

# Main points from Presentations

## **Science management and strategic priorities**

- Networking initiatives funded by pan EU organisations (COST, ESF)
- Strategic policy aspects (MB-ESF)

## **Framework on Model validation**

- Common agreed terminology, approach and framework needed
- Models did help to demand data documentation
- Set-up a Hierarchy in process with key variables and parameters we feel more confident about (= more robust model): more refine model (in a specific area with integrated variables)
- Best practices for comparisons exercises
- Design monitoring networks

## **End Product / end-users**

- Targeted Objective: end product with end users
- User needs: need specific questions associated with each validation, acceptable range of physical parameters, error estimates associated with the models for prioritization
- Engineering links to further establish to share common expectations. An opportunity? Coastal communities to be further involved in contributing to fund common initiatives.
- Need to define next generation of coastal products (e.g. what physical content will be required?)
- Deliver Products with a better resolution: focus on editing, filtering, sub-sampling data procedures
- coastal products: improve the resolution along the track, new algorithm to gain new points, apply regional geophysical model

## **Data**

- Old data sets are often inadequate for generating generic model development
- need a huge data bank for ecosystem models
- more recent data for short term forecasts and real time product
- Data collection is a key point (availability in regional seas)
- Need to Address concept of data calibration/assimilation

## **Some Technics...**

- Altimetry use for regional/coastal applications is less mature (accuracy decreases when approaching the coast)
- Spectral analysis used to separate different dynamic processes: requires good mathematical model to improve

## **Modelling**

- Basic Model (Mercator) + forcings for regional models
- Adopt another way with a rather different space time approach for instance for bloom monitoring
- On-line Comparison with observations (T&S moorings, current meters, tide gauges, volume transport)
- Off-line comparison with observations: delayed mode; + new protocols (ferry box, High frequency SST data, drifter trajectories etc.)
- Identify/monitor key parameters to refine bio/physical coupling

## Validation strategy

- Ad hoc arrays and model validation are complementary
- Validation requires well designed and documented benchmark data sets (very costly to make them comprehensive)
- Progress on uncertainty and accuracy assessment
- Statistics to validate models
- Adapt metrics stats to the scales
- Validation: validating a model wrt. Observations: isolate data/model on 1 specific oceanographic process in 1 area where it is highly visible;
- Appropriate and targeted Science (physics) is really needed to fine tune local models.
- Observations are not the truth: errors may happened
- Model error intercomparison
- Check model and observation errors in order to check whether difference is in acceptable range
- cross-validation between models (e.g. nutrient reduction)
- Comparisons data/model: how good? Prove that Errors are correlated to improve the model
- Comparison global/regional systems