

---

# A CLIVAR Pacific Region Panel Working Group on Tropical Pacific Decadal Variability: Goals and Possible Synergies

Antonietta Capotondi\*<sup>1</sup>

<sup>1</sup>University of Colorado/CIRES and NOAA/PSL – 325 Broadway, Boulder, CO, United States

## Abstract

Internally-generated Tropical Pacific Decadal Variability (TPDV) plays an important role in the global climate, especially in the context of a warming climate, where internally-generated decadal variations can confound the detection of climate change. However, the nature of TPDV remains poorly understood. While a significant fraction of TPDV may arise as ENSO residual, slow oceanic processes could play an important role in generating decadal variations by either integrating interannual and higher-frequency atmospheric forcing, or by triggering atmospheric feedbacks that could reverse the phase of the decadal cycle, with important implications for decadal predictability. A working group on "Tropical Pacific Decadal Variability: Oceanic Processes and Inter-Basin Interactions" has recently been developed by the CLIVAR Pacific Region Panel to review and synthesize our current understanding of the main oceanic processes proposed for TPDV, examine the relative role of local atmospheric feedbacks and remote influences in driving these processes, and assess the fidelity of climate models in simulating them. This presentation outlines the objectives and undertakings of this working group to identify avenues that can support the WCRP "Explaining and Predicting Earth System Change" Lighthouse Activity

**Keywords:** Tropical Pacific Decadal Variability, Decadal oceanic processes, Atmospheric feedbacks, tropical extratropical interactions, Interbasin interactions

---

\*Speaker