Correction to ORAS5 r1x1 files

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For use ORAS5 r1x1 files archived at ICDC server, it is recommanded to always apply the following land-sea-mask (lsm) first, before any further analysis/application can be carried out.

Correct land-sea-mask file should be applied for different ORAS5 variables, depends on the its location in the NEMO C grids

LSM can be applied using cdo

```
cdo ifthen $LSM $infile $outfile
```

Table below list the correct LSM file names for each variable.

Table 1. 3D variables

votemper	Potential Temperature [C]	tmask_r1x1.nc
vosaline	Salinity [psu]	tmask_r1x1.nc
vozocrte	Zonal Velocity (rotated)	tmask_r1x1.nc
vomecrtn	Meridional Velocity (rotated)	tmask_r1x1.nc
vozocrtx	Zonal Velocity [m/s]	umask_r1x1.nc
vomecrty	Meridional Velocity [m/s]	vmask_r1x1.nc

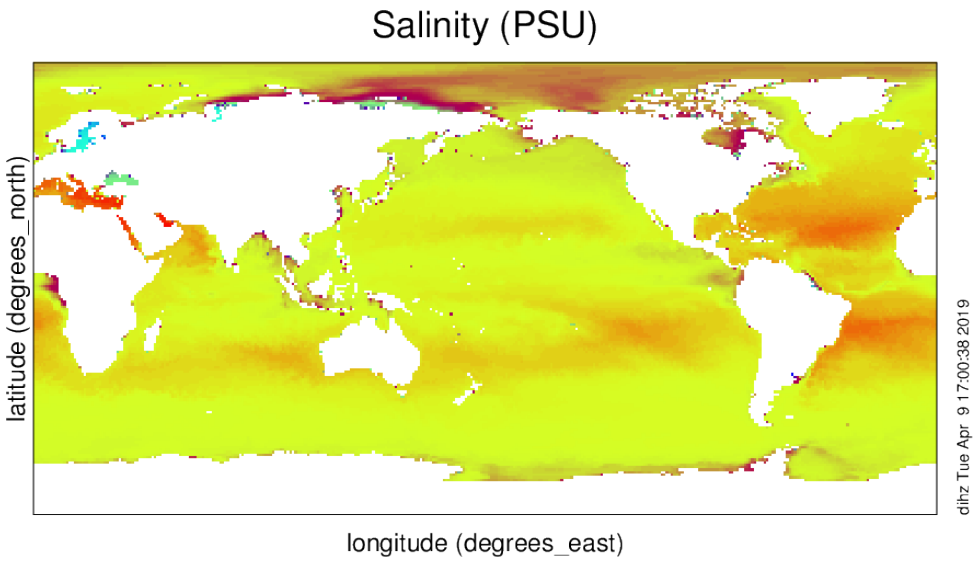
Table 2. 2D variables.

sosstsst	Sea Surface Temperature [C]	tmask2D_r1x1.nc
sosaline	Sea Surface Salinity [psu]	tmask2D_r1x1.nc
sossheig	Sea Surface Height [m]	tmask2D_r1x1.nc
ileafrac	Sea Ice Concentration	tmask2D_r1x1.nc
iicethic	Sea Ice Thickness [m]	tmask2D_r1x1.nc
somxl010	Mixed Layer Depth 0.01 [m]	tmask2D_r1x1.nc
sohefldo	Net Downward Heat Flux [W/m^2]	tmask2D_r1x1.nc

sowaflup	Net Upward Water Flux [Kg/m^2/s]	tmask2D_r1x1.nc
sozotaux	Wind Stress along i-axis [N/m^2]	umask2D_r1x1.nc
sometauy	Wind Stress along j-axis [N/m^2]	vmask2D_r1x1.nc
sohtc300	Ocean Heat Content for the upper 300m [J/m2]	tmask2D_r1x1.nc
sohtc700	Ocean Heat Content for the upper 700m [J/m2]	tmask2D_r1x1.nc
sohtcbtm	Ocean Heat Content for the total water column [J/m2]	tmask2D_r1x1.nc
so20chgt	Depth of 20C isotherm [m]	tmask2D_r1x1.nc
iicevelu	Sea Ice zonal velocity [m/s]	umask2D_r1x1.nc
iicevelv	Sea Ice meridional velocity [m/s]	vmask2D_r1x1.nc

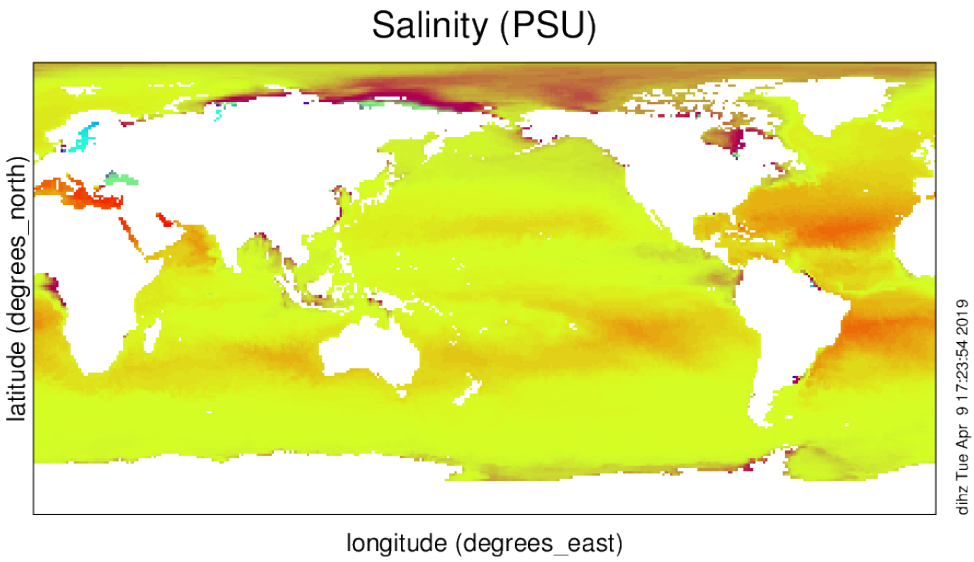
Example

For salinity field, before applying this LSM, the r1x1 file looks like



Monthly mean salinity
Range of Salinity: 0 to 40.5627 PSU
Range of longitude: 0 to 359 degrees_east
Range of latitude: -89.5 to 89.5 degrees_north
Current time_counter: 0 seconds since 1959-02-15 00:00:00 UTC
Current Vertical T levels: 0.50576 m
File vosaline_ORAS5_1m_195902_r1x1.nc

Same salinity field after applying the LSM becomes



Monthly mean salinity
Range of Salinity: 0 to 40.5627 PSU
Range of longitude: 0 to 359 degrees_east
Range of latitude: -89.5 to 89.5 degrees_north
Current time_counter: 0 seconds since 1959-02-15 00:00:00 UTC
Current Vertical T levels: 0.50576 m
File vosaline_ORAS5_1m_195902_grid_T_02_r1x1.nc