

Long Observation Period « LOP »

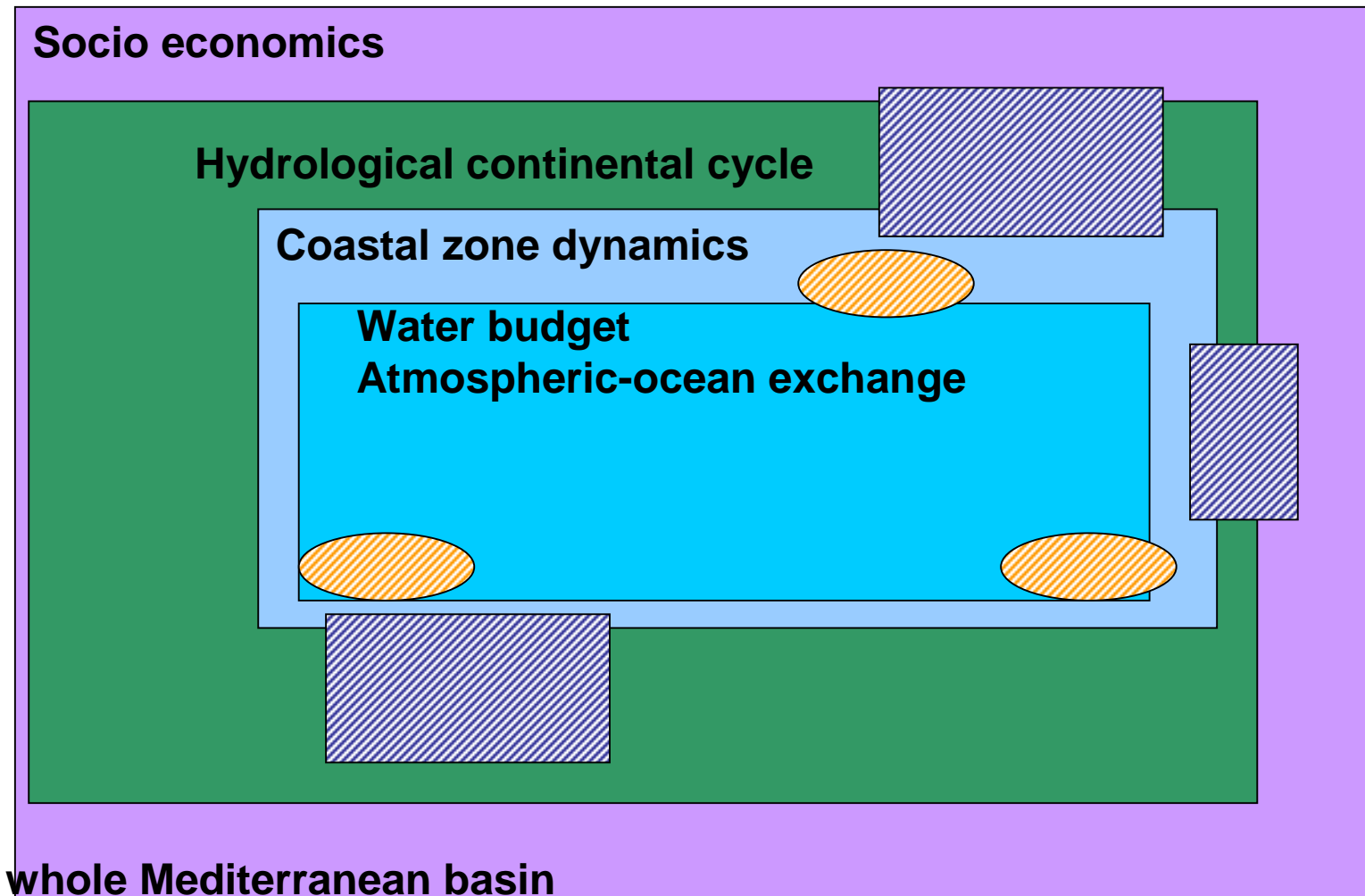
Round Table PS2.3

Tuesday 3rd June 2008

Wednesday 4th June 2008

J. Font (ICM Spain), P. Lionello (Salento Univ. Italy), N.
Viltard (CETP, France) & N. Dörfliger (BRGM, France)

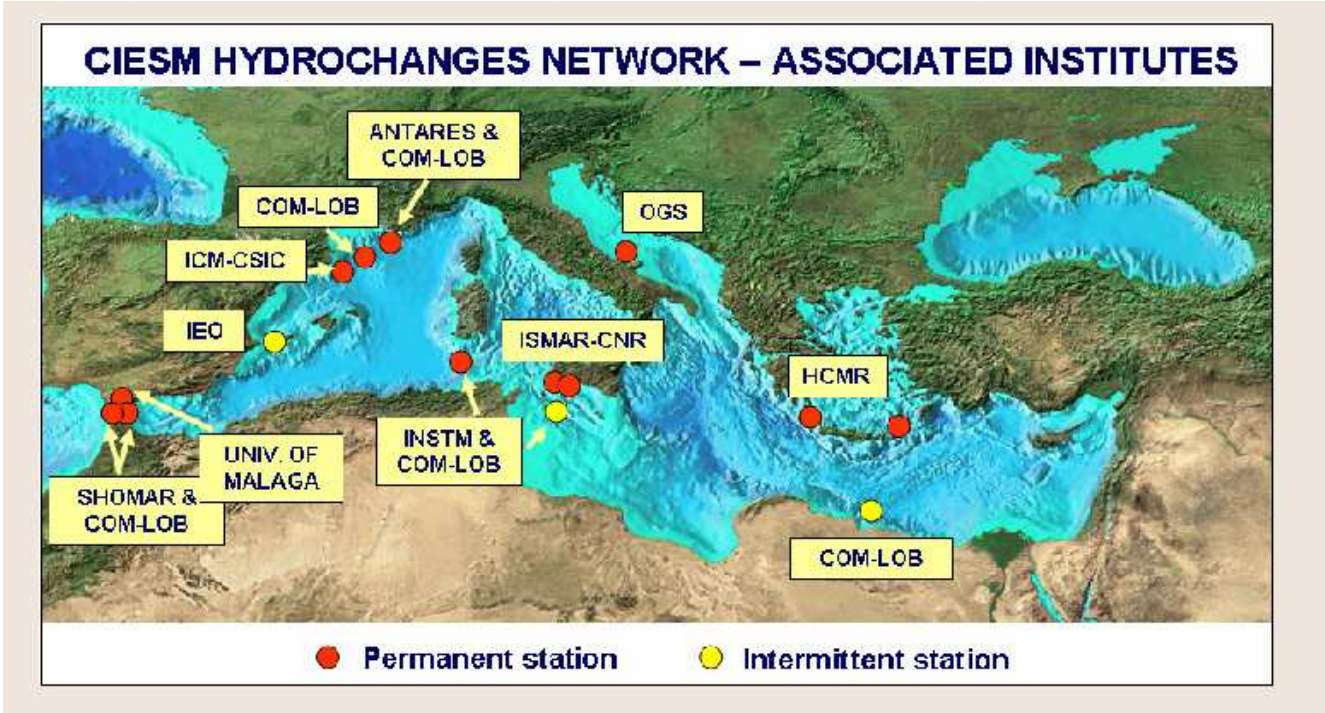
LOP for...multi-compartments Mediterranean basin



Long Time series (lasting about 10 years) to study and support analysis of the seasonal to interannual variability of the water cycle through budget analyses

Summary of discussion

- Exchange about network concerning Marine Ocean, GPS and Radiosonde stations network that may be supported and “used” by HyMEx communities
- CIESM The Mediterranean Science Commission (J. Font, C2 Chairman) [www.ciesm.org]
 - 6 committees, one about Physics and Climate of the Ocean => HyMEx topics
 - CIESM programmes:
 - MedGLOSS: sea level measurements, real time stations
 - HydroChanges: [since 2002], stations about deep basin (12 permanent stations, 3 temporary stations)
 - TransMed: seasurface monitoring packages on ferries (regular lines)



(CIESM courtesy)

Potential routes for TRANSMED development

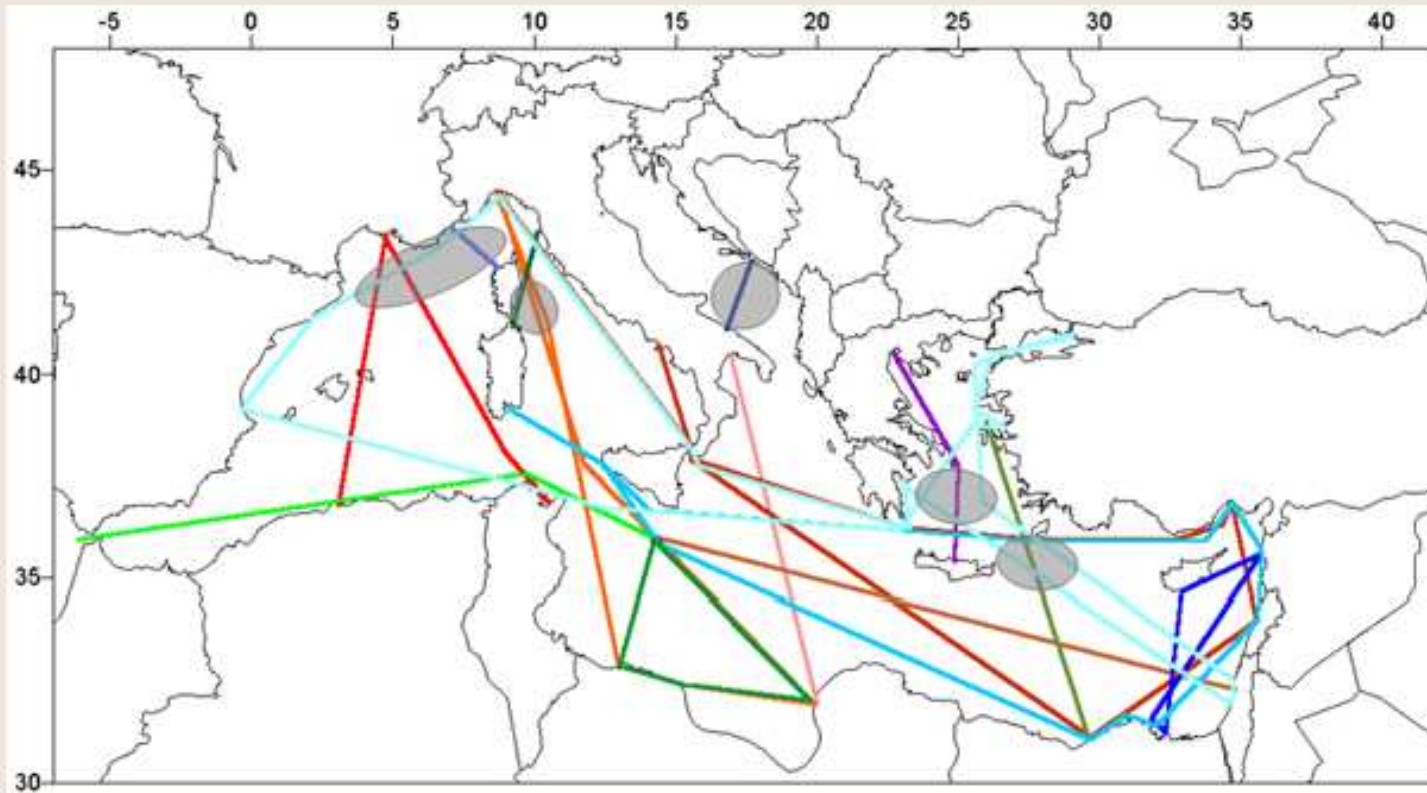


Figure 1: Potential routes for later Transmed development.

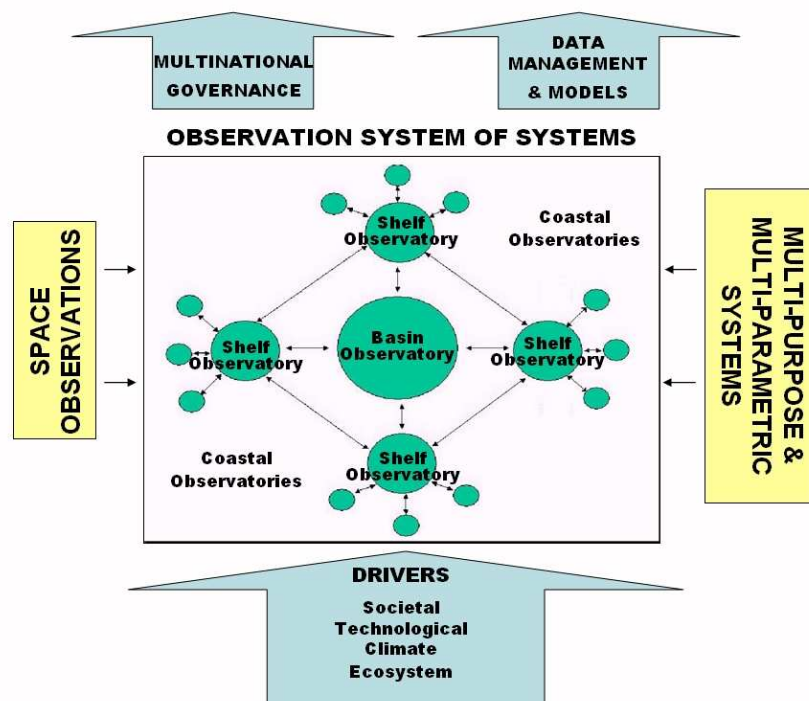
(CIESM courtesy)

Summary of discussion

- Strategic components from CIESM towards an Integrated System of Mediterranean Main Observatory (Workshop, January 2008 La Spezia)

<http://www.ciesm.org/online/monographs>

INTEGRATED MEDITERRANEAN MARINE OBSERVATORY



Considering basin, sub-basin, regional and coastal zones

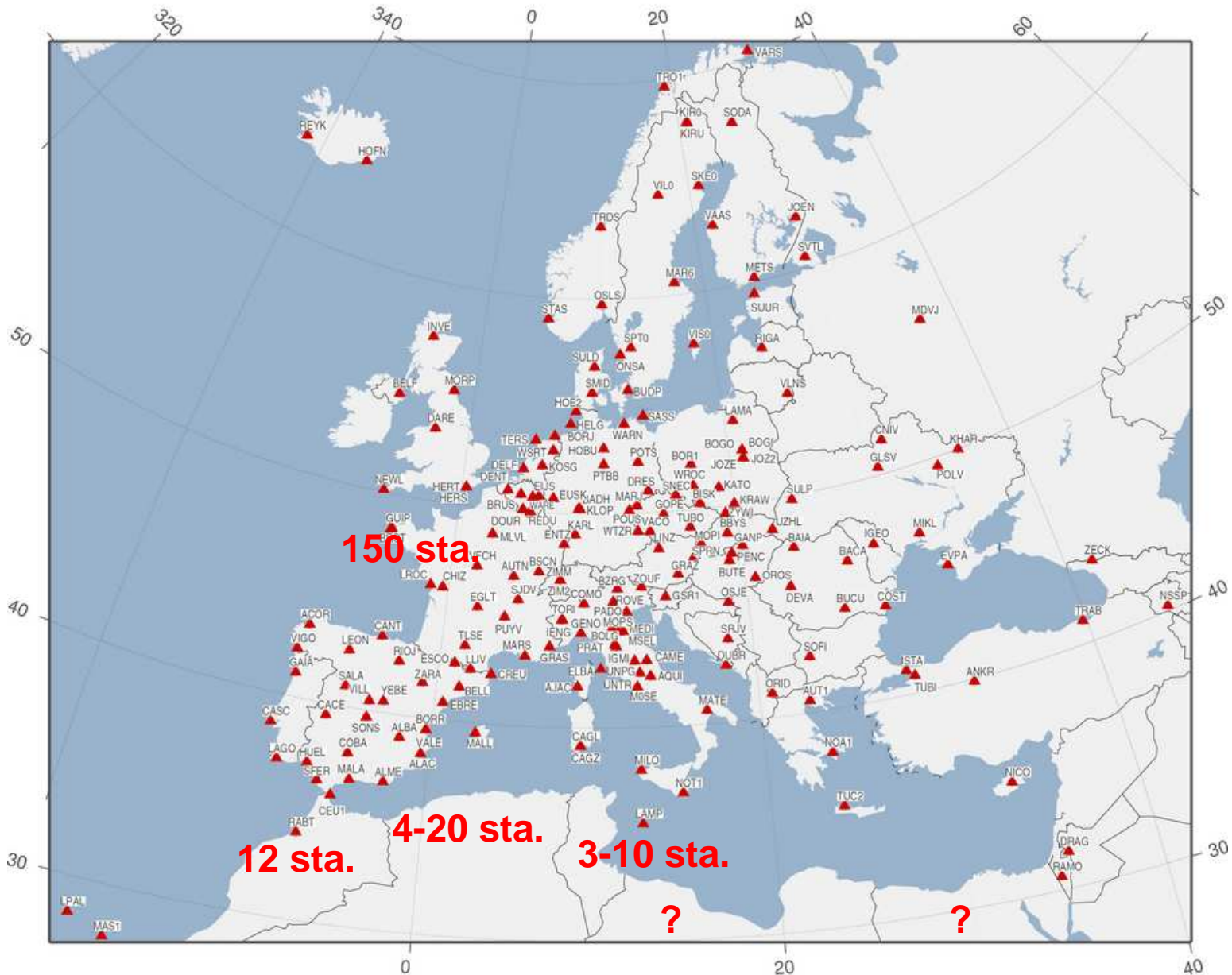
1. Deep sites for fixed long term surveys
2. Permanent coastal stations
3. Autonomous moving platforms
4. Remote sensing information
5. Voluntary observing ships
6. Coordinated multidisciplinary cruises
7. Modeling tools for optimised sampling planning, data assimilation and prediction
8. Efficient organisation and dissemination of information

HyMeX water budgets (O.Bock (IGN) and collaborators)

Ground-based GPS network

- Observations:
 - Total column water vapor (precipitable water) => one term of the atmos. water budget
 - Typ. 1h resolution, all weather, 24/24
- Initial discussion group:
 - F. Masson (Univ. Strasbourg), O. Bock (IGN),
 - P. Briole (CNRS, Paris), E. Doerflinger (CNRS, Montpellier)
 - Open to other participants, especially from Mediterranean countries!
- Proposal:
 - Federate Med. Countries to provide GPS data:
 - Western Med. dense (~100km) coastal network: EOP
 - Whole Med. coastal network: LOP

EUREF Permanent Tracking Network



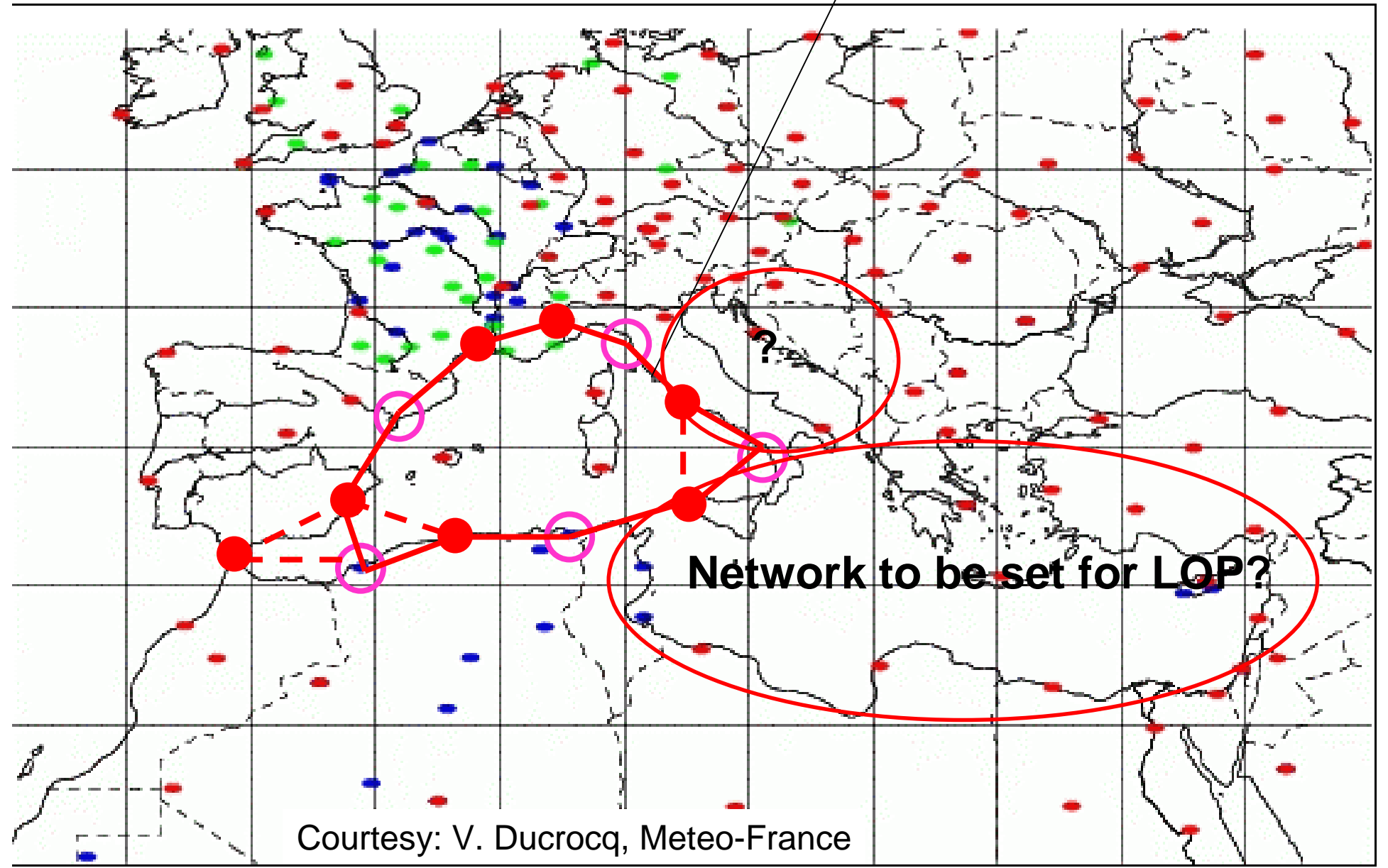
Radiosonde network (O.Bock (IGN) and collaborators)

- Observations:
 - P, Temp, humidity, wind
 - High resolution: 10m, all weather, 2/day
 - Provide horizontal Moisture fluxes
- Experience from AMMA:
 - Had to deal with RS humidity biases => GPS provided a useful reference
 - RS flux arrays to compute vertically resolved water and energy budgets (cf. TOGA-COARE & USA...)
 - Up to 8/day in water budget IOPs
 - Also useful for model budget verification, parameterization testing
- Proposal:
 - High frequency soundings during SOP (or IOPs) on a dense (~300 km) coastal network: 4/day to 8/day
 - Requires 3 to 5 additional stations

Meteorological observations:

- TEMP
- PILOT
- EUROPROFIL

○ Additional points for water budget purpose
EOP + LOP



Courtesy: V. Ducrocq, Météo-France

Summary of discussion (1)

- Needs of networks of data base, meta data base
- Needs of a HyMEx portal ?
- Data base management = services
- Standards to be used
- Data Quality control to be taken into consideration
- What strategies of HyMEx regarding re-analysing ?
 - Difficult to decide before definitive scientific targets of HyMEx projects are defined
 - May be necessary at the end of LOP

Summary of discussion (2)

- LOP stations, existing or planned stations:
 - Radar Data (cf Meteo France, P. Tabary)
 - Raman Lidar (Central Mediterranean Sea –Italy)
 - Lightning data ? ZEUS stations
 - Satellite: sea surface temperature available in 2010 ans 2020
 - Lampedusa climatic station (link with possible several SOPs –intercomparison of data)
- Hydrological Continental cycle data:
 - National data bases about river discharge (BDHydro France,....), new data base from ONEMA in France....)
 - National data bases about groudwater (i.e. ADES France (brgm website), etc)

Summary of discussion (3)

- Actions planned to be carried out:
 - Inventory of parameters for which long time series are needed, for each **HyMEx compartment**
 - Inventory of existing stations, networks (existing and planned (time framework)), data bases for each **HyMEx compartment (matrix)**
 - Inventory of availability of data (data policies, added values in exchange, free or not ?)
 - Conventional observations (**put effort to gathered and making available such data**)
 - WMO and National services contact for exchange data
 - Inventory of available satellites in 2010-2020 : inventory, type of data
 - **Workshop** to be run with Commissions, coordinators of CIESM programs, coordinators of EU Integrated Projects and MedCLIVAR, about Mediterranean Sea, Climate..., Organizations, Institutions and Government Representatives in order to discuss about HyMEX support, data exchange agreement, data **policies...When ? 1st trimester 2009 ?**

Potential Contacts

- MedCLIVAR (meta data base under construction; time series for climate analysis)
- MedGOOS secretary (Malta)
- National Meteo surveys
- Euro-Mediterranean Information System on the know-how in the Water Sector
EMWIS is a program of the Euro-Mediterranean Partnership.

<http://www.emwis.net>