

1 Supplement of
2 **BHRR v1.0: a two-stage Transformer framework for simultaneous**
3 **spatial restoration and quantile-function bias correction of climate**
4 **model temperature fields**

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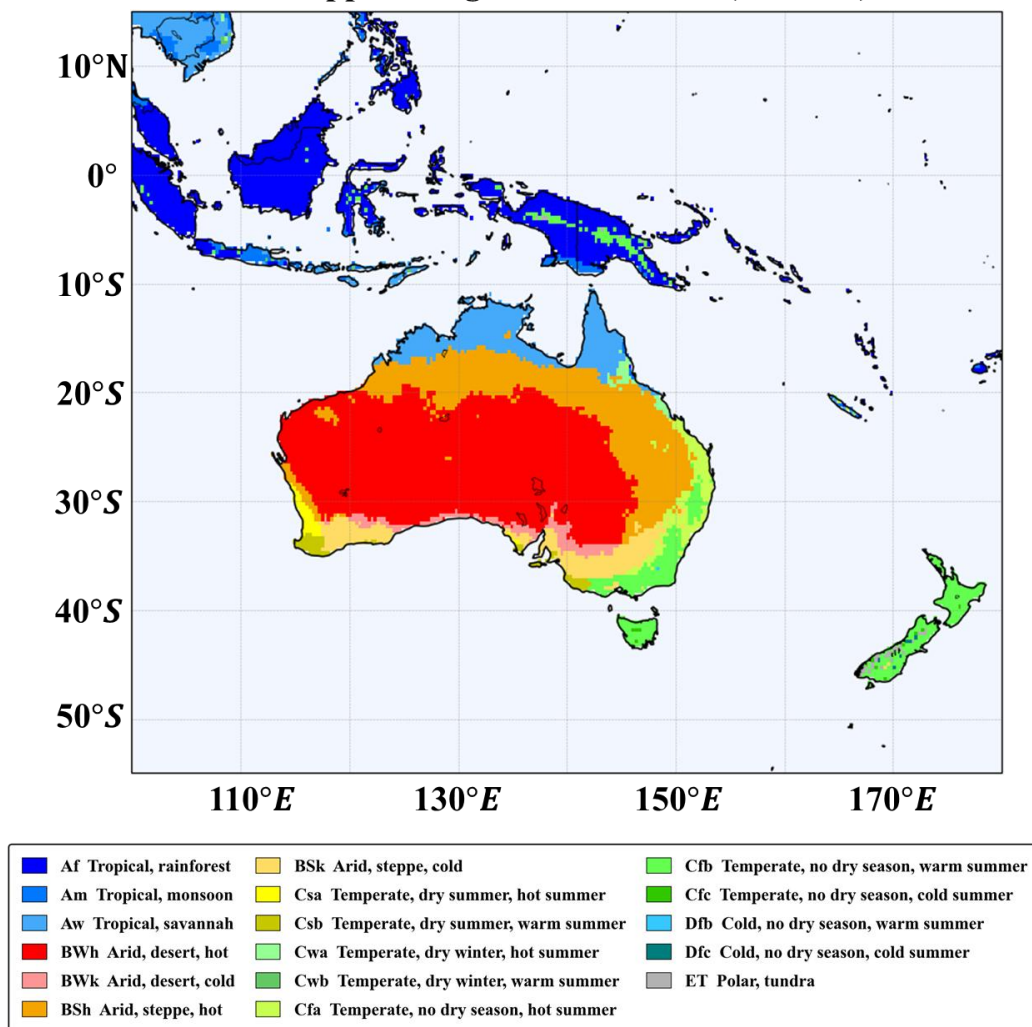
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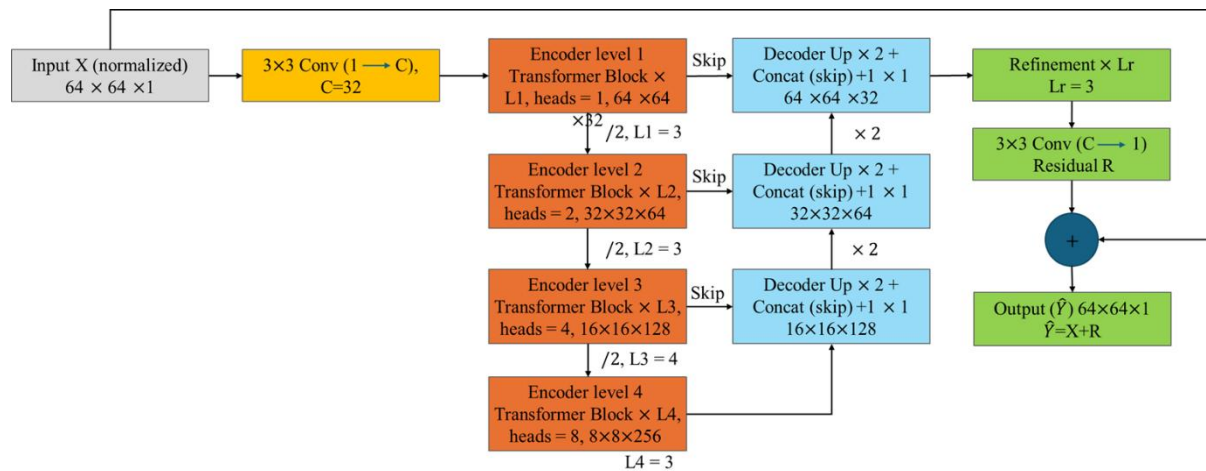
Köppen-Geiger climate zones (Oceania)



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25 **Fig. S1.** Köppen-Geiger climate zones over the Oceania study domain

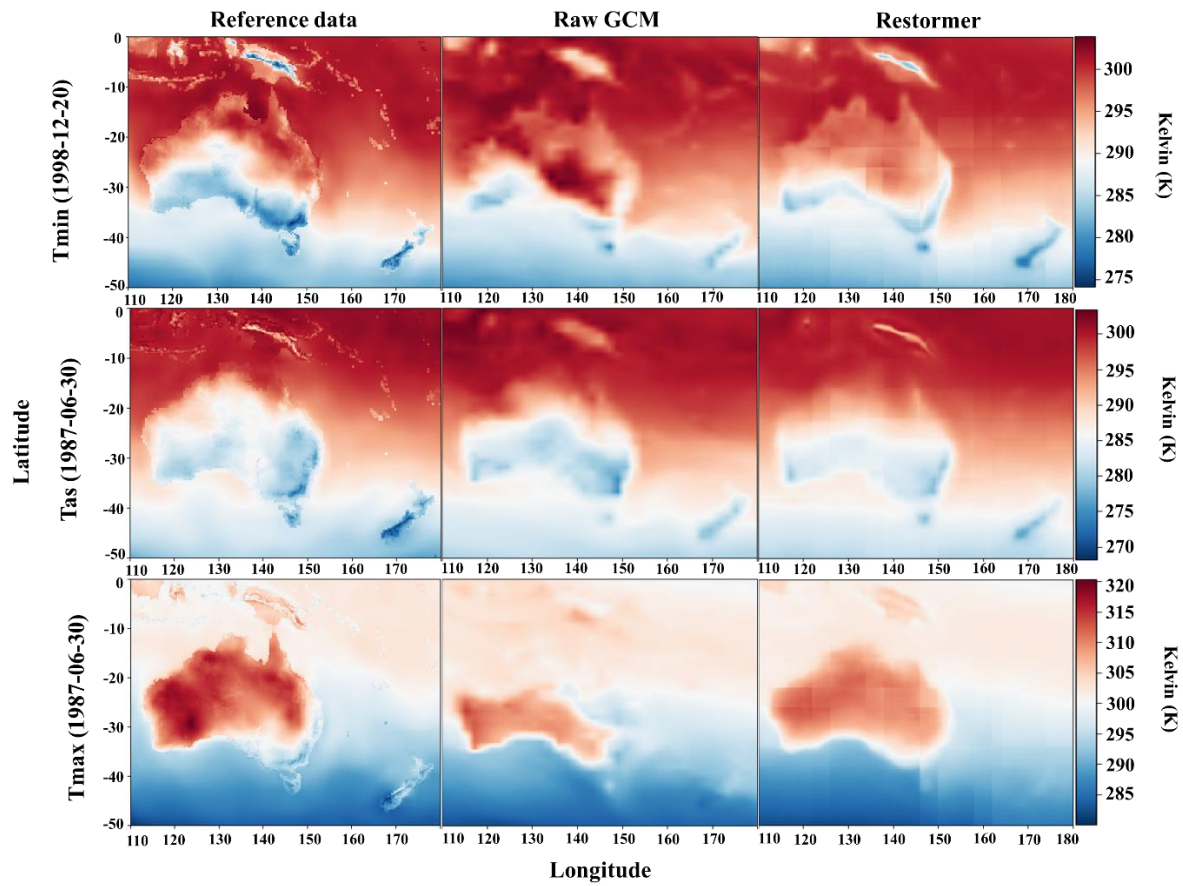
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28 **Fig. S2.** Restormer (Zamir et al., 2021) architecture used for patch-based climate field restoration

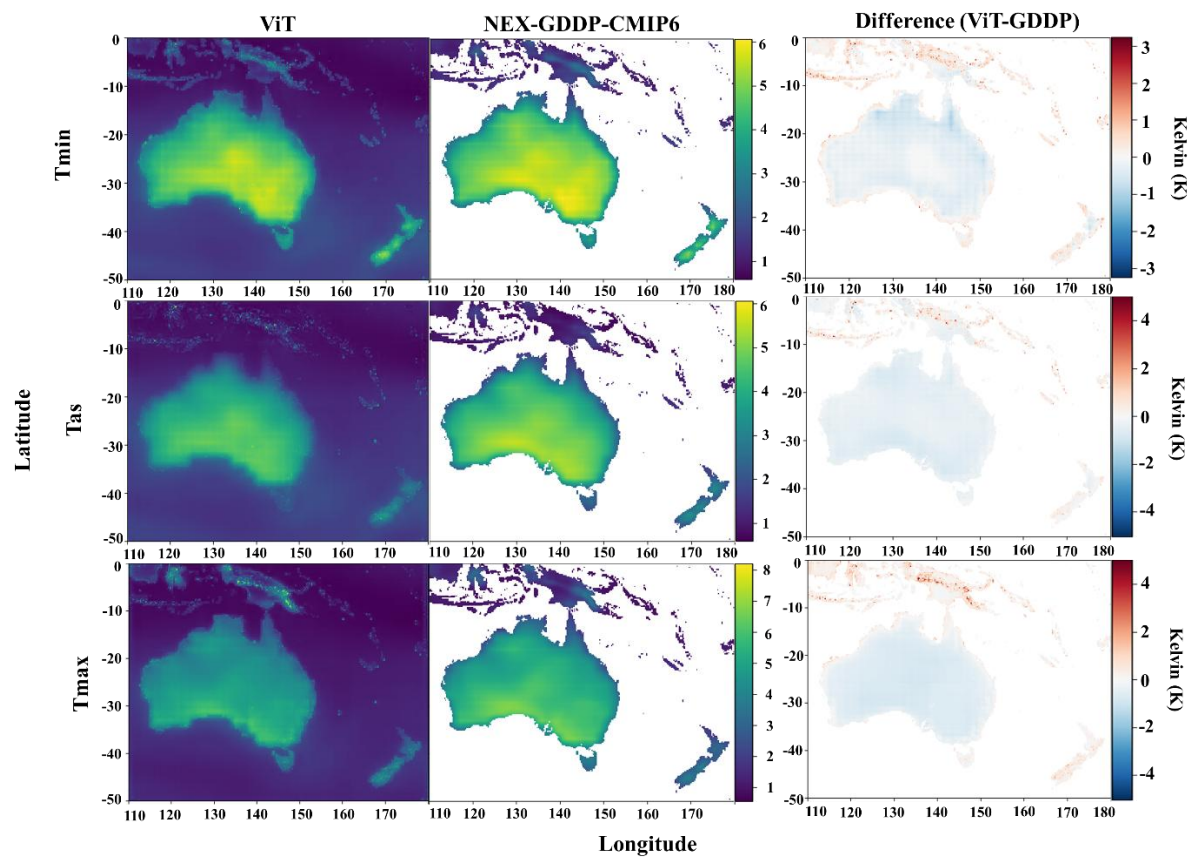
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31 **Fig. S3.** Spatial comparison of three daily temperature predictions on randomly selected dates across
 32 Oceania

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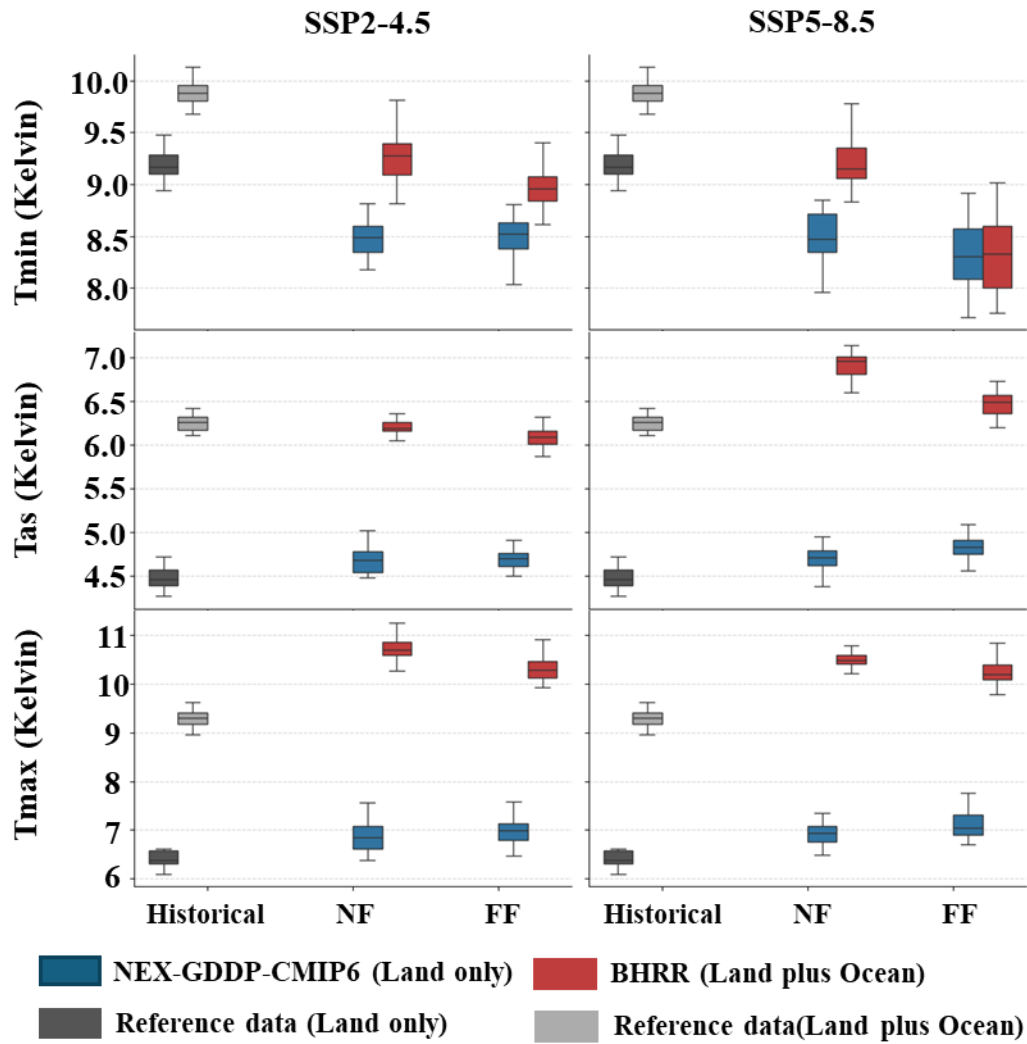


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35 **Fig. S4.** Spatial distribution of RMSE for ViT-based bias correction and NEX-GDDP for Tmin, Tas, and
 36 Tmax over Oceania (1980-2014)

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40 **Fig. S5.** Boxplots of spatial STDEV for three climate variables over Oceania for historical reference and
 41 for BHRR and NEX-GDDP-CMIP6 in NF and FF under SSP2-4.5 and SSP5-8.5

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