# Step-by-step Guideline DISPLACE version 0.9.10 (Windows & Ubuntu)

# **Creating scenario files by designing spatial restrictions (tested by Francois Bastardie)**

## 1. Specifications e.g. for Ionian Sea

In this tutorial we will be creating the existing closures to add to the default parameterisation. So it will concern adding the existing aquaculture sites and the existing closures specific to the OTB gear type with different timing depending on the closed polygon. Example of specifications is:

The inner part of Patraikos gulf where trawling is banned from: 1 March - 30 November. b) The Korinthiakos gulf and c) the gulf of Kerkyra where trawling is banned from: 1 April -30 November.) you can include the abovementioned banning periods and for all the other areas you can include the temporal pause from 1 June to 30 September.

Scenarios 1 and 2 will be done derived later on from the same basis but will not be shown in this tutorial. For info, scenario 1 and 2 could be:

Scenario 1: Suitable areas for future aquaculture development (based on a national aquaculture management plan). In this scenario the métier that mainly can be affected are GNS, GTR and LLS (and in a lower level the PS and OTB).

Scenario 2: European hake nursery ground- excluding OTB for 2 more months (i.e. April & May). In this point I would like to remind you that in Greece there is already a temporal banning for OTB from the 1st of June up to 30 of September.

#### 2. Including procedure into DISPLACE

First we load an existing graph (here, graph 50 of the Ionian Sea application) into DISPLACE:



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We load the WGS84 GIS shape files into the platform:



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aquaculture_existing_areas_buffer1km.shp	14/12/2017 16:04	SHP File
Korintiakos_kerkyra_temporal_restrictions_OTB_existingAreas.shp	18/12/2017 16:02	SHP File
Patraikos_temporal_restrictions_OTB_existingAreas.shp	18/12/2017 16:01	SHP File



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aquaculture_existing_areas_buffer1km.shp		14/12/2017 16:04	SHP File
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Patraikos_temporal_restrictions_OTB_existingAreas.shp	15	18/12/2017 16:01	SHP File



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Patraikos_temporal_restrictions_OTB_existingAreas.shp	18/12/2017 16:01	SHP File



Then we apply the spatial restriction:

But be aware you'll need to fill in the specification for each GIS shape file in case the timing and/or the metier and vessel size is different between them.

So here we start with the aquaculture site that affect all metiers during all the months of the year:



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(Note that Quarter-based info is to be used with the "area\_closure" dynamic allocation informed in the scenario .dat file)



(Note that monthly-based info is to be used with the "area\_monthly\_closure" dynamic allocation informed in the scenario .dat file)

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Then the last GIS shape file:

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At the end (i.e. after having done the job for the 3 GIS files one by one like showed....) we can save the affected graph with a derived name, here 51:



👔 Dialog	2	
Graph Name	51	
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Output options		
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Vind file	V Benthos Biomass file	
SST file	Benthos Number file	
Salinity file	Closed polygons	
Output names		
Customize		
Graph File	graph51.dat	
Coordinates file	coord51.dat	
Landscape file	coord51_with_landscape.dat	
Benthos Total Bio. file	coord51_with_benthos_total_biomass.dat	
Benthos Total Nb. file	coord51_with_benthos_total_number.dat	
Area codes file	code_area_for_graph51_points.dat	
Wind file	coord51_with_wind.dat	
SST file	coord51_with_sst.dat	
Salinity file	coord51_with_salinity.dat	
Closed polygon files (Quarterly)	metier_dosure_a_graph51_quarter?.dat	
Closed polygon files (Monthly)	metier_dosure_a_graph51_month?.dat	
Closed polygon files (Ves Sizes)	vsize_closure_a_graph51_month?.dat	

Then look at /graphsspe folder to see the new created files:



We also need a new scenario file:

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baseline.dat	01/12/2017
baseline_old.dat	16/03/2017
config.dat	20/02/2017
existing_restrictions.dat	18/12/2017
existing_restrictions_and_sce1.dat	18/12/2017
existing_restrictions_and_sce2.dat	18/12/2017
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tstep_months_2009_2015.dat	20/02/2017
tstep_quarters_2009_2015.dat	20/02/2017
tstep_semesters_2009_2015.dat	20/02/2017
tstep_years_2009_2015.dat	20/02/2017

## With content (for example):



The important info is the graph name i.e. 51 here. Also we added the option "area\_monthly\_closure" in this file.

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Same info here displayed from within DISPLACE:

And last we need the short paths library:

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Because the step "Adding Penalities From Shape File" did actually NOT add penalties on the path (

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If penalities is chosen different from 0.00 then the shortest paths library need a rebuilding with:



Finally we can load and run the new scenario:



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