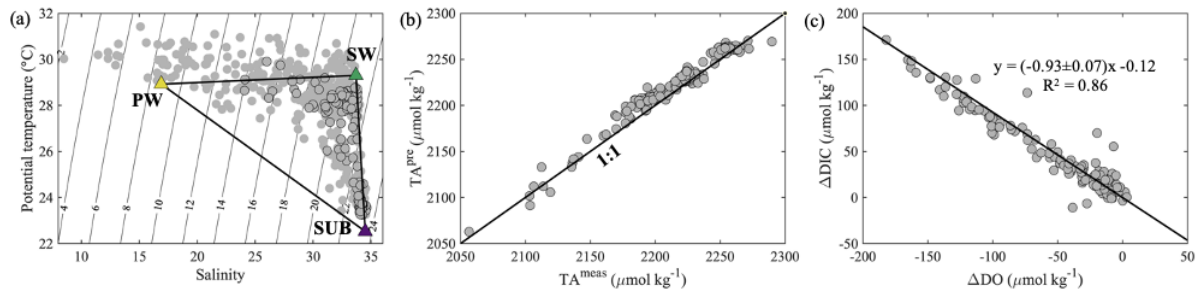


Figure S1: Distribution of temperature ($^{\circ}\text{C}$), salinity, DO ($\mu\text{mol kg}^{-1}$) and Chl *a* concentrations ($\mu\text{g L}^{-1}$) in the middle layer off the PRE during Leg 1 prior to Typhoon, and during Legs 2 and 3 post-typhoon. The almost homogeneous spatial distribution is similar to the bottom layer after being disturbed by the typhoon, and reoxygenation along the coast in shallow waters is forced by easterly winds in Legs 1 and 3 when hypoxia developed.

5



10 **Figure S2: (a) Potential temperature (°C) vs. salinity, (b) predicted TA (TA^{pre} , $\mu\text{mol kg}^{-1}$) vs. measured TA (TA^{meas} , $\mu\text{mol kg}^{-1}$), and (c) ΔDIC ($\mu\text{mol kg}^{-1}$) vs. ΔDO ($\mu\text{mol kg}^{-1}$) on the NSCS shelf off the PRE. The black-edged circles represent bottom water samples with depths ≥ 10 m. The yellow, green and purple triangles in (a) represent the endmember values of Brackish Plume Water (PW), offshore surface water (SW) and upwelled subsurface water (SUB), respectively. The black line in (c) denotes the slope of ΔDIC plotted against ΔDO derived from the type II regression.**