



## **Changes in ENSO-related PDO due to global warming**

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El Nino and Southern Oscillation (ENSO) is the most dominant atmosphere-ocean coupled mode in the equatorial Pacific region. Pacific Decadal Oscillation (PDO) has been described by some as a long-lived El Nino-like pattern of Pacific climate variability. Although there are several mechanisms to explain such multi-year persistence of upper ocean temperature anomalies, the origin to cause PDO variability remains unclear. In this study, we examine the characteristics of ENSO-related PDO under a warmer climate state using climate model results of Climate Model Inter-comparison Project Phase 5 (CMIP5). In particular, we focus on changes in PDO characteristics in relation to ENSO by directly comparing the RCP45 climate change projections with the historical control run. Our preliminary results indicate that a linear relationship between PDO and ENSO is significantly stronger in RCP45 experiment than in the historical experiment. Possibly, such change may be due to changes in ENSO properties or changes in tropics-midlatitude teleconnection under global warming. We investigate changes in spatial structure and influenceable factors of ENSO and ENSO-related PDO variability under the global warming climate.