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**Analysis of Droughts in Tropical South America linked to ENSO occurrence.**

During El Niño events, significant climate perturbations, including pervasive warming of the free troposphere and surface and reductions in rainfall, occur across much of the Tropics outside of ENSO’s Pacific source region. While certain regions tend to experience a consistent response across different El Niño (or La Niña) events—the implied predictability motivates considerable effort to forecast ENSO on seasonal or longer timescales—not every El Niño event produces consistent responses in the same places. During El Niño events droughts have been observed to develop in teleconnected South America Tropical areas, reflected in a reduction on precipitation. A spatial analysis using a Drought Index and observational and modeled data is shown, in order to provide tools that allow further research to improve the knowledge of rainfall variability and its links to El Niño events under global warming scenarios.