TUTORIAL 06:
CREATE CLIM CONFIG WITH NESTING

OBJECTIVES

➢ Prepare the CROCO forcing files for the child grid

➢ Compile the code

➢ Run the model

➢ Visualize the outputs

➢ From a terminal/konsole:

```
ssh -X login@scp.chpc.ac.za
```

➢ Reserve an interactive processor for pre-processing:

```
[login@login2 ~]$ qsubi1
```

➢ Go into your CROCO directory (lustre/croco):

```
[login@cnode0220 ~]$ cd lustre/croco
```

➢ Go into your Run Clim:

```
[login@cnode0220 ]$ cd Run_Clim
```

➤ Launch Matlab :

```
[login@cnode0220 Run_Clim]$ matlab -nodesktop &
```

➤ Create your croco grid

```
>> make_grid
```

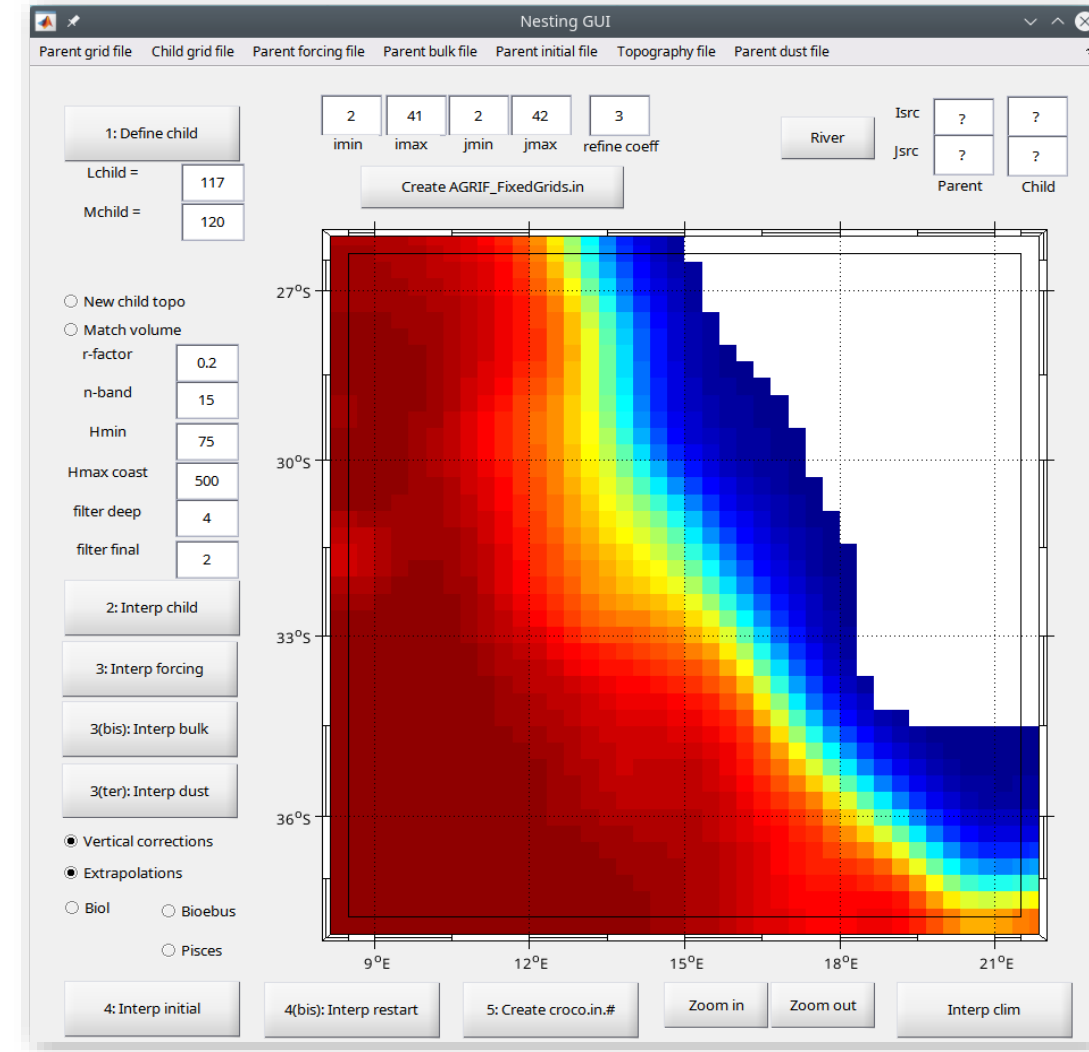➤ Create your surface forcing files

```
>> make_forcing
```

➤ Create your CROCO initial and boundary conditions

```
>> make_clim
```

➤ Launch nesting gui tool :

```
>> nestgui
```

➤ Launch nesting gui tool :

>> **nestgui**

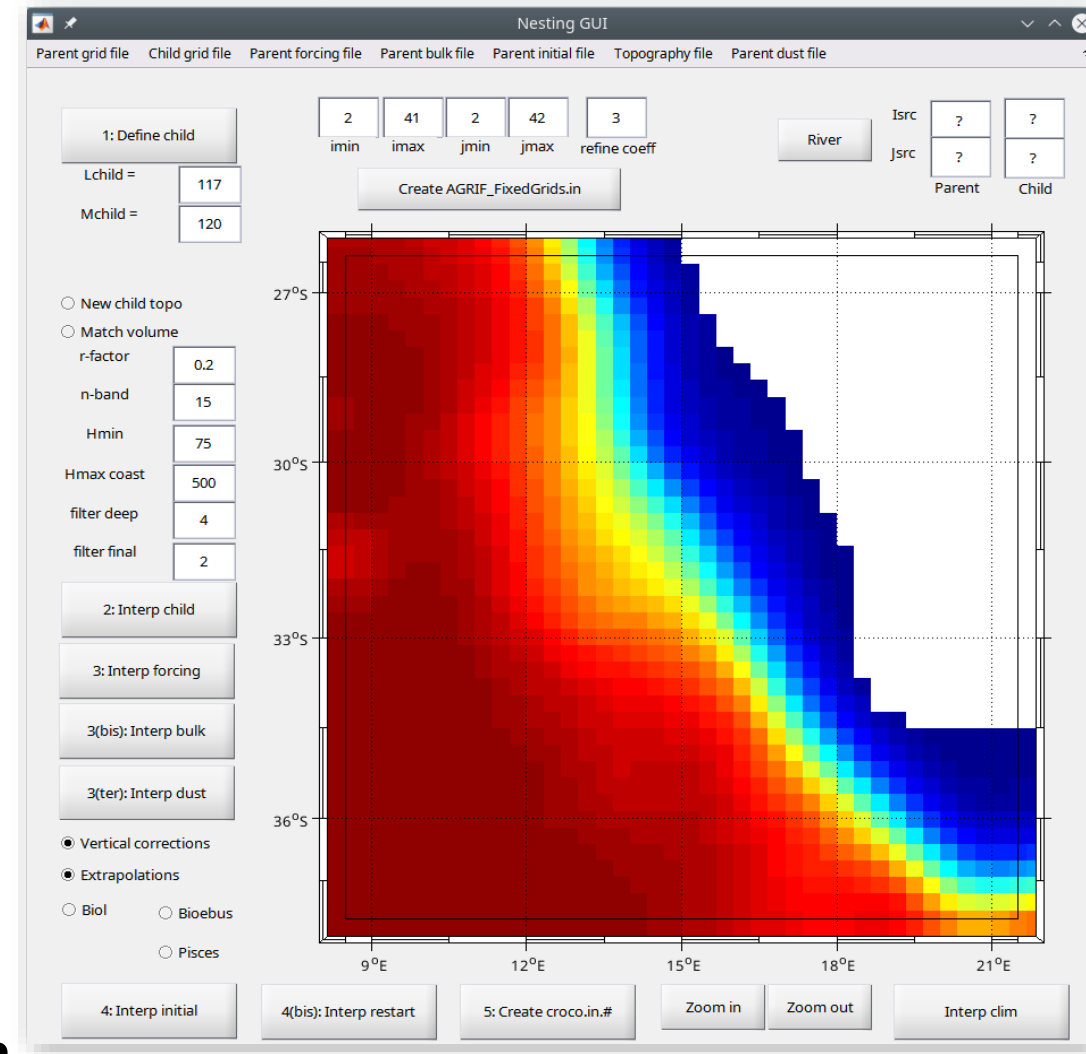➤ Load parent grid in nestgui :

CROCO_FILES/croco_grd.nc

➤ 1. Define the child grid

➤ 2. Interpolate the child grid

and create the grid

➤ 2. bis Reload the child grid

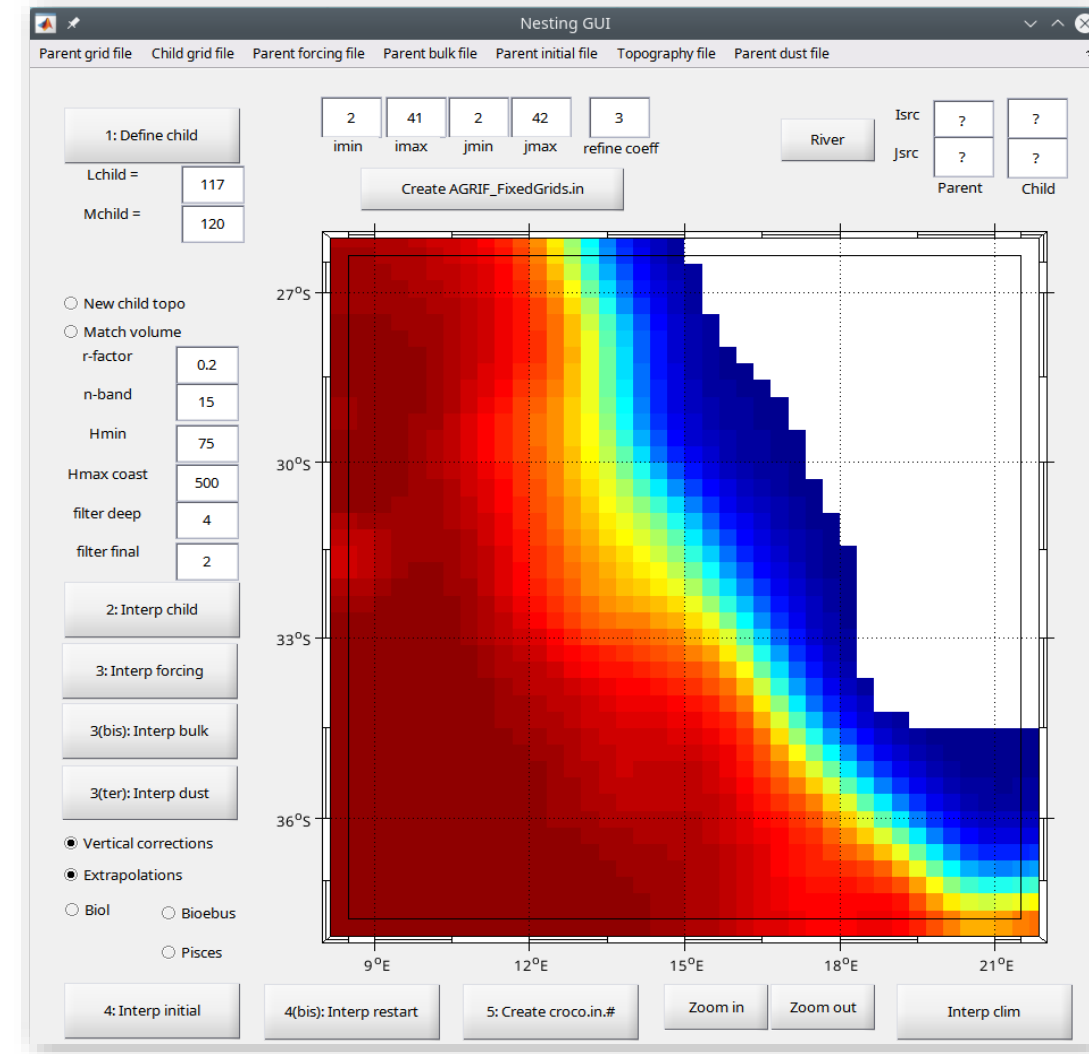and click on **Create AGRIF_Fixed_grid.in**

➢ 3. Create the child forcing file

➢ 3. bis. Create the child bulk forcing file

➢ 4. Create the child initial conditions

➢ 5. Create the child parameter file

croco_inter.in.1

```
>> exit
```

➤ Copy the script to compile the code in your Run_Clim directory :

```
cp /mnt/lustre/users/sillig/CROCO_TRAINING_Week1/3_Some_files/jobcomp_lengau .
```

➤ Edit and fix the parameter file **param.h**

```
[login@cnode0220 Run_Clim]$ nedit param.h &
```

➤ Edit and set the **cppdefs.h** to activate nesting capability

```
[login@cnode0220 Run_Clim]$ nedit cppdefs.h &
```

➤ Compile CROCO using the **jobcomp_lengau** script

```
[login@cnode0220 Run_Clim]$ ./jobcomp_lengau
```

STEP 5: Running CROCO

➢ Copy the job file to run the code in your Run_Clim directory :

```
cp /mnt/lustre/users/sillig/CROCO_TRAINING_Week1/3_Some_files/run_croco.pbs .
```

➢ Edit parameter files in **croco_inter.in** and **croco_inter.in.1**

```
[login@cnode0220 Run_Clim]$ nedit croco_inter.in.1 &
```

➢ Edit the script **run_croco.pbs**

```
[login@cnode0220 Run_Clim]$ nedit run_croco.pbs &
```

➢ Launch your simulation

```
[login@cnode0220 Run_Clim]$ qsub run_croco.pbs
```

➢ Launch Matlab:

```
[login@cnode0220 Run_Clim]$ matlab -nodesktop
```

➢ Visualise the outputs with croco_gui

```
>> croco_gui
```

➢ Enjoy!!!

STEP 7: Exiting

➢ Exit Matlab:

```
exit
```

➢ Give back the compute node:

```
exit
```

➢ Logoff the Lengau cluster:

```
exit
```