## Earth's Future

## Supporting Information for

## Tropical Pacific warming patterns influence future hydroclimate shifts and extremes in the Americas

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## Introduction

This document contains supplementary Figure S1, which illustrates how the uniform tropical temperature experiment (noEP) is implemented, as well as the Pacific meridional temperature gradient and the gradient between the equatorial Pacific and the North Atlantic.



**Figure S1.** (a) Same as Fig. 1a, but with boxes added to show the areas used for the tropical smoothing function applied to the noEP experiment shown in (b). The black and blue boxes are where all grid cells are set to an area mean value and the green box shows the maximum extent of the smoothing kernel applied subsequently. (c) Same as Fig. 1c but with Nino3 ( $150^{\circ}$  W to  $90^{\circ}$  W,  $5^{\circ}$  S to  $5^{\circ}$  N) and Nino4 ( $150^{\circ}$  E to  $150^{\circ}$  W,  $5^{\circ}$  S to  $5^{\circ}$  N) boxes shown as well as a box representing the North Atlantic ( $50^{\circ}$  E to  $10^{\circ}$  W,  $10^{\circ}$  N to  $30^{\circ}$  N). These boxes are used to plot trends in (d) and (e). (d) shows the deseasonalized zonal temperature gradient over time for Nino3-Nino4. (e) shows the deseasonalized meridional gradient between Nino3 and the North Pacific.