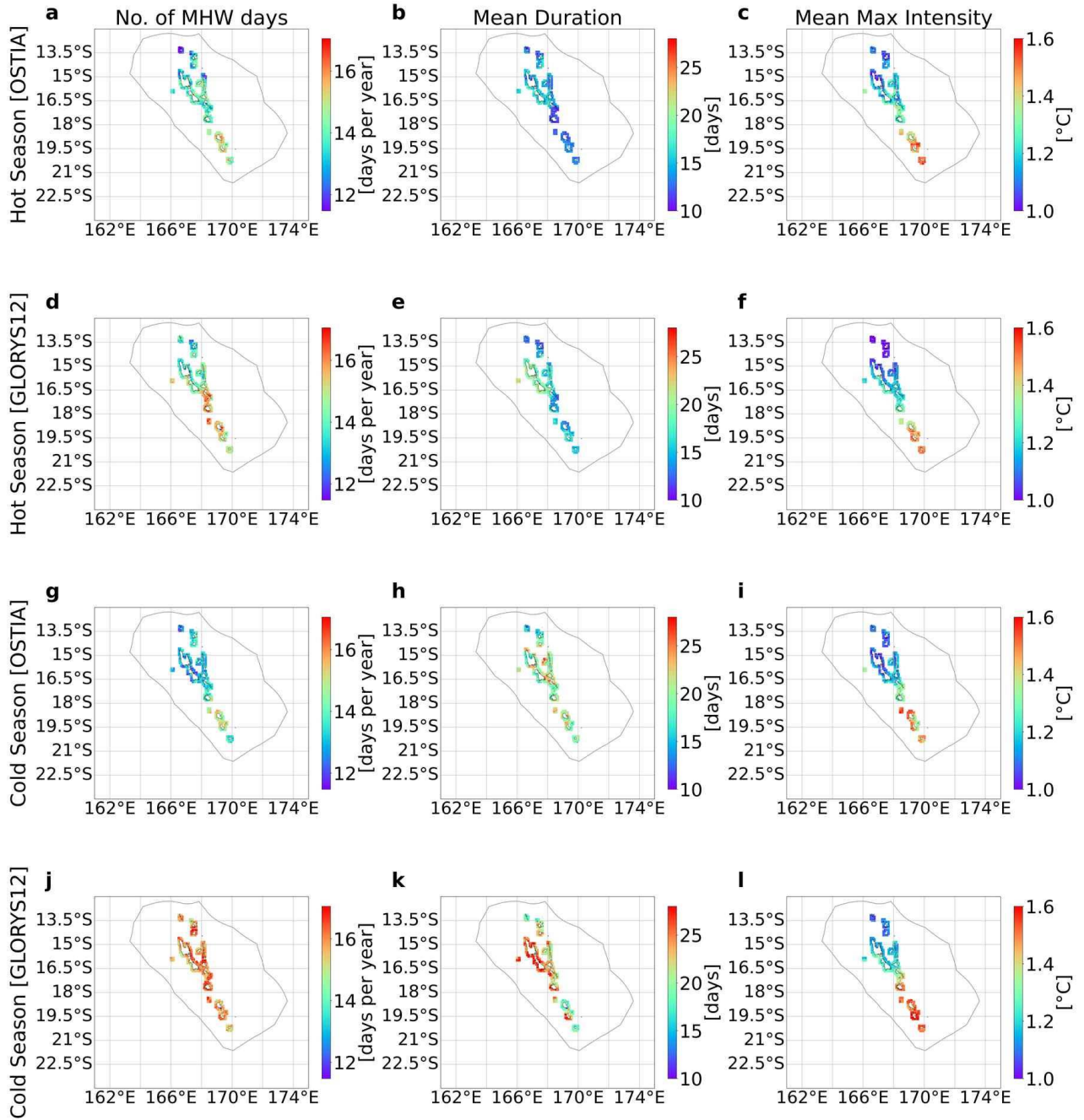
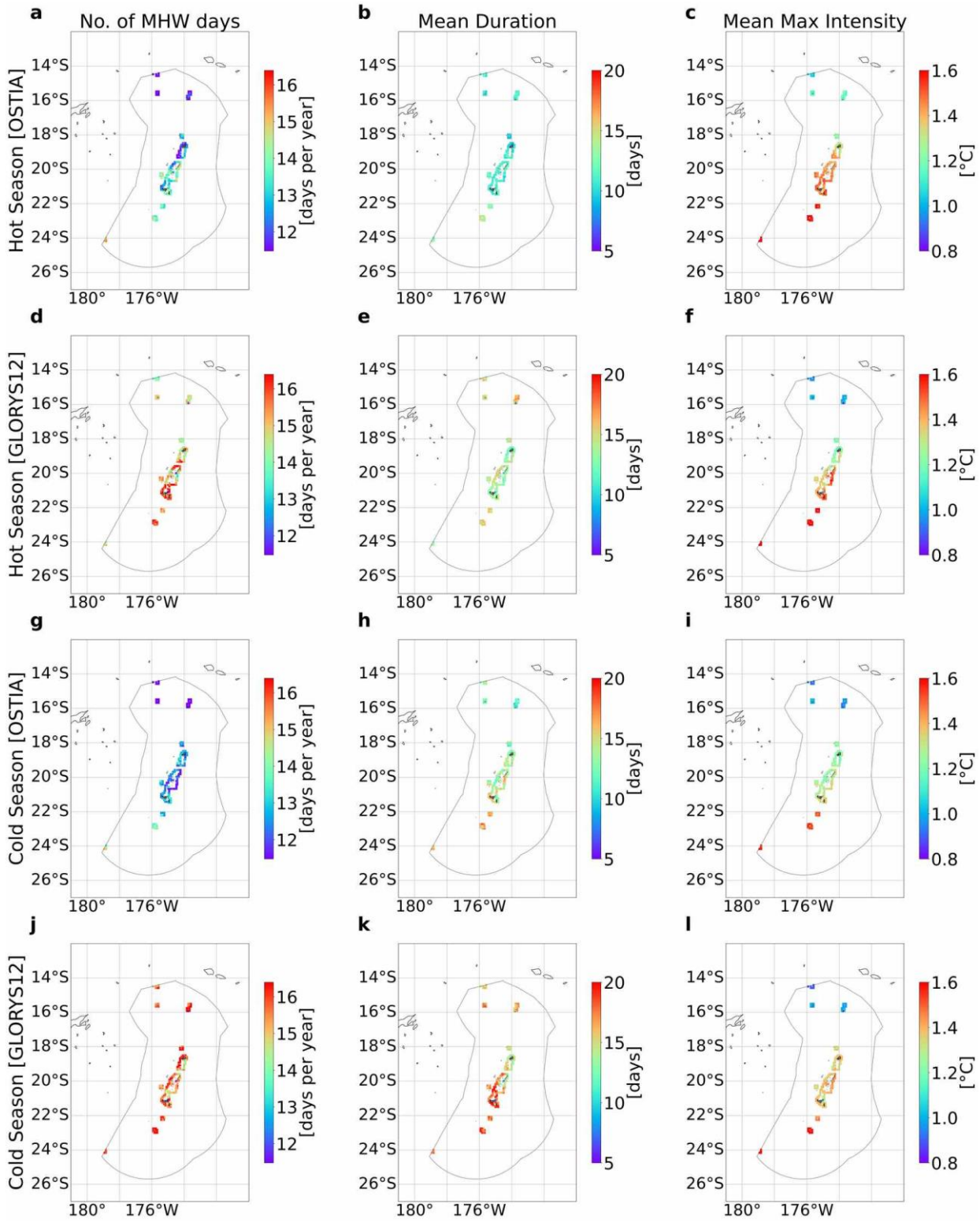


**Figure S1** Total number of MHW days, mean Duration and mean Max Intensity in coastal Solomon Islands, in hot season; a, b, c, in OSTIA, d,e,f, in GLORYS12 and in cold season; g,h,i in OSTIA, j,k,l, in GLORYS12.. MHWs detected using OSTIA and GLORYS12 from 1993-01 to 2023-10.

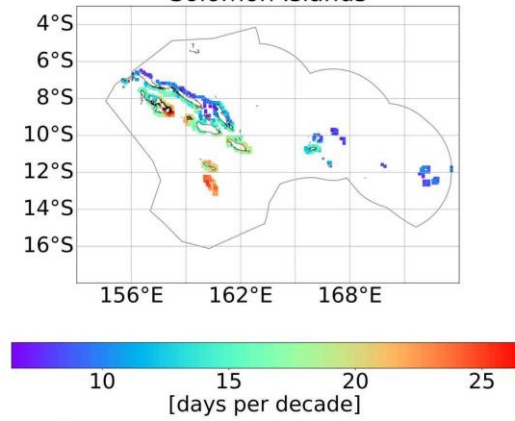


**Figure S2** Total number of MHW days, mean Duration and mean Max Intensity in coastal Vanuatu in hot season; a, b, c, in OSTIA , d,e,f, in GLORYS12 and in cold season; g,h,i in OSTIA, j,k,l, in GLORYS12 in cold season. MHWs detected using OSTIA and GLORYS12 from 1993-01 to 2023-10.

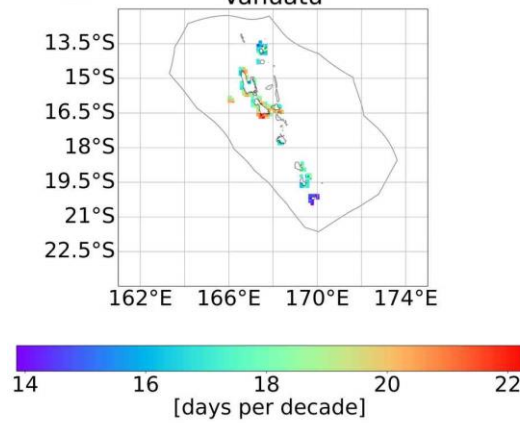


**Figure S3** Total number of MHW days, mean Duration and mean Max Intensity in coastal Tonga in hot season; a, b, c, in OSTIA , d,e,f, in GLORYS12 and cold season; g,h,i in OSTIA, j,k,l, in GLORYS12 in cold season. MHWs detected using OSTIA and GLORYS12 from 1993-01 to 2023-10.

Total annual MHW days trend per decade  
**a** Solomon Islands



**b** Vanuatu



**c** Tonga

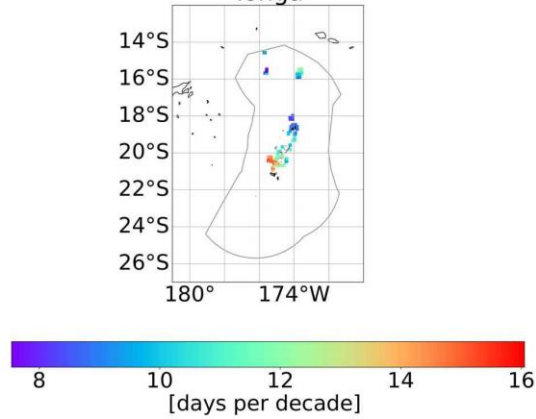


Figure S4 Significant trends ( $p$ -value  $< 0.05$ ) in Annual number of MHW days in a, coastal Solomon Islands, b, coastal Vanuatu, and c, coastal Tonga. MHWs detected using OSTIA from 1993 to 2022. The data in the maps refer to average changes in these metrics per decade over the 29 years.