

# SANGOMA: Stochastic Assimilation for the Next Generation Ocean Model Applications

SPA.2011.1.5-03 call, project 283580

April 1-2, 2014, Liège

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# WP6 Dissemination: Project objectives

- Task 6.1 : Setting up of project web pages for information exchange 😊
- Task 6.2 : Organization of two workshops for Ph.D students 😊
- Task 6.3 : From results of WP3,WP4 and WP5, define best DA practise for operational models
- Task 6.4 : Organisation of two workshops of operational users 😊
- Task 6.5 : Prepare an exercise session at the ESA earth observation summer school 🍷
- Task 6.6 : Organisation of the Liege Colloquium 2015
- Task 6.7 : At the end of the project, an open call for Ph.D. students
- Task 6.8 : The codes shared internally on SVN will made public annually 😊
- Task 6.9 : After the annual meetings and reports, mailings to reach external DA experts and operational centres will be prepared and dispatched 🍷
- Task 6.10 : Final report
- Task 6.11 : Organization of exchange mechanisms

# Summary of deliverables accepted

D6.1 Web pages updated regularly. 😊

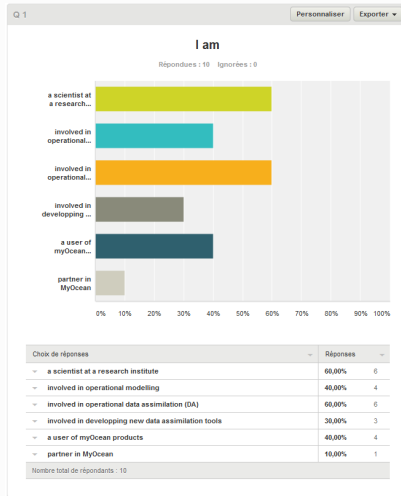
D6.7 Workshop on Data Assimilation within MyOcean Science days (as decided on GMES marine projects coordination meeting on 24/05/2012 in Brussels) with invitation to operational users 😊

D6.12 Code release 1 😊

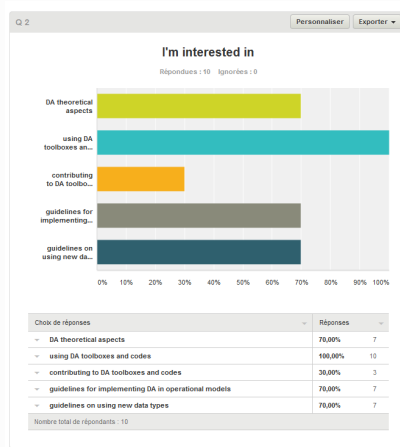
# To do deliverables WP6

6	2	Web pages V2 report	0.0	UNIVERSITE DE LIEGE	0.5	Report	PU	10/04/2014 (30 months)	30/04/2014
6	3	Web pages V3 report	0.0	UNIVERSITE DE LIEGE	0.5	Report	PU	31/10/2013 (48 months)	31/10/2013
6	4	Ph.D workshop 1 report	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	1.0	Report	PU	31/10/2013 (24 months)	31/10/2013
6	5	Ph.D workshop 2 report	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	1.0	Report	PU	30/09/2013 (47 months)	30/09/2013
6	6	Report on best DA for operational purposes	0.0	UNIVERSITE DE LIEGE	2.0	Other	PU	31/10/2014 (36 months)	31/10/2014
6	8	Report on workshop 2 for operational users	0.0	UNIVERSITE DE LIEGE	1.5	Report	PU	30/09/2013 (47 months)	30/09/2013
6	9	Documentation of exercise sets for summerschools	0.0	UNIVERSITE DE LIEGE	3.0	Report	PU	30/04/2014 (30 months)	30/04/2014
6	10	Report on International Colloquium	0.0	UNIVERSITE DE LIEGE	3.5	Report	PU	28/02/2015 (40 months)	28/02/2015
6	11	Publication	0.0	UNIVERSITE DE LIEGE	2.0	Report	PU	31/10/2015 (48 months)	31/10/2015
6	13	Code release 2 documentation	0.0	UNIVERSITE DE LIEGE	1.0	Report	PU	30/04/2014 (30 months)	30/04/2014
6	14	Code release 3 documentation	0.0	UNIVERSITE DE LIEGE	2.0	Report	PU	31/10/2015 (48 months)	31/10/2015
6	15	Final public report with synthesis	0.0	UNIVERSITE DE LIEGE	2.0	Report	PU	31/10/2015 (48 months)	31/10/2015

# Survey: 10 responses



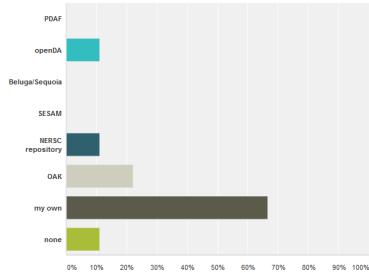
# Survey: 10 responses



# Survey: 10 responses

## I used one of the following data assimilation toolboxes

Répondus : 9 Ignorées : 1



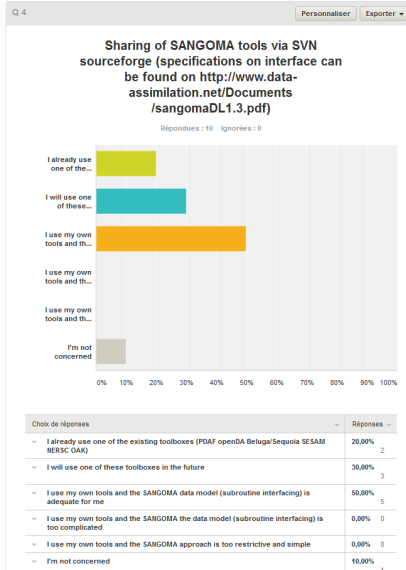
Choix de réponses	Réponses
▼ PDAF	0,00% 0
▼ openDA	11,11% 1
▼ Beluga/Sequoia	0,00% 0
▼ SESAM	0,00% 0
▼ NERSC repository	11,11% 1
▼ OAK	22,22% 2
▼ my own	66,67% 6
▼ none	11,11% 1

Nombre total de répondants : 9

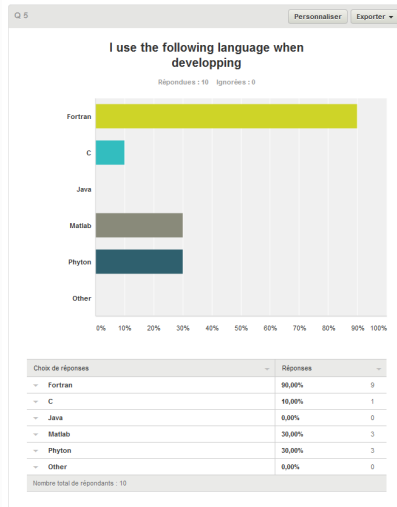
Commentaires (0)



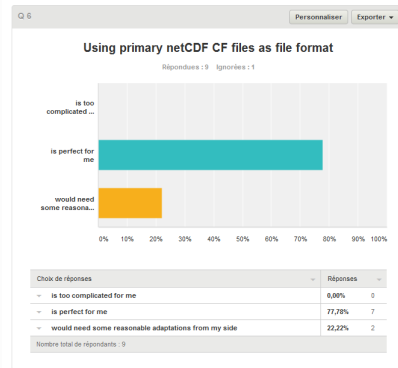
# Survey: 10 responses



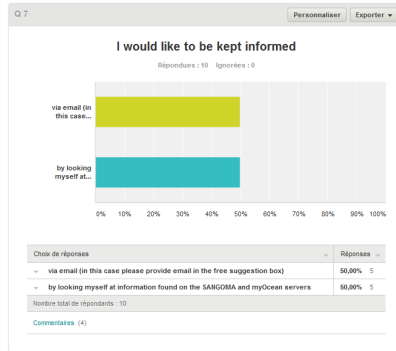
# Survey: 10 responses



# Survey: 10 responses



# Survey: 10 responses



## Next actions

- Complete list of dissemination activities: *all* (NEMO-ASSIM, AVISO, NERSC meeting)
- Newsletter: *all*
- Exchange of Ph.D. students in 2014?
- Ph.D workshop in one year: *LEGI* (Milestone 4): see [SANGOMA\\_AnnualMeeting\\_WP6\\_GarnierMetref.pdf](#)
- Update of web pages (benchmarks, newsletter, living documents, feedback mechanism): *all*

# WP7 Management : Objectives

Task 7.1 : Organization of project meetings 😊

Task 7.2 : Financial reporting, consortium agreement maintenance and six-monthly preparation of informal status report to EU 😊

Task 7.3 : Setting up of a communication network 😊

# To do deliverables WP7

7	3	Steering committe 3	0.0	UNIVERSITE DE LIEGE	0.1	Report	CO	30/04/2014 (30 months)	30/04/2014
7	4	Steering committe 4	0.0	UNIVERSITE DE LIEGE	0.1	Report	CO	31/10/2015 (48 months)	31/10/2015

# Summary of deliverable contents and milestones

## MS1 Web pages and communication tools: 😊

- Project web page <http://www.data-assimilation.net/>
- Sourceforge Sangoma pages <http://sourceforge.net/projects/sangoma/>
- List for management purposes [Sangoma-manage@lists.sourceforge.net](mailto:Sangoma-manage@lists.sourceforge.net)
- List for scientific purposes [Sangoma-science@lists.sourceforge.net](mailto:Sangoma-science@lists.sourceforge.net)
- Google docs <https://docs.google.com/open?id=0ByuhAXFac4tIMzNmYzYwMDctMTc3Yi00MDA3LWE5NWQtZjcwY2E0NDc3YmMx>
- WebEx
- EU portal SESAM only for final upload of deliverables
- Forums <https://sourceforge.net/projects/sangoma/forums> : Developers, Harmonization: not yet used  
... Some of the discussions could be done there ?



## Next actions

- Review meeting April 2014
- Financial reporting (before 30/4/2014)
- Submission of annual report (before 30/4/2014) draft will be available at <http://www.data-assimilation.net/Documents/sangomaannual2.pdf>
- Today's meeting report

# Review meeting feedback

Presentation of <http://www.data-assimilation.net/Documents/sangomaannual1.pdf>, review available at [http://www.data-assimilation.net/Sangomaprivate/283580\\_Review\\_Report100130405\\_20130114\\_112307\\_CET.pdf](http://www.data-assimilation.net/Sangomaprivate/283580_Review_Report100130405_20130114_112307_CET.pdf)

Overall the project is simply on track. Minor recommendations are:

- Assess technology readiness level for the theoretical data assimilation research proposed.
- Include also more linear diagnostic tools in the tools box (similar to proposal)

# Accepted deliverables

## Submitted deliverables

WP ID	Deliverable ID	Title	Version	Lead beneficiary	Person months	Nature	Dissemination level	Document type	Delivery date from Annex I (start month)	Actual date	Status	Status date
1	1	List of existing tools	2.0	TECHNISCHE UNIVERSITEIT DELFT	2.0	Report	PU		31/01/2012 (3 months)	20/12/2012	Accepted	20/12/2012
1	2	List of tools to be adapted	2.0	TECHNISCHE UNIVERSITEIT DELFT	2.0	Report	PU		30/04/2012 (6 months)	20/12/2012	Accepted	20/12/2012
1	3	Specifications of data model	1.0	ALFRED WEGENER-INSTITUT FÜR POLAR- UND MEERESFORSCHUNG	4.0	Report	PU		30/04/2012 (6 months)	10/07/2012	Accepted	10/07/2012
1	4	Supplement list of contacts and new tools	1.0	TECHNISCHE UNIVERSITEIT DELFT	5.0	Report	PU		21/10/2012 (12 months)	20/11/2012	Accepted	20/11/2012
1	3	Documentation of specifications	1.0	TECHNISCHE UNIVERSITEIT DELFT	2.0	Report	PU		31/10/2012 (12 months)	20/11/2012	Accepted	20/11/2012
2	1	EVH project description for collaborative development	1.0	UNIVERSITE DE LIÈGE	0.5	Report	PU		30/11/2011 (1 month)	15/12/2011	Accepted	15/12/2011
2	3	Software V0.00001	1.0	ALFRED WEGENER-INSTITUT FÜR POLAR- UND MEERESFORSCHUNG	0.5	Report	PU		31/10/2012 (12 months)	20/11/2012	Accepted	20/11/2012
3	2	Living document	1.0	TECHNISCHE UNIVERSITEIT DELFT	1.0	Report	PU		30/04/2012 (6 months)	22/09/2012	Accepted	22/09/2012
4	1	Realtime demonstration	1.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	6.0	Report	PU		31/10/2012 (12 months)	20/11/2012	Accepted	20/11/2012
5	9	Agreement with the OASIS	1.0	UNIVERSITE DE LIÈGE	0.5	Report	RE		30/11/2011 (1 month)	22/08/2012	Accepted	22/08/2012
6	1	Web portal V1.00001	1.0	UNIVERSITE DE LIÈGE	0.5	Report	PU		31/10/2012 (12 months)	20/11/2012	Accepted	20/11/2012
6	7	Report on workshop 1 for operational users	1.0	UNIVERSITE DE LIÈGE	1.5	Report	PU		31/10/2012 (12 months)	18/12/2012	Accepted	18/12/2012
6	12	Code release 1 documentation	1.0	UNIVERSITE DE LIÈGE	1.0	Report	PU		31/10/2012 (12 months)	20/11/2012	Accepted	20/11/2012
7	1	Meeting committee 1	1.0	UNIVERSITE DE LIÈGE	0.1	Report	CO		30/11/2011 (1 month)	15/12/2011	Accepted	15/12/2011
7	2	Meeting committee 2	1.0	UNIVERSITE DE LIÈGE	0.1	Report	CO		31/10/2012 (12 months)	18/12/2012	Accepted	18/12/2012
7	5	Report on project information exchange tool	1.0	UNIVERSITE DE LIÈGE	2.4	Other	RE		30/04/2012 (6 months)	22/05/2012	Accepted	22/05/2012
7	6	Dissemination plan	1.0	UNIVERSITE DE LIÈGE	2.0	Report	CO		31/01/2012 (2 months)	22/05/2012	Accepted	22/05/2012

# To do deliverables

WP	Deliverable ID	Title	Version	Lead beneficiary	Person months	Nature	Dissemination level	Document type	Delivery date from Annex 1 (first month)	Forecast date
2	2	Software codes on SVN (continually)	0.0	ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG	17.5	Report	PU		31/10/2015 (48 months)	31/10/2015
2	4	Software V1 report	0.0	ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG	0.5	Report	PU		30/04/2014 (30 months)	30/04/2014
2	5	Software V2 report	0.0	ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG	0.5	Report	PU		31/10/2015 (48 months)	31/10/2015
3	1	State of the art non-linear data assimilation	0.0	THE UNIVERSITY OF READING	1.0	Report	PU		30/04/2012 (6 months)	30/04/2012
3	3	Report on implementation	0.0	ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG	25.0	Report	PU		30/04/2014 (30 months)	30/04/2014
3	4	Report on new methods	0.0	THE UNIVERSITY OF READING	25.0	Report	PU		30/04/2015 (42 months)	30/04/2015
3	5	Report on new non-linear methods	0.0	THE UNIVERSITY OF READING	1.0	Report	PU		31/10/2015 (48 months)	31/10/2015
4	2	Report on benchmark implementations	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	15.0	Report	PU		31/10/2013 (24 months)	31/10/2013
4	3	Report on metric analysis	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	14.0	Report	PU		30/04/2014 (30 months)	30/04/2014
4	4	Report on metrics with new tools	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	14.0	Report	PU		31/10/2015 (48 months)	31/10/2015
4	5	Report on metrics in large cases	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	14.0	Report	PU		31/10/2015 (48 months)	31/10/2015
5	1	List of remote sensed variables	0.0	UNIVERSITE DE LIEGE	2.5	Report	PU		31/10/2012 (12 months)	31/10/2012
5	2	Ecosystem data report	0.0	THE UNIVERSITY OF READING	3.0	Report	PU		31/10/2014 (36 months)	31/10/2014
5	3	Large scale model V1 analysis	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	9.0	Report	PU		31/10/2014 (36 months)	31/10/2014
5	4	Large scale model V2 analysis	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	9.0	Report	PU		31/10/2015 (48 months)	31/10/2015
5	5	Regional model V1 analysis	0.0	UNIVERSITE DE LIEGE	9.0	Report	PU		31/10/2014 (36 months)	31/10/2014
5	6	Regional model V2 analysis	0.0	UNIVERSITE DE LIEGE	9.0	Report	PU		31/10/2015 (48 months)	31/10/2015
5	7	Lagrangean ice data analysis	0.0	STIPTJELSEN NANSEN CENTER FOR FJERNMAALING	7.0	Report	PU		31/10/2015 (48 months)	31/10/2015
5	8	Array analysis	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	6.0	Report	PU		31/10/2015 (48 months)	31/10/2015
6	2	Web pages V2 report	0.0	UNIVERSITE DE LIEGE	0.5	Report	PU		30/04/2014 (30 months)	30/04/2014
6	3	Web pages V3 report	0.0	UNIVERSITE DE LIEGE	0.5	Report	PU		31/10/2015 (48 months)	31/10/2015
6	4	Ph.D workshop 1 report	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	1.0	Report	PU		31/10/2013 (24 months)	31/10/2013
6	5	Ph.D workshop 2 report	0.0	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	1.0	Report	PU		30/09/2015 (47 months)	30/09/2015
6	6	Report on best DA for operational purposes	0.0	UNIVERSITE DE LIEGE	2.0	Other	PU		31/10/2014 (36 months)	31/10/2014
6	8	Report on workshop 2 for operational users	0.0	UNIVERSITE DE LIEGE	1.5	Report	PU		30/09/2015 (47 months)	30/09/2015
6	9	Documentation of exercise sets for summerschools	0.0	UNIVERSITE DE LIEGE	3.0	Report	PU		30/04/2014 (30 months)	30/04/2014
6	10	Report on International Colloquium	0.0	UNIVERSITE DE LIEGE	3.5	Report	PU		28/02/2015 (40 months)	28/02/2015
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6	13	Code release 2 documentation	0.0	UNIVERSITE DE LIEGE	1.0	Report	PU		30/04/2014 (30 months)	30/04/2014
6	14	Code release 3 documentation	0.0	UNIVERSITE DE LIEGE	2.0	Report	PU		31/10/2015 (48 months)	31/10/2015
6	15	Final public report with synthesis	0.0	UNIVERSITE DE LIEGE	2.0	Report	PU		31/10/2015 (48 months)	31/10/2015
7	3	Steering committee 3	0.0	UNIVERSITE DE LIEGE	0.1	Report	CO		30/04/2014 (30 months)	30/04/2014
7	4	Steering committee 4	0.0	UNIVERSITE DE LIEGE	0.1	Report	CO		31/10/2015 (48 months)	31/10/2015

# WP Reporting

Via template `WPreport.tex` (can be compiled with `sangomaannual2.tex` (on SVN), with attention to recommendations from our advisory board and project reviewer

- Executive summary (1 paragraph)
- Scientific/technical highlights (2-3 pages)
- Deviations from DOW (DL, Milestones and potential impact on project) and if necessary justifications with respect to reviewers comments
- List of publications and presentations/posters



## **Work Package 6 Outreach**

*on the MoorSPICE cruise  
March 2014*

**Annual SANGOMA Meeting, April 2014**

# MoorSPICE cruise, 2014

**Program** : SPICE international program

**Location** : Salomon sea

**Research Vessel** : T.G. Thompson



## Main objectives :

- Understand air-sea fluxes and oceanic currents in Salomon Sea
- Describe local and global effects of water mass transformations
- Estimate impacts of water redistribution from the subtropics to the equator and the Southern Ocean (e.g. ENSO modulations)

# Workshop participants

Participants are specialized in *in situ* observations. This workshop is an introduction to data assimilation and SANGOMA's work.

## Participants :

- **2 chief scientists** (SCRIPS, San Diego ; IRD, Nouméa)
- **9 students** (University of Fiji ; University of Papua-New Guinea ; IRD, Nouméa ; SCRIPS, San Diego ; LEGOS, Toulouse ; MEOM, Grenoble)
- **5 engineers** (CNRS-INSU, Brest ; SCRIPS, San Diego ; IRD, Nouméa)
- **6 marine technicians** (University of Washington)



# SANGOMA Workshop

## *Between observations and modelization*

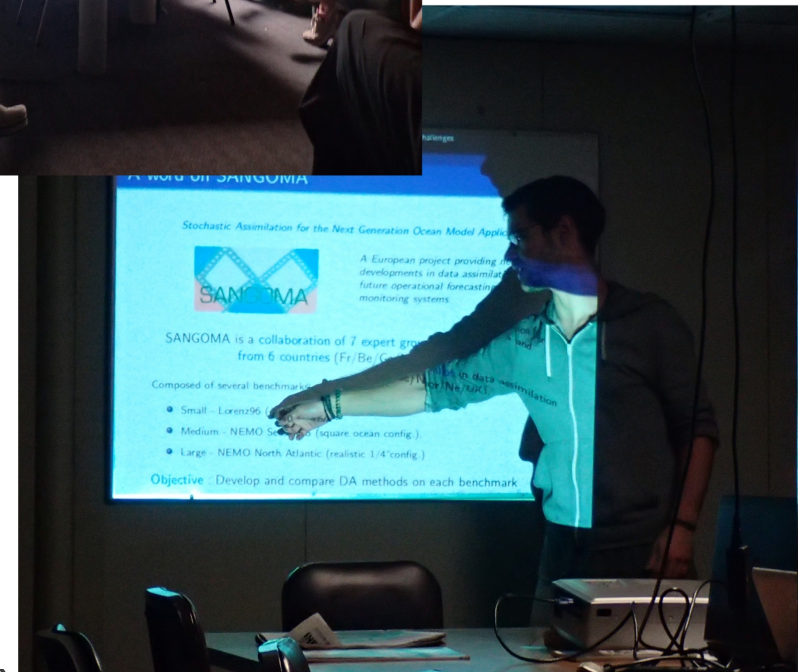
Workshop part I :

*Sammy Metref*



## *Introduction to data assimilation*

- Introduction and challenges in DA
- SANGOMA presentation
- Training (SANGOMA demo webpage)



# SANGOMA Workshop

## *Between observations and modelization*

Workshop part II :

*Florent Garnier*

*Toward data assimilation :*

*The use of stochastic parametrizations*

- Presentation of ensemble simulations
- Basics on stochastic parametrizations
- Results on large benchmark

