



WP3 Innovative DA techniques

Sanita Vetra-Carvalho

Peter Jan van-Leeuwen

SANGOMA Annual Meeting 26th November 2012



WP3 Participants

Work package number	3	Start date	Start date or starting event:			MO	
Work package title	Innovative Data Assimilation techniques						
Activity Type ¹	RTD						
Participant number	1	2	3	4	5	6	
Participant short name	ULg	UREAD	AWI	TUD	CNRS	NERSC	
Person-months per participant:	6	12	10	7	13	5	

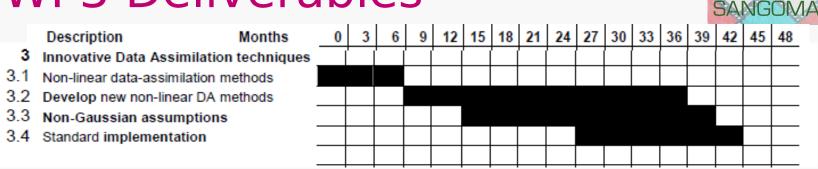
WP3 Tasks



- Task 3.1: Report on current stochastic DA methods for MyOcean.
- Task 3.2: Generate a living document on existing and new stochastic DA methods for MyOcean.
- Task 3.3: Develop objective comparison of non-Gaussian assumptions.
- Task 3.4: Generate standard implementation of the new methods as modules.

WP3 Deliverables





- D3.1: Report on current DA methods (M6)
- D3.2: Living document on new DA methods (M6)
- D3.3: Implementation of one common new DA method in all toolboxes (M36)
- D3.4: Codes of new methods compliant with WP1 (M42)
- D3.5: Final living document including uncertainty estimation (M48)

Deliverable 3.1



- D3.1 currently includes
 - Ensemble methods (various variants of EnSRF & pert. obs EnKF)
 - Particle filters (PF) (equivalent weight & auxiliary)
 - Gaussian mixture particle filter (GMPF)
 - Various resampling methods for PFs & GMPF
- Still missing
 - Hybrid methods
 - Rank Histogram Filter
 - Other methods that have been implemented in SANGOMA community

Deliverable 3.2



- Currently working on new methods, with interest in:
 - Rank Histogram Filter
 - Anamorphosis schemes
 - Parameter estimation using ensemble & PF methods
 - Particle smoothers
 - Mixture filters
- Currently deliverable includes proper orthogonal decomposition (POD) calibration method.