 A1B INGV A1B MIROC med A1B				# Cat 4-5: **+87** +39 **+116** +21 -53 **+110** **+211** -100 -42 +26 +47 -32					
(Yamada et al., 2017)	NICAM Type: global (AGCM) [1]	14km	Timeslice using CMIP3 A1B multi model ens. mean SST change (2075-2099 minus 1979-2003) Periods: 1979-2008, 2075-2104	#<944hPa **+7**	#<944 hPa +1	#<944 hPa +20	#<944hPa -50	#<944hPa +18	#<944 hPa **-100**	#<944hPa -61	#<944 hPa +8	#<944 hPa +43

(Manganello et al., 2014)	IFS Type: global (AGCM) [1]	T1279 (~16km)	Timeslice using CMIP3 A1B CCSM3.0 ens. mean SST change (2065-2075 minus 1965-1975) Periods:1960-2007, 2070-2117					# Cat 3-5 **+70%** (NW Pac. but May - Nov only)				
(Knutson et al., 2008)	GFDL Zetac regional [1]	18 km	Downscale CMIP3 ens. A1B, 2080-2100				+140% (12 vs 5) # w/ V_{sfc}>45 m/s					
(Murakami et al., 2012b)	JMA/MRI global AGCM timeslice [1]	V3.2 20 km	Downscale CMIP3 multi-model ens. A1B change (2075-2099 minus control)	**# Cat 4-5:** +4 **# Cat. 5:** **+56**	+9 **+60**	-7 +43	+15 **+287**	-4 **+45**	**+179** Incr from 0	+35 +100	**+45** **+261**	**-54** **-61**
Tsou et al. (2016)	Atm. Model: HiRAM Type: global AGCM [1]	20 km	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003)					**# Cat 4-5:** +400				
(Oouchi et al., 2006)	MRI/JMA Timeslice [1]	TL959 L60 (~20km)	10y A1B 1982-1993 2080-2099	**Signif. Increase,** # V_{850} **of 55-60 m/s**								
Bhatia et al., (2018)	Model: HiFLOR Type: global (CGCM) [2]	25km	RCP4.5 (2081-2100) vs.(1986-2005)	**# Cat 4:** +28 **# Cat 5:** +85			+73 +136	+1 +80	+163 +200	+129 +133		
(Sugi et al., 2016)	JMA/MRI global AGCM3 CMIP3 Timeslice 25 years [1]		Control (1979-2003) vs. A1B (2075-2099)	**# Cat 4-5:**								
		60km, AGCM3.1	AS-convection CMIP3 ens SST									
			N=1	-2	-1	-5	+15	0	-11	-14	+13	-50
			N=2	-5	-6	+2	+13	-14	-13	+71	+24	-47
			N=3	-29	-32	-23	-14	-26	-39	-38	-7	-41
			AS-convection CSIRO SST									
			N=1	-25	-35	+11	-30	+8	-78	-86	-25	+106
			N=2	-26	-33	+13	-44	-3	-48	-71	+19	0
			N=3	-23	-36	+19	-39	-8	-56	-63	-2	+43
			AS-convection MIROC hi SST									
			N=1	+44	+47	+33	+53	+115	-19	-29	+60	-39
			N=2	+20	+13	+52	+3	+73	-27	+14	+110	-74
			N=3	+12	+12	+11	+14	+83	-42	-13	+79	-65
			AS-convection MRI SST									
			N=1	-4	-6	+3	+51	-17	-24	-57	-15	+50
			N=2	-8	-11	+3	+51	-37	-23	+43	+7	-5
			N=3	-30	-35	-16	+46	-45	-47	-25	-26	-5
		60km, AGCM3.2	YS- convection CMIP3 ens. SST									
			N=1	-26	-24	-31	-63	-30	+17	+33	-33	-25
			N=2	-13	-12	-14	-14	-17	+22	-17	-7	-38
			N=3	+10	+11	+6	-11	+8	+11	+122	+2	+16
			N=4	+5	+4	+6	-7	0	+46	-25	+16	-17
			YS-convection									
			CMIP3, cluster 1	-16	-18	-10	-6	-29	-13	+133	+8	-45
			CMIP3, cluster 2	-5	-9	+8	+31	-31	+70	+67	+18	-10
			CMIP3, cluster 3	+10	+24	-36	+19	+30	-26	+56	-56	+5
			KF-convection									
			CMIP3 ens. SST	-6	-10	+4	-22	-19	+23	+7	+9	-6
			CMIP3, cluster 1	-23	-29	-10	-52	-39	+20	-29	+3	-39
			CMIP3, cluster 2	-5	-19	+29	-15	-36	+41	-36	+38	+10
			CMIP3, cluster 3	+10	+12	+7	-30	+13	+48	-29	+19	-19
			AS-convection									
			CMIP3 ens. SST	-4	0	-13	+24	+1	-47	+45	0	-39
			CMIP3, cluster 1	-16	-14	-22	-47	-4	-65	+28	-3	-61
			CMIP3, cluster 2	+1	+5	-10	+18	-10	+12	+53	+14	-56
			CMIP3, cluster 3	+4	+17	-24	-24	+26	+4	+15	-20	-32
		20 km,	AS-convection									

		AGCM3.1 20 km, AGCM3.2	CMIP3 ens SST YS-convection CMIP3 ens SST	+13 -5	+5 +1	+25 -20	+50 -31	-14 -13	+26 +50	-22 +38	+43 +6	-17 -66
(Murakami et al., 2017b)	Model: HiFLOR Type: global (CGCM) [2]	25km	2015 Control minus 1860 Control (historical warming)							#>46 m/s: **+60** (Arabian Sea)		
(Murakami et al., 2018)	Model: HiFLOR Type: global (CGCM) [2]	25km	RCP4.5 (2081-2100) vs.(1986-2005) RCP8.5 (2081-2100) vs.(1986-2005)				# Cat 3-5: **+66** **+83**					
Bacmeister et al. (2016)	Model: CAM5 Type: global [1]	28km	Bias-corrected CAM5 coupled model SSTs: RCP8.5 (2070-2090 vs 1985-2005)	**cat 4-5** +200				**cat 4-5** +282			**cat 4-5:** +224	**cat 4-5:** +317
Wehner et al. (2018)	Model: CAM5.3 Type: global (AGCM) [1]	28km	+2K global warming; RCP2.6 Forcing changes 60 simulated yrs	**#Cat4-5:** +27	+30	+19	+28	+17	+52	-62	+32	-23
(Walsh et al., 2004)	CSIRO DARLAM regional model [1]	30 km	IS92a; 2061-2090 minus 1961-1990									+26% P<970 mb
(Bengtsson et al., 2007)	ECHAM5 timeslice [1]	T319 (~40 km)	2071-2100, A1B		+42%, #>50m/s							
(Zhao and Held, 2010)	GFDL HIRAM timeslice with statistical refinement of intensity [1]	50 km	Downscale A1B: CMIP3 n=7 ens. GFDL CM2.0 GFDL CM2.1 HadCM3 HadGem1 ECHAM5 MRI_CGCM2.3 MIROC High				#Cat 3-5 -13 +9 +5 -28 -53 +24 0 -27					
(Zhao and Held, 2012)	GFDL HIRAM timeslice [1]	50 km	Downscale A1B: CMIP3 n=18 ens. GFDL CM2.0 GFDL CM2.1 HadCM3 HadGem1 ECHAM5 CCCMA MRI_CGCM2.3 MIROC High	#>33m/s, % **-15** -6 **-11** +6 **-11** **-14** **-22** **-16** -5	#>33 **-16** -1 -5 **+17** -3 **-13** **-24** **-18** -6	#>33 **-13** **-21** **-26** **-26** **-31** **-16** -16 -10 -4	#>33m/s **-20** +16 -4 **-51** **-84** **+25** **-42** +20 **-31**	#>33m/s **-30** **-19** +9 -11 **-29** **-49** **-37** **-33** **-17**	#>33 +14 **+30** **-34** **+121** **+115** **+58** +17 -3 **+44**	#>33 +6 +20 -31 +39 -35 -21 -21 -12 -40	#>33 -11 -14 **-30** **-20** **-46** +9 -2 -12 +16	#>33 -14 **-30** -19 **-35** -9 **-56** **-37** -7 **-34**

(Kim et al. 2014)	Model: GFDL CM2.5 Type: global coupled climate model [2]	50 km (atm.); 25 km (ocean)	2xCO2 vs. control (fully coupled) 50-year periods	#>33m/s **-9.2**			#>33m/s -25	#>33m/s -7.6	#>33 m/s +17	#>33 m/s 0	#>33 m/s **-23**	#>33m/s -16
(Leslie et al., 2007)	OU-CGCM with high-res. Window [2]	Up to 50 km	2000 to 2050 control and IS92a (6 members)									+100% #>30m/s by 2050
(Bengtsson et al., 2007)	ECHAM5 timeslice [1]	T213 (~60 km)	2071-2100, A1B		+32%, #>50m/s							
(Yoshida et al., 2017)	JMA/MRI global AGCM Timeslice 60years Ensemble 90members Statistical downscale for TC intensity [1]	V3.2 60 km	RCP8.5 late 21st century: CMIP5 6-model ensemble (n=90 min/max) CCSM4 (n=15 min/max) GFDL-CM3 (n=15 min/max) HadGEM2-AO (n=15 min/max) MIROC5 (n=15 min/max) MPI-ESM-MR (n=15 min/max) MRI-CGCM3 (n=15 min/max)	#Cat 4-5 **-13** (-33,6) **-18** (-28,-9) **-10** (-17,-2) **-12** (-20,-5) **-23** (-33,-14) **-13** (-22,-5) -2 (-8,6)	#Cat 4-5 **-7** (-36,13) **-23** (-36,-17) -4 (-14,6) +2 (-8,12) **-10** (-23,-1) -9 (-20,3) +3 (-10,13)	#Cat 4-5 **-28** (-66,11) -7 (-24,11) **-25** (-37,-13) **-48** (-56,-37) **-55** (-66, -37) **-21** (-37, -8) **-12** (-39,0)	#Cat 4-5 +20 (-69,275) **-44** (-83,-17) **+40** (0,114) -23 (-61,18) **+216** (175,275) -44 (-69, 35) -22 (-48,26)	#Cat 4-5 **-26** (-81,13) **-22** (-35,-8) **-20** (-33,-8) -13 (-21,3) **-76** (-81,-67) **-30** (-40,-20) +2 (-8,13)	#Cat 4-5 **+88** (-62,307) -32 (-62,6) **+72** (40,105) **+106** (44,163) **+223** (163,307) **+146** (95,190) +10 (-32,40)	#Cat 4-5 -1 (-49,75) +4 (-32,41) -24 (-61,7) +15 (-49,58) -14 (-38,18) -11 (-32,13) +25 (-10,75)	#Cat 4-5 **-23** (-62,31) +7 (-8,31) -15 (-37,16) **-48** (-62,-34) **-37** (-49,-19) **-17** (-32,-1) **-27** (-55,-11)	#Cat 4-5 **-37** (-97,37) **-32** (-58,-16) **-43** (-66,-8) **-49** (-64,-36) **-89** (-97,-72) -27 (-50,4) +15 (-10,37)
Ogata et al. (2016)	Atm. Model: MRI-AGCM3.2H Ocean:Model: MRI.COM3 [1] vs. [2]	60 km grid Atm. Model ~55 to 110 km grid Ocean model	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003) Coupled mod.[2] Atm. Only [1]	# Cat 3-5 +20 -25	# Cat 3-5: +13 -7.3	# Cat 3-5: +44 -48	# Cat 3-5: +14 -29	# Cat 3-5: +9.1 -19	# Cat 3-5: +100 +200	# Cat 3-5: 0.0 +150	# Cat 3-5: +125 -43	# Cat 3-5: 0.0 -60
(McDonald et al., 2005)	HadAM3 Timeslice [1]	N144 L30 (~100km)	15y IS95a 1979-1994 2082-2097	Increase In # strong TCs (vort > 24-30 x 10^{-5}/s)								
(Sugi et al., 2002)	JMA Timeslice [1]	T106 L21 (~120km)	10y 1xCO2, 2xCO2	~0 # >40 m/s								

(Gualdi et al., 2008)	SINTEX-G coupled model [2]	T106 (~120 km)	30 yr 1xCO2, 2xCO2, 4xCO2	~0								
(Hasegawa and Emori, 2007)	CCSR/NIES/FRC coupled model [2]	T106 L56 (~120km)	20yr control Vs +1%/yr CO2 (yr 61-80)	Rel. freq. of Pc < 985mb +21 couple +59 uncoup								
(Yoshimura et al., 2006)	JMA Timeslice [1]	T106 L21 (~120km)	10y 1xCO2, 2xCO2	Mixed changes: # > 25 m/s								
(Wang and Wu., 2012)	CMIP5 downscaling; statistical/dynamical model [1]	---	A1B (2065-2099 minus 1965-1999)					#Cat 4-5 **+66**				
Change in the proportion of Cat 4-5 storms vs. Cat 0-5 storms (in percent)												
(Emanuel 2013)	Statistical-dynamical downscaling [3]	---	Downscale RCP8.5 CMIP5: CCSM4 GFDL CM3 HADGEM2 MPI-ESM-MR MIROC5 MRI-CGCM3 Ensemble Mean: Periods: 1981-2000, 2081-2100	**# Cat 4-5/** **# Cat 0-5:** +2 +26 +9 +17 +43 +16 +20								
(Knutson et al., 2015)	Model: GFDL HiRAM (global AGCM) downscaled into GFDL Hurricane model w/ ocean coupling [3]	6 km	Timeslice using CMIP5 RCP4.5 Late 21st century vs. 1982-2005 climatological SST	**# Cat 4-5/** **# Cat 0-5:** **+52**								
(Yamada et al., 2017)	NICAM Type: global (AGCM) [1]	14km	Timeslice using CMIP3 A1B multi model ens. mean SST change (2075-2099 minus 1979-2003) Periods: 1979-2008, 2075-2104	**#<944hPa/** **#Cat 0-5** **+39**								
(Murakami et al., 2012b)	JMA/MRI global AGCM timeslice [1]	V3.2 20 km	Downscale CMIP3 multi-model ens. A1B change (2075-2099 minus control)	**# Cat 4-5/** **# Cat 0-5:** +22								
Bhatia et al., (2018)	Model: HiFLOR Type: global (CGCM) [2]	25km	RCP4.5 (2081-2100) vs.(1986-2005)	**# Cat 4-5/** **# Cat 0-5** +17%								

Wehner et al. (2018)	Model: CAM5.3 Type: global (AGCM) [1]	28km	+2K global warming; RCP2.6 Forcing changes 60 simulated yrs	**# Cat4-5 / # Cat 0-5:** +41%								
(Sugi et al., 2016)	JMA/MRI global AGCM3 CMIP3 Timeslice 25 years [1]		Control (1979-2003) vs. A1B (2075-2099)	**# Cat 4-5/ # Cat 0-5:**								
		60km, AGCM3.1	AS-convection CMIP3 ens SST									
			N=1	+28	+29	+26	+16	+25	+32	-27	+32	-16
			N=2	+25	+27	+25	+22	+5	+38	+41	+32	-13
			N=3	-3	-3	0	+2	+10	-12	-13	+5	+5
			AS-convection CSIRO SST									
			N=1	+2	-3	+26	+10	+2	-57	-81	-4	+99
			N=2	+3	0	+34	-12	-3	-2	-68	+48	+10
			N=3	+4	-10	+47	0	-1	-32	-36	+25	+67
			AS-convection MIROC hi SST									
			N=1	+67	+60	+77	+35	+37	+41	-51	+56	+108
			N=2	+47	+34	+100	+13	+21	+39	-29	+99	-2
			N=3	+38	+36	+44	+68	+41	-3	-25	+66	+46
			AS-convection MRI SST									
			N=1	+22	+22	+26	+10	+20	+10	-44	+8	+75
			N=2	+20	+29	+12	+16	+16	+24	+58	+12	+10
		60km, AGCM3.2	N=3	-5	0	-8	+35	+32	-18	+11	-17	+2
			YS- convection CMIP3 ens. SST									
			N=1	-2	-1	-7	-40	-5	+33	+59	-12	+1
			N=2	+13	+14	+9	+11	+24	+26	-4	+14	-16
			N=3	+35	+38	+29	+43	+28	+42	+134	+25	+41
			N=4	+38	+32	+52	+22	+31	+71	-6	+59	+28
			YS-convection									
			CMIP3, cluster 1	+9	+5	+19	+19	-5	+26	+109	+37	-22
			CMIP3, cluster 2	+27	+21	+45	+64	+4	+88	+111	+45	+39
			CMIP3, cluster 3	+25	+27	-6	+64	+29	-28	+60	-27	+28
			KF-convection									
			CMIP3 ens. SST	+17	+14	+26	+19	+7	+24	+62	+41	+5
			CMIP3, cluster 1	-4	-5	+4	-24	-12	+39	-14	+29	-36
			CMIP3, cluster 2	+21	+9	+53	+3	0	+39	+21	+54	+42
			CMIP3, cluster 3	+27	+25	+29	+28	+17	+30	+33	+59	-15
			AS-convection									
			CMIP3 ens. SST	+16	+10	+23	+27	+13	-24	+44	+33	-2
			CMIP3, cluster 1	+4	+6	-2	-25	+9	-36	+56	+21	-49
			CMIP3, cluster 2	+13	+15	+5	-2	+15	-6	+59	+15	-29
		20 km, AGCM3.1	CMIP3, cluster 3	+19	+17	+7	-1	+14	+8	+32	+28	-22
			AS-convection									
		20 km, AGCM3.2	CMIP3 ens SST	+44	+32	+63	+35	+14	+69	0	+54	+54
			YS-convection									
			CMIP3 ens SST	+12	+17	-1	-2	+9	+46	+52	+32	-59
Tsou et al. (2016)	Atm. Model: HiRAM Type: global AGCM [1]	20 km	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003)					# Cat 4-5/ # Cat 0-5 +990				
Bacmeister et al. (2016)	Model: CAM5 Type: global [1]	28km	Bias-corrected CAM5 coupled model SSTs: RCP8.5 (2070-2090 vs 1985-2005)	**# Cat 4-5/ # Cat 0-5** +270								
(Yoshida et al., 2017)	JMA/MRI global AGCM Timeslice 60years Ensemble 90members	V3.2 60 km	RCP8.5 late 21[st] century: CMIP5 6-model ensemble (n=90) CCSM4	**#Cat 4-5 / # Cat 0-5** +30 +22								

	Statistical downscale for TC intensity [1]		(n=15) GFDL-CM3 (n=15) HadGEM2-AO (n=15) MIROC5 (n=15 min/max) MPI-ESM-MR (n=15 min/max) MRI-CGCM3 (n=15 min/max)	 +30 +29 +31 +26 +42								
Ogata et al. (2016)	Atm. Model: MRI-AGCM3.2H Ocean:Model: MRI.COM3 [1] vs. [2]	60 km grid Atm. Model ~55 to 110 km grid Ocean model	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003) Coupled mod.[2] Atm. Only [1]	**# Cat 3-5 / # Cat 0-5** +79 +14								

<u>Table 2. Projections of Intense TC Frequency</u>. Projected change in frequency of intense tropical cyclones (i.e., more intense than tropical storms) in warm climate runs relative to control run in percent. The rows of reported results are ordered from top to bottom generally in order of decreasing model horizontal resolution. The section at the bottom of the table lists the percent change in the proportion of Cat 0-5 storms that become very intense at some point in their lifetime (i.e., Cat 4-5 intensity or as noted). Red and blue numbers/text denote projected increases and decreases, respectively. Bold text denotes where a statistical significance test was reported that showed significance. Black values denote no change. Green text denotes changes based on SST-increase-only or 2xCO2-only idealized experiments. Type of ocean coupling for the study is indicated by the following Model/Type: [1] no ocean coupling (e.g., specified sea surface temperatures or statistical downscaling of tropical cyclones; [2] fully coupled ocean experiment; or [3] hybrid type, with uncoupled atmospheric model for storm genesis, but with ocean coupling for the dynamical or statistical/dynamical downscaling step.

Table 3. TC Intensity Projections: **Metric/** **Reference**	**Model/Type**	**Resolution/ Metric type (high to low resolution)**	**Climate Change scenario**	**Global**	**NH**	**SH**	**N Atl.**	**NW Pac.**	**NE Pac.**	**N Ind.**	**S. Ind.**	**SW Pac.**
Dynamical or Stat/Dyn. Model Projections (Max wind speed % change)							Avg (low, high)					
(Emanuel et al., 2008)	Stat./Dyn. Model [3]	Max Wind speed (%)	CMIP3 7-model A1B (2181-2200 minus 1981-2000)	+1.7	+3.1	+0.2	+2.0	+4.1	-0.1	+0.2	+0.5	-0.8
(Tsuboki et al. 2014)	CReSS regional model downscale of 30 strongest typhoons in MRI-AGCM3.1 present and warm climates [3]	2 km; Average max wind speed (%)	CMIP3 18-model ens. A1B (2074-2087 minus 1979-1993)					+15.1				
(Hill and Lackmann 2011)	WRF regional model downscale of CMIP3 environments (idealized simulations) [1]	2 km; Square root Of Central Pressure Deficit	Downscale CMIP3 ens. A1B (2090-99) A2 (2090-99) B2 (2090-99)				 +5.1 +8.1 +4.6					
Kanada et al. (2013)	NHM2 nonhydrostatic regional atm. model	2 km grid; Max. azmuthial avg 10 m windspeed	RCP8.5 (2075–2099) – (1979–2003)]				+8.7					
Gutmann et al. (2018)	WRF regional model downscale of 22 hurricane cases [1]	4 km grid model; Avg. Max. surface windspeed change along track (%)	RCP8.5 19-model CMIP5 ensemble environmental change & Greenhouse gas change				+6.3					
(Patricola and Wehner 2018)	WRF regional model v. 3.8.1 nested in CAM5.1 atm. Model forced with CMIP5 ens. boundary conditions [1]	4.5 km grid Maximum windspeed change (%)	RCPx 1980-2000 vs. 2081-2100. 10-member ensembles of 1 to 9 cases per basin. RCP4.5 RCP6.0 RCP8.5				+5.9 +7.6 +10.5	+5.8 +4.6 +12	-0.35 -3.4 +4.0		+7.8 +8 +15	+12 +14 +20
(Kanada et al. 2017)	Four Non-hydrostatic regional models [1]	5 km grids % change in Sq Root of central pressure fall. Assume envir press$_{v\,=}$ 1013.26 mb	CMIP5 ens. RCP8.5 (1979-2003 vs. 2075-2099) CReSS JMANJM MM5 WRF v. 3.3.1 WRF with Bogus					+11 +10 +16 +11 +3.9				
(Knutson et al., 2015)	Model: GFDL HiRAM (global AGCM) downscaled into GFDL Hurricane model with ocean coupling [3]	6 km; Max Wind speed change (%) of hurricanes	Timeslice using CMIP5 RCP4.5 Late 21st century vs. 1982-2005 climatological SST	**+4.1**			**+4.5**	**+5.5**	**+7.8**	+1.6	**+3.3**	-3.1
(Bender et al., 2010)	GFDL Zetac (18 km atmospheric model), downscaled into GFDL Hurricane model with ocean coupling [3]	9 km; Max Wind speed (%)	Downscale TCs from regional model 18-mod ensemble: CMIP3 A1B; yrs 2081-2100 minus 2001-2020				+0.7 (trop. storms) +6 (hurri-canes)					
(Knutson et al., 2013)	GFDL Zetac (18 km atmospheric model), downscaled into GFDL Hurricane model with ocean coupling [3]	9 km; Max Wind speed change (%) of hurricanes	Downscale TCs (2081-2100) CMIP3 ens. A1B CMIP5 ens Rcp45 Gfdl CM2.1 A1B MPI A1B HadCM3 A1B MRI A1B Gfdl CM2.0 A1B HadGEM1 A1B				 **+6.1** **+4.0** **+8.6** **+4.2** +2.0 **+9.2** **+11** -2.7					

			MIROC hi A1B CCMS3 A1B INGV A1B MIROC med A1B				+2.9 **+5.3** +5.9 +2.9					
(Knutson and Tuleya, 2004)	GFDL Hurricane Model [1]	9 km grid inner nest; Max Wind speed (%) Pressure fall (%)	CMIP2+ +1%/yr CO2 80-yr trend				+5.5 (1.5, 8.1) +13 (3.2, 22)	+5.4 (3.3, 6.7) +14 (8.0, 17)	+6.6 (1.1, 10.1) +15 (3.6, 25)			
(Yamada et al., 2017)	NICAM Type: global (AGCM) [1]	14km Lifetime Max: sqrt of pressure fall. Red/ blue indicate increase/ decrease in intensity.	Timeslice using CMIP3 A1B multi model ens. mean SST change (2075-2099 minus 1979-2003) Periods: 1979-2008, 2075-2104	**+2.8**	+2.1	**+4.3**	-1.0	+3.2	**-6**	**-5.4**	**+7**	+2.2
(Lavender and Walsh, 2011)	CCAM regional model nested in a suite of GCMs [1]	15 km Max winds	A2 1990, 2090									+5 to +10 %
(Manganello et al., 2014)	IFS Type: global (AGCM) [1]	T1279 (~16km) Max wind	Timeslice using CMIP3 A1B CCSM3.0 ens. mean SST change (2065-2075 minus 1965-1975) Periods:1960-2007, 2070-2117					**+12**				
(Knutson et al., 2001)	GFDL Hurricane Model [3]	18 km grid w./ ocean coupling; Max Wind speed (%)	GFDL R30 downscale, +1%/yr CO2 yr 71-120 avg	+6								
(Knutson et al., 2008)	GFDL Zetac regional [1]	18 km; Max Wind speed (%)	Downscale CMIP3 ens. A1B, 2080-2100				+2.9					
(Knutson et al., 2013)	GFDL Zetac regional [1]	18 km; Max Wind speed (%) of hurricanes	Downscale TCs (2081-2100) CMIP3 ens. A1B CMIP5 ens Rcp45 Gfdl CM2.1 A1B MPI A1B HadCM3 A1B MRI A1B Gfdl CM2.0 A1B HadGEM1 A1B MIROC hi A1B CCMS3 A1B INGV A1B MIROC med A1B				**+2.0** **+2.2** **+2.8** +3.6 +0.9 +4.0 **+3.6** +1.5 +2.3 +3.8 +2.0 +2.1					
(Wu et al. 2014)	Model: Zetac Type: regional [1]	18km	Downscale CMIP3 A1B multi model ens. Periods: 1980-2006, 2080-2099					+2.6				
Tsou et al. (2016)	Atm. Model: HiRAM Type: global AGCM [1]	20 km	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003)					+14				
(Murakami et al., 2012b)	JMA/MRI global AGCM timeslice [1]	V3.1 20 km V3.2 20 km Avg. lifetime max winds	Downscale CMIP3 multi-model ens. A1B change (2075-2099 minus control)	**+13** **+3**	**+12** **+5**	**+14** -1	+2 **+9**	**+16** **+6**	**+13** **+6**	+8 +5	**+15** **+7**	**+7** **-10**
(Murakami et al., 2012b)	JMA/MRI global AGCM timeslice [1]	V3.1 20 km V3.2 20 km; Avg. max winds over lifetime of all TCs	Downscale CMIP3 multi-model ens. A1B change (2075-2099 minus control)	**+11** **+4**	**+12** **+6**	**+10** 0	**+5** **+10**	**+18** **+7**	**+12** **+6**	**+5** **+7**	**+10** **+7**	**+8** **-10**

(Oouchi et al., 2006)	MRI/JMA Timeslice [1]	TL959 L60 (~20km) Avg. lifetime max windspeed	10y A1B 1982-1993 2080-2099	+11	+8.5	+14	+11	+4.2	+0.6	-13	+17	-2.0
(Oouchi et al., 2006)	MRI/JMA Timeslice [1]	TL959 L60 (~20km) Avg. annual max winds	10y A1B 1982-1993 2080-2099	+14	+16	+6.9	+20	-2.0	-5.0	-17	+8.2	-23
(Semmler et al., 2008)	Rossby Centre regional model [1]	28 km; Max winds	16 yr control and A2, 2085-2100				+4					
(Wehner et al., 2015)	Model: CAM5.1 Type: global (AGCM) [1]	25km Avg. 10 highest max wind	Clim. SST (early 1990s) 2xCO2 only SST+2K only 2xCO2&SST+2K Periods: 13yr	 -2 +10 +7								
(Chauvin et al., 2006)	ARPEGE Climat Timeslice [1]	~50 km Max winds	Downscale - CNRM B2 - Hadley A2				 ~0 ~0					
(Kim et al. 2014)	Model: GFDL CM2.5 Type: global coupled climate model [2]	50 km (atm.); 25 km (ocean)	2xCO2 vs. control (fully coupled) 50-year periods	**+2.7**			**+4.3**	**+2.5**	**+4.6**	**+3.2**	+2.0	+1.5
(Yoshida et al., 2017)	J JMA/MRI global AGCM Timeslice 60years Ensemble 90members Statistical downscale for TC intensity [1]	V3.2 60 km Max Wind	RCP8.5 late 21st century CMIP5 6-model ensemble (n=90 min/max) CCSM4 (n=15 min/max) GFDL-CM3 (n=15 min/max) HadGEM2-AO (n=15 min/max) MIROC5 (n=15 min/max) MPI-ESM-MR (n=15 min/max) MRI-CGCM3 (n=15 min/max)	**+9** (4,13) **+7** (4,9) **+9** (8,11) **+8** (6,10) **+9** (7,12) **+9** (7,12) **+12** (10,13)	**+10** (4,13) **+7** (4,9) **+10** (9,11) **+9** (7,11) **+10** (7,13) **+10** (7,12) **+12** (10,13)	**+6** (-4,13) **+7** (5,10) **+6** (2,9) +2 (-3,6) +1 (-4,6) **+8** (5,11) **+10** (6,13)	**+8** (-9,25) +3 (-3,9) **+12** (6,20) +6 (-2,18) **+21** (19,25) +1 (-9,18) +6 (0,14)	**+8** (-5,15) **+8** (5, 11) **+10** (9,12) **+8** (6,11) -1 (-5,5) **+9** (5,11) **+13** (11,15)	**+15** (1,27) **+7** (1,13) **+17** (13,22) **+15** (8,20) **+22** (18,27) **+18** (15,22) **+13** (10,18)	**+9** (2,22) **+8** (3,12) **+4** (0,8) **+11** (3,17) **+13** (6,22) **+9** (2,14) **+12** (4, 8)	**+9** (-1,16) **+12** (9,16) **+10** (5,16) +6 (-1,10) +6 (0,13) **+11** (8,15) **+10** (2,15)	0 (-19,17) -1 (-4,5) -1 (-7,7) -1 (-6,3) **-14** (-19,-4) **+4** (1,11) **+10** (4,17)
(Sugi et al., 2002)	JMA Timeslice [1]	T106 L21 (~120km) Max winds	10y 1xCO2, 2xCO2	~0								
(Gualdi et al., 2008)	SINTEX-G coupled model [2]	T106 (~120 km); Max winds	30 yr 1xCO2, 2xCO2, 4xCO2	~0								
(Hasegawa and Emori, 2005)	CCSR/NIES/FRC AGCM timeslice [1]	T106 L56 (~120km) Max winds	5x20y at 1xCO2 7x20y at 2xCO2					De-crease				
(Yoshimura et al., 2006)	JMA Timeslice [1]	T106 L21 (~120km) Max winds	10y 1xCO2, 2xCO2	~0								
(Hasegawa and Emori, 2007)	CCSR/NICS/FRC Coupled GCM [2]	T106 L56 (~120 km) Max winds	20yr control Vs +1%/yr CO2 (yr 61-80)	~0 for Pc < 985 mb								
(Wang and Wu, 2012)	CMIP5 downscaling – statistical/dyn model [1]	various	A1B (2065-2099 minus 1965-1999)						**+14**			
Potential intensity theory projections of intensity (% Change)							Avg (low, high)					
(Vecchi and Soden, 2007)	Emanuel PI, reversible w/ diss. heating [1]	Max Wind speed (%)	CMIP3 18-model A1B (100yr trend)	+2.6	+2.7	+2.4	+0.05 (-8.0, 4.6)	+2.9 (-3.1, 13)	+3.5 (-6.4 16)	+4.4 (-3.3, 16)	+3.7 (-7.6, 17)	+0.99 (-8.6, 8.6)
(Knutson and Tuleya, 2004)	Potential Intensity Emanuel,	Pressure fall (%)	CMIP2+ +1%/yr CO2				+2.6 (-5.6,	+7.0 (-1.0,	+5.4 (-5.0,			

	reversible [1]		80-yr trend				13)	20)	22)			
(Knutson and Tuleya, 2004)	Potential Intensity, Emanuel, pseudoadiabatic [1]	Pressure fall (%)	CMIP2+ +1%/yr CO_2 80-yr trend				+6.0 (1.6, 13)	+8.5 (2.8, 25)	+8.2 (-3.3, 28)			
(Knutson and Tuleya, 2004)	Potential Intensity, Holland [1]	Pressure fall (%)	CMIP2+ +1%/yr CO_2 80-yr trend				+12 (-4.0, 29)	+17 (9.4, 31)	+16 (3.4, 43)			
(Yu et al., 2010)	Emanuel PI modified by vertical wind shear [1]	Max Wind speed (%)	CMIP3 18 model ensemble 1%/yr CO_2, 70-year trend				-0.1 to +2.3	+2.3	+2.4	+3.3	+3.4	+1.0
(Wehner et al., 2015)	Emanuel PI reversible Model: CAM5.1 Type: global (AGCM) [1]	Max Wind speed (%)	Clim. SST (early 1990s) $2xCO_2$ only SST+2K only $2xCO_2$&SST+2K Periods: 13yr	-1 +6 +5								
ACE or PDI (% change) using Dynamical or Stat/Dyn. Models												
(Emanuel et al., 2010)	Stat./Dyn. Model [1]	Power Dissipation Index (%)	Timeslice using CMIP3 A1B ens. SST change, 1990-2090, and NICAM model 14 km fields		+65% in PDI,; (global but June to Oct only)							
(Knutson et al. 2015)	Model: GFDL HiRAM (global AGCM) downscaled into GFDL Hurricane model with ocean coupling [3]	6 km; ACE or Power Dissipation Index	Timeslice using CMIP5 RCP4.5 Late 21st century vs. 1982-2005 climatological SST	-13 (ACE) **-10** (PDI)			-10 (ACE) -3 (PDI)	**-27** (ACE) **-23** (PDI)	**+44** (ACE) **+53** (PDI)	+23 (ACE) +29 (PDI)	**-29** (ACE) **-27** (PDI)	**-42** (ACE) **-44** (PDI)
(Yamada et al., 2010)	NICAM GCM timeslice [1]	14 km Metric: ACE (Accum. Cyclone Energy)	Timeslice using CMIP3 A1B ens, SST change, 1990-2090		-14 (ACE) (global but June to Oct only)		-88 (ACE)	+17 (ACE)	+65 (ACE)	-86 ACE	-14 ACE	
(Manganello et al., 2014)	IFS Type: global (AGCM) timeslice [1]	T1279 (~16km) PDI	Timeslice using CMIP3 A1B CCSM3.0 ens. mean SST change (2065-2075 minus 1965-1975) Periods:1960-2007, 2070-2117					**+51** (PDI)				
(Sun et al., 2017)	WRF v. 3.3 global AGCM [Table S.5] [1]	~20 km	+2K SST-only expt. ; 10-member ensemble (May-Oct. Season)				+220 (PDI)	+30 (PDI)				
(Stowasser et al., 2007)	IPRC Regional Model [1]	~50 km PDI	Downscale NCAR CCSM2, $6xCO_2$					+50 in PDI,; incr. inten-sity				
(Wu et al. 2014)	Model: Zetac Type: regional [1]	18km	Downscale CMIP3 A1B multi model ens. Periods: 1980-2006, 2080-2099					-0.5 (ACE)				
(Kim et al. 2014)	Model: GFDL CM2.5 Type: global coupled climate model [2]	50 km (atm.); 25 km (ocean)	$2xCO_2$ vs. control (fully coupled) 50-year periods	-3.5 (PDI)			-11 (PDI)	-4.6 (PDI)	-7.1 (PDI)	+3.4 (PDI)	-12 (PDI)	-7.6 (PDI)
(Villarini and Vecchi, 2013) (Villarini and Vecchi, 2013; contd.)	Statistical downscale of CMIP5 models [1]	--	17 CMIP5 models Mean and (min/max range) RCP2.6 RCP4.5				PDI: **+34** (-1,126) **+57**					

			RCP8.5 (late 21st century)				(-21,270) **+110** (-23,320)					
(Emanuel 2013)	Statistical-dynamical model [3]	PDI	Downscale CCSM3 A1B CM2.0 A1B ECHAM5 A1B MIROC3.2 A1B MRI-CGCM2.3.2a A1B Periods: 1981-2000, 2181-2200 CCSM4 RCP8.5 CM3 RCP8.5 HADGEM2-ES RCP8.5 MPI-ESM-MR RCP8.5 MIROC5 RCP8.5 MRI-CGCM3 RCP8.5 Periods: 1981-2000, 2081-2200	 +5 +2 +4 +8 +22 +8 +72 +31 +57 +80 +26								

Table 3. Tropical cyclone intensity change projections (percent change in maximum wind speed or central pressure fall, except as noted in the table. The dynamical model projections are ordered from top to bottom in order of decreasing model horizontal resolution. Red and blue colors denote increases and decreases, respectively. Bold values denote statistically significant changes. Black values denote no change. Green text denotes changes based on SST-increase-only or 2xCO2-only idealized experiments. Pairs of numbers in parentheses denote ranges obtained using different models as input to a downscaling model or theory. The potential intensity change projections from Emanuel et al. (2008), Knutson and Tuleya (2004), and Vecchi and Soden (2007) and pressure fall changes from Yamada et al. (2017) in the table include some unpublished supplemental results (personal communication from the authors) such as results for individual basins, ranges of results across models, and results for additional or modified calculations that are adapted from the original papers but have been modified in order to facilitate intercomparison of methods and projection results from different studies. In some cases, ACE or PDI changes are reported, which depend on intensity, frequency, and lifetime. Type of ocean coupling for the study is indicated by the following Model/Type: [1] no ocean coupling (e.g., specified sea surface temperatures or statistical downscaling of tropical cyclones; [2] fully coupled ocean experiment; or [3] hybrid type, with uncoupled atmospheric model for storm genesis, but with ocean coupling for the dynamical or statistical/dynamical downscaling step.

Table 4. TC Precipitation Projections												
Reference	Model/Type	Resolution/ averaging radius (R)	Experiment	Basin								
				Global	NH	SH	N Atl.	NW Pac.	NE Pac.	N Ind.	S. Ind.	SW Pac.
(Knutson and Tuleya, 2004)	GFDL Hurricane Model (idealized) [1]	9 km inner nest R = 100 km	CMIP2+ +1%/yr CO2 80-yr trend		+22 (Atlantic, NE Pacific, NW Pacific only)							
Hasagawa and Emori (2005)	CCSR/NIES/FRC AGCM timeslice [1]	T106 L56 (~120km)/ R=1000 km	5x20y at 1xCO2 7x20y at 2xCO2					+8.4 (all TC periods)				
(Yoshimura et al., 2006)	JMA GSM8911 Timeslice [1]	T106 L21 (~120km)/ R=300 km All TC periods	10y 1xCO2, 2xCO2	+10 Arakawa-Schubert +15 Kuo								
(Chauvin et al. 2006)	ARPEGE Climat Timeslice [1]	~50 km; R= n/a	Downscale CNRM B2 Downscale Hadley A2				Substantial increase					
(Bengtsson et al., 2007)	ECHAM5 timeslice [1]	T213 (~60 km); R=550km. Accum. Along path	2071-2100, A1B		+21 (all TCs) +30 (TC > 33 m/s intensity)							
(Knutson et al., 2008)	GFDL Zetac regional (All hurricane periods) [1]	18 km; R=50 km R=100 km R-400 km	Downscale CMIP3 ens. A1B, 2080-2100				 +37 +23 +10					
(Gualdi et al., 2008)	SINTEX-G coupled model [2] All TC Periods Time of Max. winds	T106 (~120 km)	30 yr 1xCO2, 2xCO2	+6.1 (R=100 km) +2.8 (R=400 km) +11 (R=100 km) +4.9 (R=400 km)								
(Hill and Lackmann 2011)	WRF regional model downscale of CMIP3 environments (idealized simulations) [1]	2 km; R=100 km	Downscale CMIP3 ens. A1B (2090-99) A2 (2090-99) B2 (2090-99)				 +19 +13 +11					
(Knutson et al., 2013)	GFDL Zetac regional / GFDL hurricane model; (All TC periods) [3]	18 km / 9 km; R = 100 km	Downscale TCs (2081-2100) CMIP3 ens. A1B CMIP5 ens: RCP 4.5 GFDL CM2.1 A1B MPI A1B				Zetac / Hurr. Model **+19/+22** **+13/+19** **+22/+28** **+24/+33**					

			HadCM3 A1B MRI A1B GFDL CM2.0 A1B HadGEM1 A1B MIROC hi A1B NCAR CCMS3 A1B INGV A1B MIROC med A1B				+12/8.2 **+28/+24** **+26/+34** +11/-4.3 **+22/+14** **+23/+29** **+19/+26** **+22**/+12					
(Kim et al. 2014)	Model: GFDL CM2.5 Type: global coupled climate model [2]	50 km (atm.); 25 km (ocean)	2xCO2 vs. control (fully coupled) 50-year periods	**+12** (R=150km) **+11** (R=450km)								
(Villarini et al. 2014)	Models: GFDL HiRAM CMCC CAM5 AGCMs with specified SSTs and CO2 levels [1]	50 km 75 km 25 km Avg, rain rate within 5 deg radius, 10% rainiest storms	20 yrs 10 yrs 9 yrs 2xCO2 and +2K SST increase combined	+12 +13 +17	+13 +17 +16	+9 +4.5 +18	-12 +11 +8.5	+17 +15 +3.7	+17 +24 +28	+18 +21 +19	+5.8 -1.4 +26	+13 +5.3 +11
(Tsuboki et al. 2014)	CReSS regional model downscale of 30 strongest typhoons in MRI-AGCM3.1 present and warm climates [3]	2 km; Average rain rate with 100 km radius	CMIP3 18-model ens. A1B (2074-2087 minus 1979-1993)					+25				
(Knutson et al. 2015)	Model: GFDL HiRAM (global AGCM) downscaled into GFDL Hurricane model with ocean coupling [3]	6 km; Radius around storm center (R) = 100 km	Timeslice using CMIP5 RCP4.5 Late 21st century vs. 1982-2005 climatological SST	**+13**			**+21**	**+16**	**+14**	**+13**	**+11**	+3.5
Wright et al., 2015	Model: GFDL Zetac regional model [1]	18 km Median rain rate over storm lifetime	Timeslice: CMIP3/A1B Late (2090 minus 2010) CMIP5 RCP4.5 Early (2025 minus 1995) CMIP5 RCP4.5 Late (2090 minus 1995)				Ocean; Land +19; +10 (150 km) +15; +21 (500 km) +10; +11 (150 km) +10; +14 (500 km) +13; +5 (150 km) +7; +4 (500 km)					
Bacmeister et al. (2016)	Model: CAM5 Type: global [1]	28km	Bias-corrected CAM5 coupled model SSTs: RCP8.5 (2070-2090 vs 1985-2005)	Increase freq. of intense TC rainfall								
(Yamada et al., 2017)	NICAM Timeslice [1]	14km; R=100 km	Timeslice using CMIP3 A1B multi model ens.	Global +11.8 (time of min sea								

			mean SST change (2075-2099 minus 1979-2003) Periods: 1979-2008, 2075-2104	level press.)								
Tsou et al. (2016)	Atm. Model: HiRAM Type: global AGCM [1]	20 km; Max precip within 200km of center at max TC intensity	CMIP5 RCP8.5 (2075-2099 vs. 1979-2003)					+54				
(Yoshida et al., 2017)	JMA/MRI global AGCM Timeslice 60years Ensemble 90 members [1]	V3.2 60 km Radius around storm center: 200km	RCP8.5 late 21st century CMIP5 6-mod. ensemble (n=90 min/max)	**+28** (8,45)	**+28** (3,49)	**+29** (5,47)	**+24** (-23,67)	**+32** (7,48)	**+47** (1,76)	**+30** (12,53)	**+39** (15,62)	**+13** (-28,44)
			CCSM4 (n=15 min/max)	**+30** (24,36)	**+27** (19,35)	**+36** (29,44)	+6 (-23,29)	**+29** (20,36)	**+15** (1,29)	**+23** (12, 35)	**+49** (40, 62)	**+18** (7,29)
			GFDL-CM3 (n=15 min/max)	**+32** (27,35)	**+33** (28,37)	**+29** (21,35)	**+39** (26,67)	**+38** (33,42)	**+55** (43,75)	**+24** (13, 32)	**+42** (28,58)	+11 (-5,29)
			HadGEM2-AO (n=15 min/max)	**+28** (23,33)	**+30** (27,37)	**+21** (11,32)	+8 (-10,35)	**+30** (24,37)	**+58** (43,68)	**+28** (12, 44)	**+32** (16, 47)	+10 (-8,22)
			MIROC5 (n=15 min/max)	**+13** (8,19)	**+11** (3,14)	**+19** (5,34)	**+51** (36, 65)	**+19** (7,36)	**+62** (49,76)	**+38** (24, 53)	**+30** (15, 49)	-12 (-28,10)
			MPI-ESM-MR (n=15 min/max)	**+27** (23,33)	**+26** (20,31)	**+30** (21,40)	+13 (-17,45)	**+31** (22,38)	**+54** (42,67)	**+32** (17, 40)	**+41** (34, 54)	**+16** (7,24)
			MRI-CGCM3 (n=15 min/max)	**+40** (37,45)	**+42** (39,49)	**+37** (24,47)	**+28** (11,41)	**+44** (39,48)	**+39** (29, 60)	**+35** (25,52)	**+42** (25, 58)	**+33** (19, 44)
(Wehner et al., 2015)	Model: CAM5.1 Type: global (AGCM) [1]	25km Avg. of max. precip. Rates for each storm	Clim. SST (early 1990s) 2xCO2&SST+ 2K Periods: 13yr	**(+14, +24%)**								
Gutmann et al. (2018)	WRF regional model downscale of 22 hurricane cases [1]	4 km grid model; Avg. Max. precip. Rate along track (%)	RCP8.5 19-model CMIP5 ensemble environmental change & Greenhouse gas change				+24					
(Patricola and Wehner 2018)	WRF regional model v. 3.8.1 nested in CAM5.1 atm. Model forced with CMIP5 ens. boundary conditions [1]	4.5 km grid Precip rate change (%)	RCPx 1980-2000 vs. 2081-2100. 10-member ensembles of 1 to 9 cases per basin. RCP4.5 RCP6.0 RCP8.5 RCP4.5 RCP6.0 RCP8.5				Region: 5^o x 5^o : +7.6 +11 +13 1.5^o x 1.5^o +20 +25 +32	+12 +12 +31	+5.8 +4.9 +15		+20 +17 +42	+16 +23 +35

Table 4. Tropical Cyclone-related precipitation projected changes (%) for the late 21st century (relative to present day). Results from Gualdi et al. (2008) are from original paper and personal communication with the authors (2009; 2010). Red and blue colors denote increases and decreases, respectively. Bold values denote statistically significant changes. R refers to the averaging radius around the storm center used for the

precipitation calculation. Type of ocean coupling for the study is indicated by the following Model/Type: [1] no ocean coupling (e.g., specified sea surface temperatures or statistical downscaling of tropical cyclones; [2] fully coupled ocean experiment; or [3] hybrid type, with uncoupled atmospheric model for storm genesis, but with ocean coupling for the dynamical or statistical/dynamical downscaling step.