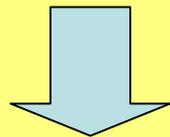


- 1) Many topics associated to the general term « coastal zone » (i.e. beach erosion, ICZM, ecosystems...) are not really treated within HYMEX but in other projects (MERMEX, ...).  
The main focus here is on « dynamics ».

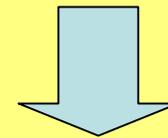
2) Submarine groundwater discharges (SGD) on the coastal zone are still unknown in terms of flux, processes and influence (biogeochemistry, ecosystem).

*According Unesco (2004), the karstic areas of the Mediterranean Sea could contribute to 75 % to the total freshwater runoff, mostly through SGD.*

SGD could influence the global water budget of the Med sea as well as biogeochemical cycles, but probably have a low influence on coastal zone dynamics.



Treated in  
dedicated  
project



Treated together with  
« coastal aquifers » of PS1.2  
*hydrological continental cycle*

3) Representatives of the HCMR (Greece) are interested by all the topics discussed during the roundtable and are « ready » to:

- implement the same approach on their coastal zones
- complete or implement their present observation system (11 Poseidon buoys, ...)
- share strategy and methodology to be develop for HYMEX

**Hellenic peninsula :**

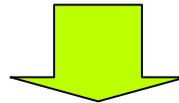
*coastline appr. 18 000 km*

**BUT at the same time than the  
SOP-EOP,  
not in 2016 !!**

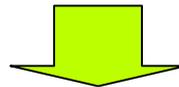


#### 4) Various topics discussed :

- Floods,
- Dense water formation on shelves and associated shelf-slope exchange
- Mesoscale/submesoscale,
- Need of coupled atmosphere-ocean model ? Coupled wave-current model ?



**Need of *in situ* data**  
**(long term as well as event scale)**  
**to improve already existing models**



**Need of new tools:**  
**Gliders, HF radars, altimetry...**

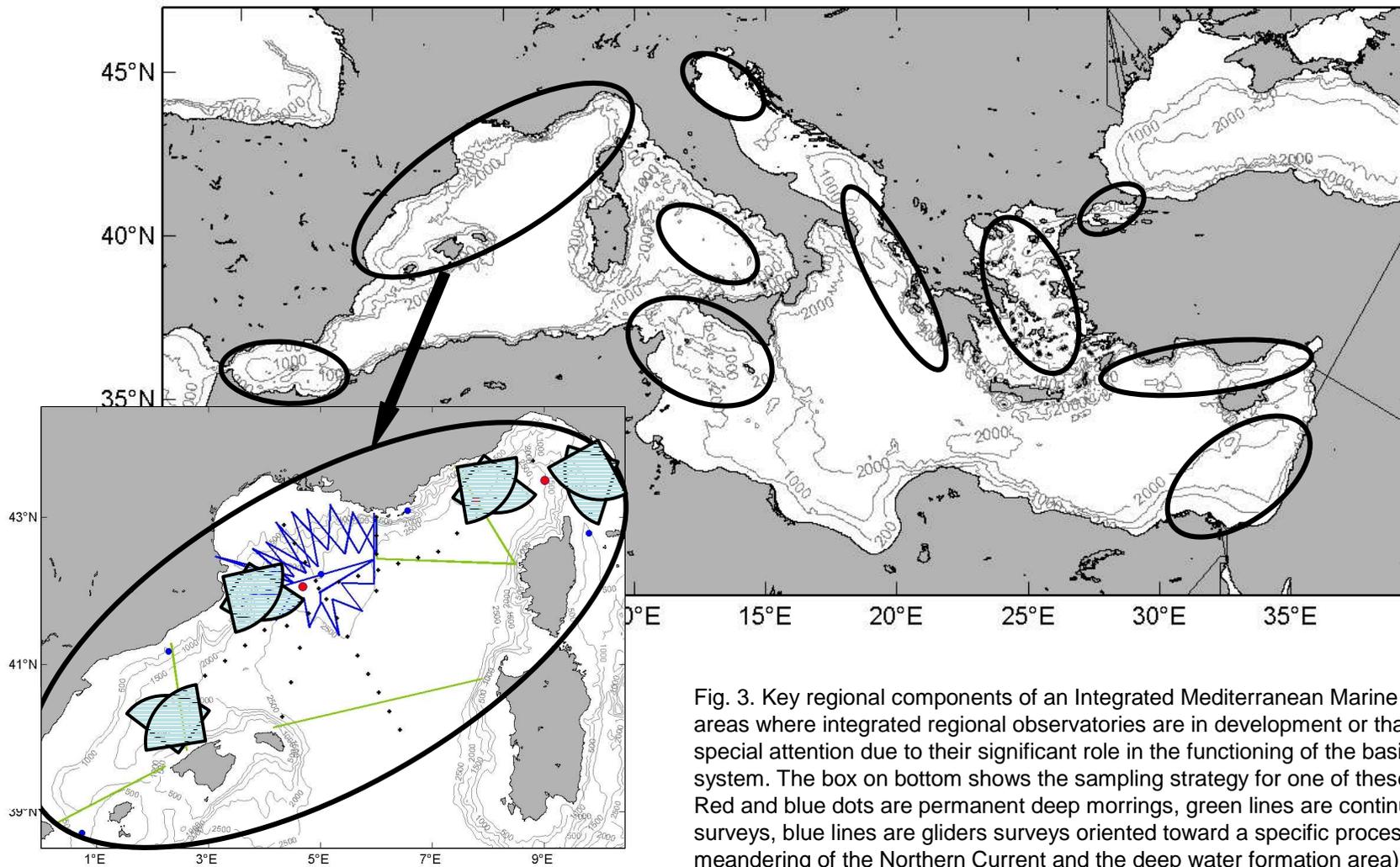
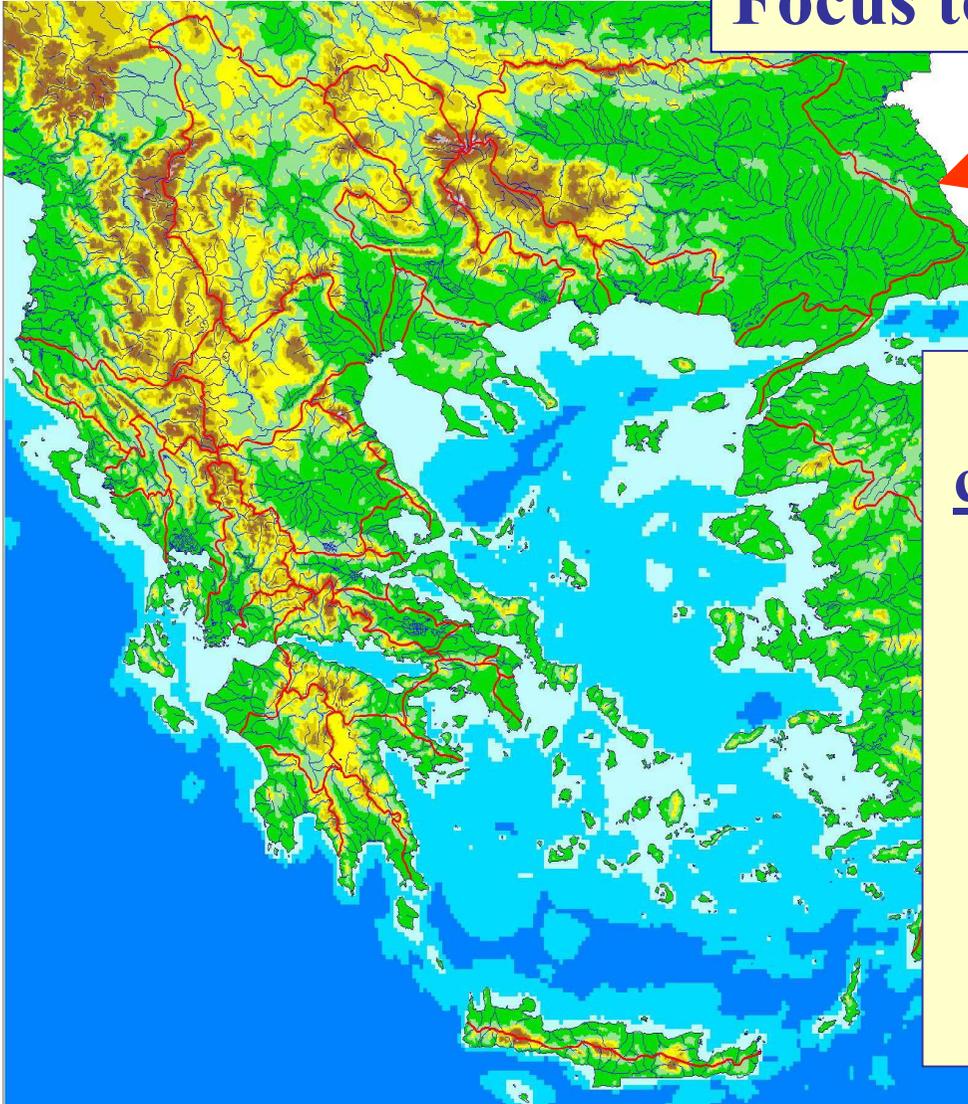


Fig. 3. Key regional components of an Integrated Mediterranean Marine Observatory: areas where integrated regional observatories are in development or that require special attention due to their significant role in the functioning of the basin-wide marine system. The box on bottom shows the sampling strategy for one of these components : Red and blue dots are permanent deep moorings, green lines are continuous gliders surveys, blue lines are gliders surveys oriented toward a specific process (here the meandering of the Northern Current and the deep water formation area), blue fan shaped symbols are HF radars stations and black dotted lines are seasonal R/V hydrological surveys. Note that coastal stations (see <http://www.ciesm.org/marine/programs/index.htm>) are not shown here.

## Focus to the Hellenic peninsula



*Drainage systems of the Hellenic peninsula*

### The coastal zone compartments of the Hellenic peninsula

*River basin-coastal systems*

*Semi-enclosed marine areas*

*Marginal shelf systems*

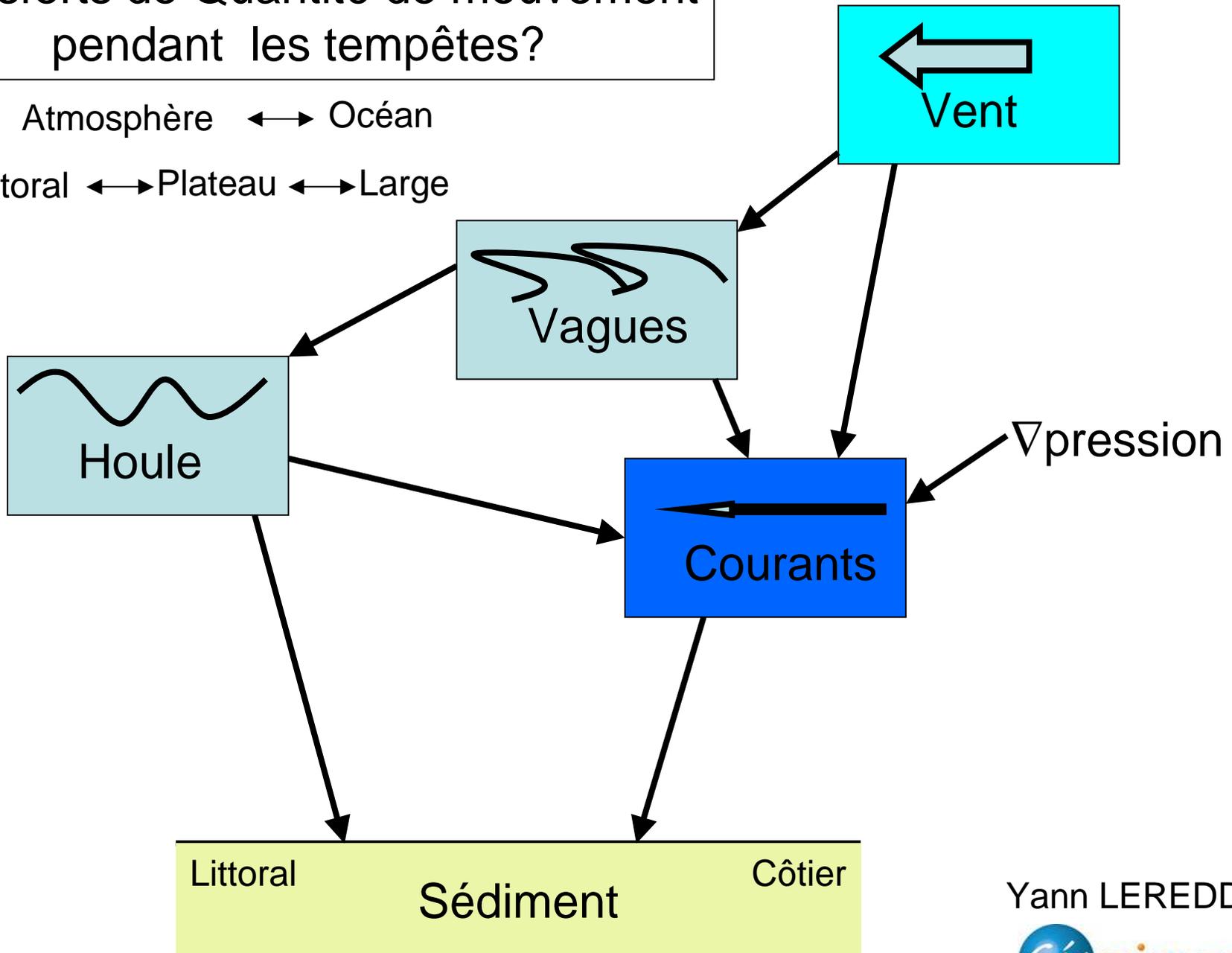
*Insular complexes*

Greece: -coastline length approx. 18.000 km.

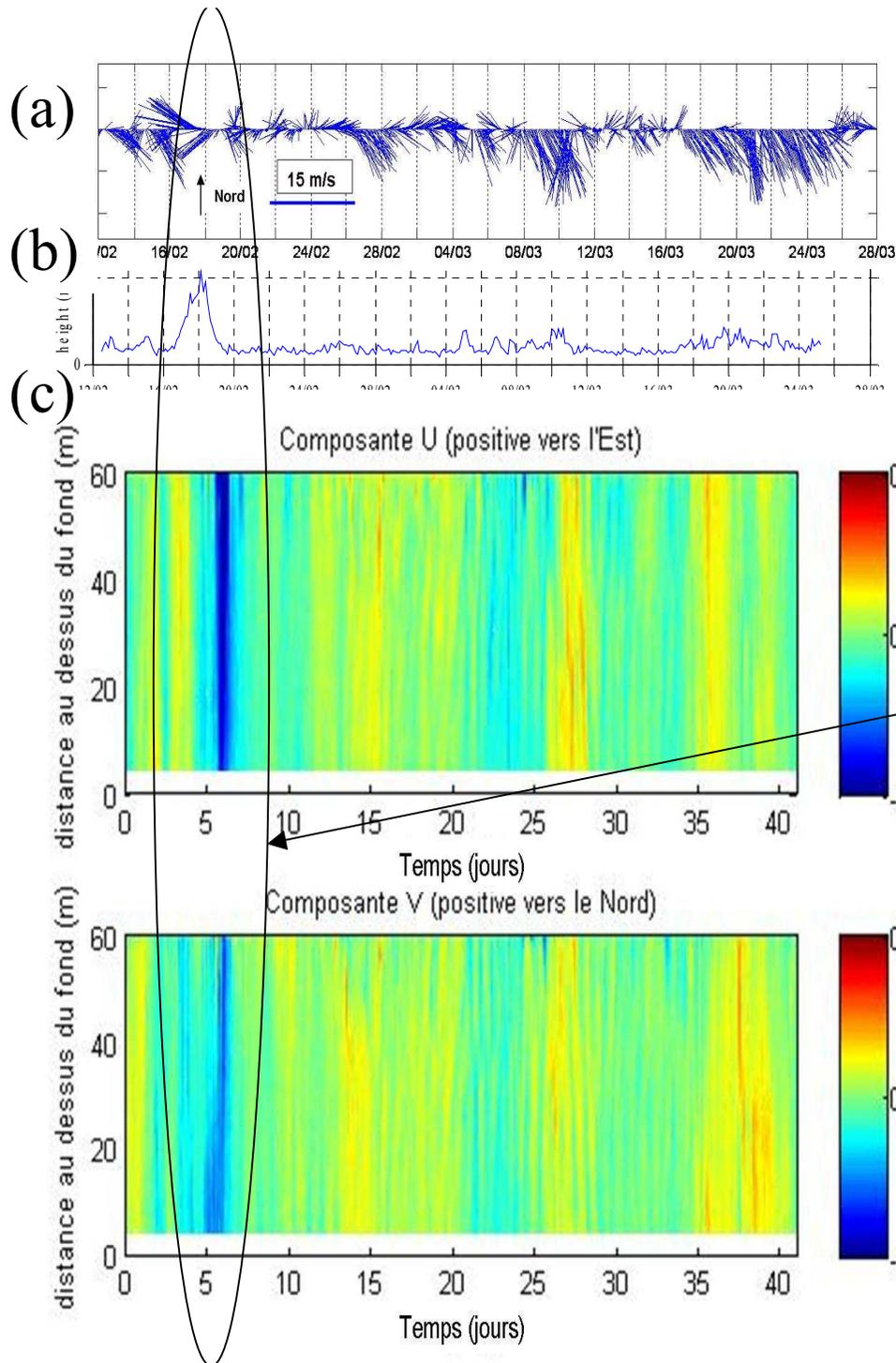
-land area approx. 130.000 km<sup>2</sup>

# Transferts de Quantité de mouvement pendant les tempêtes?

Atmosphère ↔ Océan  
Littoral ↔ Plateau ↔ Large



Yann LEREDDE



*Série temporelle de données mesurées entre le 12 février et le 25 mars 2007.*

(a) *Vents à la station météorologique de Sète,*

(b) *Hauteur significative de la houle mesurée à la station BESSète,*

(c) *Courants mesurés à la station BESSète.*

Mesures ADCP sur le plateau (sous 70 m)

Tempête du 18 février 2007

Vents de Sud-Est modérés  
(localement 10 à 15 m/s)

Fortes Houles  $H_s > 5$  m

Très forts courants sur le plateau

$\|U\| > 0,8$  m/s

Pourquoi et comment ?

Impacts sur les transports pendant les tempêtes