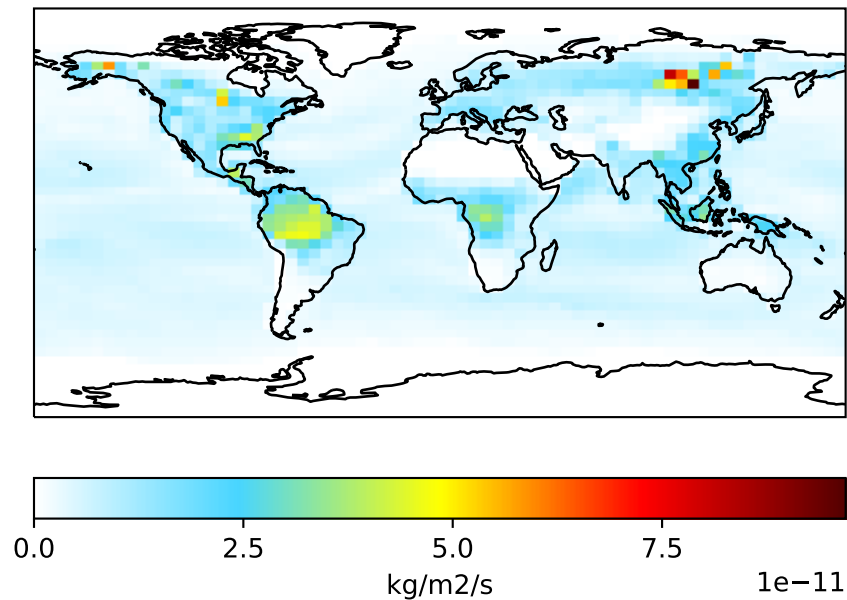
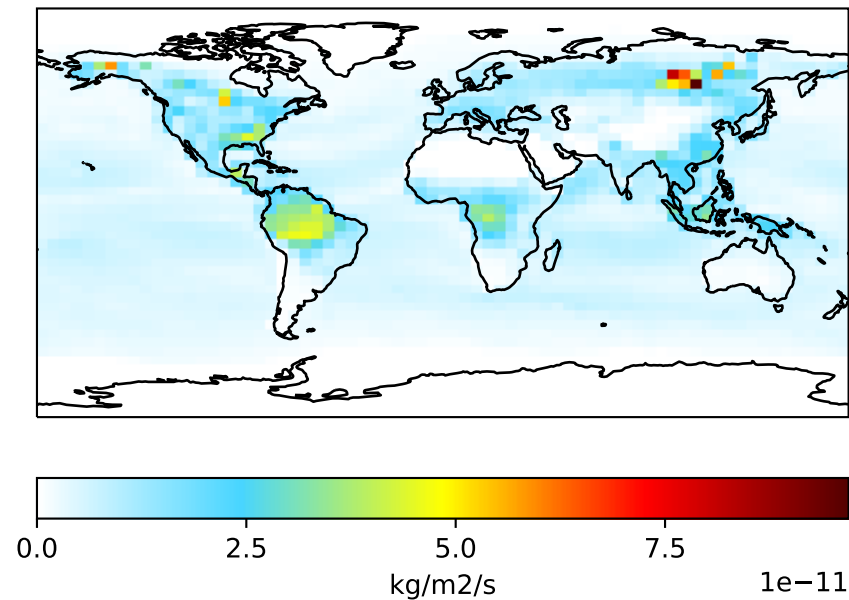


EmisACET_Total

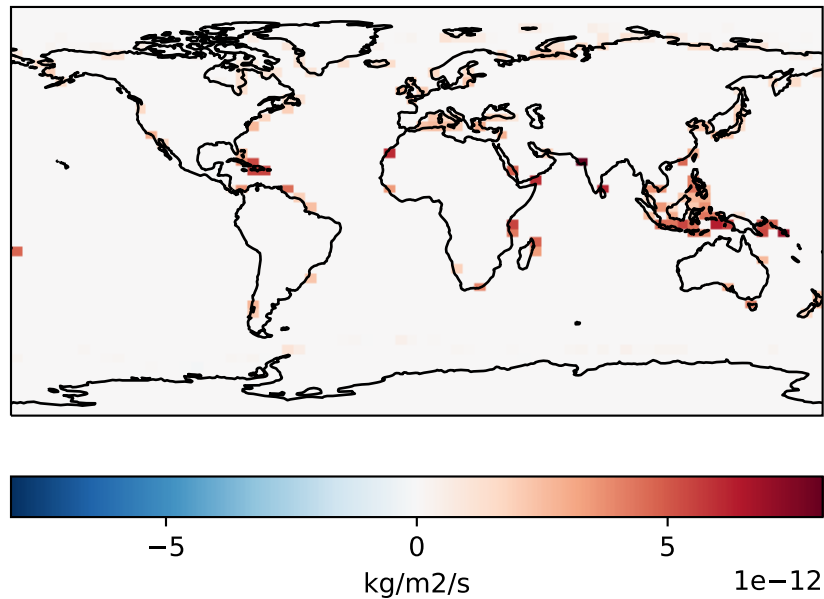
GCC_ref (Ref)
4.0x5.0



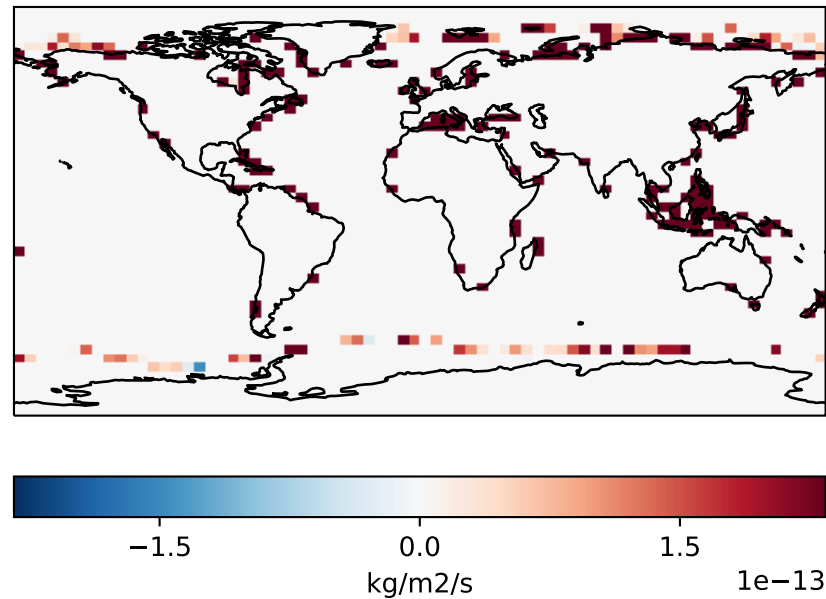
GCC_dev (Dev)
4.0x5.0



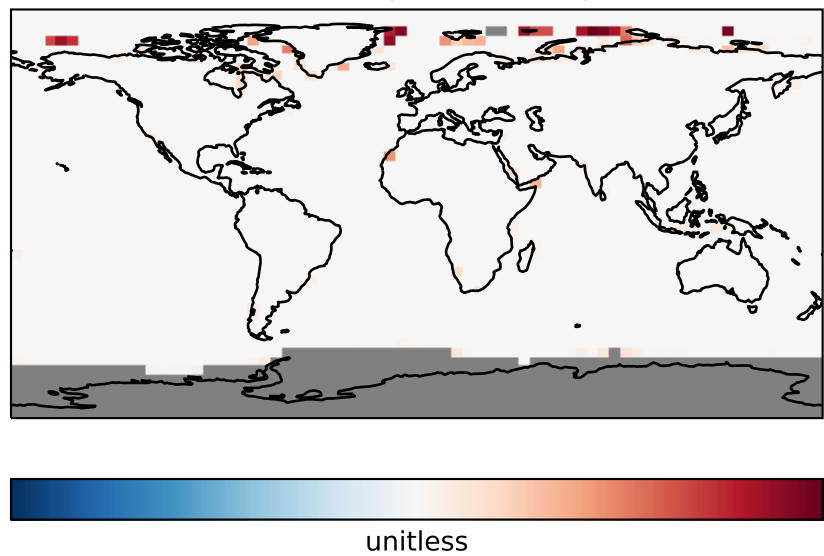
Difference
Dev - Ref, Dynamic Range



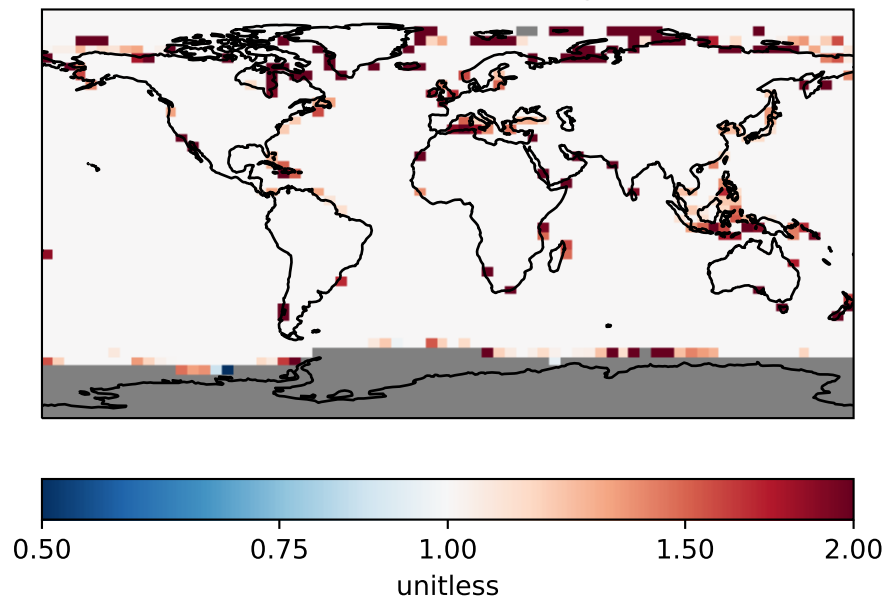
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

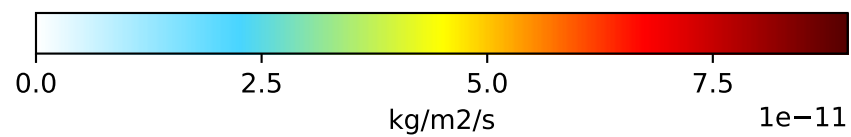
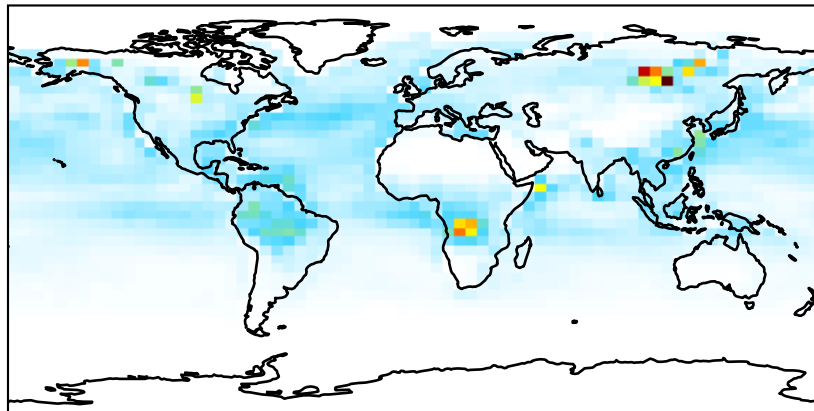


Ratio
Dev/Ref, Fixed Range

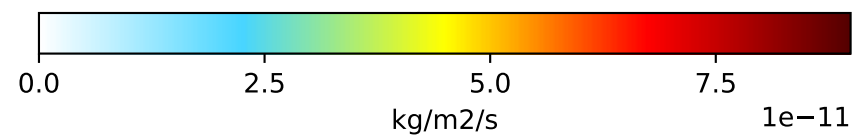
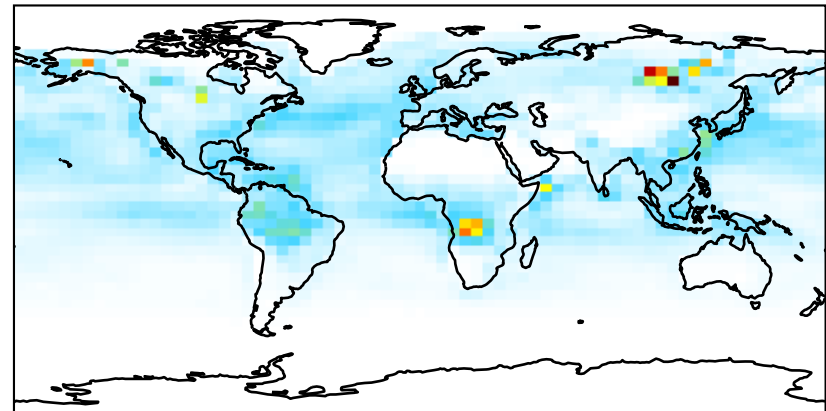


EmisALD2_Total

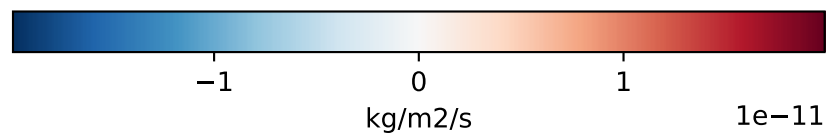
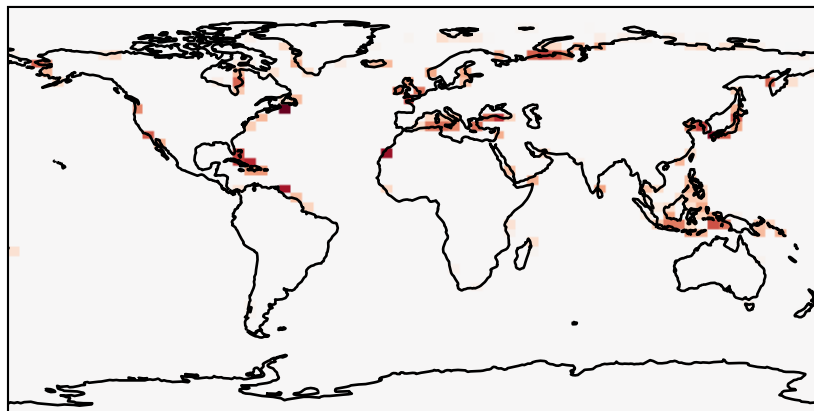
GCC_ref (Ref)
4.0x5.0



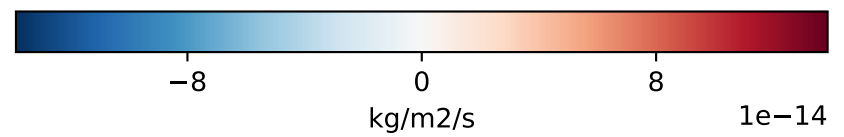
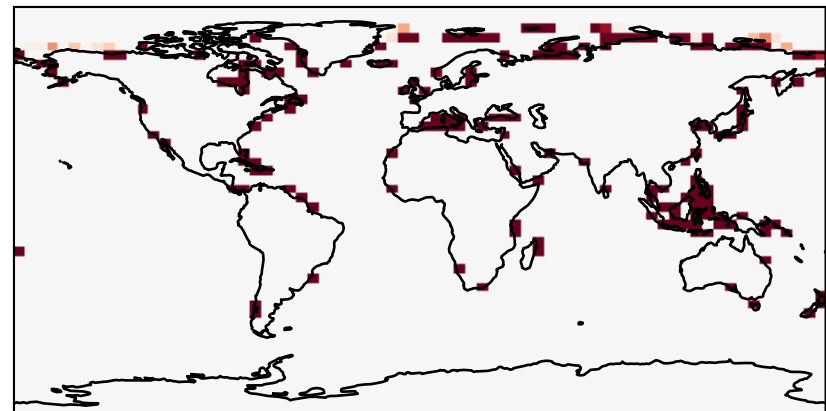
GCC_dev (Dev)
4.0x5.0



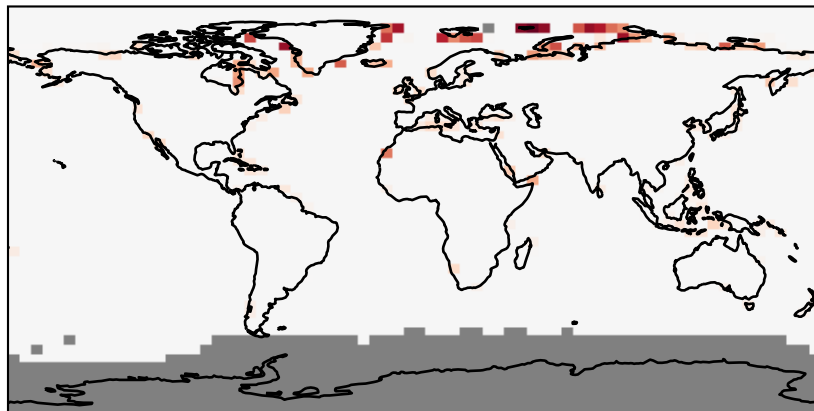
Difference
Dev - Ref, Dynamic Range



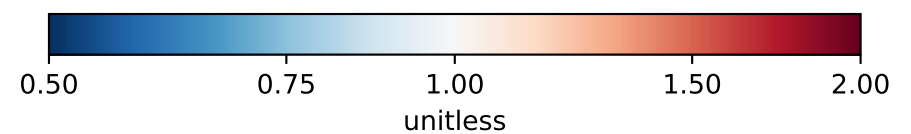
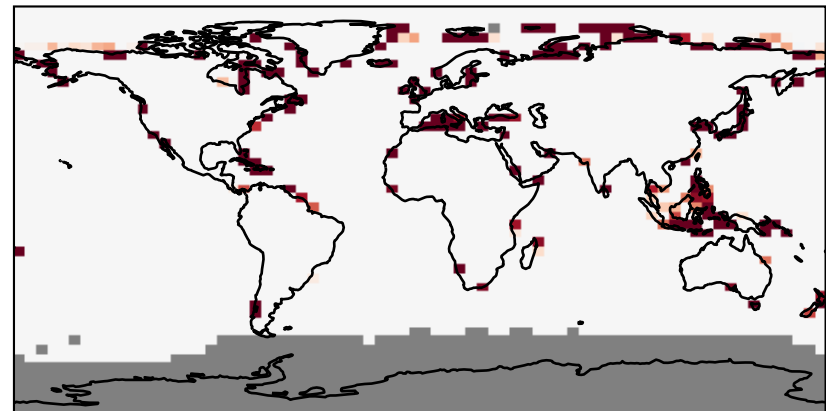
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

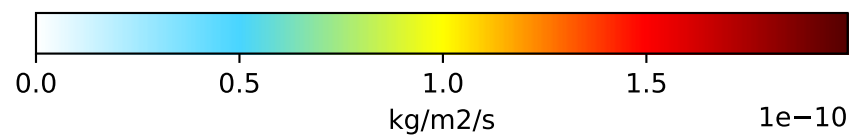
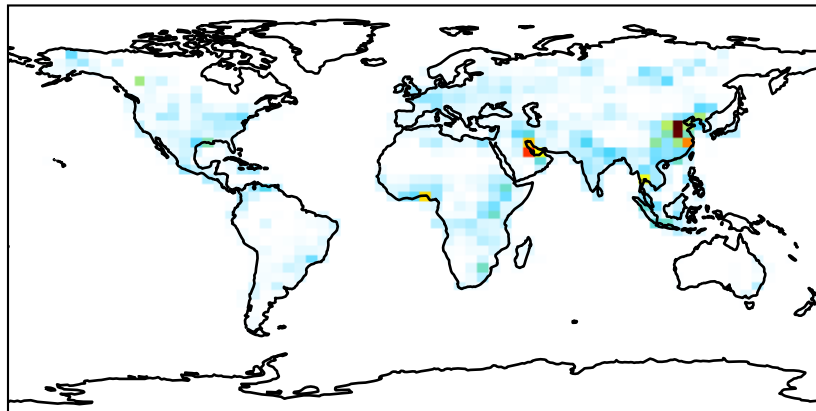


Ratio
Dev/Ref, Fixed Range

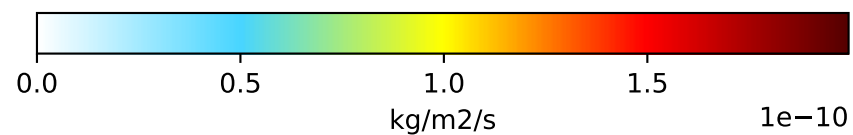
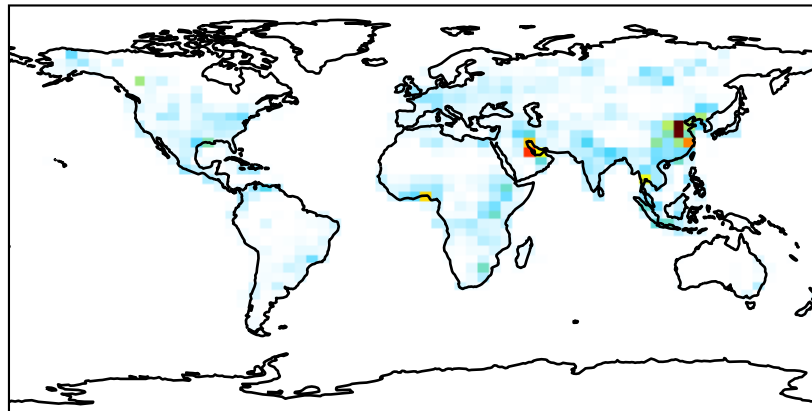


EmisALK4_Total

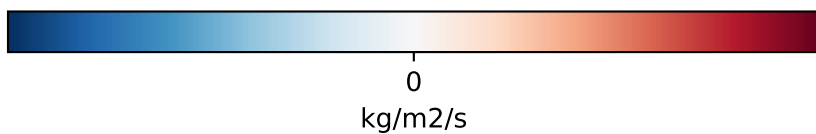
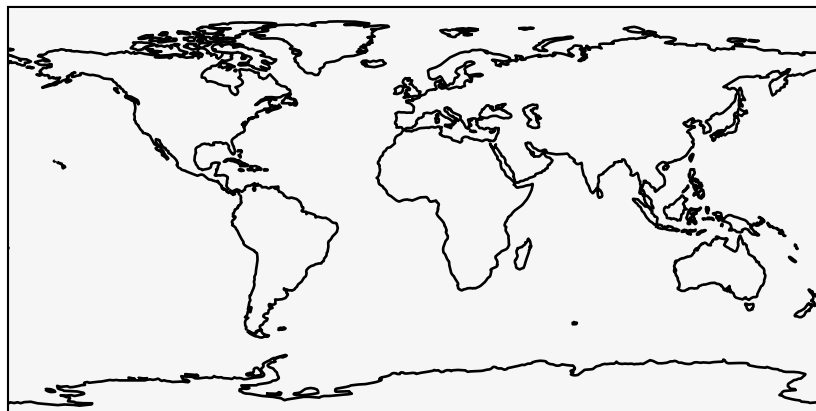
GCC_ref (Ref)
4.0x5.0



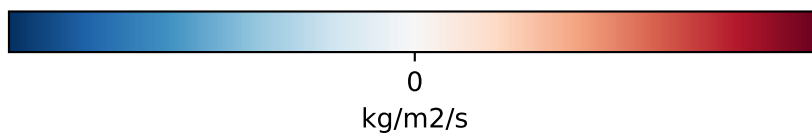
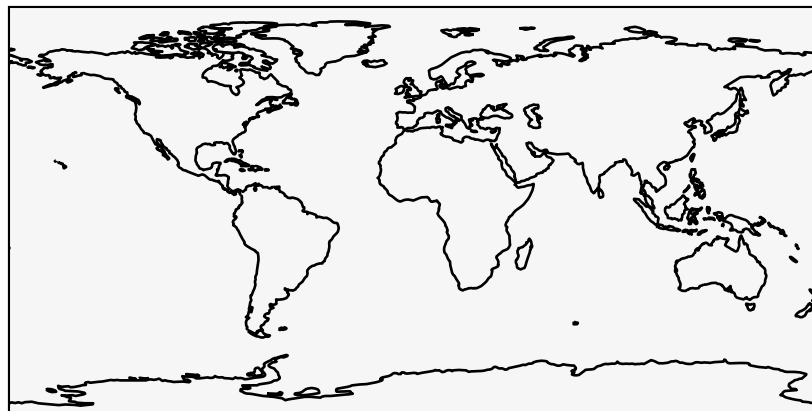
GCC_dev (Dev)
4.0x5.0



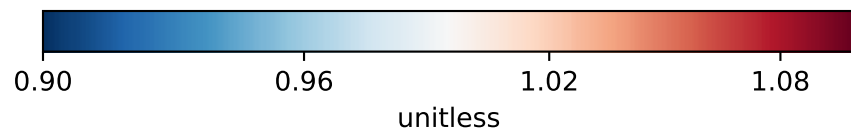
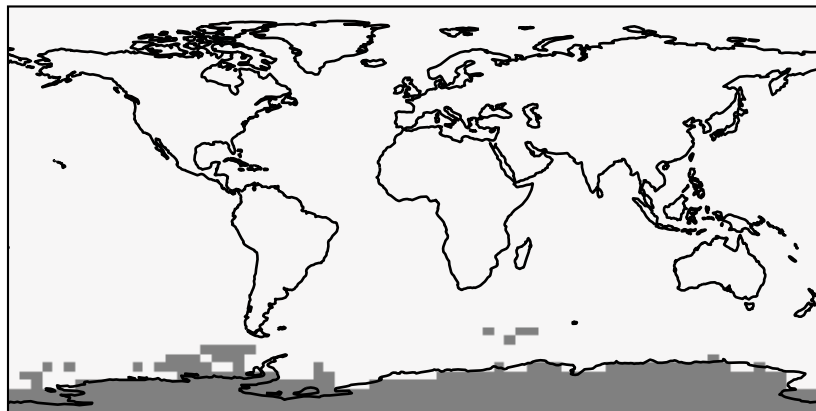
Difference
Dev - Ref, Dynamic Range



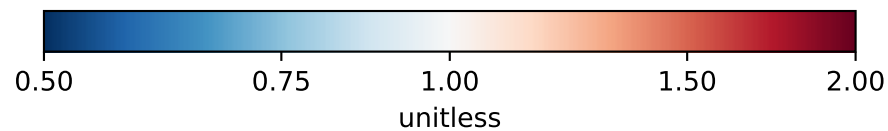
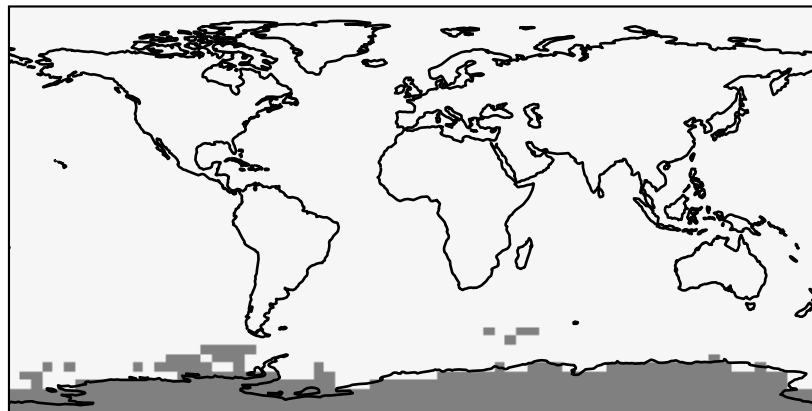
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

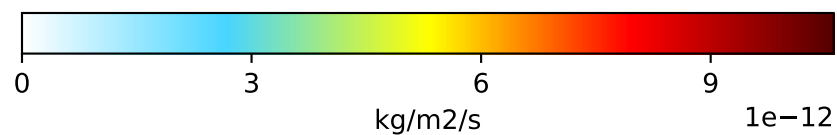
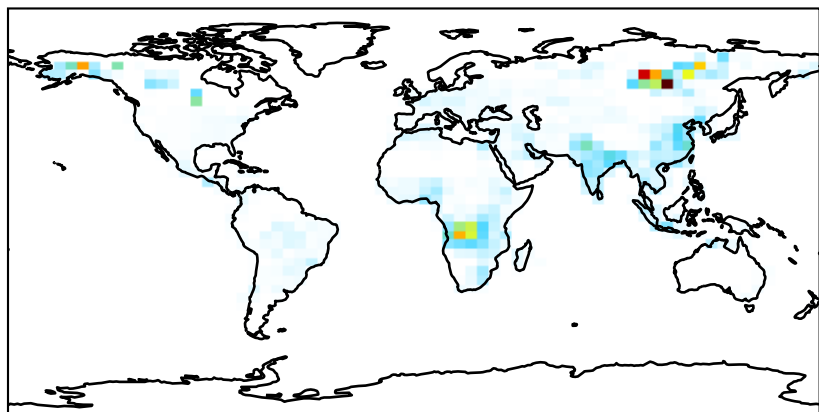


Ratio
Dev/Ref, Fixed Range

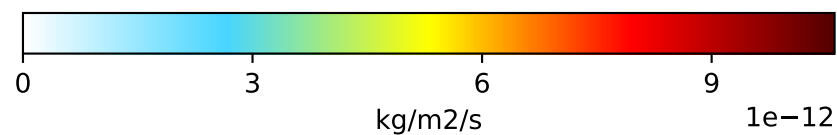
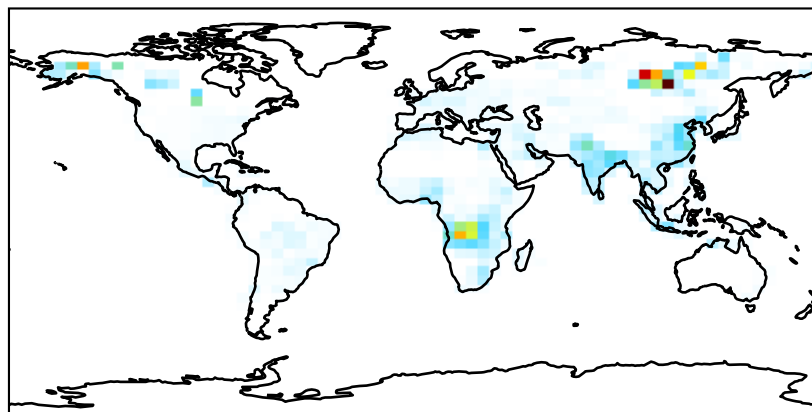


EmisBCPI_Total

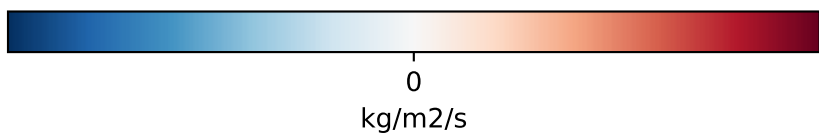
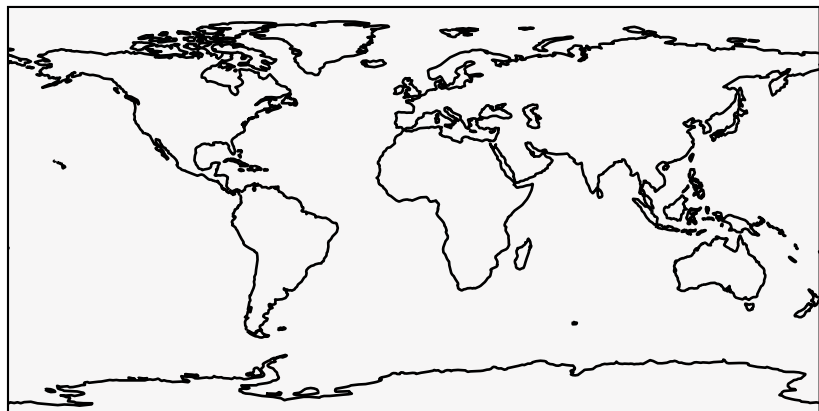
GCC_ref (Ref)
4.0x5.0



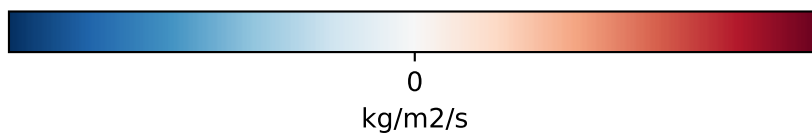
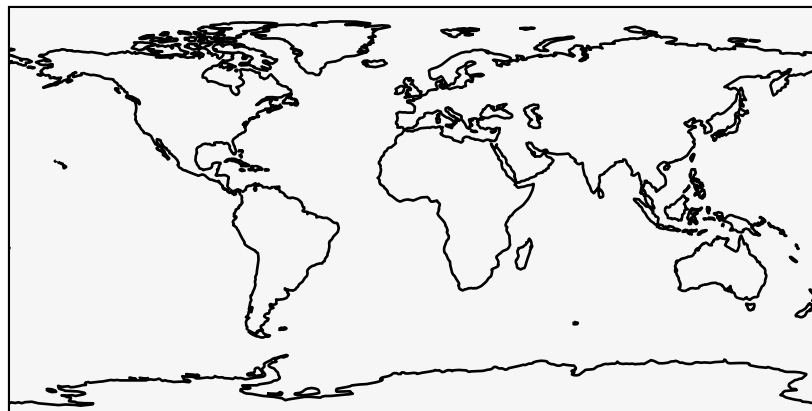
GCC_dev (Dev)
4.0x5.0



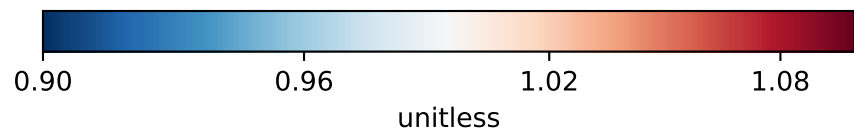
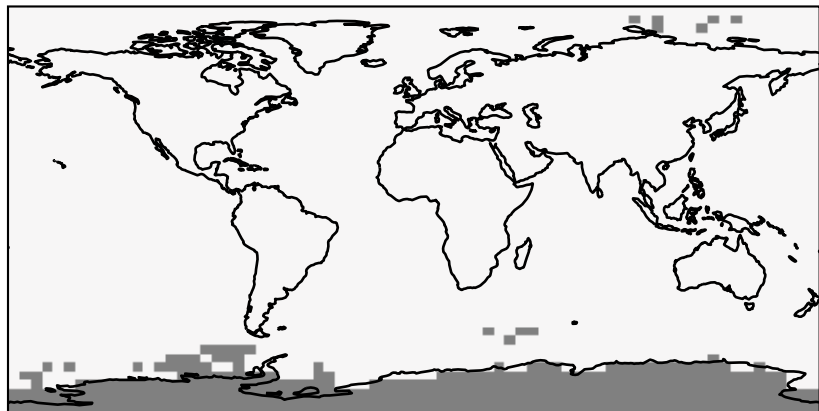
Difference
Dev - Ref, Dynamic Range



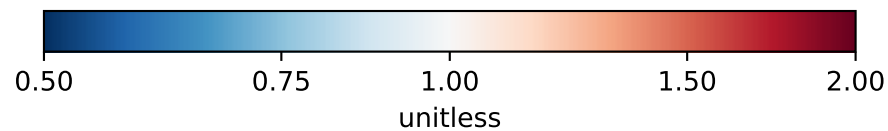
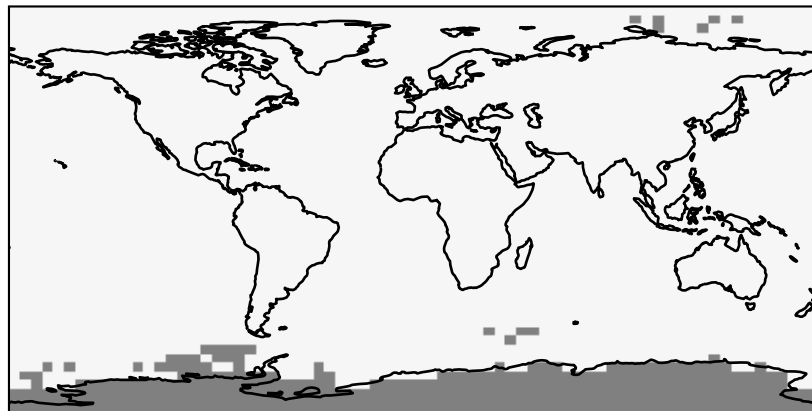
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

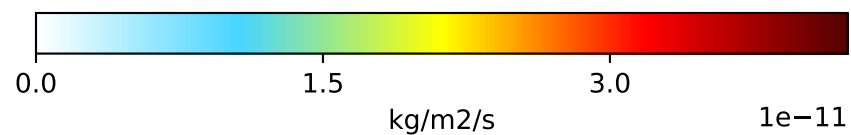
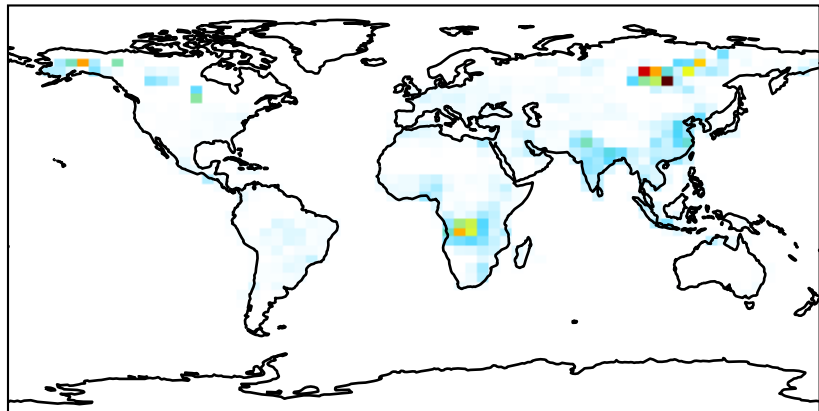


Ratio
Dev/Ref, Fixed Range

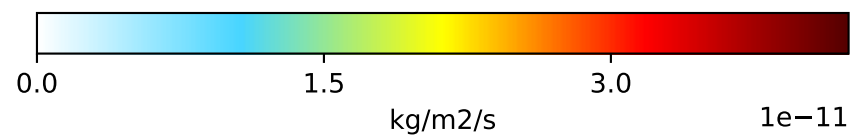
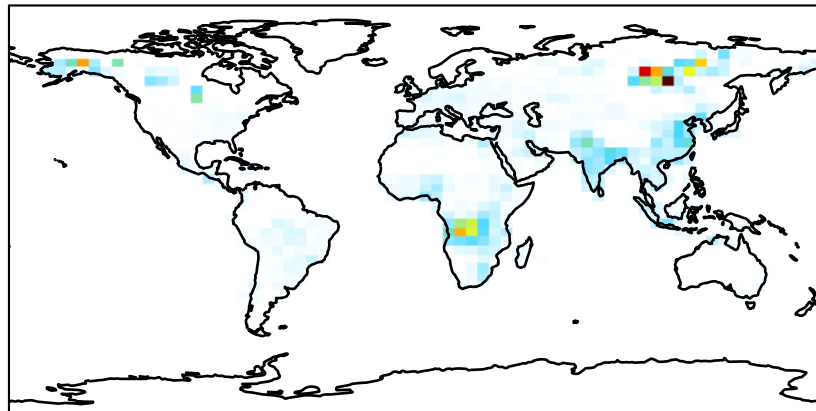


EmisBCPO_Total

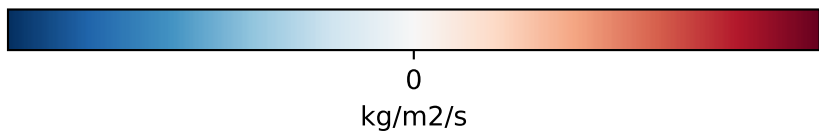
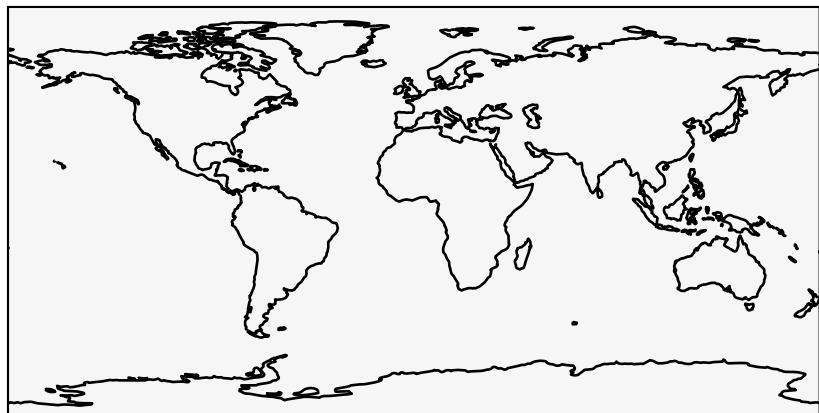
GCC_ref (Ref)
4.0x5.0



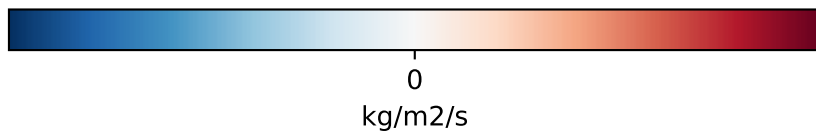
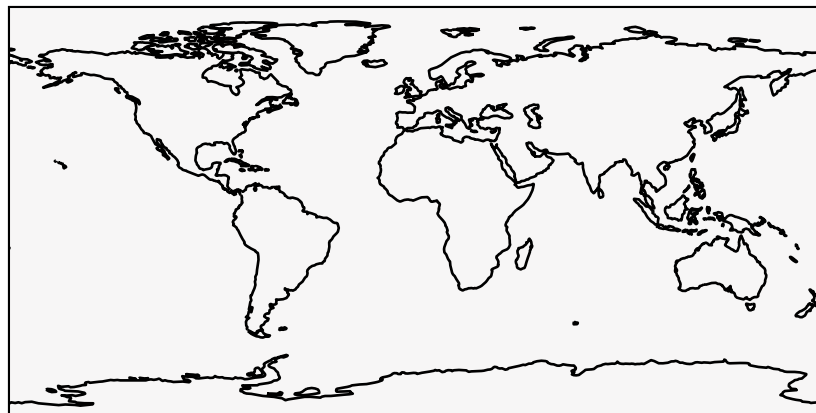
GCC_dev (Dev)
4.0x5.0



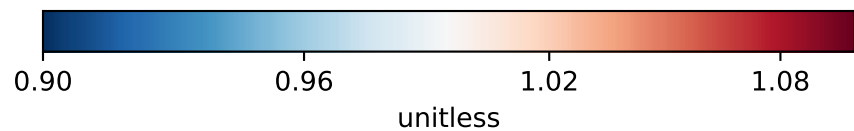
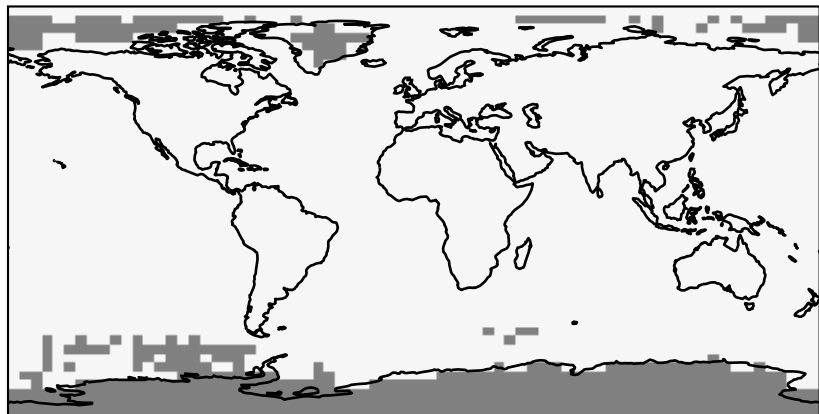
Difference
Dev - Ref, Dynamic Range



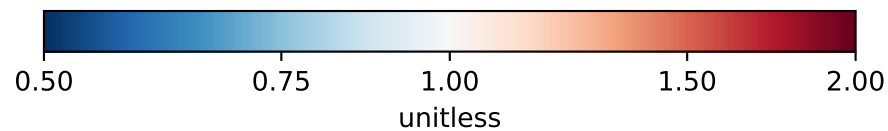
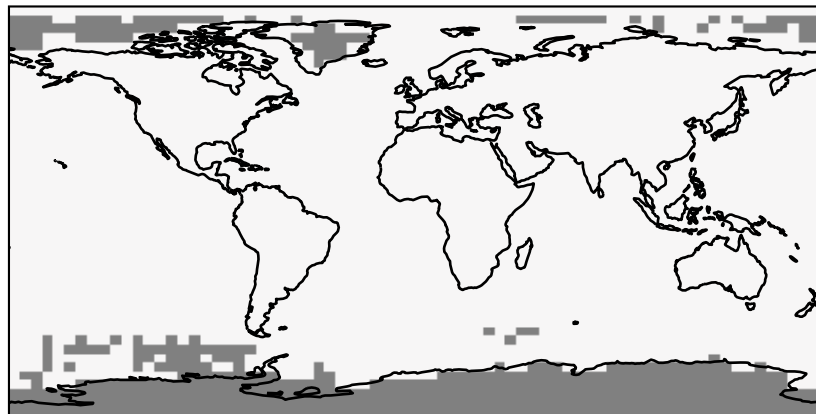
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

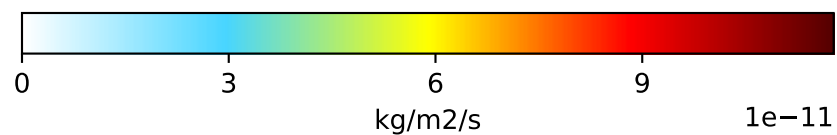
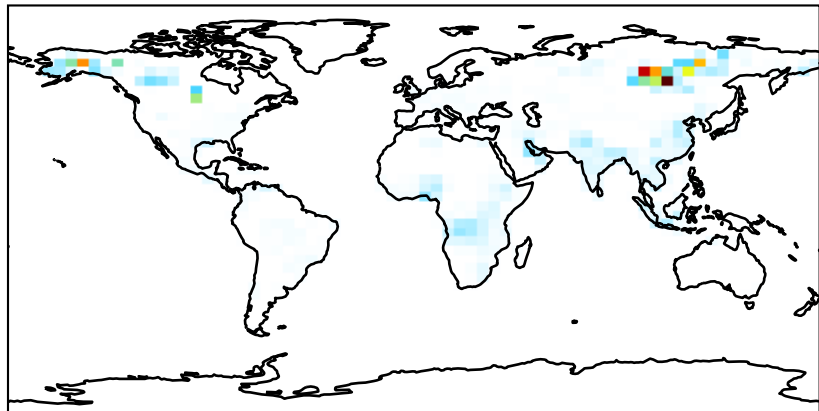


Ratio
Dev/Ref, Fixed Range

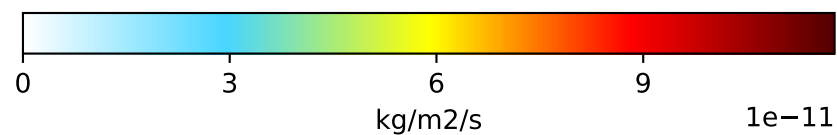
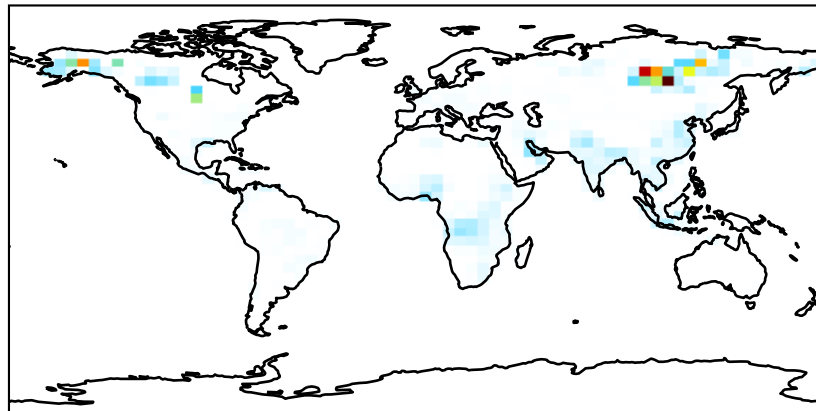


EmisBENZ_Total

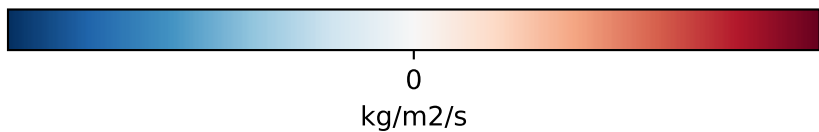
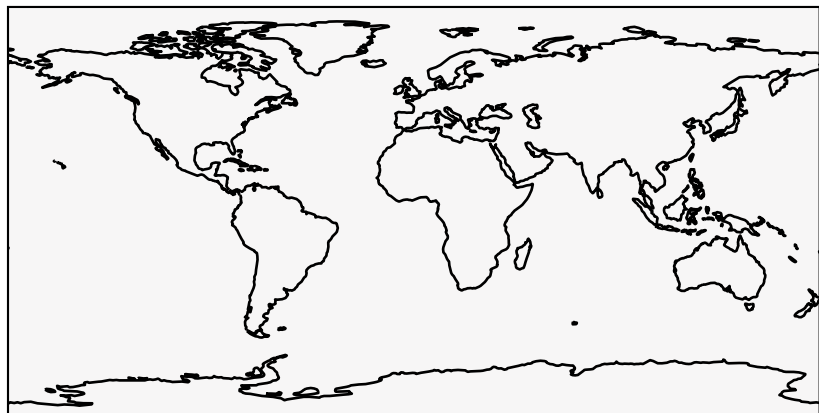
GCC_ref (Ref)
4.0x5.0



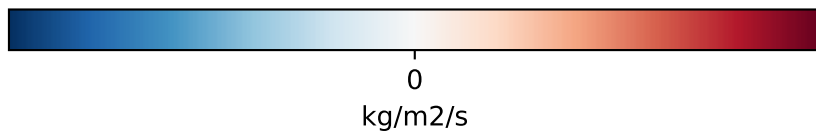
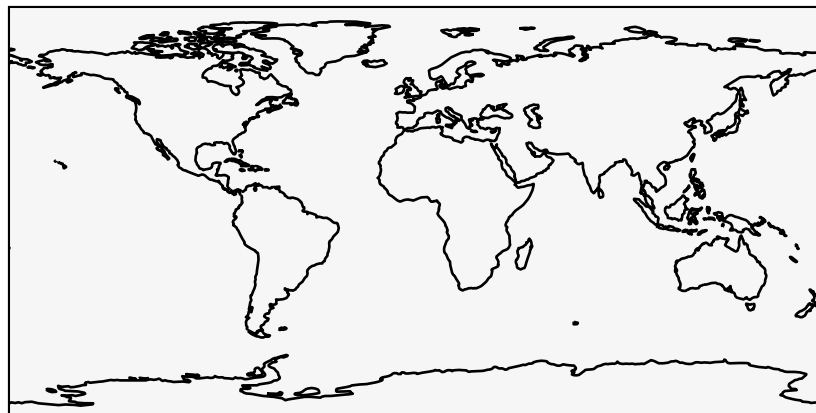
GCC_dev (Dev)
4.0x5.0



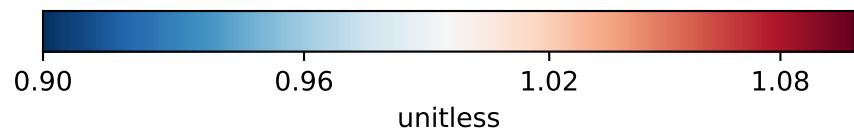
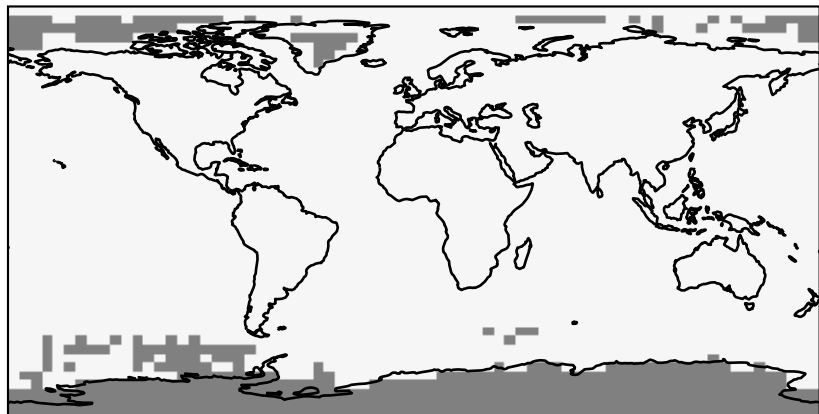
Difference
Dev - Ref, Dynamic Range



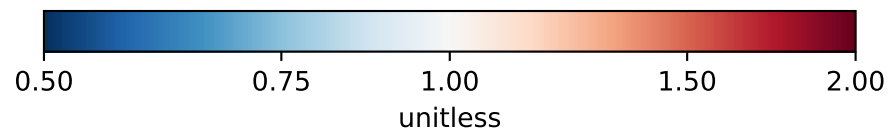
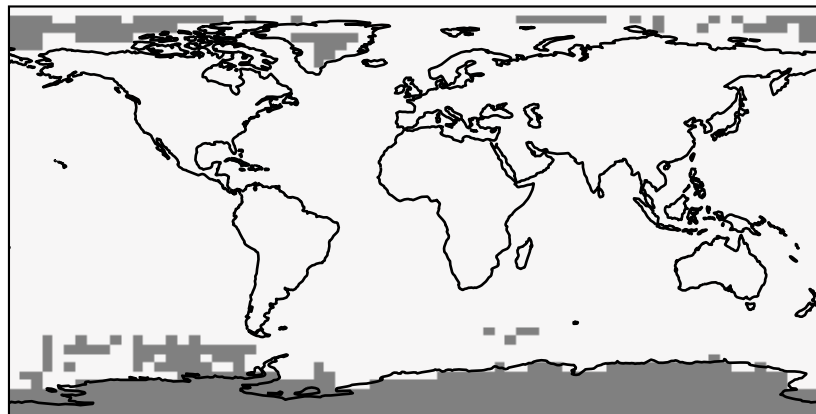
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

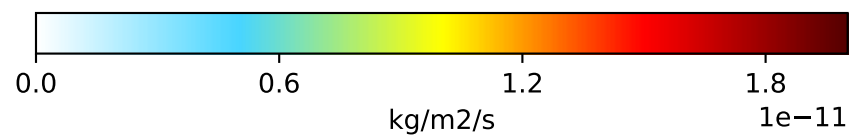
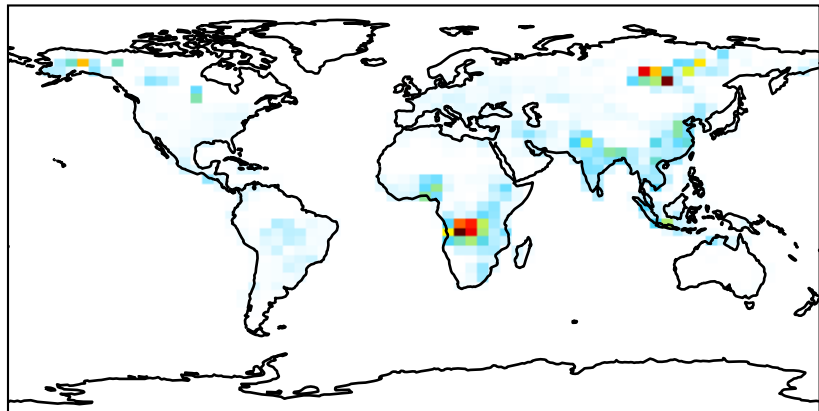


Ratio
Dev/Ref, Fixed Range

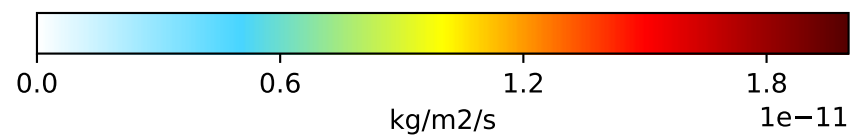
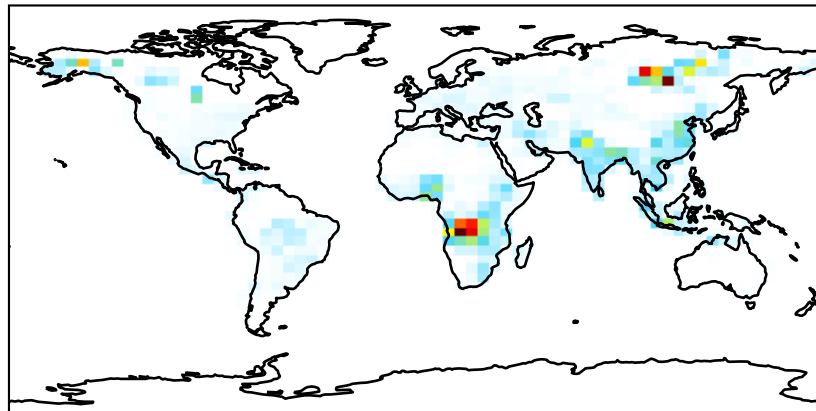


EmisC2H2_Total

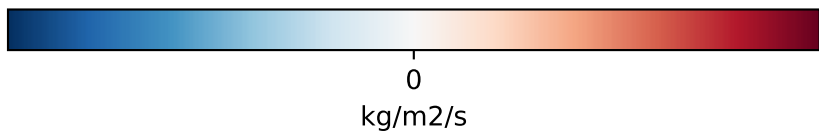
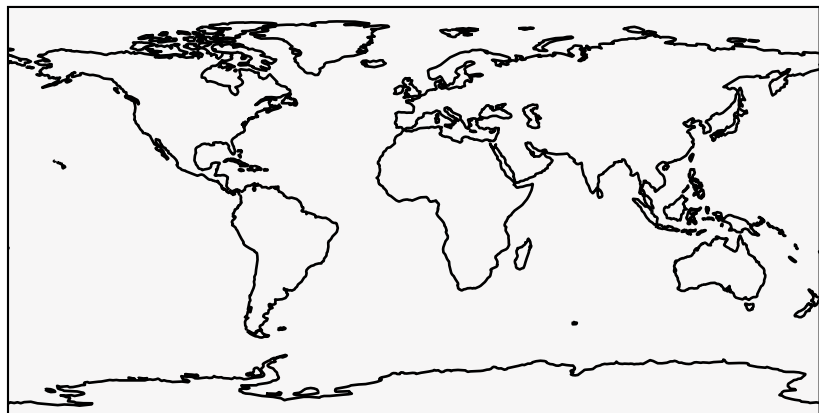
GCC_ref (Ref)
4.0x5.0



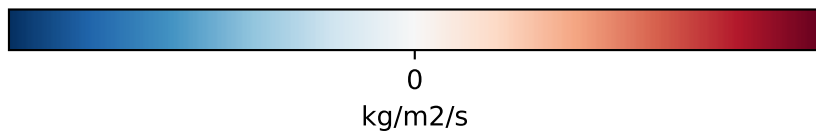
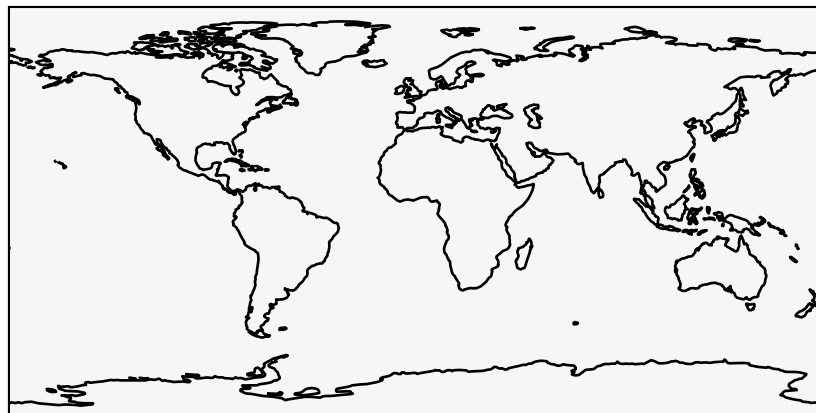
GCC_dev (Dev)
4.0x5.0



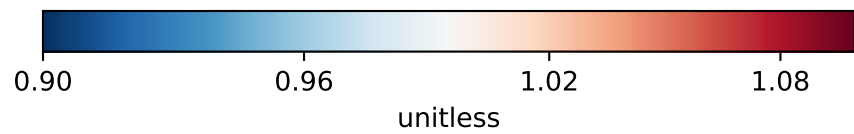
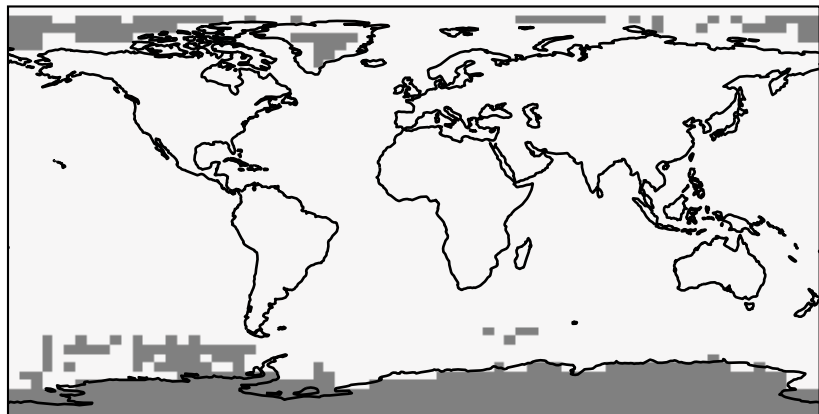
Difference
Dev - Ref, Dynamic Range



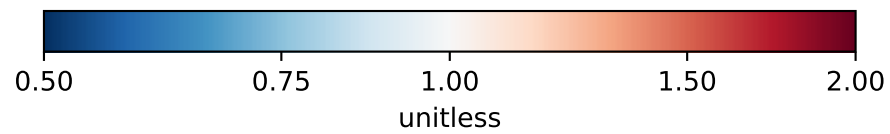
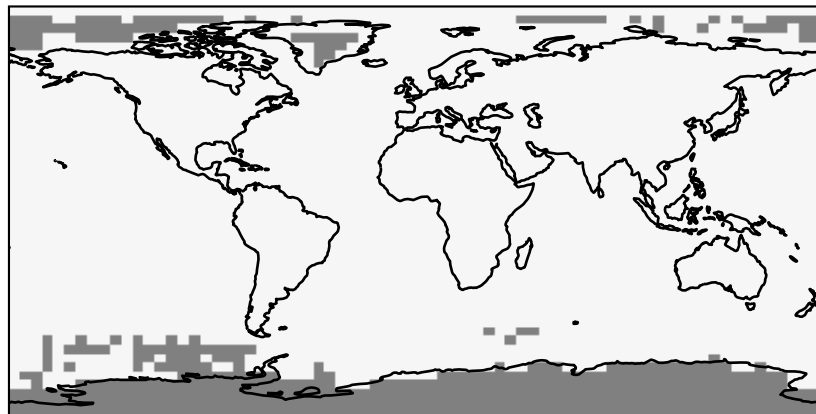
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

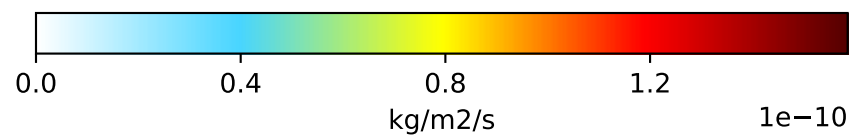
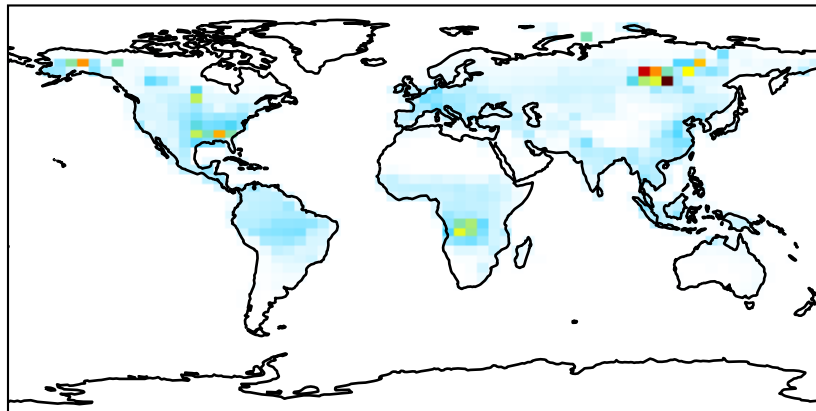


Ratio
Dev/Ref, Fixed Range

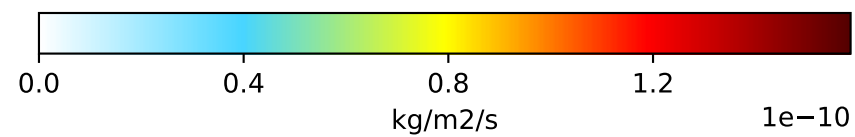
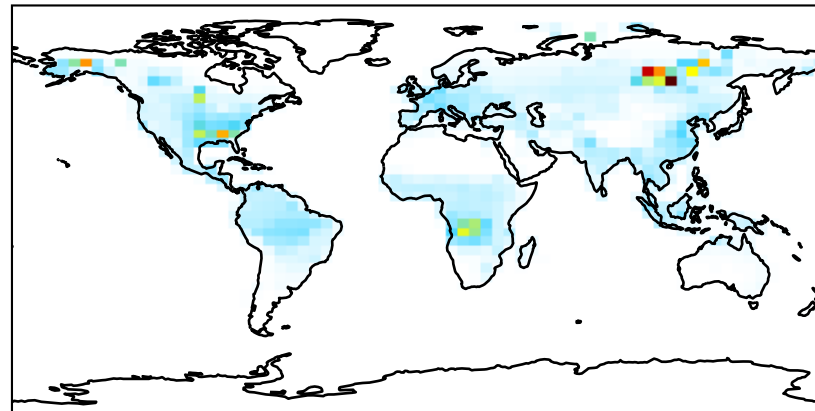


EmisC2H4_Total

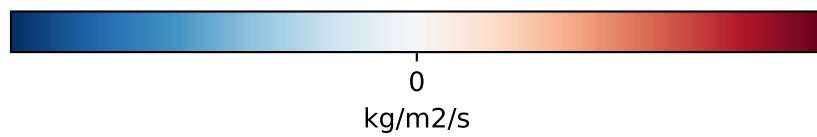
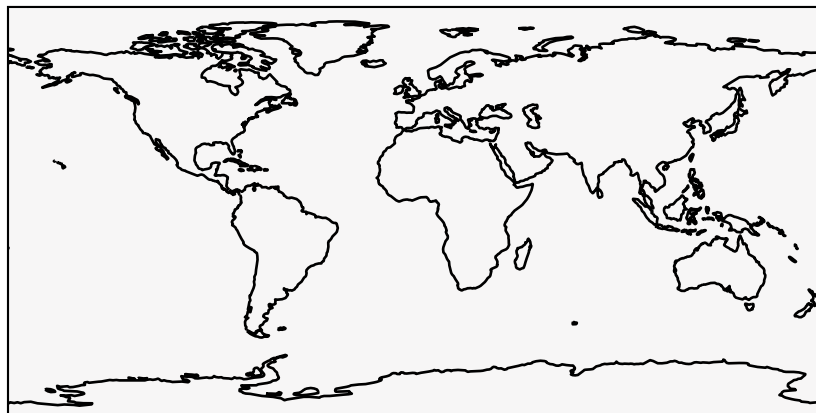
GCC_ref (Ref)
4.0x5.0



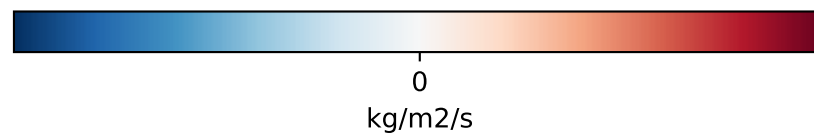
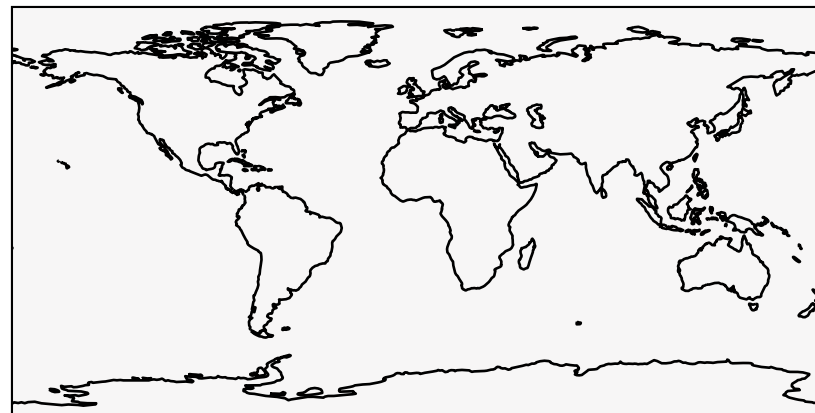
GCC_dev (Dev)
4.0x5.0



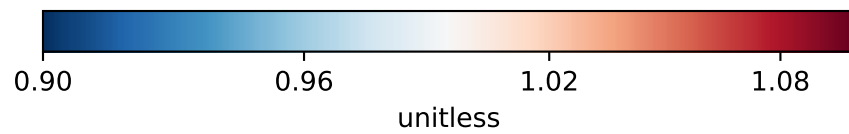
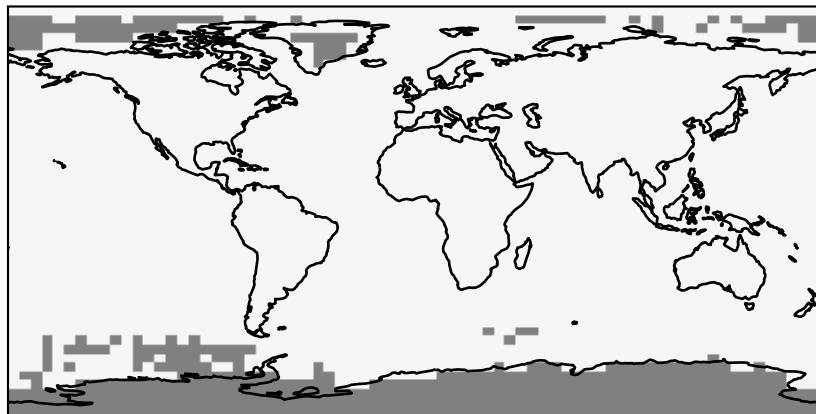
Difference
Dev - Ref, Dynamic Range



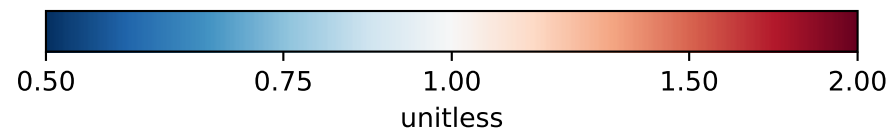
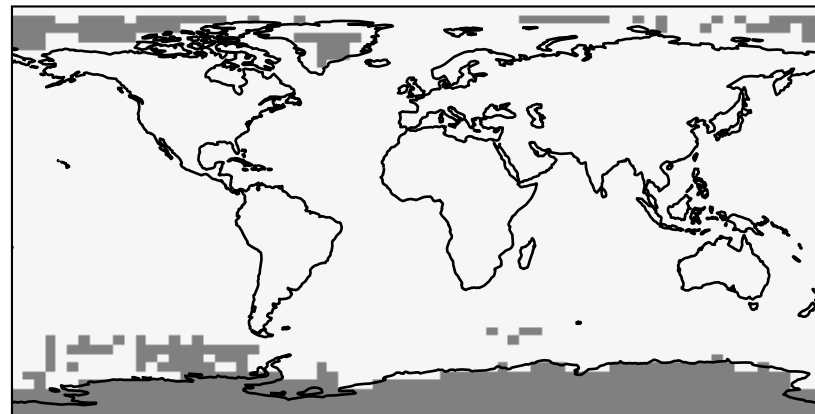
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

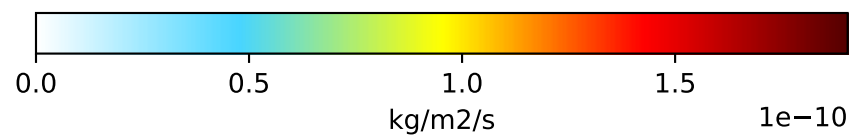
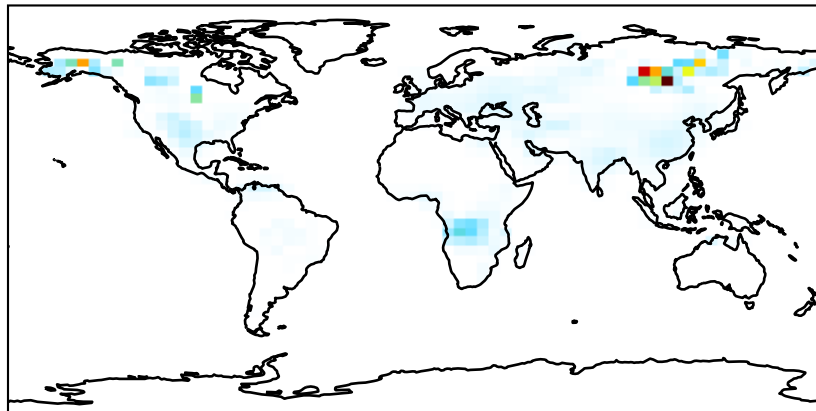


Ratio
Dev/Ref, Fixed Range

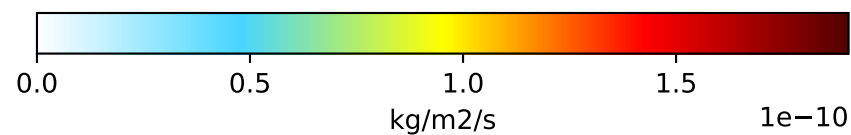
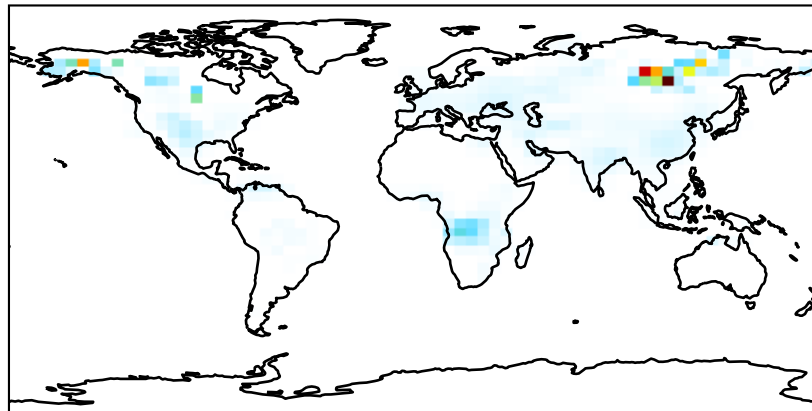


EmisC2H6_Total

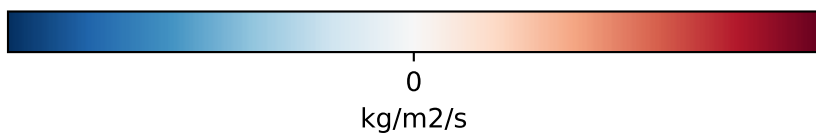
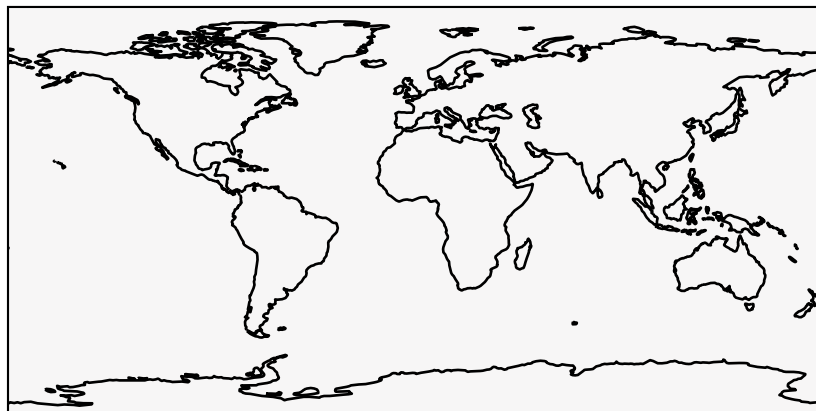
GCC_ref (Ref)
4.0x5.0



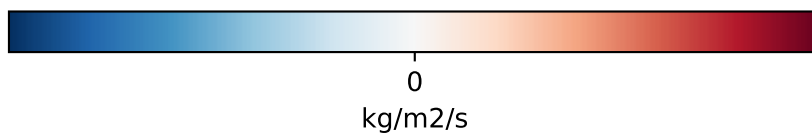
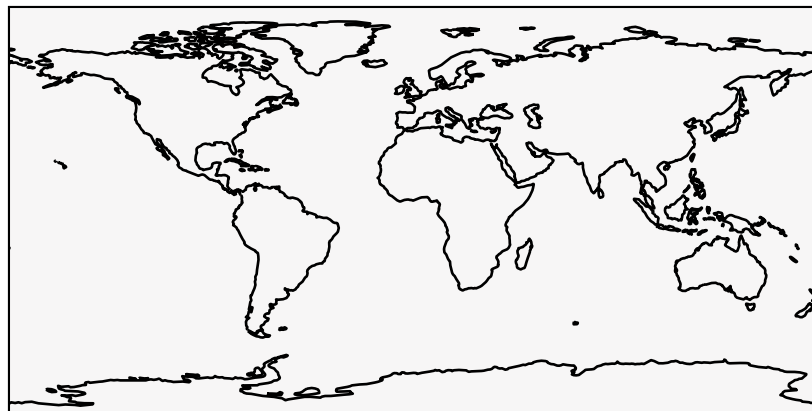
GCC_dev (Dev)
4.0x5.0



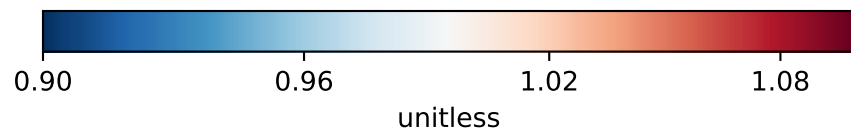
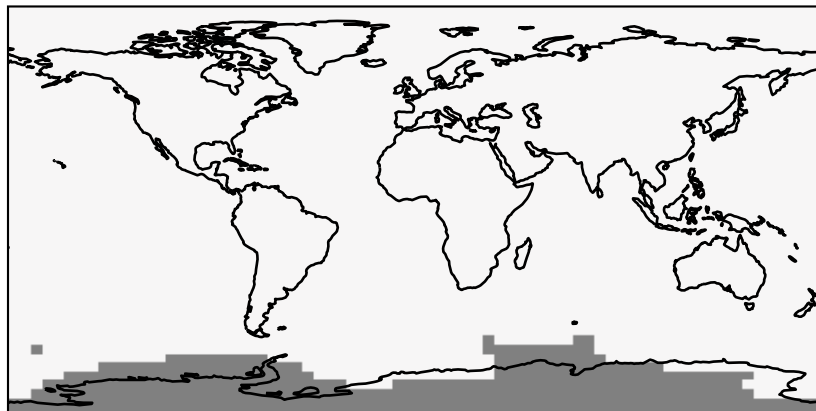
Difference
Dev - Ref, Dynamic Range



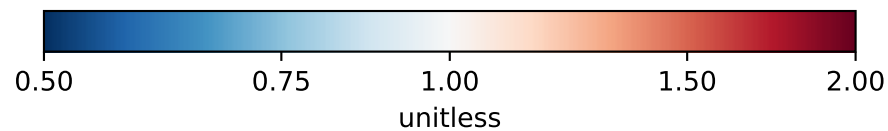
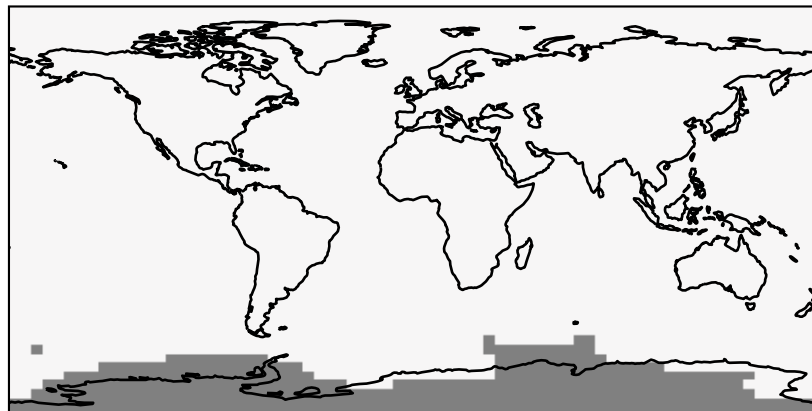
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

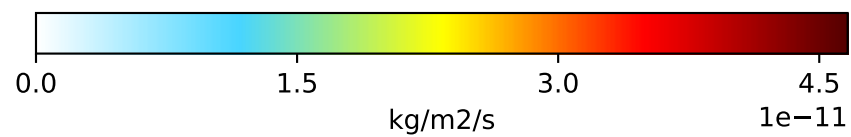
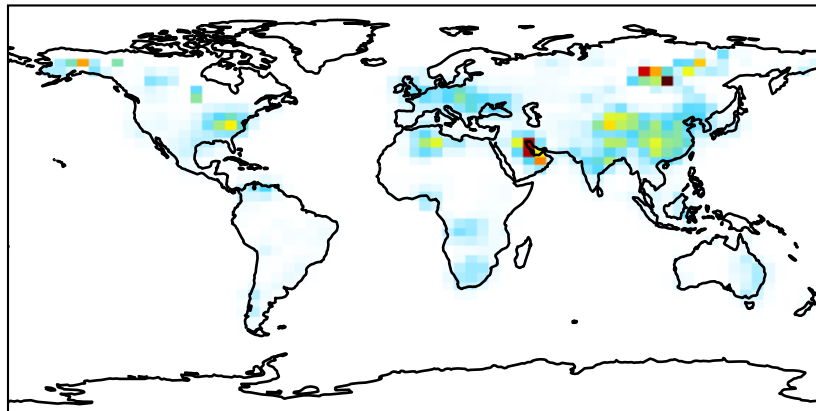


Ratio
Dev/Ref, Fixed Range

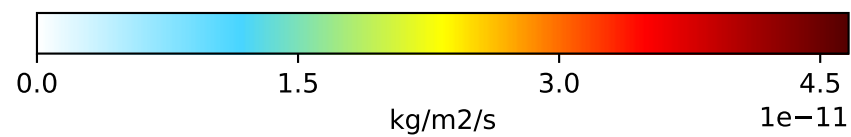
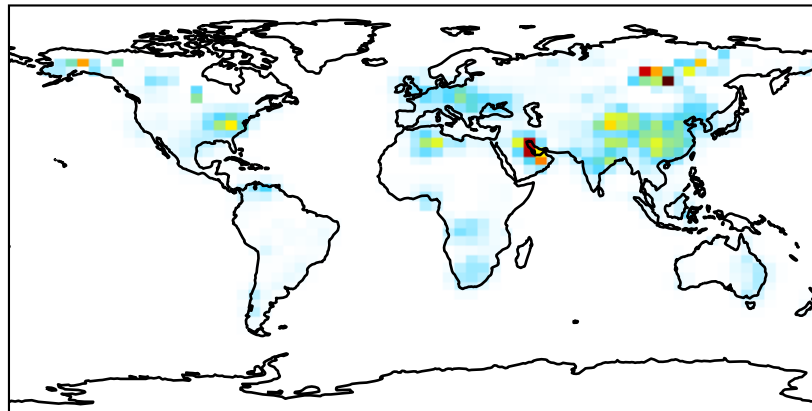


EmisC3H8_Total

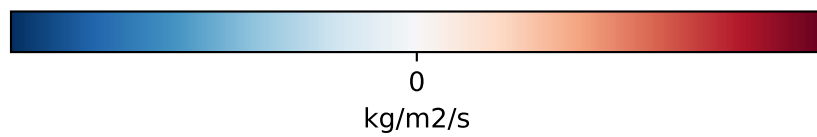
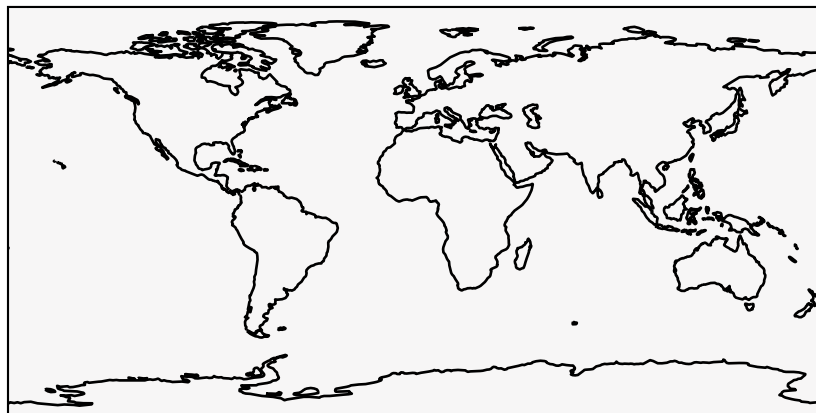
GCC_ref (Ref)
4.0x5.0



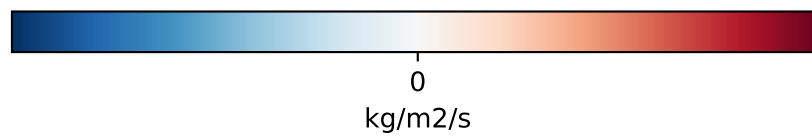
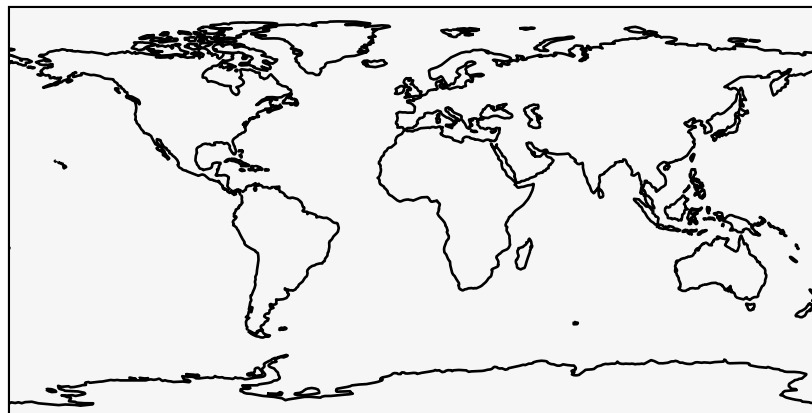
GCC_dev (Dev)
4.0x5.0



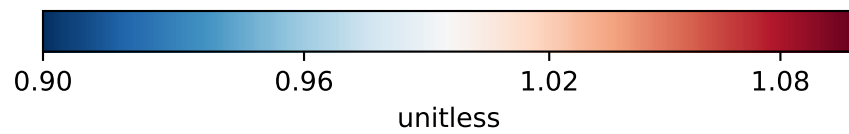
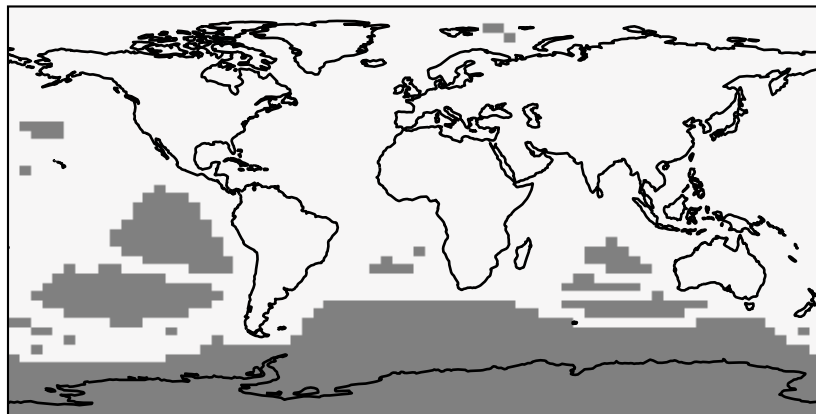
Difference
Dev - Ref, Dynamic Range



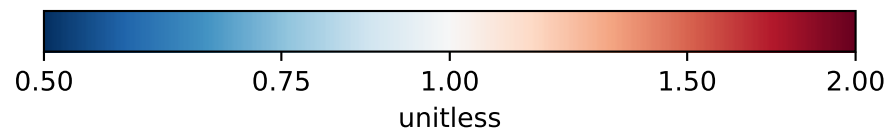
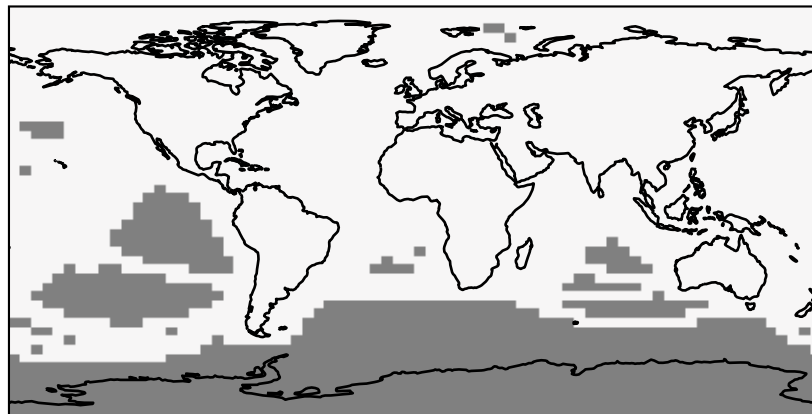
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

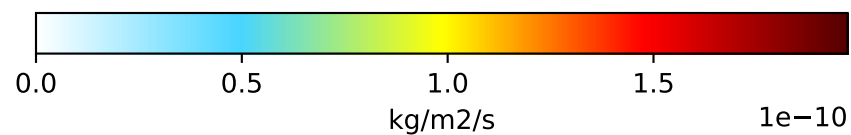
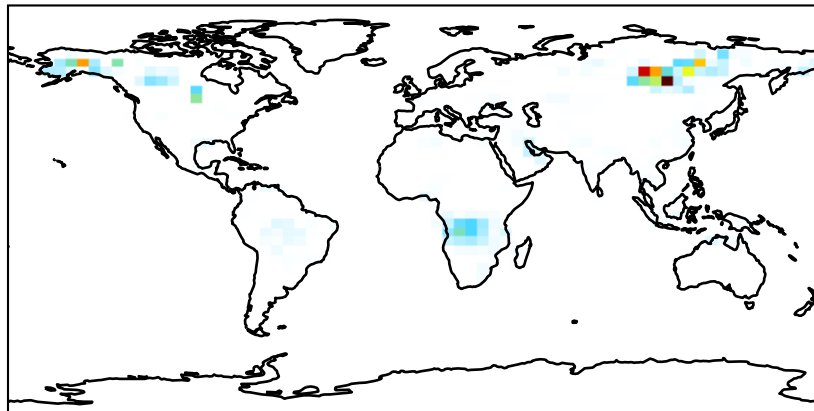


Ratio
Dev/Ref, Fixed Range

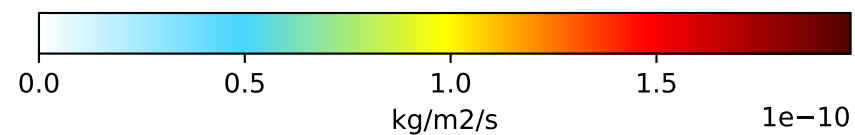
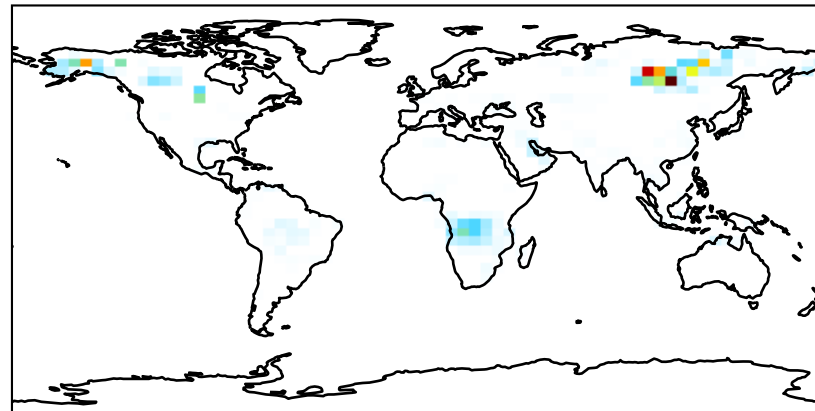


EmisCH2O_Total

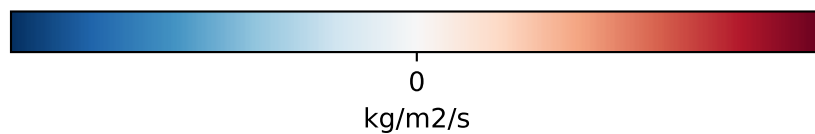
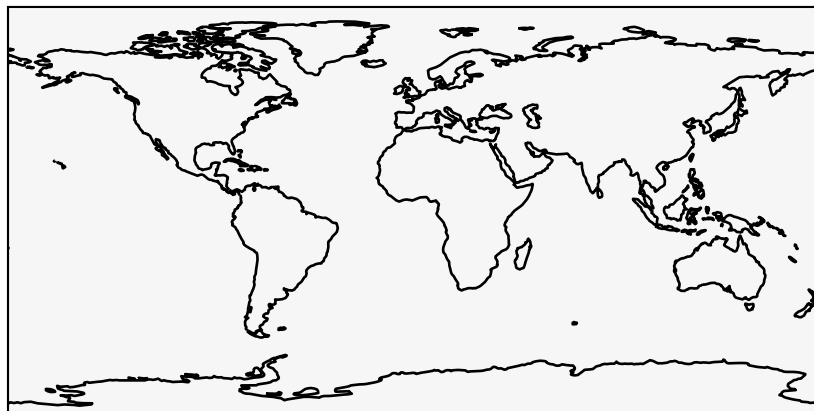
GCC_ref (Ref)
4.0x5.0



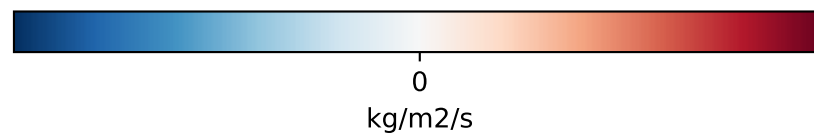
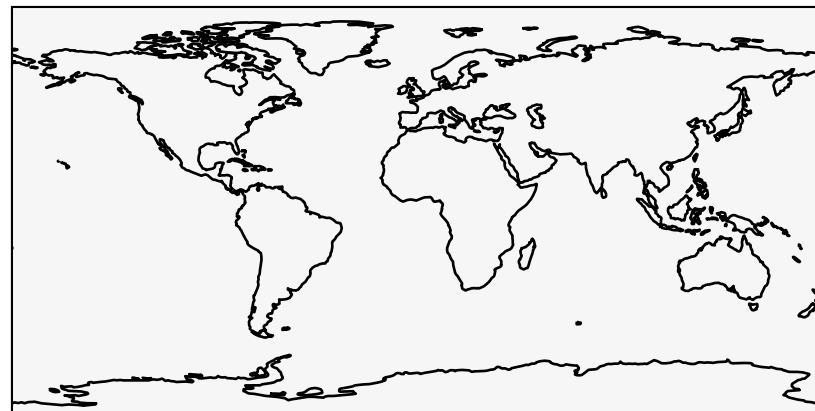
GCC_dev (Dev)
4.0x5.0



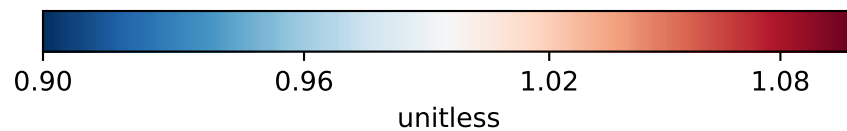
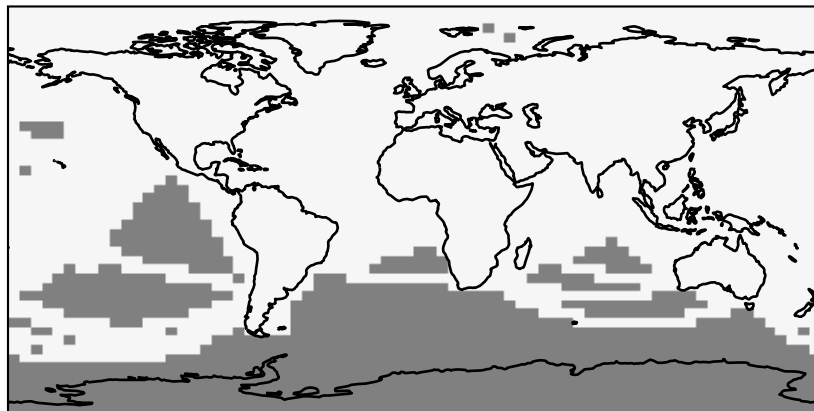
Difference
Dev - Ref, Dynamic Range



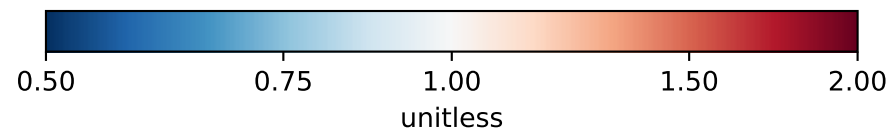
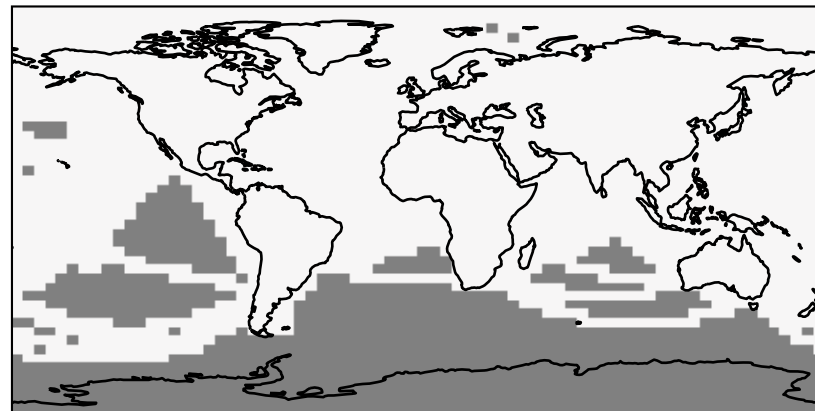
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

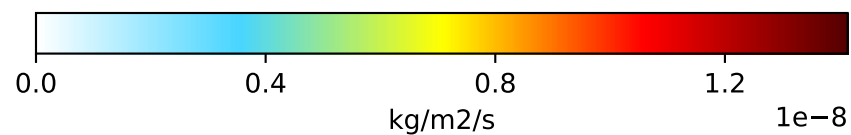
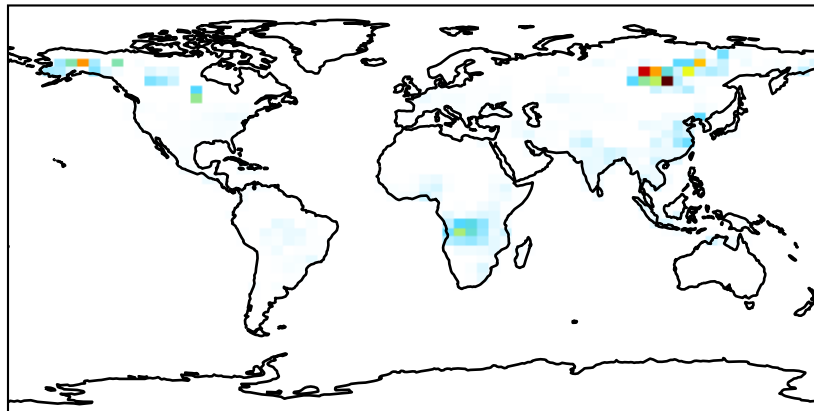


Ratio
Dev/Ref, Fixed Range

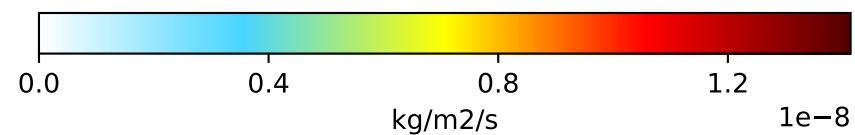
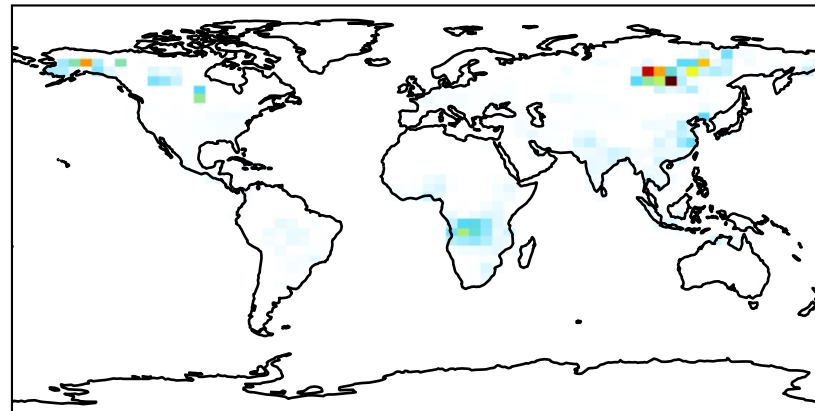


EmisCO_Total

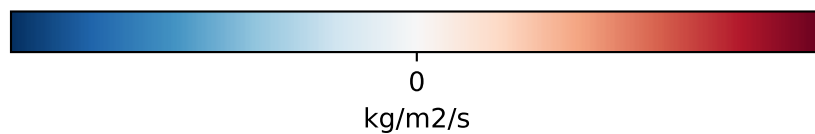
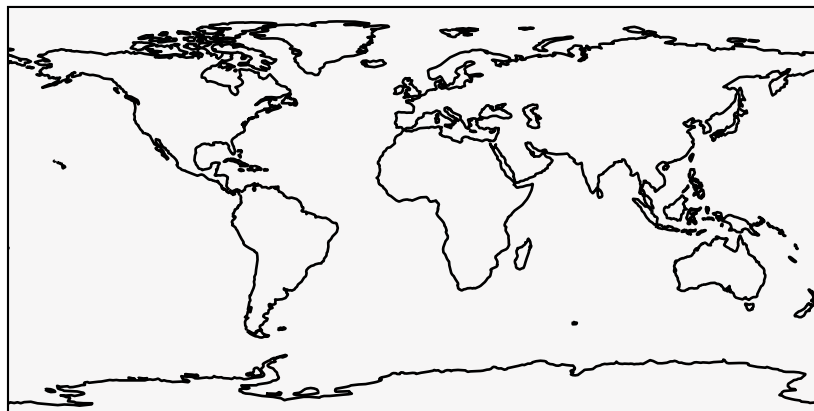
GCC_ref (Ref)
4.0x5.0



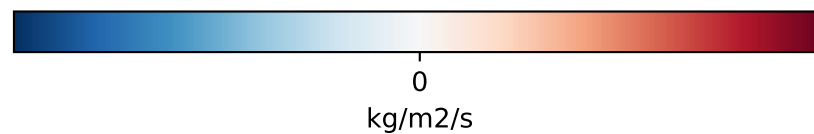
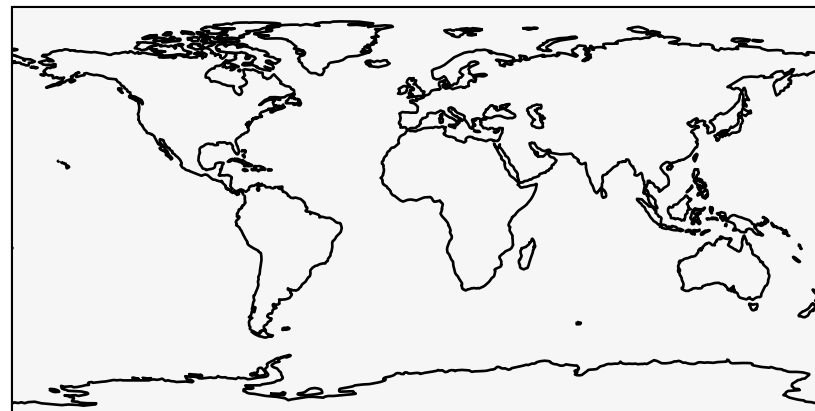
GCC_dev (Dev)
4.0x5.0



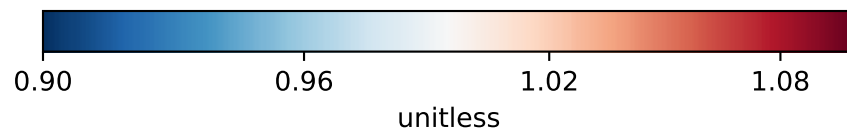
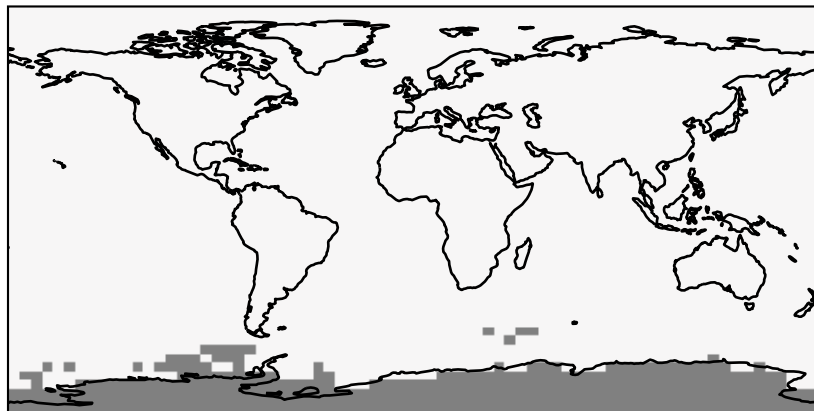
Difference
Dev - Ref, Dynamic Range



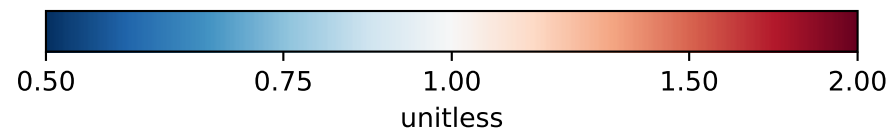
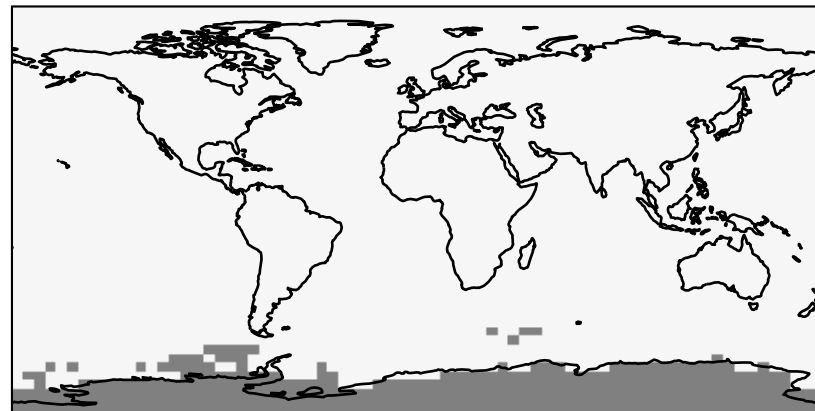
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

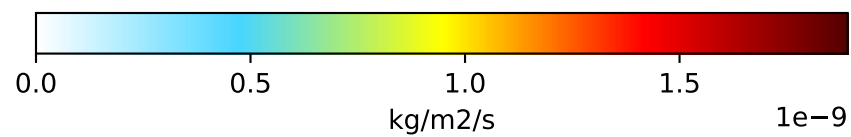
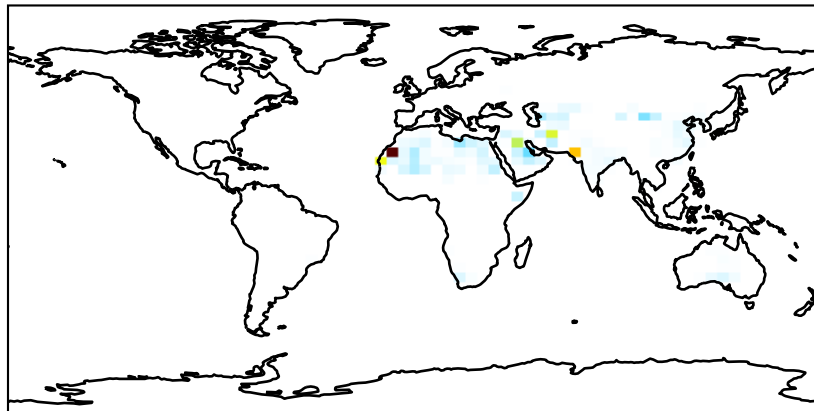


Ratio
Dev/Ref, Fixed Range

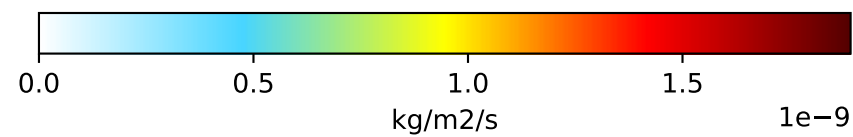
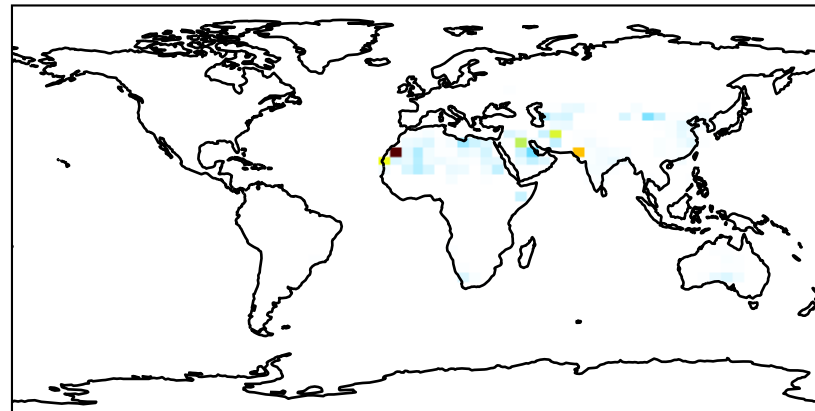


EmisDST1_Total

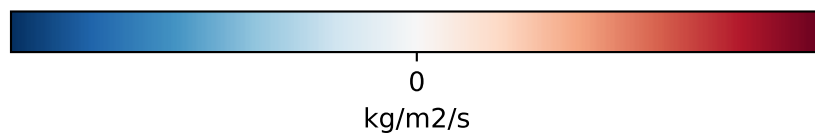
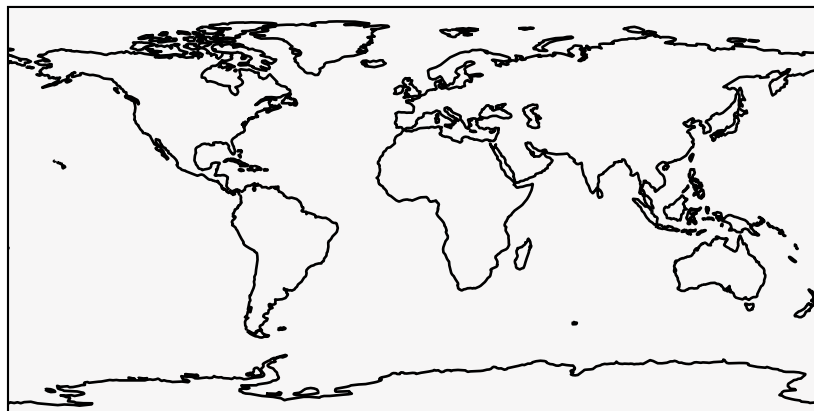
GCC_ref (Ref)
4.0x5.0



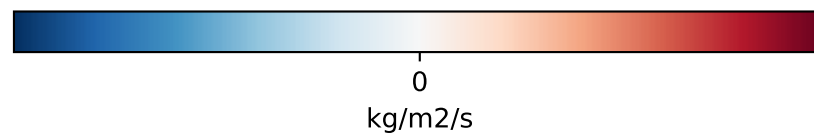
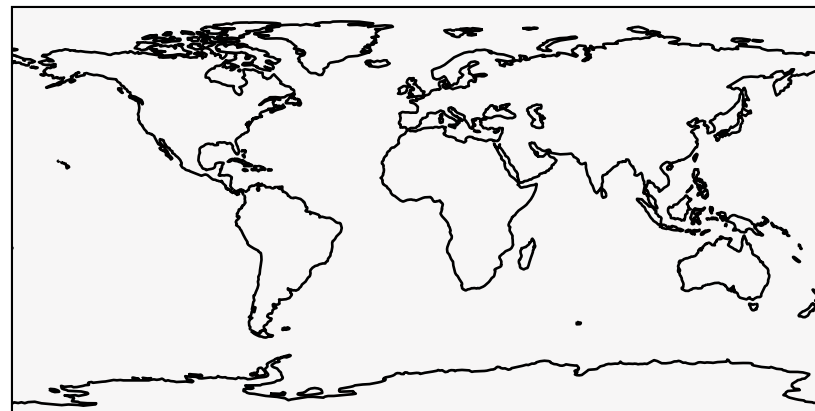
GCC_dev (Dev)
4.0x5.0



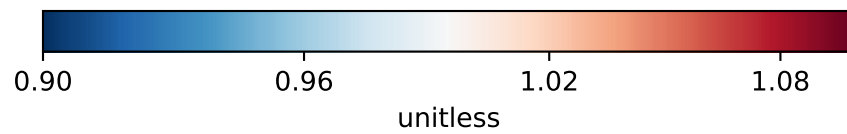
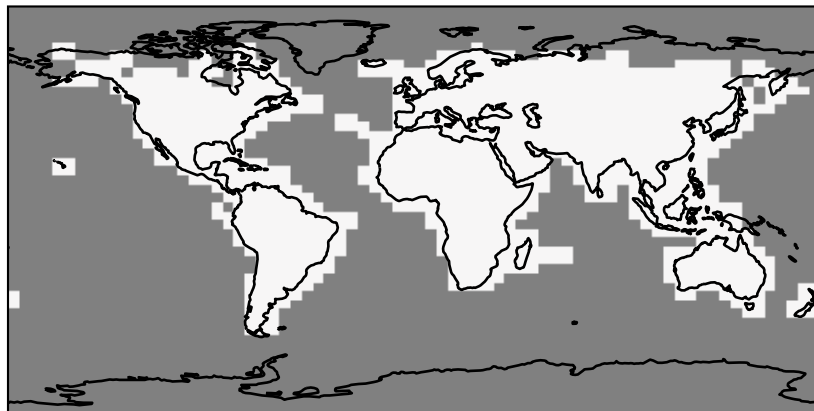
Difference
Dev - Ref, Dynamic Range



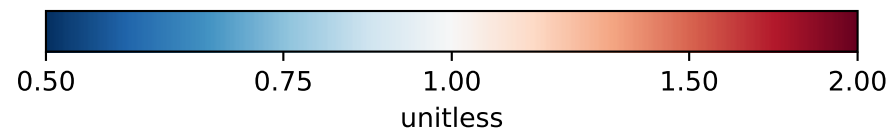
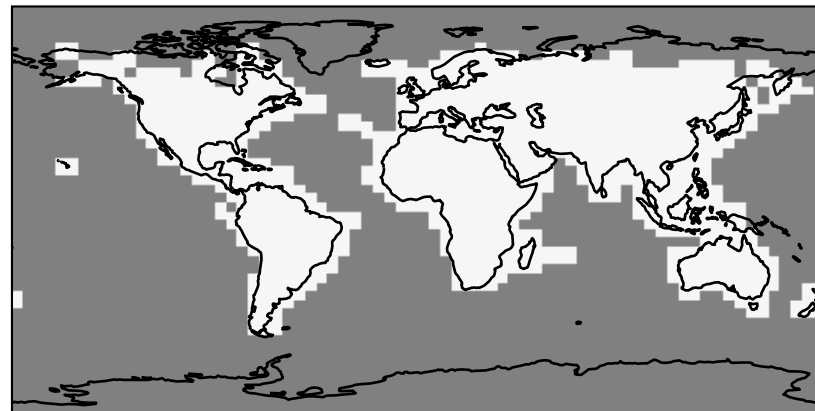
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

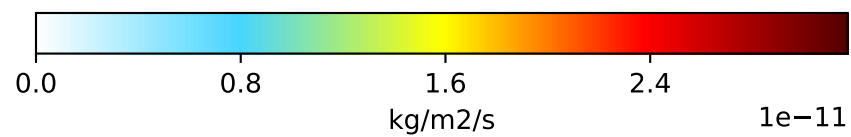
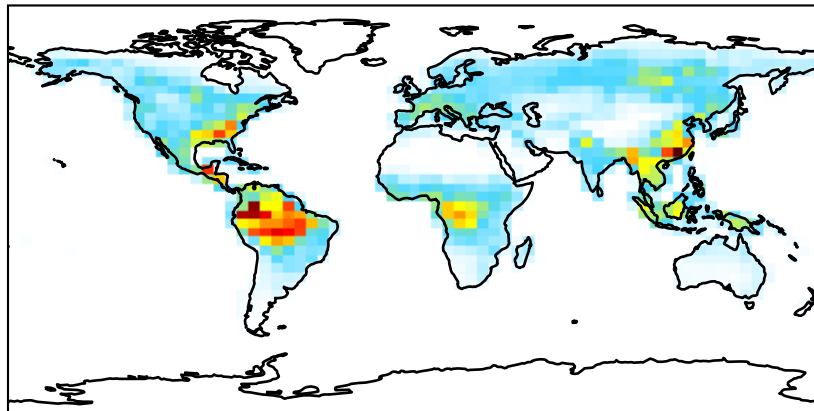


Ratio
Dev/Ref, Fixed Range

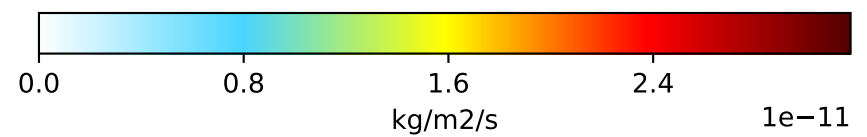
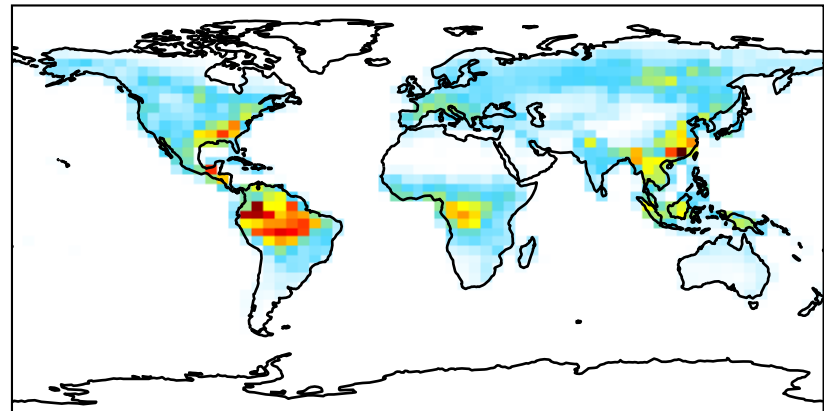


EmisEOH_Total

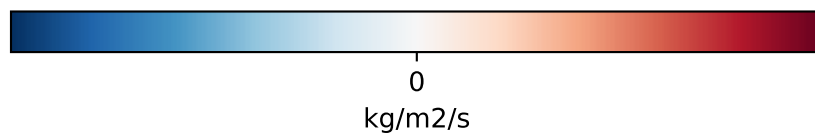
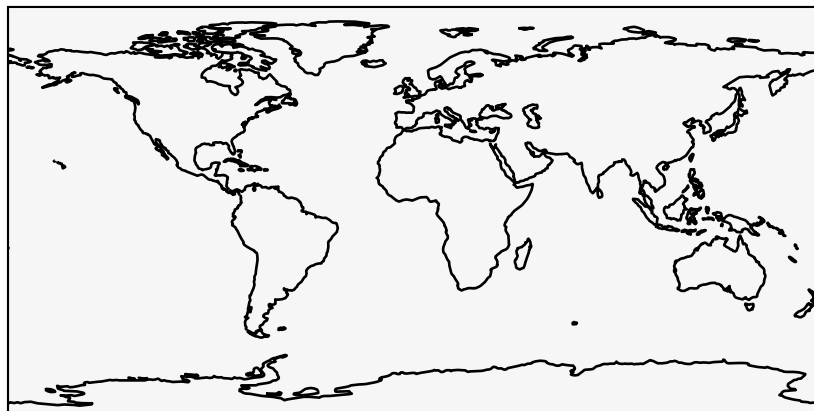
GCC_ref (Ref)
4.0x5.0



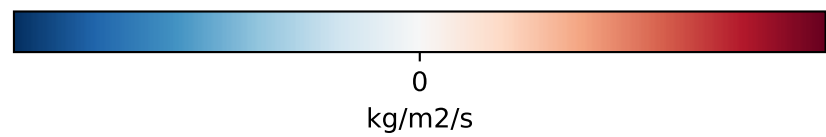
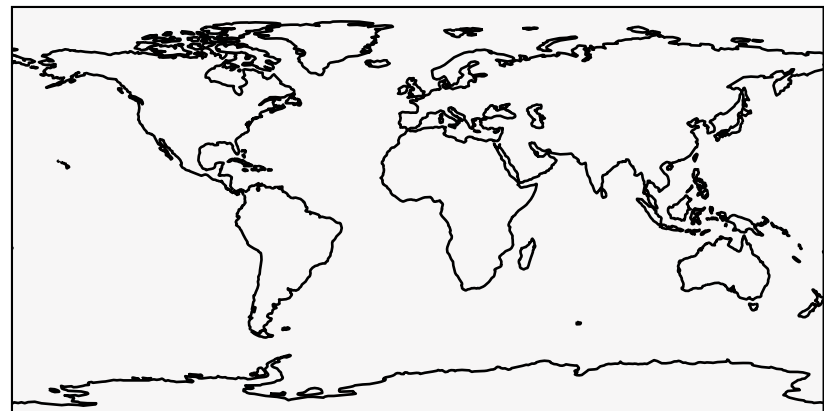
GCC_dev (Dev)
4.0x5.0



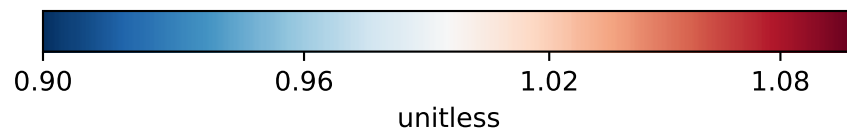
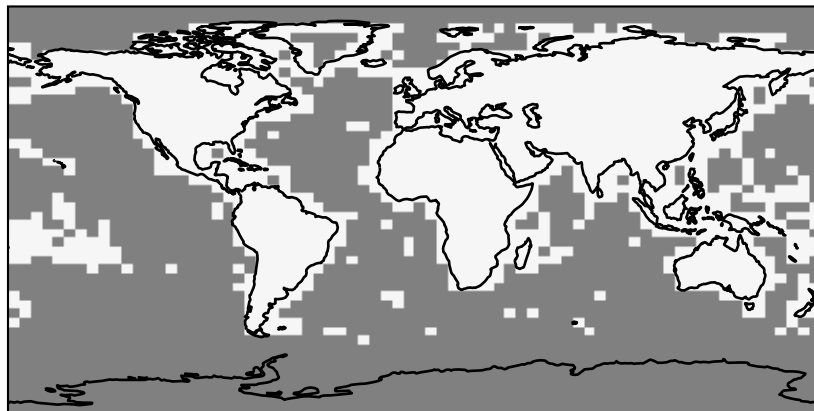
Difference
Dev - Ref, Dynamic Range



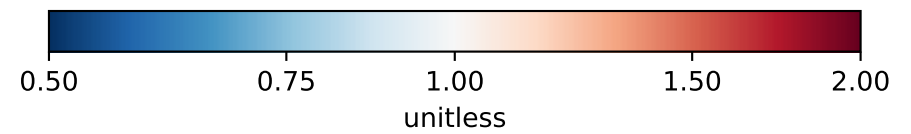
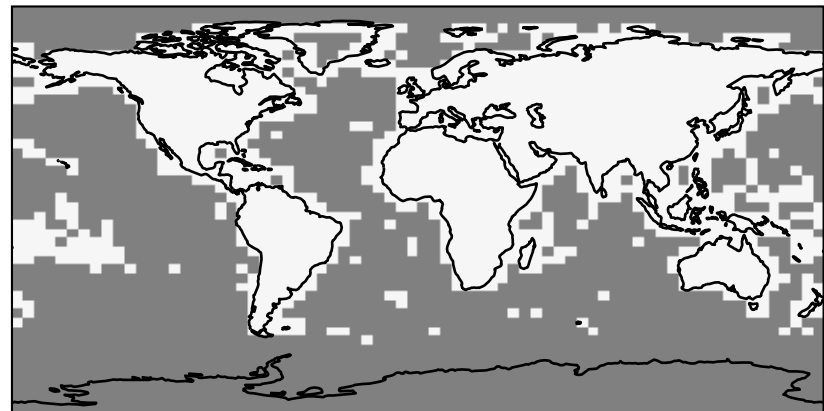
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

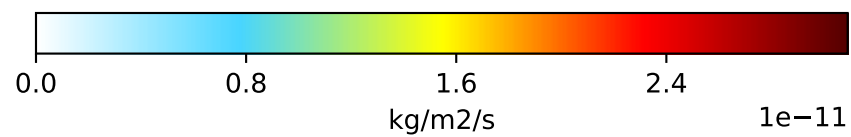
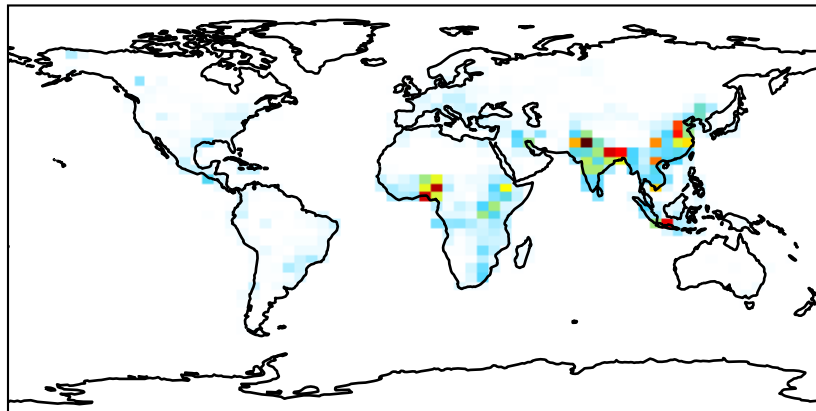


Ratio
Dev/Ref, Fixed Range

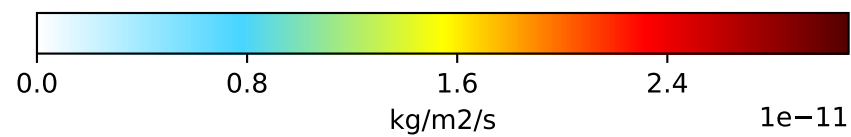
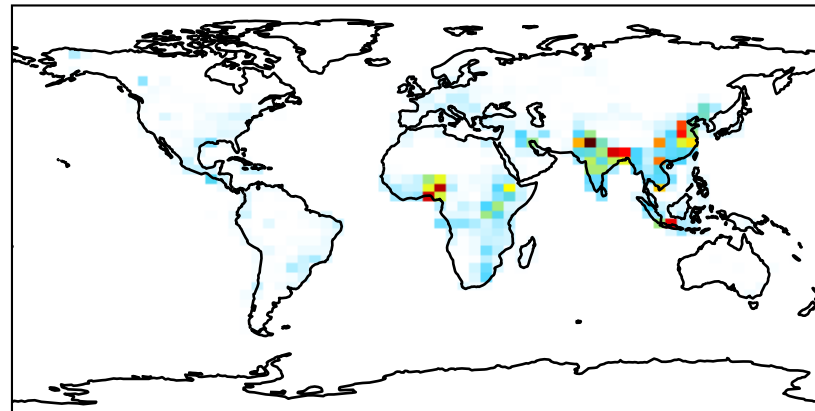


EmisHCOOH_Total

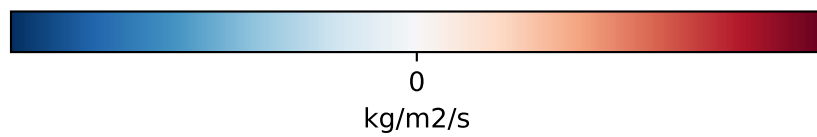
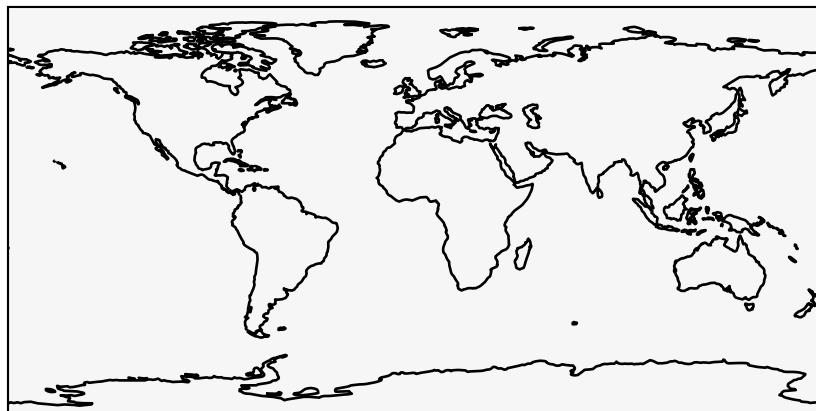
GCC_ref (Ref)
4.0x5.0



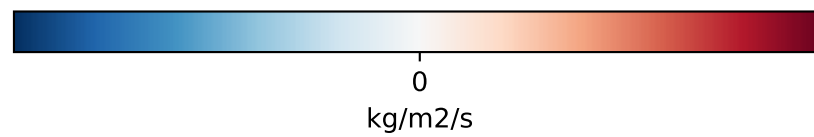
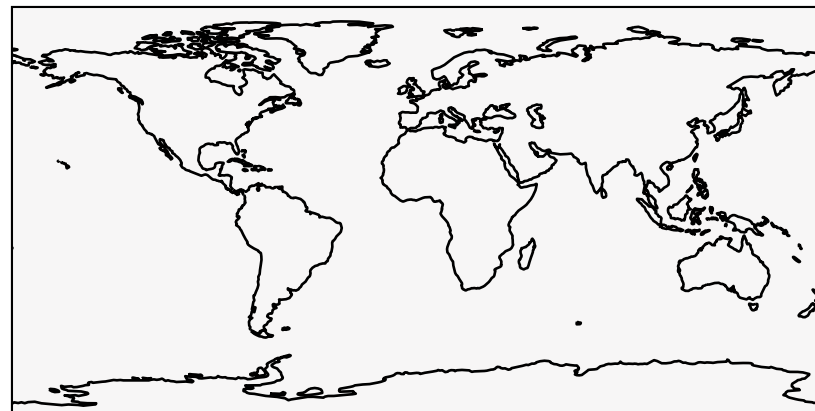
GCC_dev (Dev)
4.0x5.0



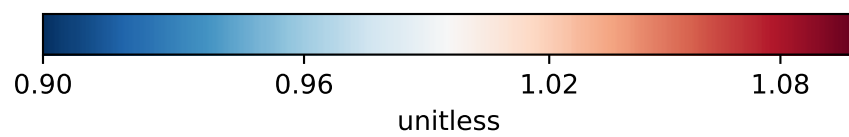
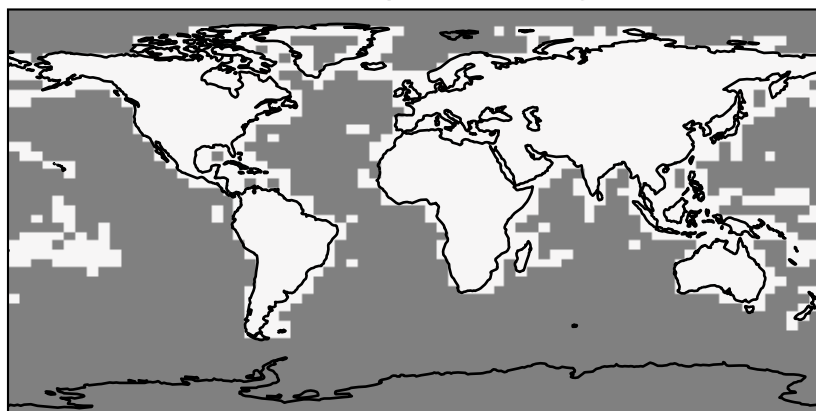
Difference
Dev - Ref, Dynamic Range



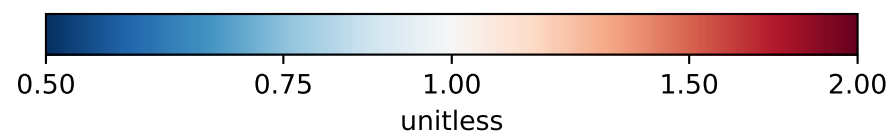
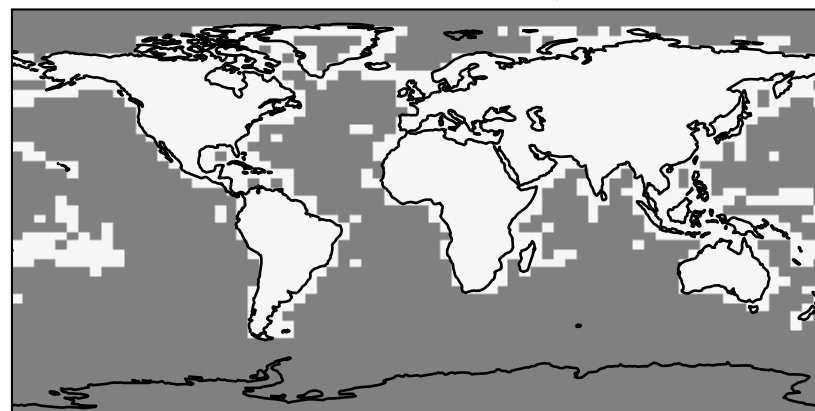
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

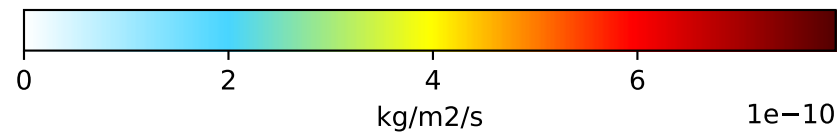
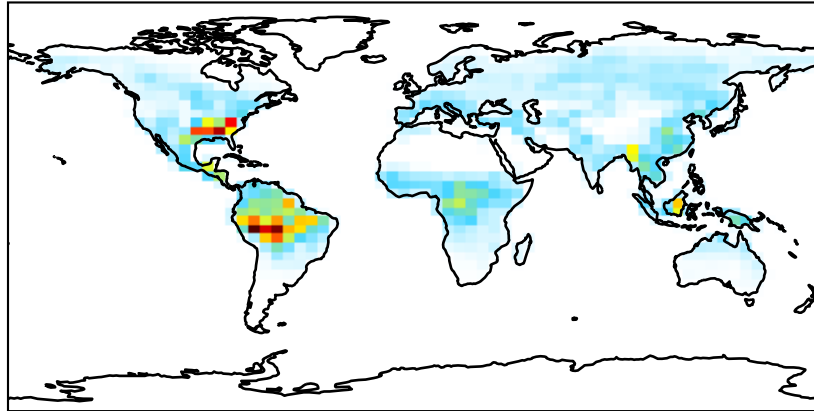


Ratio
Dev/Ref, Fixed Range

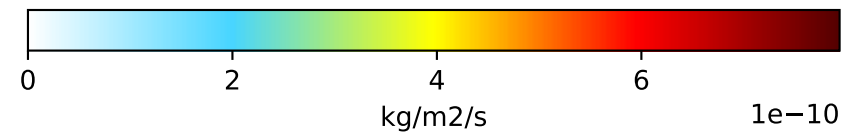
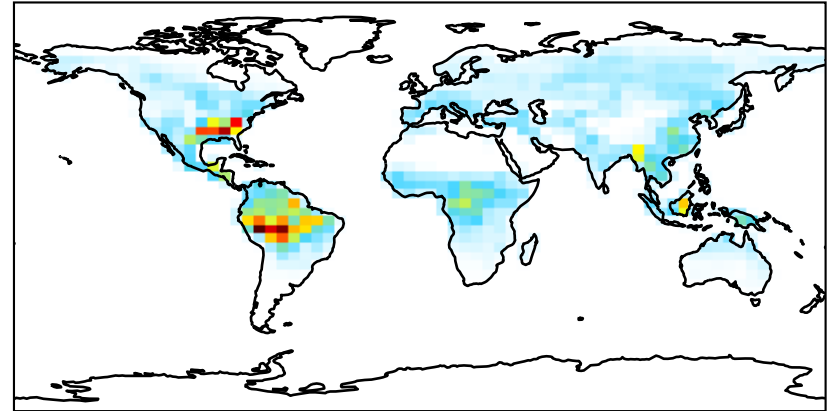


EmisISOP_Total

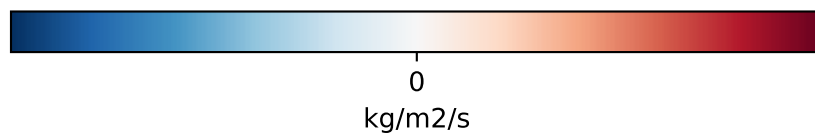
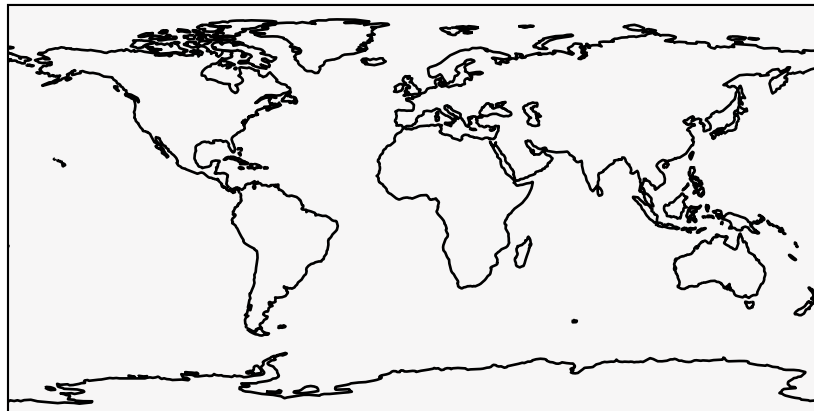
GCC_ref (Ref)
4.0x5.0



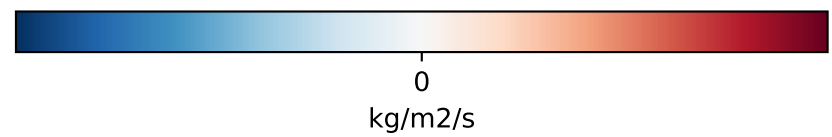
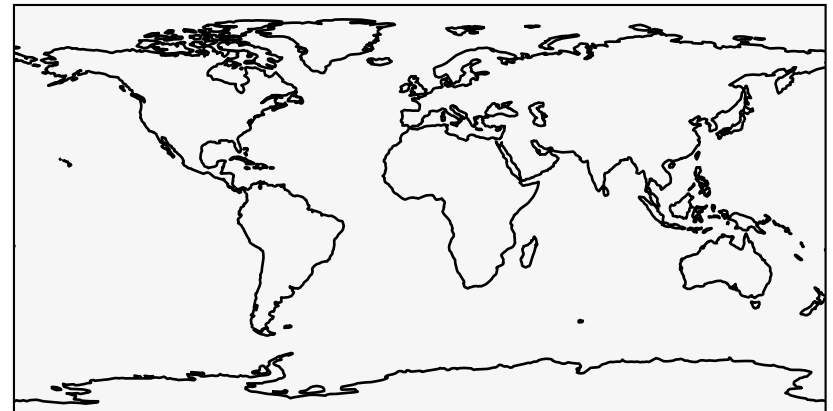
GCC_dev (Dev)
4.0x5.0



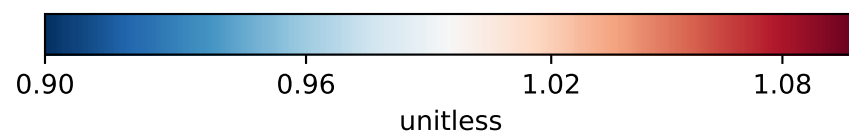
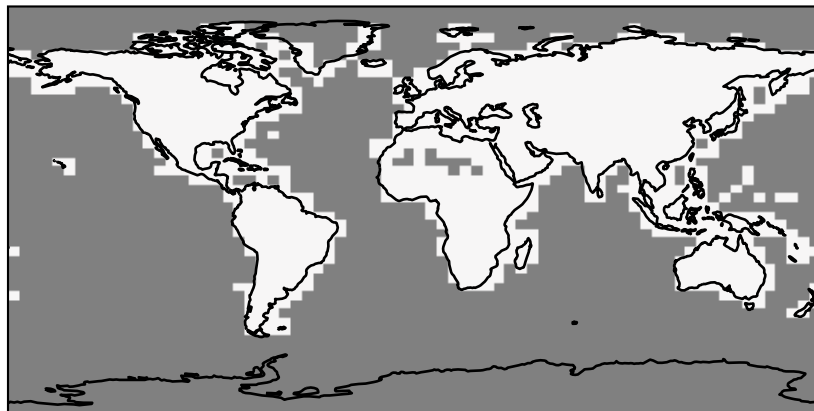
Difference
Dev - Ref, Dynamic Range



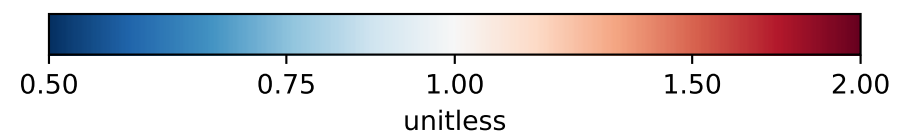
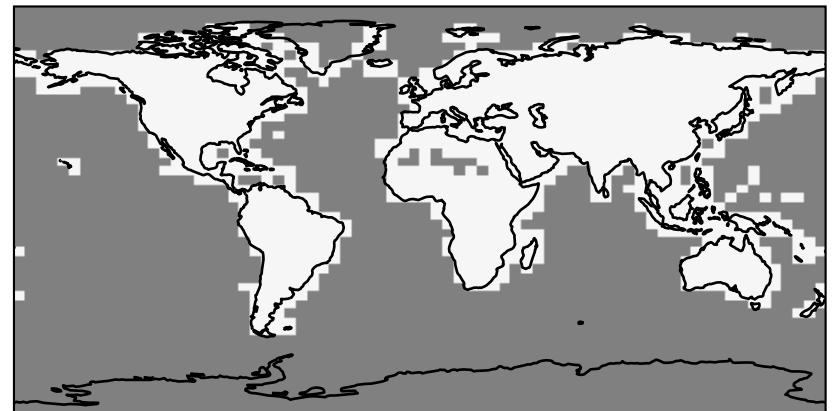
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

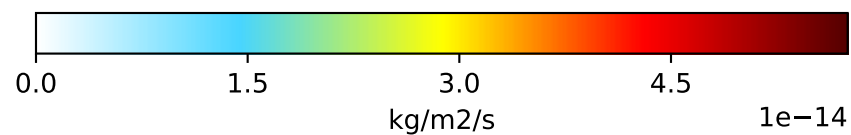
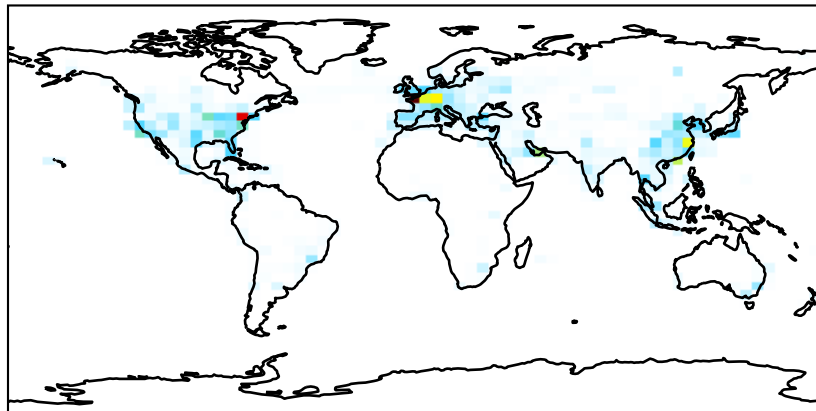


Ratio
Dev/Ref, Fixed Range

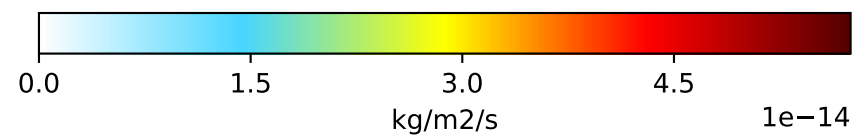
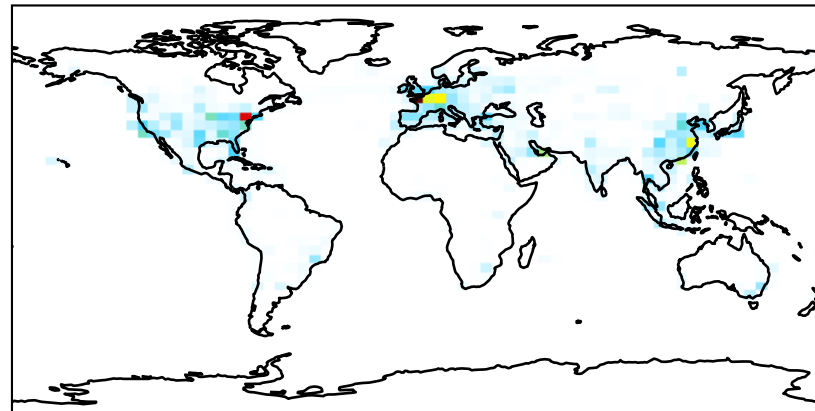


EmisMACR_Total

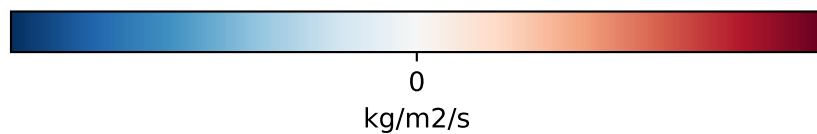
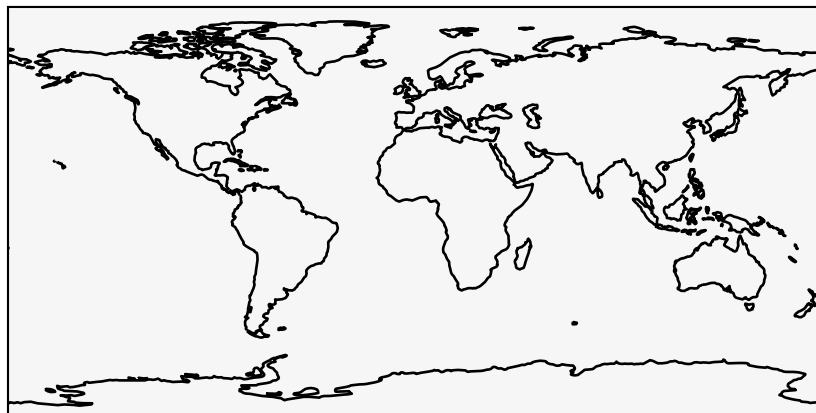
GCC_ref (Ref)
4.0x5.0



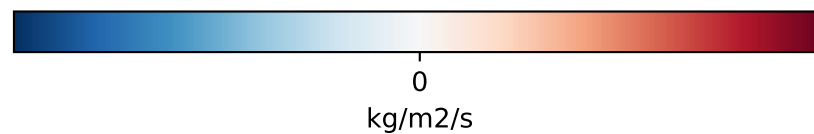
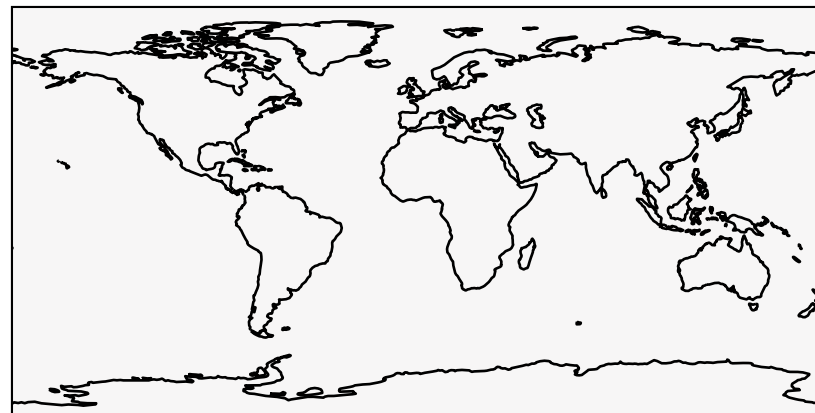
GCC_dev (Dev)
4.0x5.0



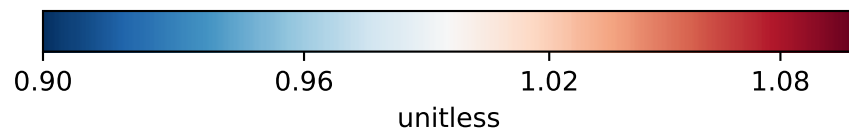
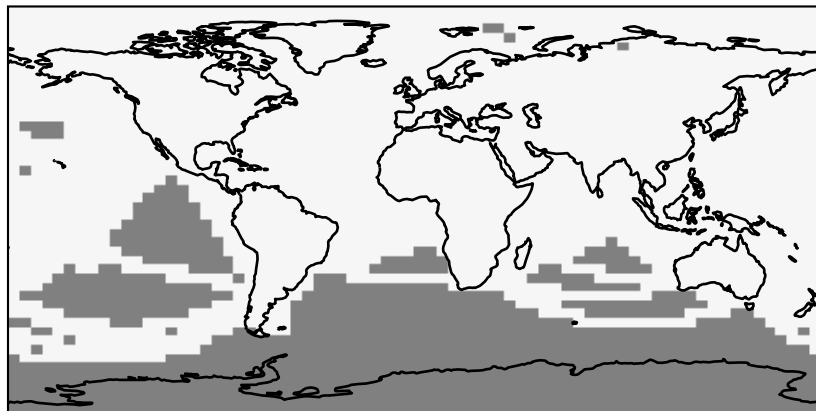
Difference
Dev - Ref, Dynamic Range



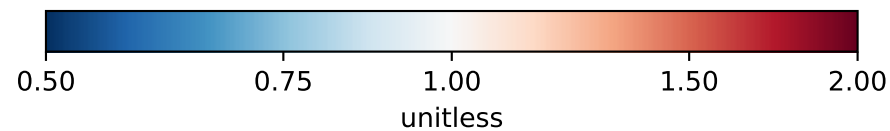
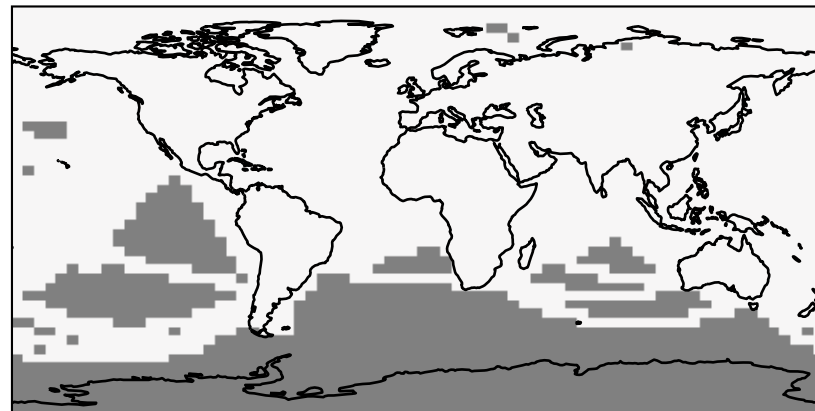
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

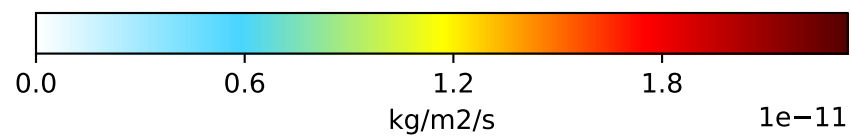
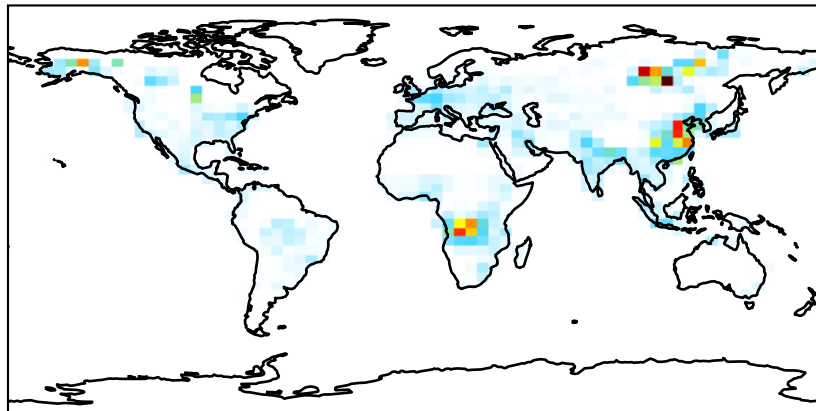


Ratio
Dev/Ref, Fixed Range

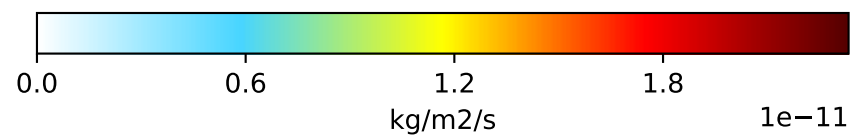
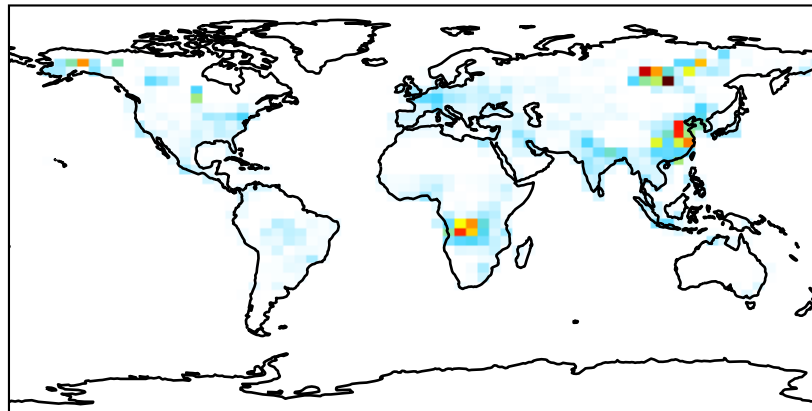


EmisMEK_Total

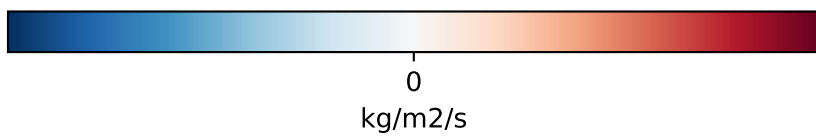
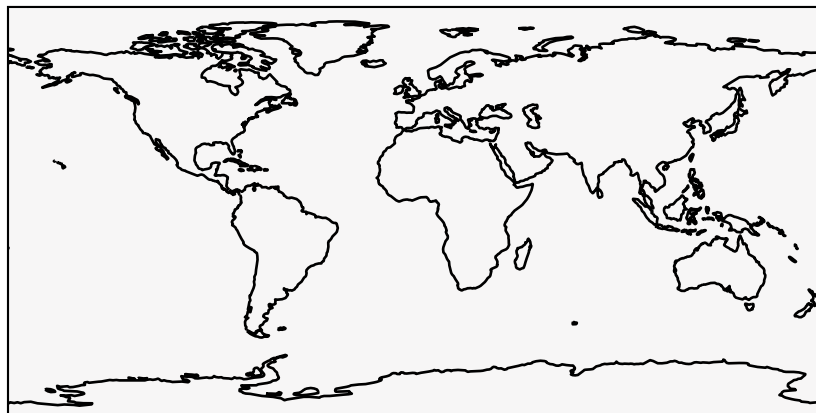
GCC_ref (Ref)
4.0x5.0



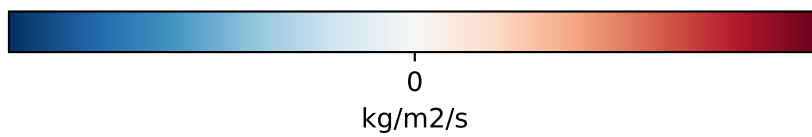
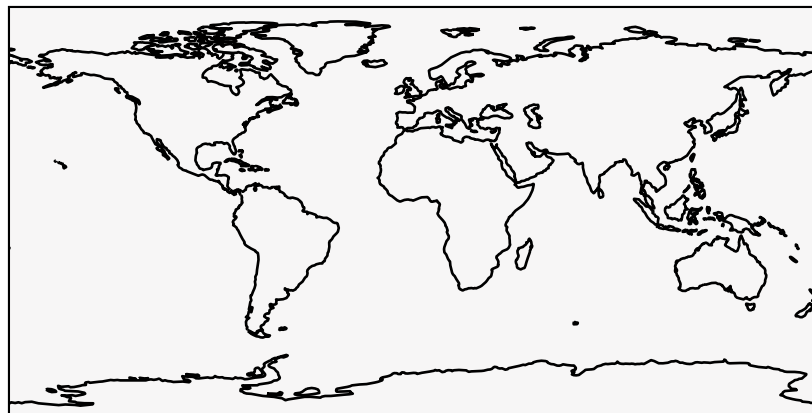
GCC_dev (Dev)
4.0x5.0



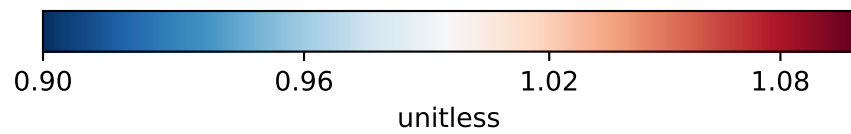
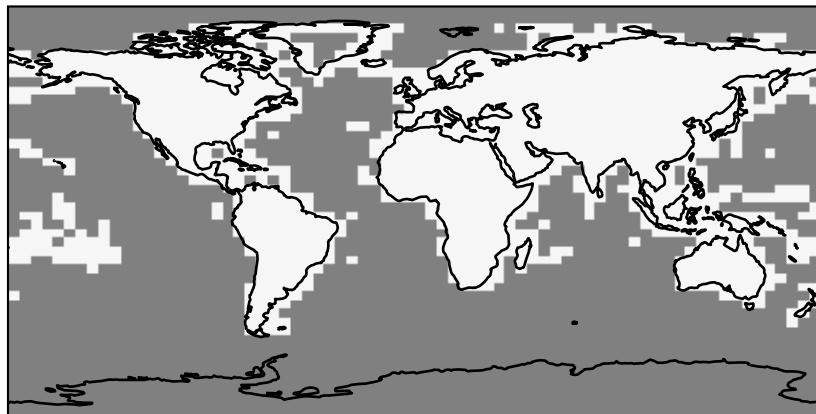
Difference
Dev - Ref, Dynamic Range



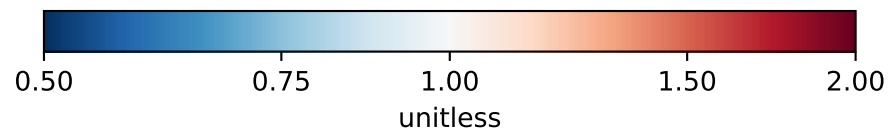
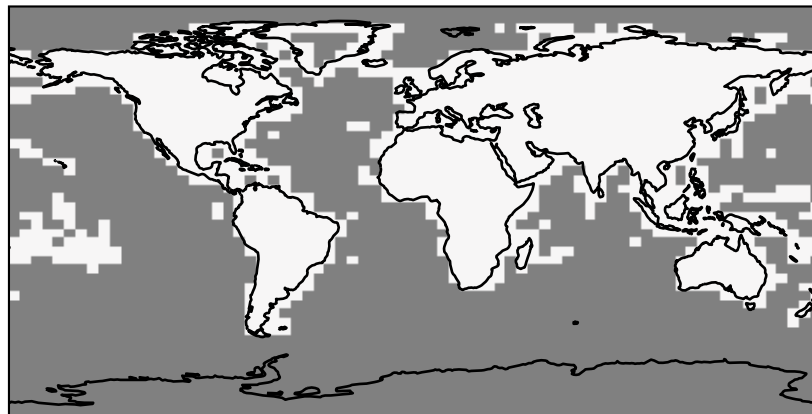
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

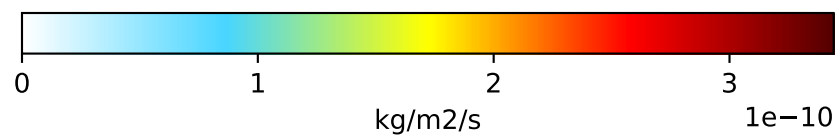
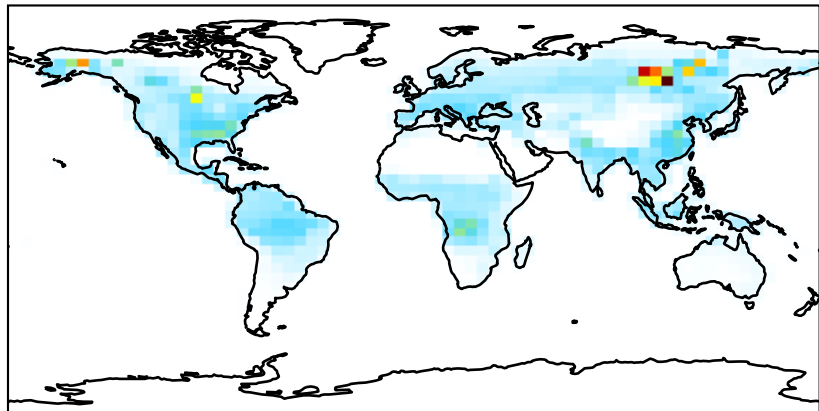


Ratio
Dev/Ref, Fixed Range

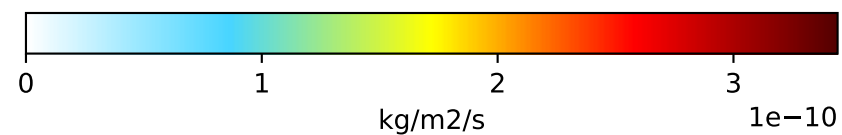
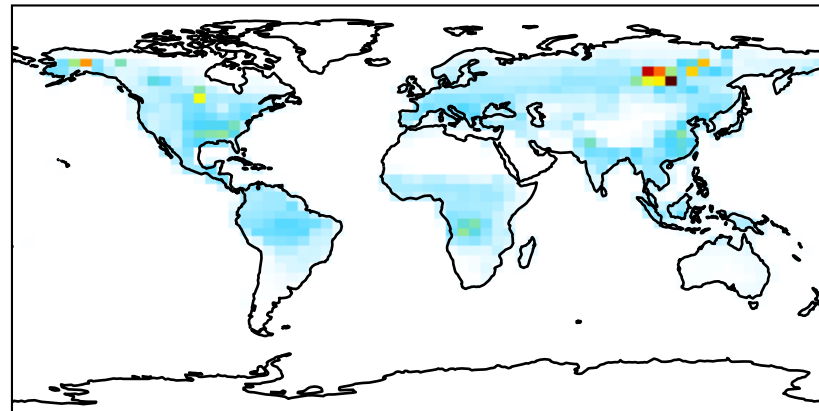


EmisMOH_Total

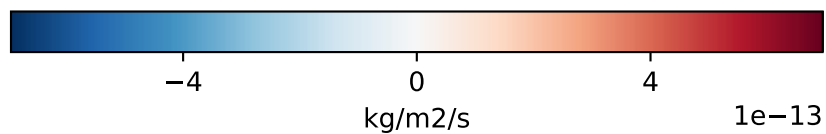
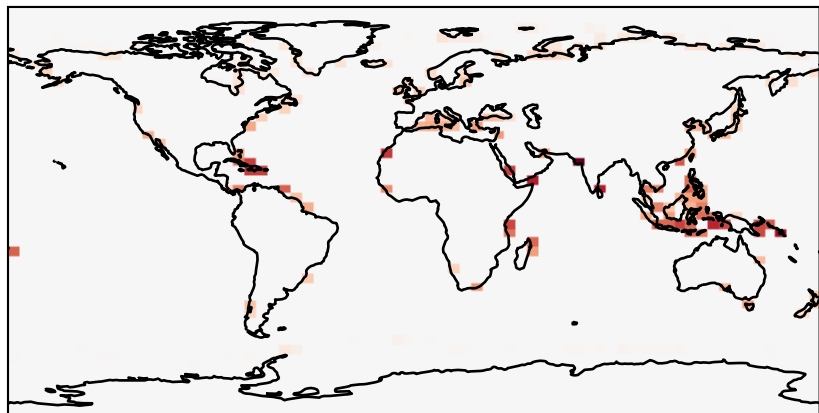
GCC_ref (Ref)
4.0x5.0



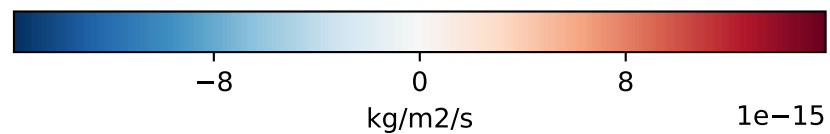
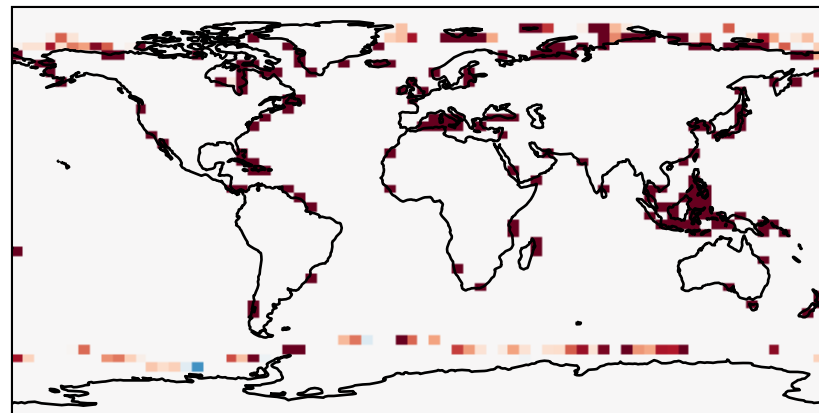
GCC_dev (Dev)
4.0x5.0



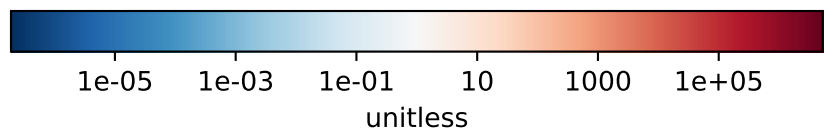
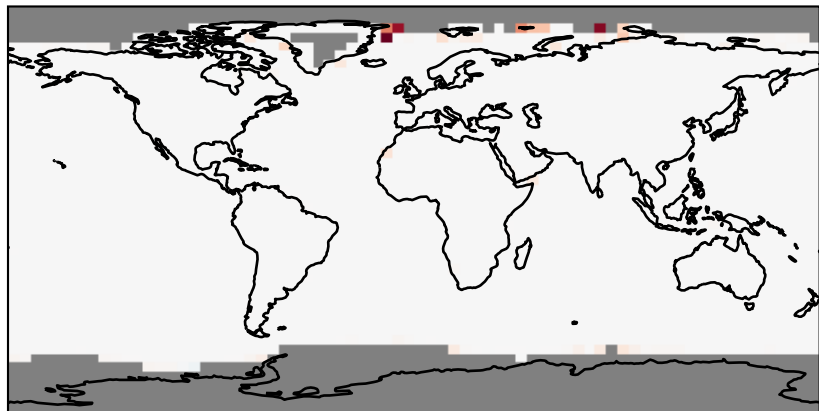
Difference
Dev - Ref, Dynamic Range



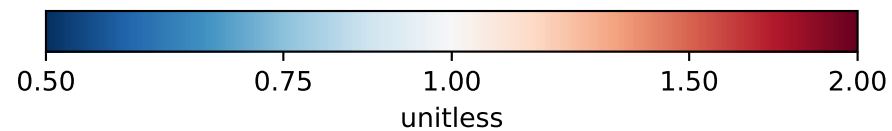
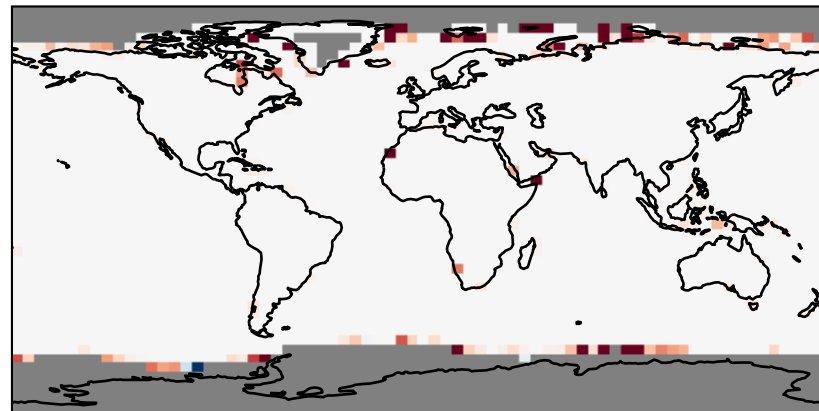
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

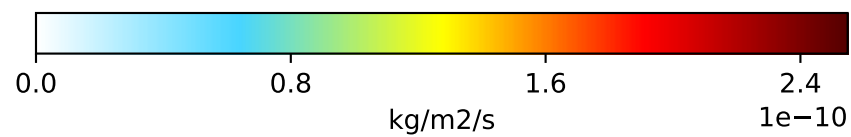
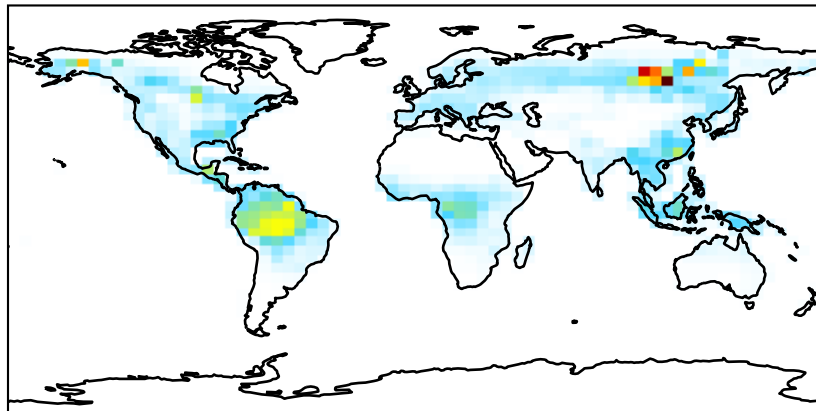


Ratio
Dev/Ref, Fixed Range

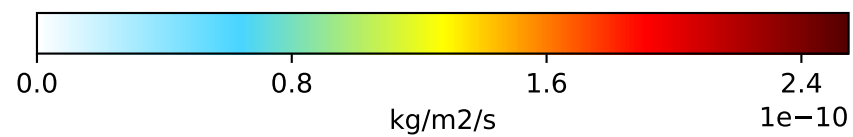
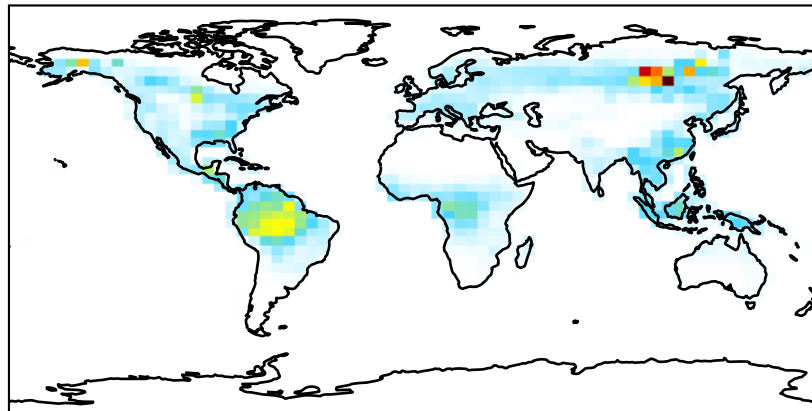


EmisMTPA_Total

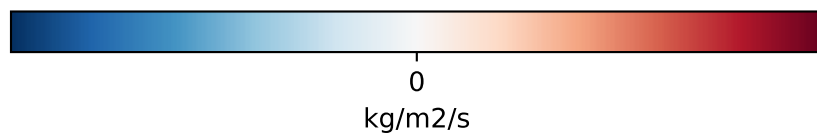
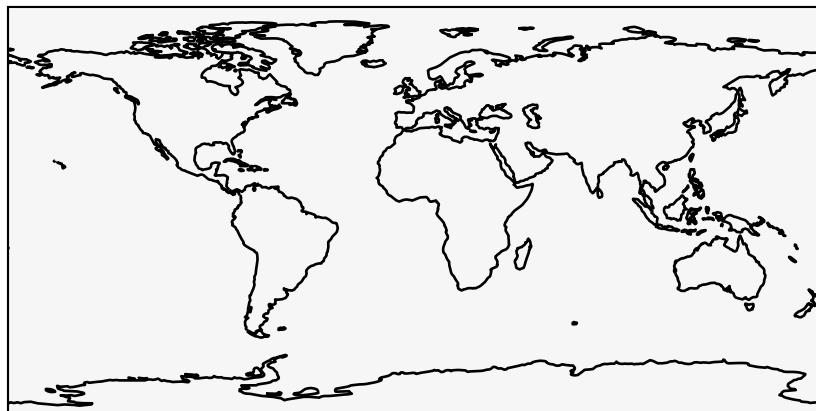
GCC_ref (Ref)
4.0x5.0



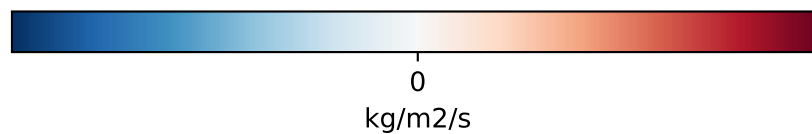
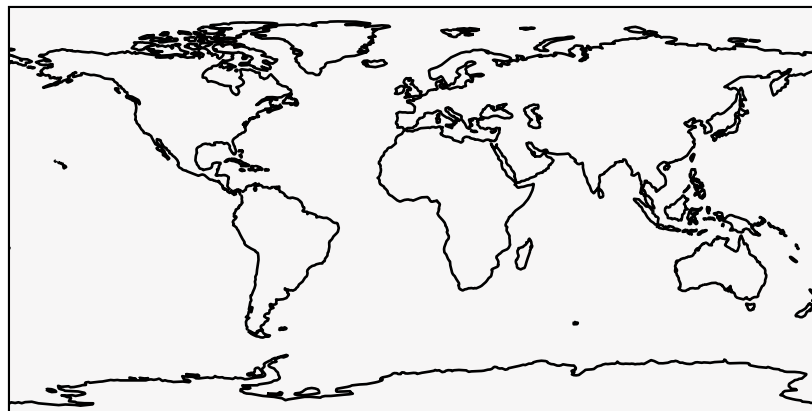
GCC_dev (Dev)
4.0x5.0



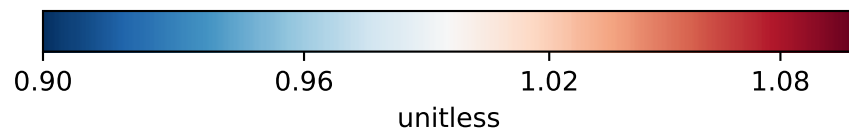
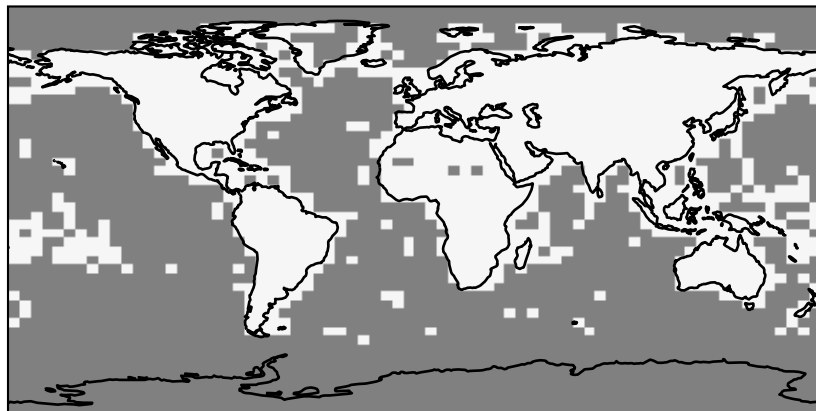
Difference
Dev - Ref, Dynamic Range



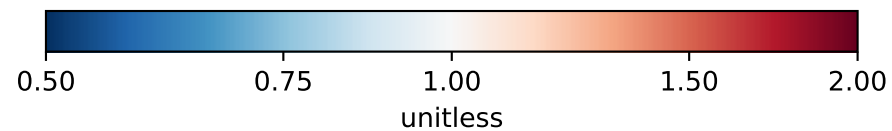
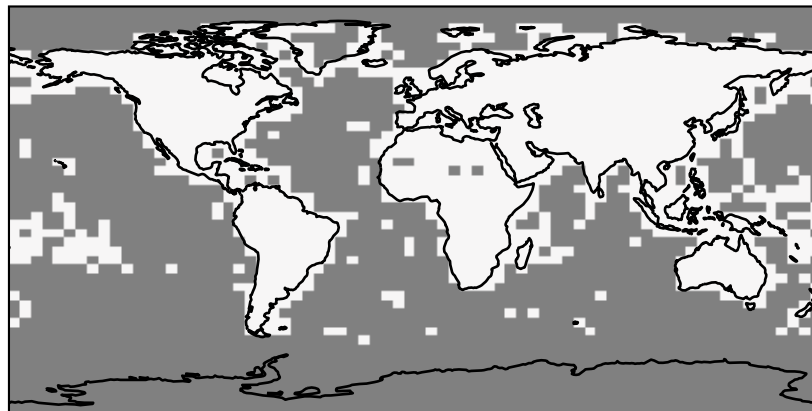
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

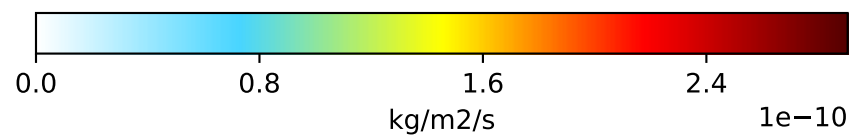
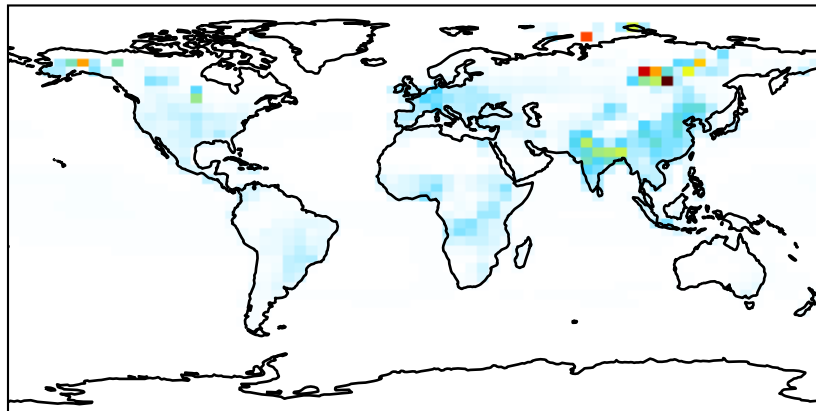


Ratio
Dev/Ref, Fixed Range

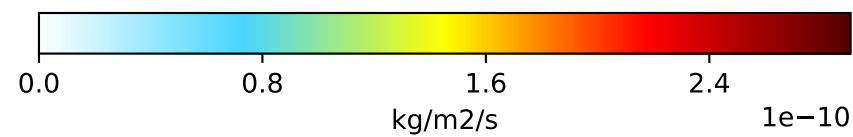
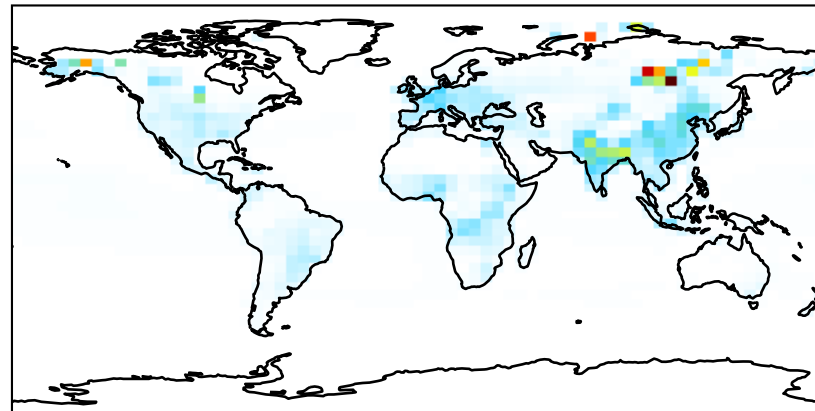


EmisNH3_Total

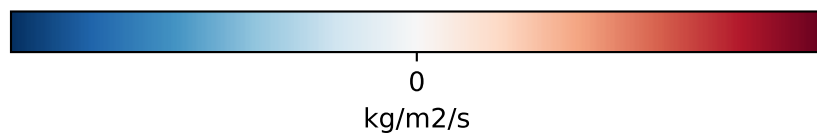
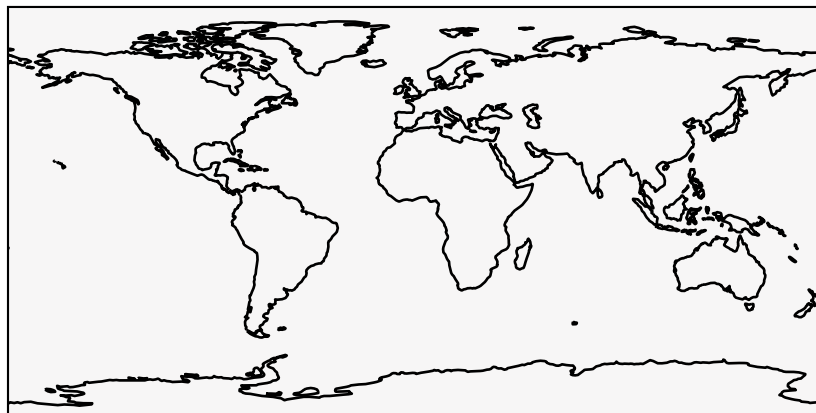
GCC_ref (Ref)
4.0x5.0



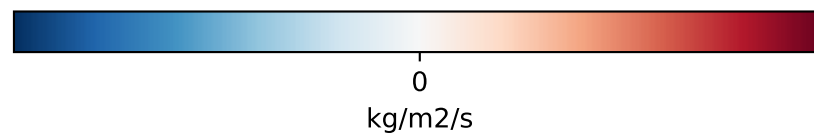
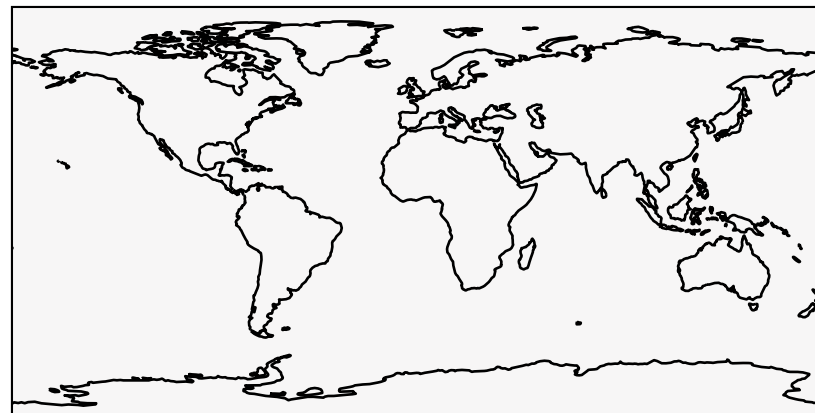
GCC_dev (Dev)
4.0x5.0



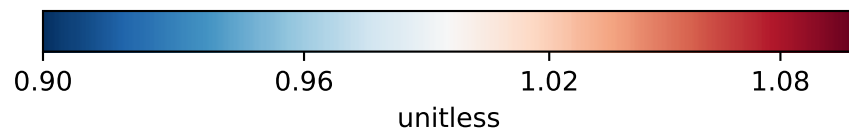
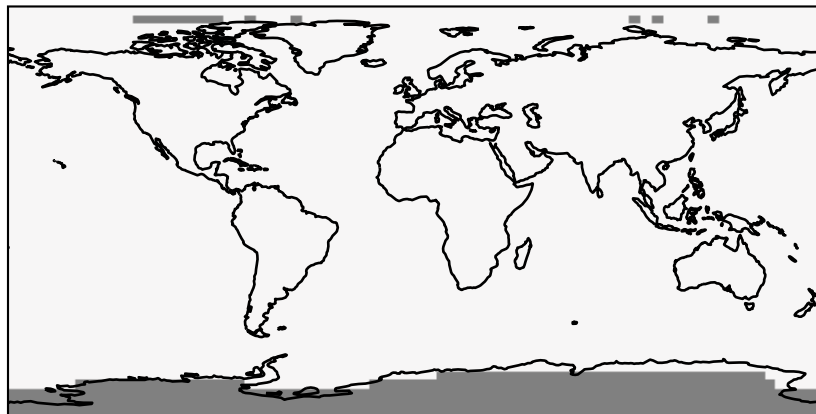
Difference
Dev - Ref, Dynamic Range



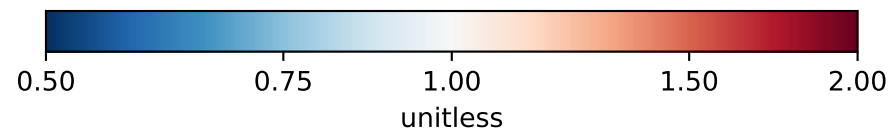
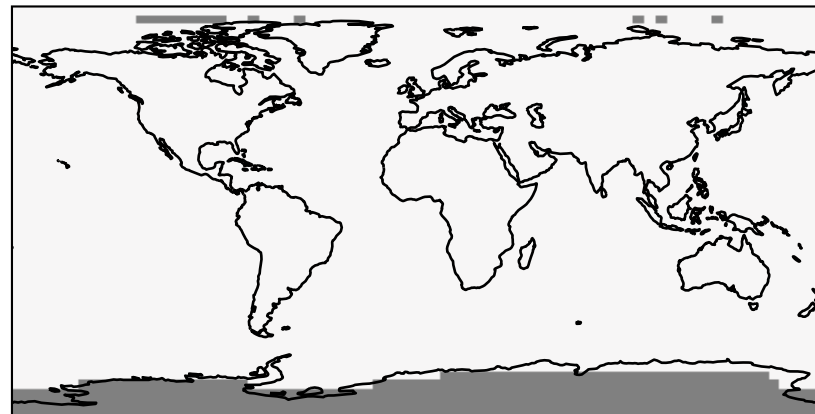
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

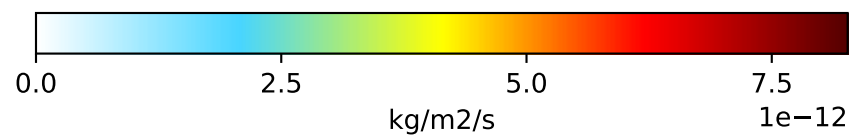
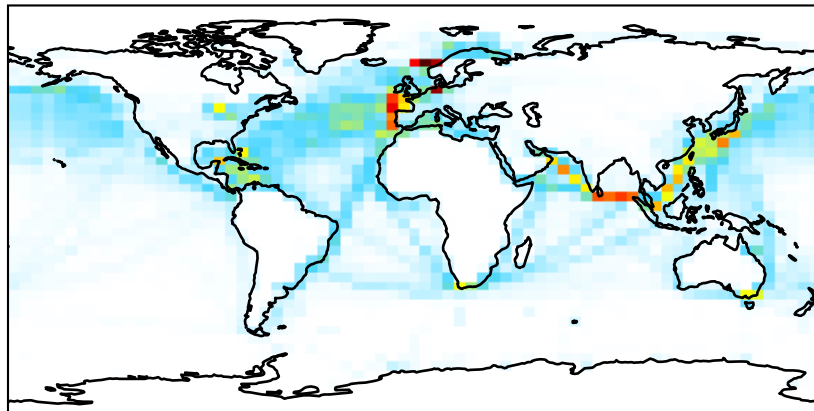


Ratio
Dev/Ref, Fixed Range

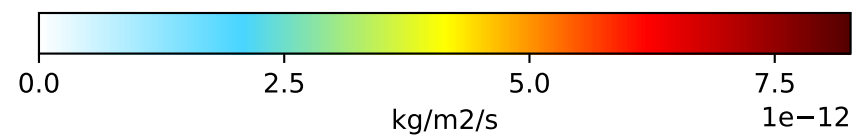
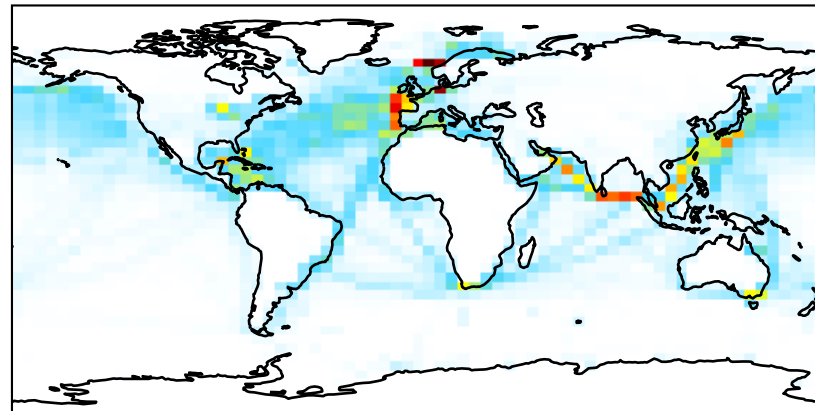


EmisNO2_Total

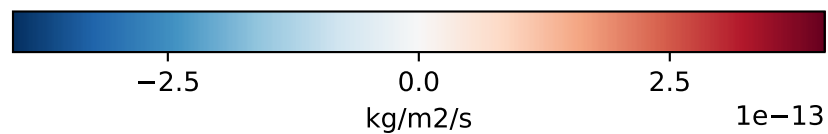
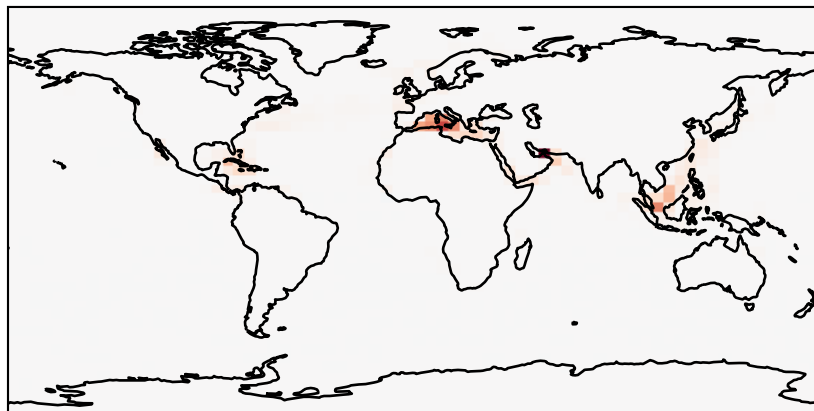
GCC_ref (Ref)
4.0x5.0



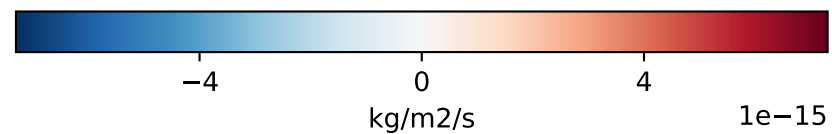
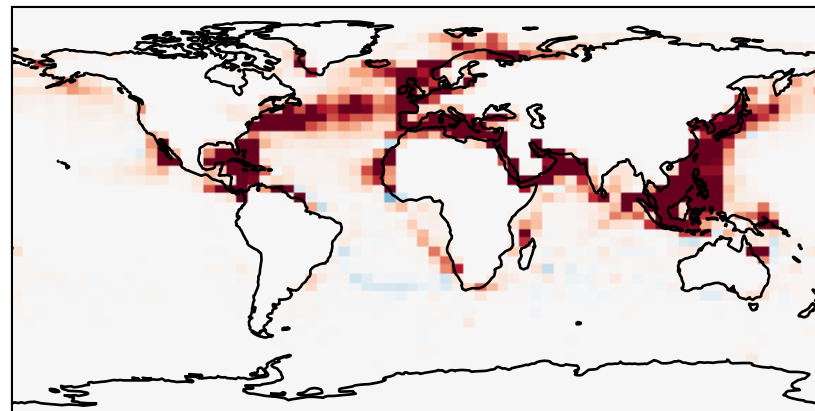
GCC_dev (Dev)
4.0x5.0



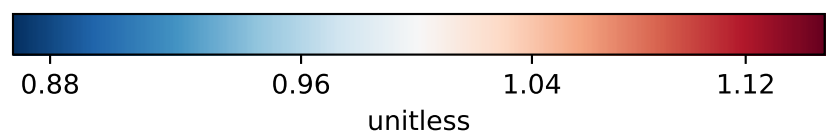
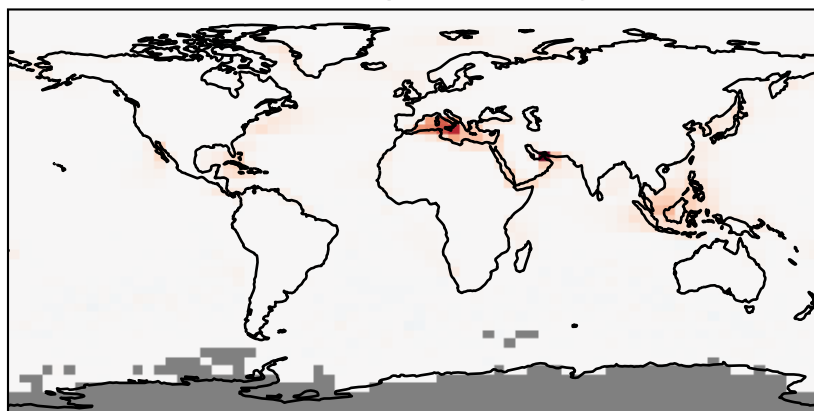
Difference
Dev - Ref, Dynamic Range



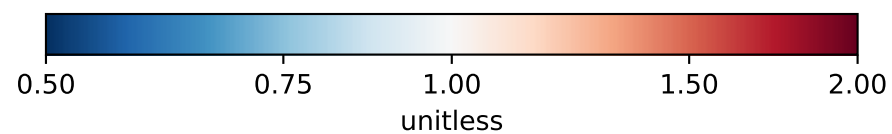
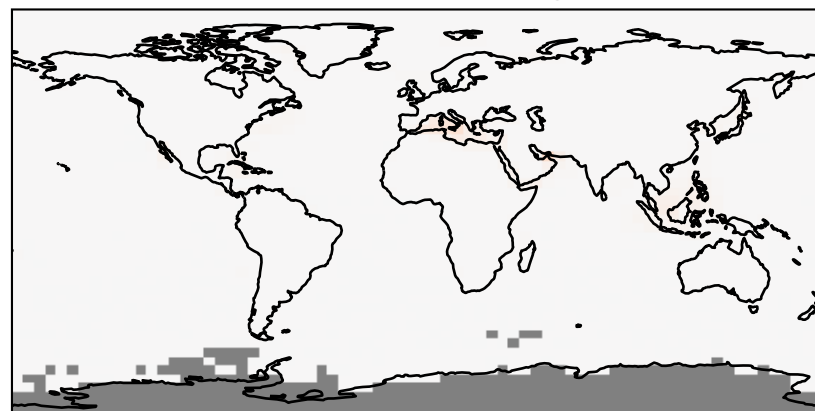
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

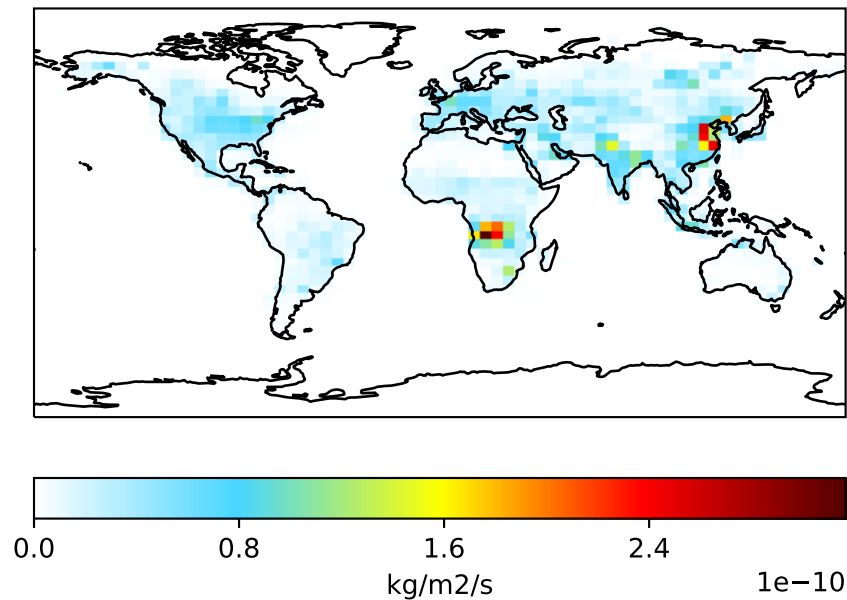


Ratio
Dev/Ref, Fixed Range

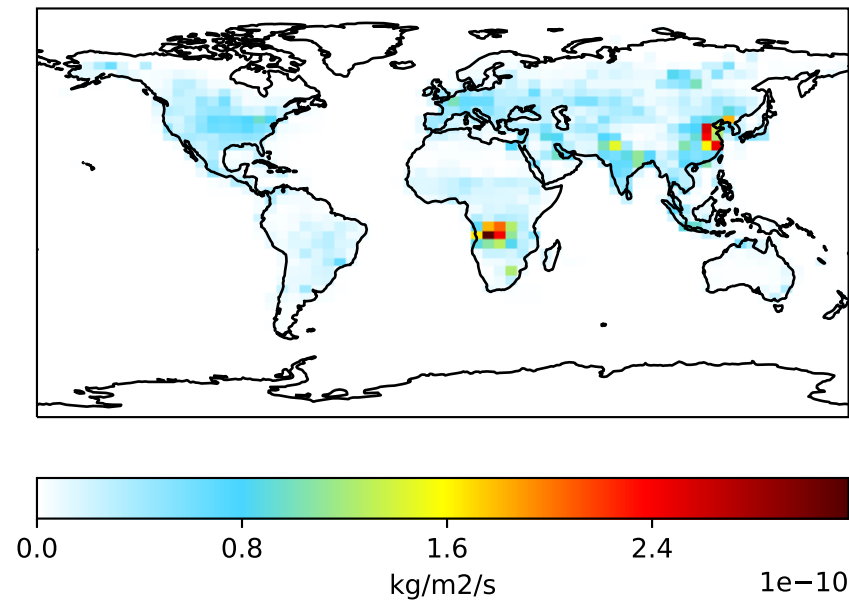


EmisNO_Total

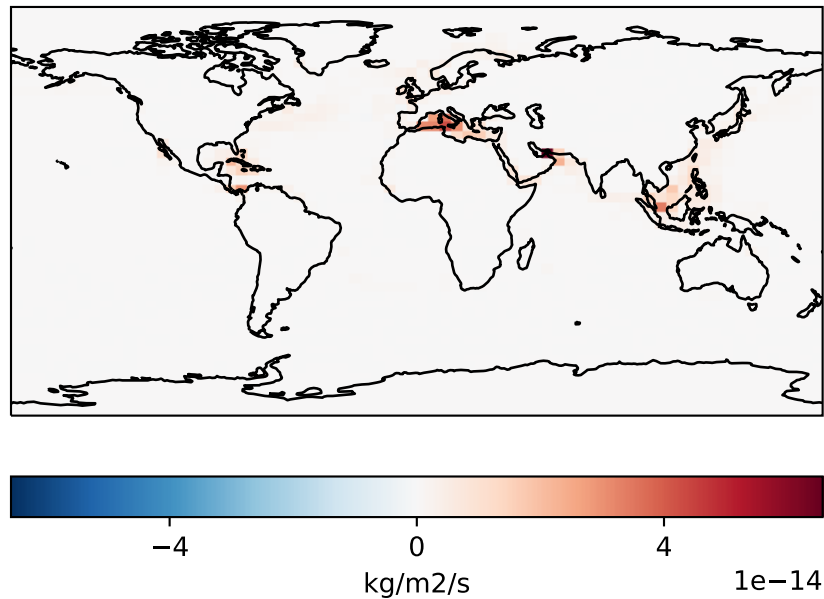
GCC_ref (Ref)
4.0x5.0



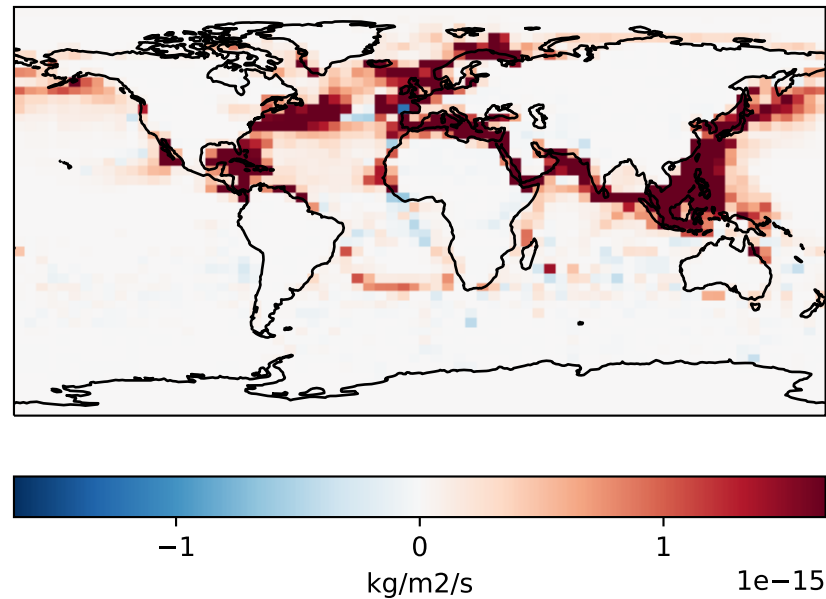
GCC_dev (Dev)
4.0x5.0



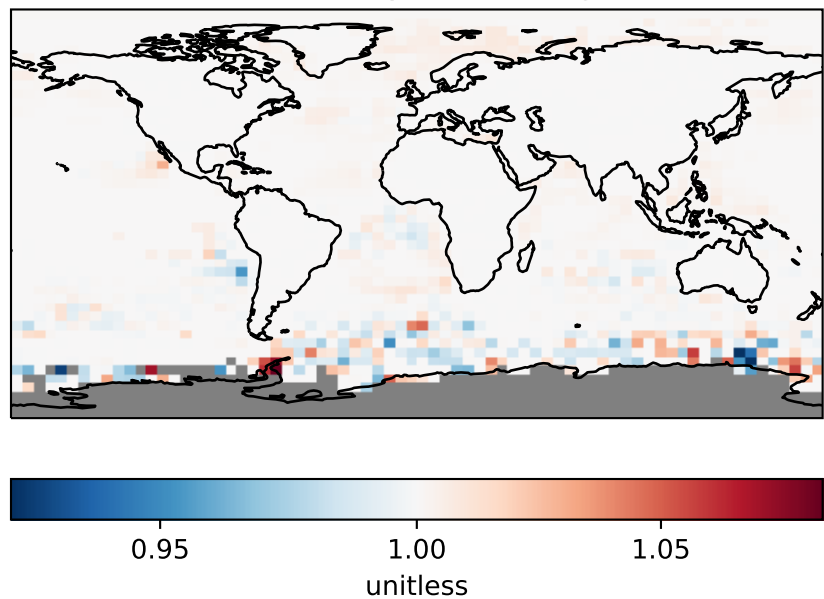
Difference
Dev - Ref, Dynamic Range



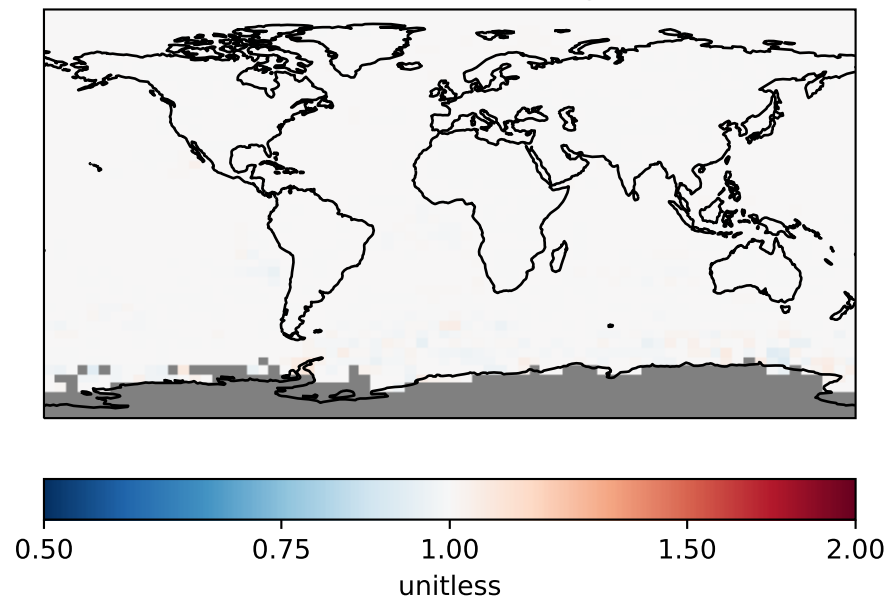
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

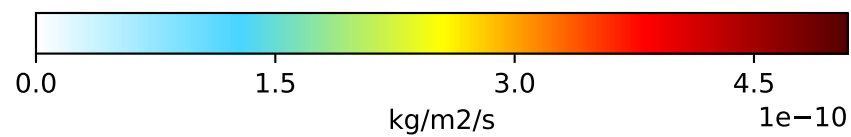
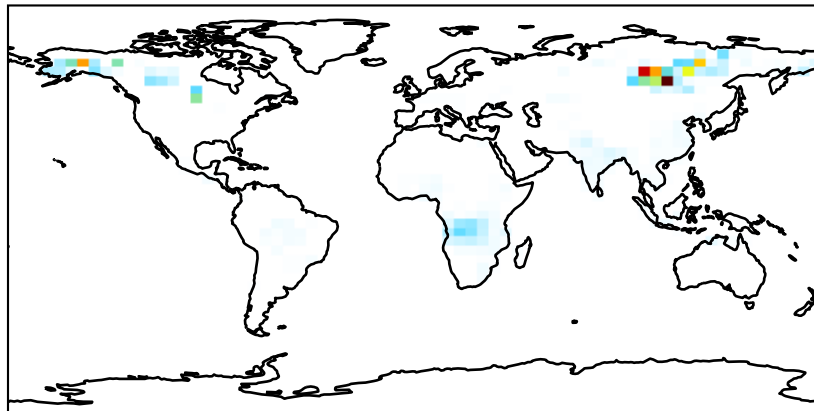


Ratio
Dev/Ref, Fixed Range

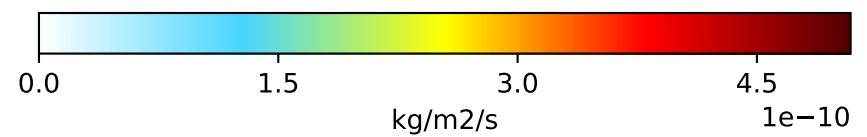
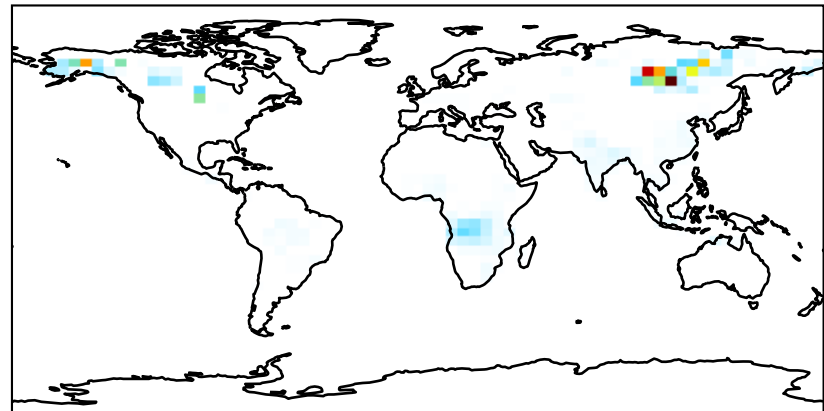


EmisOCPI_Total

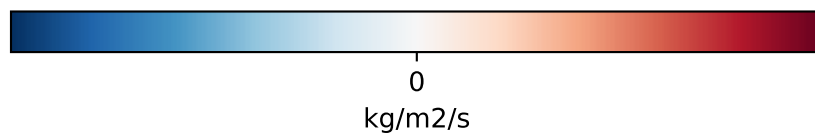
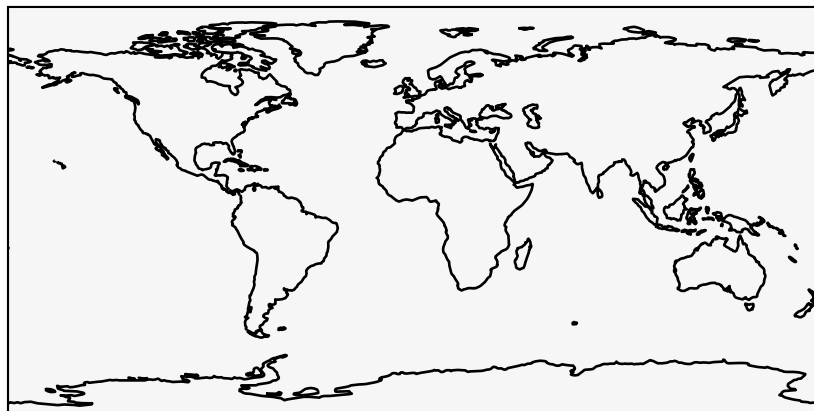
GCC_ref (Ref)
4.0x5.0



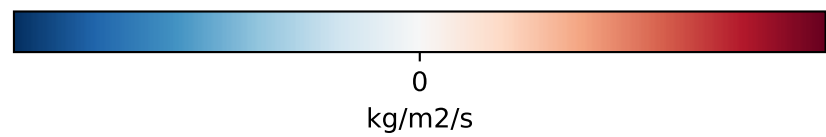
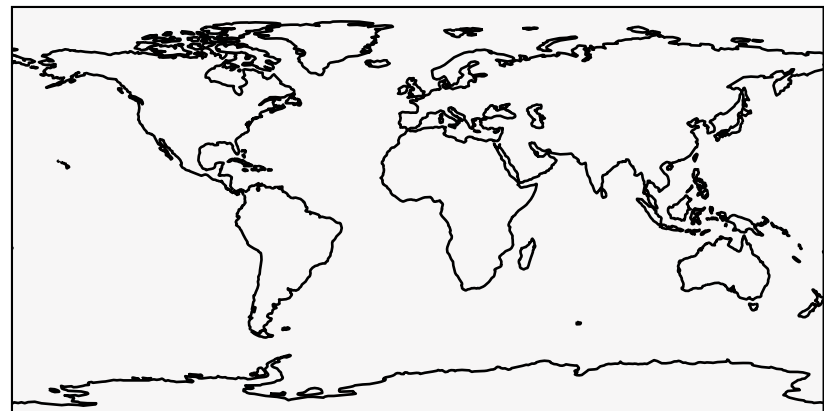
GCC_dev (Dev)
4.0x5.0



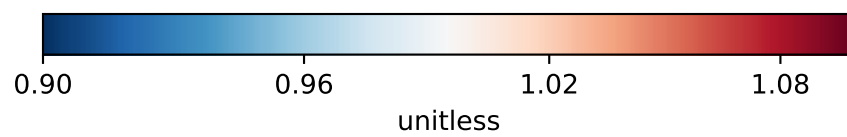
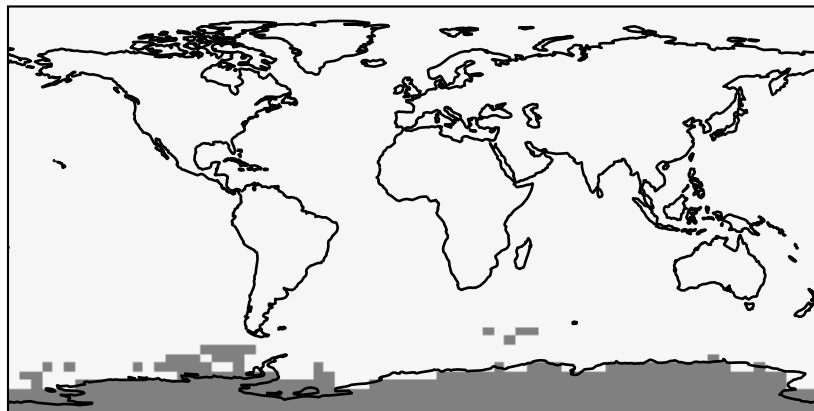
Difference
Dev - Ref, Dynamic Range



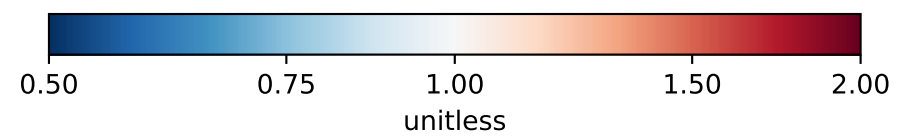
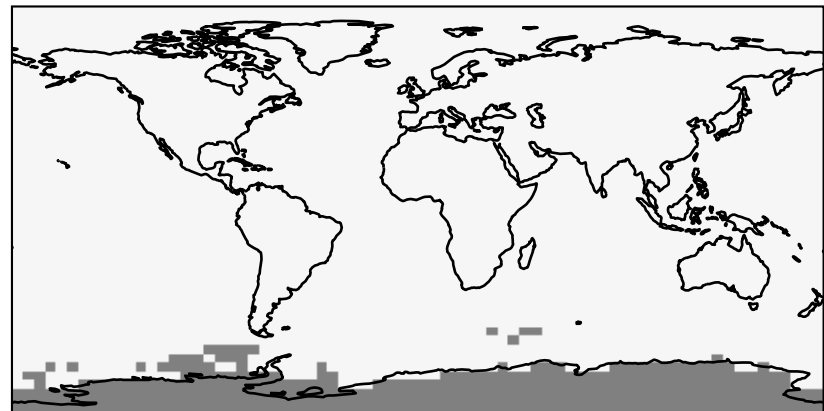
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

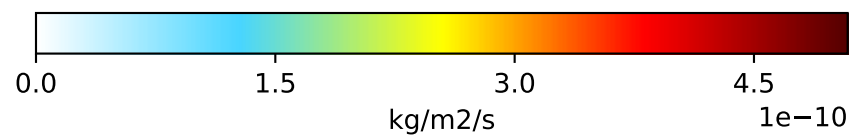
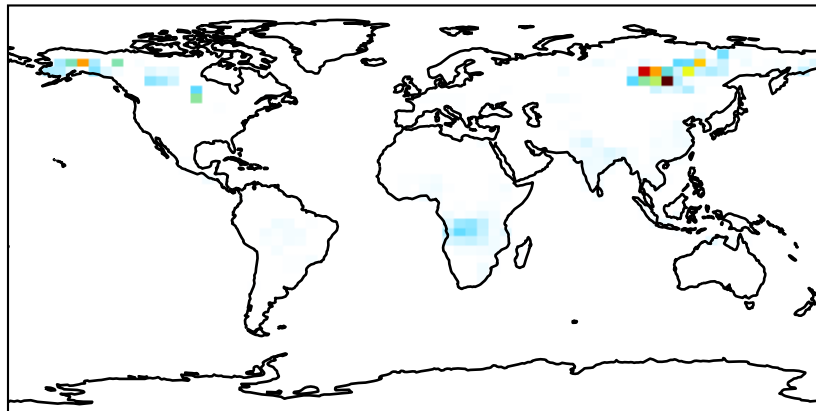


Ratio
Dev/Ref, Fixed Range

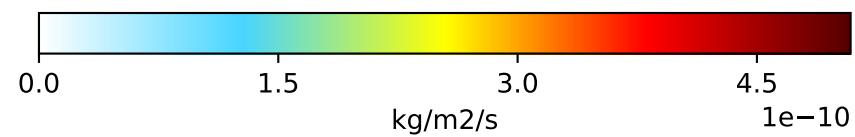
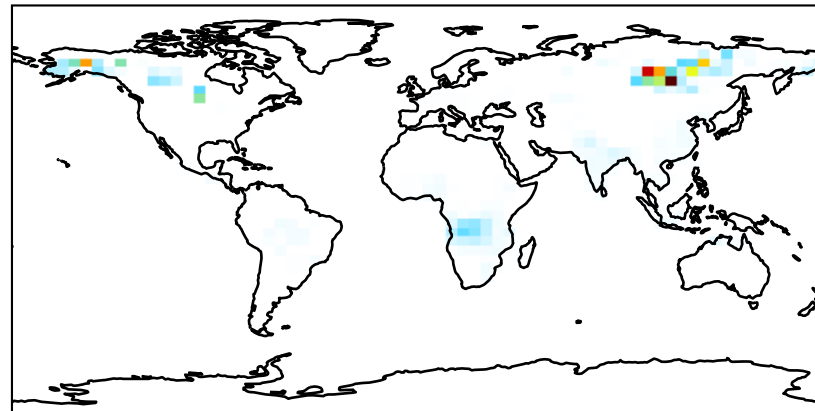


EmisOCPO_Total

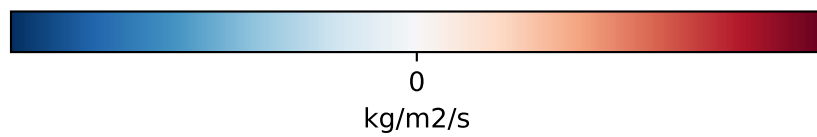
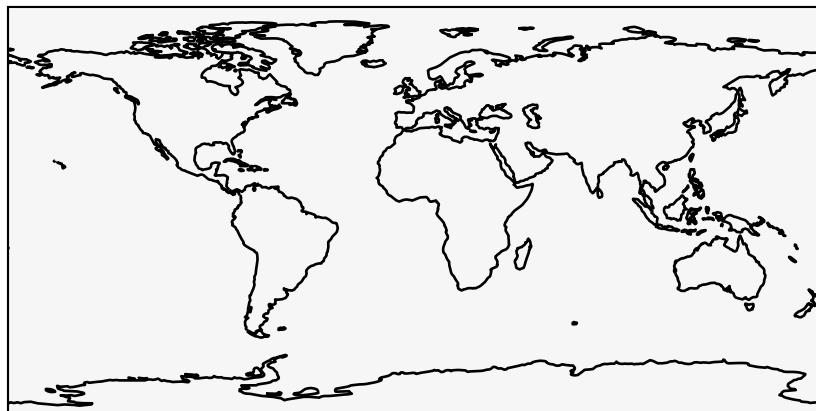
GCC_ref (Ref)
4.0x5.0



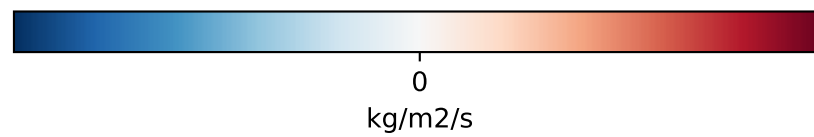
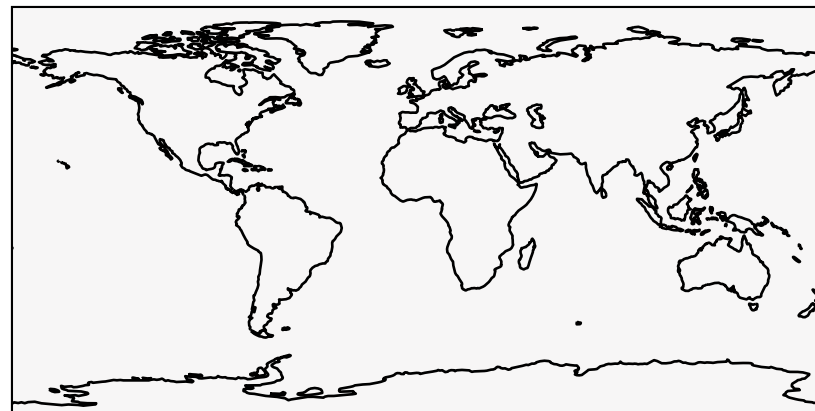
GCC_dev (Dev)
4.0x5.0



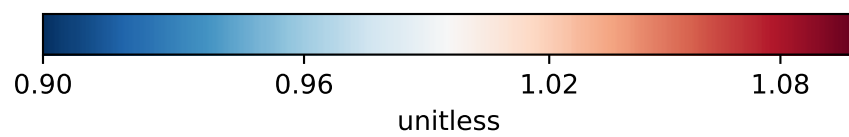
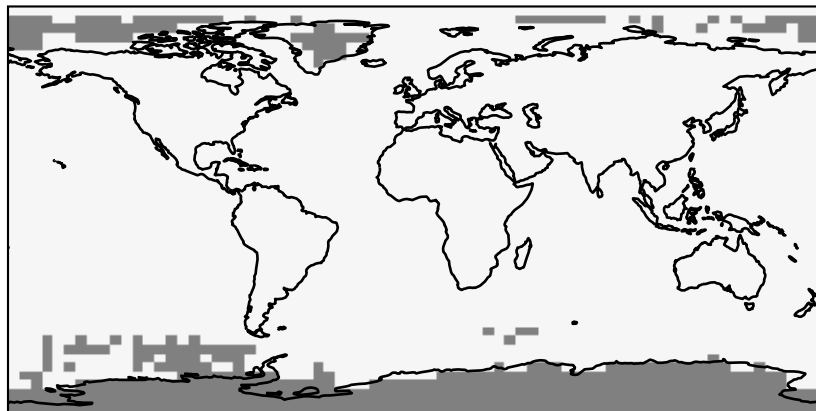
Difference
Dev - Ref, Dynamic Range



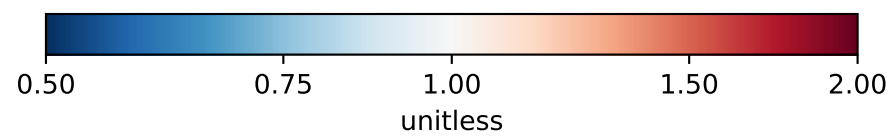
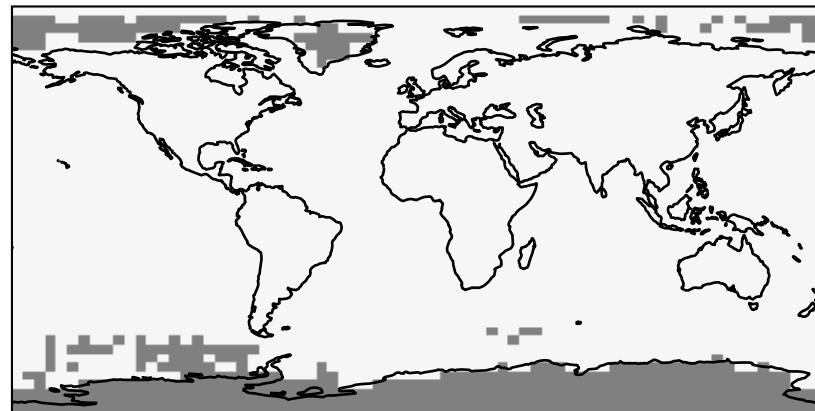
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

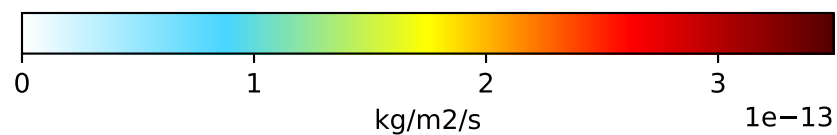
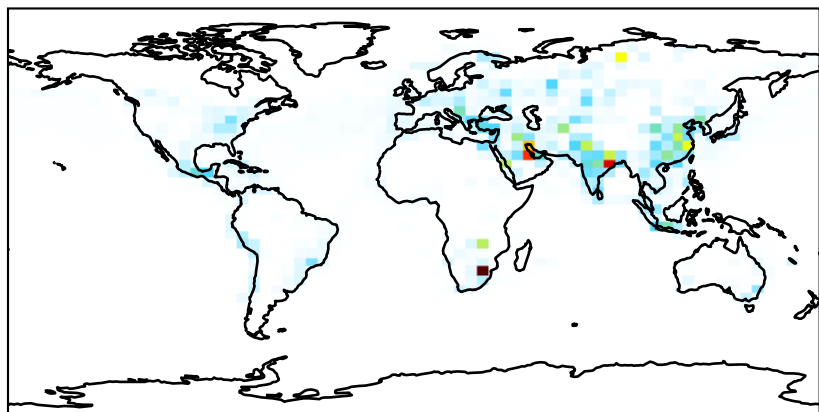


Ratio
Dev/Ref, Fixed Range

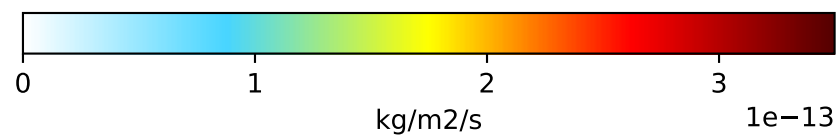
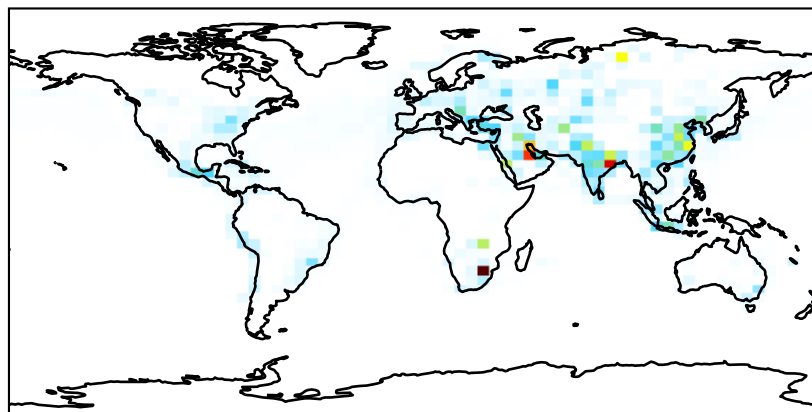


EmispFe_Total

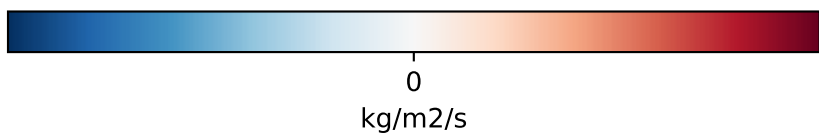
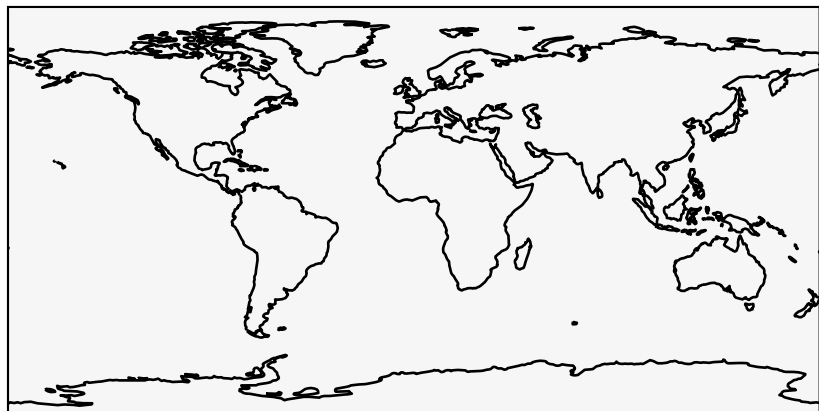
GCC_ref (Ref)
4.0x5.0



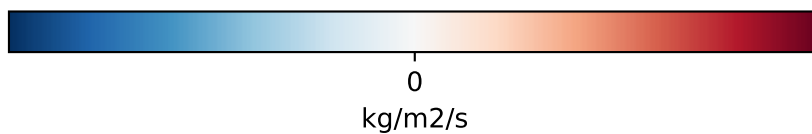
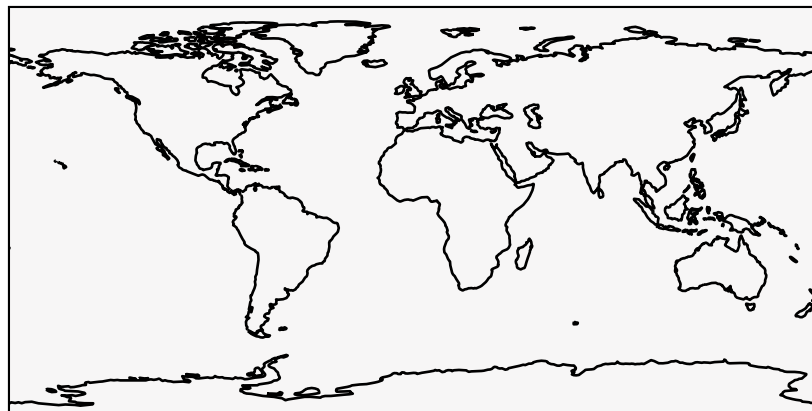
GCC_dev (Dev)
4.0x5.0



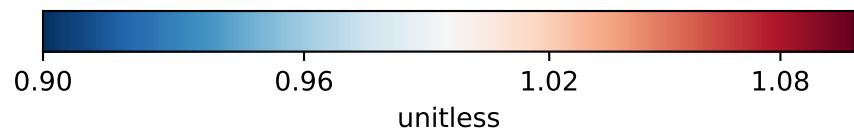
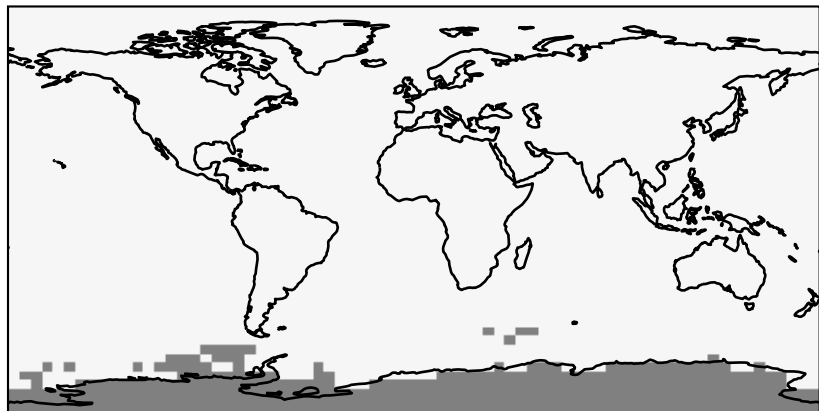
Difference
Dev - Ref, Dynamic Range



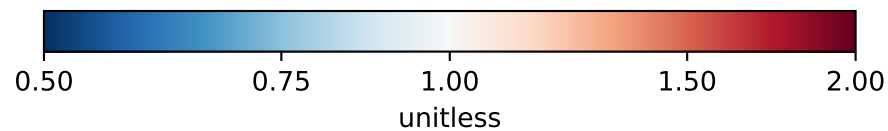
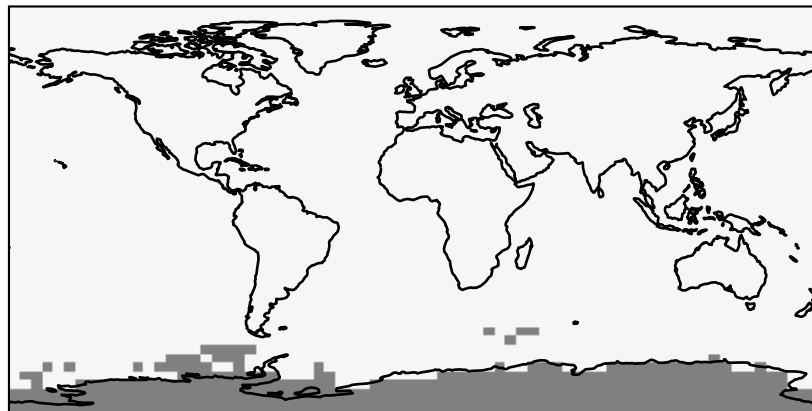
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

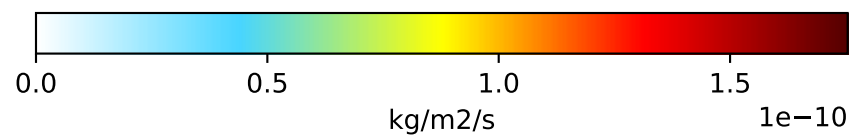
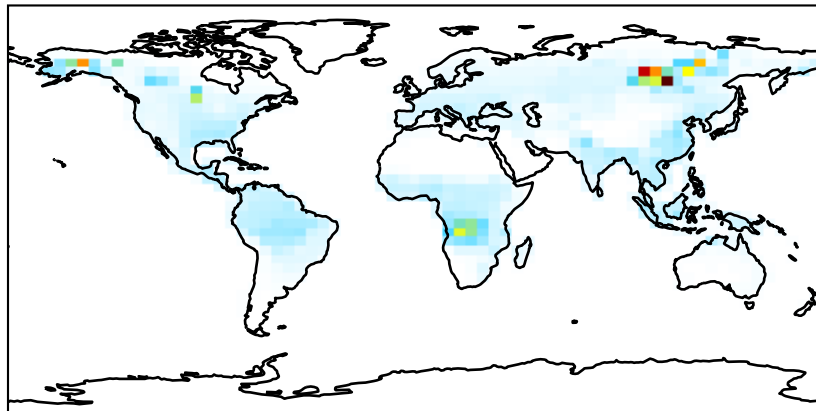


Ratio
Dev/Ref, Fixed Range

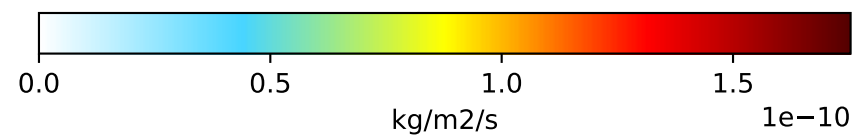
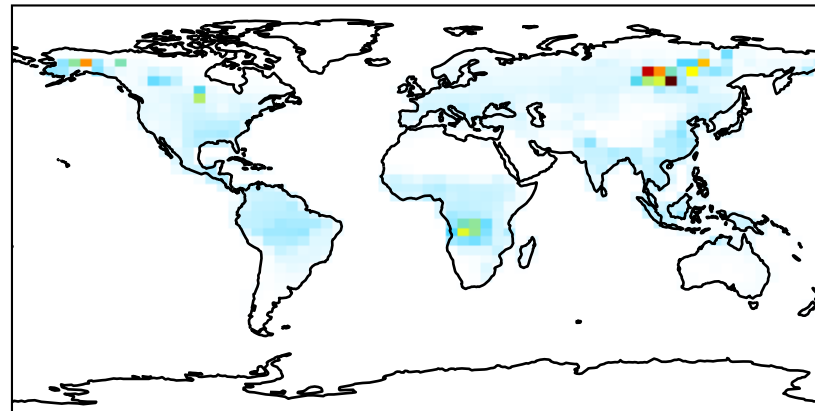


EmisPRPE_Total

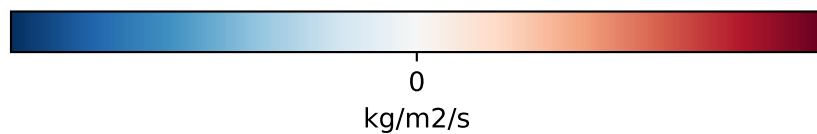
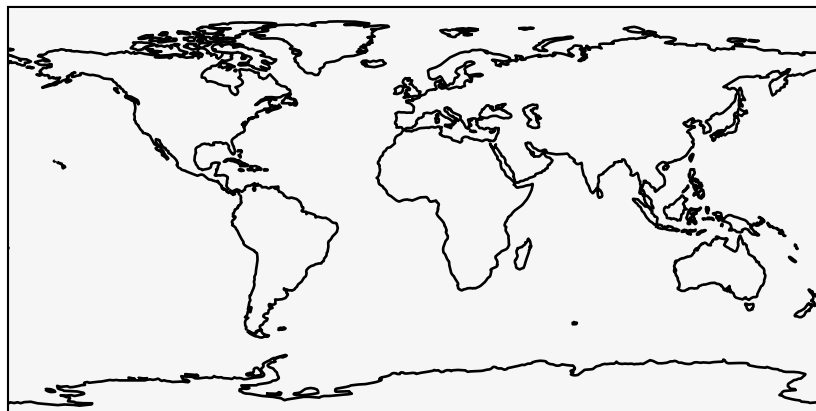
GCC_ref (Ref)
4.0x5.0



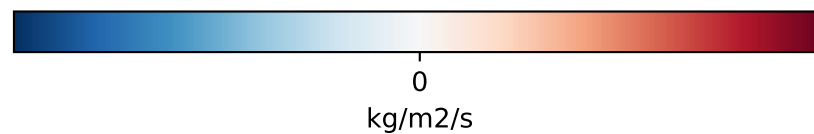
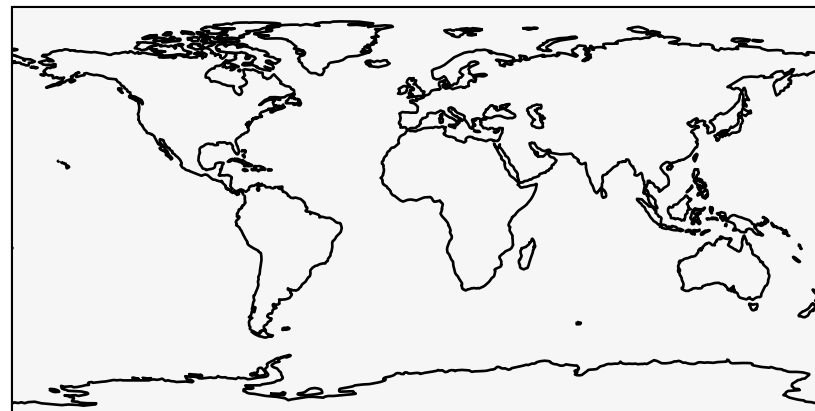
GCC_dev (Dev)
4.0x5.0



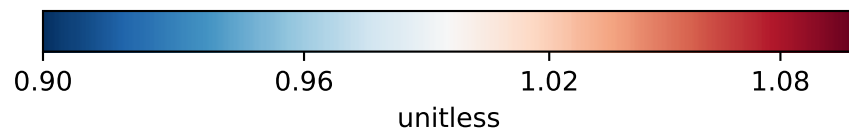
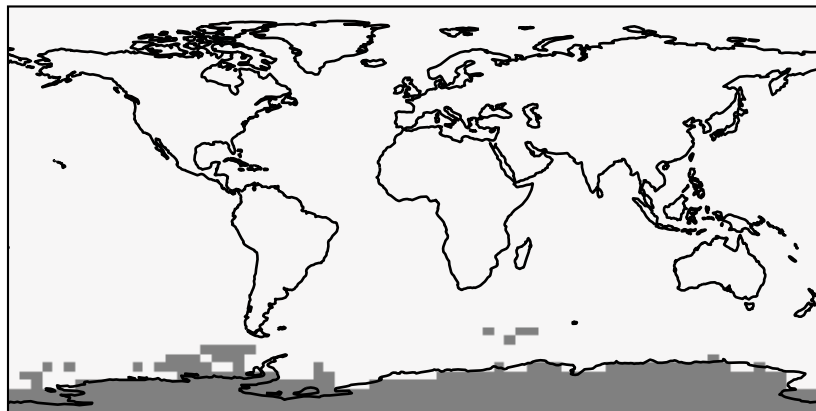
Difference
Dev - Ref, Dynamic Range



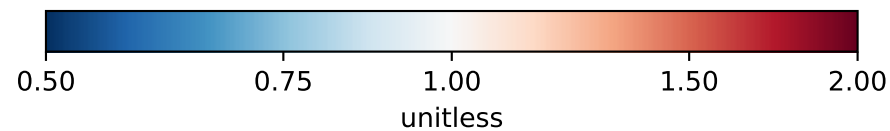
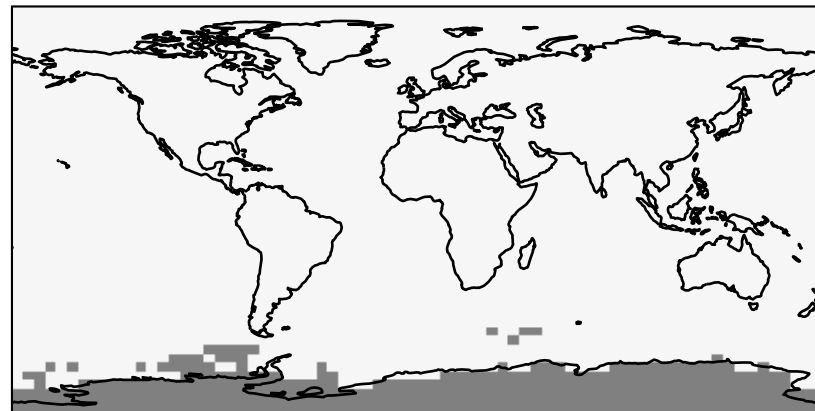
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

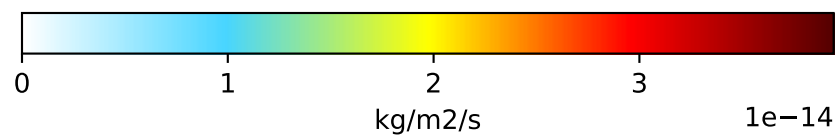
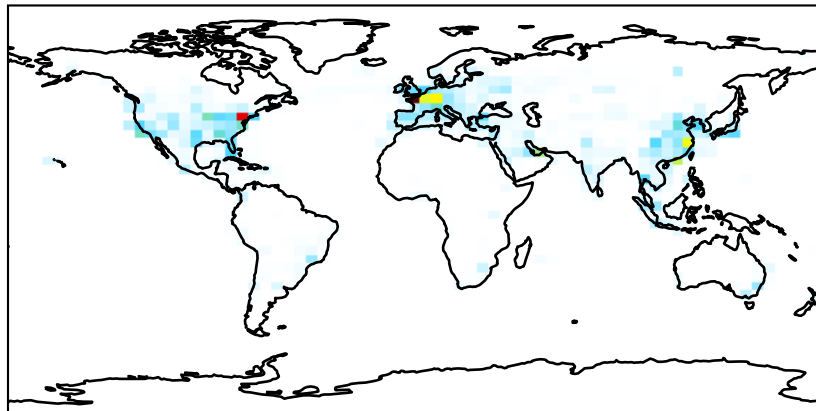


Ratio
Dev/Ref, Fixed Range

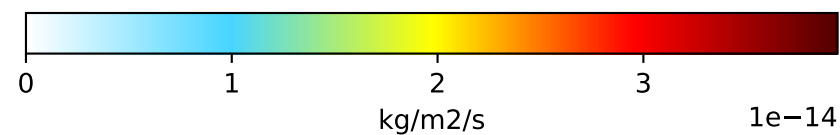
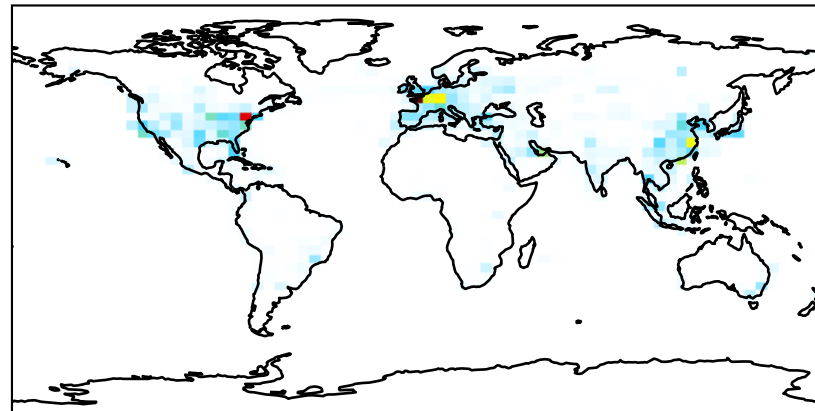


EmisRCHO_Total

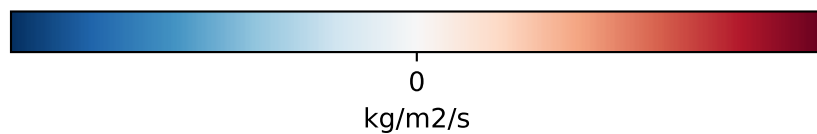
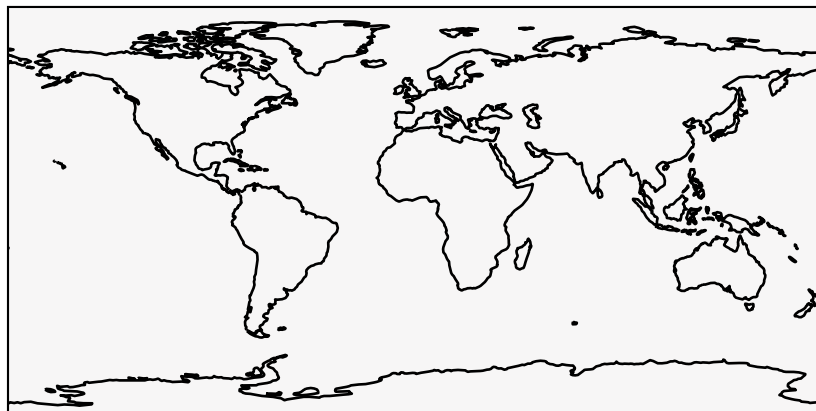
GCC_ref (Ref)
4.0x5.0



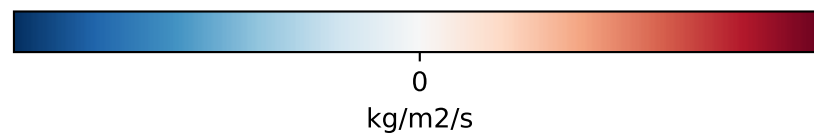
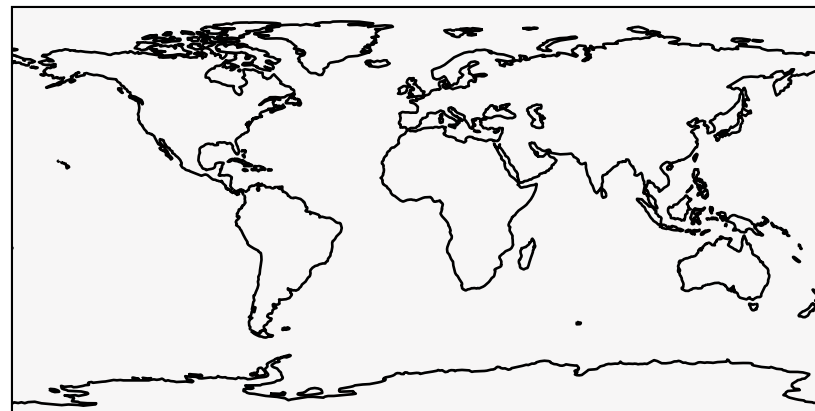
GCC_dev (Dev)
4.0x5.0



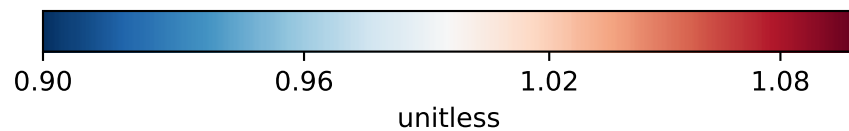
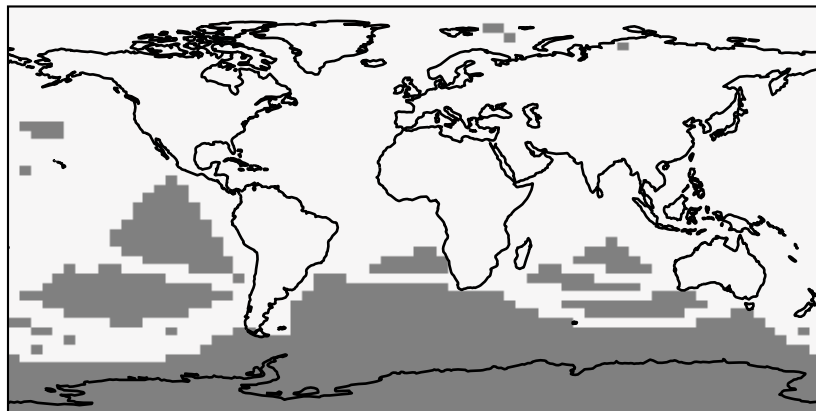
Difference
Dev - Ref, Dynamic Range



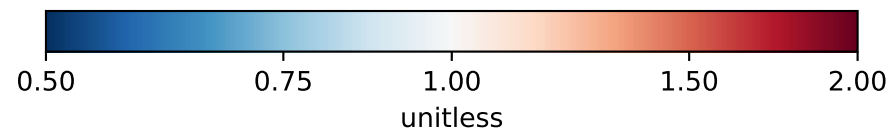
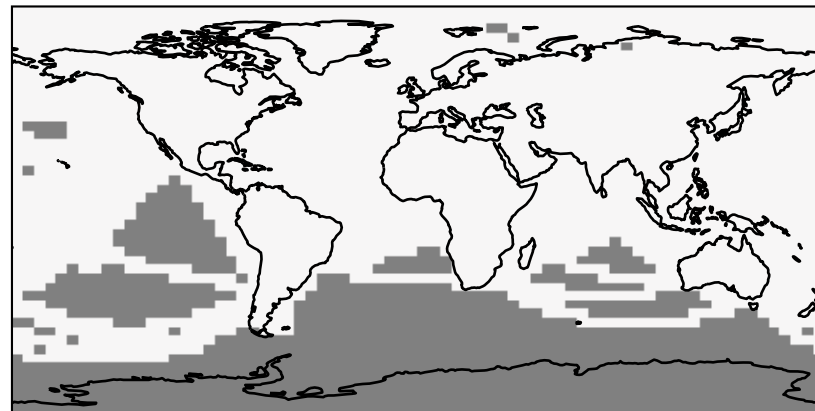
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

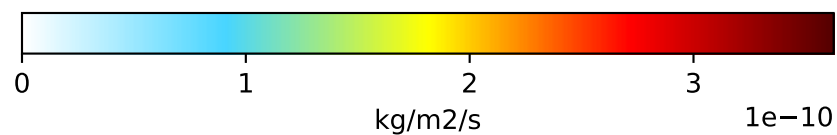
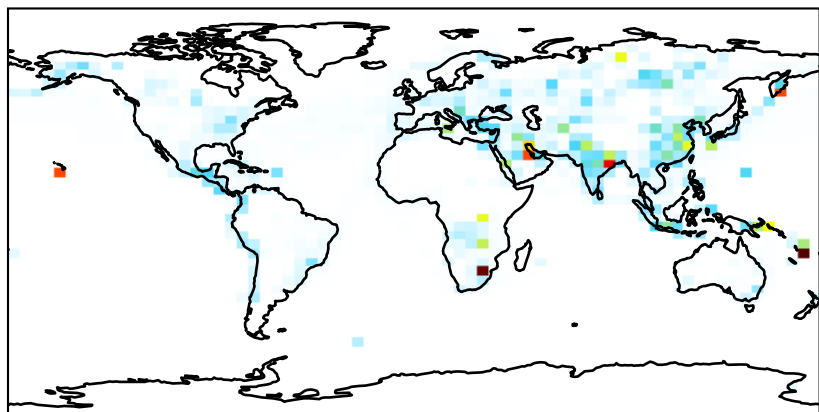


Ratio
Dev/Ref, Fixed Range

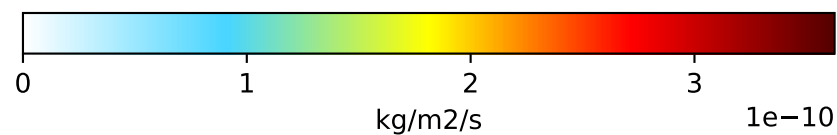
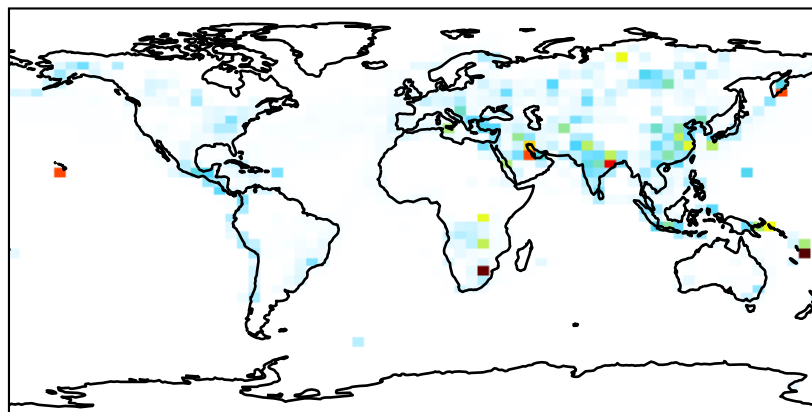


EmisSO2_Total

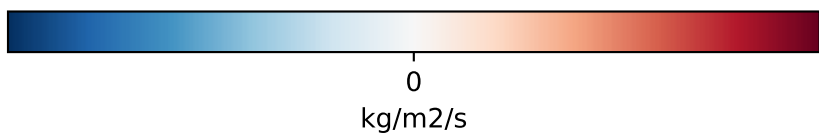
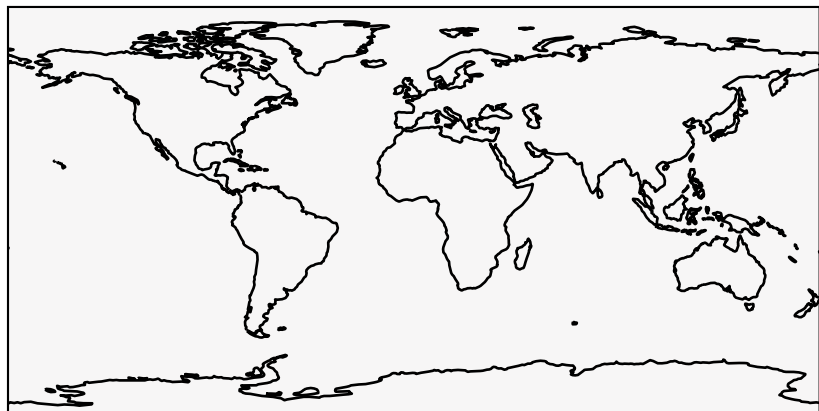
GCC_ref (Ref)
4.0x5.0



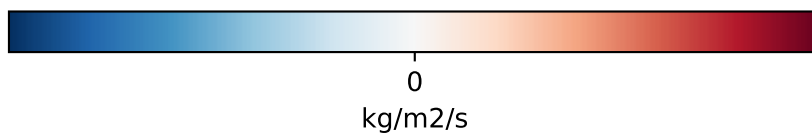
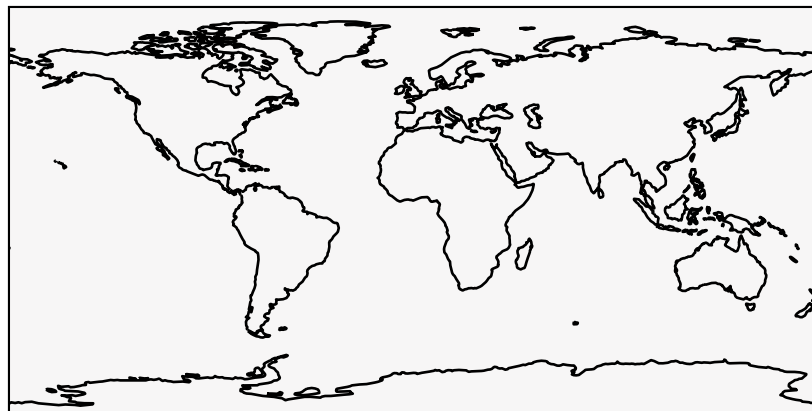
GCC_dev (Dev)
4.0x5.0



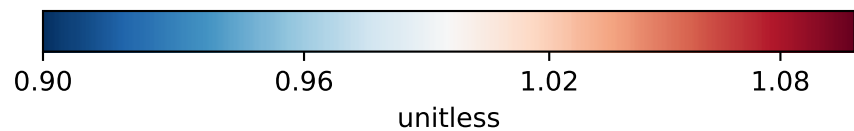
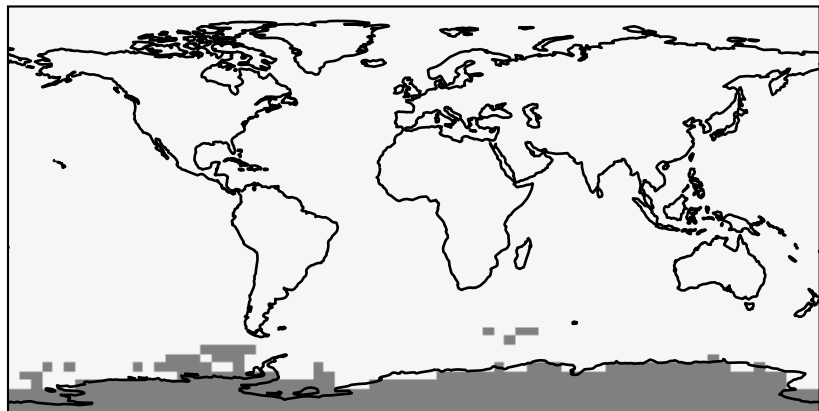
Difference
Dev - Ref, Dynamic Range



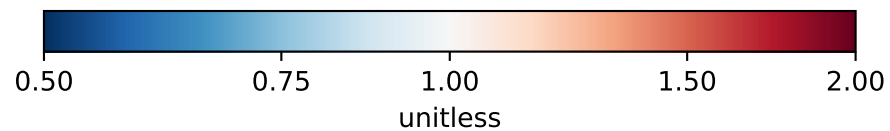
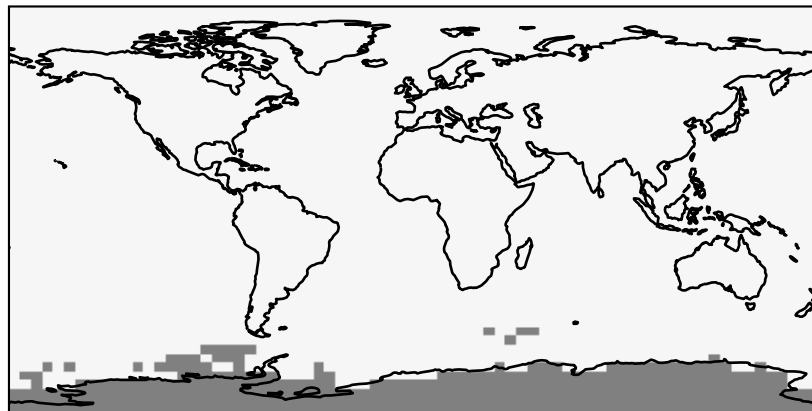
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

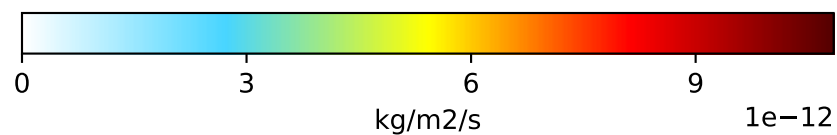
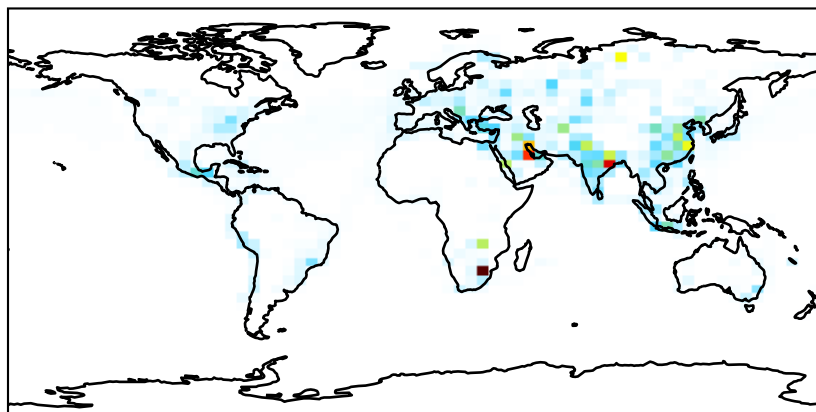


Ratio
Dev/Ref, Fixed Range

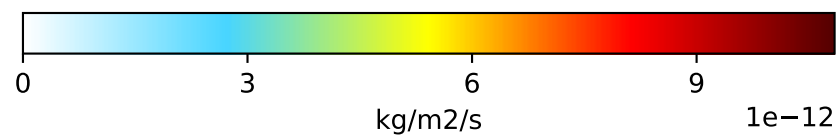
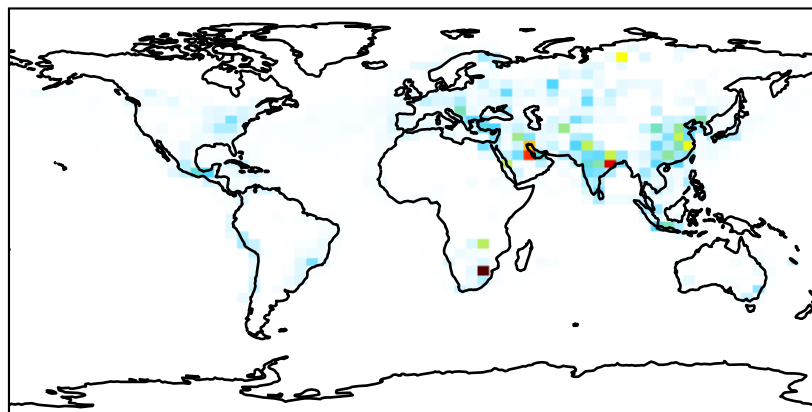


EmisSO4_Total

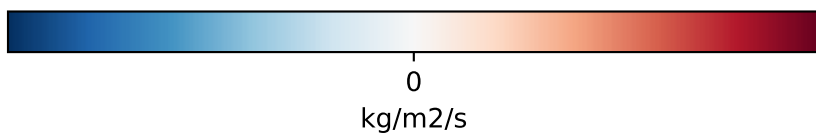
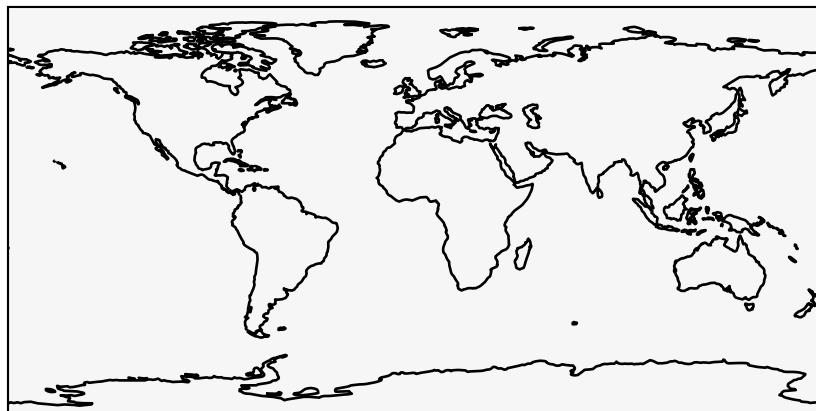
GCC_ref (Ref)
4.0x5.0



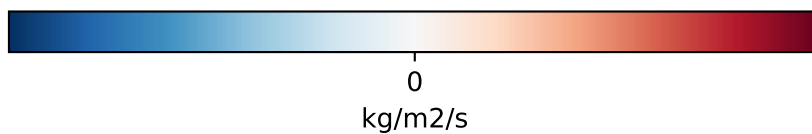
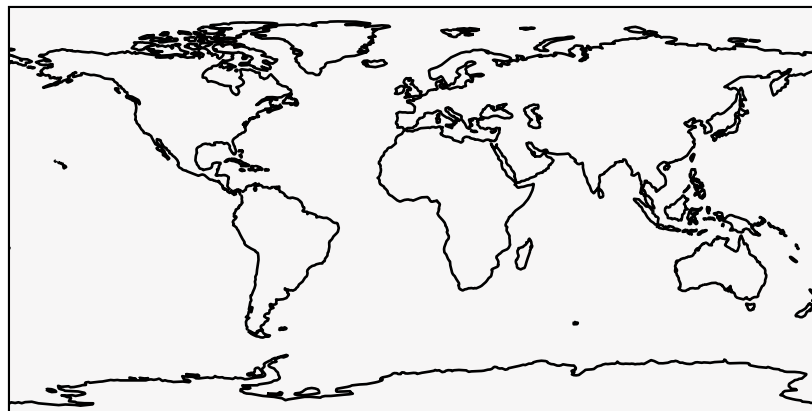
GCC_dev (Dev)
4.0x5.0



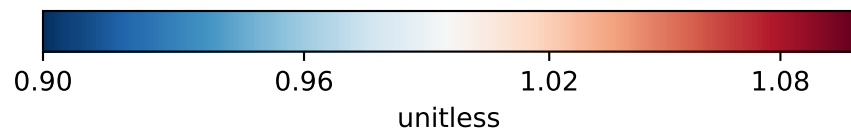
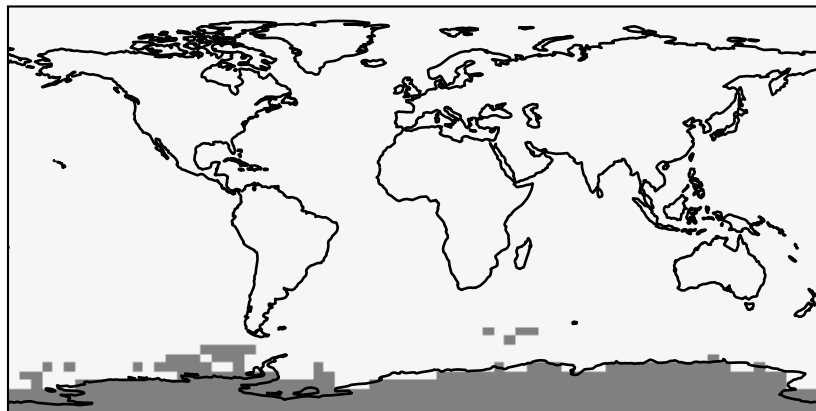
Difference
Dev - Ref, Dynamic Range



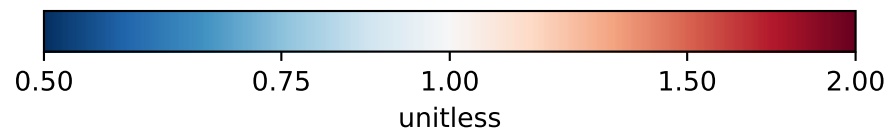
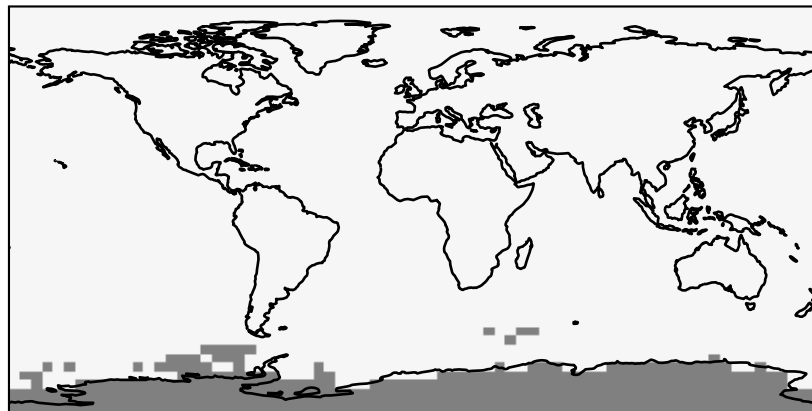
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

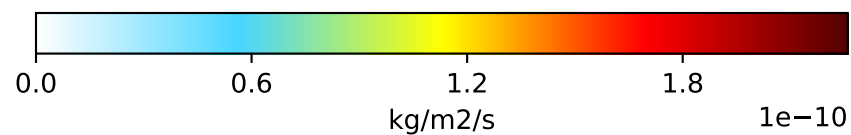
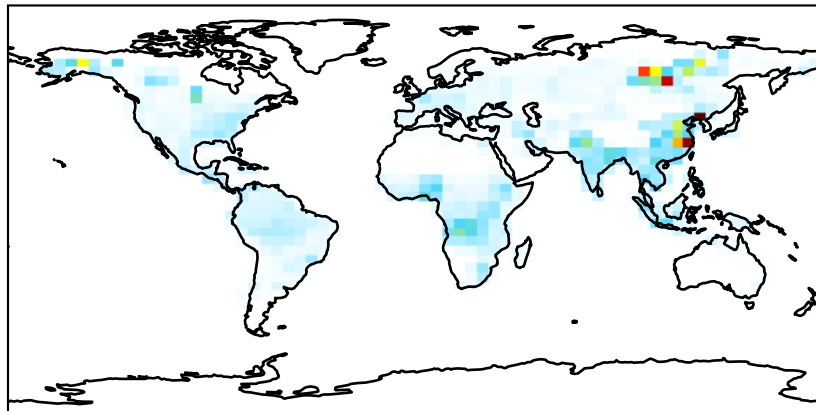


Ratio
Dev/Ref, Fixed Range

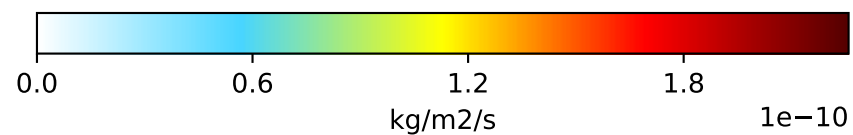
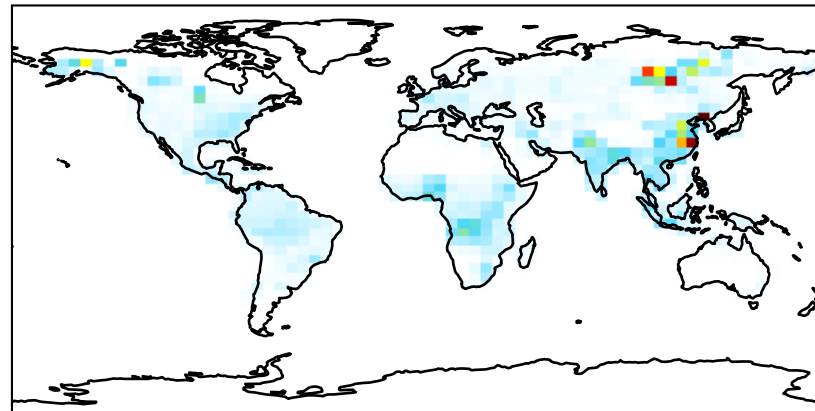


EmisSOAP_Total

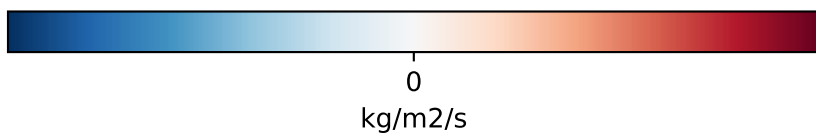
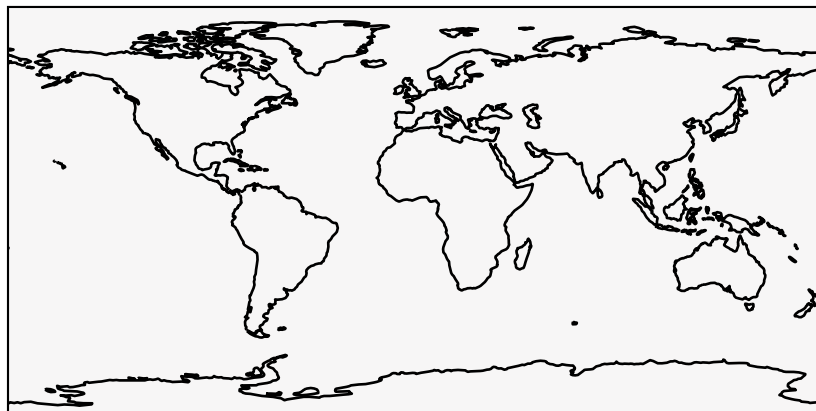
GCC_ref (Ref)
4.0x5.0



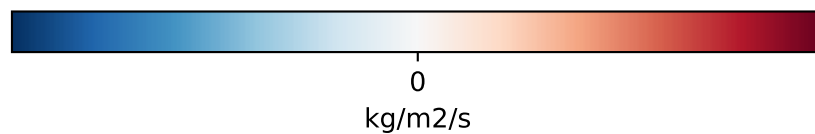
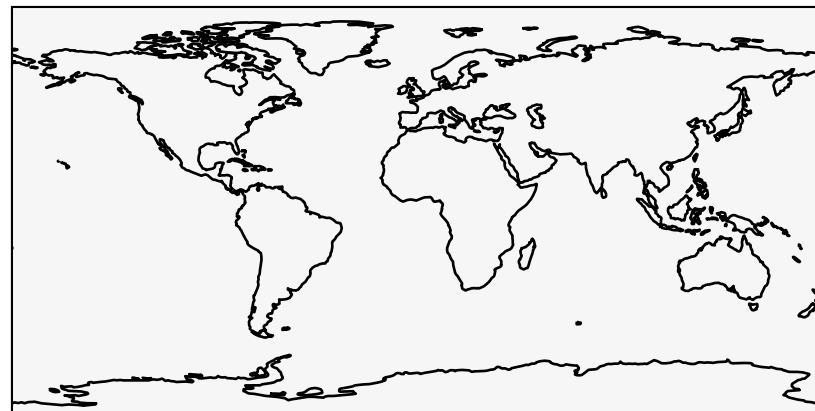
GCC_dev (Dev)
4.0x5.0



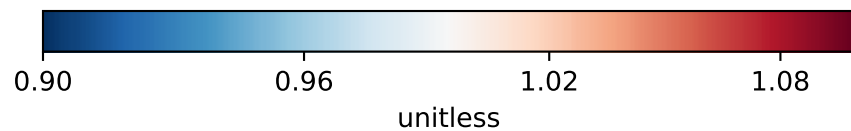
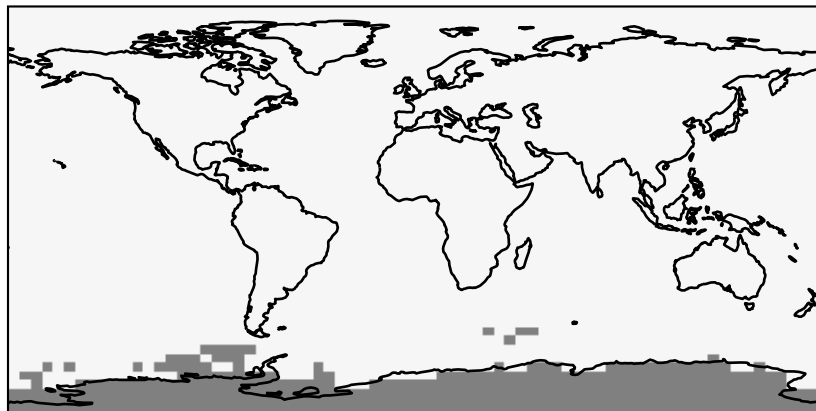
Difference
Dev - Ref, Dynamic Range



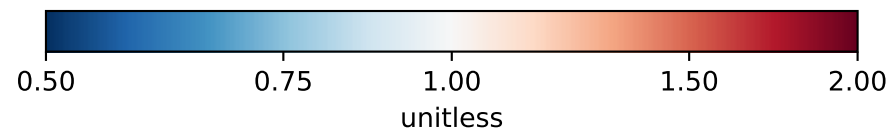
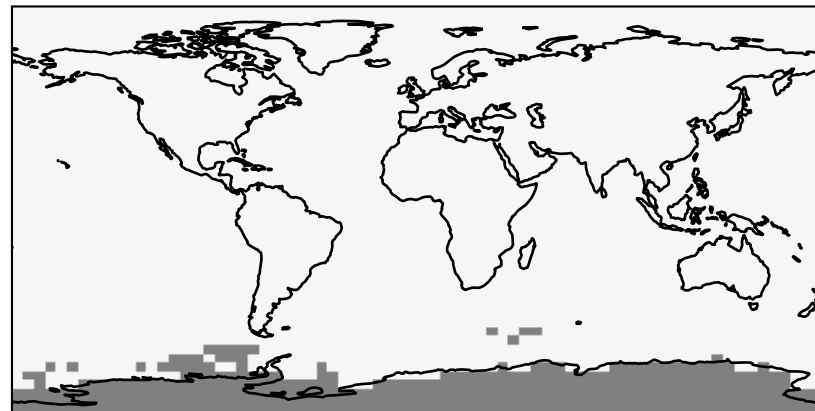
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

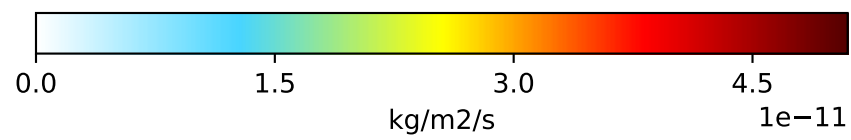
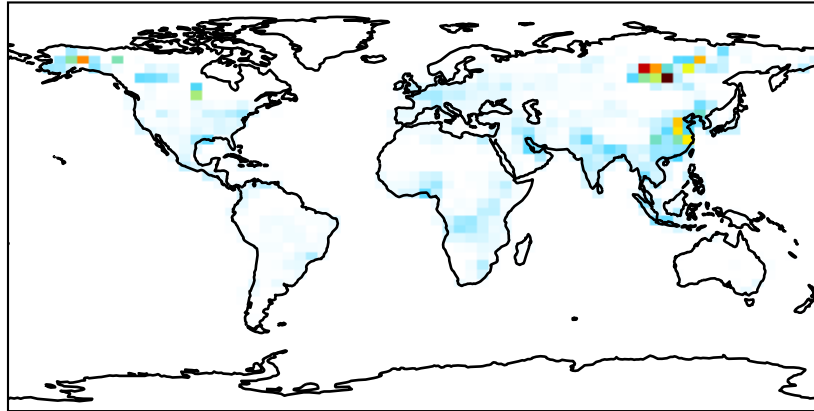


Ratio
Dev/Ref, Fixed Range

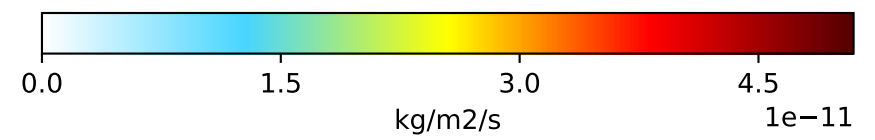
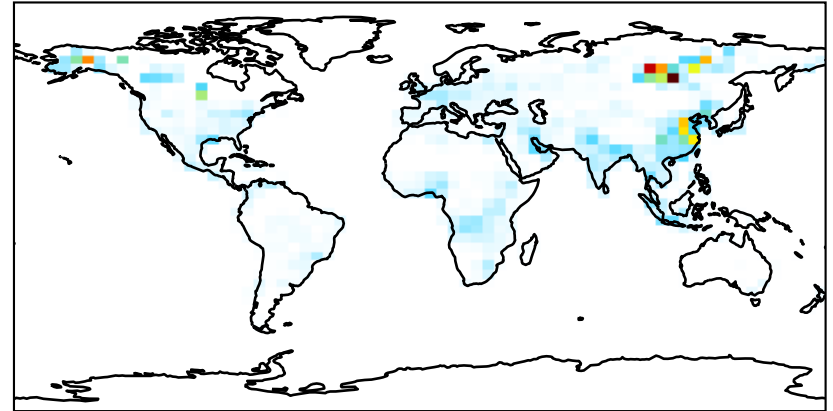


EmisTOLU_Total

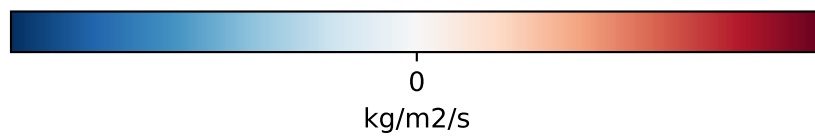
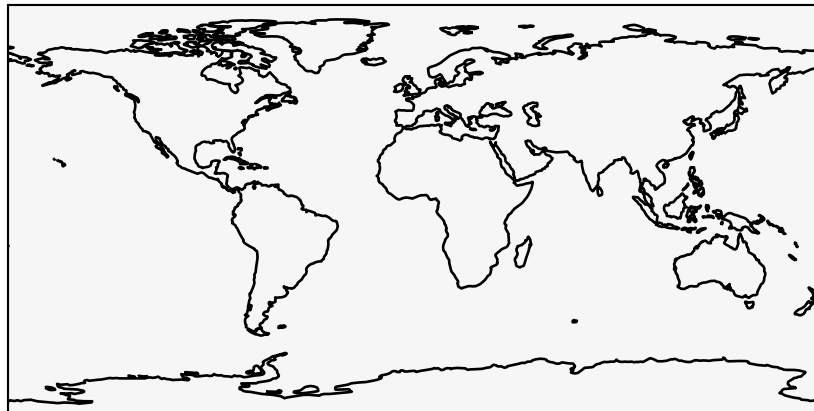
GCC_ref (Ref)
4.0x5.0



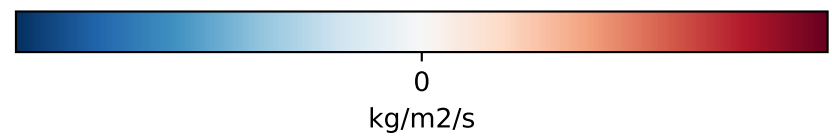
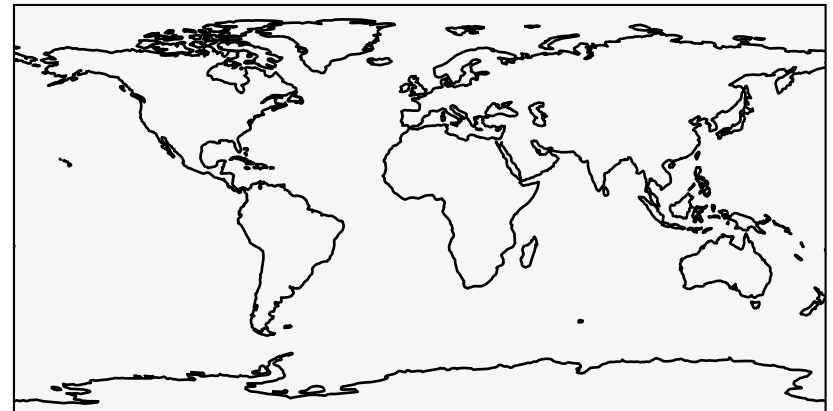
GCC_dev (Dev)
4.0x5.0



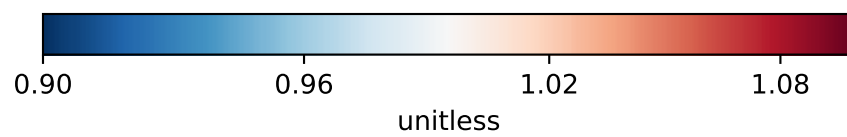
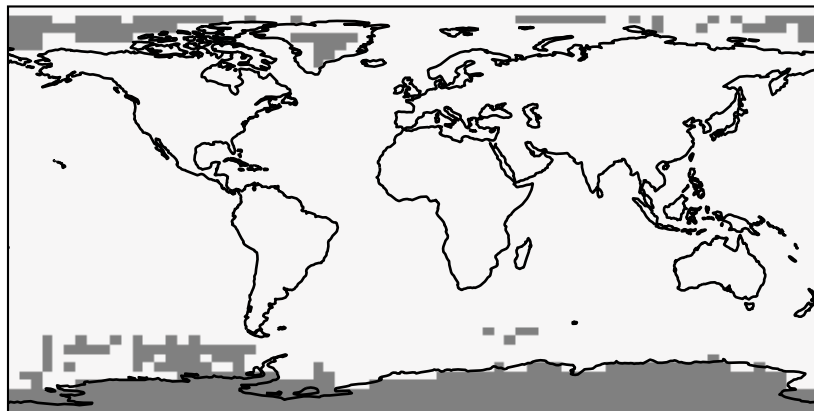
Difference
Dev - Ref, Dynamic Range



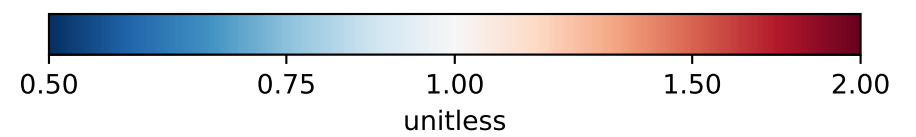
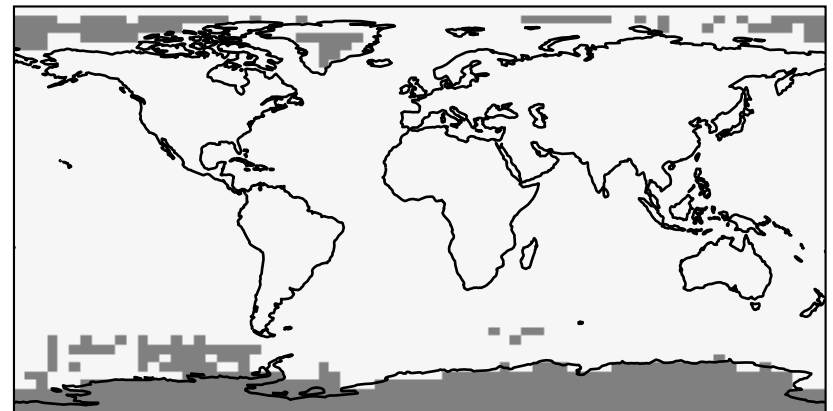
Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range

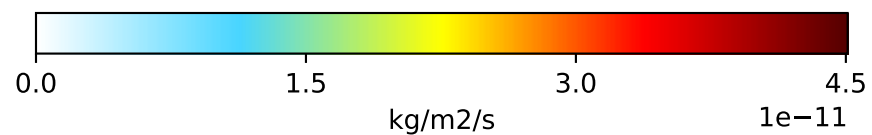
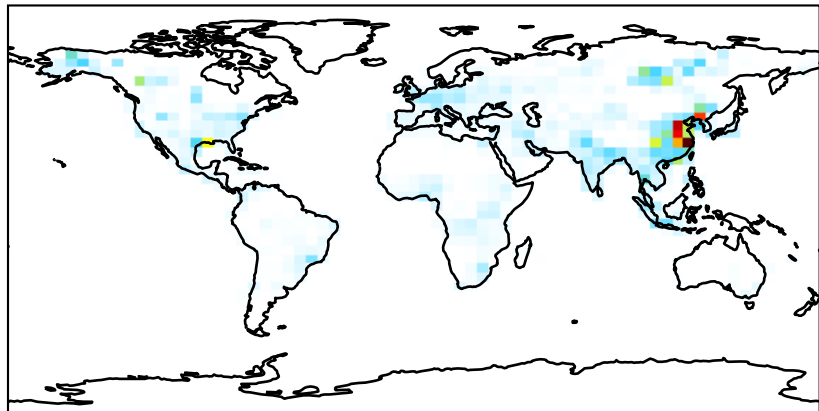


Ratio
Dev/Ref, Fixed Range

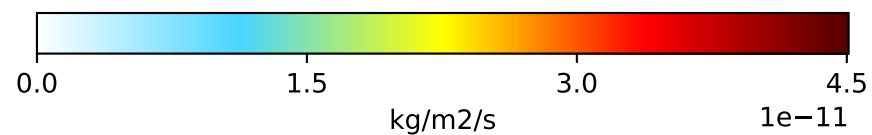
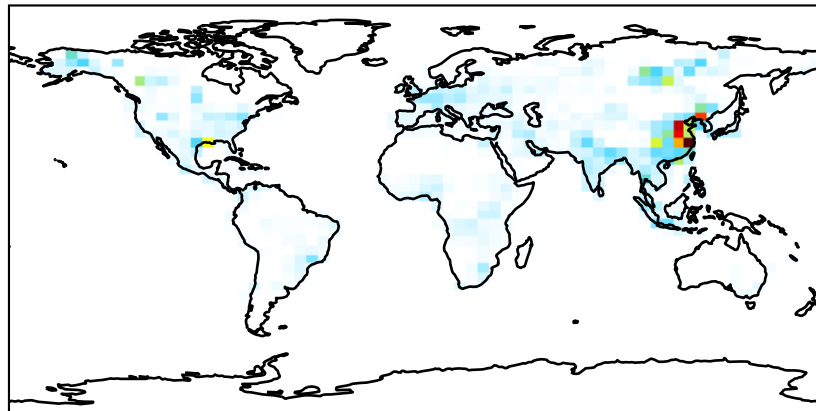


EmisXYLE_Total

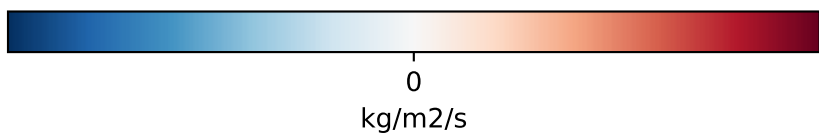
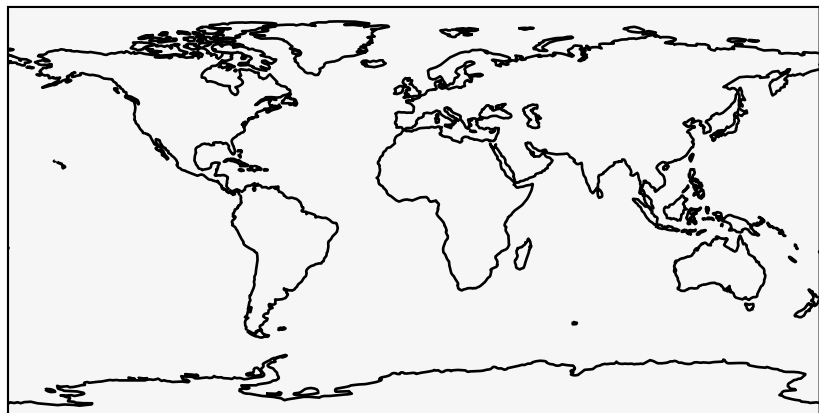
GCC_ref (Ref)
4.0x5.0



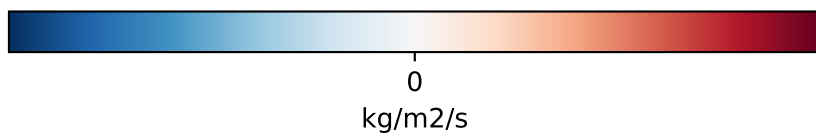
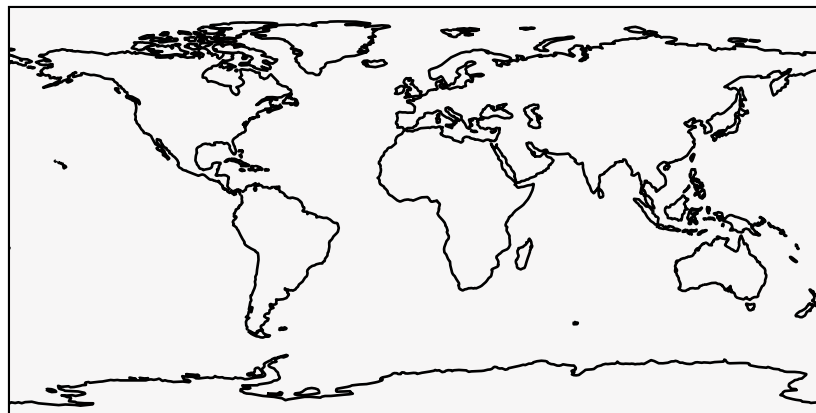
GCC_dev (Dev)
4.0x5.0



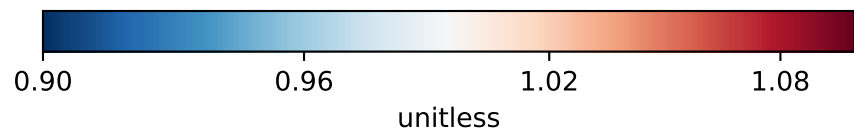
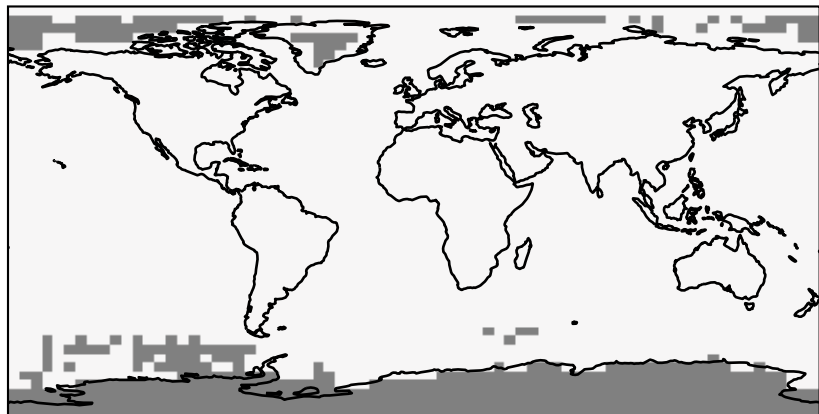
Difference
Dev - Ref, Dynamic Range



Difference
Dev - Ref, Restricted Range [5%,95%]



Ratio
Dev/Ref, Dynamic Range



Ratio
Dev/Ref, Fixed Range

