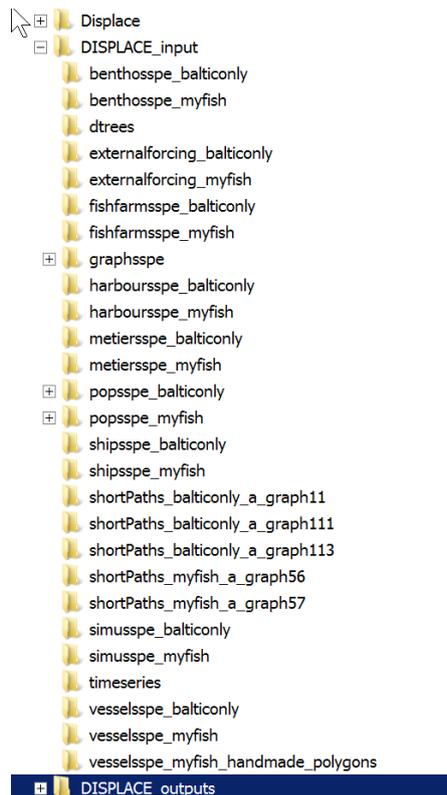


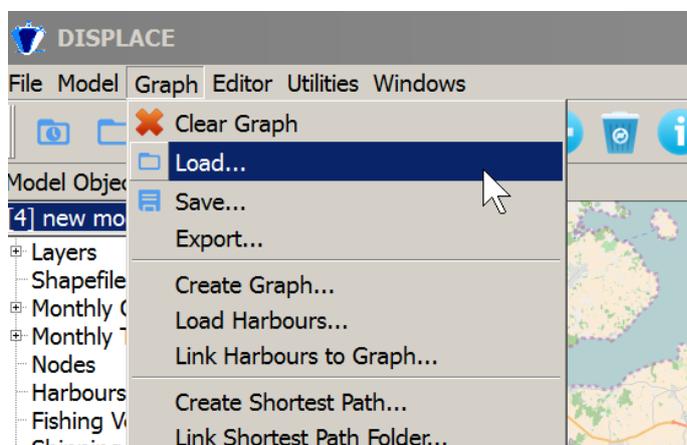
Step-by-step Guideline DISPLACE version 0.8.2 (Windows)

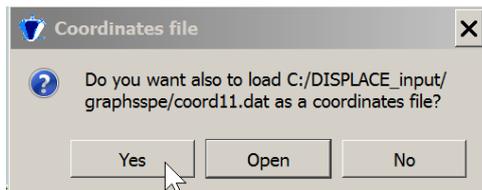
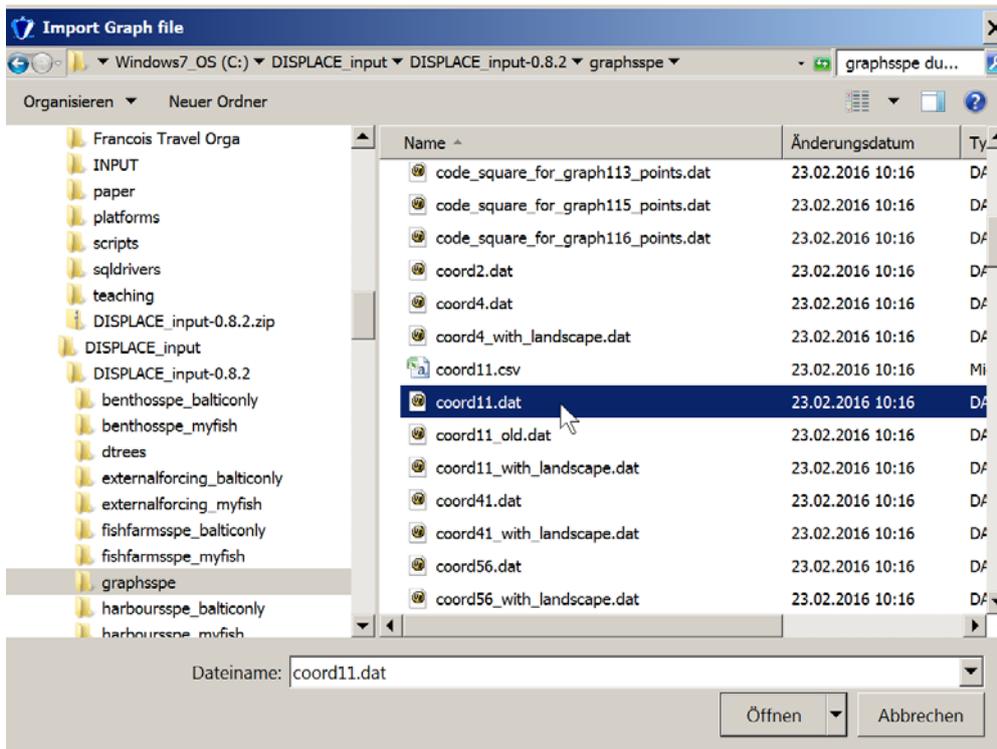
Setup a new scenario and run a DISPLACE simulation based on a baseline scenario (tested by Jens Floeter & Francois Bastardie)

All folders directly under c:\ without blanks in the names

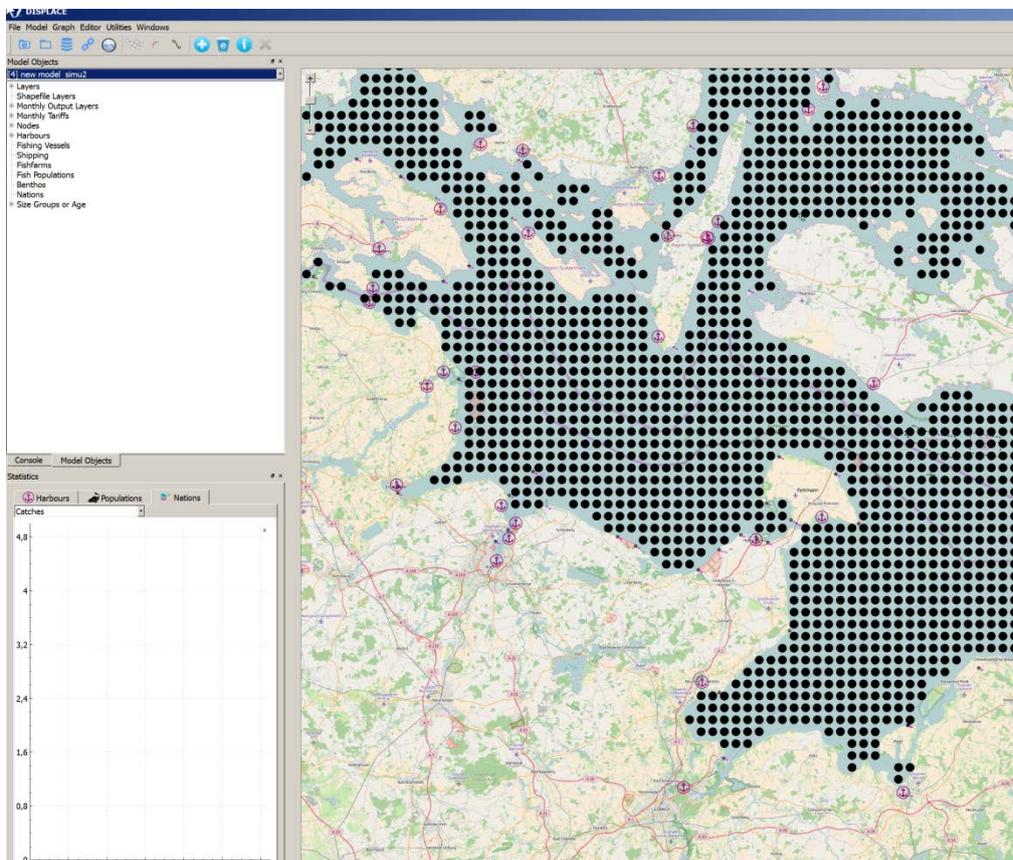


Load the baseline graph with the ending 11

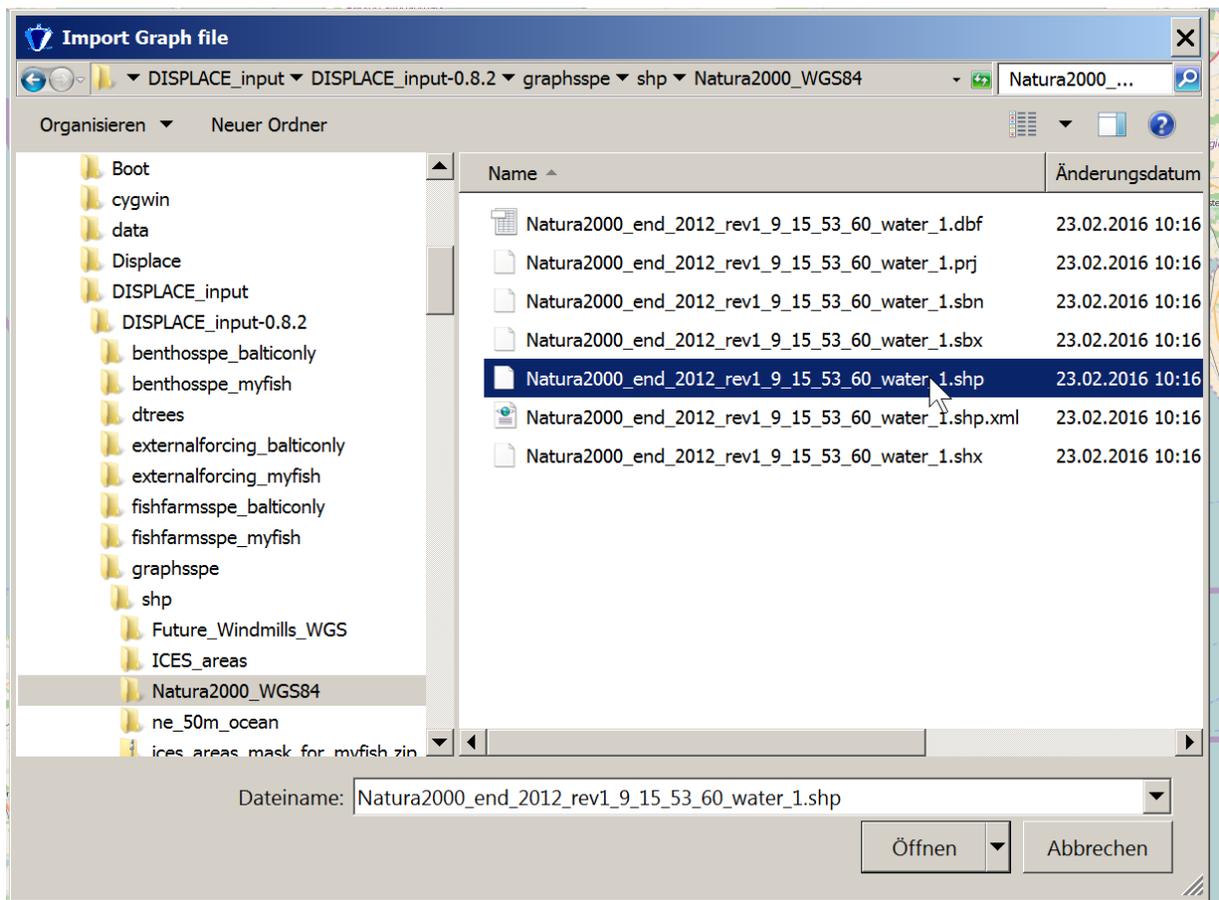
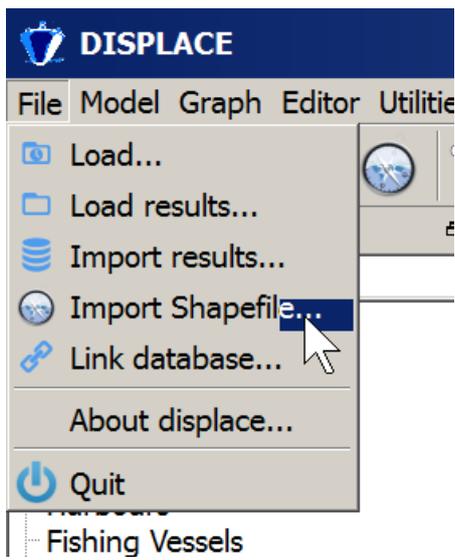


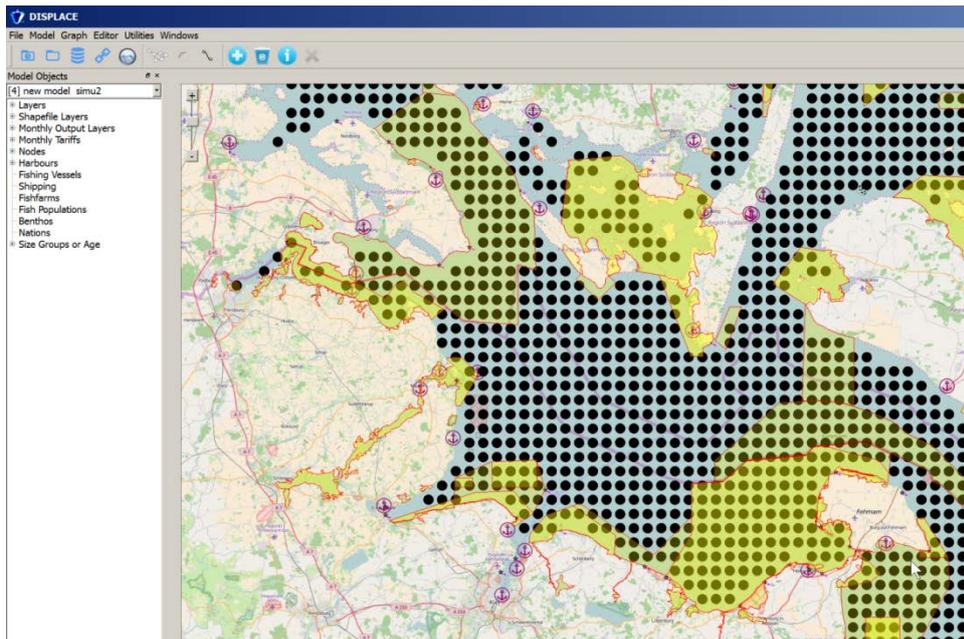


then it looks like

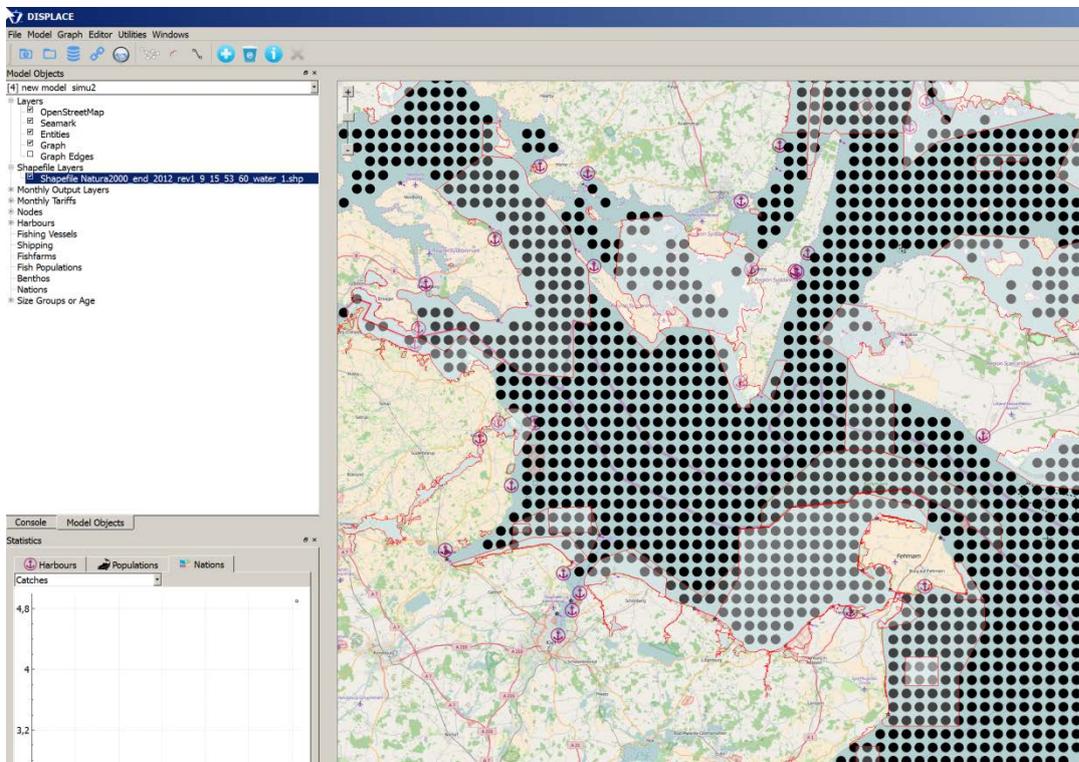
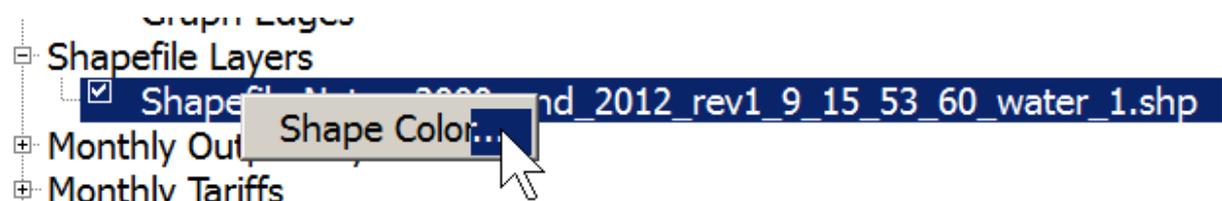


next load the shapefile with the Natura2000 closed areas



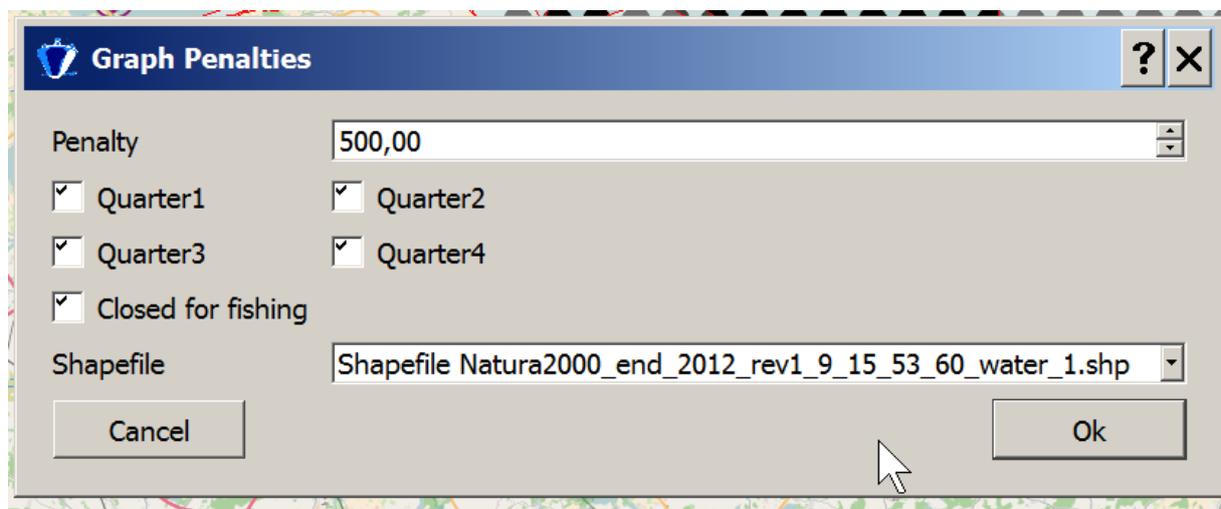
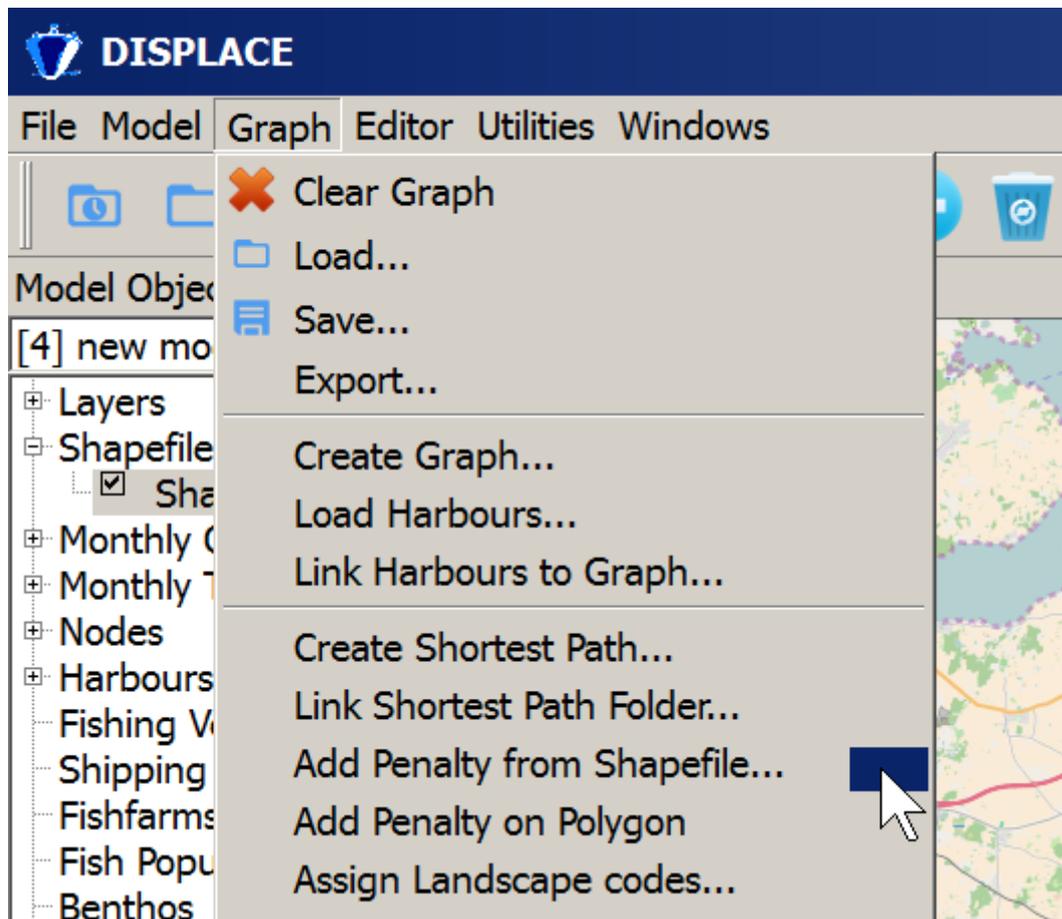


right click and make color white



The shape file makes the closed areas visible on the GUI but does not affect the simulation itself. To enable that we need to add the penalty from shapefile of closed areas...

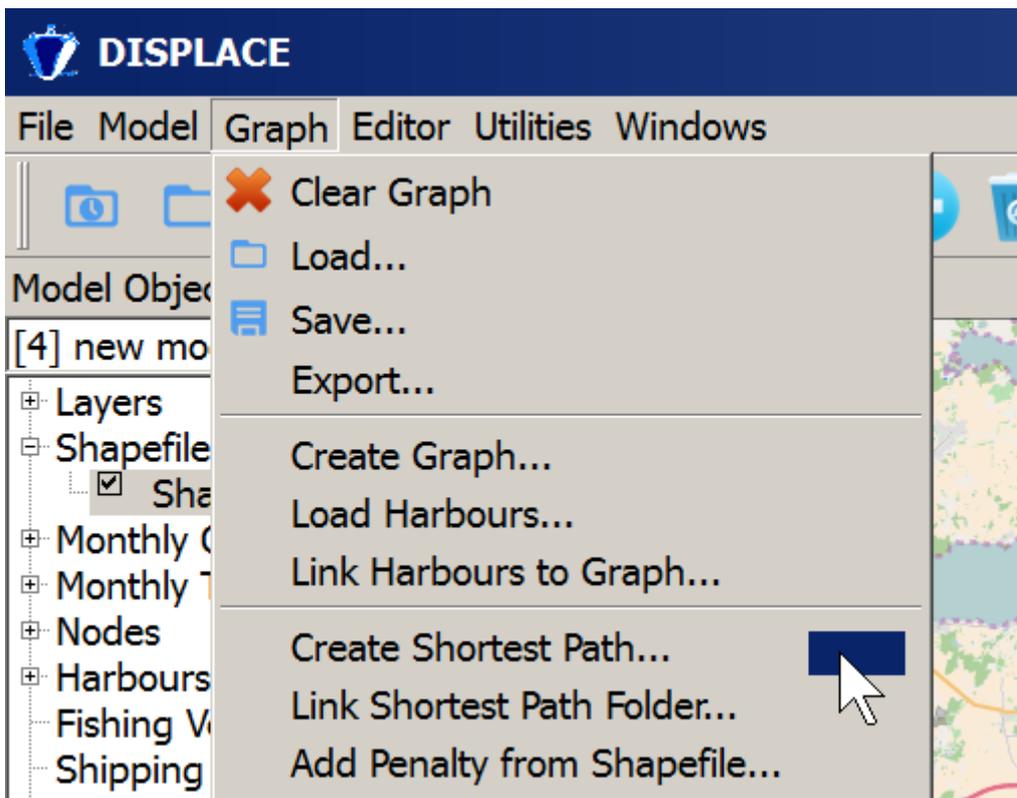
the penalty works by artificially increasing the distance between nodes so that nodes in the closed areas are far away (500km)...which means that they are never on the shortest and never steamed through...but this does not apply for fishing..so we need a second step and tick the checkbox closed for fishing

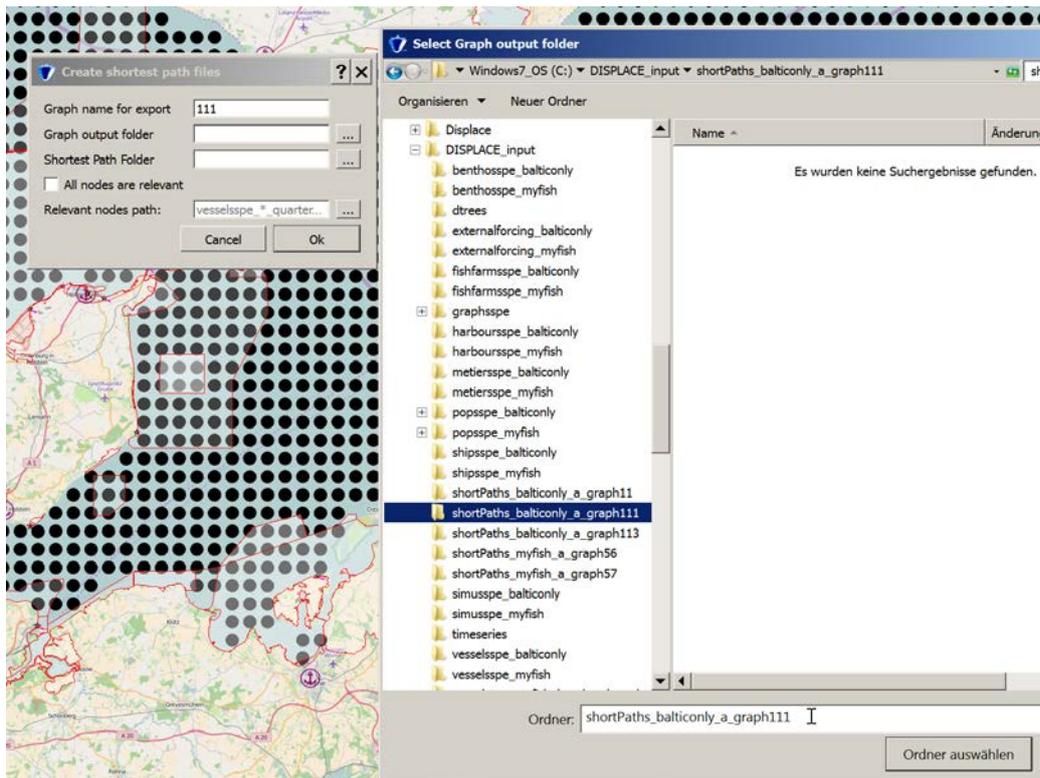


Now we need to re.create the shortes path graph which is used by the vessels to calculate their steaming routes



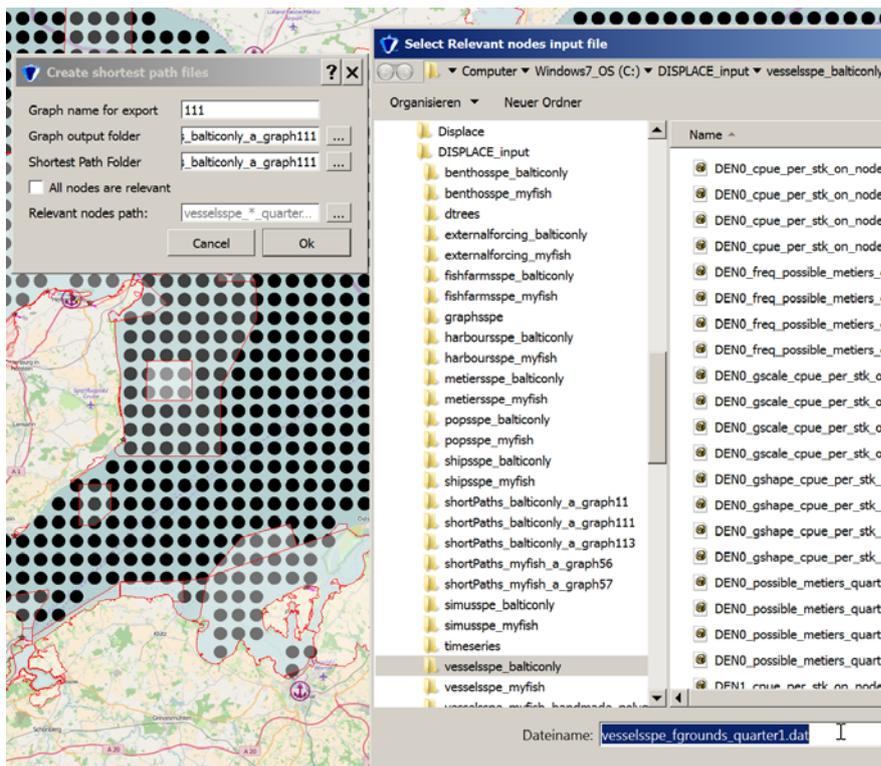
But before that we need to create a new folder in which the shortest Path will be saved

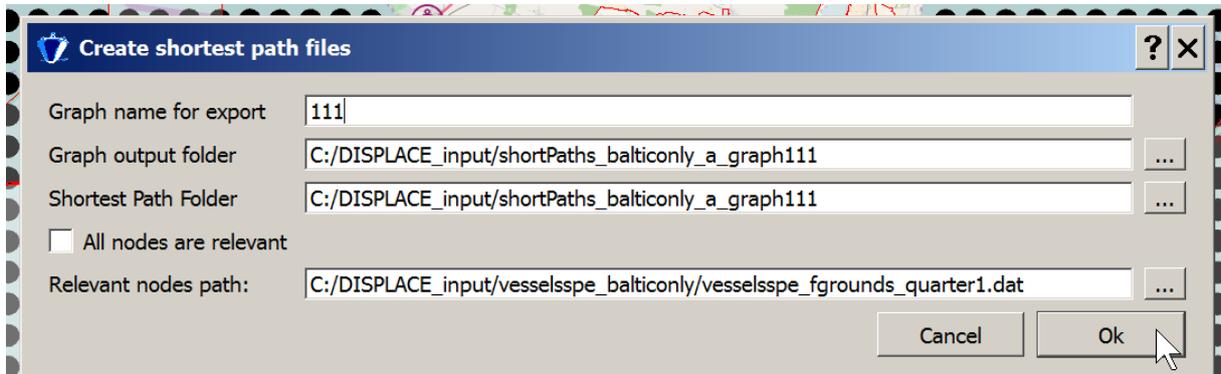




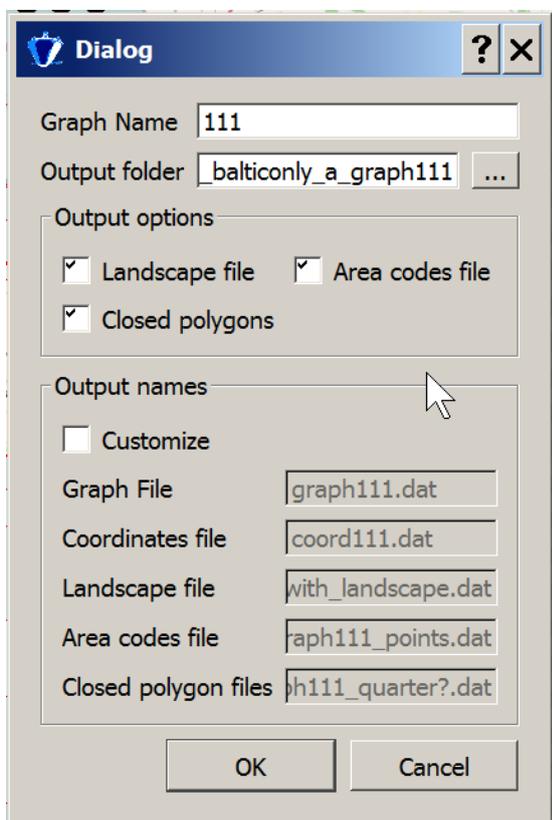
baseline graph = 11 so create a graph name for export as child ==> 111

Next file to load is the vessel specific node.dat to create the shortest paths...it will look at all quarters so doesn't matter which quarter you chose here we take "vesselspe_fgounds_quarter1.dat" in the vesselspe_balticonly folder

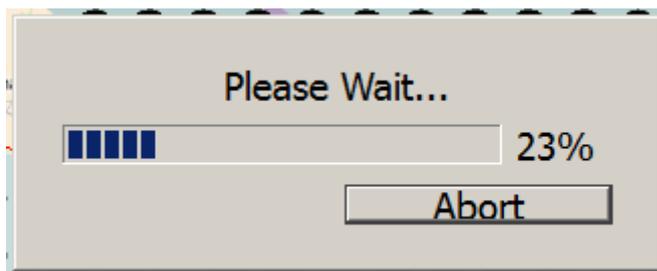




leave defaults in the following window



Now its calculating the shortest paths between the relevant nodes for the selected vessels



now we need to attach a baseline scenario file

load the baseline and change for the graph name and change scenario and tick area closure

Scenario file:

Dyn Alloc Sce

baseline focus_on_high_profit_grounds TACs
 LTMP FMSY area_closure
 fuelprice_plus20percent reduced_speed_10percent closer_grounds
 closer_port area_closure_fuelprice_plus20percent increased_catch_power_5percent
 focus_on_high_profit_grounds_area_closure shared_harbour_knowledge twoFoldTAConstr
 fishing_credits

Dyn Pop Sce

baseline use_SMS use_SMS_single
 stop_mig_35065

Bio Sce

Freq do growth

Freq dispatch

AGraph ...

N Row Coord

N Row Graph

A Port

Grid Resolution

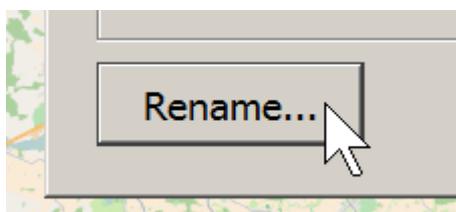
Options

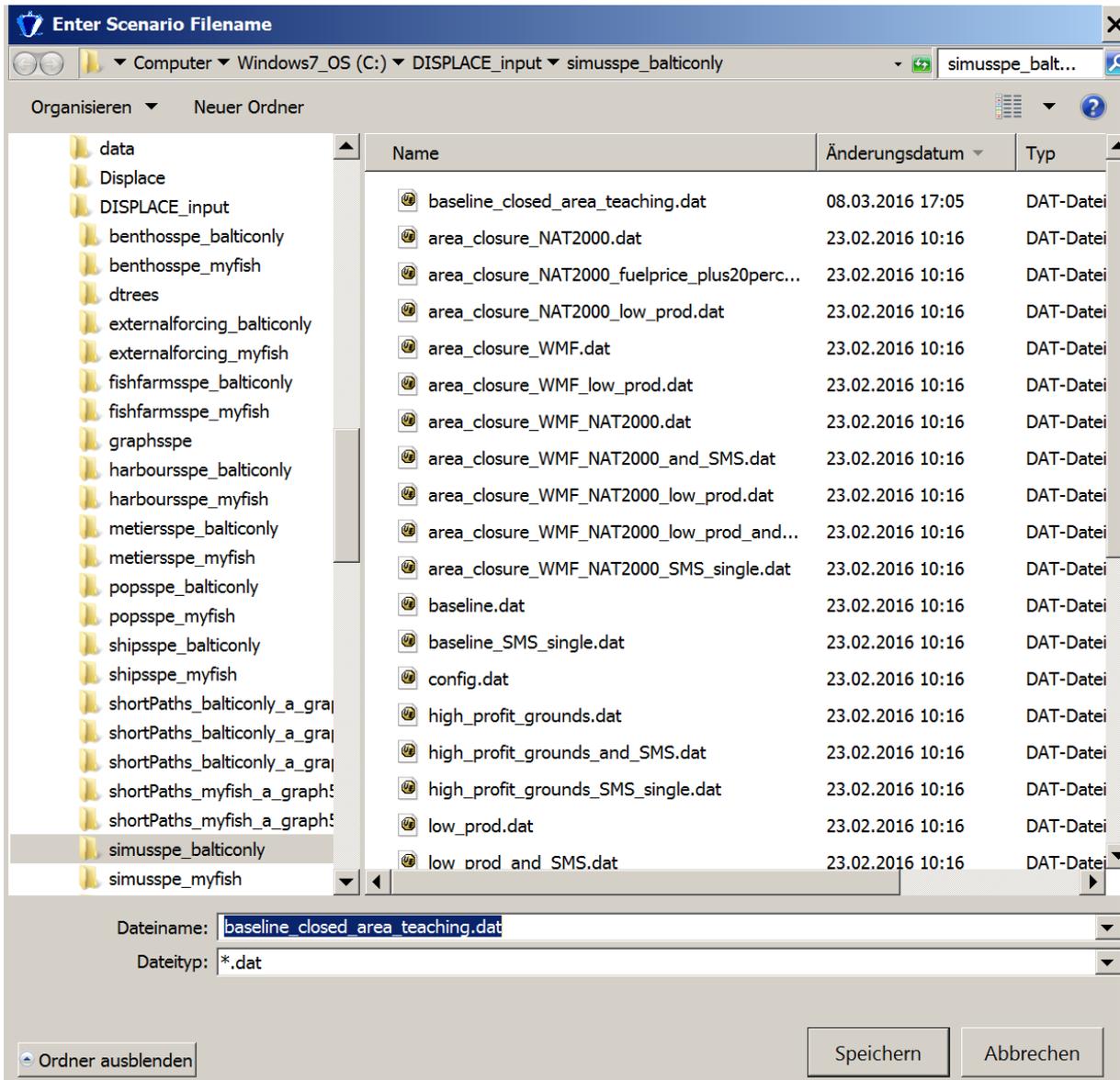
Individual Quotas
 Check All Stocks Bef. Going
 Use DTrees

Decision Trees

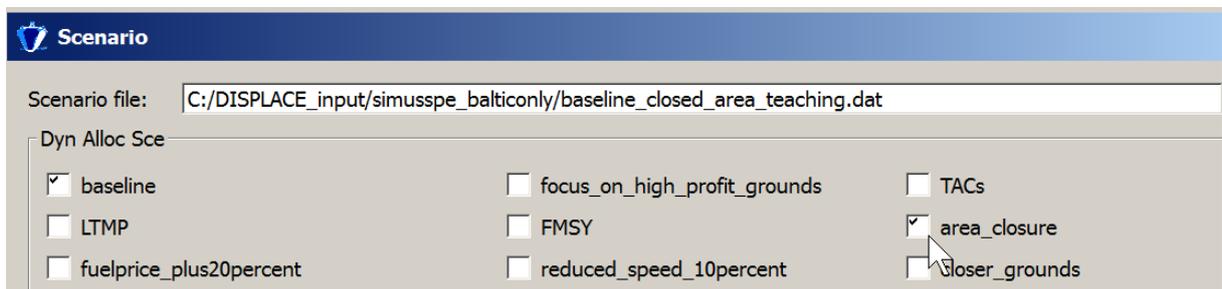
Use Go Fishing Browse
 Use Choose Ground Browse
 Use Start Fishing Browse
 Use Change Ground Browse
 Use Stop Fishing Browse
 Use Change Port Browse

Rename... Cancel Save and Close





tick area closure



make grid resolution to 2,5km **must be a COMMA not a decimal point !**

and insert a Port 10449 which is in the default harbor for looking for prices if no price is available at the closed harbor

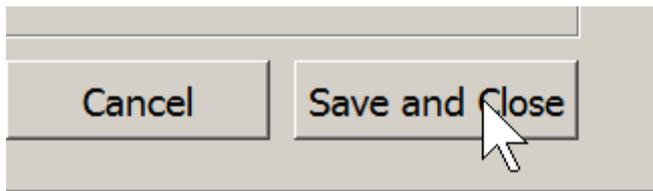
A Port	10449
Grid Resolution	2,50 km

you can check the meaning of the flags in baseline.dat in the simuspe_balticonly folder

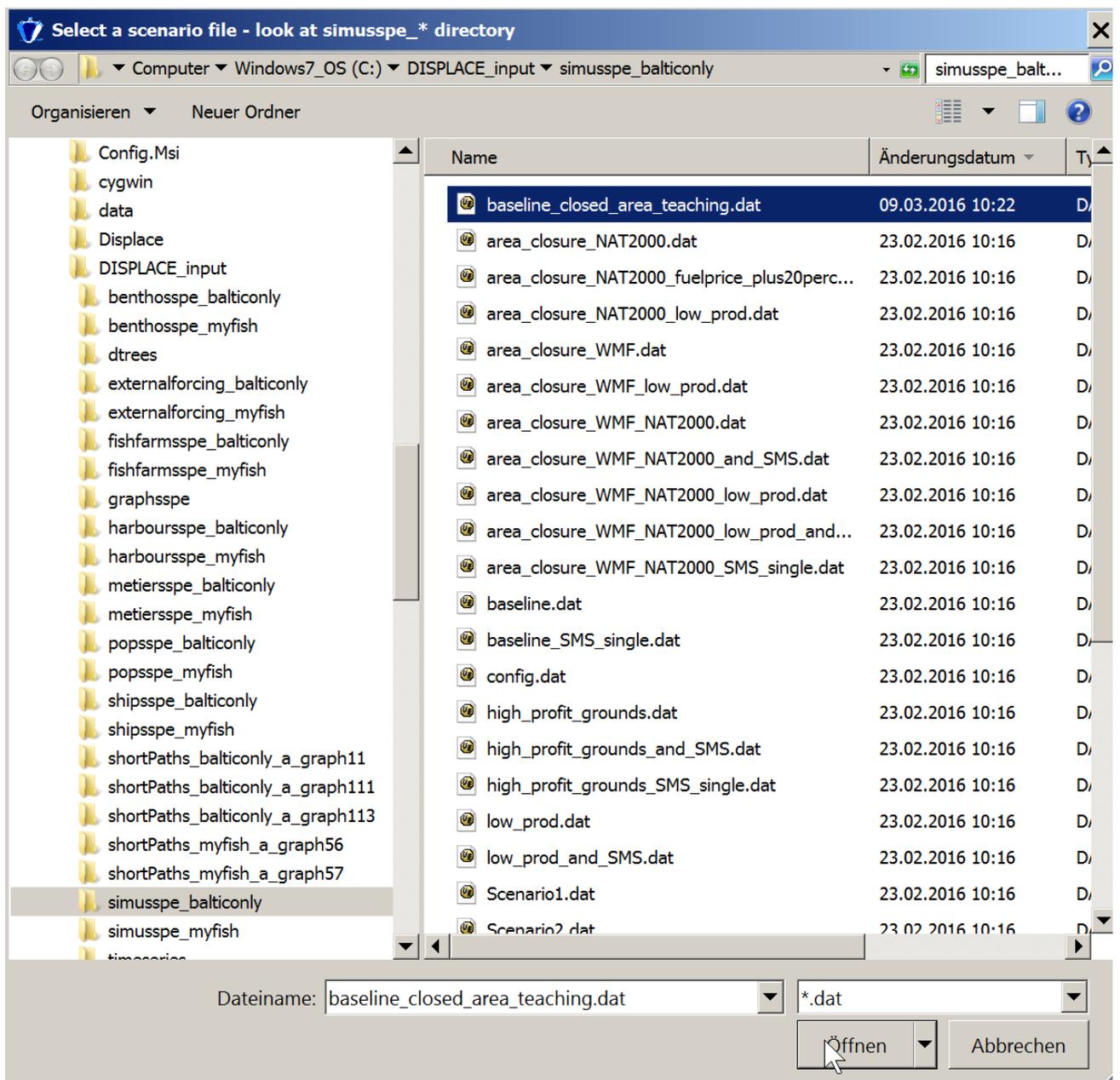
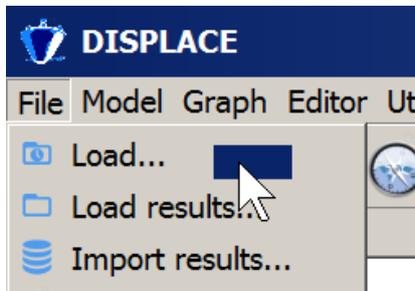
The screenshot shows a 'Scenario' configuration window with the following sections and settings:

- Scenario file:** C:/DISPLACE_input/simusspe_balticonly/baseline_closed_area_teaching.dat
- Dyn Alloc Sce:**
 - baseline
 - LTMP
 - fuelprice_plus20percent
 - closer_port
 - focus_on_high_profit_grounds_area_closure
 - fishing_credits
 - focus_on_high_profit_grounds
 - FMSY
 - reduced_speed_10percent
 - area_closure_fuelprice_plus20percent
 - shared_harbour_knowledge
 - TACs
 - area_closure
 - closer_grounds
 - increased_catch_power_5percent
 - twoFoldTACconstr
- Dyn Pop Sce:**
 - baseline
 - stop_mig_35065
 - use_SMS
 - use_SMS_single
- Bio Sce:** 1
- Freq do growth:** 4
- Freq dispatch:** 3
- AGraph:** 111
- N Row Coord:** 13645
- N Row Graph:** 104640
- A Port:** 10449
- Grid Resolution:** 2,50 km
- Options:**
 - Individual Quotas
 - Check All Stocks Bef. Going
 - Use DTrees
- Decision Trees:**
 - Use Go Fishing
 - Use Choose Ground
 - Use Start Fishing
 - Use Change Ground
 - Use Stop Fishing
 - Use Change Port

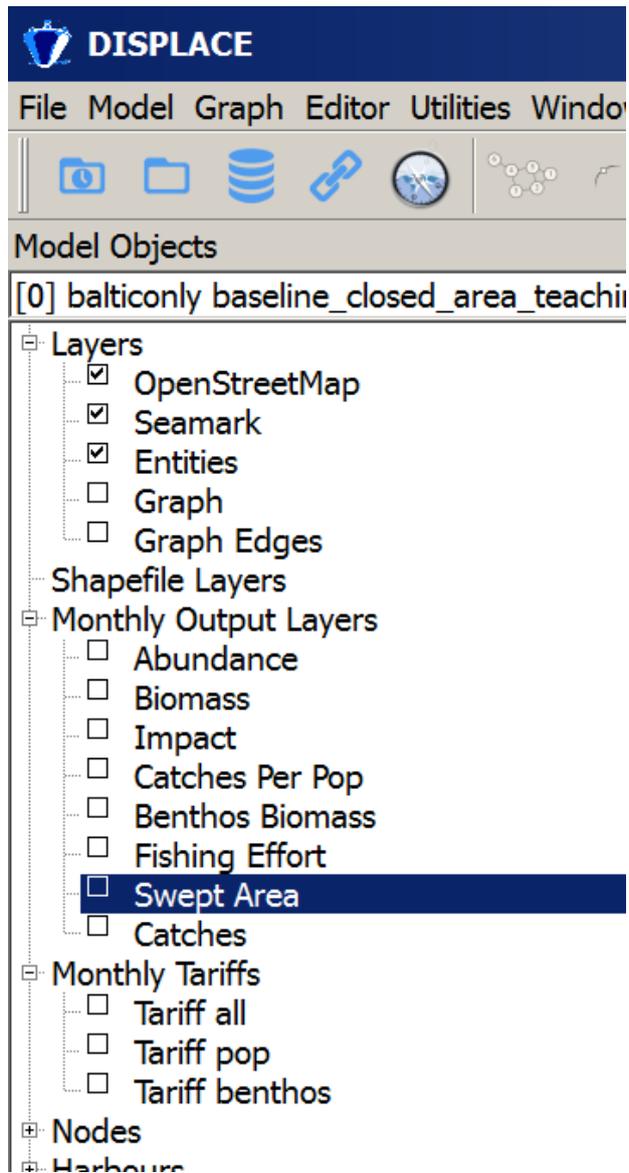
Buttons at the bottom: Rename..., Cancel, Save and Close.



Now load the scenario which you have just created

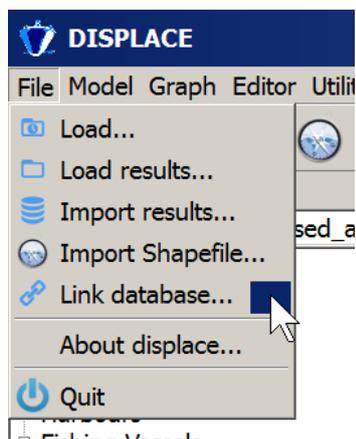


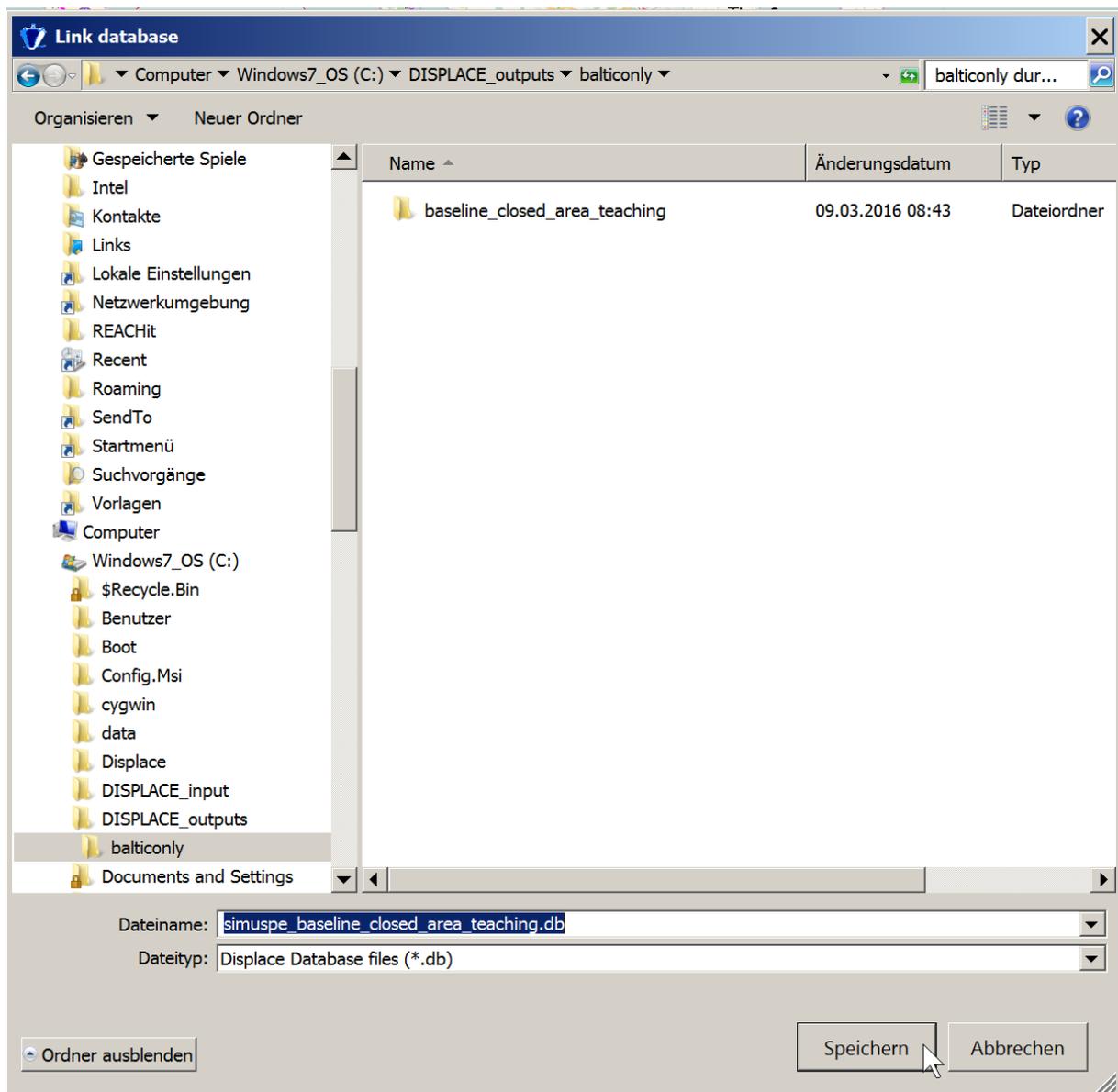
Disable the visualization of some layers (GRAPH, Monthly Tariffs) to speed up the computation and see the vessels moving.



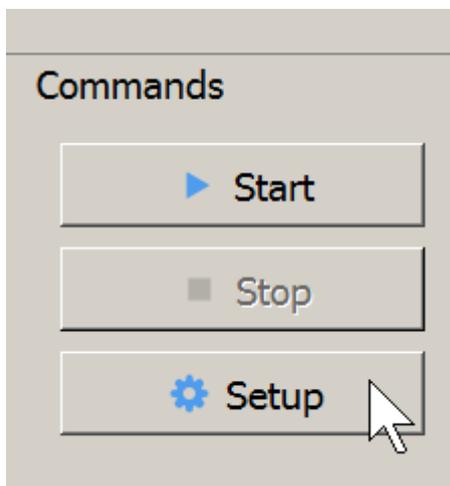
LINK A DATABASE (needed for replay the simulation...otherwise not needed !)

create a DB





Then setup the simulation in the upper right corner of the GUI

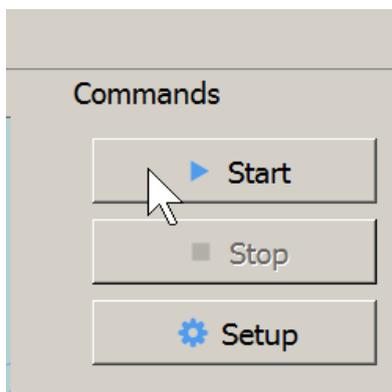
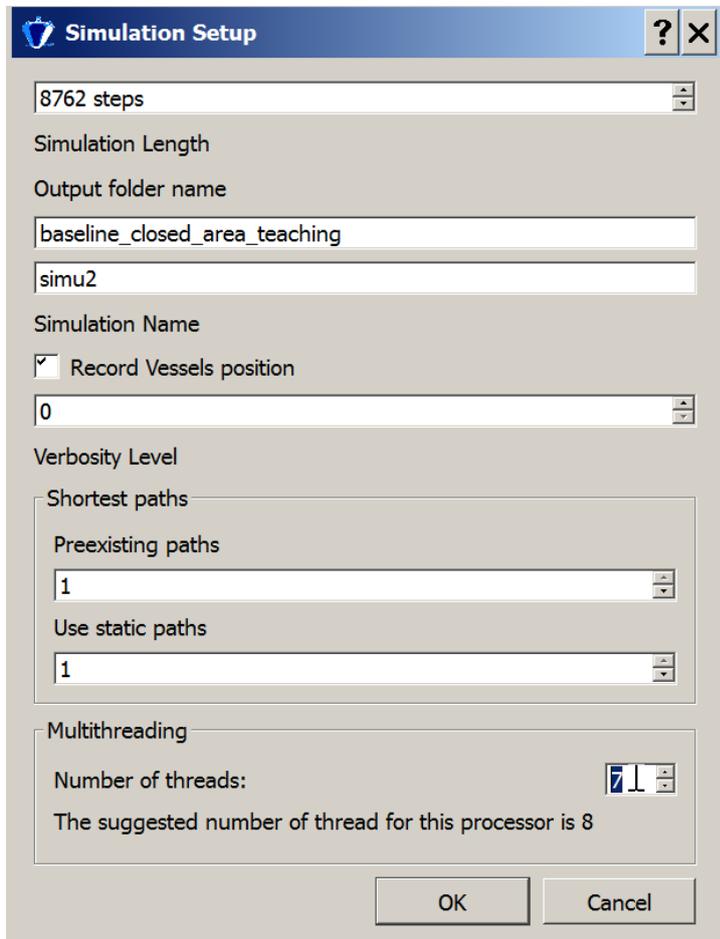


8762 steps in hours = 1 year

keep verbosity level = 0 otherwise the application may crash

simu2 defines the random seed

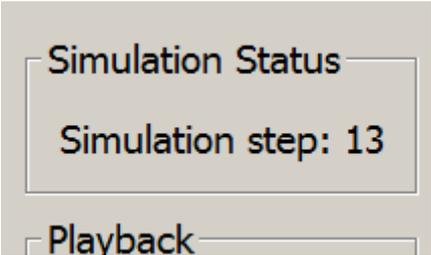
...so if you compare scenarios look at the same number !



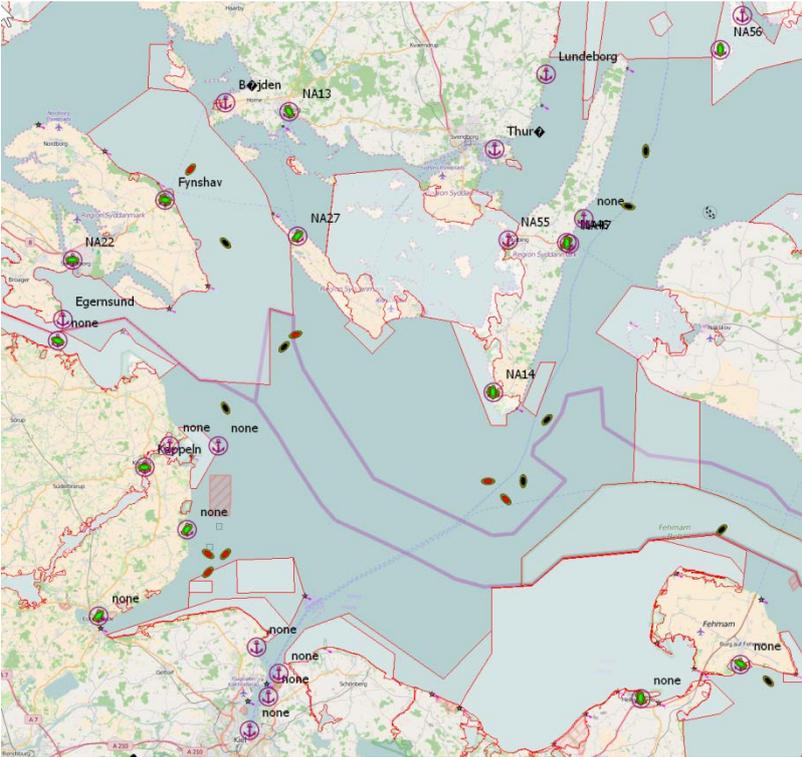
then it reads in the input files



and starts running... the steps are counting

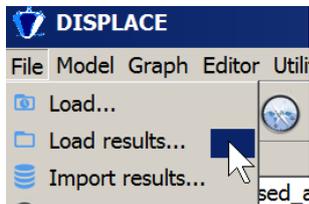


and the vessels are moving

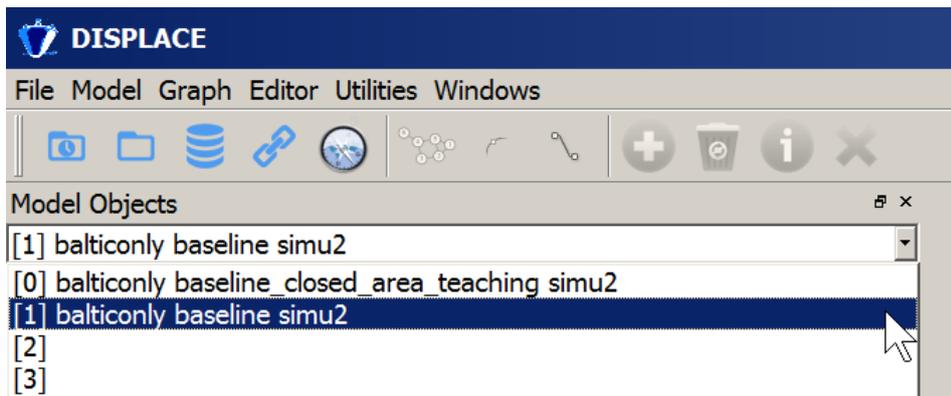


COMPARE different scenarios

(You need only the databases for comparison, not the output files)



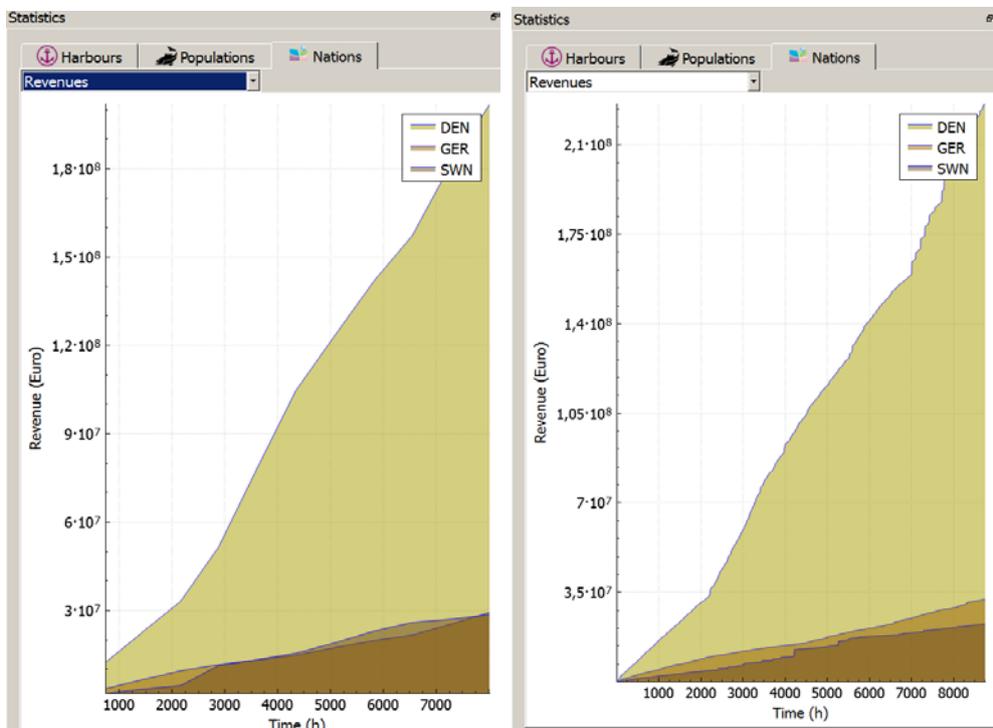
then you can switch between the scenarios



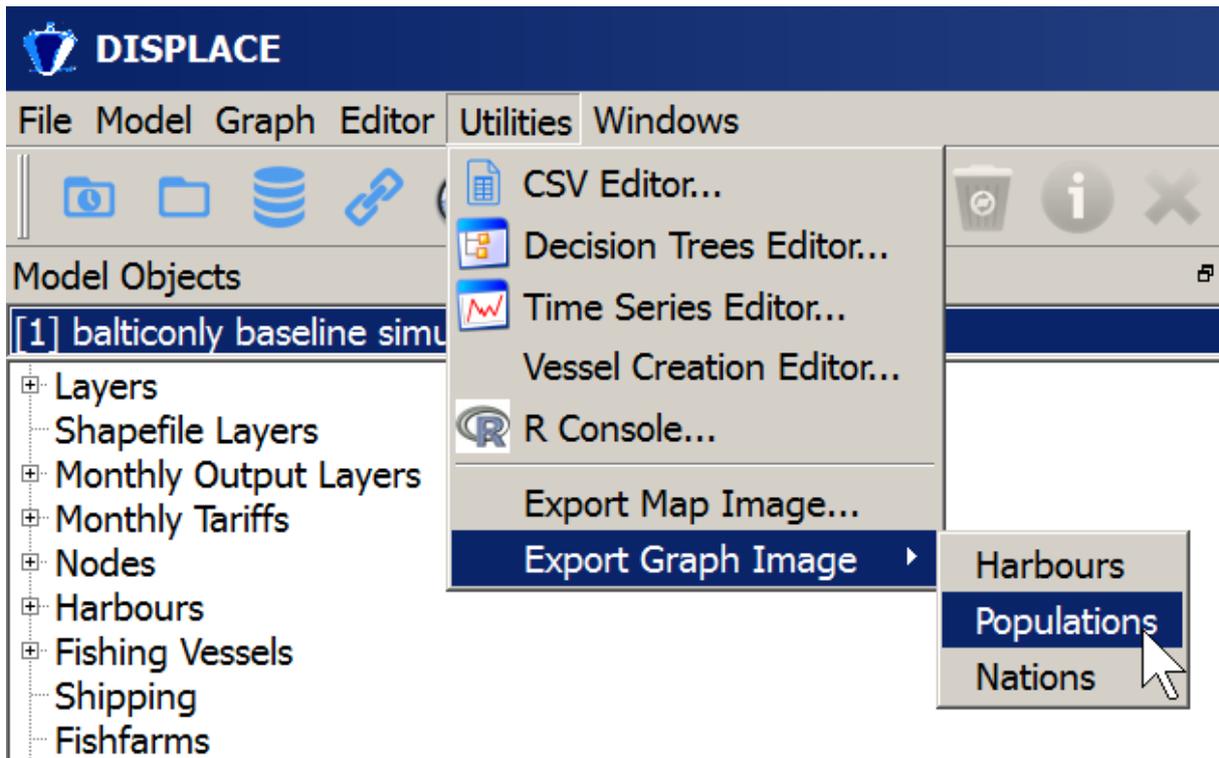
and compare the maps and summary plots (but note that scales are different and do not start at 0)

baseline scenario revenues

Closed area scenario revenues



Figures can also be exported



and numbers behind the figures are in the output files, e.g. popdyn_F_simu2.dat

```
#####  
#####
```

Launch DISPLACE from the command line without the GUI

Create a batch file with the following content (see below) and name the file e.g. launch_a_queue_of_displace_simus.bat and place this .bat file in the same folder than the DISPLACE_input folder. Launch it by double-clicking on it. Output files will be created in C:\DISPLACE_outputs

```
REM 8762 tsteps for one year....
```

```
REM here for example simu2, simu3, and simu4
```

```
REM will be created for the 'balticonly' application and scenario 'baseline'
```

```
REM you might also test with verbosity -V 0 to limit the output message in out.txt
```

```
for /l %%a in (2,1,4) do (start /d C:\Displace082 displace -f "balticonly" -f2 "baseline" -s "simu%%a" -i  
8762 -p 1 -o 1 -e 1 -v 0 --without-gnuplot -V 1 --num_threads 4 > ..\out.txt
```

```
PING 1.1.1.1 -n 1 -w 10000 >NUL)
```

```
PAUSE
```