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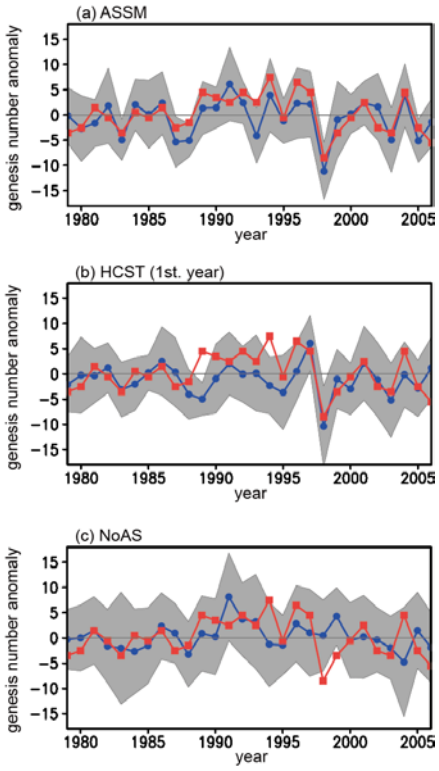
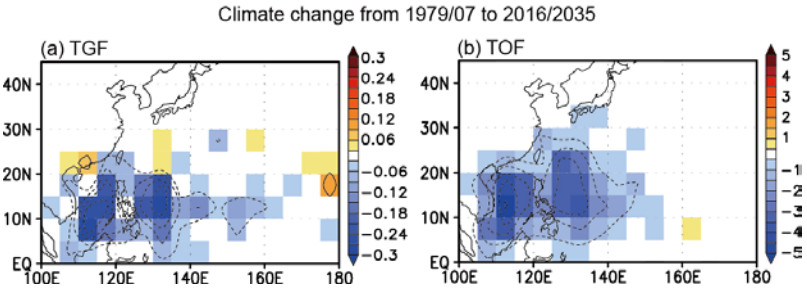


← Figure 1. Yearly variability of annual-mean TC count anomaly (unit is yr^{-1}) based on (a) data assimilation, (b) first year prediction in hindcast, and (c) no assimilation experiment. The red and blue lines and gray shading represent the observation, the multimodel ensemble mean, and the ensemble spread defined by one standard deviation, respectively.



↓ Figure 2. Projected near-future changes in (a) TC genesis frequency (contour interval is 0.06 yr^{-1}) and (b) TC occurrence frequency (1.0 yr^{-1}) based on the weighted multimodel ensemble mean. Anomalies significant at 99% confidence level are shaded (two-sided Student's *t* test). The negative contours are dashed, and the zero contours are omitted.

- Interannual and multiyear predictability of tropical cyclone (TC) activity in the western North Pacific (WNP) is explored, using three versions of the coupled atmosphere-ocean model, MIROC. In addition, global warming impacts on TC activity in the near-future are also examined.
- Initialized decadal hindcasts show that year-to-year variation of TC number reasonably captures the observation (Fig. 1). On the multiyear timescale, skillful prediction of TC number is likely difficult at least in our hindcasts, but three-year-mean states of hindcast started in 1998 reasonably capture observed major characteristics of TC activity associated with the Pacific climate shift during the late 1990s through the initialization.
- Projected near-future (2016-2035) change in TC number shows significant reduction (approximately 14%) especially over the western WNP (Fig. 2) even in the near-future when global warming is not so prominent compared with the end of this century.