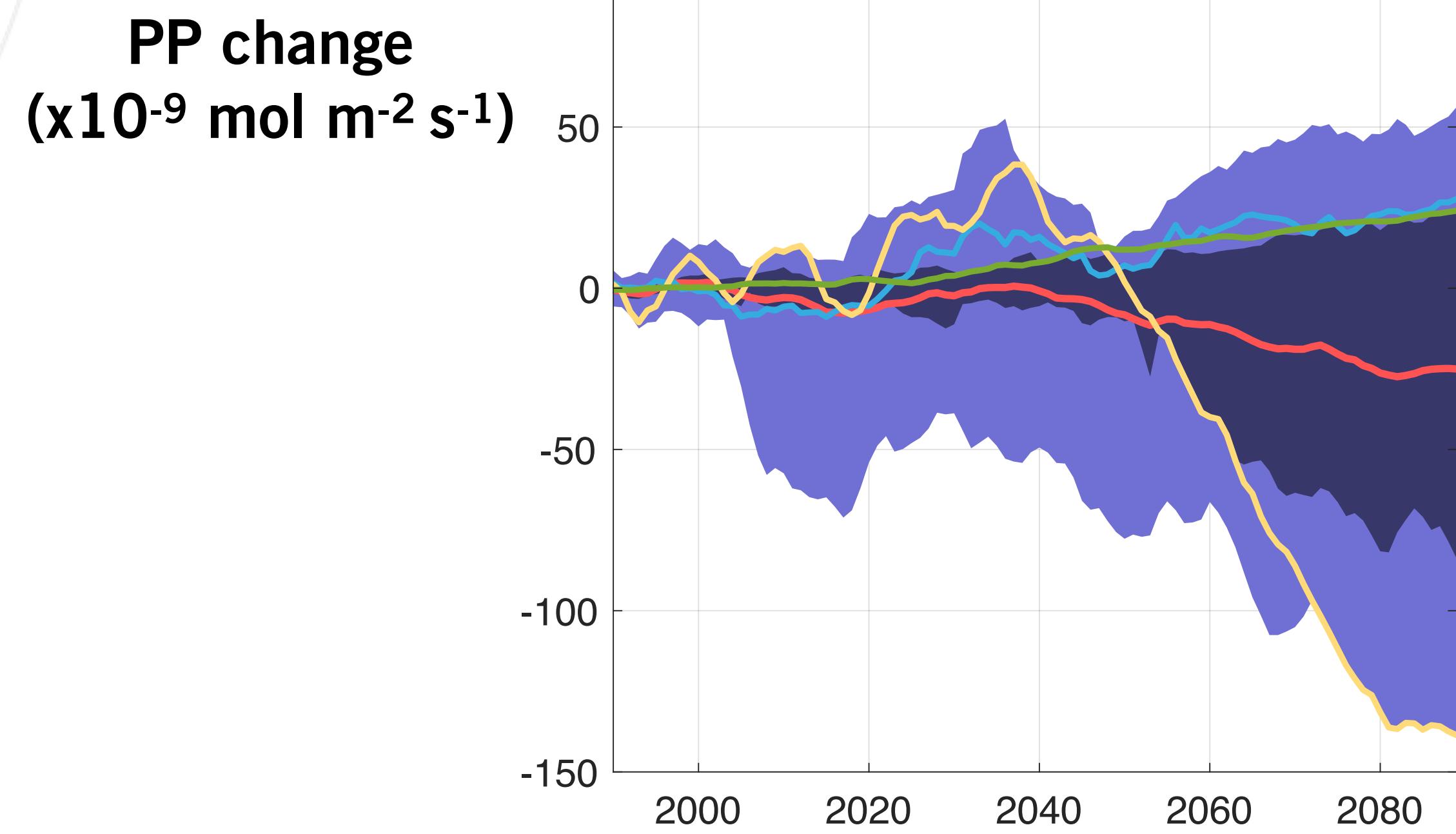
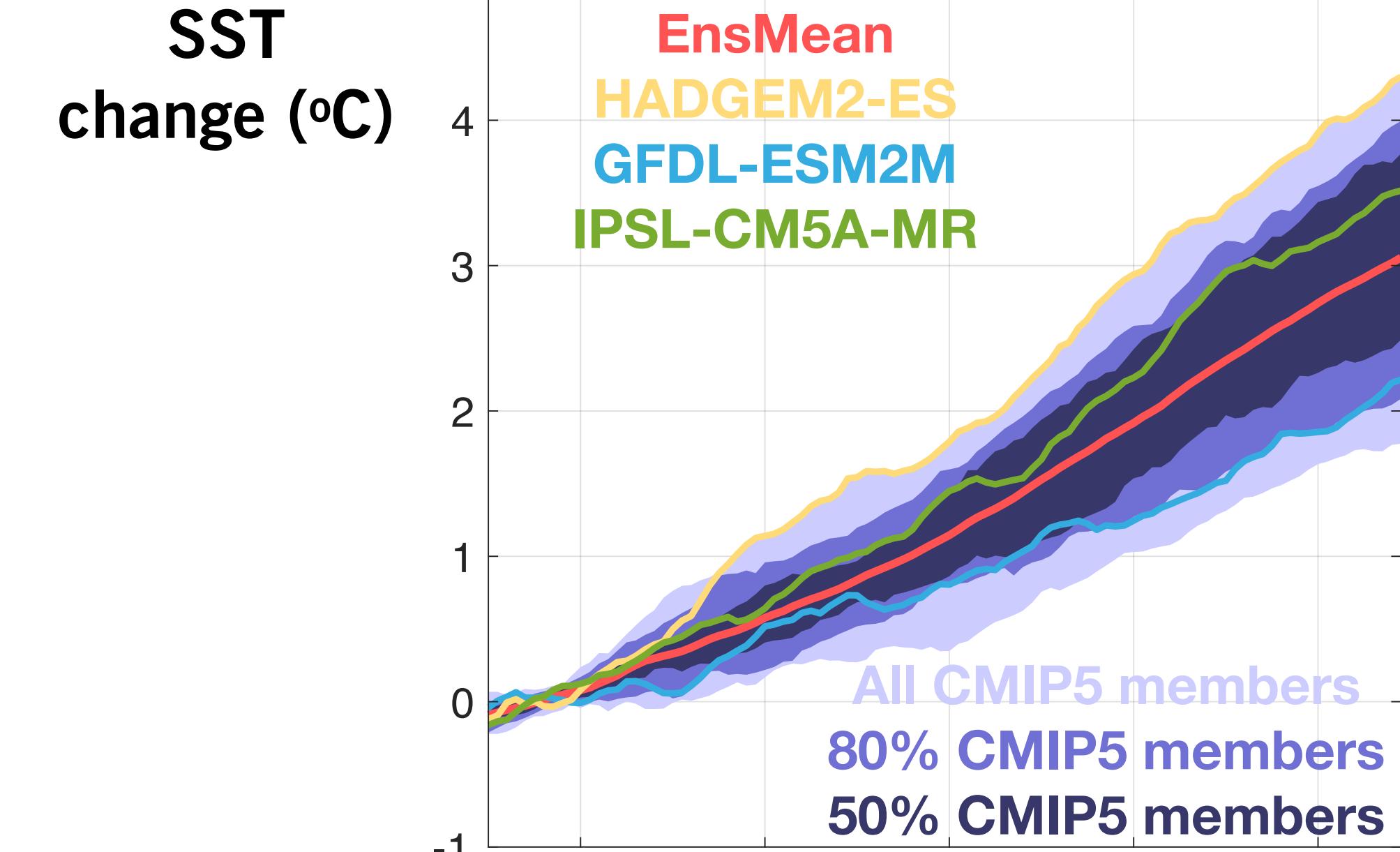
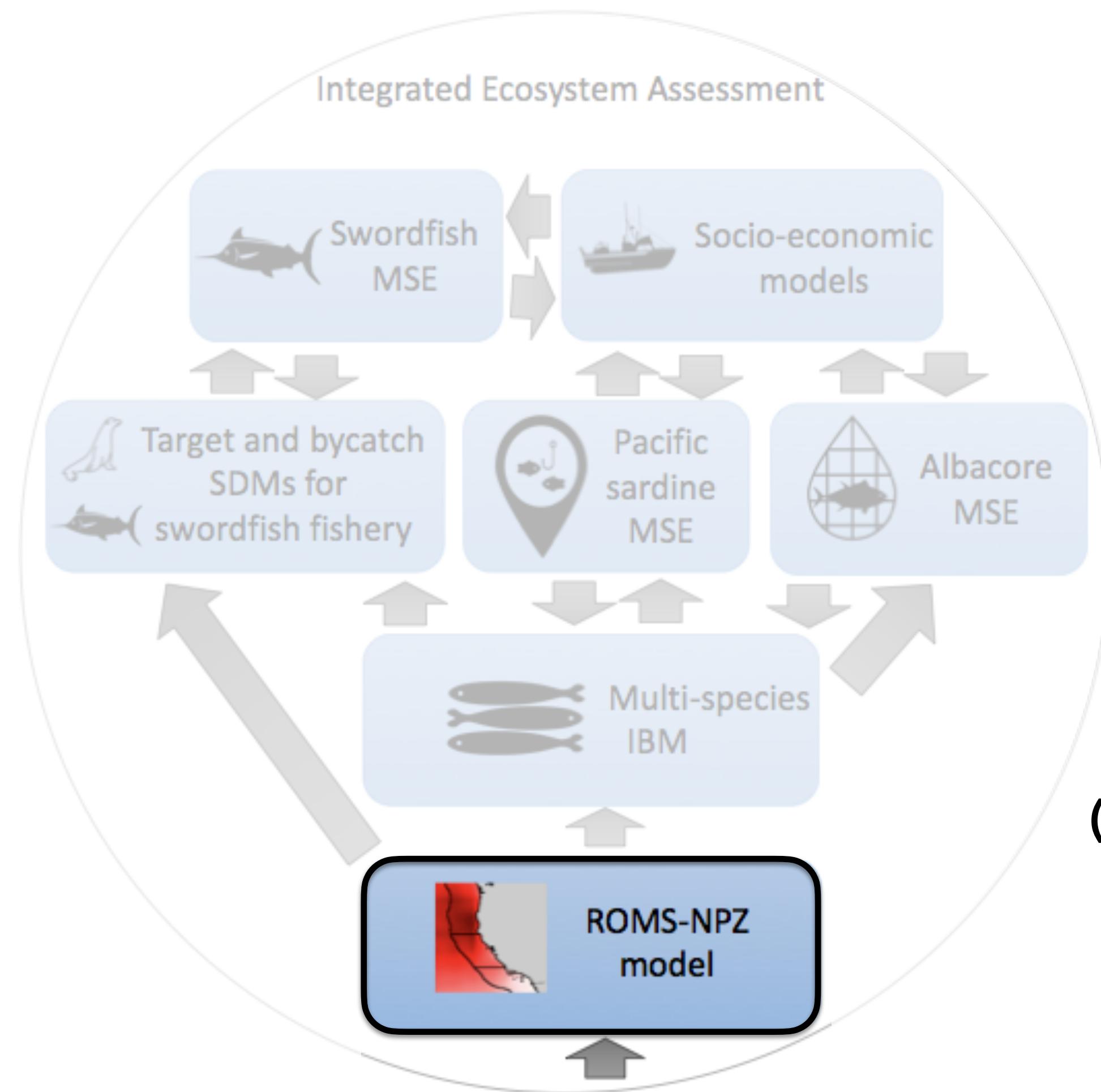
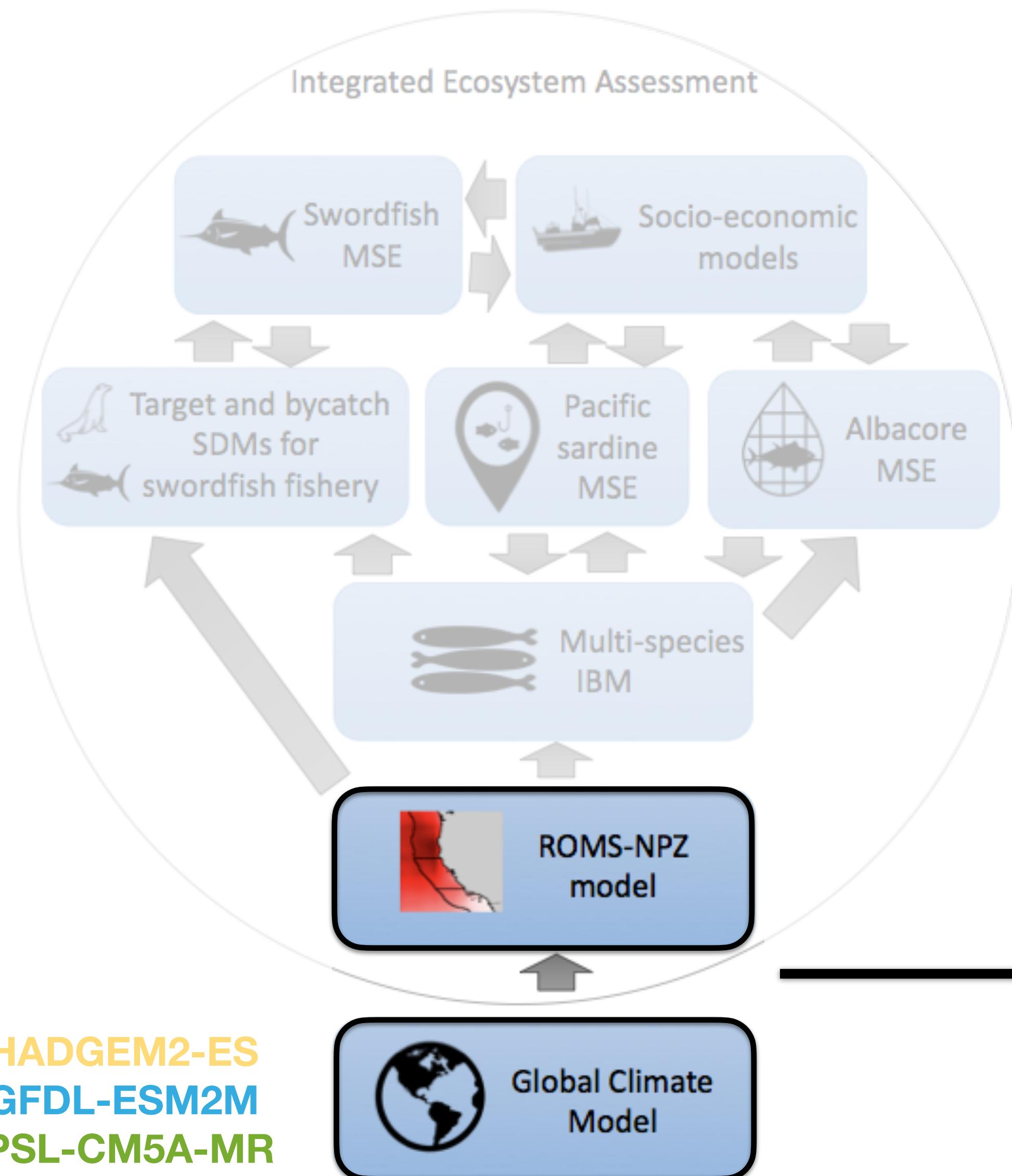


A DYNAMICALLY DOWNSCALED ENSEMBLE OF FUTURE PROJECTIONS FOR THE CALIFORNIA CURRENT SYSTEM

Mercedes (Mer) Pozo Buil

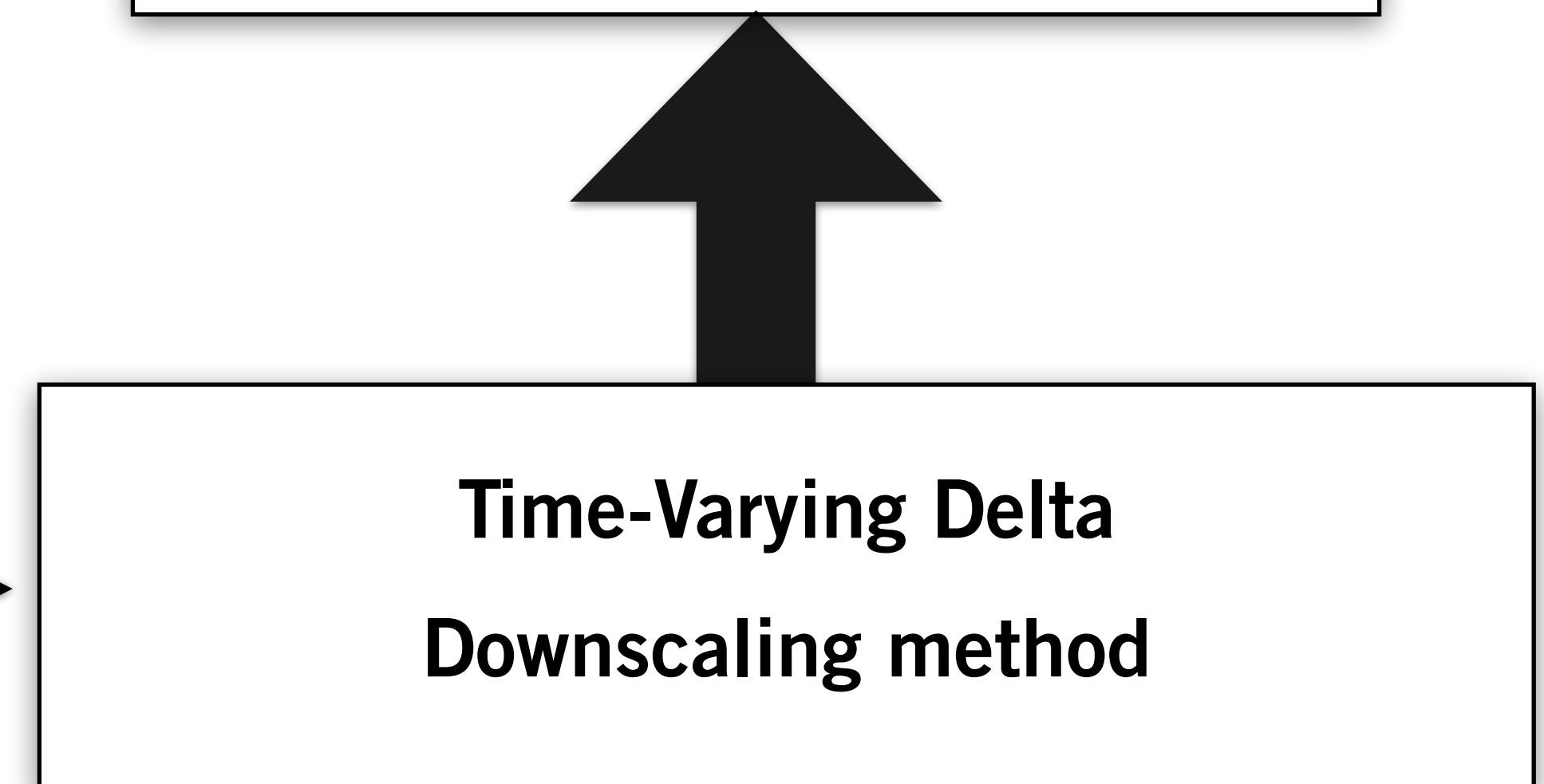
Pozo Buil et al., in review (Frontiers Marine Sciences)





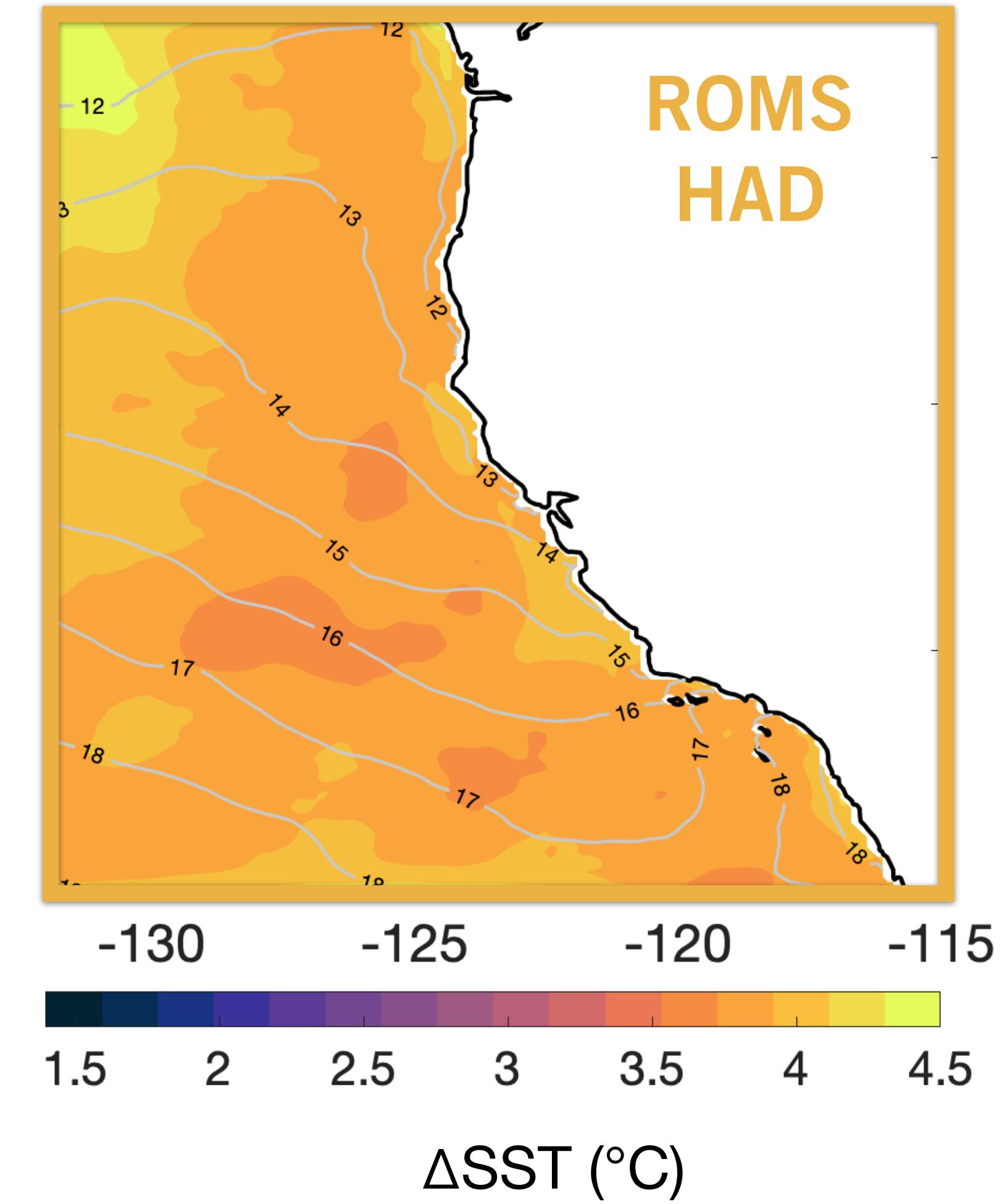
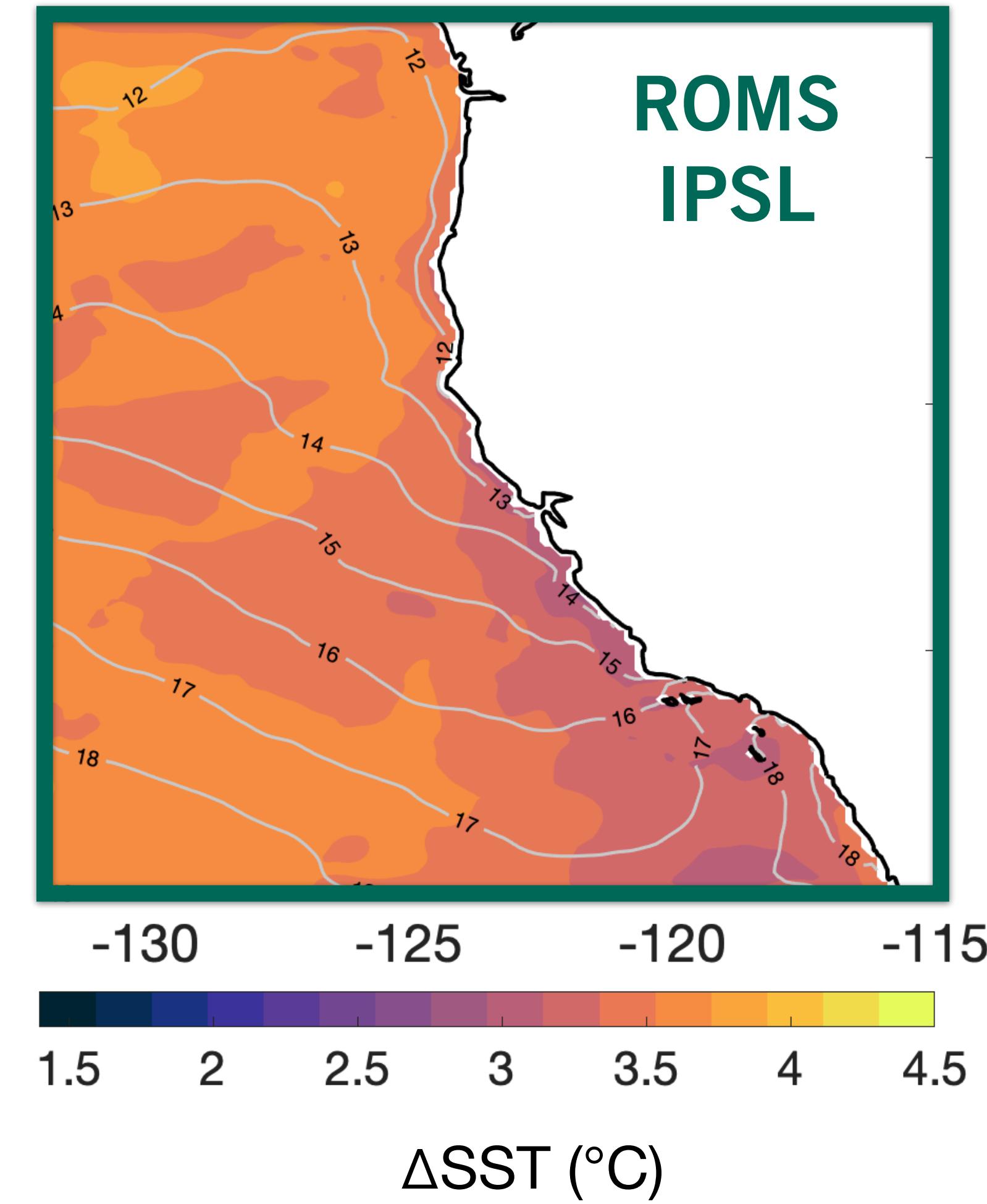
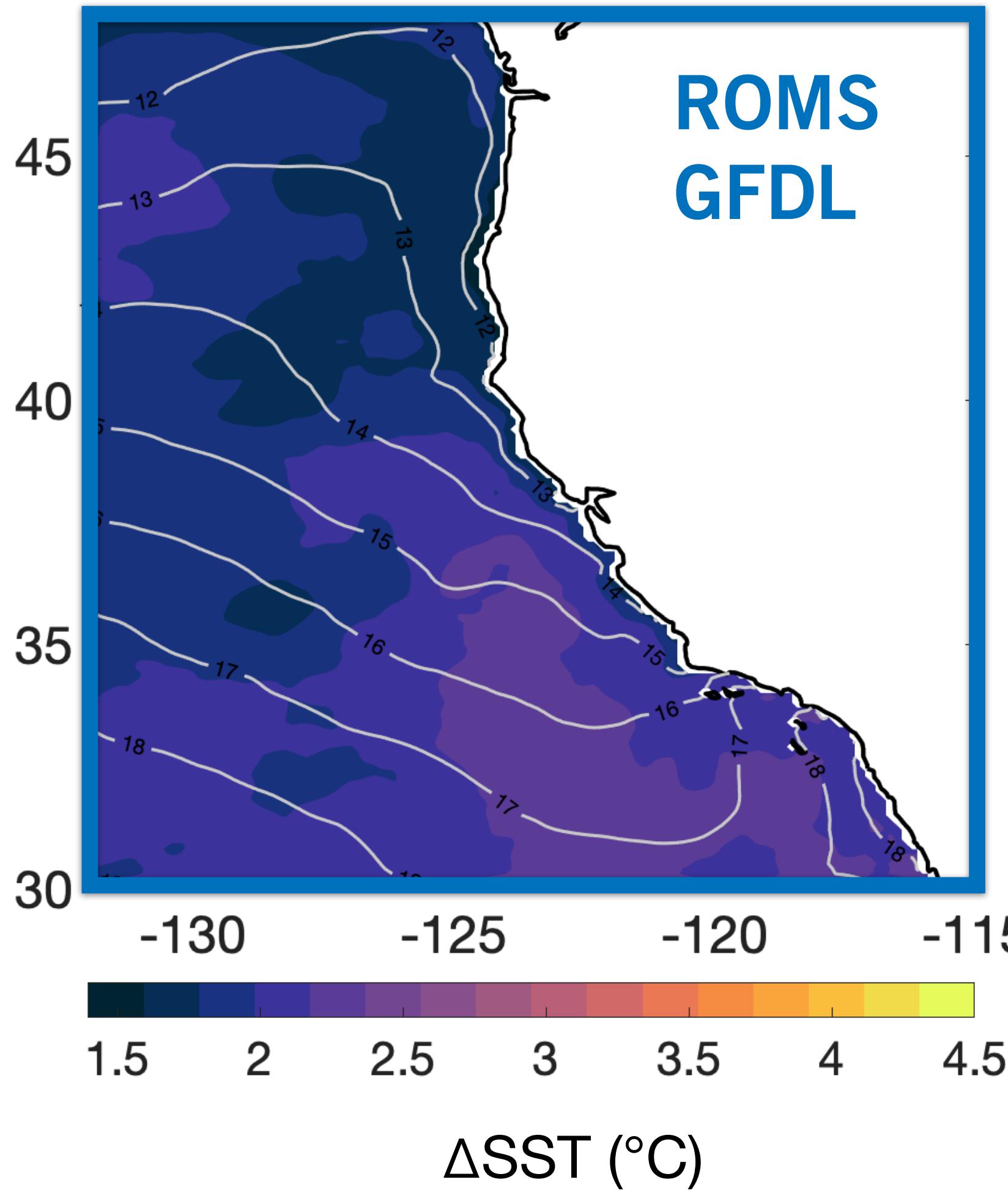
3 Downscaling Experiments:

ROMS **ROMS** **ROMS**
GFDL **IPSL** **HAD**



Future Changes: SST_{Future} - SST_{Historical}

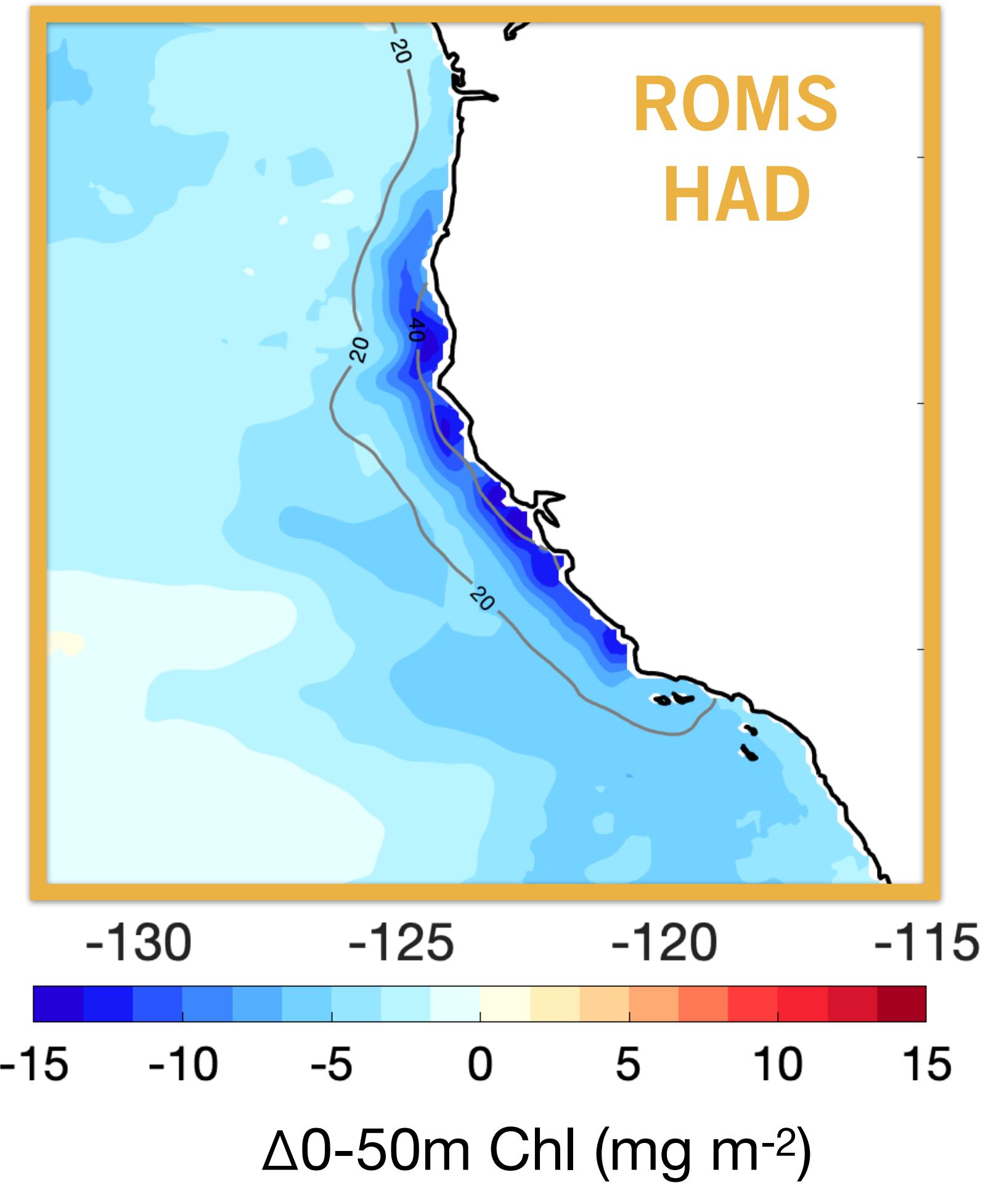
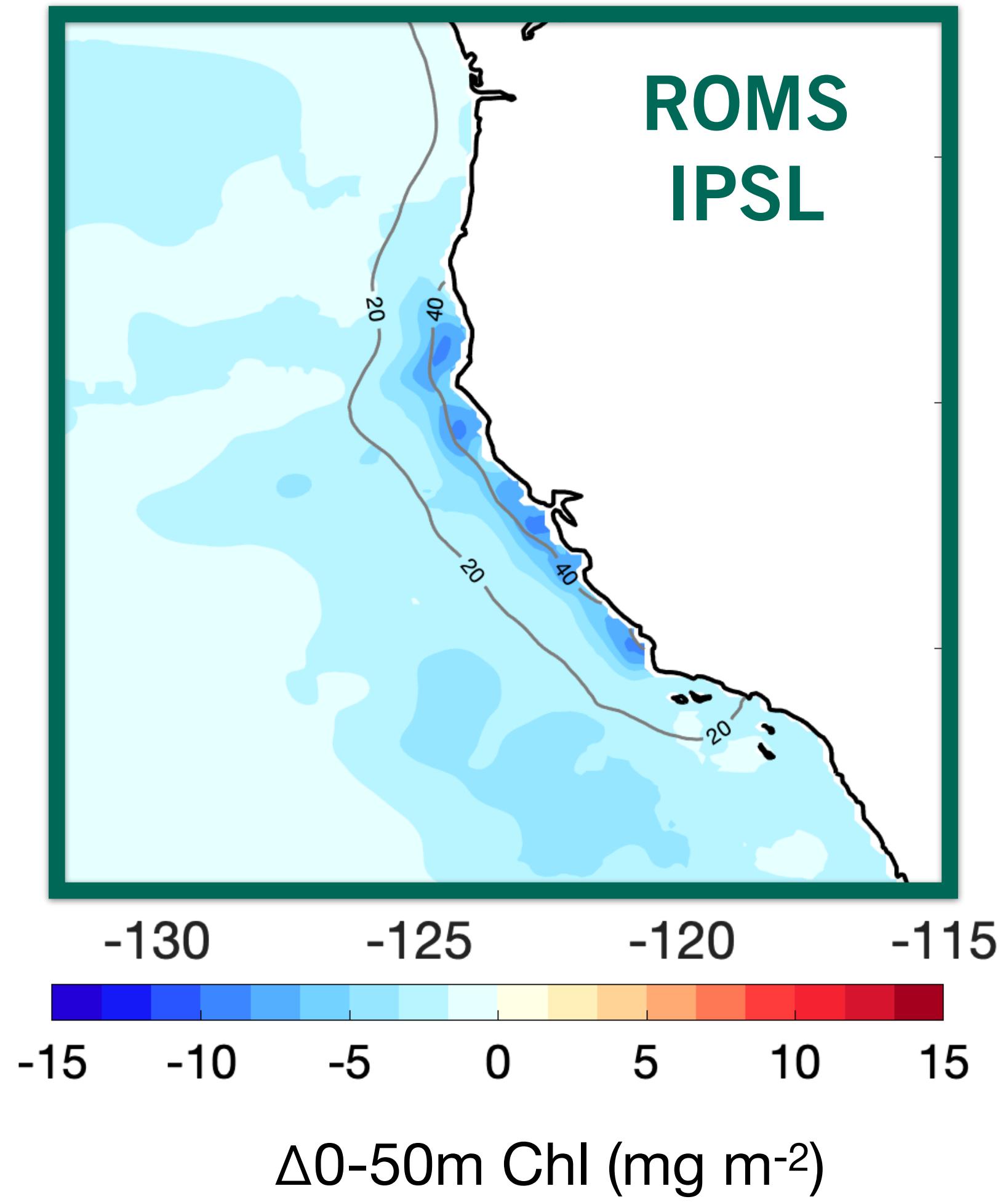
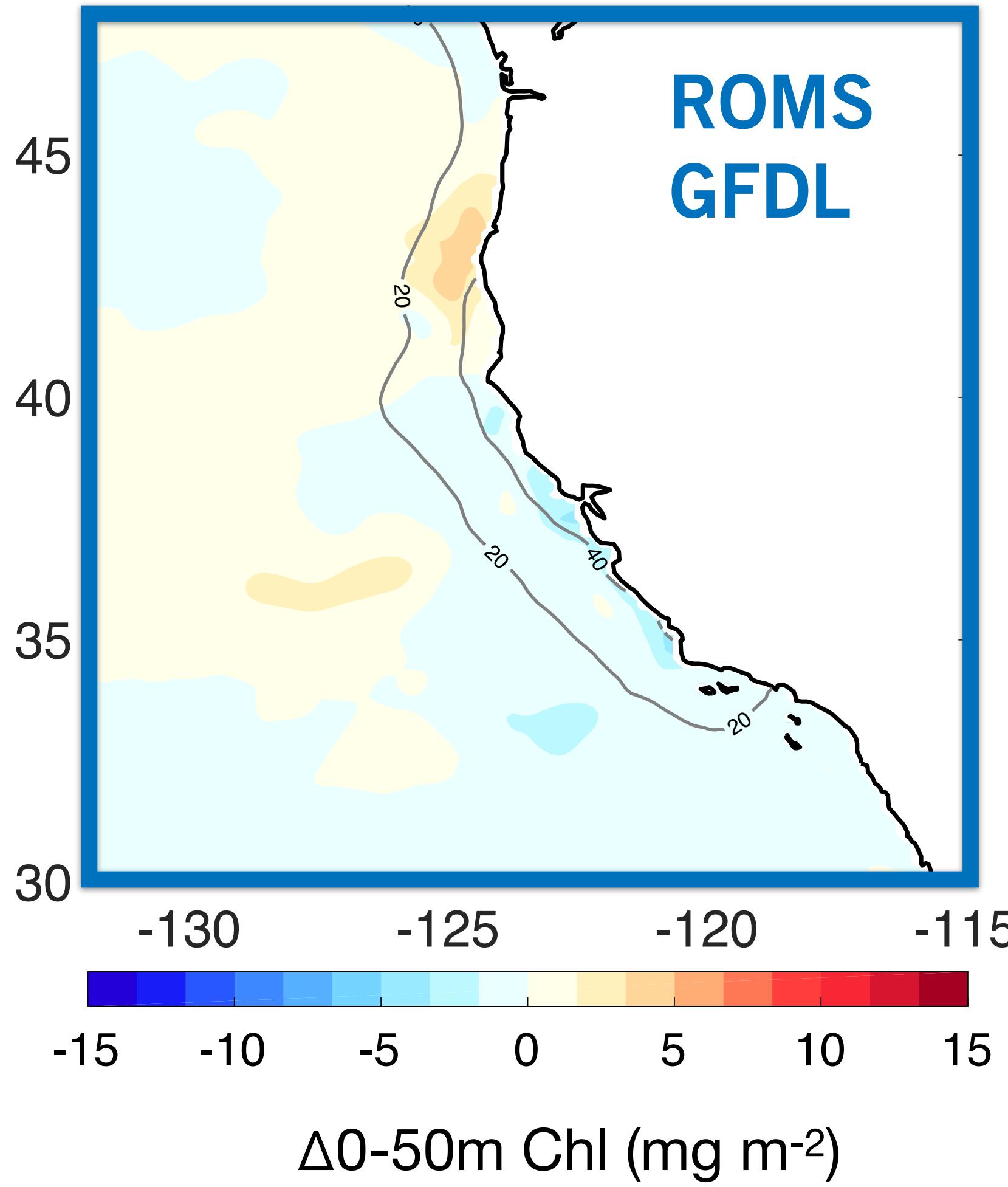
Future 2070-2100
Historical 1980-2010



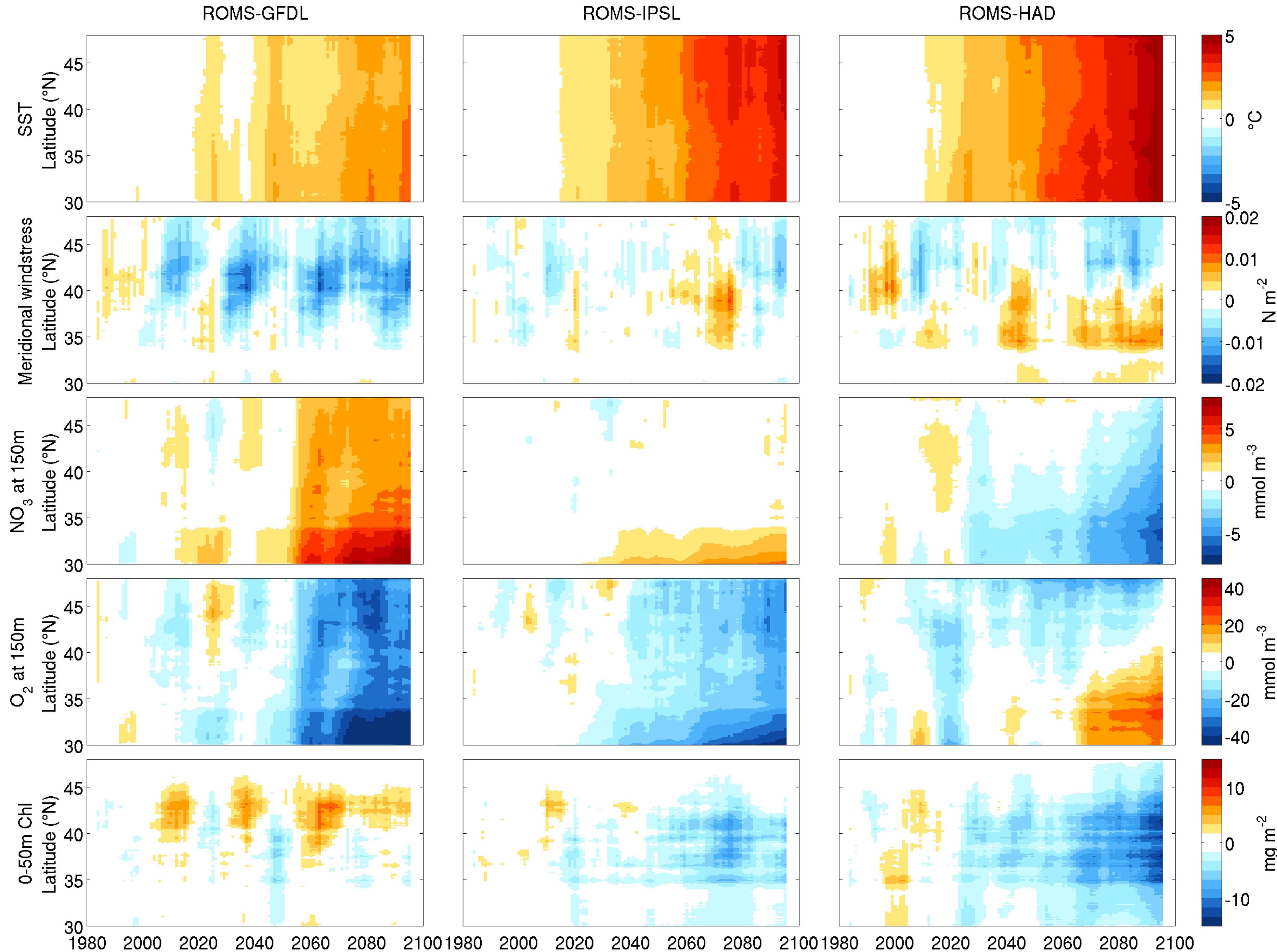
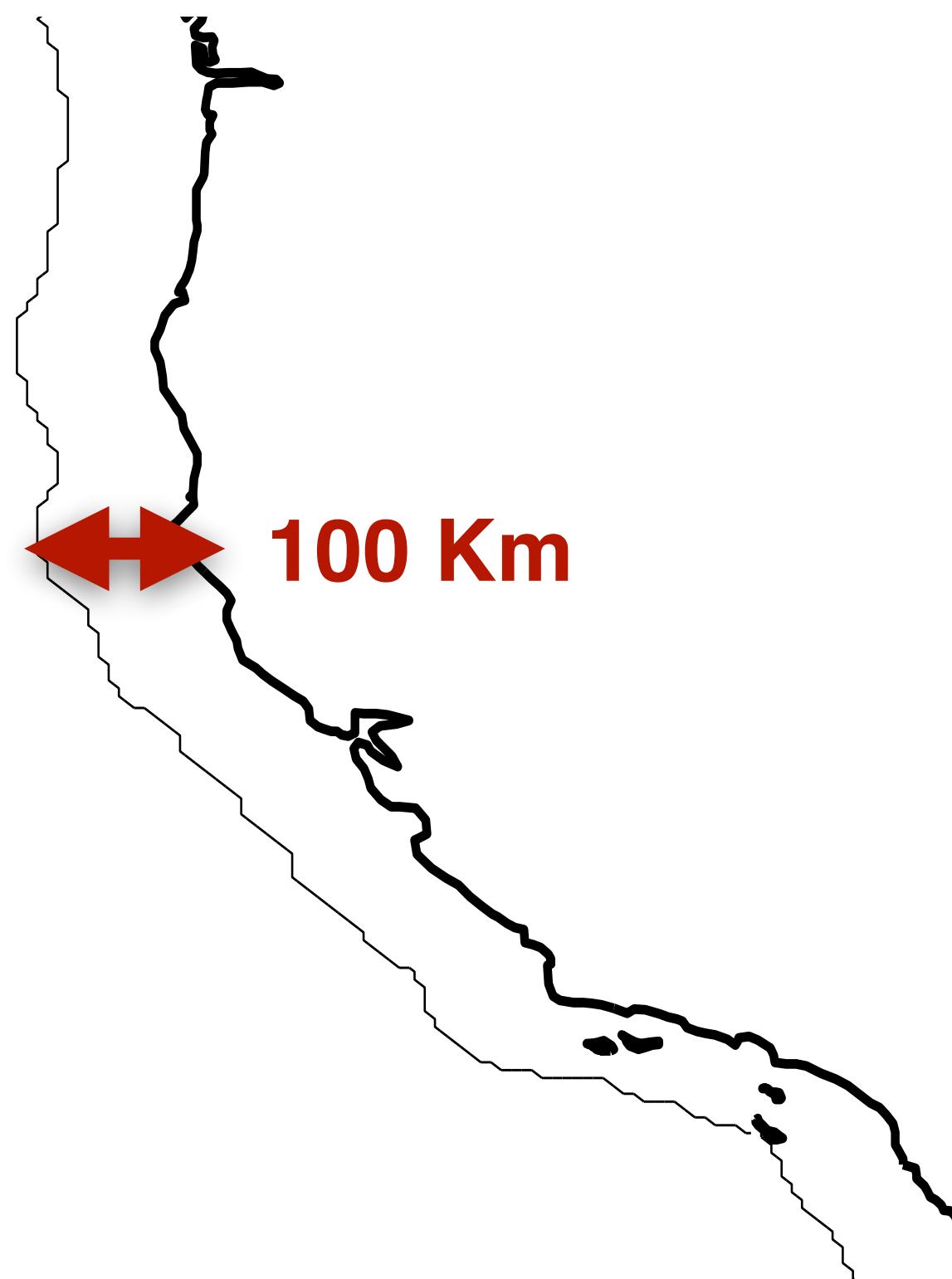
Future Changes: CHL_{Future} - CHL_{Historical}

Future 2070-2100

Historical 1980-2010



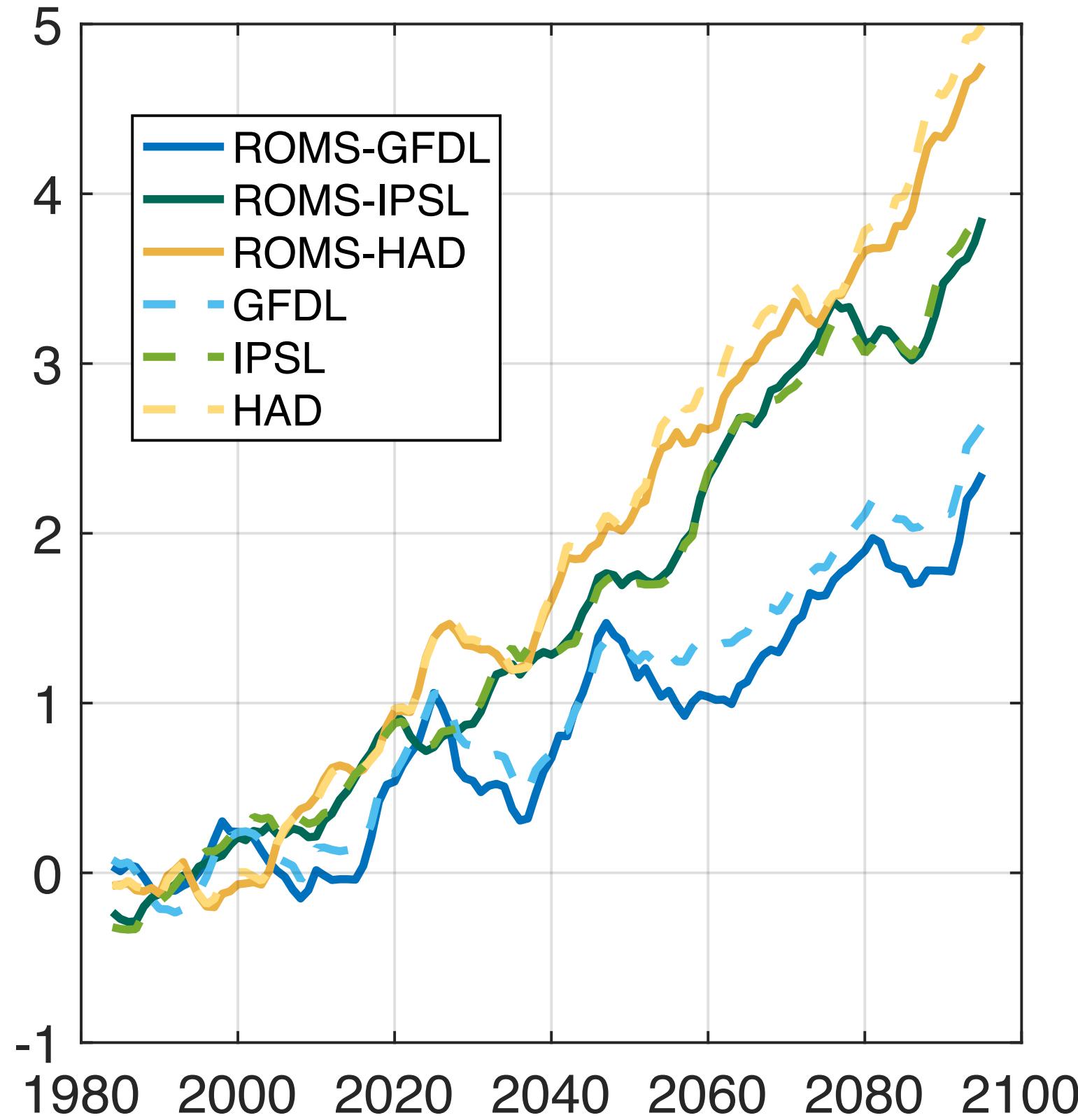
Temporal variability



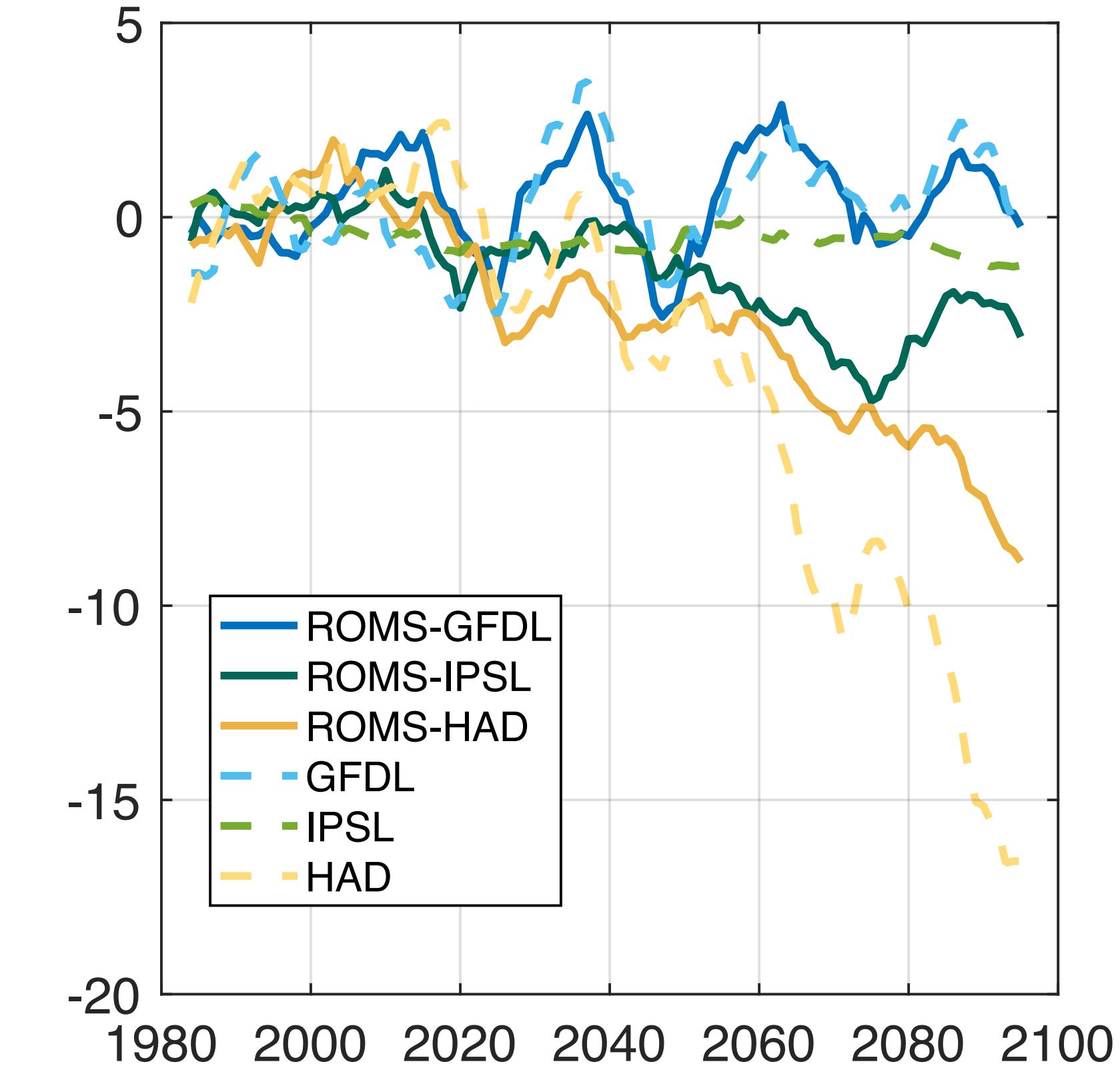
Impact of Regional Downscaling



SST change ($^{\circ}\text{C}$)



0-50m Chl anomalies (mg m^{-2})



SUMMARY

- Better resolution of upwelling dynamics leads to **regional differences** in the future changes
- All models agree in the direction of the future change in offshore waters
- Large **inter-model differences** arise in the coastal region, specially for biogeochemical variables
- While trends in the downscaled models reflect those in the GCMs that force them, the GCM and downscaled solutions differ more for biogeochemical than for physical variables



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