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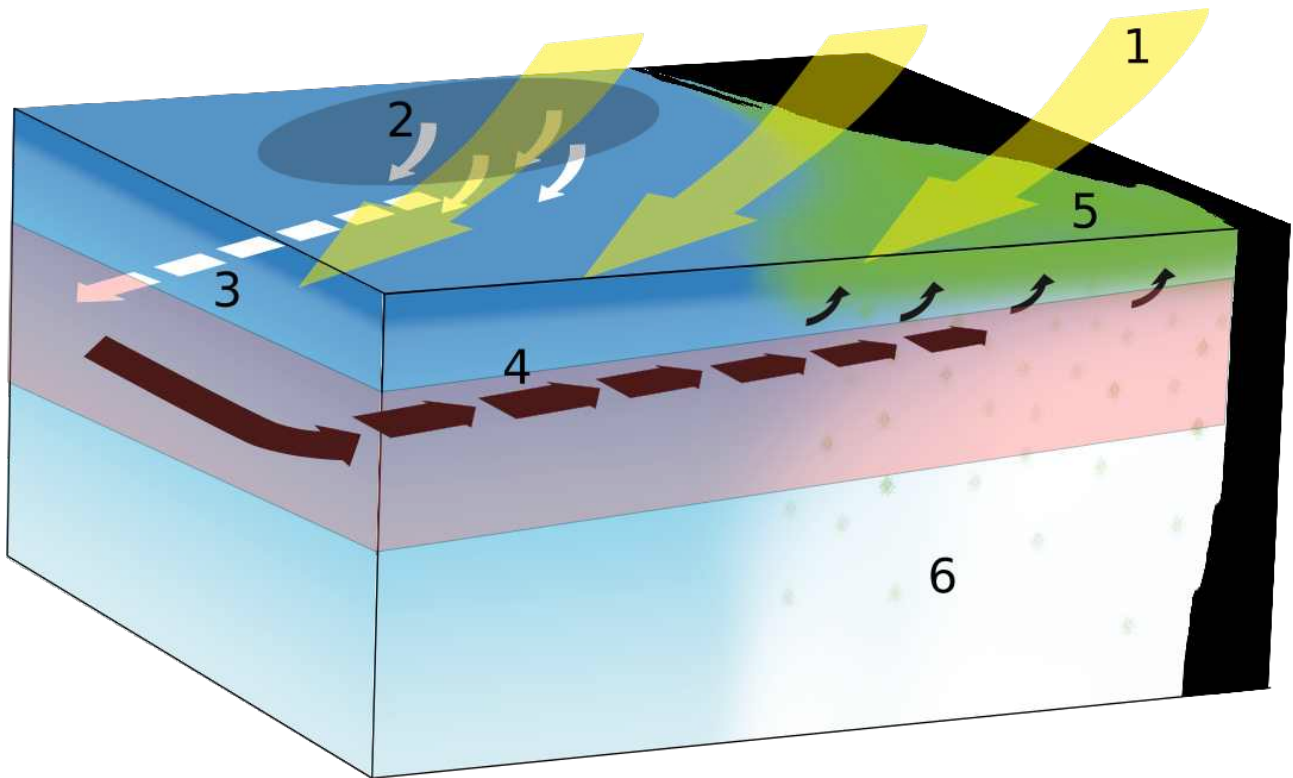
## **Pacific Decadal Oscillation and recent oxygen decline in the eastern tropical Pacific Ocean**

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## Overview of the mechanisms controlling the oxygen levels in the tropical Pacific Ocean



Supplementary figure 1 : overview of the mechanisms controlling the oxygen levels in the tropical Pacific ocean (the north tropical region, from the equator to approximately 30°N, is displayed here for clarity reasons). The upper part of the thermocline is displayed in red.

1. “trade winds”, playing a major role in the control of the strength of the ocean currents in the tropical / subtropical regions. 2. water subduction in the subtropical gyres. The water masses are transported toward the eastern tropical regions by 3. the subtropical-tropical cells and 4. the equatorial current system. 5. strong primary productivity in the eastern part of the basin. 6. strong export productivity and sluggish circulation, fostering the existence of oxygen minimum zones (figure adapted from O.Duteil, A.Oschlies, C.Böning, M.Scheinert, GEOMAR, 2014, pers. comm.)