The authors applied a standard SWAT model in two large basins to understand the impacts of Eastern Pacific (EP) and Central Pacific (CP) El Niños on water quality. They found contrasting water quality effects due to differences in precipitation and air temperature anomalies between the two El Ninos.

The authors suggest that impacts of extreme climate on the load of N and P to the rivers are dominated by variability of precipitation and consequently runoff. They discussed very little of impacts of hydrological change on biogeochemical cycles - the basis of water quality change. For example, how the change in temperature affects N denitrification and carbon decomposition and N leaching processes, in addition to water quantity through ET? Change in climate and hydrology is not only affecting total nutrient load but also the concentration of flow chemistry. More discussion in this aspect will provide more insights on the impacts of extreme climate change.