

# Impact of the Indian Ocean Basin Mode on Tropical Cyclone Genesis in the North Indian and Western North Pacific Oceans

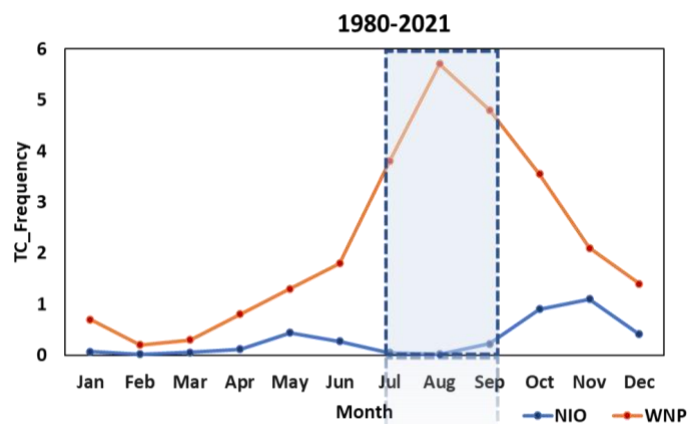
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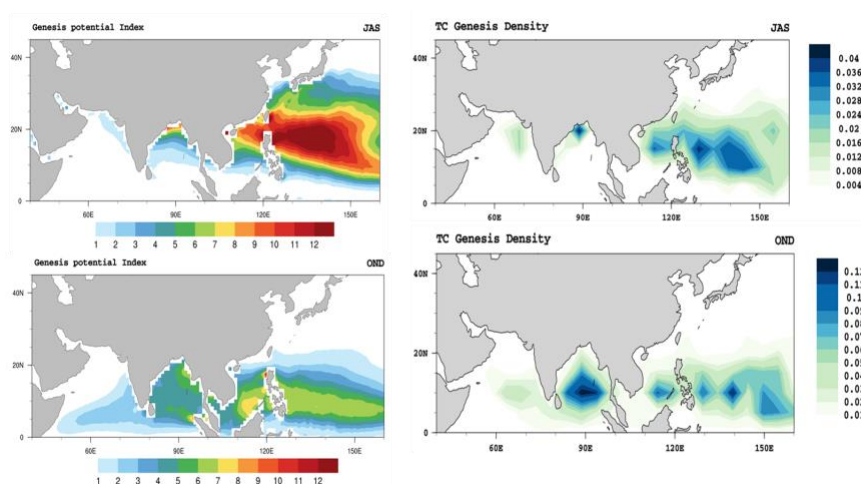
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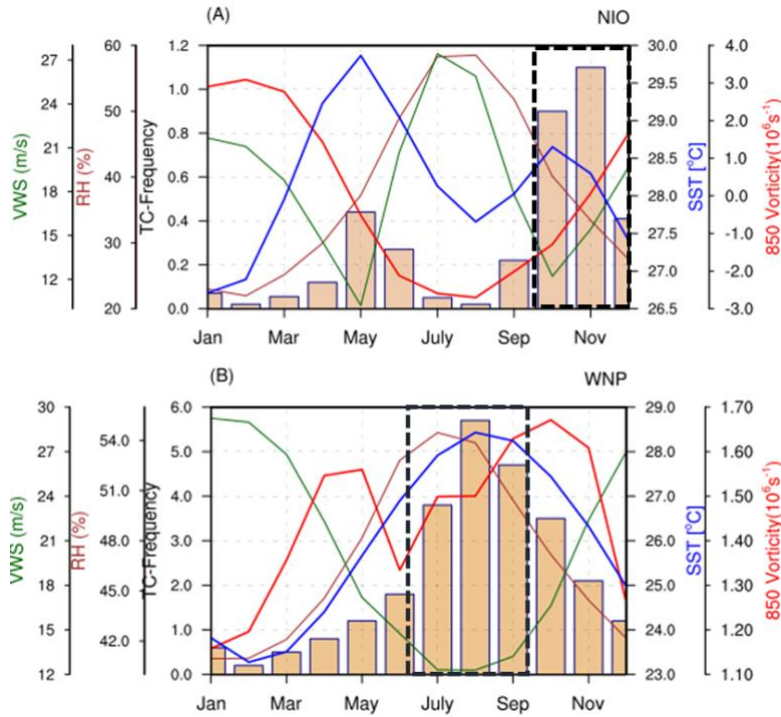
## Supplimentary Figures



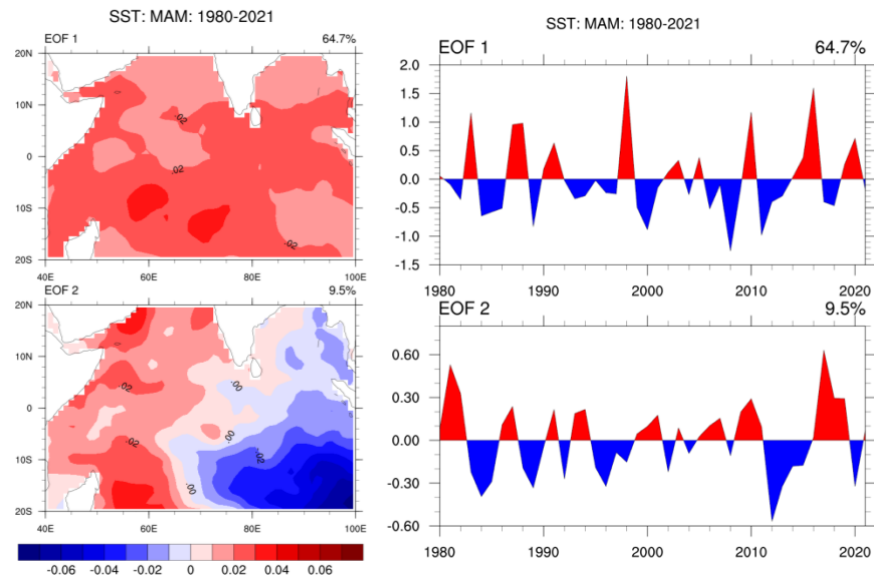
**Fig. 1.** Monthly climatological mean of tropical cyclone genesis frequency in WNP 1980-2021 (Orange) and in NIO (blue)



**Fig 2.** (Right panel) Genesis potential Index (GPI) variation and (Left panel) TC genesis frequency anomalies in each 5\* 5 grid box; the value in each grid box is the sum of all detected TCs within a 5\*5 grid box.



**Fig3.** Climatology of SST (Blue), vertical wind shear (green), relative vorticity (red) at 850hPa, relative humidity at 600 hPa (brown) and monthly distribution of TC frequency (number per month) is indicated by bars over NIO (A) and WNP (B); dash lines indicate the peak season for each of the Ocean.



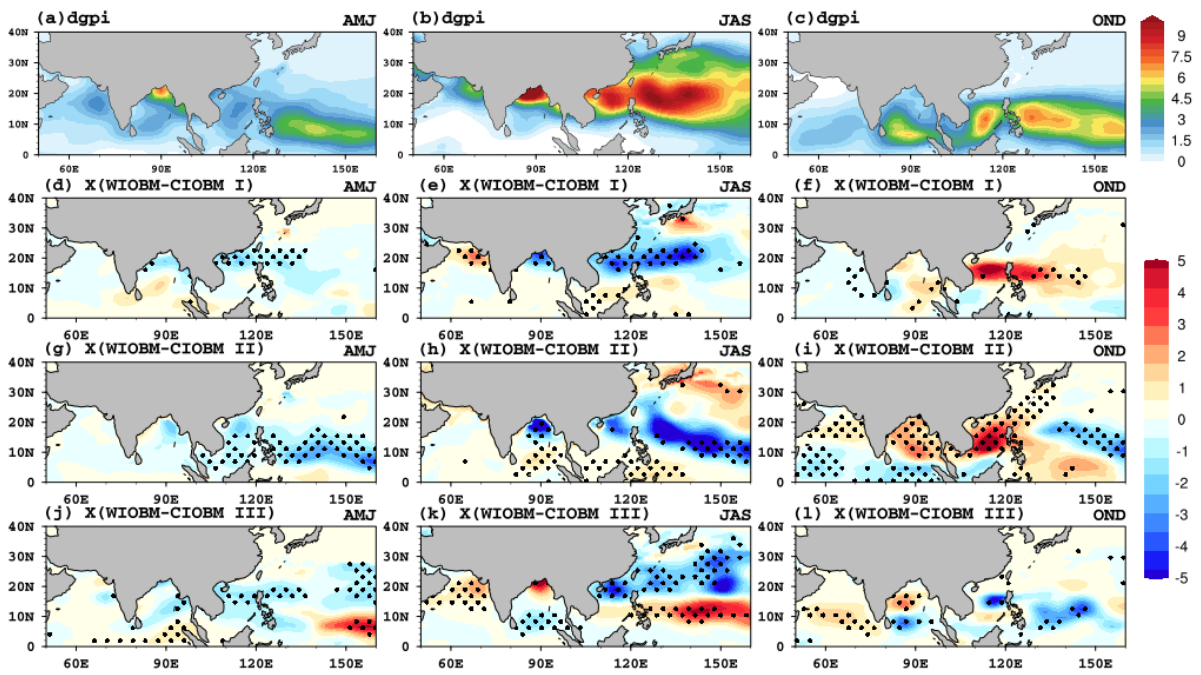
**Fig.4** The EOF modes and PC of the monthly SST variation from 1980-2021 during MAM.

**Table 1** Classification of the positive and negative of IOBMs

WARM IOBM	COLD IOBM
1983,1987,1988,1991,1998,2003,2005,2010,2015,2016,2020	1982,1984,1985,1986,1989,1993,1999,2000,2006,2008,2011,2012,2017,2018

**Table 2** Classification of the positive and negative of IODs

Positive IOD years (PIOD)	Negative IOD years (NIOD)
1982,1983,1987, 1991,1994,1997 ,2002, 2006,2015, 2018,2019	1980,1984, 1989,1992,1996,1998,2005 ,2010,2014,2016



**Fig.5** Climatological variation (a), (b) and (c) of DGPI and for Type I, Type II and Type III WIOBM -CIOBM during AMJ, JAS and OND. Striplings indicate the significant at the 95% confidence level based on the bootstrap method from 1000 samples.