MAMA

Rome meeting, 3-6 June 2003

Workpackage-4: MAMA-Model:

- *Definition of coastal/shelf modelling areas*
- *New model implementations*
- *Exchange visit program*

Definition of coastal/shelf modelling areas

INSTM – A. Harzallah and A.Gharbi (Tunisia):
Model domain for the Sicily Strait re-defined with increased Resolution.

FSR – M. Snoussi and J. Chao (Morocco)
Model domain for the Alboran Sea defined

ISMAR-CNR – G. Umgiesser and I. Scroccaro (Italy):
Model domain for the Nador re-defined for nesting

NCMS – N. Kabbara (Lebanon):
Model domain for the Lebanese coastal area defined

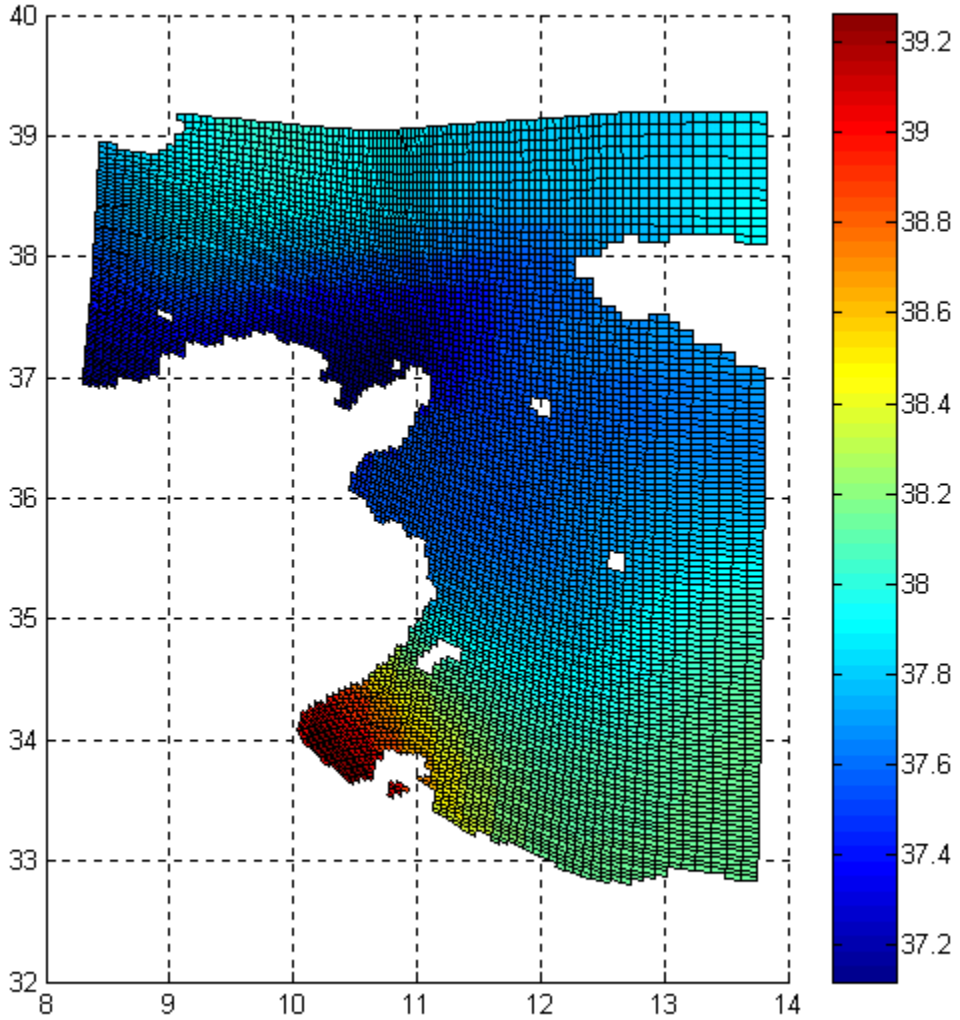
LEM (Algeria):
????????

New Model implementations

INSTM:
Sicily Strait
Development from
An earlier
implementation

Increased resolution
in the Tunisian
Coastal areas.

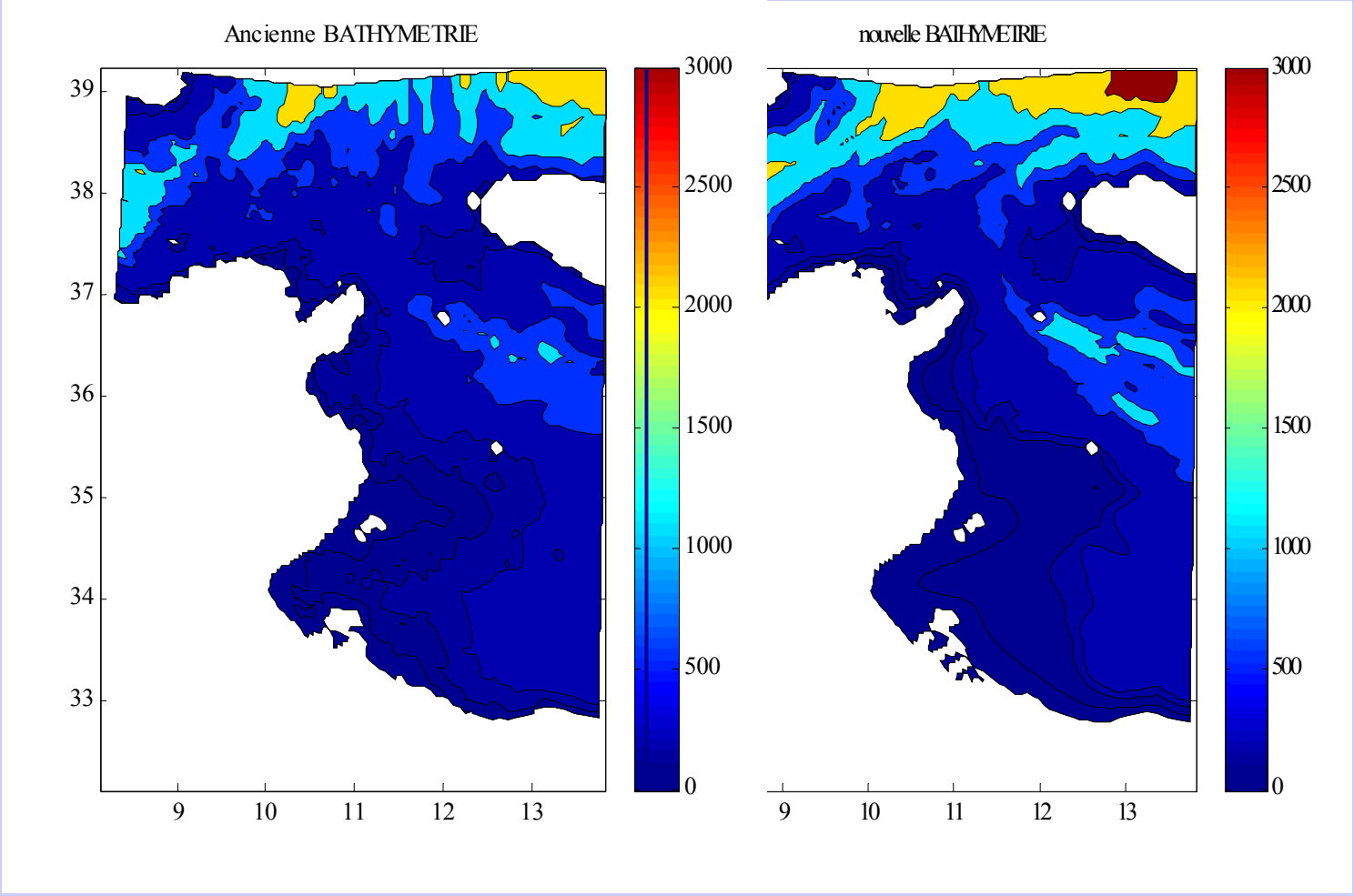
Model Grid and
Surface salinity
Field (MED6)



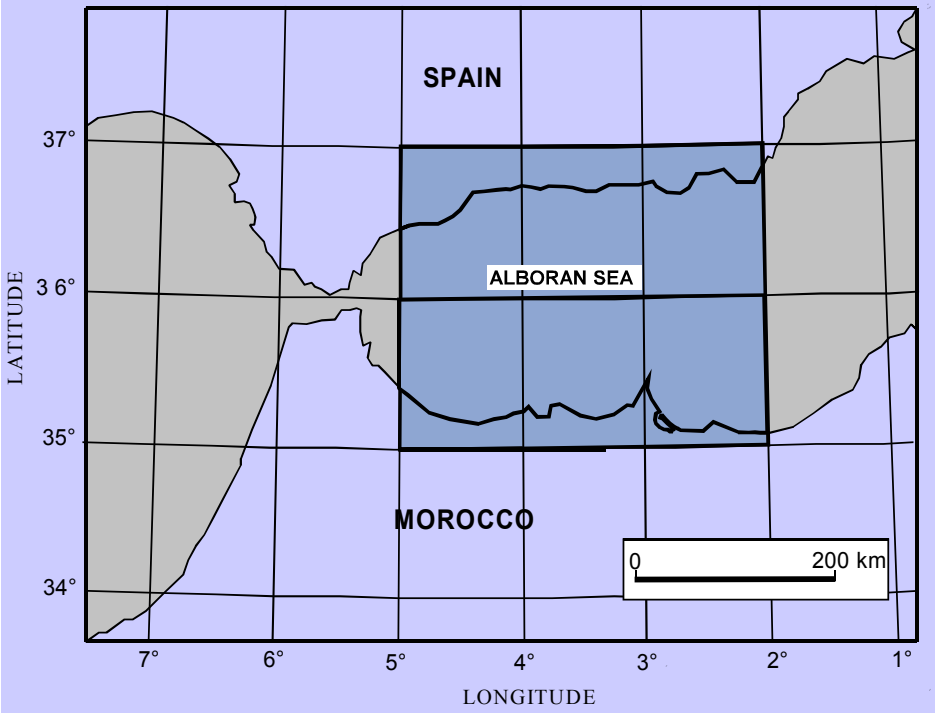
Model bathymetry now obtained from the U.S. Navy DBDB1 data set @ 1min horizontal resolution

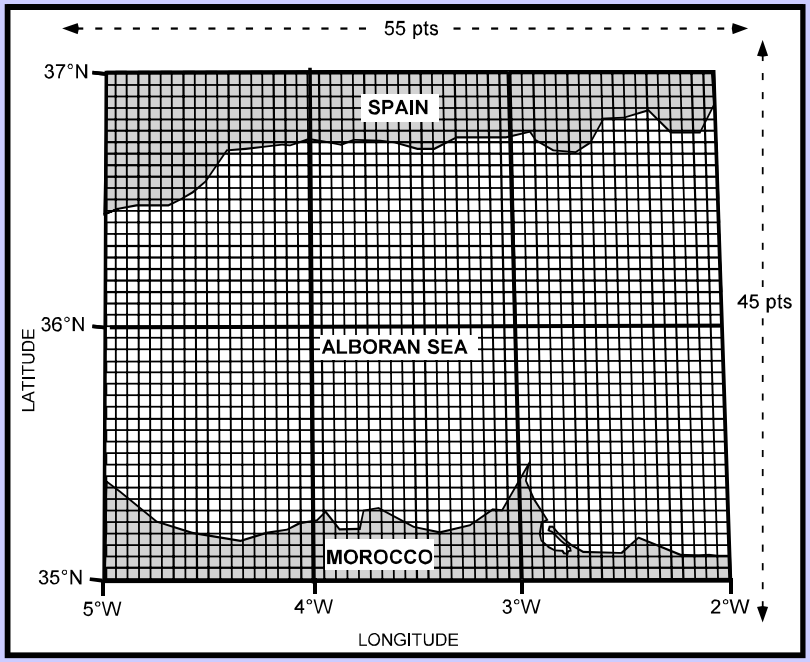
Previous

Current

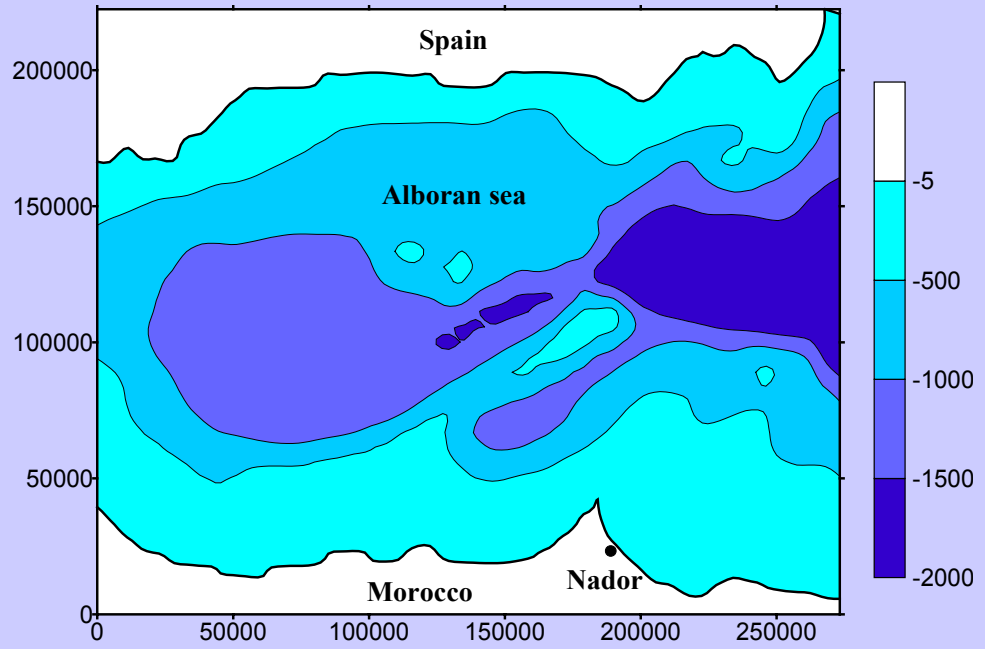


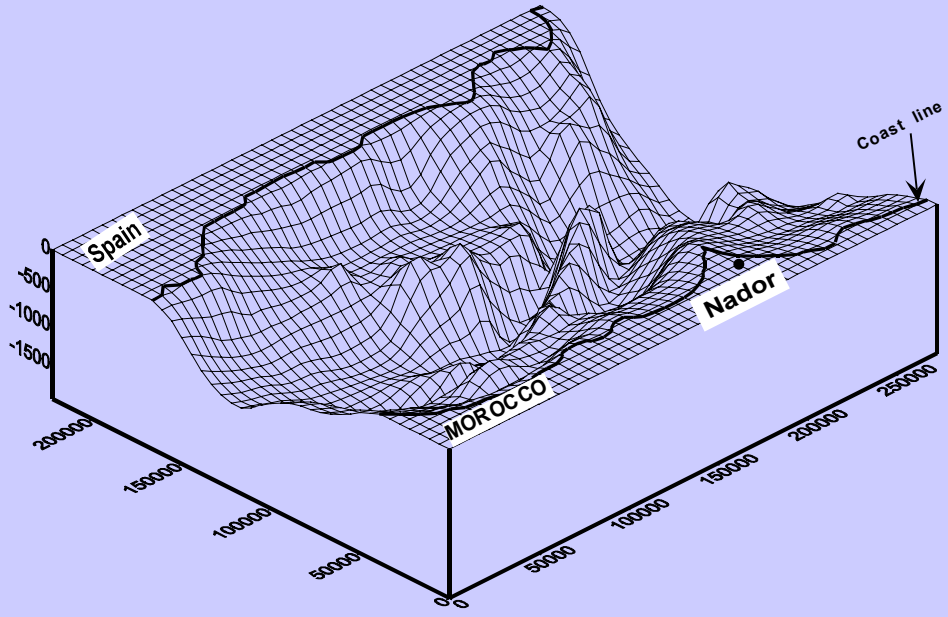
FSR
Alboran Sea Model domain
About 5 km horizontal resolution
15 σ layers vertical resolution system





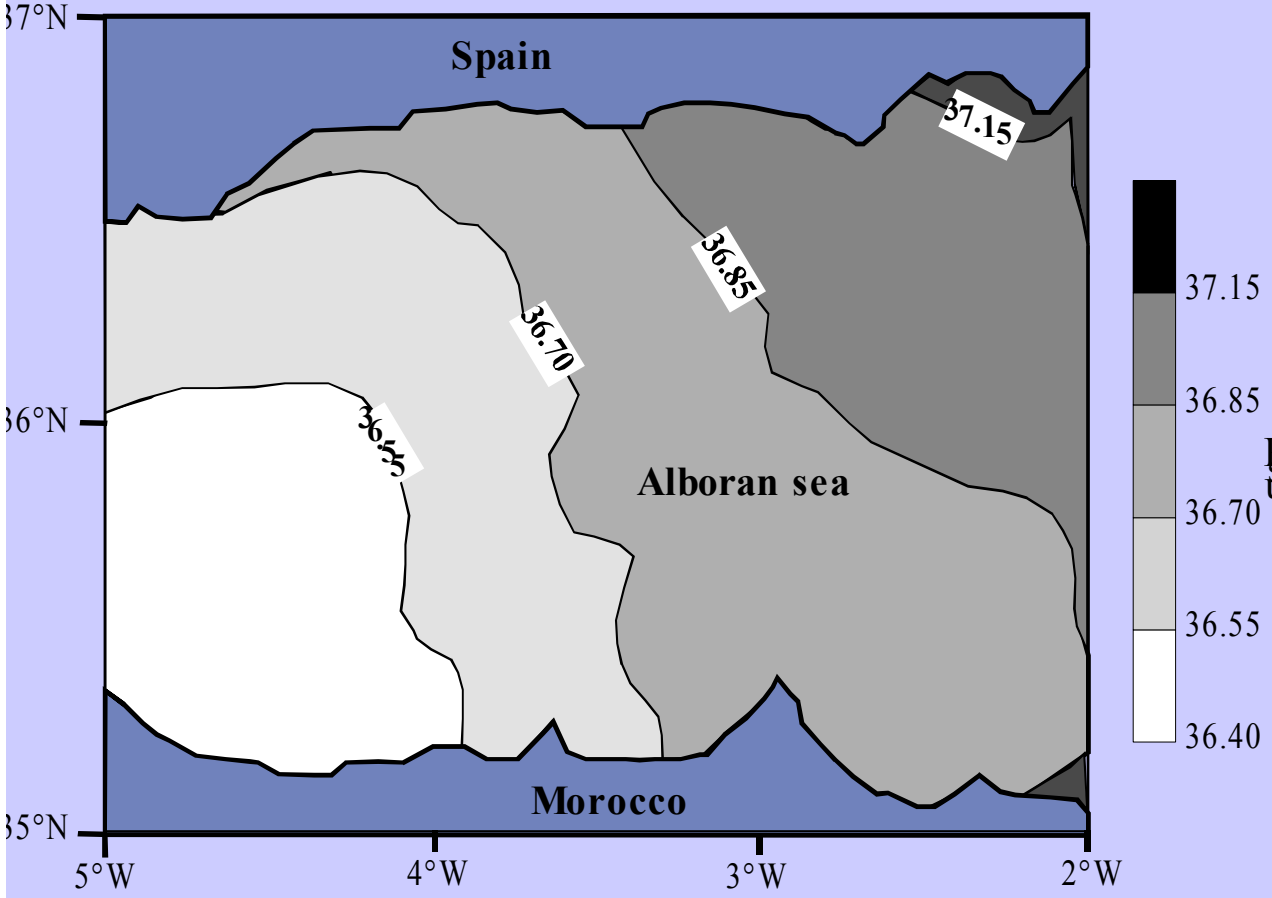
FSR
Alboran Sea
Model. Bathymetry
from DBDB1



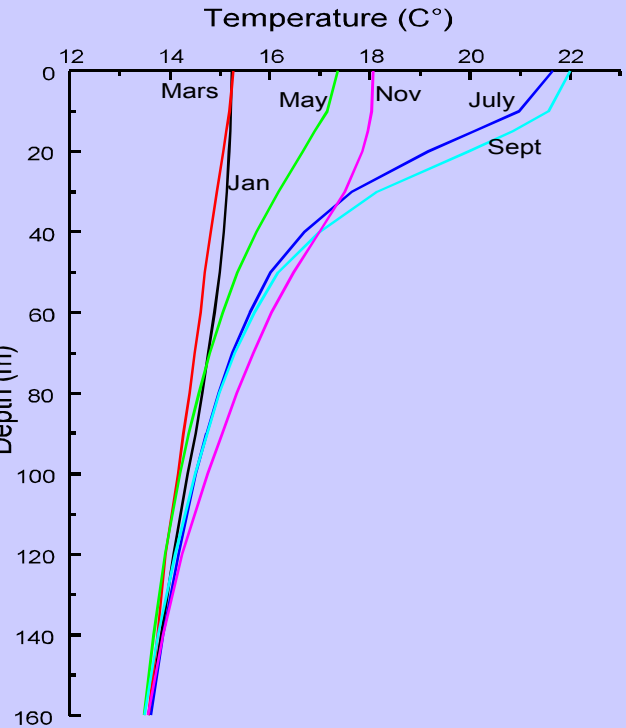


FSR: Initial Conditions and Climatological analysis from The MED6 dataset

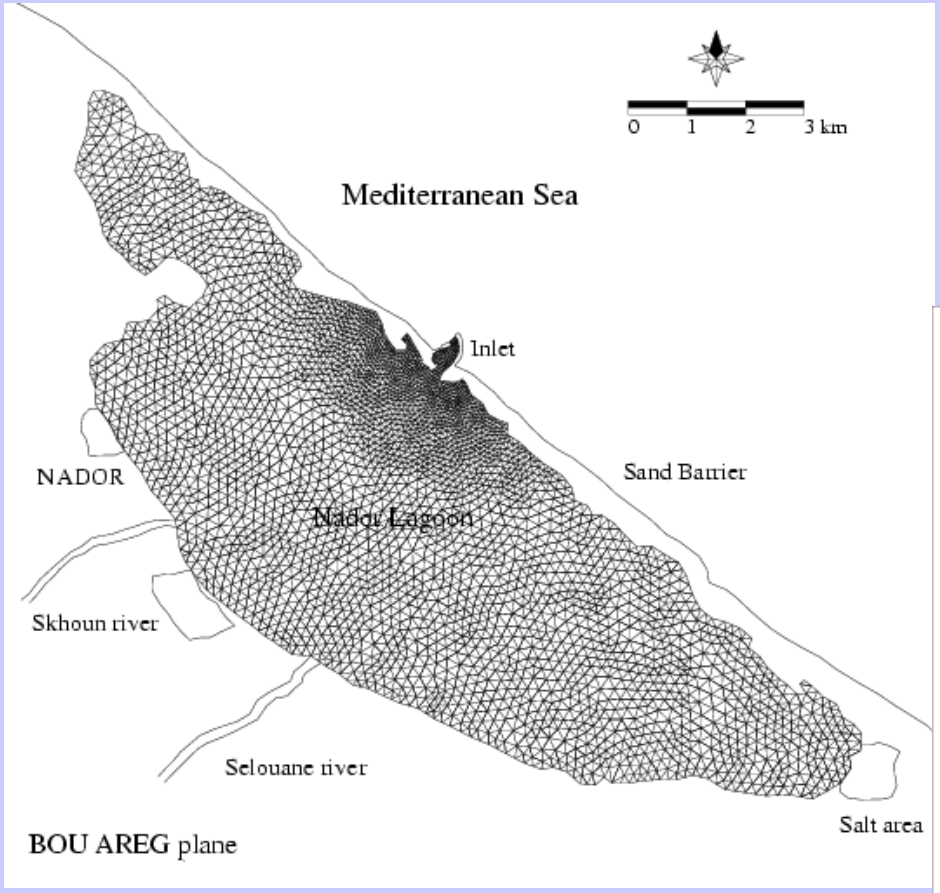
Surface salinity field January



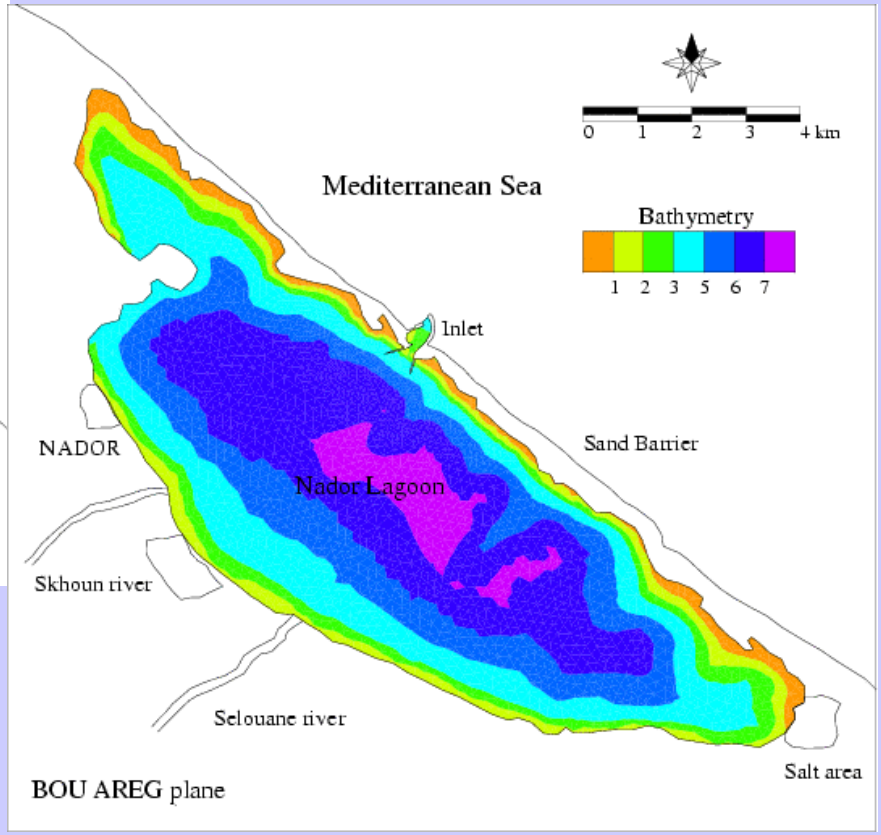
Temperature annual cycle



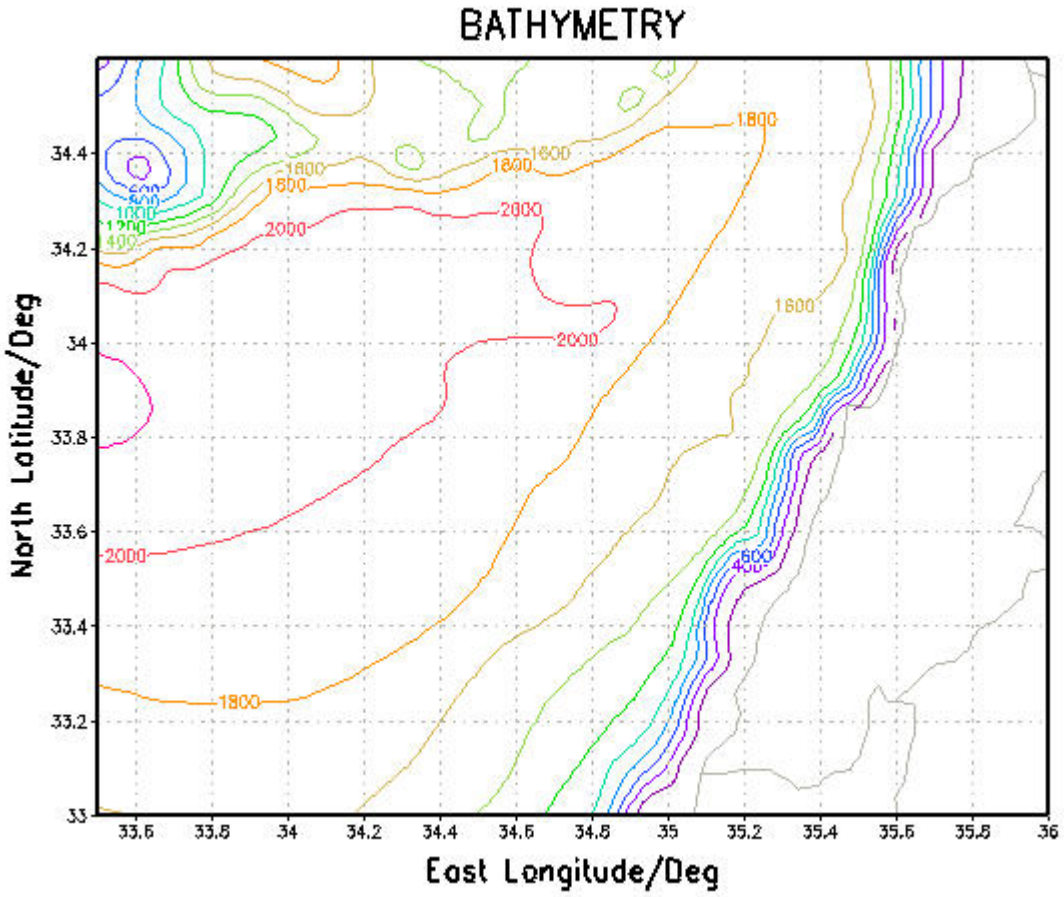
ISMAR-CNR. Nador lagoon: grid and bathymetry



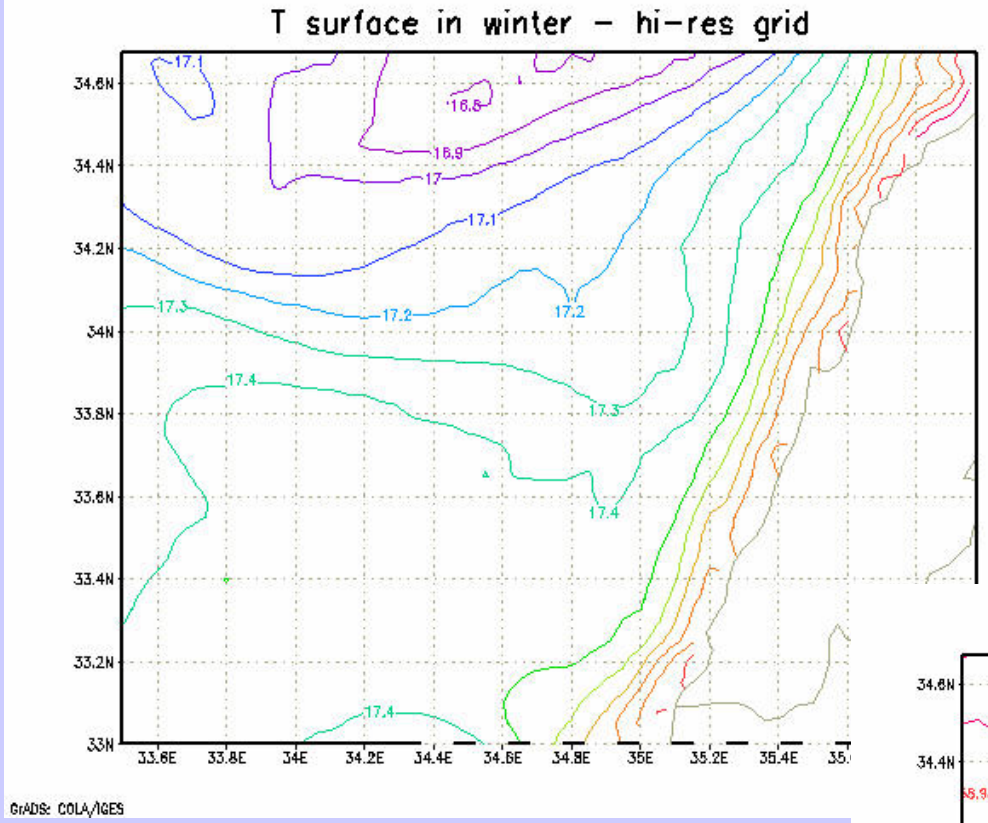
Tool: finite element model (SHYFEM)

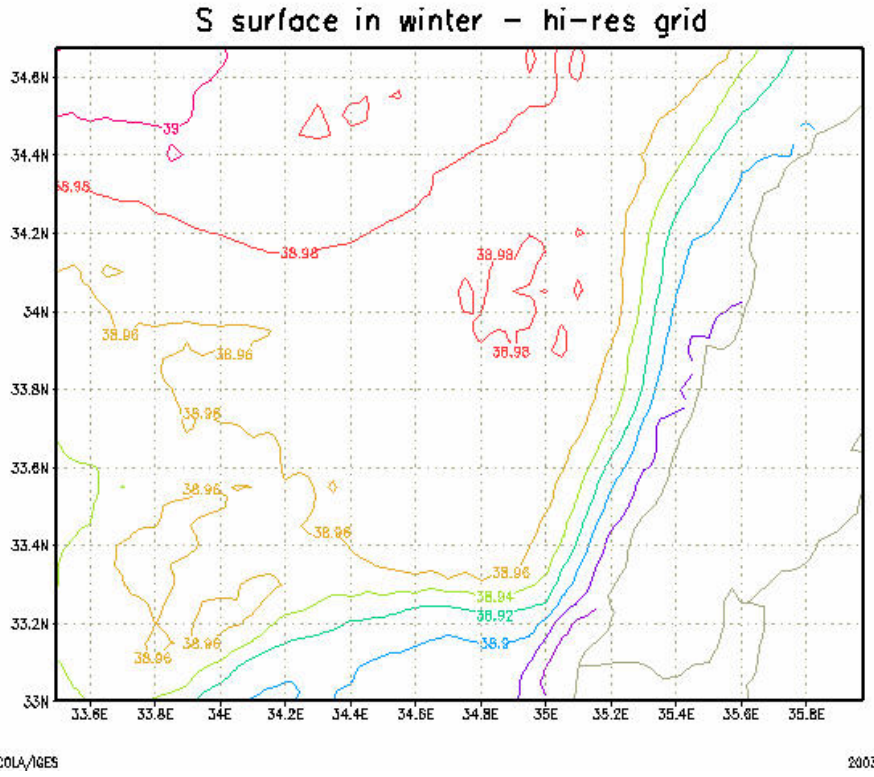


NCMS. Model bathymetry (from DBDB1)
Resolution: 1.5 km

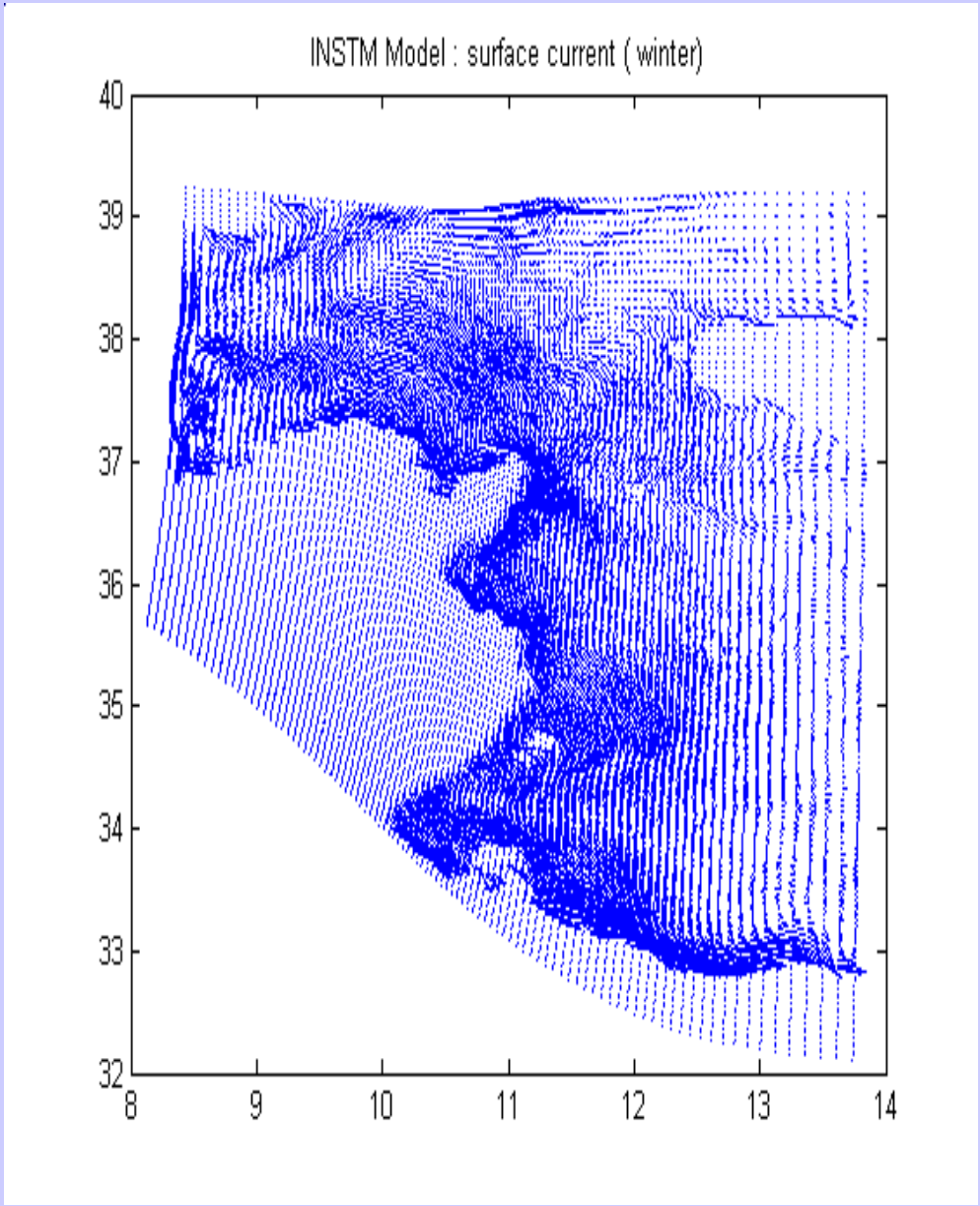


Temperature and Salinity initial fields from the ALERMO Model





RESULTS: INSTM - SICILY CHANNEL MODEL

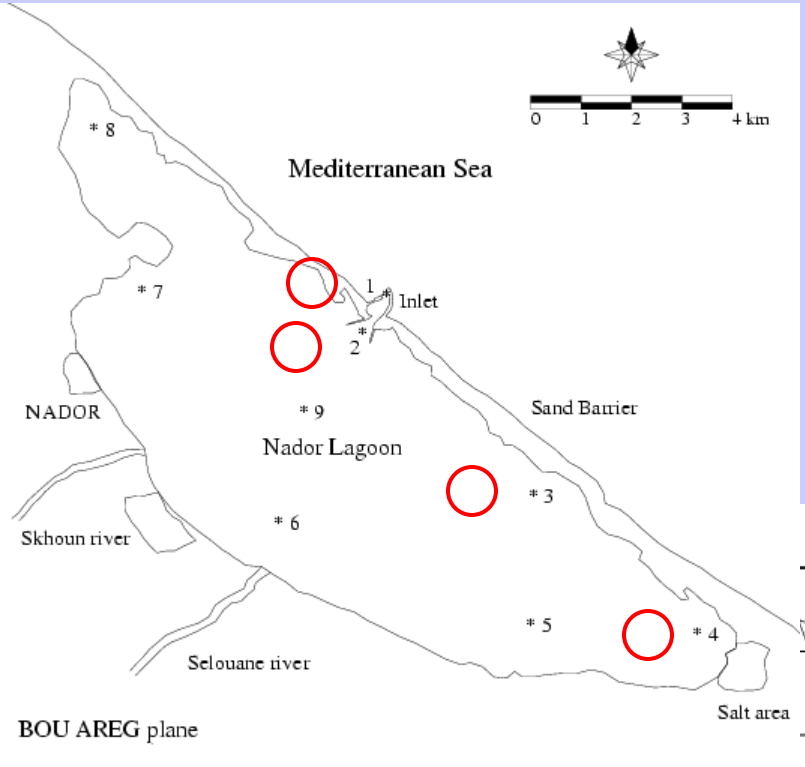


Test run.
1 Month of integration
With MFSPP-OGCM nesting

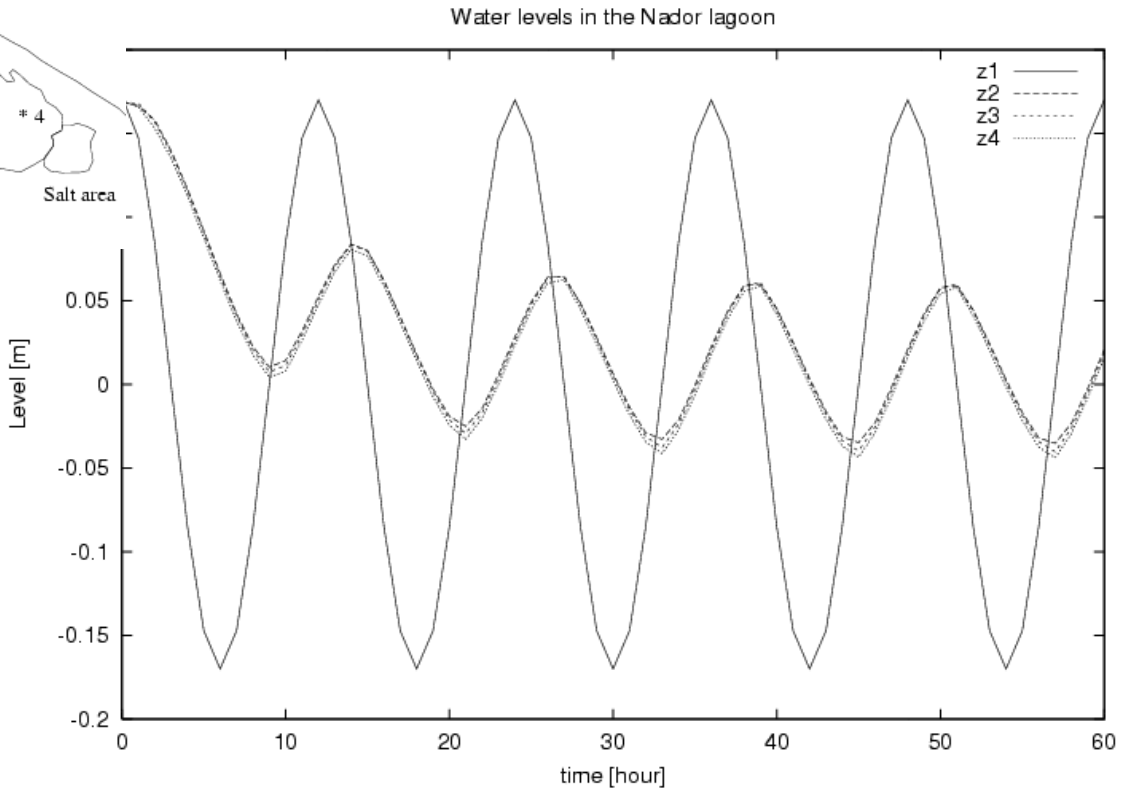
ISMAR-CNR. Nador Lagoon

Tidal oscillation

Results of the FEM model

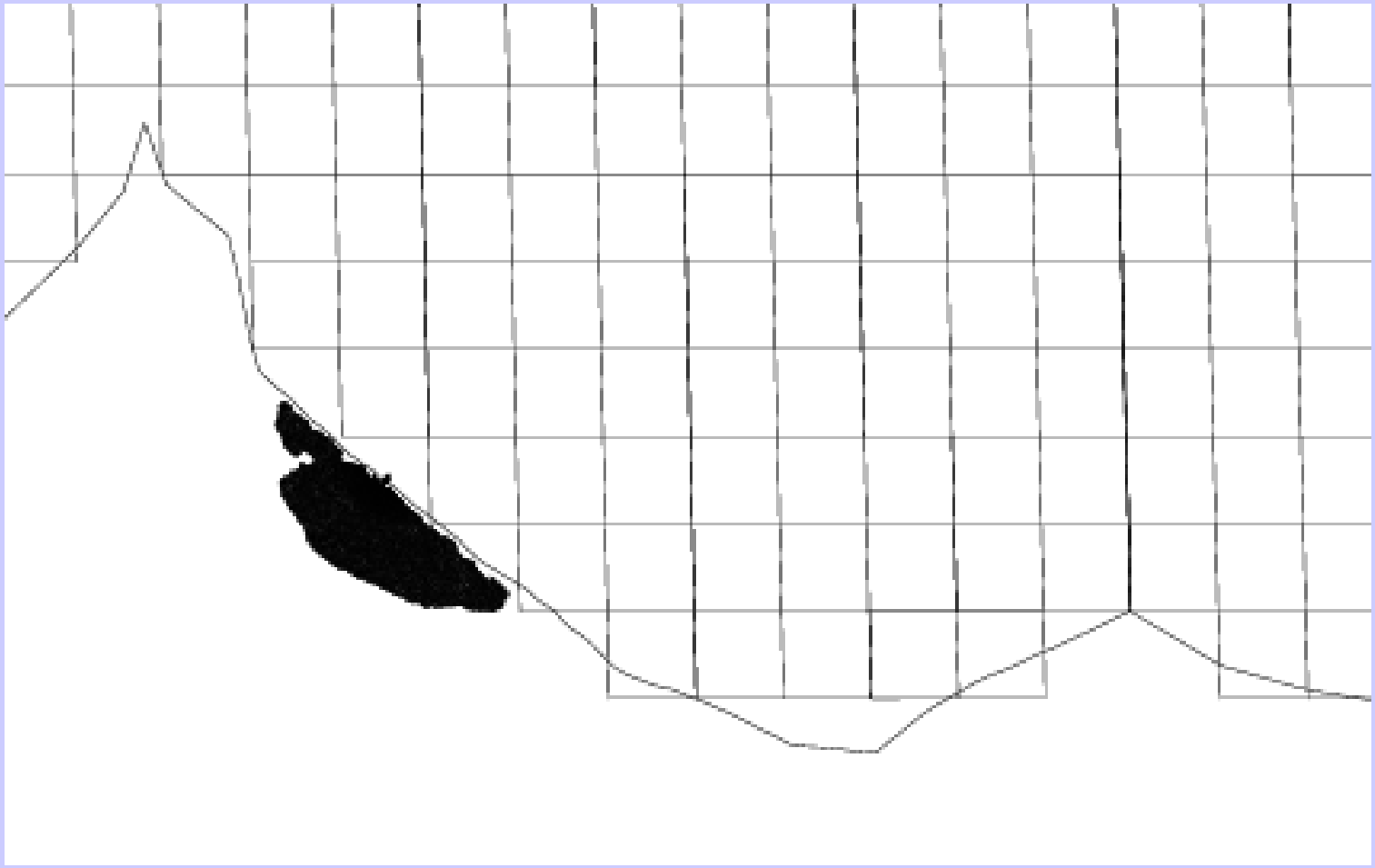


Map of the points where water levels are computed by the FEM model



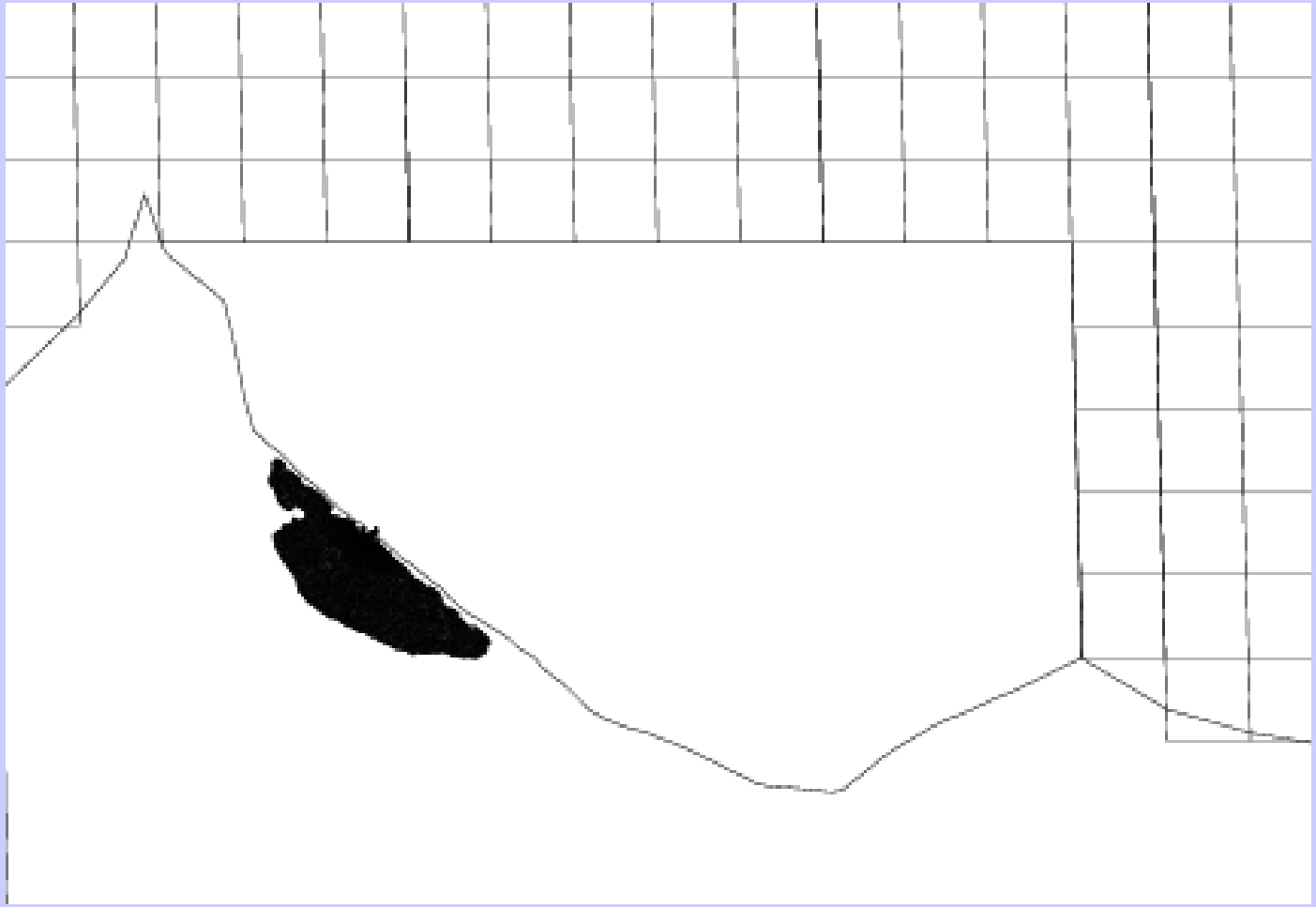
The coupling with the regional model

The finite difference grid of the regional model and the finite element grid of the Nador lagoon



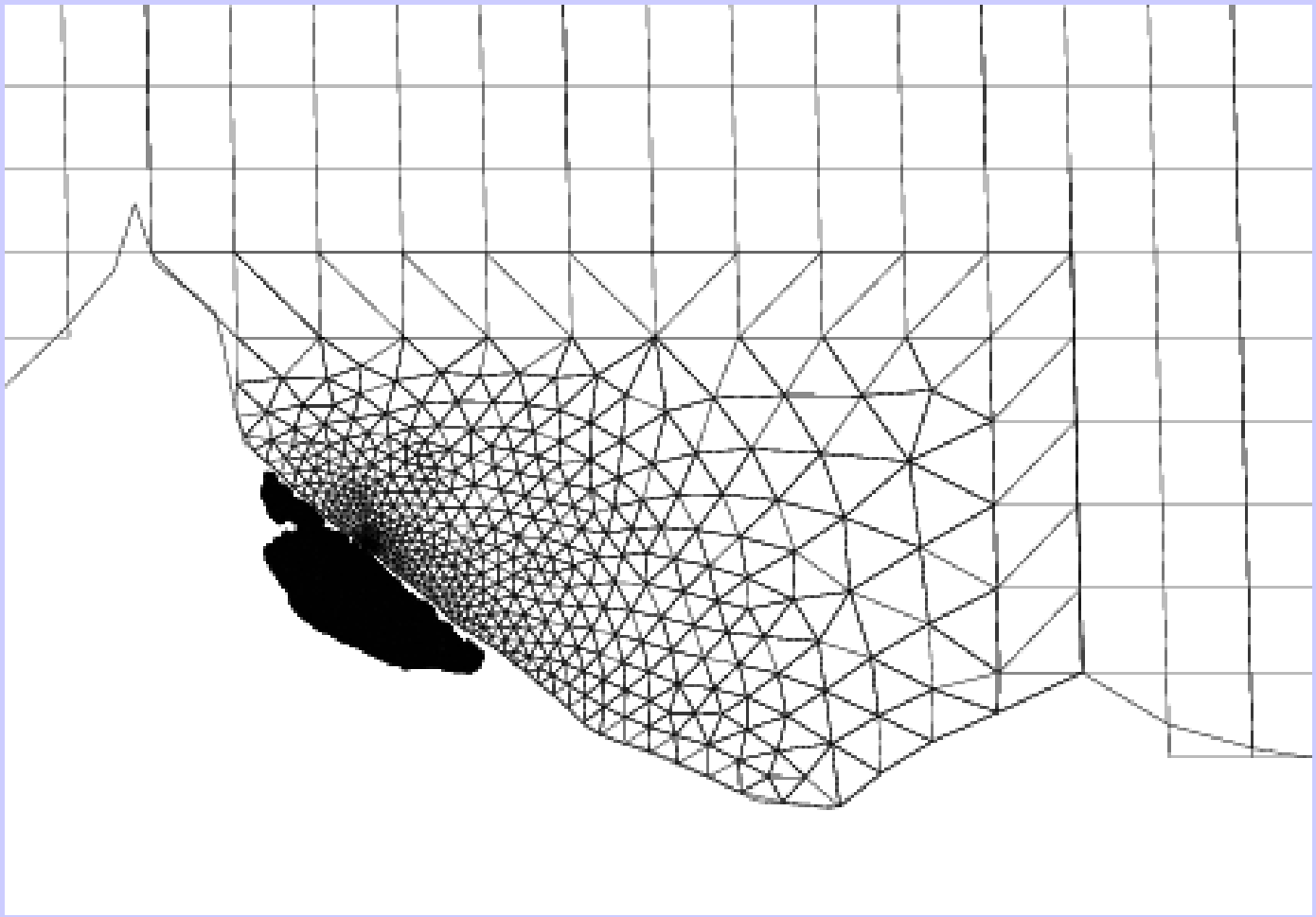
The coupling with the regional model

Area to be overlapped by the finite element grid

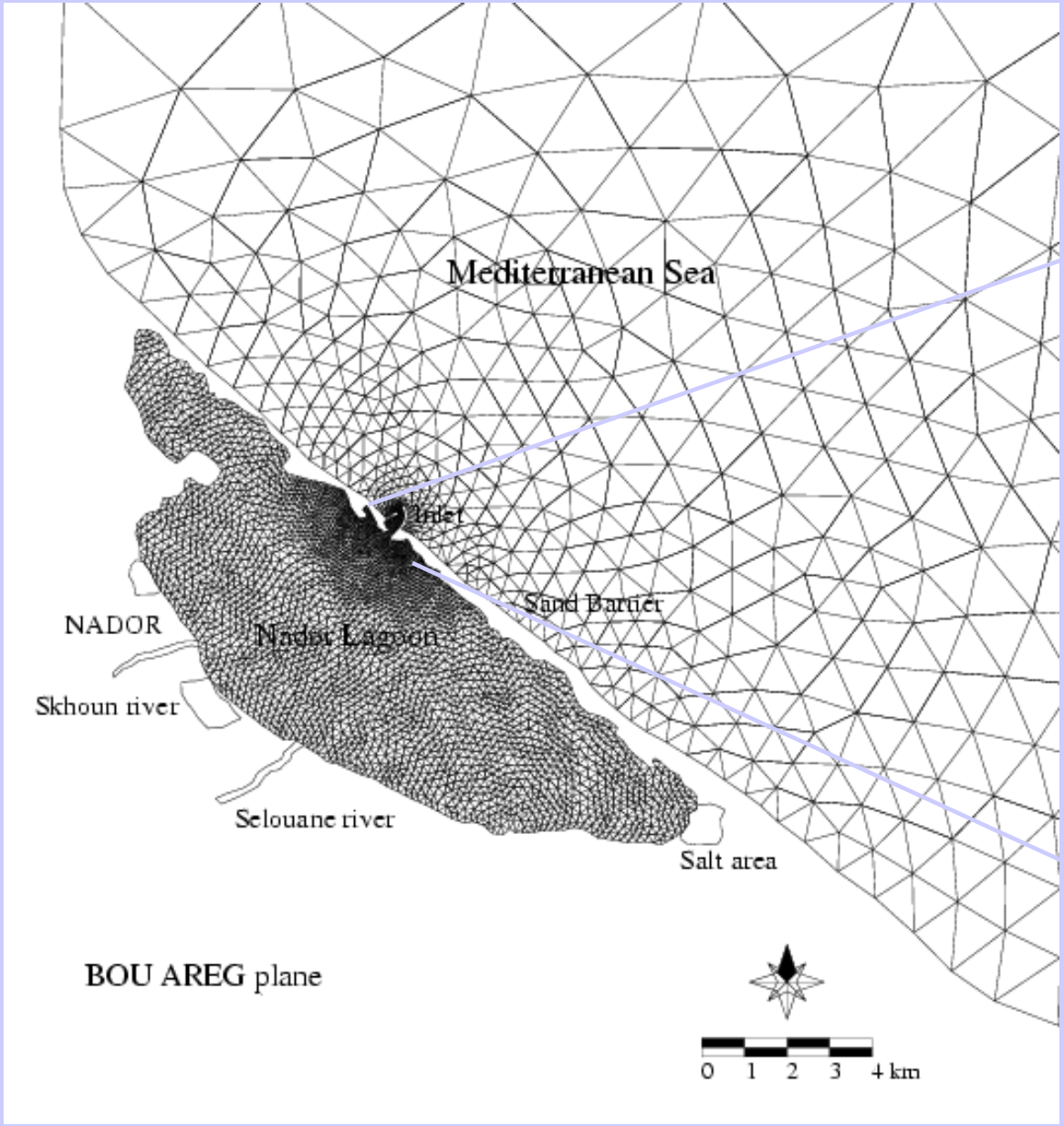


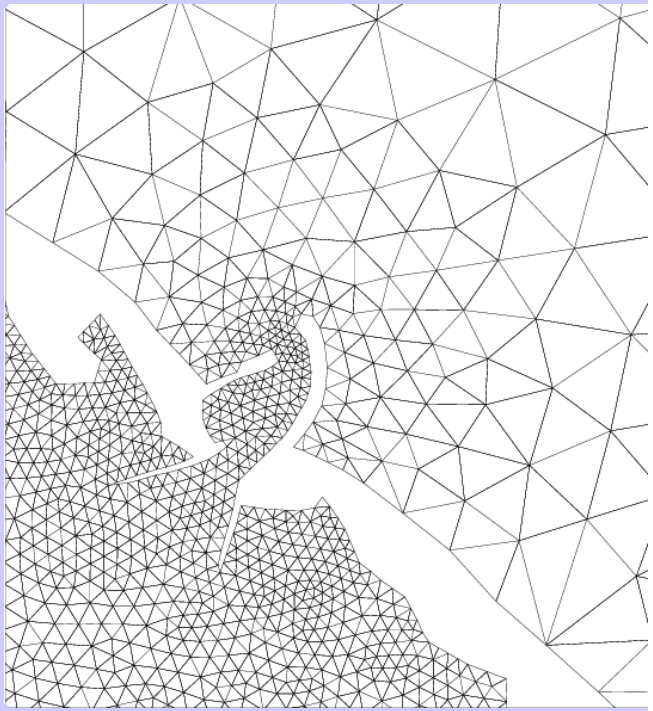
The coupling with the regional model

The new finite element grid coupled
with the finite difference grid

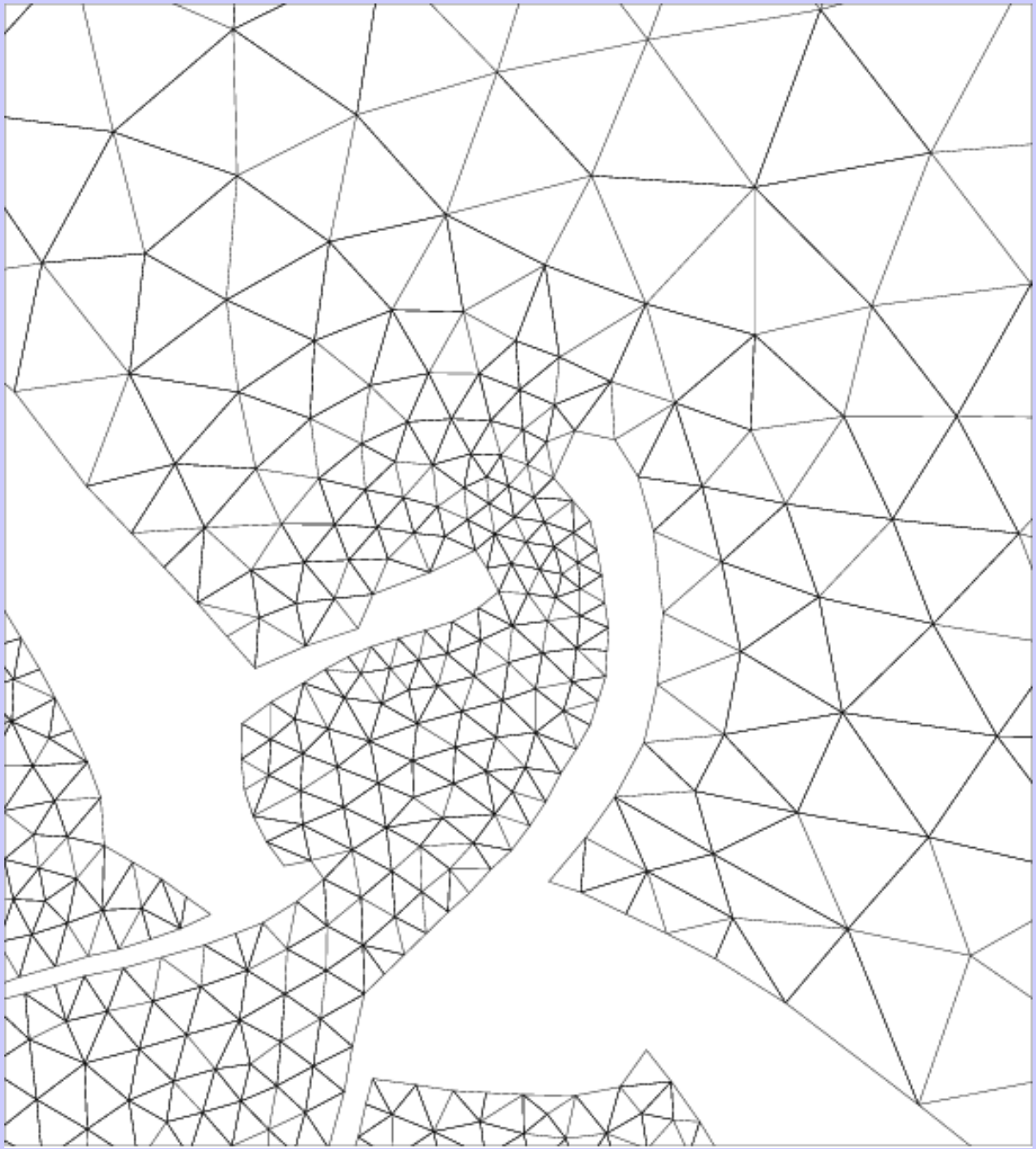


Final grid of the area of interest

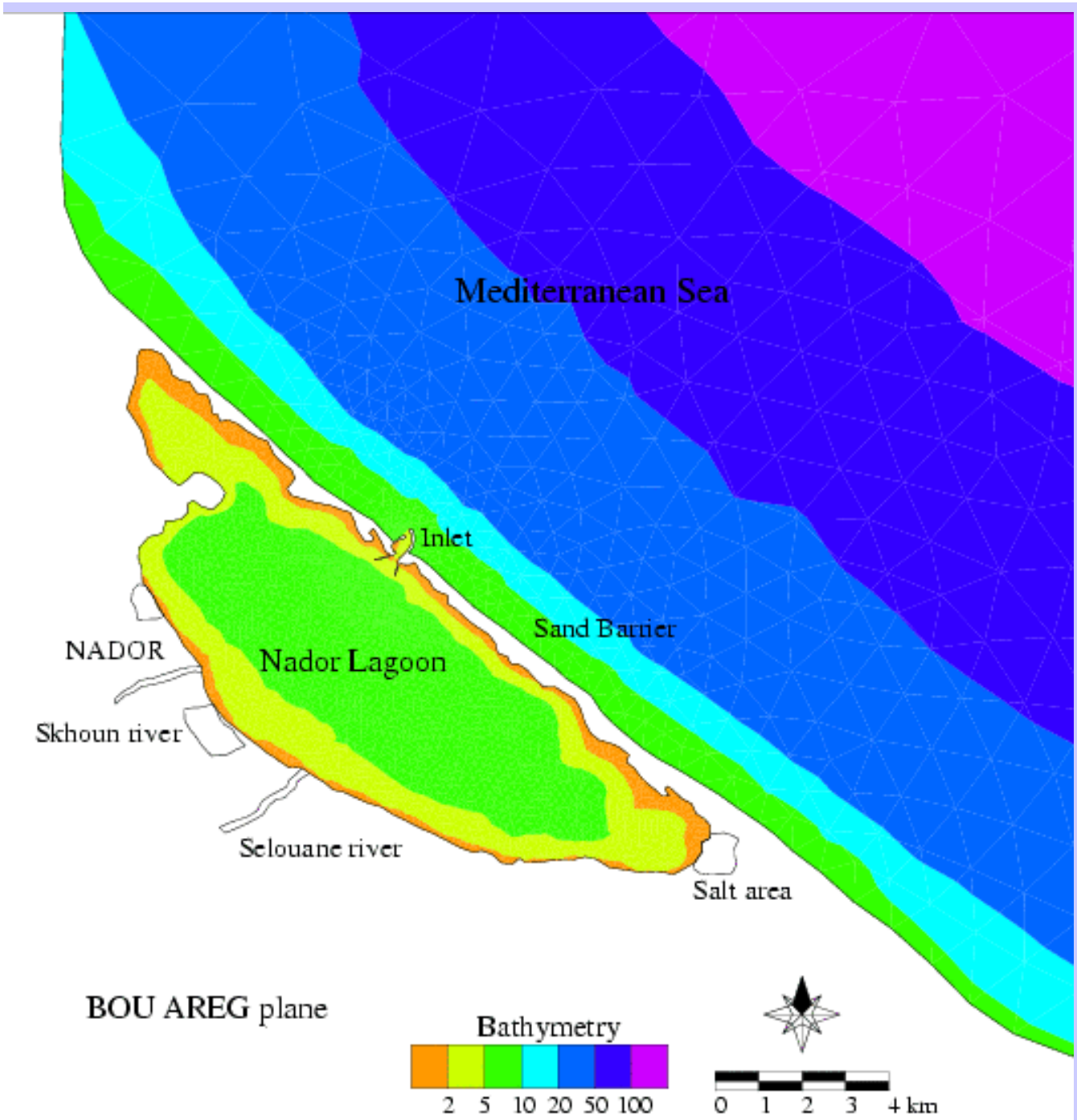




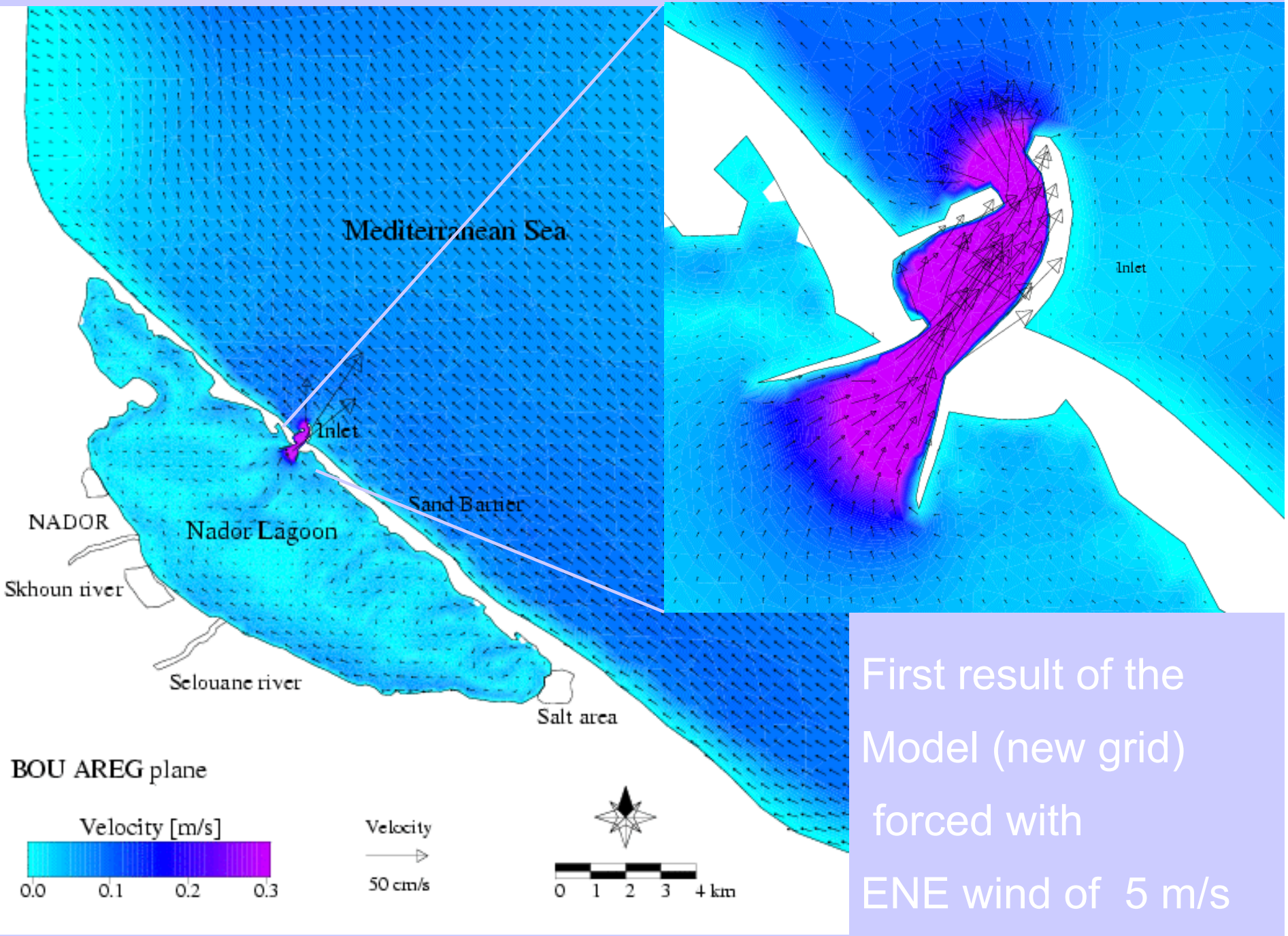
Zoom on the inlet



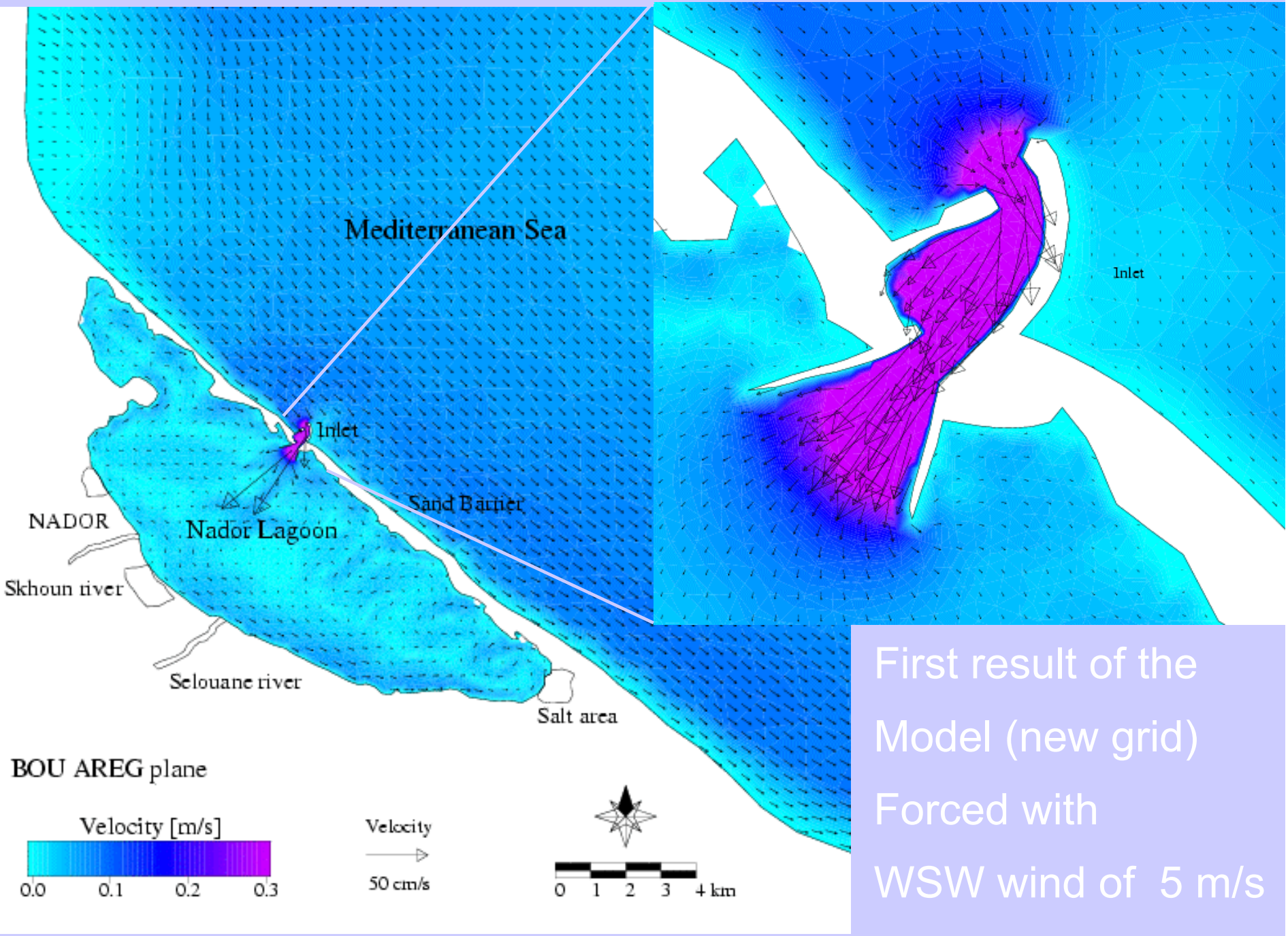
Zoom on
the inlet
of the finite
element grid



Bathymetry of the lagoon and the shelf



First result of the Model (new grid) forced with ENE wind of 5 m/s



First result of the Model (new grid) Forced with WSW wind of 5 m/s

Visit Program

- Nijad Kabbara (NCMS): Visit to IMC (R. Sorgente) just accomplished
- Ayda Gharbi (INSTM): Visit at UNIBO (M. Zavatarelli) start after the end of this meeting
- Jamal Chao (FSR) Visit at UNIBO (M. Zavatarelli) start in July