PW 1.1: Long-term ocean observations (LOP-EOP)

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PW 2.2: Instrument deployment design over the TAs during EOP/SOP

R. Bozzano, H. Giordani, I. Taupier-Letage
Issues:
- Seawater budget (WG1)
- Air-sea interactions (WG4)

LOP: The whole Med.
- EOP and SOP: TAs
- Eastern basin
- Adriatic
- NW Med

Instruments / platforms
- Moorings HC increase (Straits Crete, N Bal., …)
- Fixed buoys (atm. + ocean.) (upgrade / homogenize packages)

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Subsurface moorings and fixed buoys LOP
- Gliders: modify route (MOOSE): replace TLN –Sardinia by Banyuls-Sardinia, add Balearic-Sardinia, modify sampling during winter (jan-march): 1000m-deep dives

- Argo floats: deployment strategy during the LOP? (evenly distributed at the Med scale). Need for request for additional profilers for specific mode during winter convection period in convection areas (2000m deep dives as long as in the DWF areas). Strategy for deployment (space and time/SOP)?

- Coastal radars (TAs + Sp.?, Turkey?)
Moving (Lagrangian) platforms for LOP: gliders, Argo floats, drifters &

Gliders:
2 actives (present)
6 actives (expected)
MOOSE and collaboration with SOCIB

Maintain a minimum of 30 floats in Mediterranean by deploying about 10 new floats per year mainly along SOP lines
· Surface drifters, *(Marisondes SOP only, Aeroclipper (autonomous management))*
· SVPs: deployment strategy during the LOP? (40 = 30/year evenly distributed at the Med scale).
· Additional drifters (SVPs) during EOP (2011-2013):
  · strategy for deployment along transects or in clusters (must also provide support for modelling purposes: validation + lateral boundary conditions)
  · strategy for sensor: T0-150m? OR S? OR wind? (for 15 drifters/year)

=> suggestions requested!
Maintain minimum of 40 drifters in Mediterranean by deploying about 30 new deployments twice a year mainly along VOS lines.

Moving (Lagrangian) platforms for LOP: gliders, Argo floats, drifters &
TRANSMED: a (future) network of low cost thermosalinometers in the Mediterranean

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Dedicated (future) website.

SCOOP!! The first data
Ships of Opportunity – VOS: EOP/LOP

- Network of ships of opportunity carrying at least a Thermosalinometer (TS) and a "radiative fluxes box" and on a few routes Baros/Batos stations and GPS:
  - 2010: Genoa – Libya: TS *(done)*
  - Late 2010: Marseilles- Algiers: TS, “Flux box”, GPS (+BATOS if ferry = “Méditerranée”)
  - 2011: Civitavecchia- Barcelona: TS, “Flux box”, GPS
  - Other opportunities/EOP: install a TS on the route across the Adriatic DWF zone (monthly XBTs with ADRICOSM-STAR program)?
  - Other routes TBD (Eastern Basin)
- Add routes: which ones?
- Support to drifters and Argo deployments (possibility speed 20 knots?)
- Suggestions for strategy?
- Research Vessels (not only SOP EOP)
Western Crete - Air-Sea interactions
 observations

Support WG 4 objectives on investigation of impacts from intense air-sea interactions in maritime Mediterranean storms

- EOP data on meteorological variables and salinity/temperature from buoys
- EOP data on precipitation, wind and air-sea exchanges (bubbles formation, breaking waves, aerosols?) from sub-merged moorings with passive listening sensors
- SOP data on salinity/temperature/wind/rain etc from shallow glider with acoustic probe

Sea Level

500m-3 km

2 km (d)

50 m
The HyMerEx Experiment
The HyMerEx Network: L’Atalante
Need for the Synoptic & Geostrophic Context

- Describe $T$, $S$, $U_g$ at synoptic scale and high resolution (first Rossby radius of deformation)
- Size of the mesh: need to have a simple ratio between the two main axis, 8 miles in the NW-SE direction and 16 miles in the SW-NE direction + in the closure area (16 miles should be sufficient to resolve the geostrophic synoptic ocean circulation)
- SOP1: fall 2012
- SOP2: winter-spring 2013
- SOP3: fall 2013
SOP specificities: HyMerEx Network

- closure area stations (31)
- network stations (249)

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200m

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1000m
Missing instruments/platforms

- Moored CTD profiler (Mc Lane)
- Shipborne ADCPs (Gibraltar, Dardanelles…)

Missing (information from) areas

- Black Sea
- Levantine subbasin (Greece, Cyprus, Turkey, Israel,...)
- Southern parts of both basins
Missing information

- Please register your platform/instrument in the HYMEX catalog
- More discussions needed to achieve the implementation plans (due for September!)