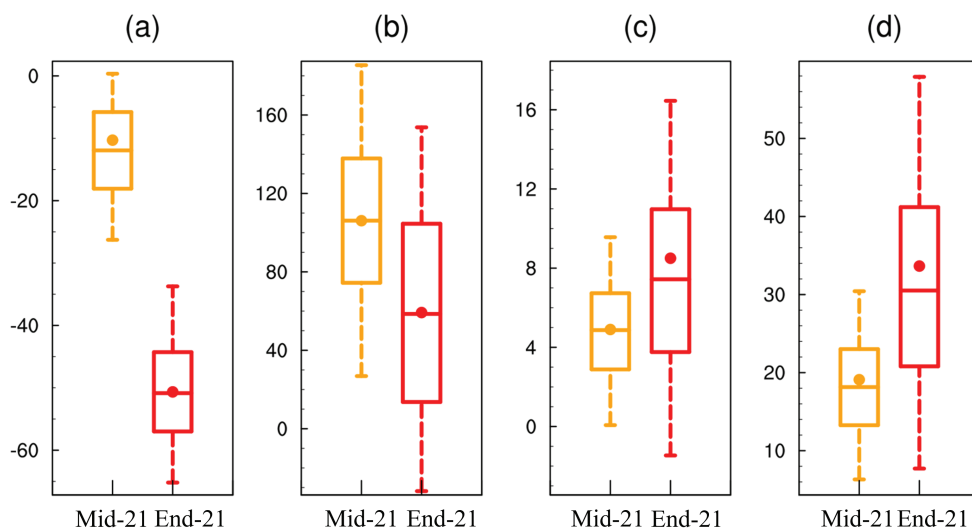


TYPHOONS



Projections from high-resolution atmospheric models indicate a 10% decrease in typhoon frequency affecting Taiwan by the middle of the century and a 50% decrease by the end of the century compared with the baseline. However, the frequency of intense typhoons is expected to increase by 105% and 60%, respectively, during these periods. Maximum wind speeds are projected to increase by 5% and 9% by the middle and end of the century, respectively. Additionally, typhoon rainfall intensity is projected to increase by 20% and 40% by the middle and end of the century, respectively. Because of higher rainfall intensity and less frequent typhoons, accumulated typhoon rainfall is projected to increase slightly by midcentury but decrease by 10% to 50% by the century's end (Figure). The aforementioned changes represent average results. Because variation in the sea surface temperature distribution used in the models can affect typhoon frequency changes, the ranges in box plots mainly reflect the spread due to SST.



Figure

Projected typhoons affecting Taiwan under the RCP8.5 scenario by the middle (yellow) and end (red) of the 21st century: (a) overall typhoon frequency, (b) frequency of intense typhoons, (c) maximum wind speed near typhoon centers, and (d) average rainfall within 200 km of typhoon centers (adapted from Cheng et al., 2024).

