Tutorial 07 :
Create my croco interanual configuration

Tutorial is there : https://drive.google.com/drive/folders/1Kaaw2MUwPELSgyGl_z3X5hro92F4m2OQ

Instead of running the model each month by forcing it with climatological means / we will force the model each month with monthly means so that if we run it for more than one year we will observe a variability in the forcings. the idea is to take into account the inter-annual variability of the forcings when you want to study and analyze your configuration

- **Some inputs files**

	data	Period availability	frequency	commands	Manage in croco / folder in crocotools
OCEAN forcing reanalysis	SODA2,2,4 SODA3,3 ECCO2 (0,25°)	1871-2010 1980-2015 1992-2021	Monthly Monthly Monthly/ 0,25°	make_OGCM	Oforc_OGCM/ extraction by Opendap (Download_data=1) Conversion by matlab scripts
	GLORYS (Mercator) (1/12°)	1993-2020	daily/monthly	make_OGCM_mercator	Oforc_OGCM/ extraction next to be registered to CMEMS + install python library motuclient Conversion by matlab scripts
OCEAN forcing analysis	PSY4 (Mercator) (1/12°)	2020-2022	daily	make_OGCM_mercator	Oforc_OGCM / extraction next to be registered to CMEMS + install python library motuclient Conversion by matlab scripts
ATMO forcing	ERA-interim (0,3°) ERA5 (0,25°)	1979-2019 1950 -	3/6 hourly hourly	make_ECMWF make_ERA5	Aforc_ECMWF/ Aforc_ERA5/ Extraction next to be registered to Climate data store + install python library cdsapi) Conversion by python scripts
	NCEP1/2 CFSR	1948- 1979-2017		make_NCEP make_CFSR	Aforc_NCEP/ Aforc_CFSR/ Extraction by opendap (Download_data=1)

For atmospheric forcing, different ways to manage these data

A) Normally , people have to extract and convert data with the crocotools
Then these files are located in their DATA directory (Run_inter/DATA/) (by default):

1) upload data : *DATA_native_yourconfig* *(extraction)*

2) convert data : *DATA_yourconfig* *(change format filename variable, flip latitude, apply variable factor)*

3) make : *CROCO_FILES/*

B) Maybe you have already data preprocessed from step 2, so you only need to do the make command

C) You can also decide :

1) extract large data files (global) and decide to put them there : *DATA_native_yourconfig*

2) then you can tell to croco before to compile to process to an online interpolation, so during runtime croco will directly read the namelist croco_inter.in to give the information of path and period to use.

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We will process interanual run from 201301 to 201303 forced by interanual global data on your personal grid, use of :

* Atmospheric reanalysis : Hourly data from ERA5 (ECMWF) 0,25° (Online interpolation) / information in directory Aforc_ERA5/
* Ocean monthly data from glorys reanalysis (Mercator) 1/12° , 2013/01 to 2013/03 (Also already uploaded) but to be converted / information in directory Oforc_OGCM/

1) create your new Run directory **Run_inter**

2) create inputs files

3) prepare croco sources for compilation

4) launch run

5) Visualize