EmisALD2_Ship

GC_12.4.0 (Ref)
4x5
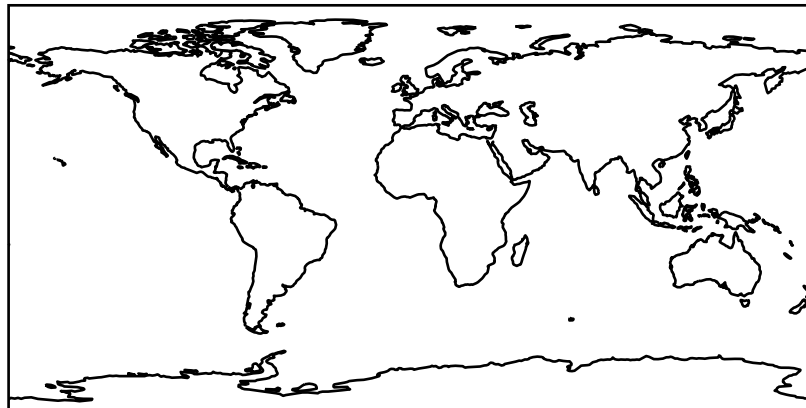
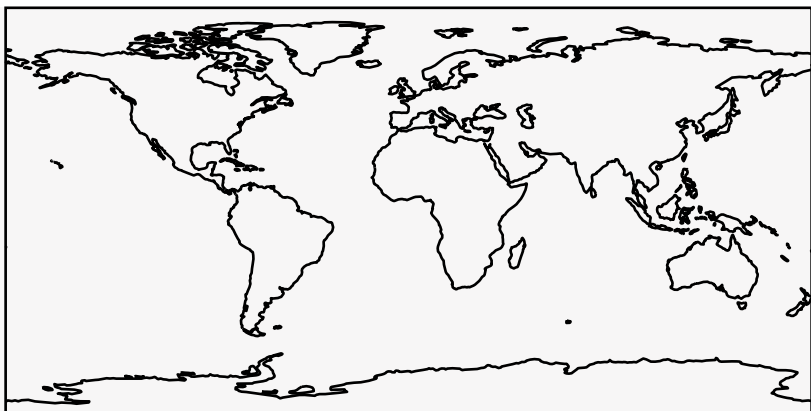### GC_12.6.0 (Dev)
4x5

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s
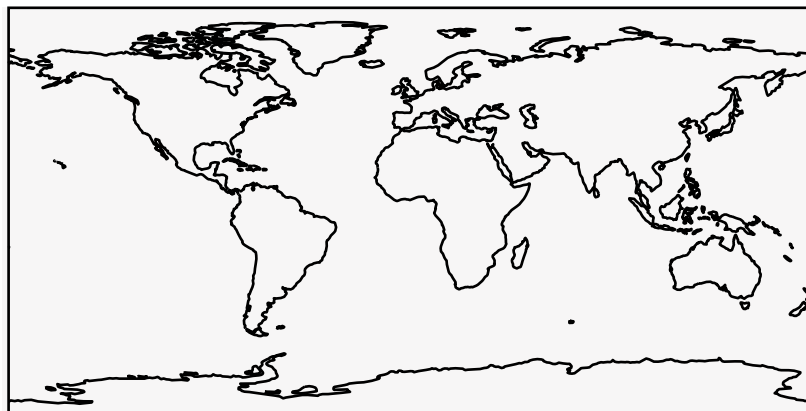
Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
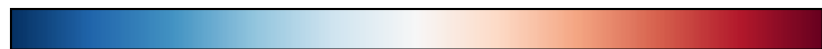
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Undefined throughout domain
unitless
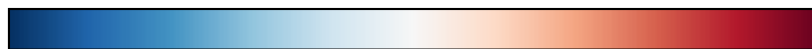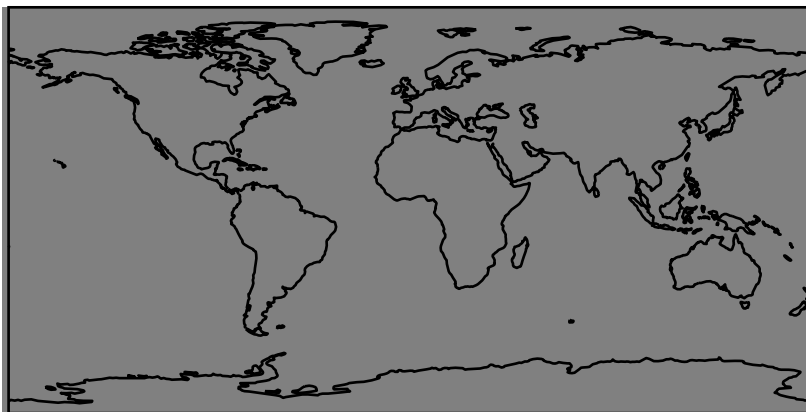
Undefined throughout domain
unitless

EmisALK4_Ship

GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
4x5

kg/m2/s

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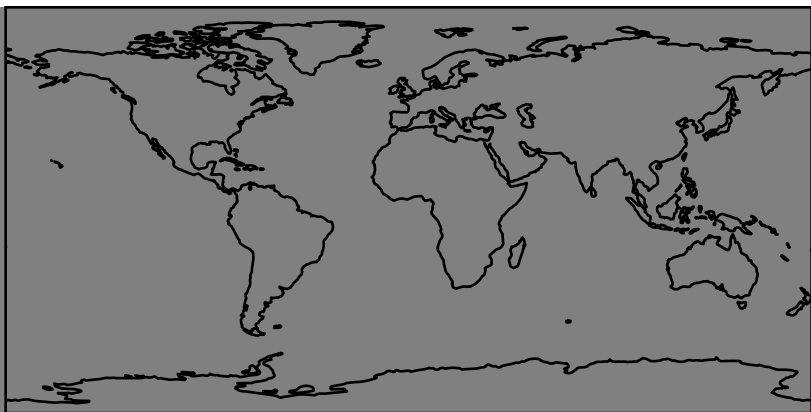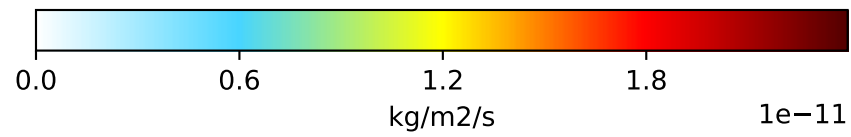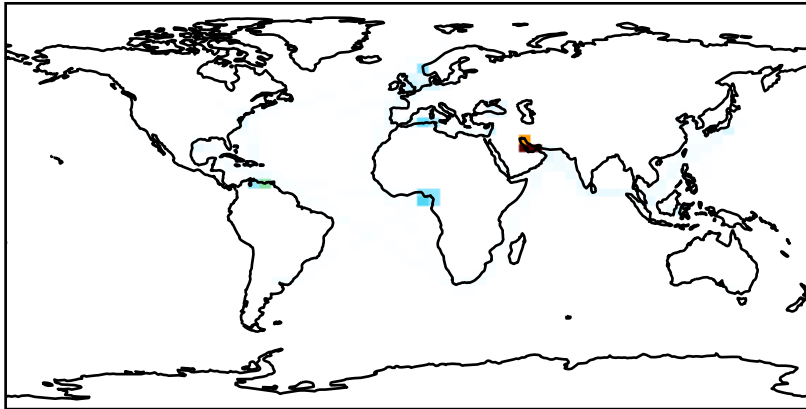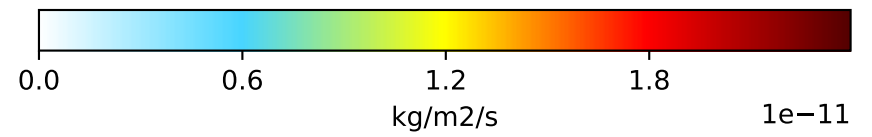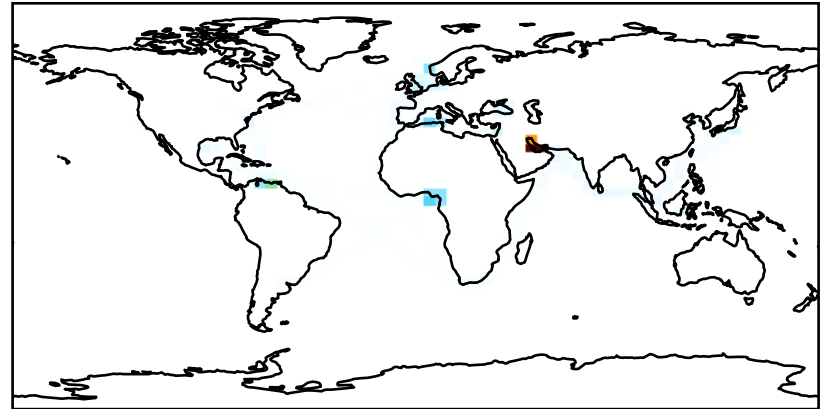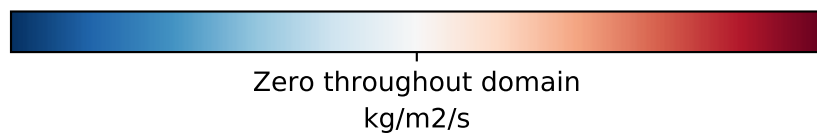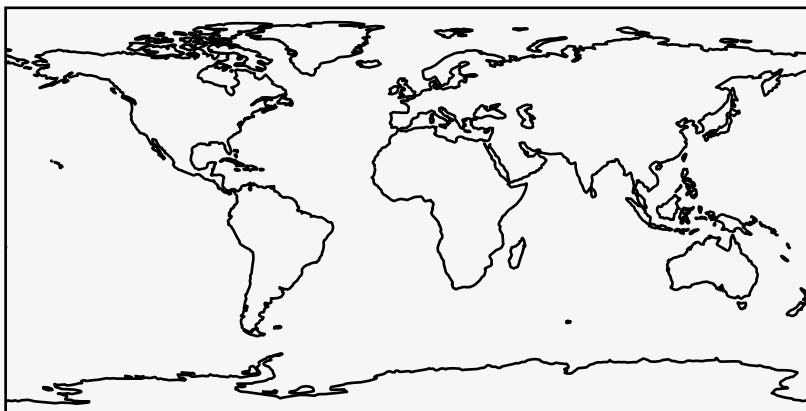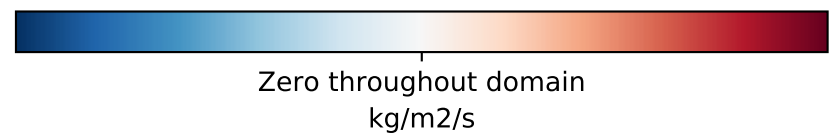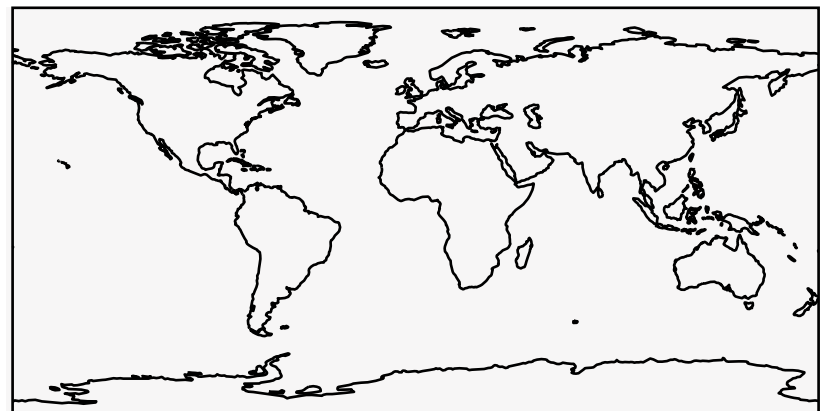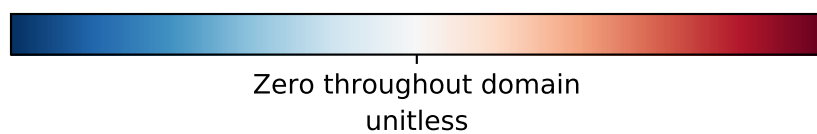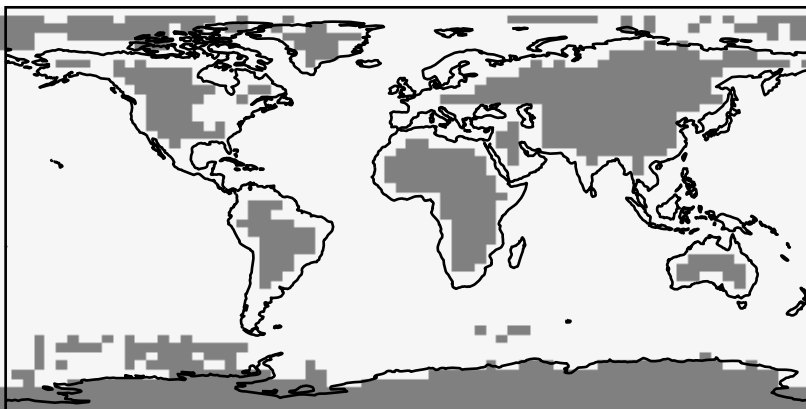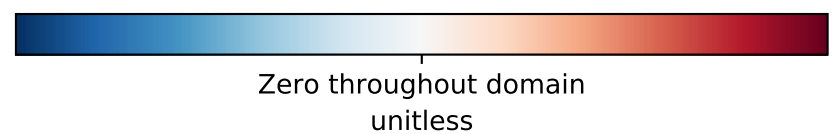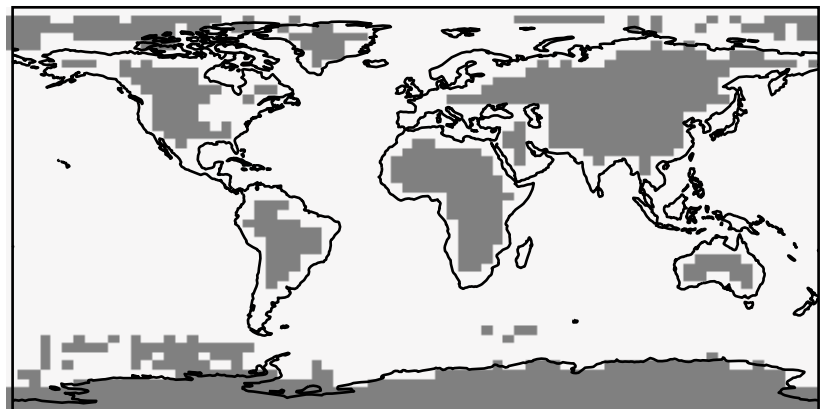
Difference
Dev - Ref, Restricted Range [5%,95%]

Zero throughout domain
kg/m2/s

Fractional Difference
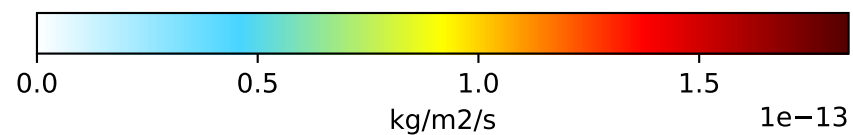(Dev-Ref)/Ref, Dynamic Range
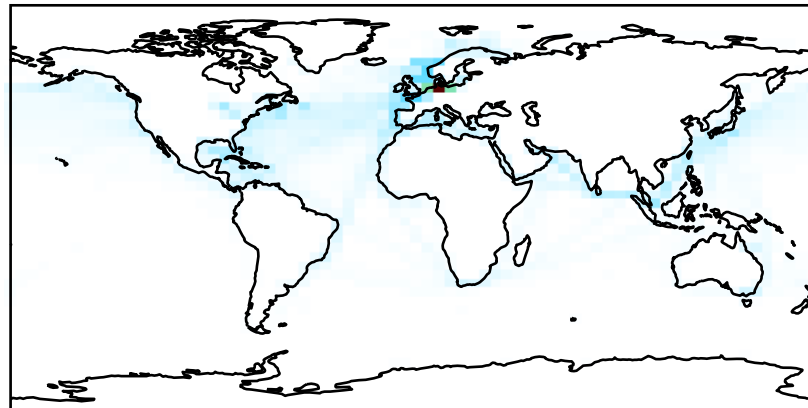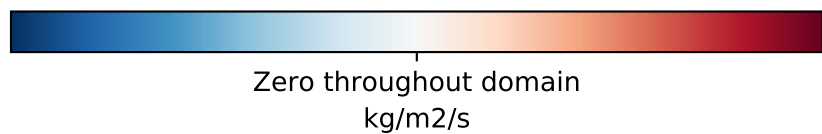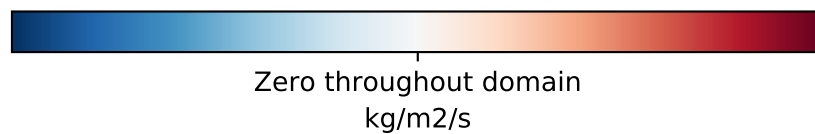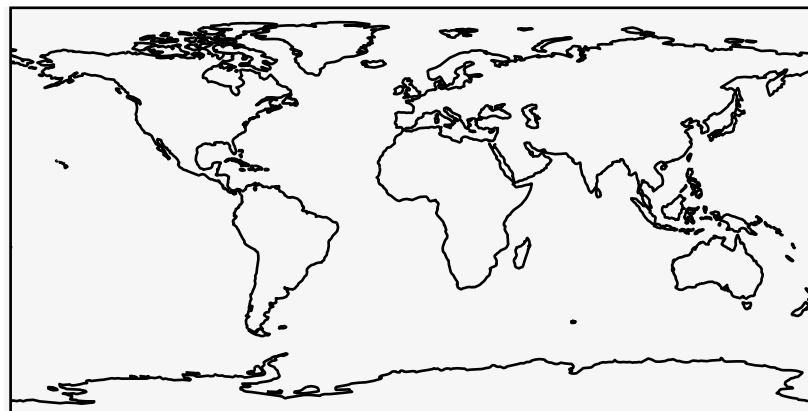
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Zero throughout domain
unitless

EmisBCPI_Ship

GC_12.4.0 (Ref)
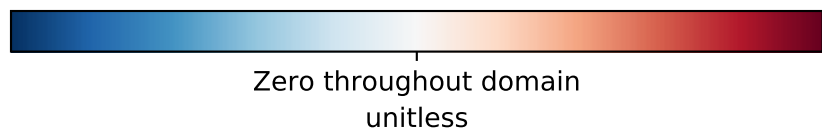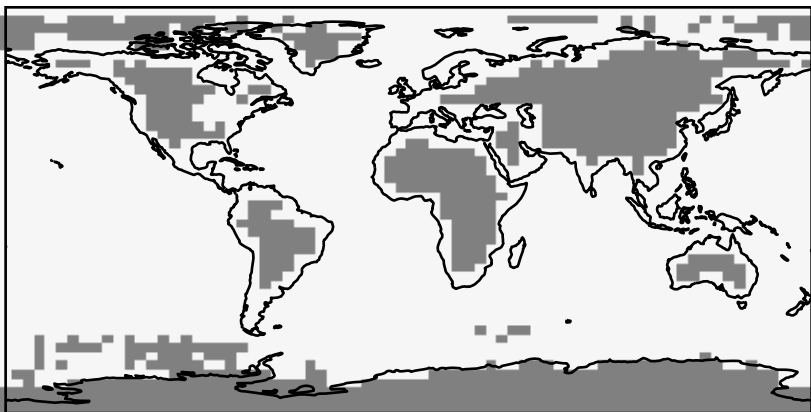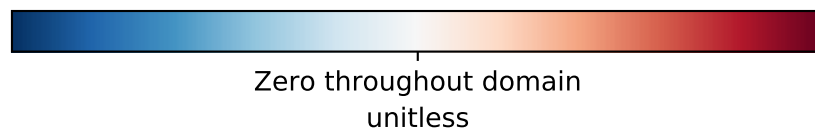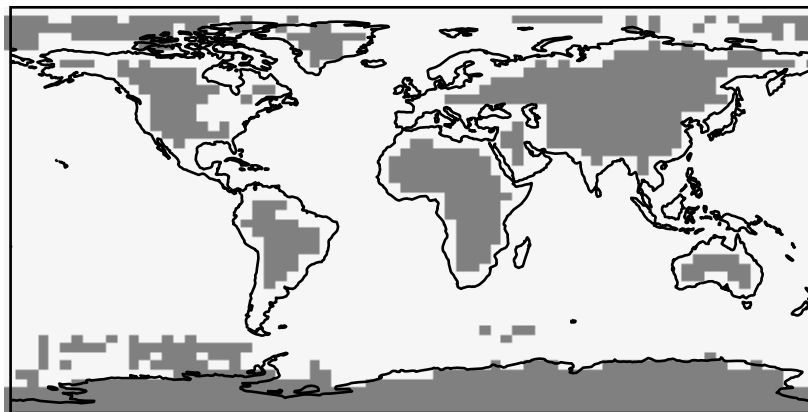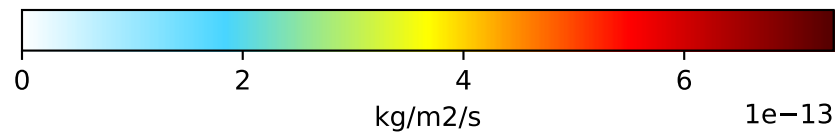4x5

GC_12.6.0 (Dev)
4x5

kg/m2/s

kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range

Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Zero throughout domain
unitless

Zero throughout domain
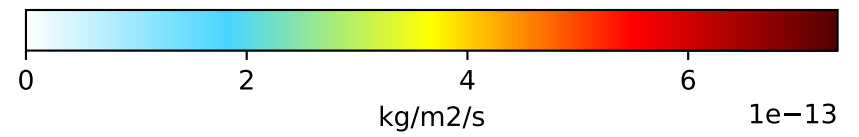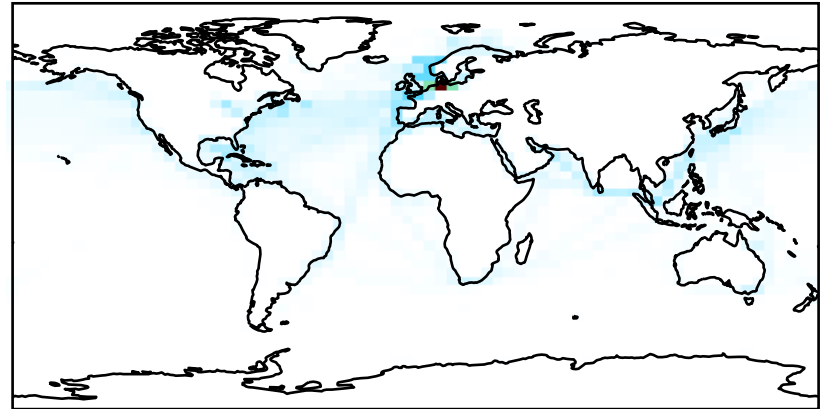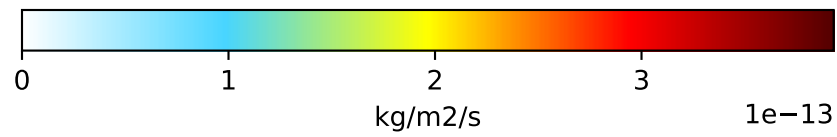unitless

EmisBCPO_Ship

EmisBENZ_Ship

EmisC2H6_Ship

GC_12.4.0 (Ref)
4x5
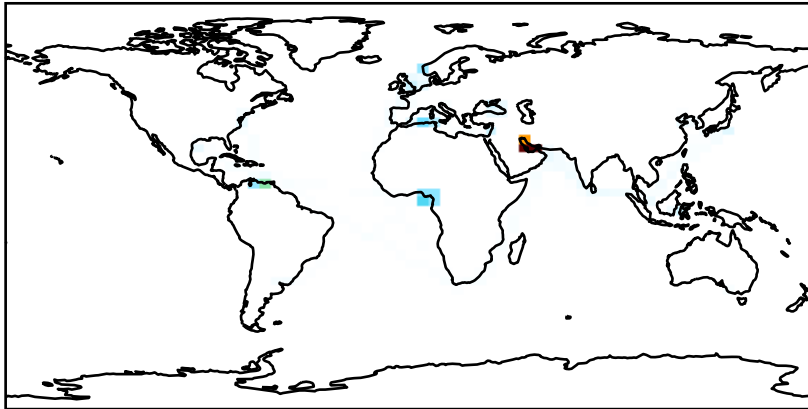
GC_12.6.0 (Dev)
4x5

kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s

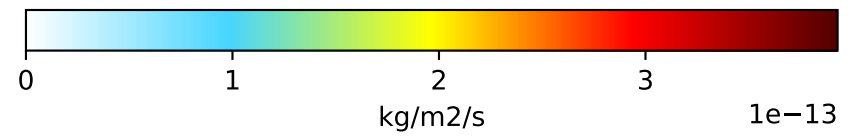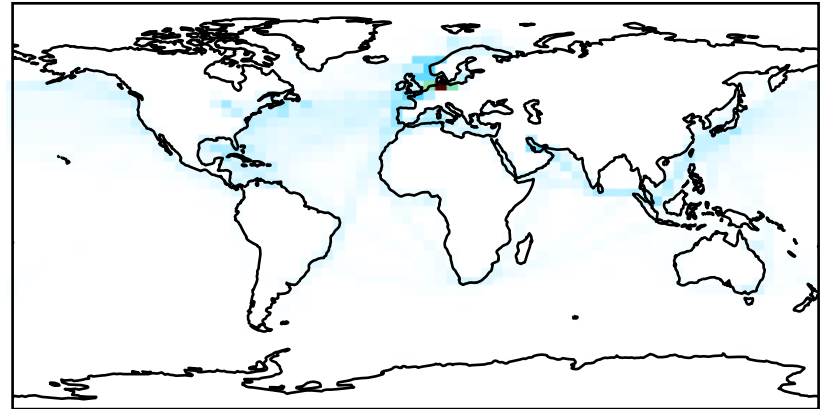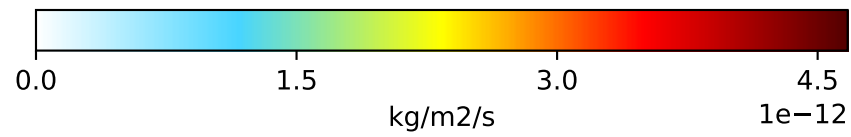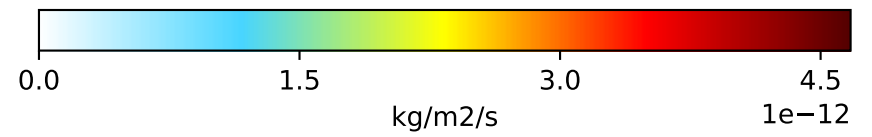Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
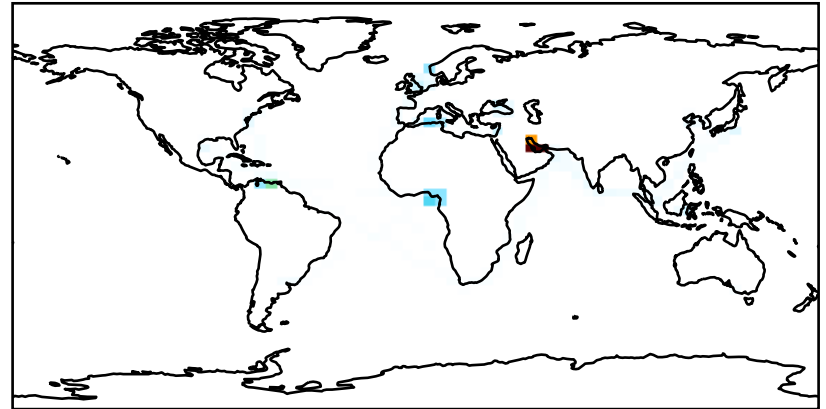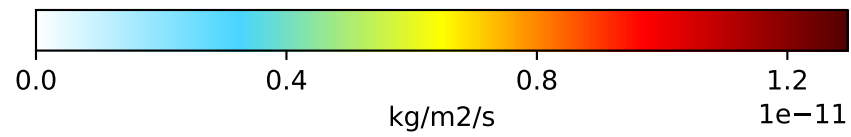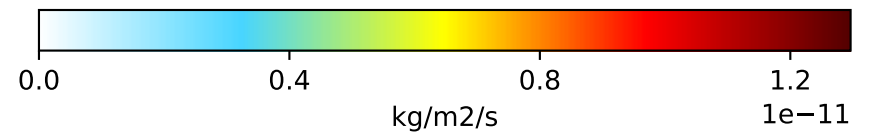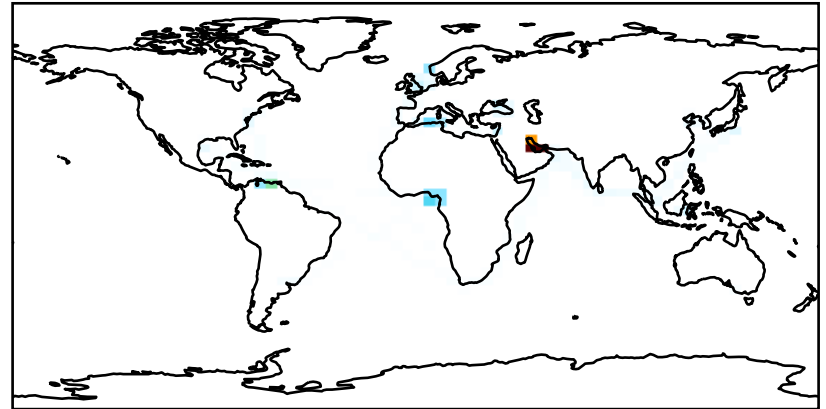
Fractional Difference
(Dev-Ref)/Ref, Fixed Range
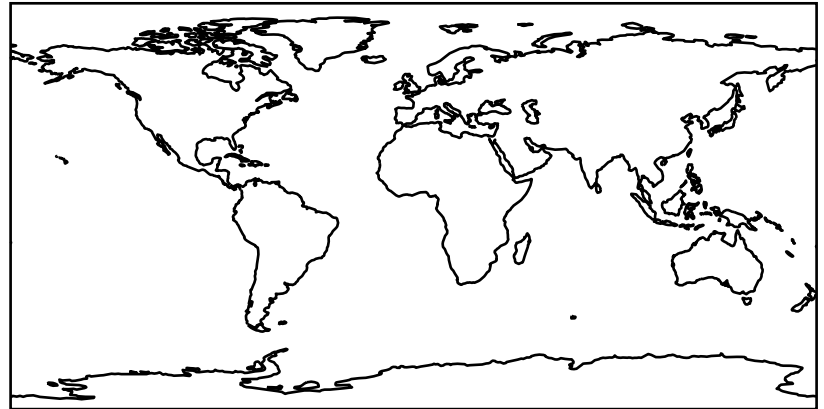
Zero throughout domain
unitless
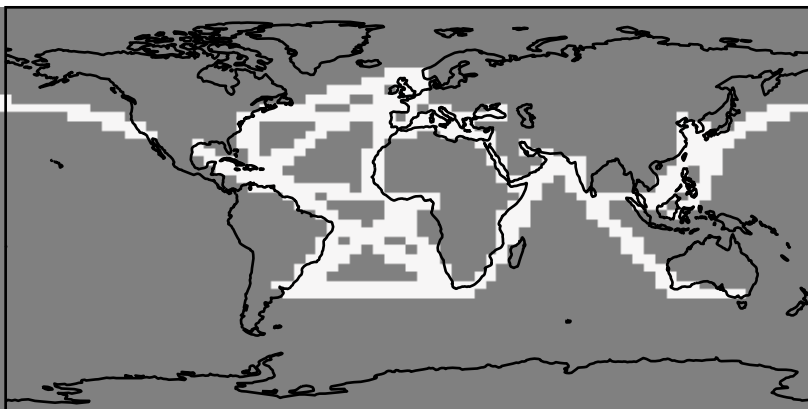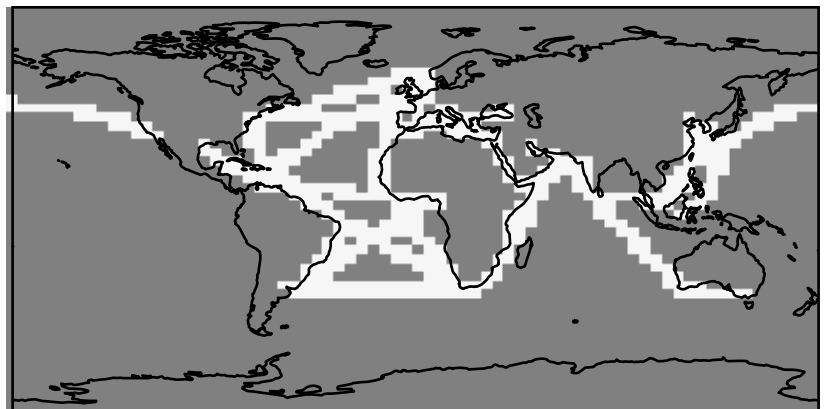
EmisC3H8_Ship
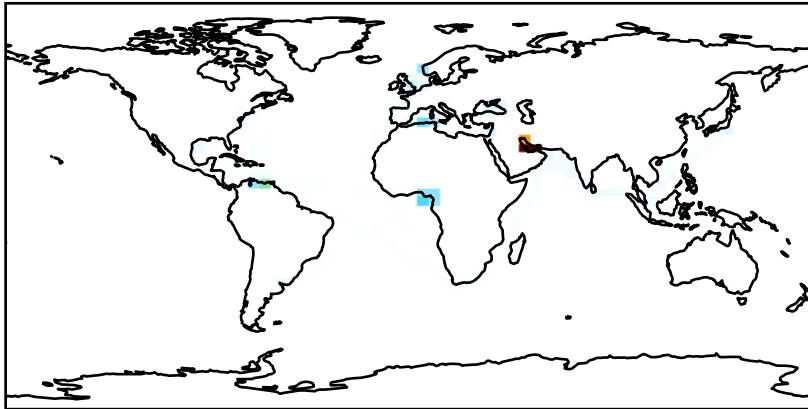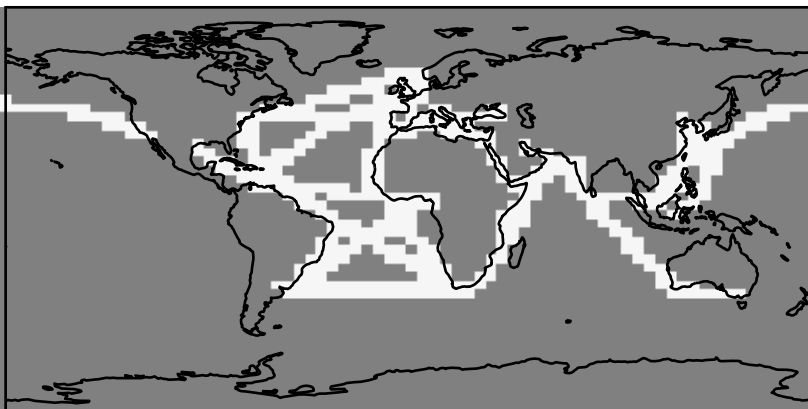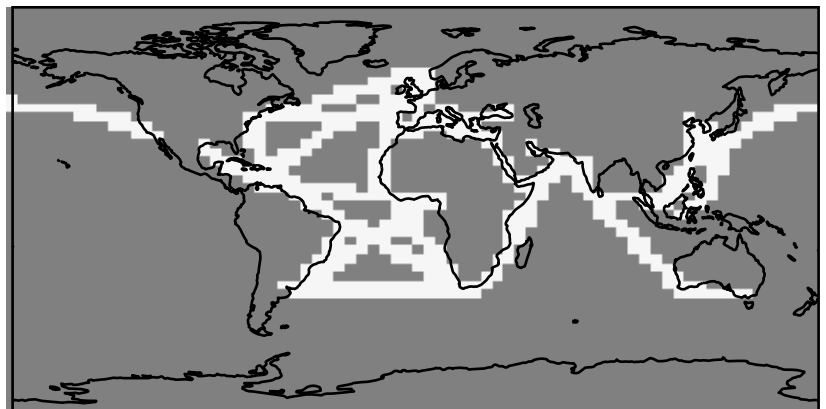
EmisCH2O_Ship

GC_12.4.0 (Ref)
4x5
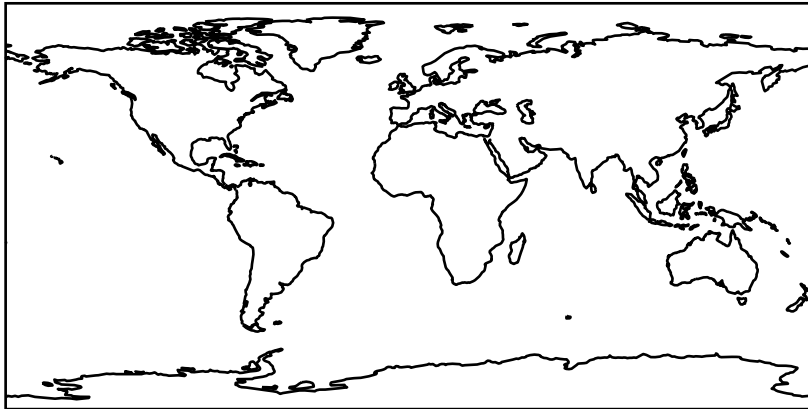
GC_12.6.0 (Dev)
4x5

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

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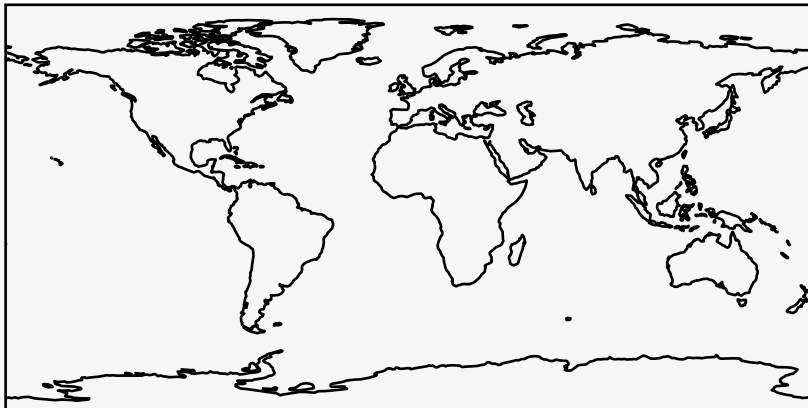
Difference
Dev - Ref, Restricted Range [5%,95%]

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
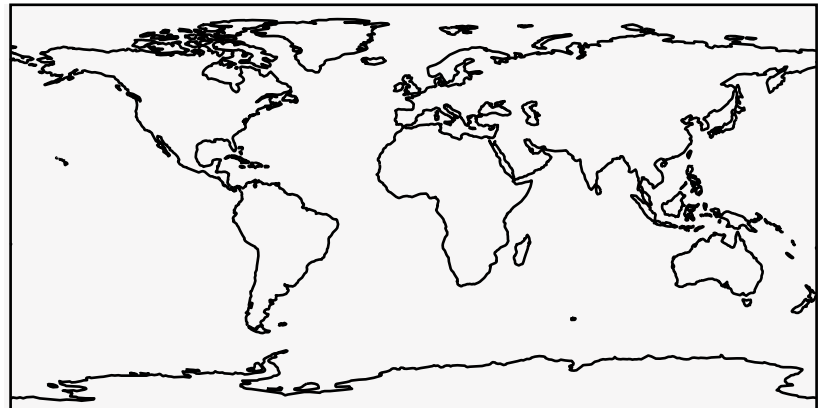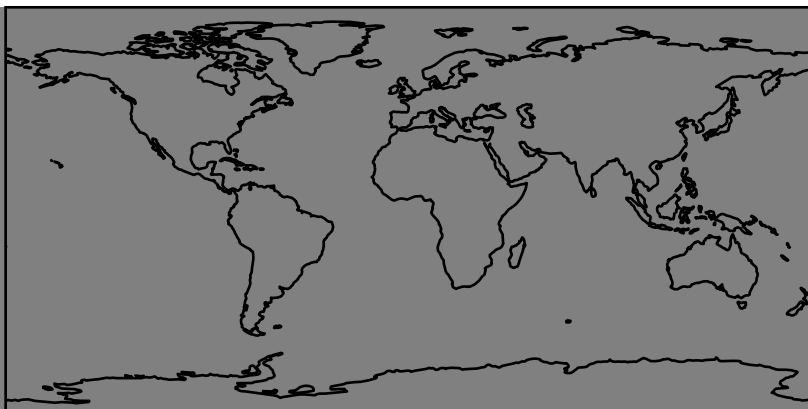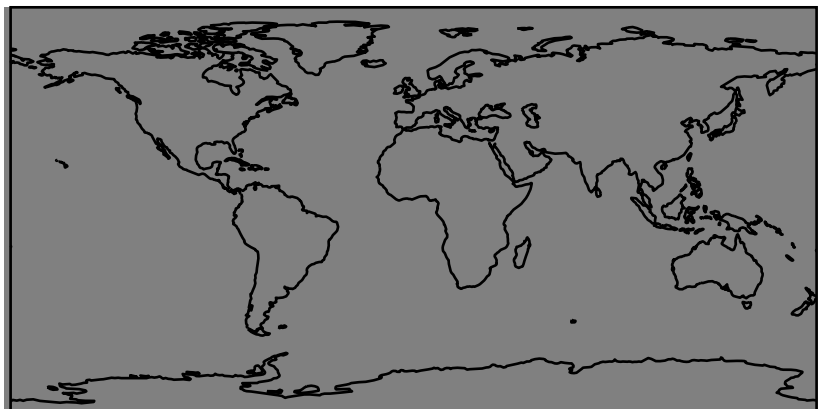
Fractional Difference
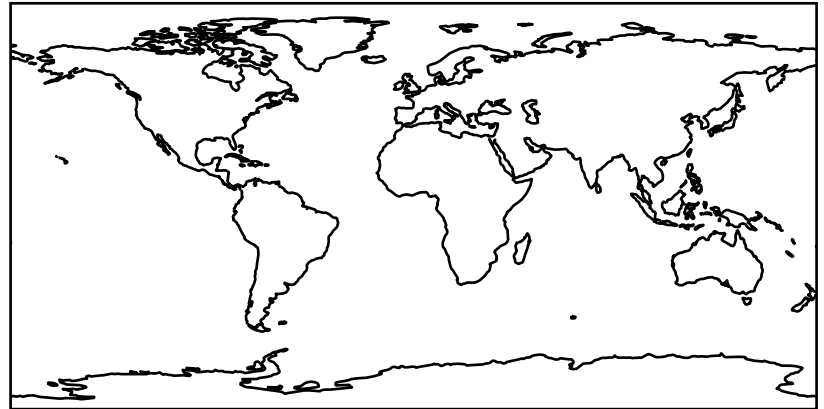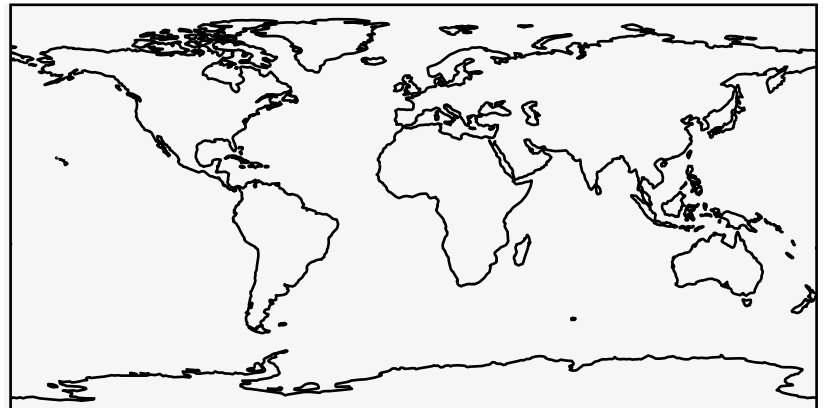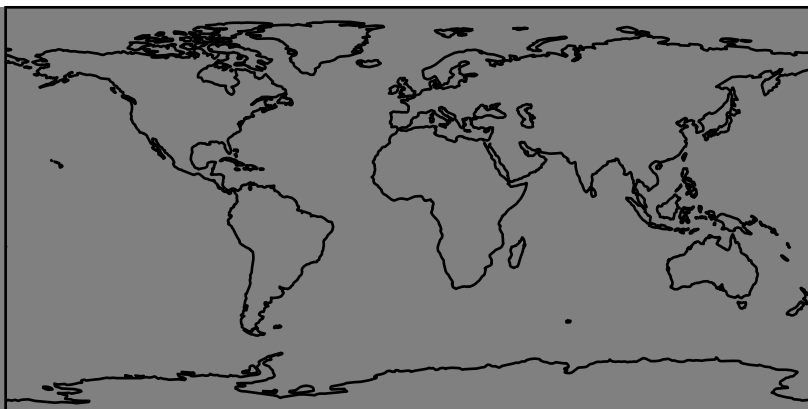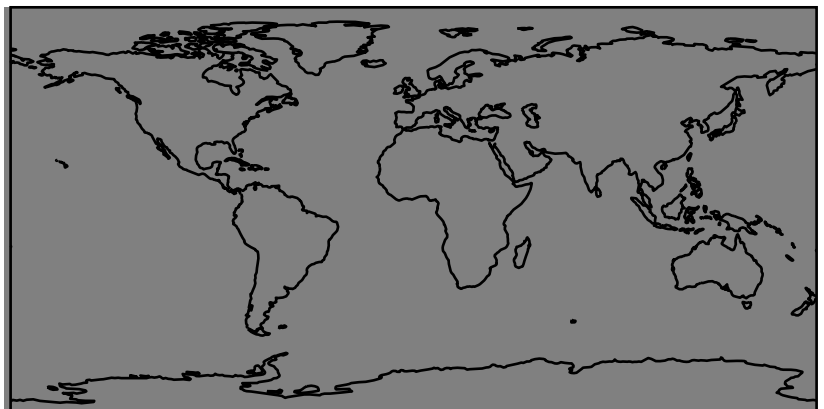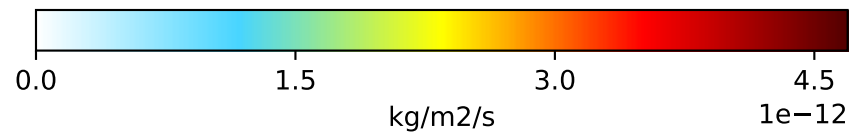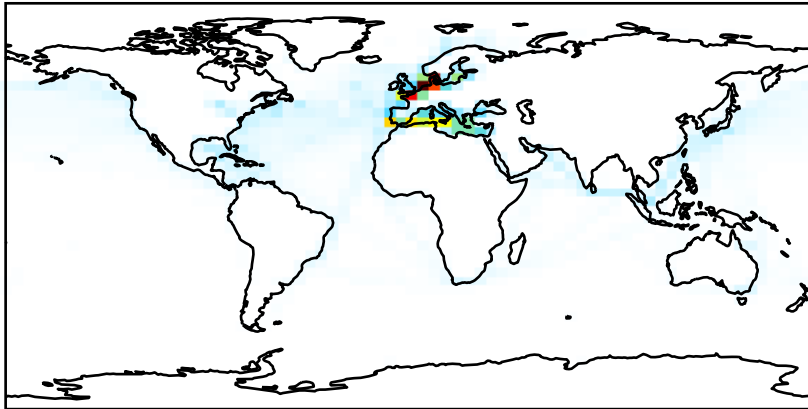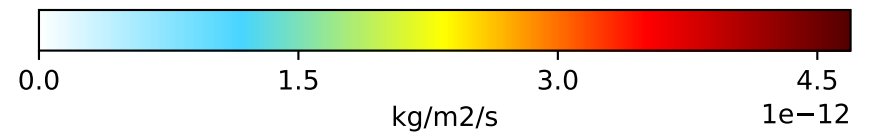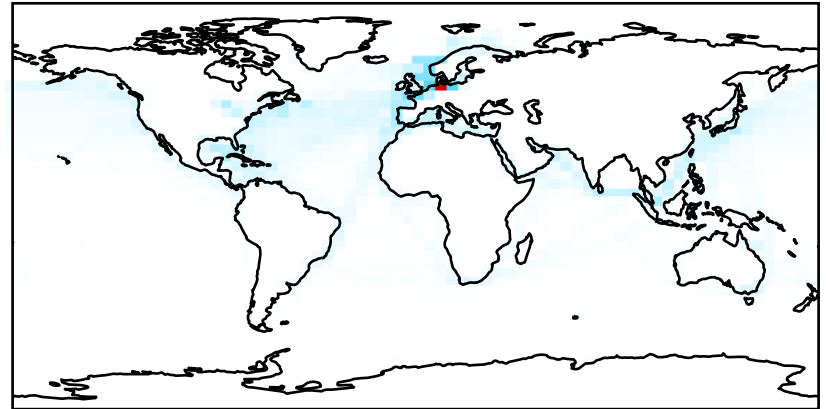(Dev-Ref)/Ref, Fixed Range

Undefined throughout domain
unitless

Undefined throughout domain
unitless

EmisCH4_Ship

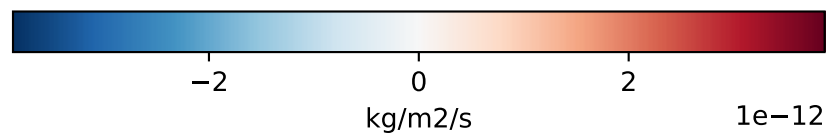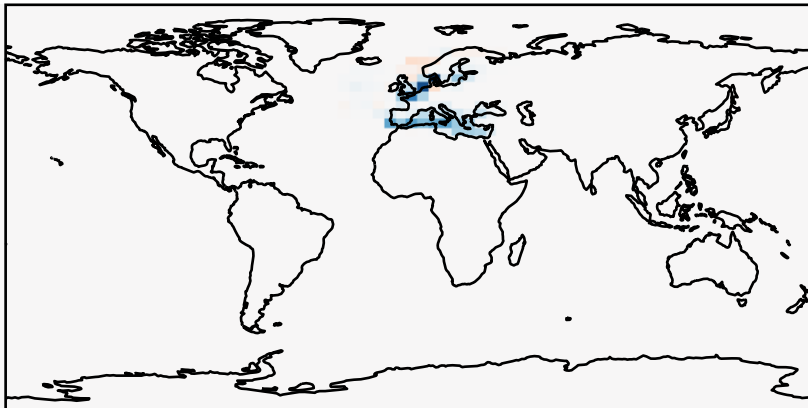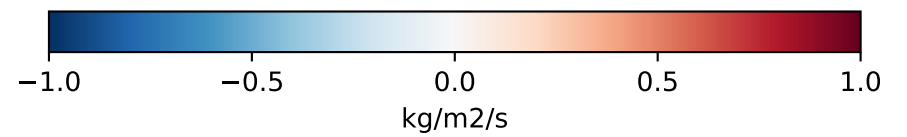GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
4x5

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

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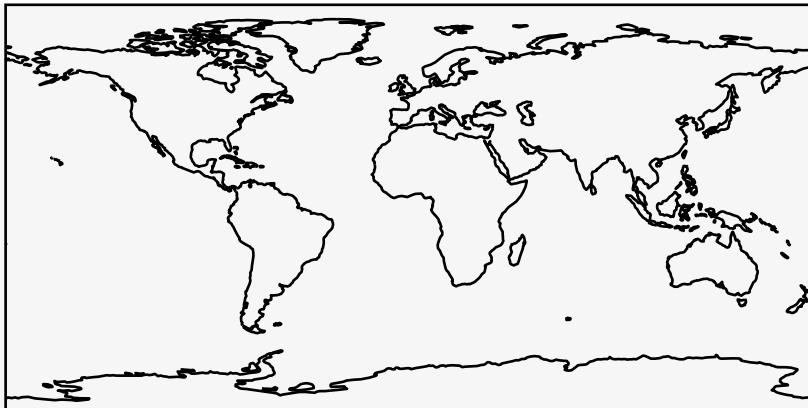
Difference
Dev - Ref, Restricted Range [5%,95%]

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range

Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Undefined throughout domain
unitless

Undefined throughout domain
unitless

EmisCO_Ship

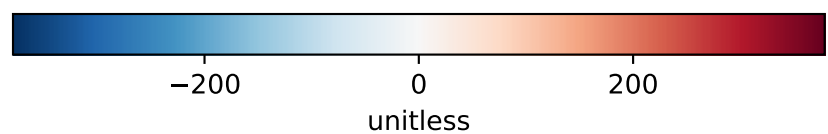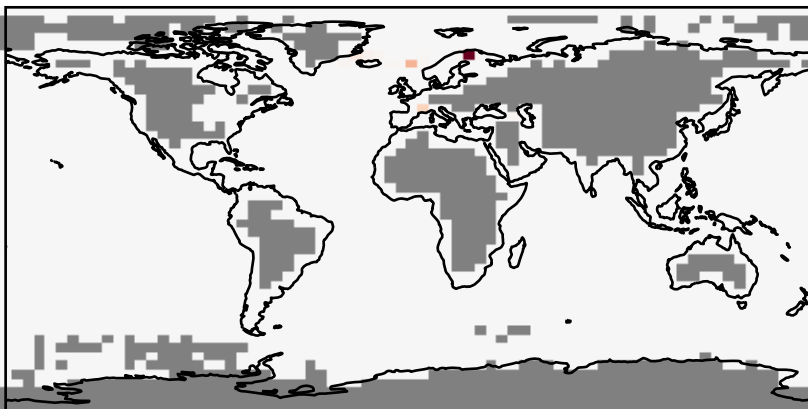GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
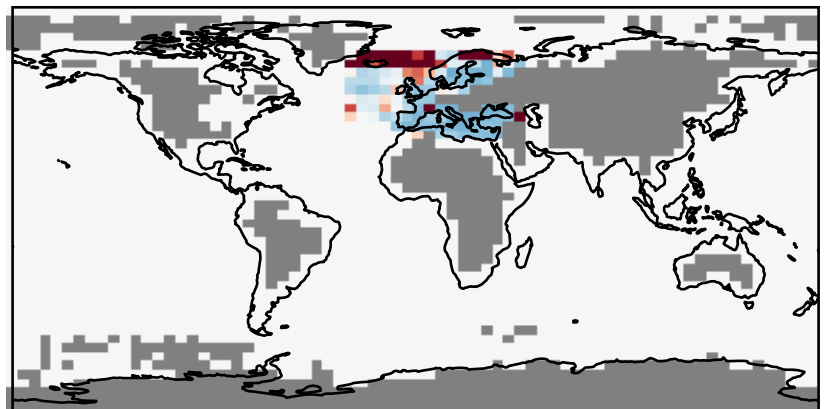4x5

Difference
Dev - Ref, Dynamic Range

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

Fractional Difference
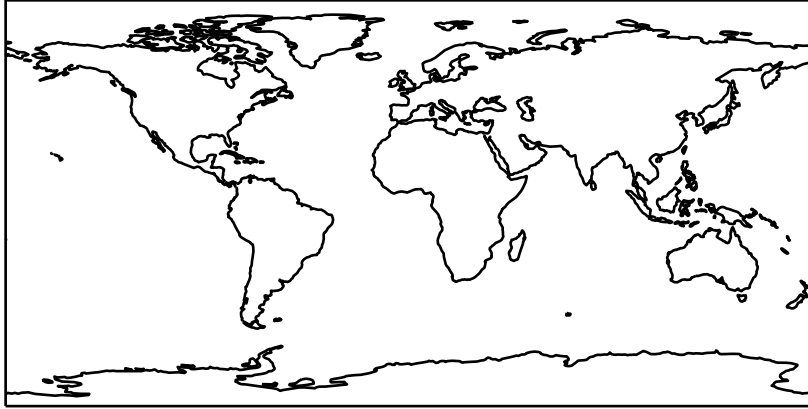(Dev-Ref)/Ref, Dynamic Range

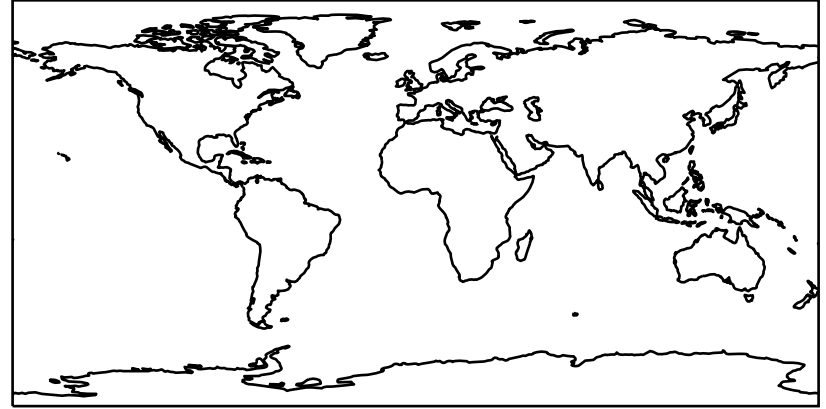Fractional Difference
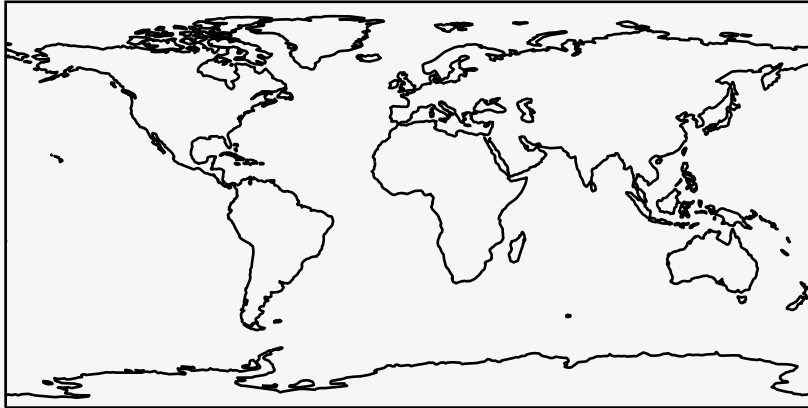(Dev-Ref)/Ref, Fixed Range

EmisEOH_Ship

GC_12.4.0 (Ref)
4x5

Zero throughout domain
kg/m2/s

GC_12.6.0 (Dev)
4x5

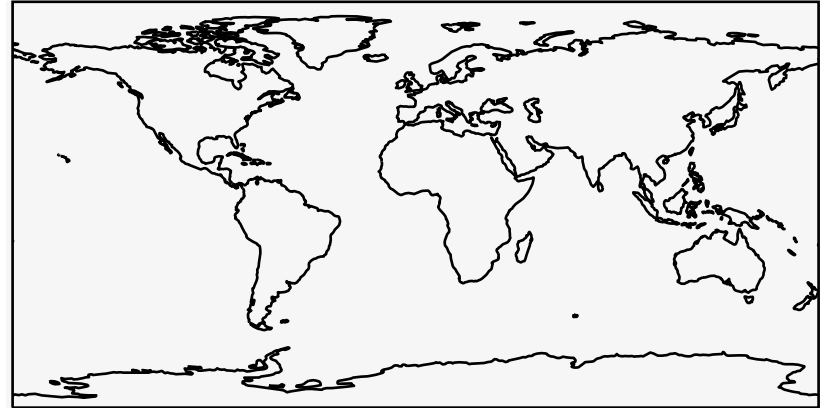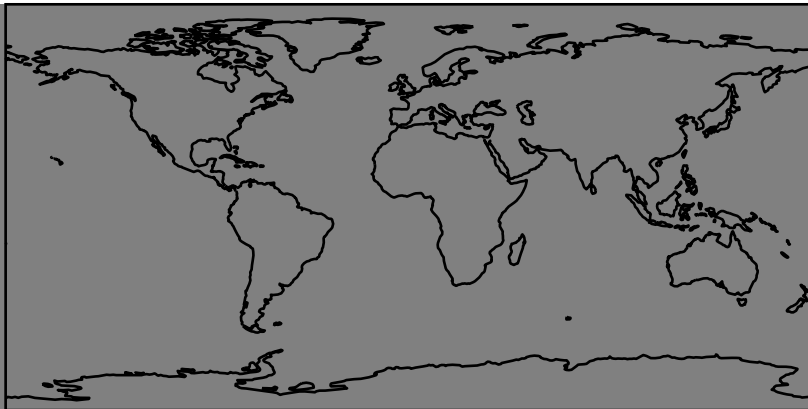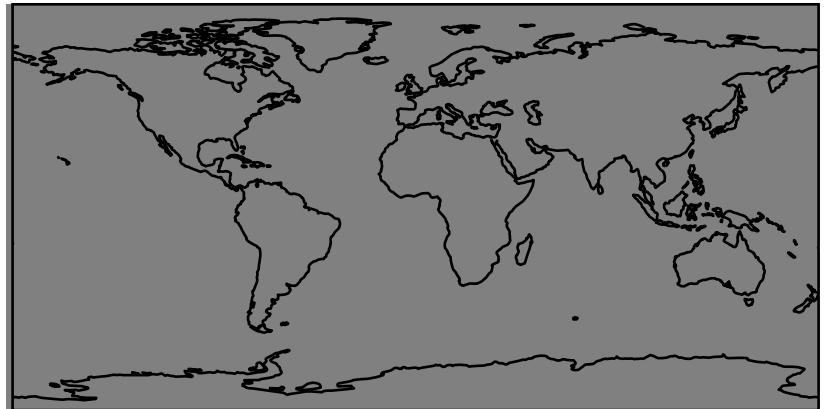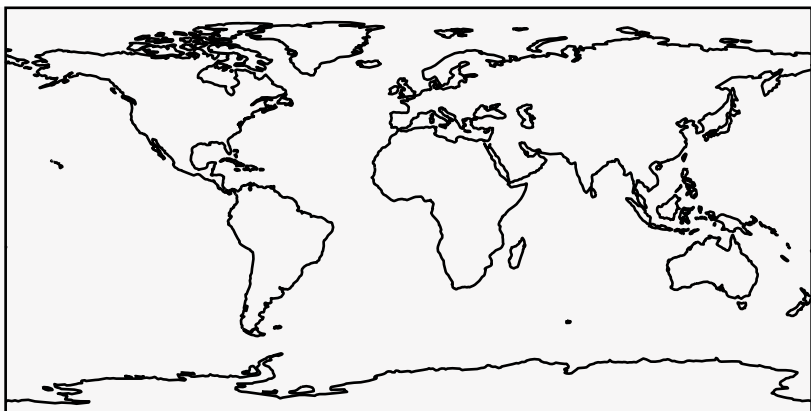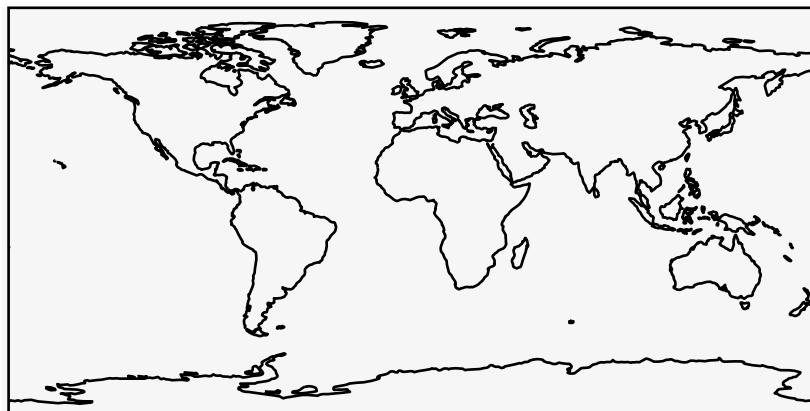Zero throughout domain
kg/m2/s

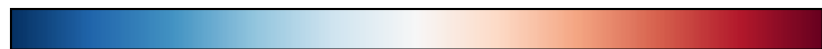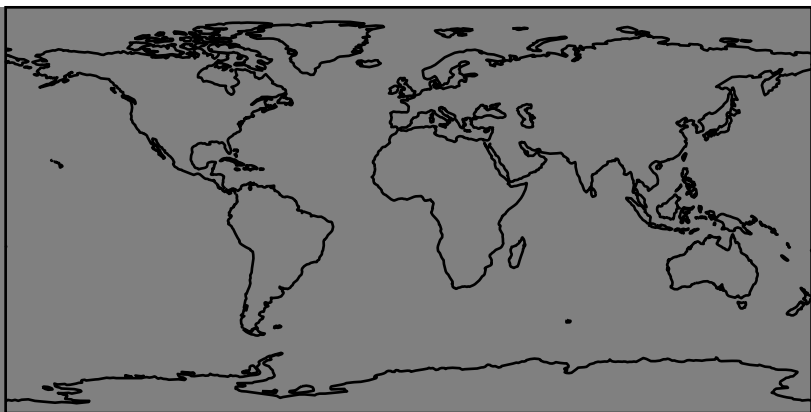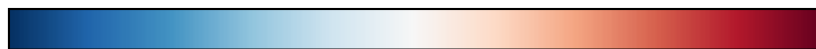## Difference
Dev - Ref, Dynamic Range

Zero throughout domain
kg/m2/s

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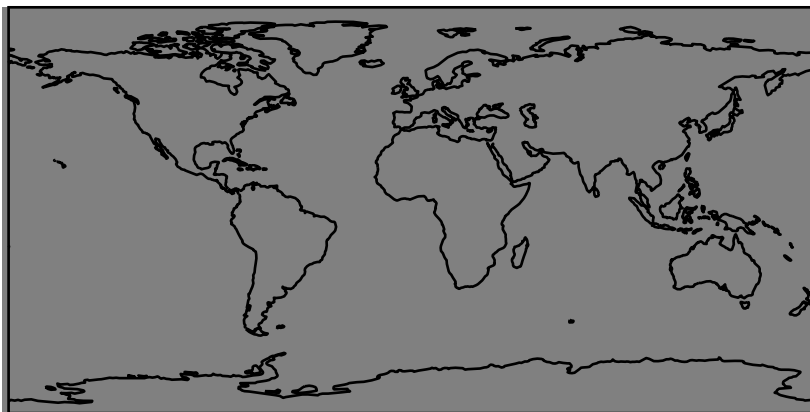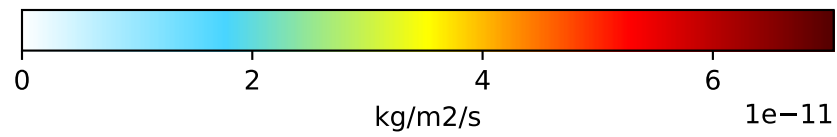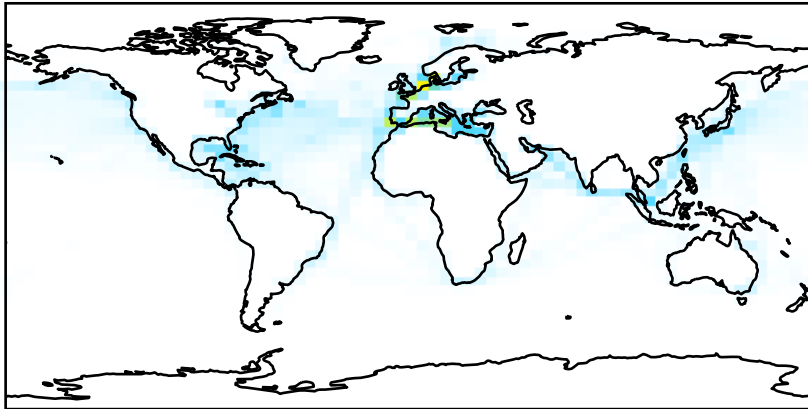Dev - Ref, Restricted Range [5%,95%]

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range

Undefined throughout domain
unitless
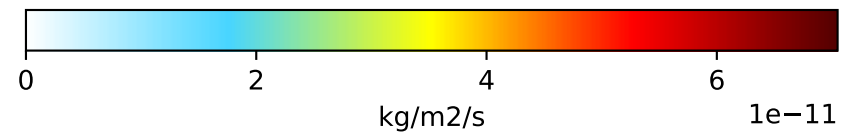
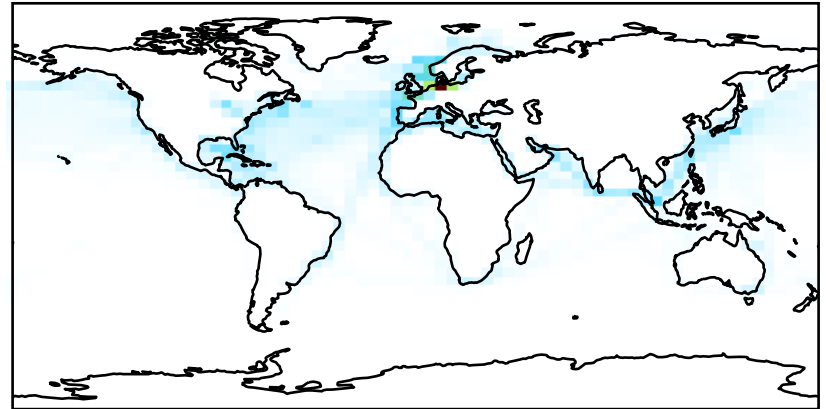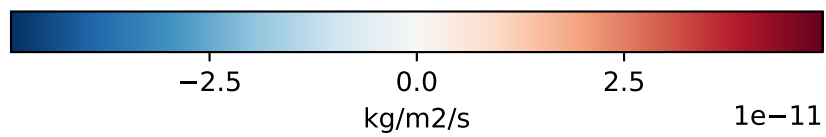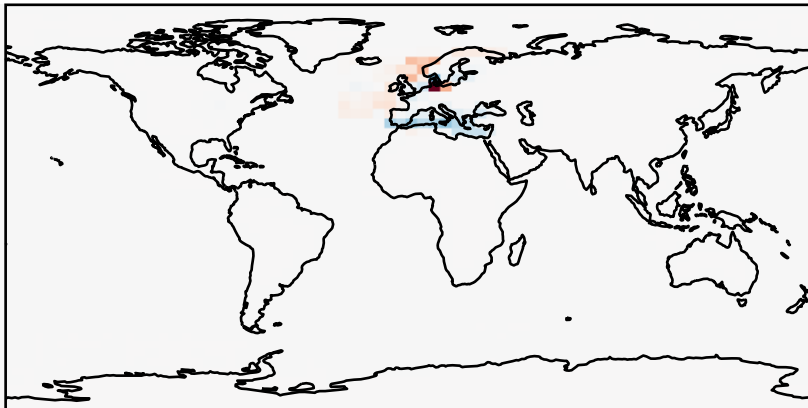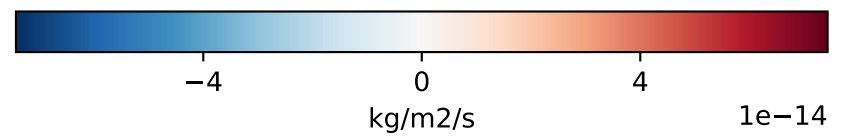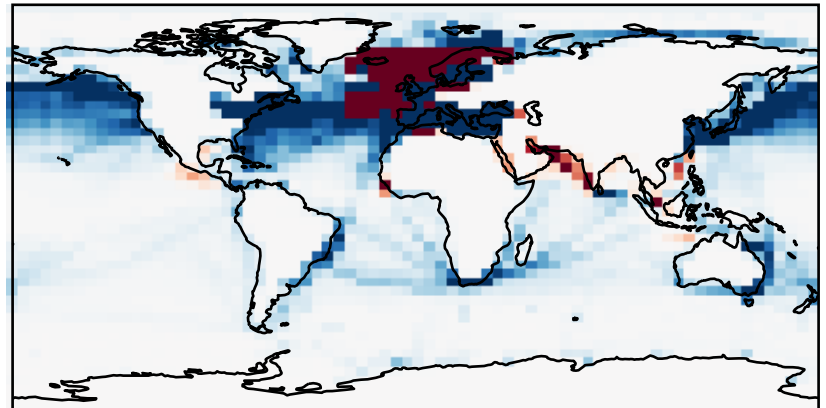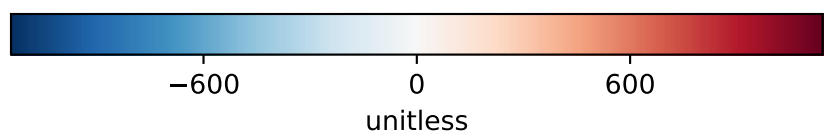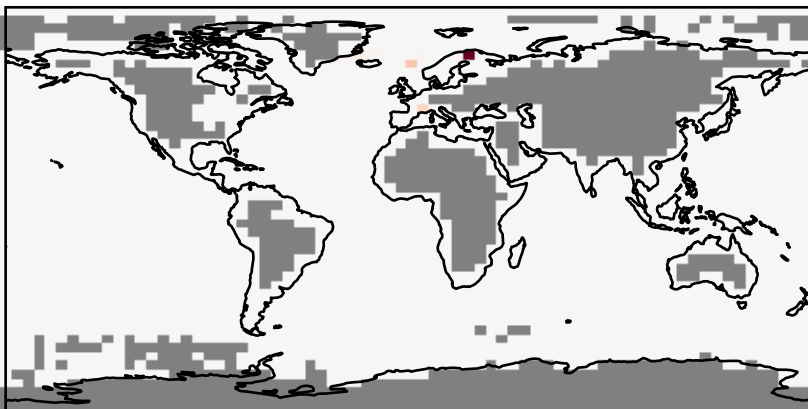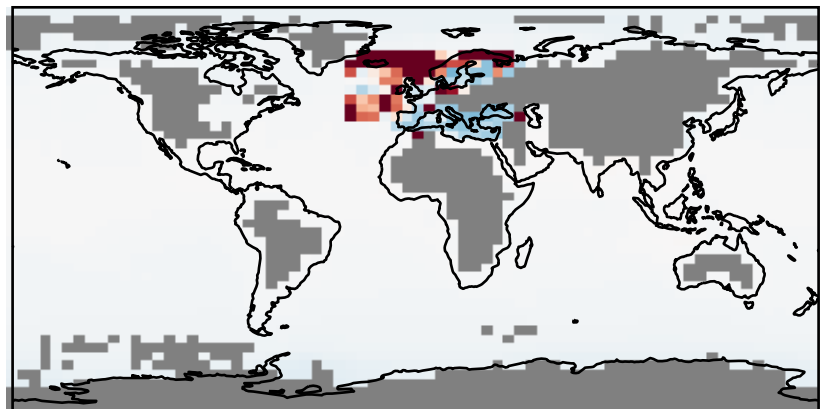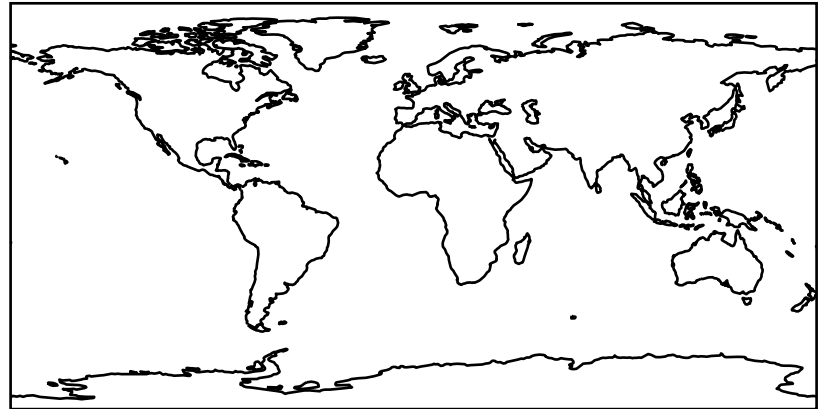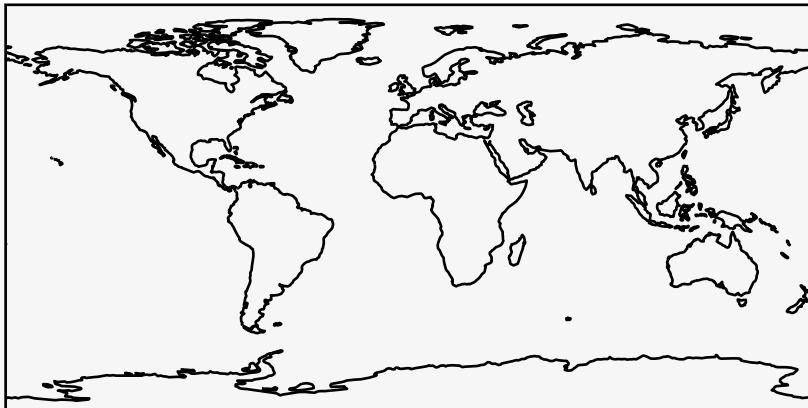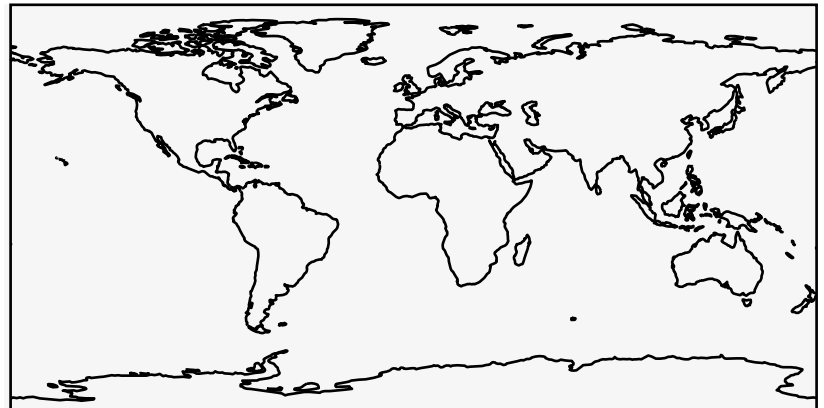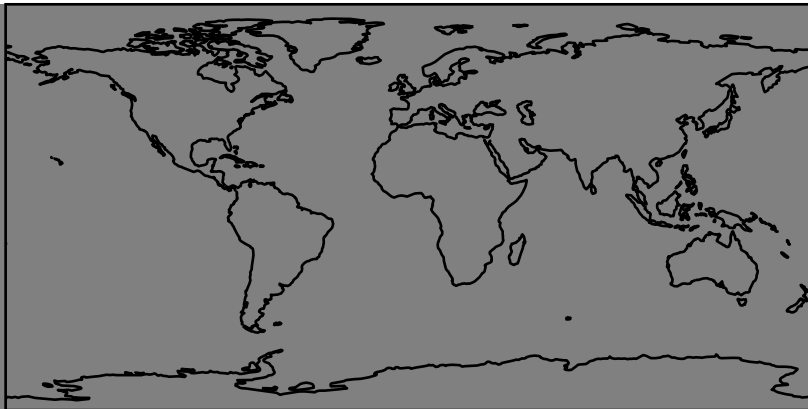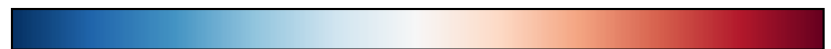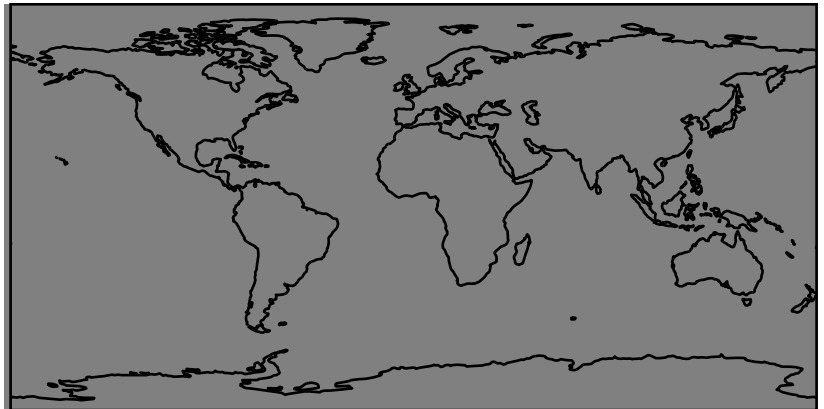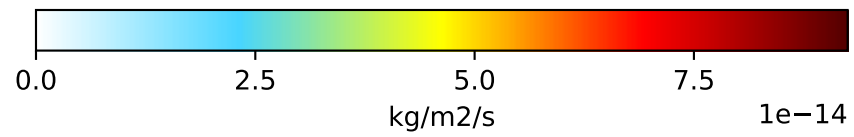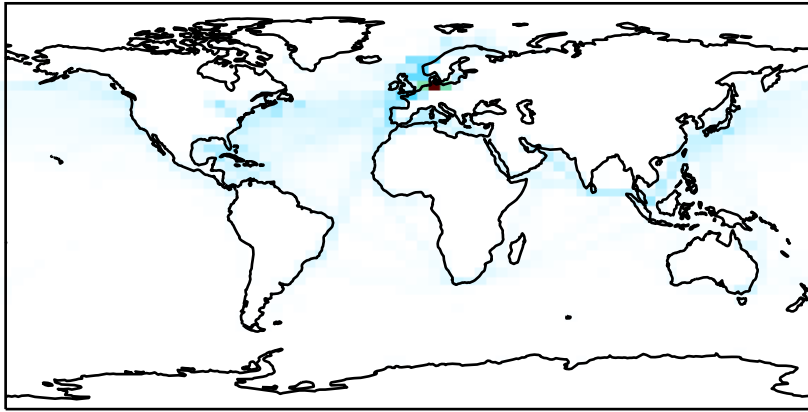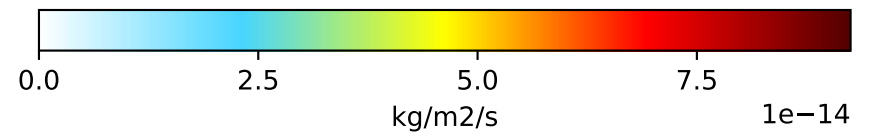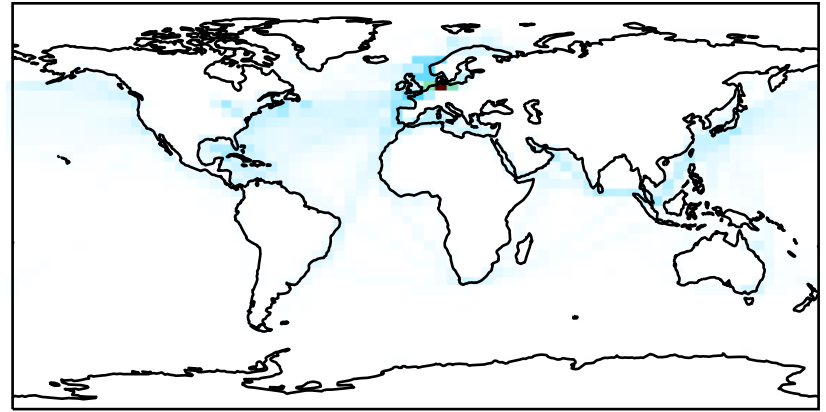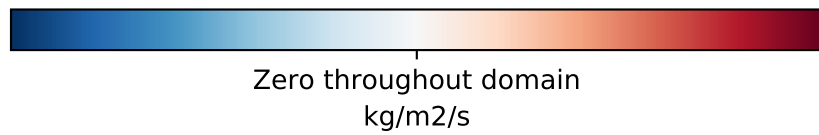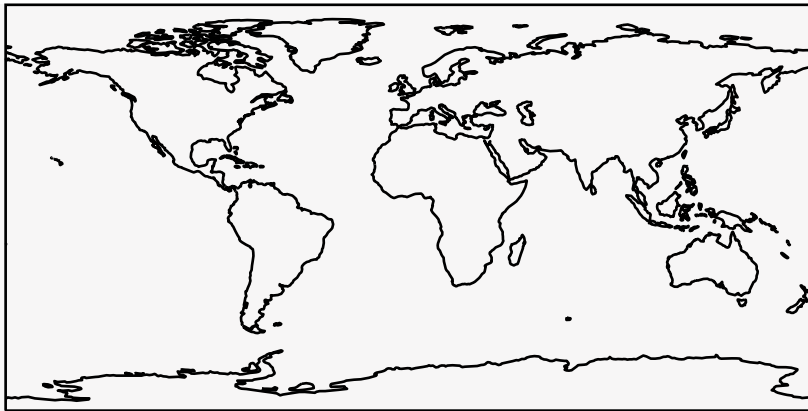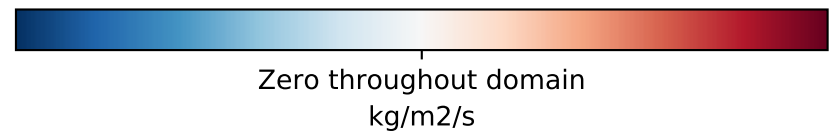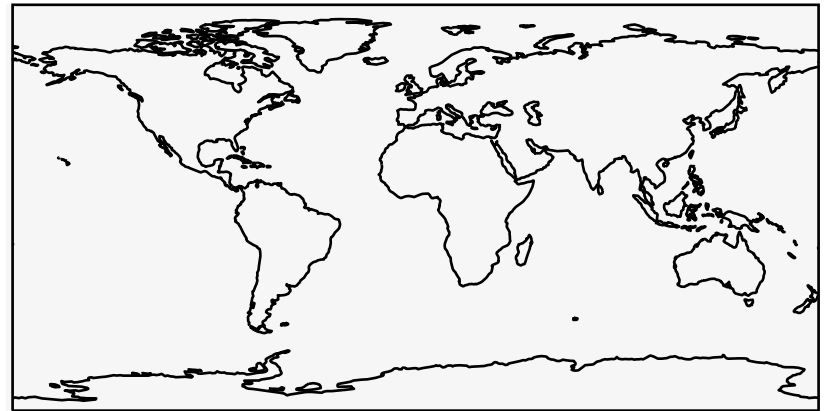## Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Undefined throughout domain
unitless

EmisHCOOH_Ship

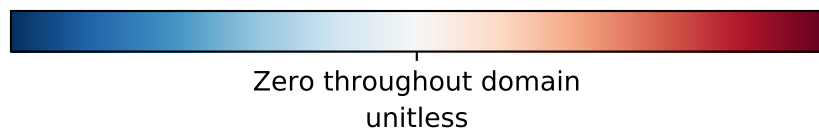| GC_12.4.0 (Ref)	GC_12.6.0 (Dev)
4x5	4x5

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
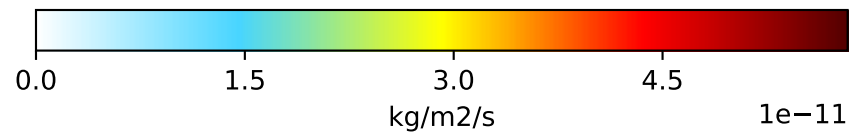
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Undefined throughout domain
unitless

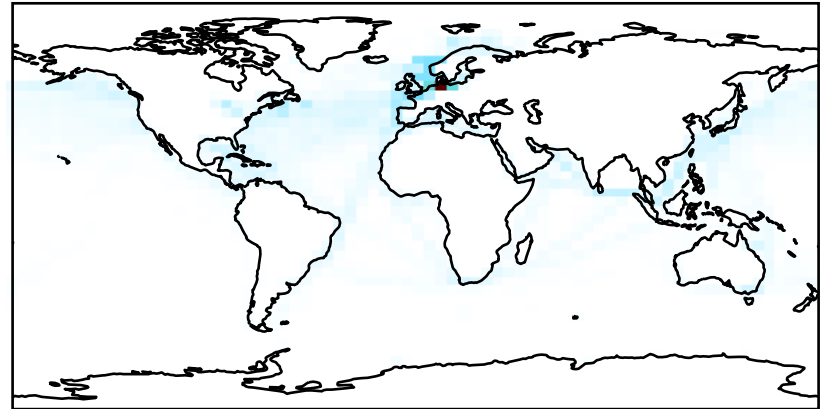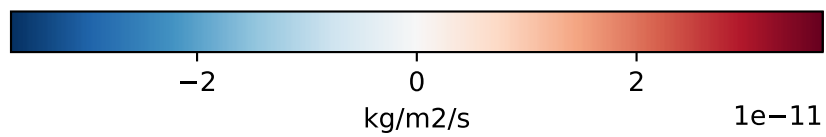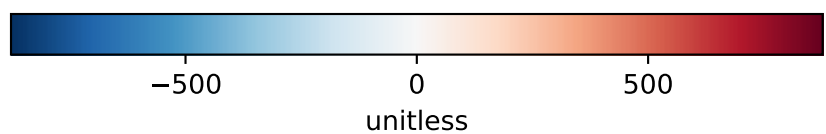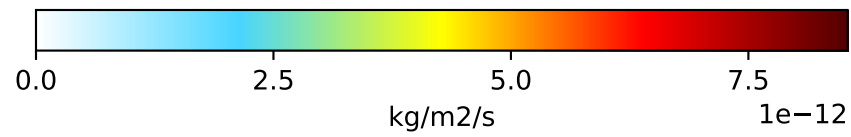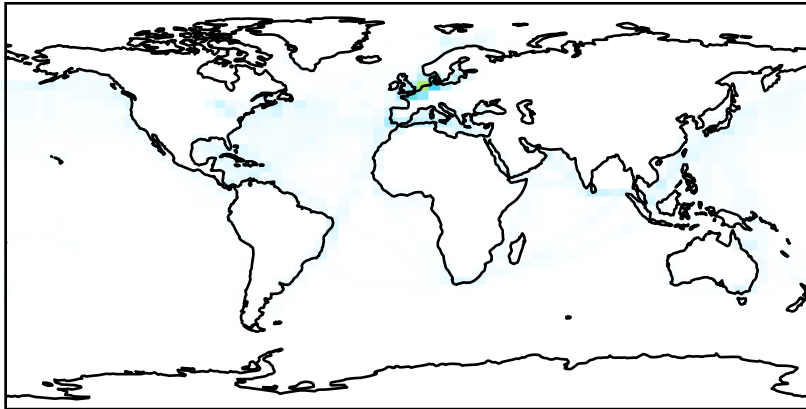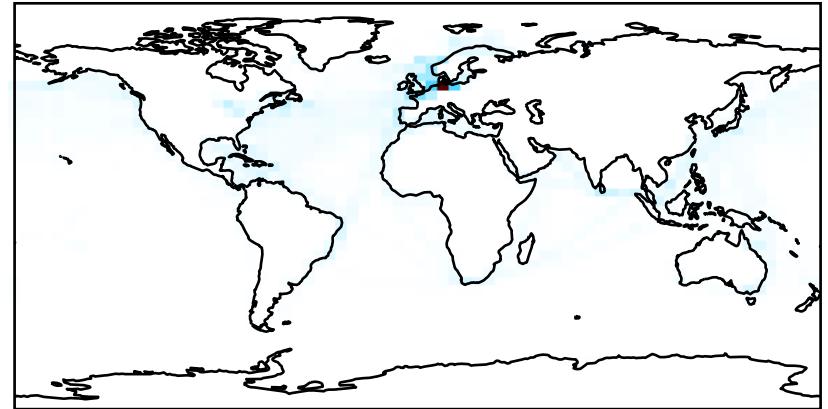Undefined throughout domain
unitless

EmisHNO3_Ship

EmisMEK_Ship

GC_12.4.0 (Ref)
4x5

Zero throughout domain
kg/m2/s

GC_12.6.0 (Dev)
4x5

Zero throughout domain
kg/m2/s

Difference
Dev - Ref, Dynamic Range

Zero throughout domain
kg/m2/s

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

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range

Undefined throughout domain
unitless

Fractional Difference
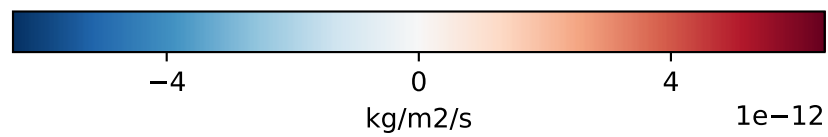### (Dev-Ref)/Ref, Fixed Range

Undefined throughout domain
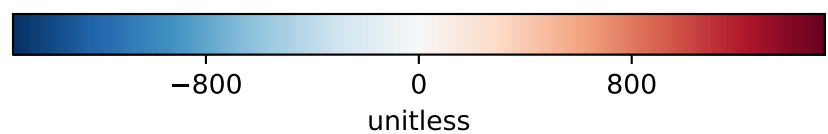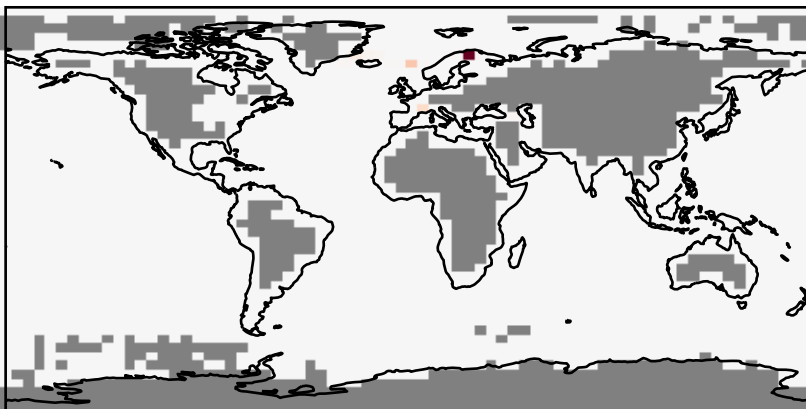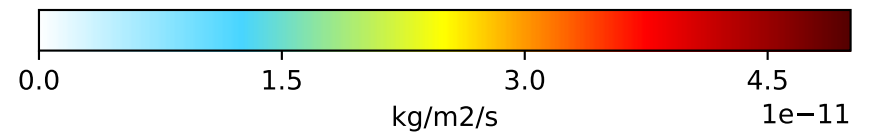unitless

EmisNH3_Ship

GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
4x5

kg/m2/s

1e−14

kg/m2/s

1e−14

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
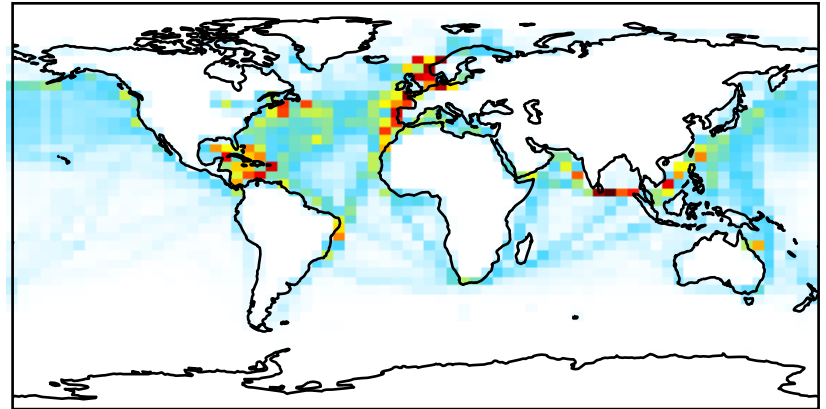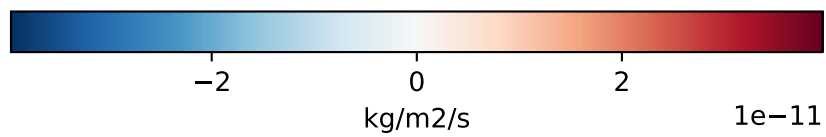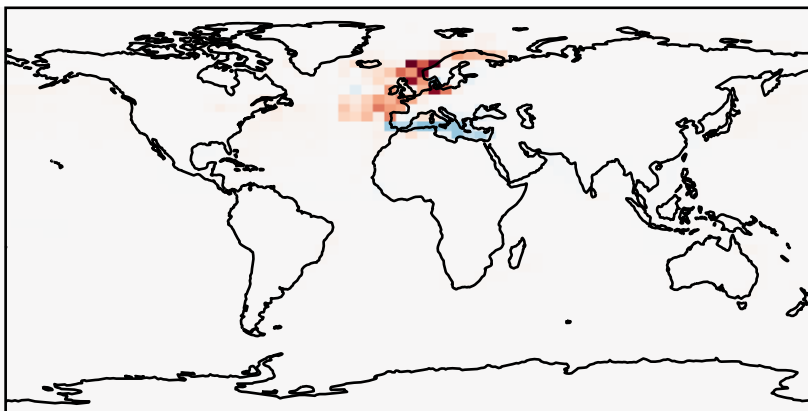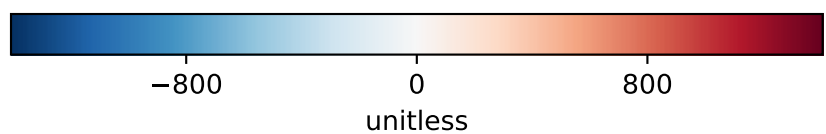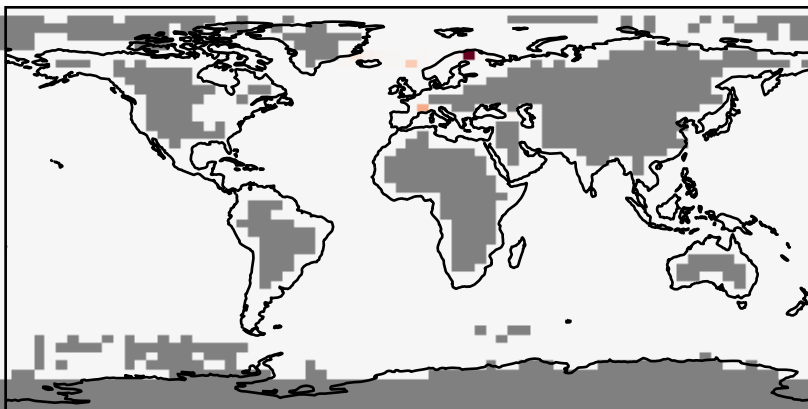
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Zero throughout domain
unitless

Zero throughout domain
unitless

EmisNO2_Ship

EmisNO_Ship

GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
4x5

Difference
Dev - Ref, Dynamic Range

Difference
Dev - Ref, Restricted Range [5%,95%]
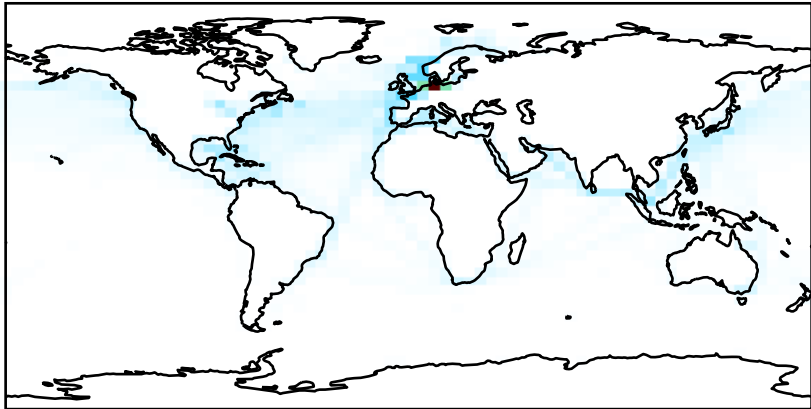
Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
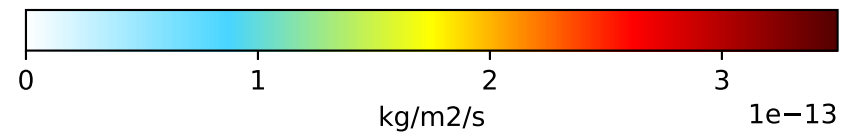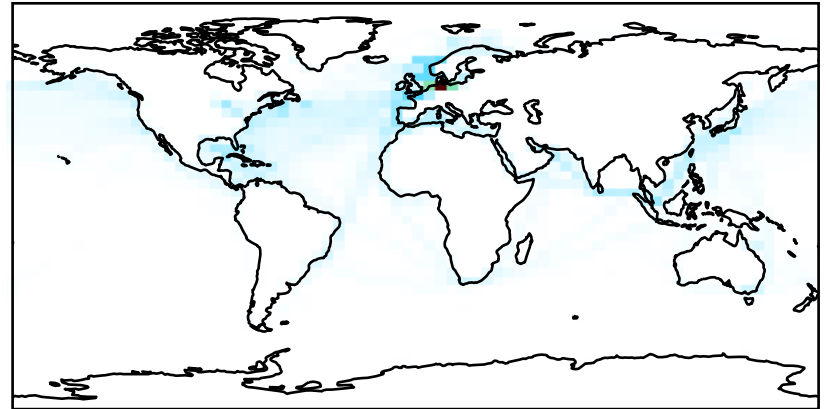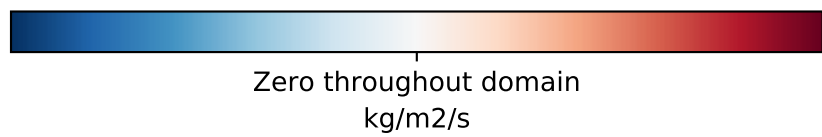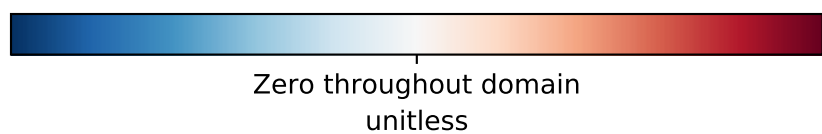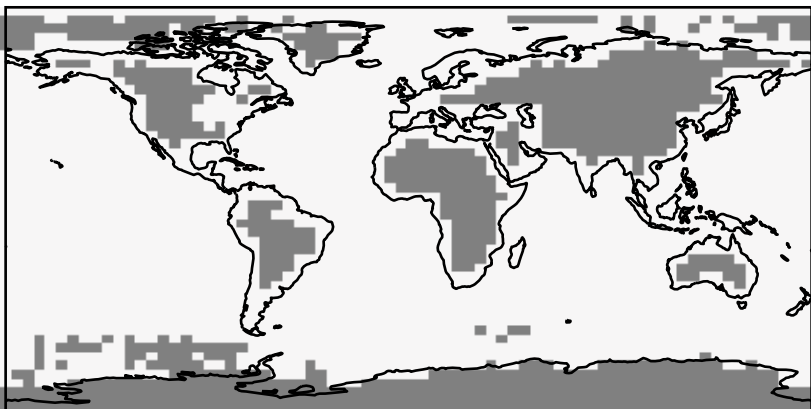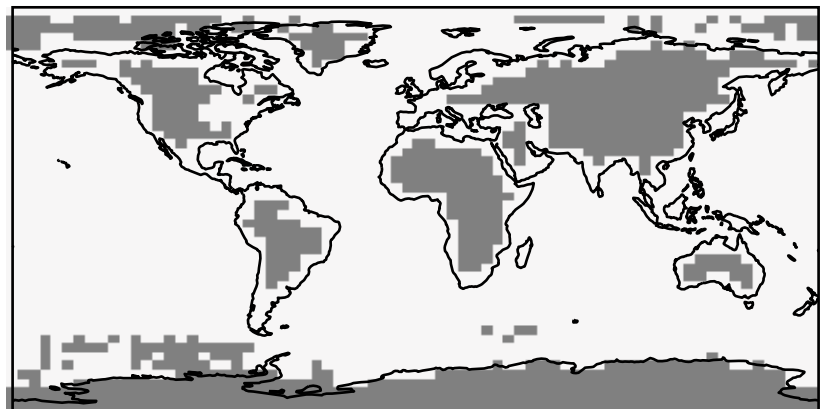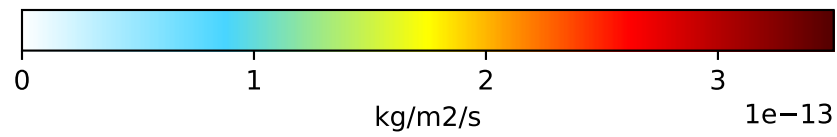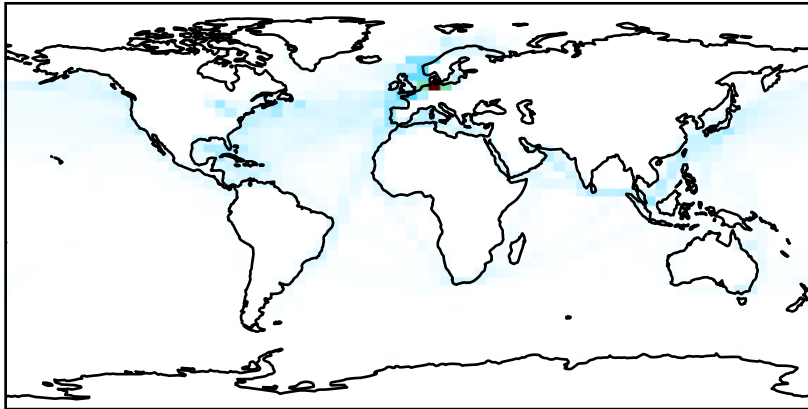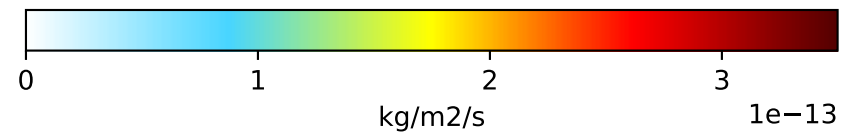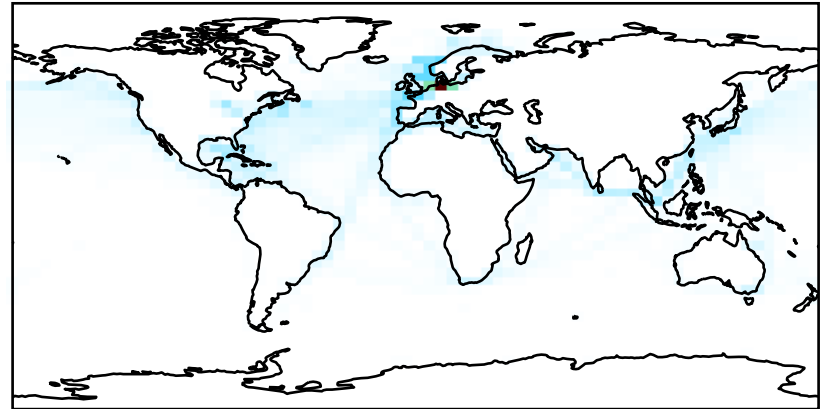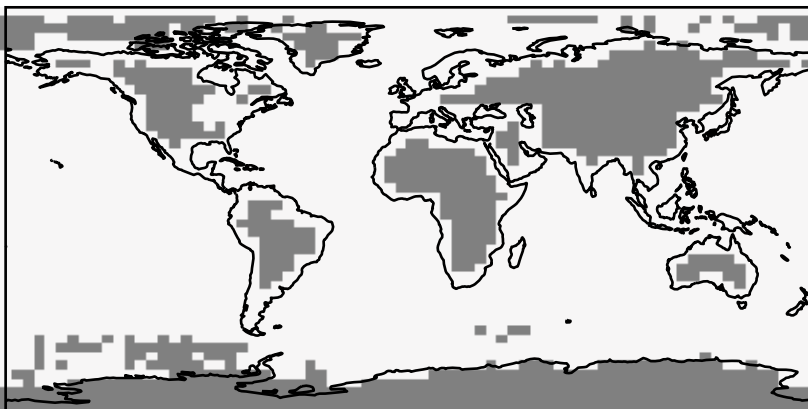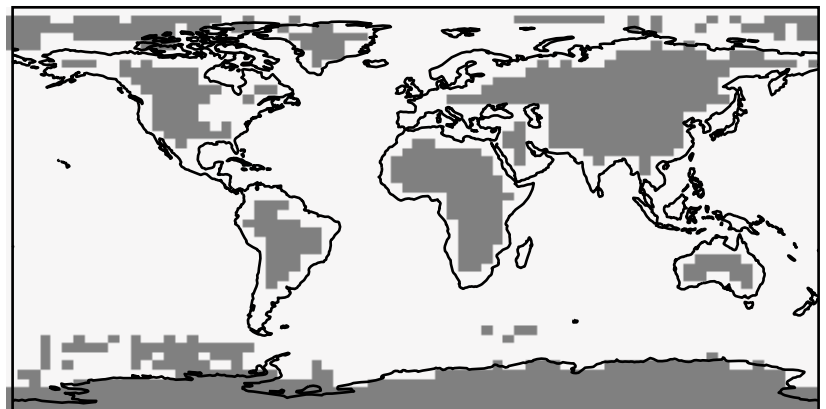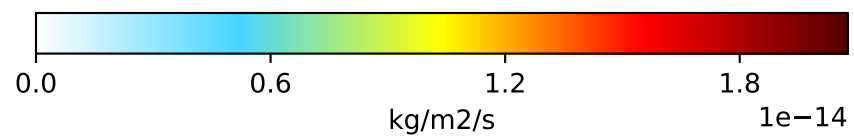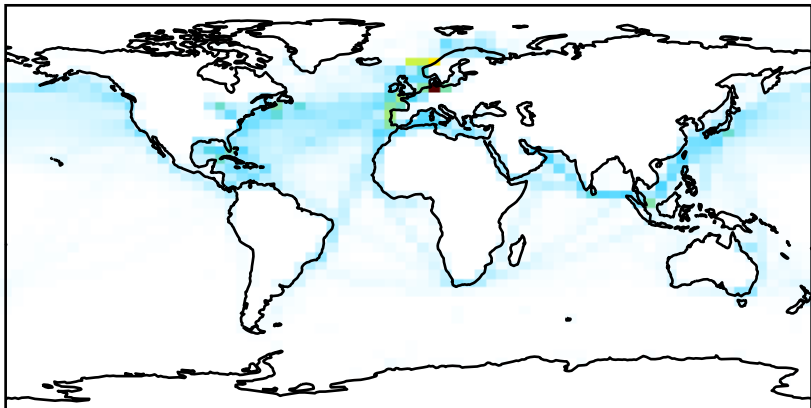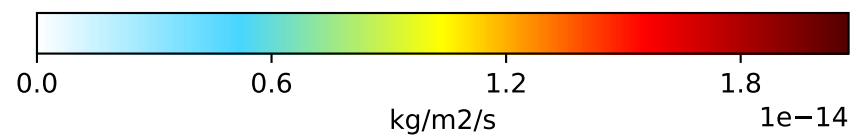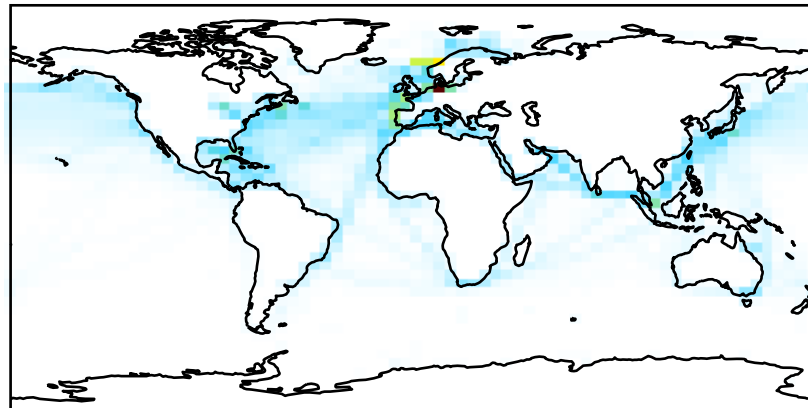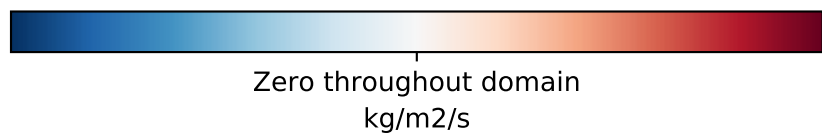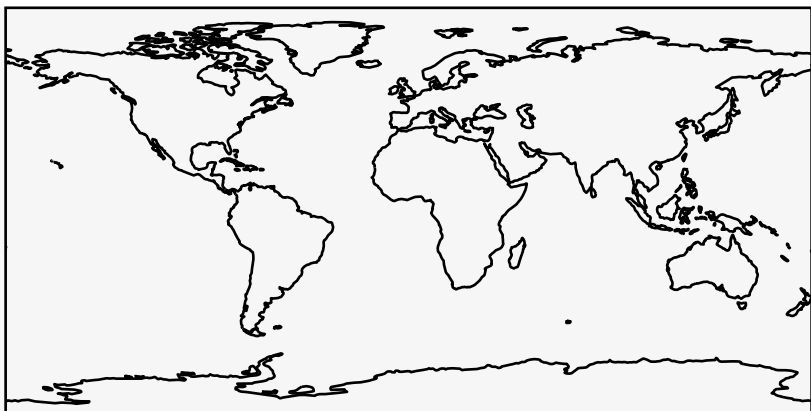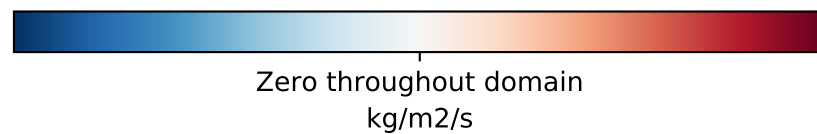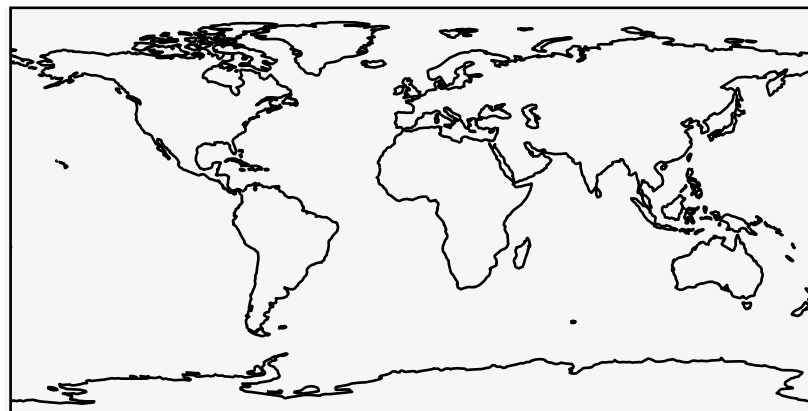
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

EmisO3_Ship

EmisOCPI_Ship

GC_12.4.0 (Ref)
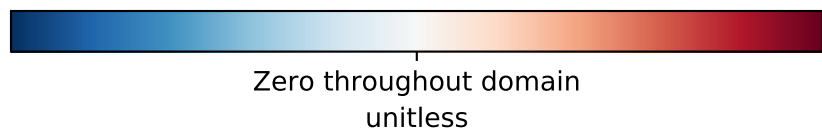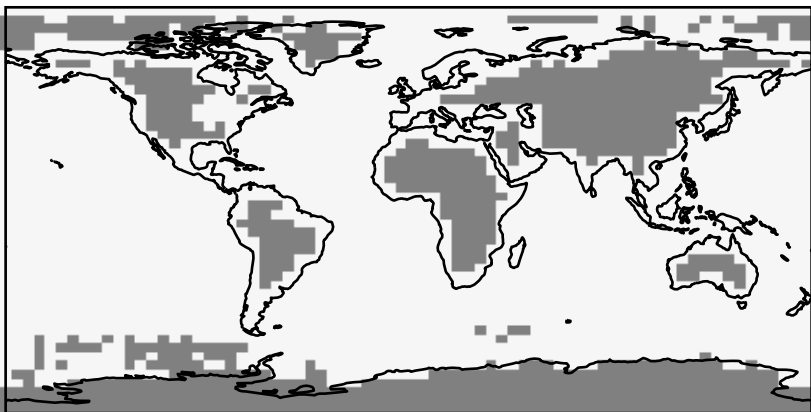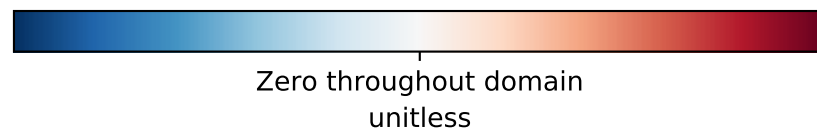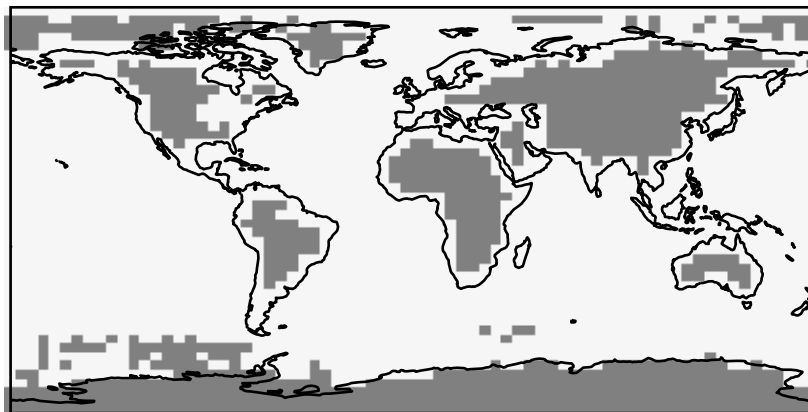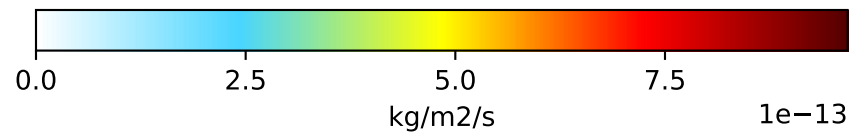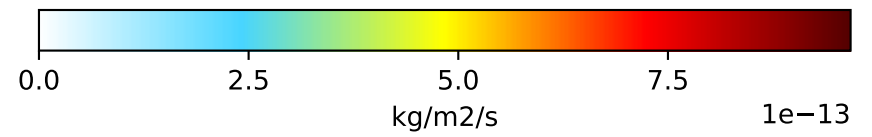4x5

GC_12.6.0 (Dev)
4x5

kg/m2/s

kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
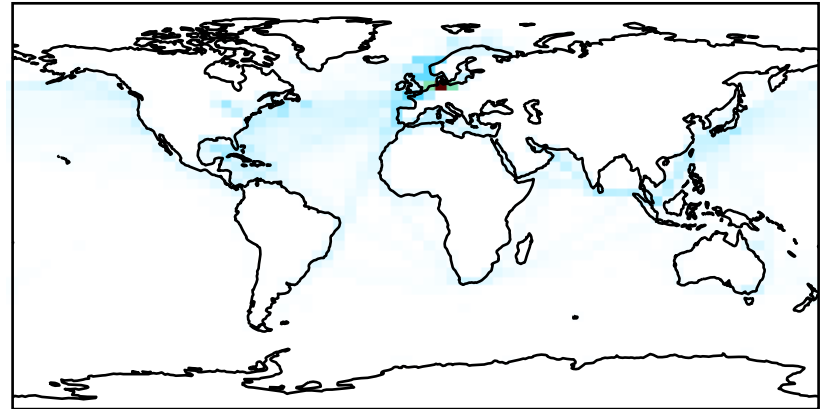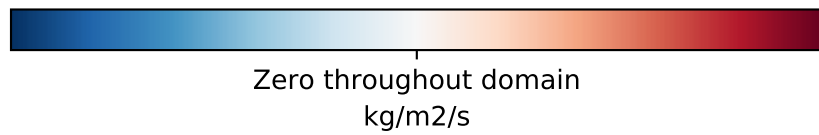
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Zero throughout domain
unitless

Zero throughout domain
unitless

EmisOCPO_Ship
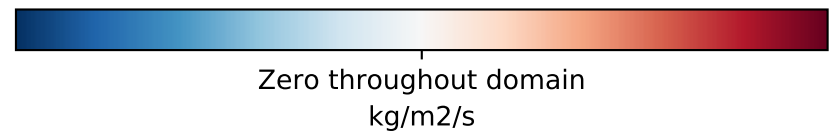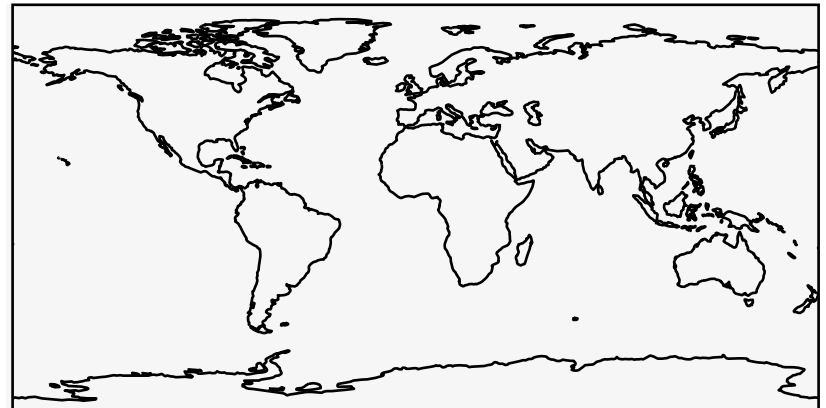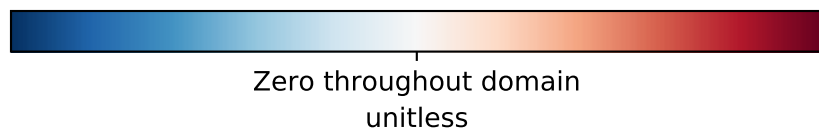
EmispFe_Ship

EmisPRPE_Ship

EmisSO2_Ship

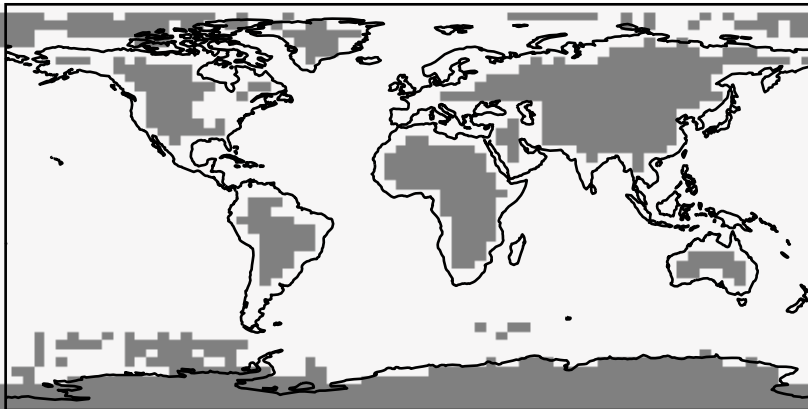GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
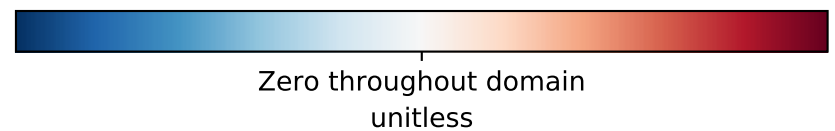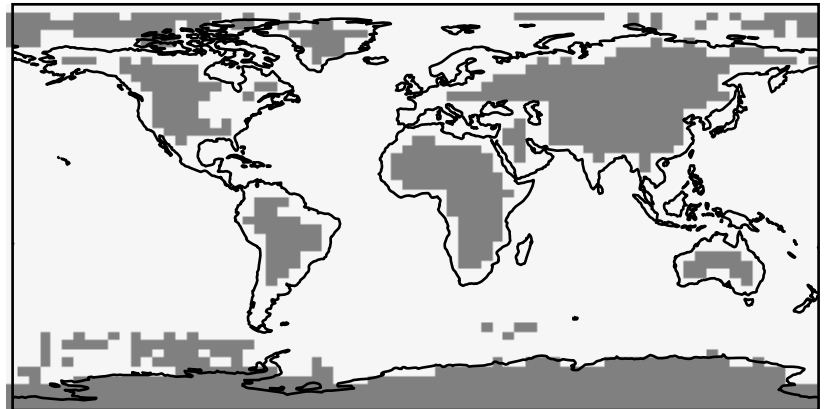4x5

Difference
Dev - Ref, Dynamic Range

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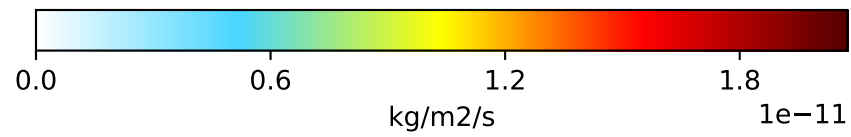Dev - Ref, Restricted Range [5%,95%]

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
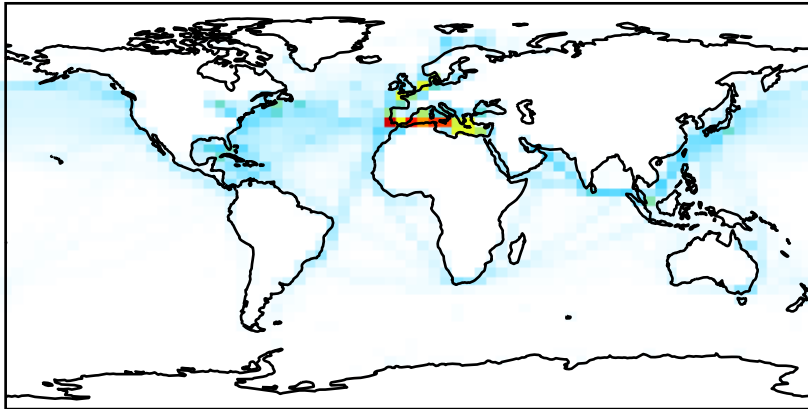
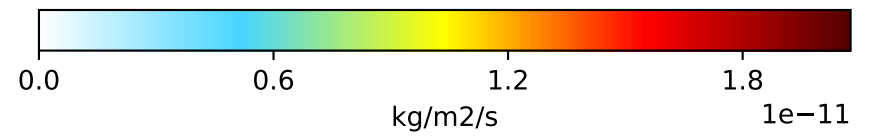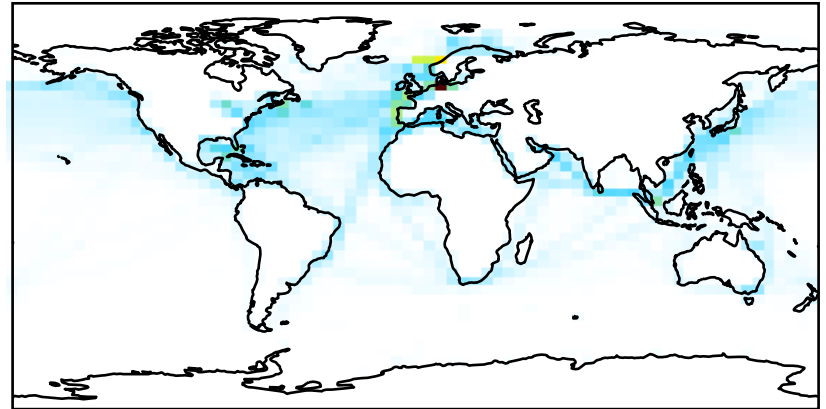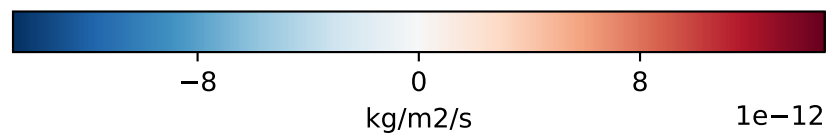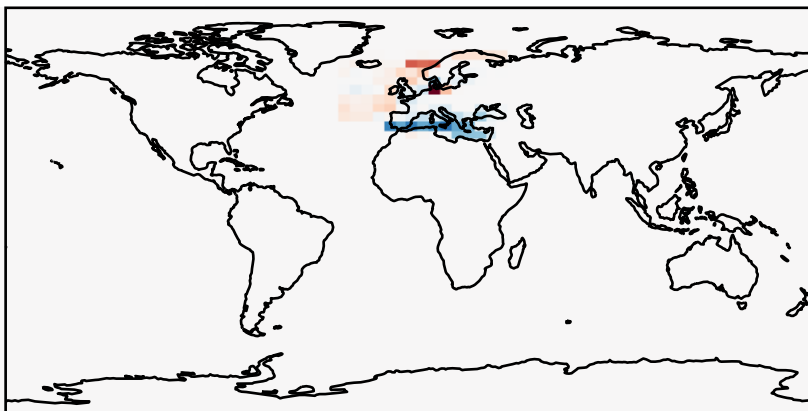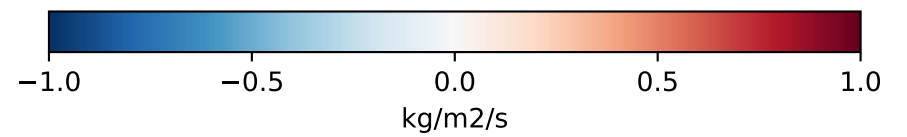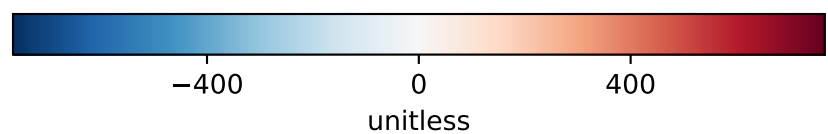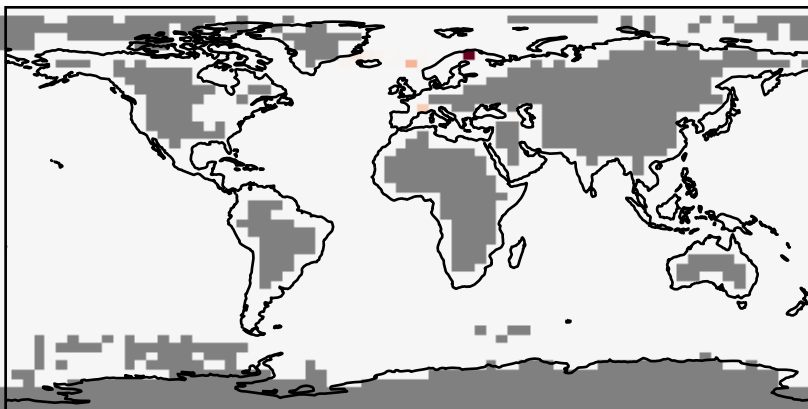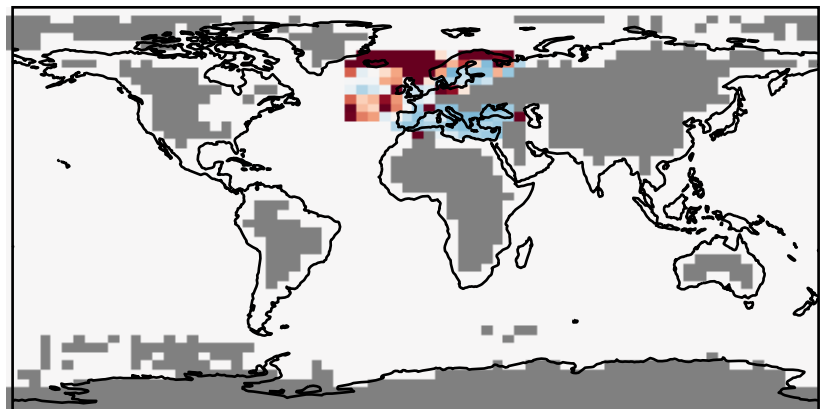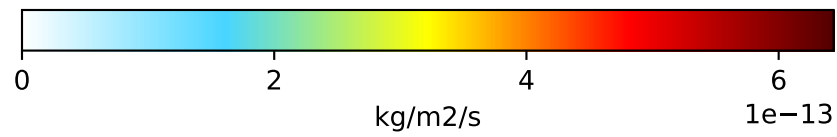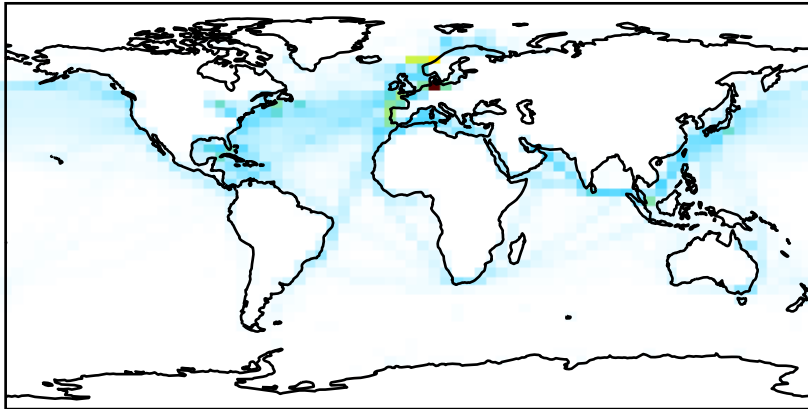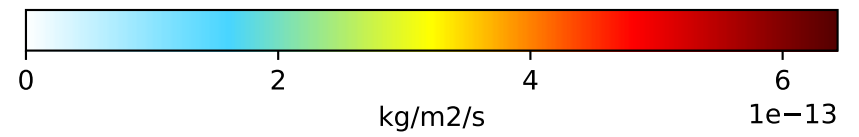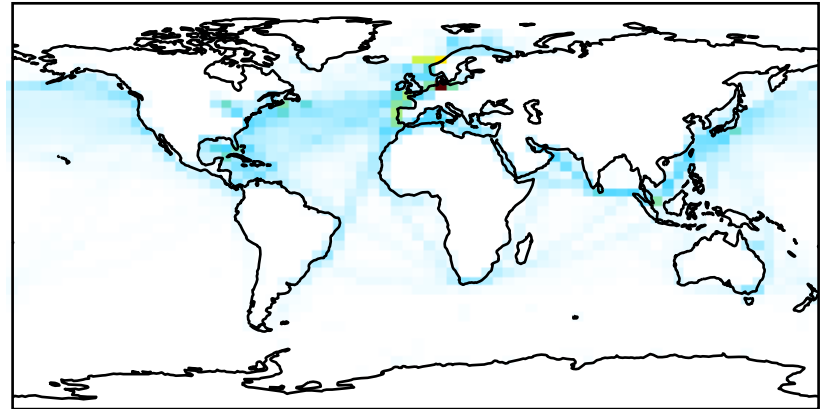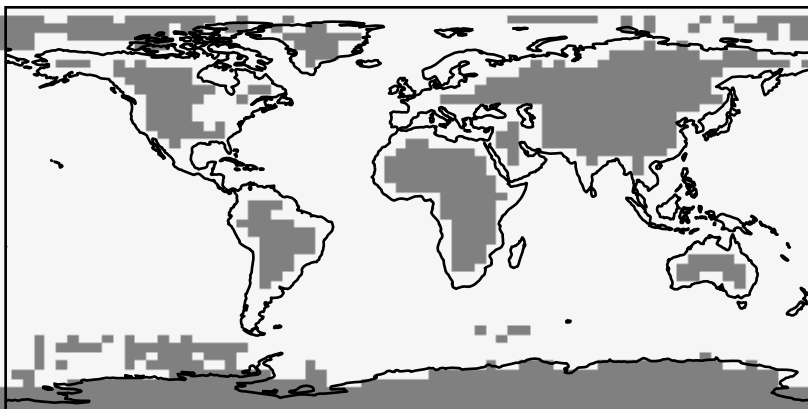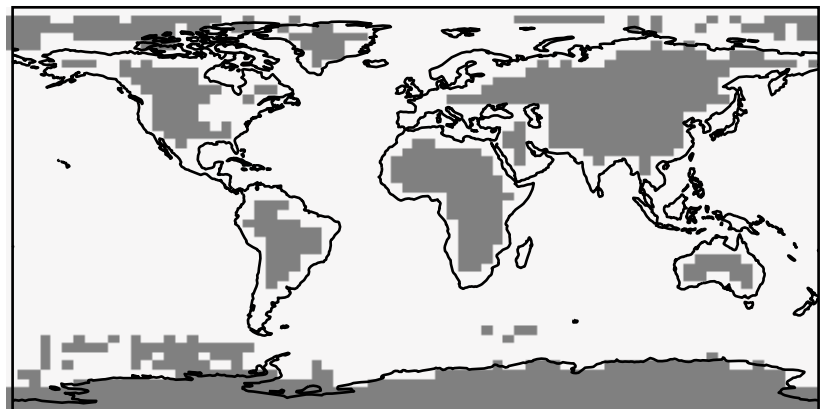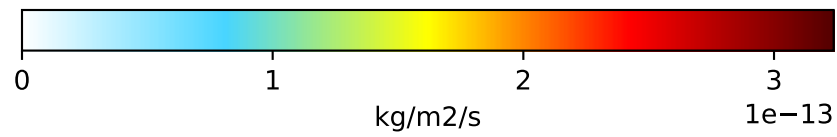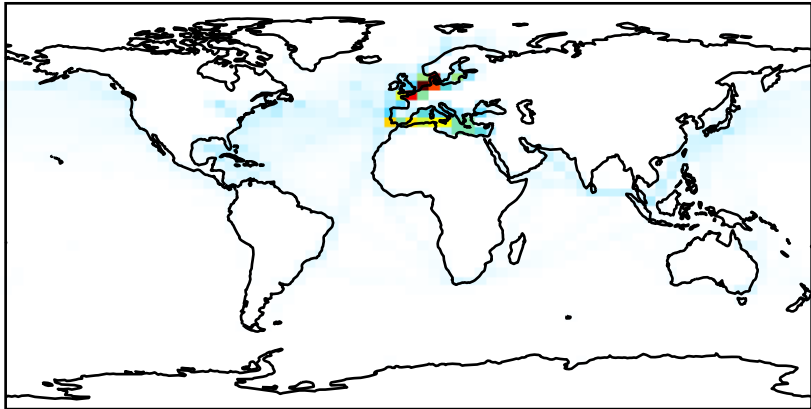Fractional Difference
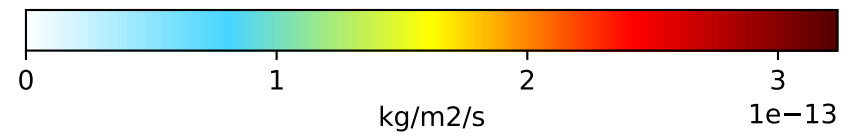(Dev-Ref)/Ref, Fixed Range

EmisSO4_Ship

GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
4x5

kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

Zero throughout domain
kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range
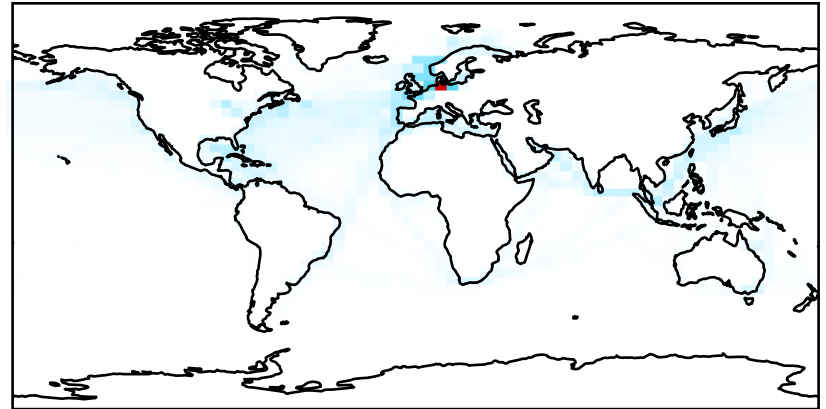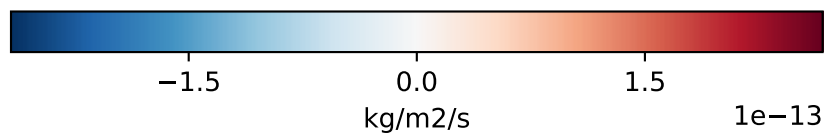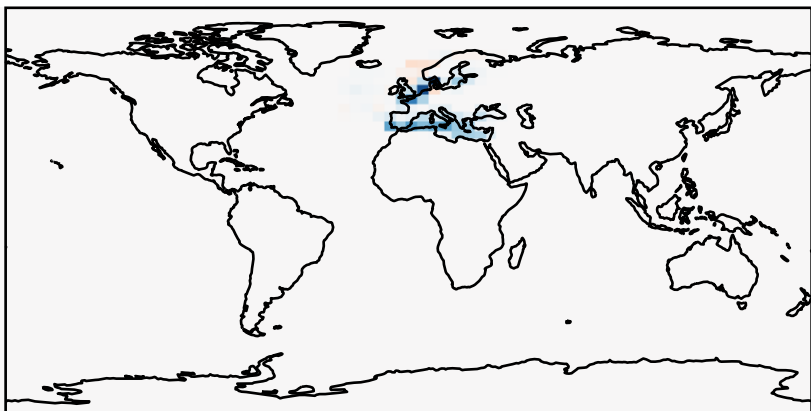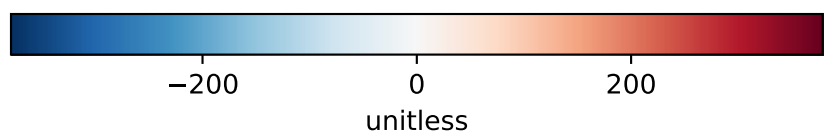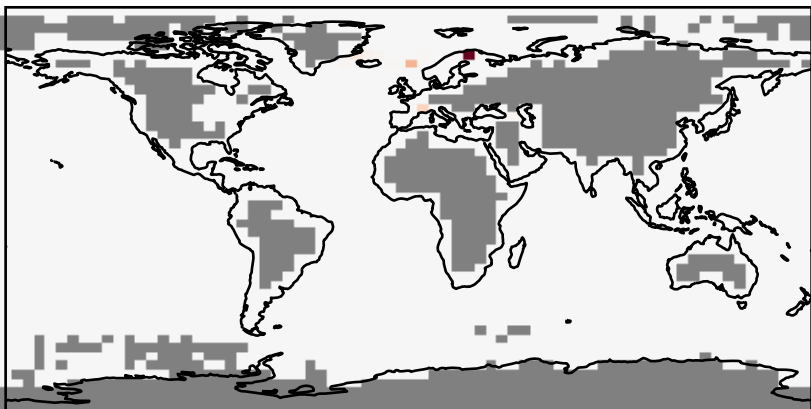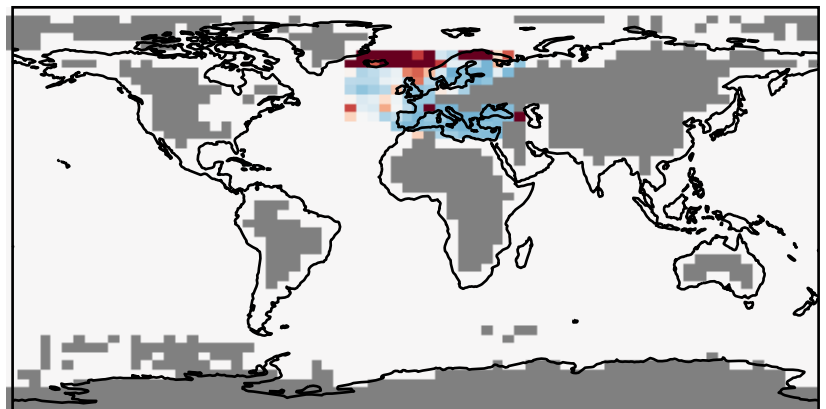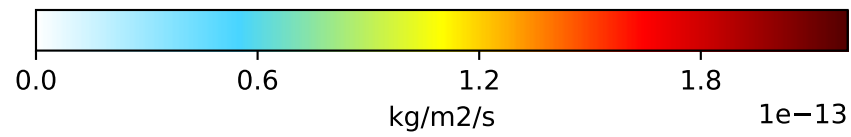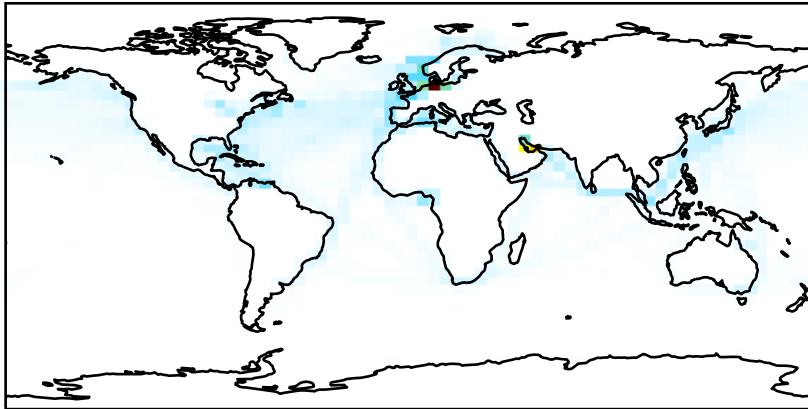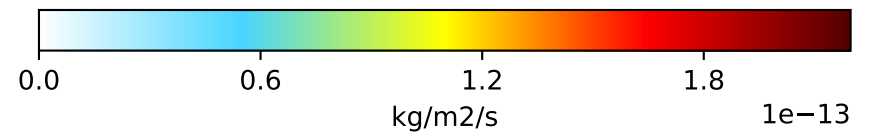
Fractional Difference
(Dev-Ref)/Ref, Fixed Range

Zero throughout domain
unitless

EmisSOAP_Ship

GC_12.4.0 (Ref)
4x5

GC_12.6.0 (Dev)
4x5

kg/m2/s

kg/m2/s

Difference
Dev - Ref, Dynamic Range

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

kg/m2/s

kg/m2/s

Fractional Difference
(Dev-Ref)/Ref, Dynamic Range

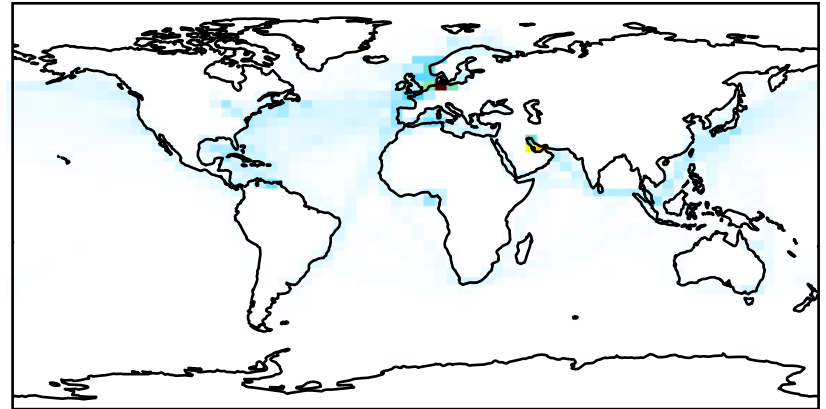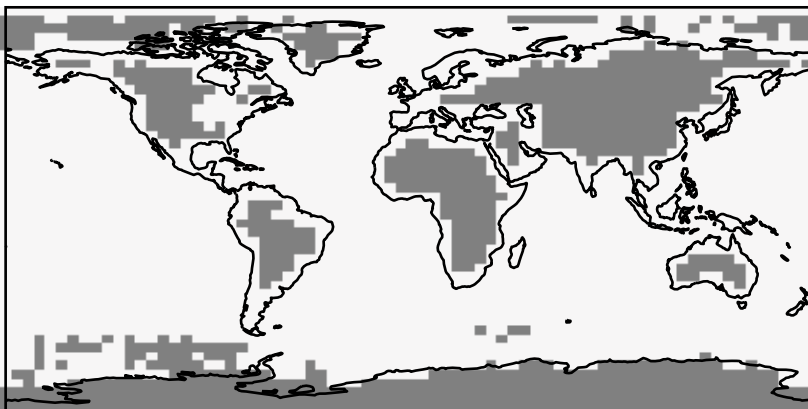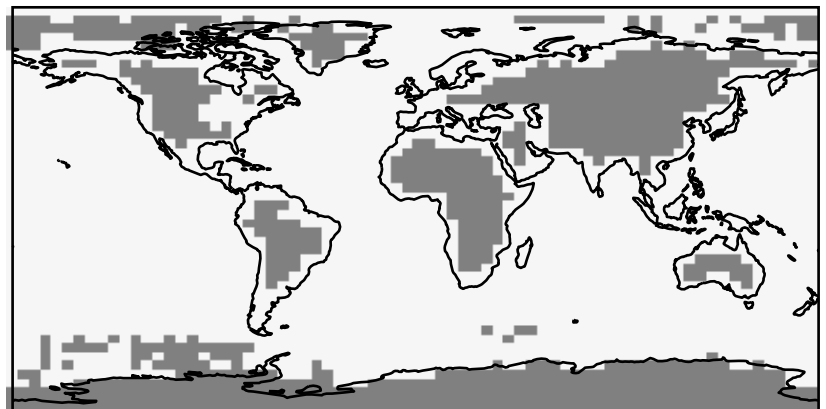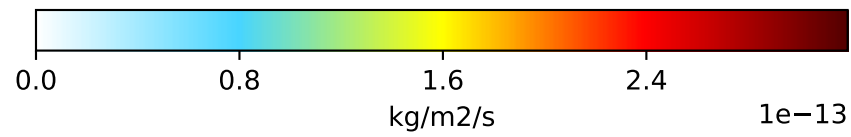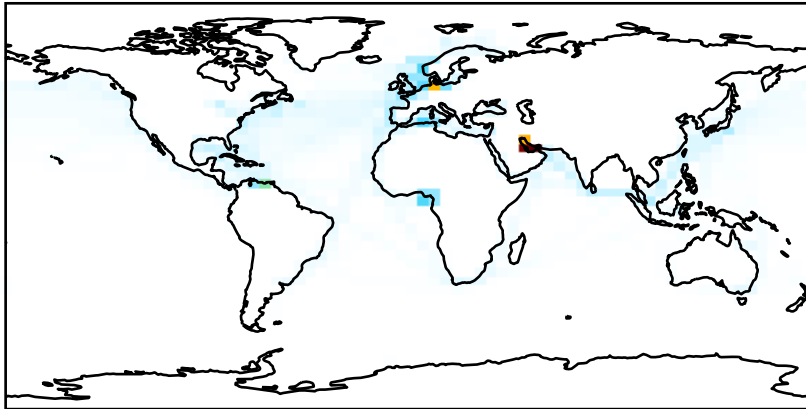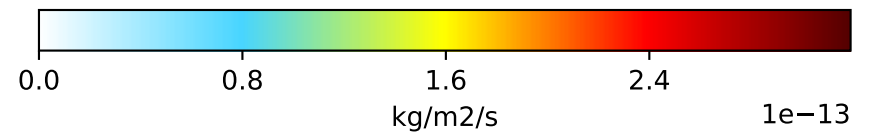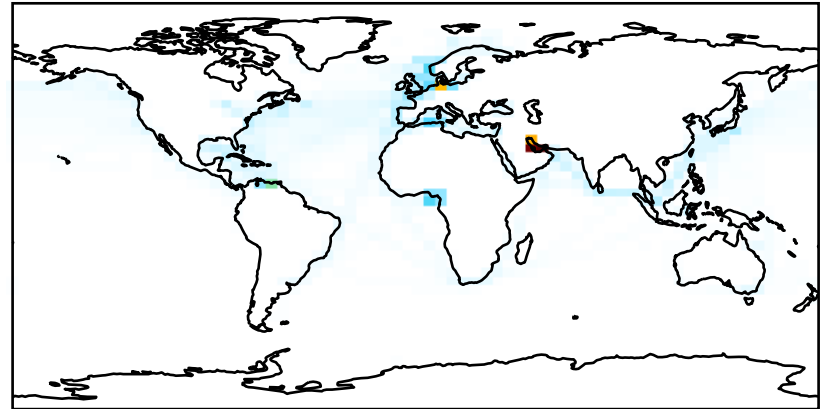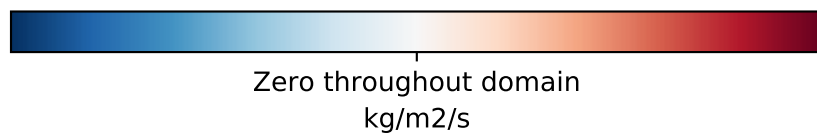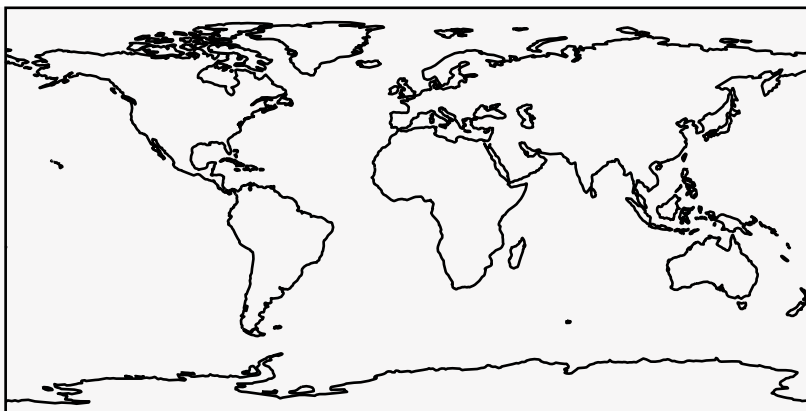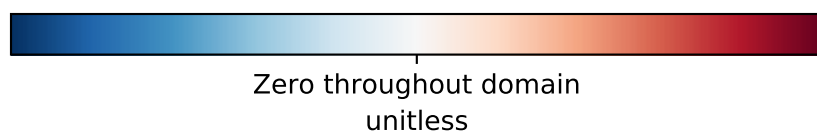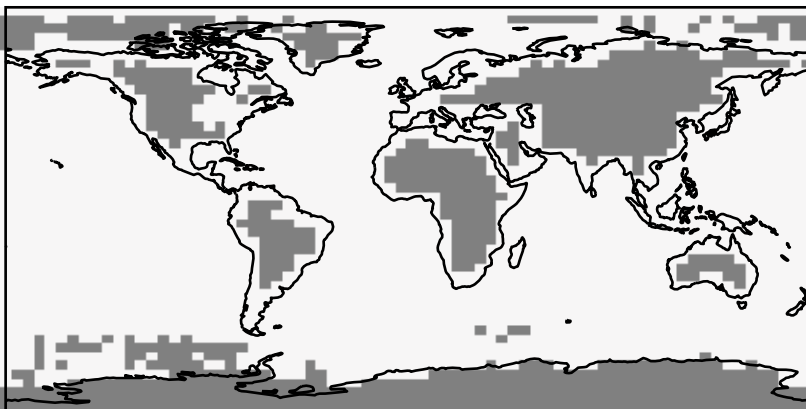Fractional Difference
(Dev-Ref)/Ref, Fixed Range

unitless

unitless

EmisTOLU_Ship

EmisXYLE_Ship