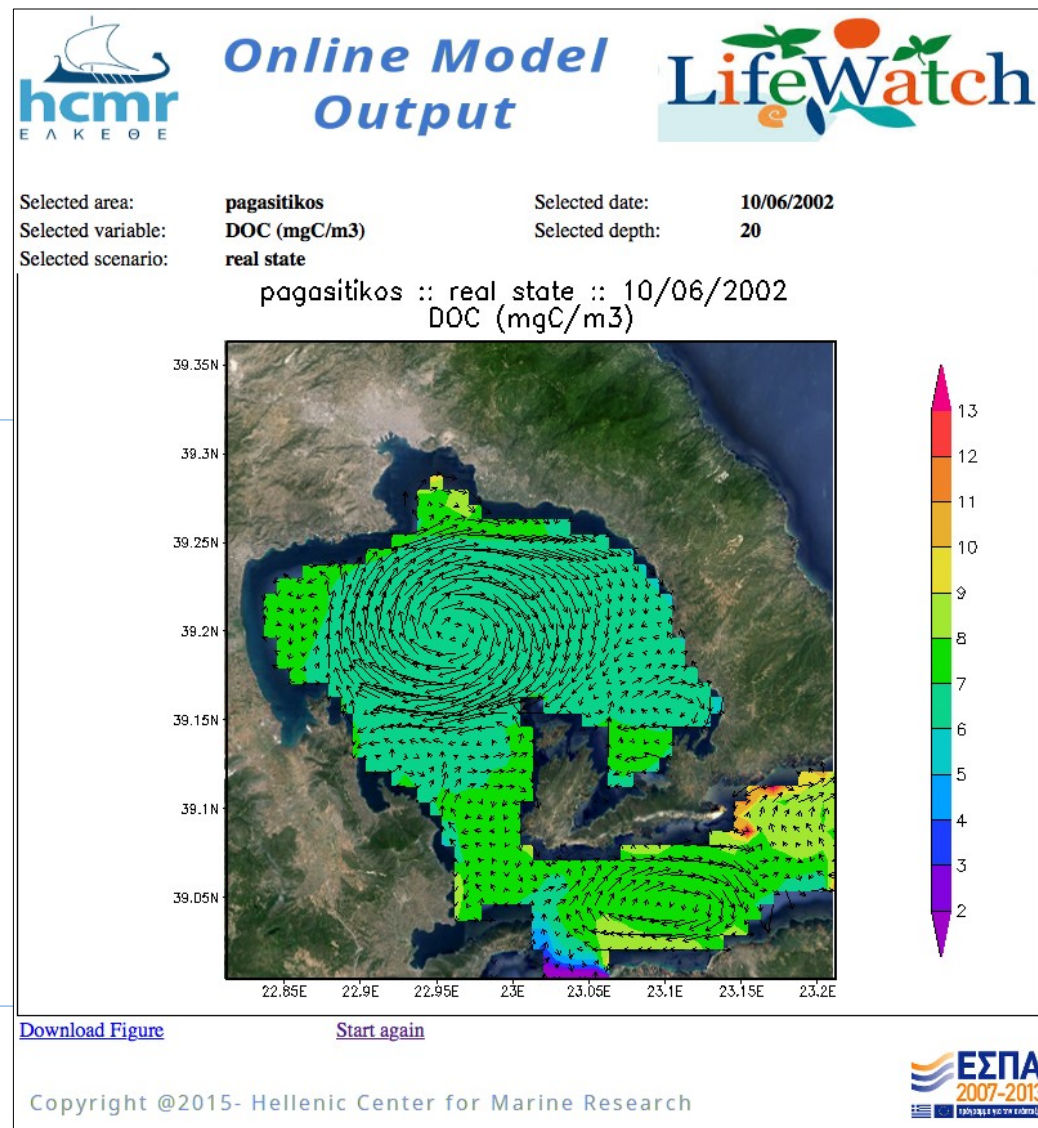


**An online graphic user interface to dynamically explore model results and ecological indices**



By Alkis Kalabokis, Manolis Potiris & George Petihakis

*EU BON - LTER Europe, workshop, 9-10, December, Granada*

# Short description

Dynamic Ecological modelling (vLab) consisting of

Two online coupled models.  
POM (physics) & ERSEM (ecology)

- Ecological and physical output for 4 specifically identified coastal areas under different scenarios
- Ecological indices calculated from the model output
- A user friendly online GUI that allows user to examine the results in the form of plots by selecting the area, scenario and parameter and download the graphs



*Online Model  
Output*



Surface Plots	Cross Section Plots	Comparison Plots
<p>Choose area: <input type="text" value="Agrilia"/></p> <p>Choose Date: <input type="text" value="01/01/2007"/></p> <p>Set depth: <input type="text" value="30"/> (1-50)</p> <p>Choose a variable to plot: <input type="text" value="Oxygen (mmol/m3)"/></p> <p>Choose Scenario: <input type="text" value="real state"/></p> <p>Set plot: <input type="text" value="shaded"/></p> <p>Show velocity vectors: <input checked="" type="checkbox"/></p> <p>Set map enable: <input checked="" type="checkbox"/></p> <p><input type="button" value="plot"/></p>		

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Dynamic Ecological modelling (vLab) consisting of

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Surface Plots	Cross Section Plots	Comparison Plots
Choose area:	<input type="text" value="Cyprus"/>	
Choose Date:	<input type="text" value="01/04/2007"/>	
Set depth:	<input type="text"/> (1-300)	
Choose a variable to plot:	<input type="text" value="Trix"/>	
Choose Scenario:	<input type="text" value="real state"/>	
Set lon:	<input type="text"/> (33.00 33.445)	
Set lat:	<input type="text"/> (34.58 34.780)	
<input type="button" value="plot"/>		



# Examples

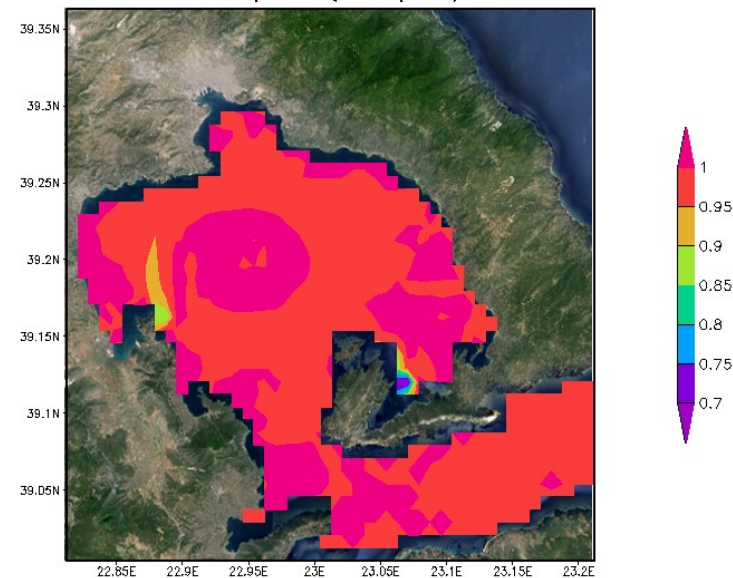


Online Model  
Output



Selected area: **pagasitikos** Selected date: **01/05/2002**  
Selected variable: **Phosphate (mmol/m3)** Selected depth: **1**  
Selected scenario is: **no fish compared with real state**

pagasitikos :: no fish – real state :: 01/05/2002  
Phosphate (mmol/m3)



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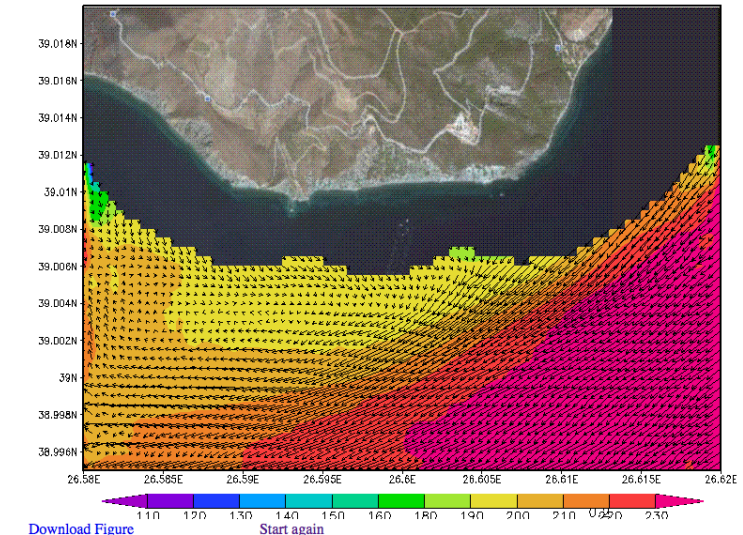


Online Model  
Output



Selected area: **agrilia** Selected date: **01/01/2007**  
Selected variable: **Oxygen (mmol/m3)** Selected depth: **30**  
Selected scenario: **real state**

agrilia :: real state :: 01/01/2007  
Oxygen (mmol/m3)



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Oxygen and currents distribution  
at 30m depth (Lesvos)

Comparison of Phosphate under different  
fish load scenarios (Pagasitikos Gulf)

Cross section of TRIX  
Index (Cyprus)

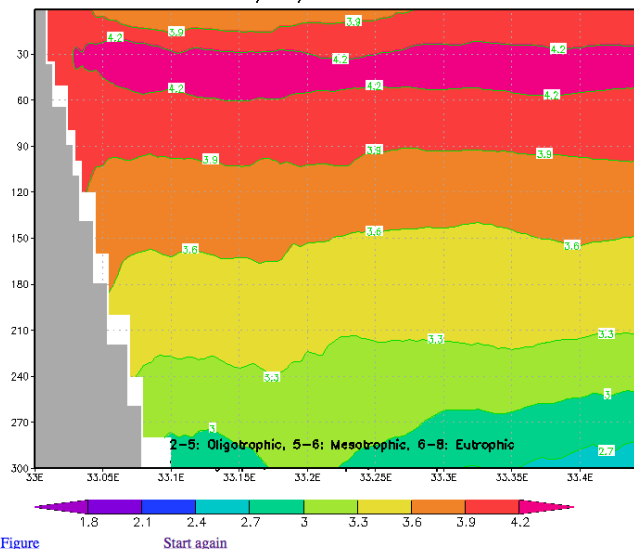


Online Model  
Output



Selected area: **cyprus** Selected date: **01/04/2007**  
Selected variable: **TRIX** Selected depth: **1 300**  
Selected scenario: **real state**  
Selected longitude: **33.000 33.4450** Selected latitude: **34.6**

01/04/2007 :: TRIX



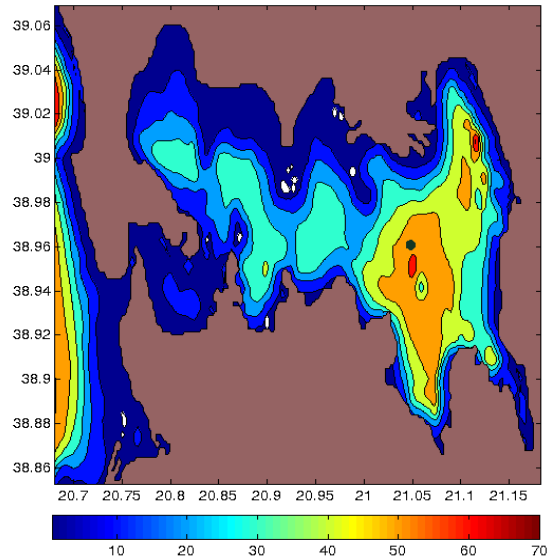
[Download Figure](#)

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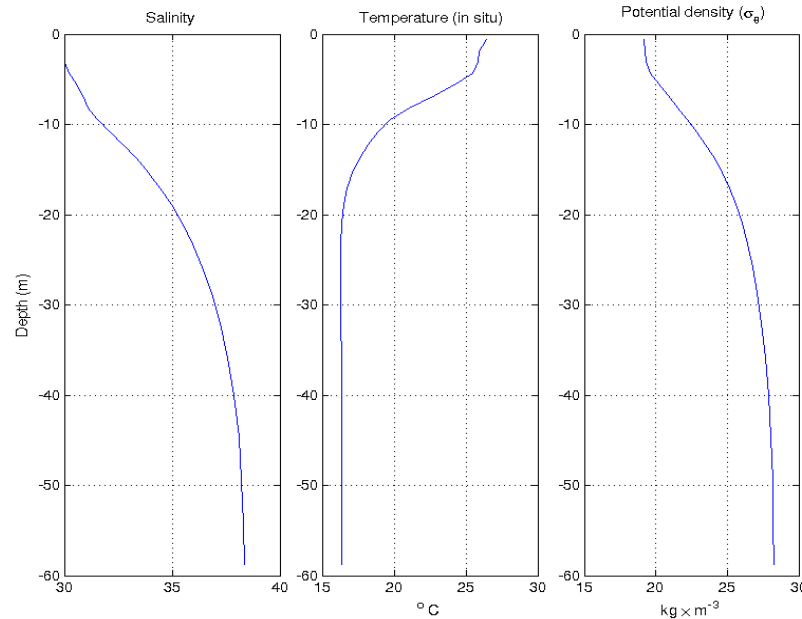
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# Amvrakikos gulf

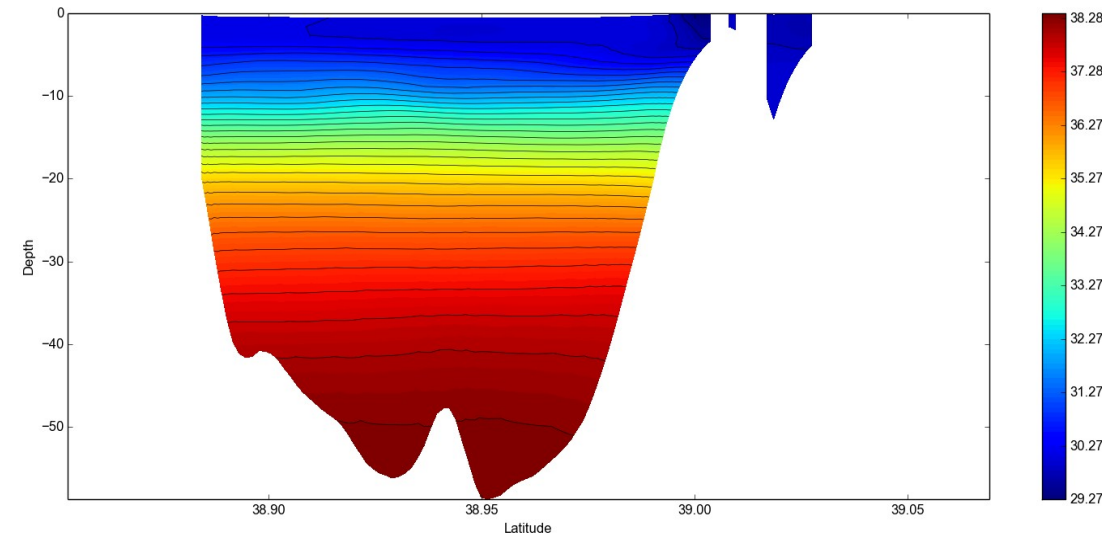
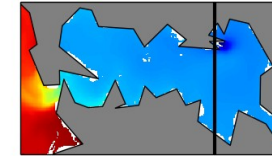


Bathymetry, m



Summer profiles at the deepest part of the gulf

Meridional Section - 23/8/1985



Meridional transect at the exit of Arachthos river

Preliminary results from a high resolution ROMS

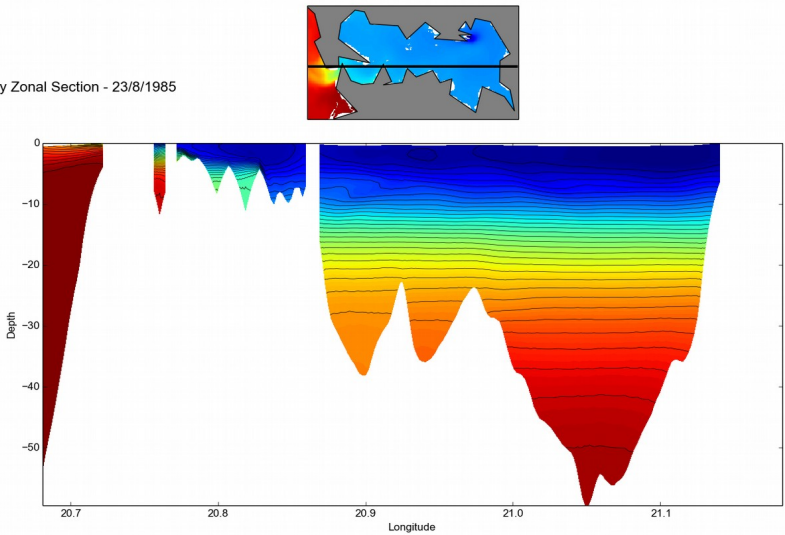
Configuration with

- ECMWF downscaled forcing
- open boundary conditions from MFS
- wet-dry module
- climatological river runoff
- main tides constituents

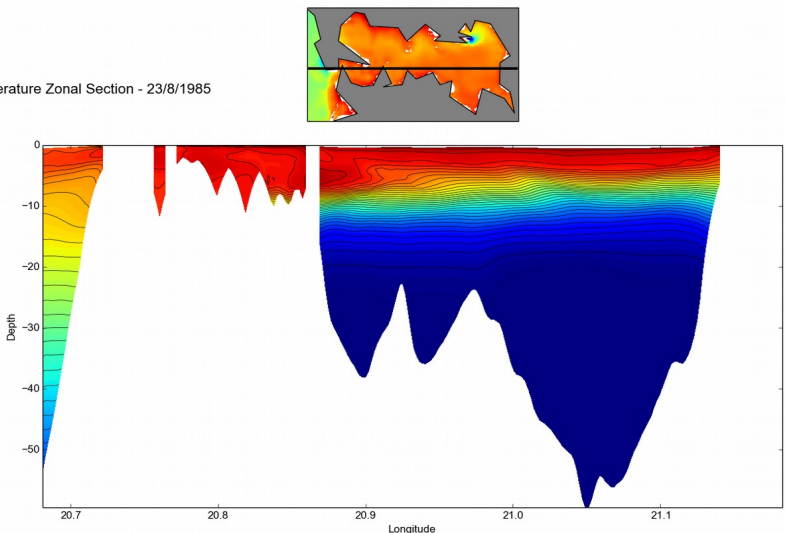


# Zonal transects and surface distributions of temperature and salinity

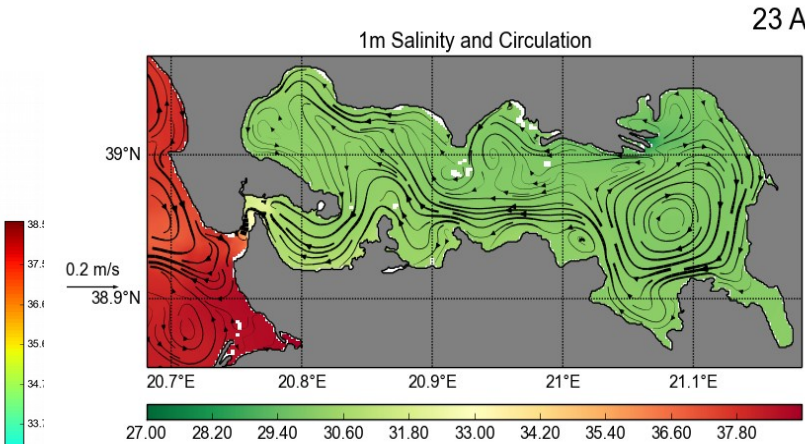
Salinity Zonal Section - 23/8/1985



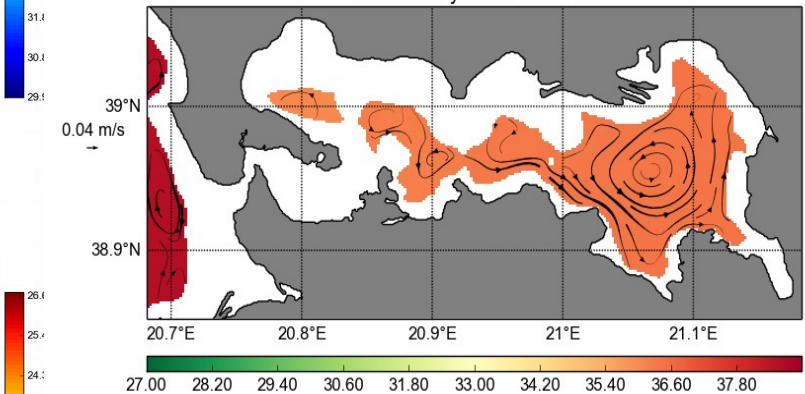
Temperature Zonal Section - 23/8/1985



1m Salinity and Circulation

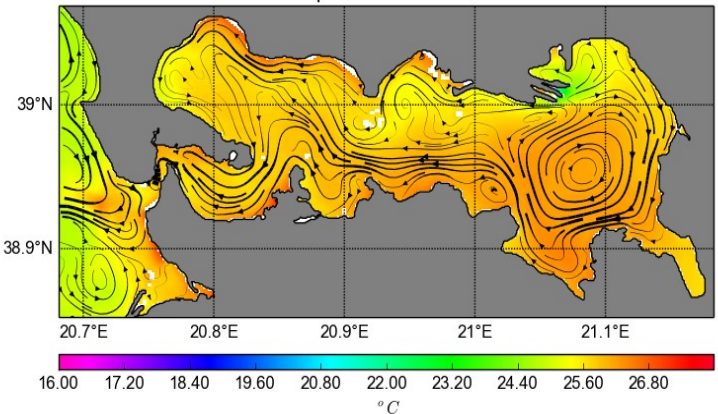


25m Salinity and Circulation

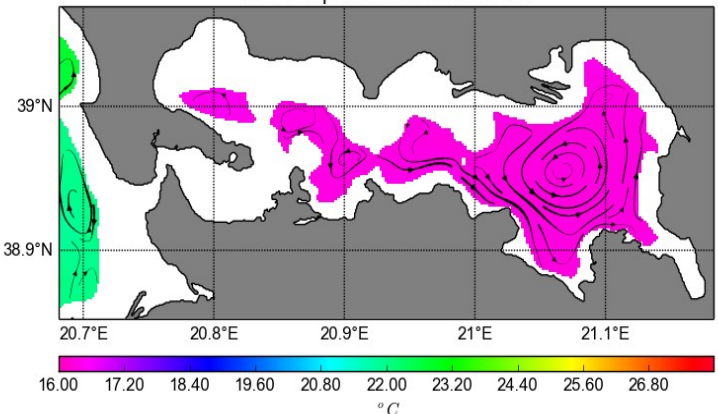


23 August 1985

1m Temperature and Circulation



25m Temperature and Circulation



Circulation at the surface and deep layers