

Your own interannual realistic case

- Create your own grid
- Run from 201301-201303
- Use of interannual global data
 - * Atmospheric reanalysis : Hourly data from ERA5 (ECMWF) (ONLINE : already upload/converted in appropriate format from Climate data store for instance)
 - * Ocean monthly data from glorys reanalysis (Mercator) 2013/01 to 2013/03 (Also already uploaded)
- Prerequisites :
 - * no more than 100*100 point grid Please !!
 - * try to not have Open Boundary Condition of one or 5 point grid

Create Your Grid

From Linux terminal

```
croco@seolane[1-10]:~$ gedit create_config_dev_seolane.bash
```

....

```
./create_config_dev_seolane.bash
```

From Text Editor (gedit, vi ..)

```
MY_CONFIG_NAME= ????
```

From Linux terminal

```
croco@seolane[1-10]:~$ cd CONFIGS/ ???/?  
gedit crocotools_param.m
```

From Text Editor (gedit, vi ..)

```
CROCO_title = ' ??? Model';  
CROCO_config = ' ???';  
Lonmin = ???;  
Lonmax = ???;  
Latmin = ???;  
Latmax = ???;  
coastfileplot = 'coastline_f.mat';  
coastfilemask = 'coastline_f_mask.mat';
```

From Linux terminal

```
croco@seolane[1-10]:~$ matlab -nodesktop
```

....

```
ncview CROCO_FILES/croco_grd.nc
```

From Matlab console

```
>> start  
>> make_grid
```

Create Your inputs

From Linux terminal

```
croco@seolane[1-10]:~$ gedit crocotools_param.m
```

```
....
```

Creation of initial / boundary files :
make_OGCM_mercator : (make_ini/make_bry)

From Text Editor (gedit, vi ..)

```
Ymin      = 2013;  
Ymax      = 2013;  
obc = [1 1 1 1]; % open boundaries (1=open , [S E N  
W])  
makeclim  = 0;  
%% ATMO data  
OGCM_dir  = [DATADIR2,'/DATA_GLORYS_GLO/'];  
Download_data = 0; % Get data from OPENDAP  
sites  
  
%ERA5_dir = [FORC_DATA_DIR,'ERA5_',CROCO_config,'];  
ERA5_dir  = [DATADIR2,'/DATA_ERA5_GLO'];  
  
%% OGCM data  
OGCM      = 'mercator';  
OGCM_dir  = [DATADIR2,'/DATA_GLORYS_GLO/'];
```

From Linux terminal

```
croco@seolane[1-10]:~$ matlab -nodesktop
```

```
ncview
```

```
CROCO_FILES/croco_ini_mercator_Y2013M(01/02/03).nc  
CROCO_FILES/croco_bry_mercator_Y2013M(01/02/03).nc
```

From Matlab console

```
>> start  
>> make_OGCM_mercator
```

Prepare croco sources / Compilation

From Linux terminal

```
croco@seolane[1-10]:~$ gedit cppdefs.h
```



From Text Editor (gedit, vi ..)

```
# define YOUR_REGION # OLD BENGUELA_LR

# define MPI
# define BULK_FLUX
# define ONLINE
# define ERA_ECMWF

# undef CLIMATOLOGY

# define OBC_EAST
# define OBC_WEST
# define OBC_NORTH
# define OBC_SOUTH
```

N sigma level ? To be consistent with your crocotools_param
LLm0/MMm0 ? Retrieve Physical grid LLm0/MMm0
on CROCO_FILES/croco_grd.nc :
⇒ size(x_rho) -2 ghost points for instance

From Linux terminal

```
croco@seolane[1-10]:~$ gedit param.h
```



From Text Editor (gedit, vi ..)

```
parameter (LLm0= ??, MMm0= ??, N= ??) !  
YOUR REGIONAL CONFIG  
parameter (NP_XI= 2, NP_ETA=1,  
NNODES=NP_XI*NP_ETA)
```

From Linux terminal

```
croco@seolane[1-10]:~$ ./jobcomp
```

Launch run

From Linux terminal

```
croco@seolane[1-10]:~$ gedit run_croco_inter.bash
```

If mpi intel :

From Linux terminal

```
croco@seolane[1-10]:~$ source /etc/bashrc
```

From Linux terminal

```
croco@seolane[1-10]:~$ gedit croco_inter.in
```

From Linux terminal

```
croco@seolane[1-10]:~$ ./run_croco_inter.bash
```

From Text Editor (gedit, vi ..)

```
# number of processors for MPI run
NBPROCS=2

# command for running the mode : ./ for sequential job,
mpirun -np NBPROCS for mpi run
#RUNCMD='./'
RUNCMD="mpirun -np $NBPROCS ./ "

#
# Oceanic boundary and initial dataset (SODA, ECCO,...)
#
OGCM=mercator

NY_START=2013
NY_END=2013

ND_HIS= ???
```

From Text Editor (gedit, vi ..)

```
online:  byear  bmonth  recordsperday  byearend
bmonthend / data path
          NYONLINE  NMONLINE    24          2013
3
/opt/DATASETS_GLOB_INTER/DATA_ERA5_GLO/
```