

## **Equatorial refuge amidst tropical warming**

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In the central Pacific Ocean, home to one of the largest marine protected areas (MPAs) and the most productive fishery region in the global tropics, sea surface temperatures are projected to increase by 2.5-3°C by the end of this century. Combining high-resolution satellite observations with global simulations, we show that warming and productivity decline around a select group of Pacific islands will likely be mitigated by a strengthening of the equatorial undercurrent. Enhanced topographic upwelling of the undercurrent will act as a natural thermostat to locally mitigate surface warming. Since the undercurrent is dynamically constrained to the equator, few coral ecosystems and fisheries stand to benefit from this equatorial island effect; those that do stand the best chance of surviving the anticipated climate changes of the 21st century.