****



|  |
| --- |
| **Consortium Members** |
| LOGO Consortium members |

ESA CLIMATE CHANGE INITIATIVE – PHASE 2

ECV Sea Level- Management proposal

|  |
| --- |
| [Reference] |
| **Management proposal** |
| 1. 0 |
| 07/06/2013 |

**Executive Summary**

Titre « accroche » caractérisant l’offre

Text

Rubrique(s) sur nos atouts

Text

Financial proposal

Montant et durée de validité

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Validation of the proposal.** | | | | |
|  | Written by | Checked by | Approved by | Application authorized by |
| Name | *M. Ablain Y. Faugère G. Larnicol* | *G. Larnicol* | *S. Limouzin* | *Christophe Vassal* |
| Photo (option) |  |  |  |  |
| Visa |  | [Checker] | [Approver] |  |

NB : Merci de veiller à l’application de la décision CLS sur la délégation de signature.

|  |
| --- |
| **List of Contents:** |

[1. Introduction 1](#_Toc361341790)

[2. Involvement of Climate Research Community 2](#_Toc361341791)

[3. Background Experience of the Consortium 3](#_Toc361341792)

[3.1. CLS 3](#_Toc361341793)

[3.2. LEGOS 4](#_Toc361341794)

[3.3. CGI 4](#_Toc361341795)

[3.4. DTU Space 4](#_Toc361341796)

[3.5. ECMWF 4](#_Toc361341797)

[3.6. GFZ 4](#_Toc361341798)

[3.7. IsardSAT 4](#_Toc361341799)

[3.8. NERSC 4](#_Toc361341800)

[3.9. NOC 4](#_Toc361341801)

[3.10. PML 4](#_Toc361341802)

[3.11. University of Hamburg 4](#_Toc361341803)

[3.12. University of Porto 4](#_Toc361341804)

[4. Organisation and Management 5](#_Toc361341805)

[4.1. Organisation structure 5](#_Toc361341806)

[4.2. Roles of the Consortium partners 5](#_Toc361341807)

[4.3. Prime Contractor’s Role 5](#_Toc361341808)

[4.4. Project Management Office 5](#_Toc361341809)

[4.4.1. Project Management Support Team 5](#_Toc361341810)

[4.4.2. CGI’s experience in PMO 5](#_Toc361341811)

[4.5. Product assurance management 6](#_Toc361341812)

[4.6. Settling disagreements 6](#_Toc361341813)

[5. Facilities 7](#_Toc361341814)

[5.1. CLS 7](#_Toc361341815)

[5.2. LEGOS 7](#_Toc361341816)

[5.3. CGI 7](#_Toc361341817)

[5.4. DTU Space 7](#_Toc361341818)

[5.5. ECMWF 7](#_Toc361341819)

[5.6. GFZ 7](#_Toc361341820)

[5.7. IsardSAT 7](#_Toc361341821)

[5.8. NERSC 7](#_Toc361341822)

[5.9. NOC 7](#_Toc361341823)

[5.10. PML 7](#_Toc361341824)

[5.11. University of Hamburg 7](#_Toc361341825)

[5.12. University of Porto 8](#_Toc361341826)

[6. Key Personnel 9](#_Toc361341827)

[6.1. CLS 9](#_Toc361341828)

[6.2. LEGOS 10](#_Toc361341829)

[6.3. CGI 10](#_Toc361341830)

[6.4. DTU Space 10](#_Toc361341831)

[6.5. ECMWF 10](#_Toc361341832)

[6.6. GFZ 10](#_Toc361341833)

[6.7. IsardSAT 10](#_Toc361341834)

[6.8. NERSC 10](#_Toc361341835)

[6.9. NOC 10](#_Toc361341836)

[6.10. PML 10](#_Toc361341837)

[6.11. University of Hamburg 10](#_Toc361341838)

[6.12. University of Porto 10](#_Toc361341839)

[7. Risks 11](#_Toc361341840)

[8. Implementation proposal 12](#_Toc361341841)

[8.1. Planning 12](#_Toc361341842)

[8.2. List of deliverables 13](#_Toc361341843)

[8.3. Workbreakdown Structure 14](#_Toc361341844)

[9. Compliance Statement 16](#_Toc361341845)

[Appendix A - Issues 17](#_Toc361341846)

[Appendix B - List of applicable and reference documents 18](#_Toc361341847)

[Appendix C - Key Personnel Curriculum Vitae 19](#_Toc361341848)

[Appendix D - Work Package Descriptions (PSS A20) 20](#_Toc361341849)

[Appendix E - List of tables and figures 21](#_Toc361341850)

[Appendix F - List of acronyms 22](#_Toc361341851)

# Introduction

Resp: CLS

# Involvement of Climate Research Community

Initiate by LEGOS and update by UoH, NERSC and ECMWF,CLS

In accordance with the requirements of the ESA Climate Change Initiative, the SL CCI consortium has engaged **internationally recognized experts**, to ensure the involvement of international scientific user communities and climate research programmes.

The SL CCI Climate Research Group, led by XXX is composed of:

UoH (Detlef Stammer)

NERSC (Johnny Johannessen)

ECMWF (Magdalena Balmaseda)

LEGOS (Anny Cazenave)

Their involvement in international scientific user communities and climate research programmes is described in the Chapter . Background Experience of the Consortium. These key partners have long-term commitments to IPCC and WCRP.

They will lead *User Assessment Studies* to evaluate the quality of the Sea Level ECV products.

# Background Experience of the Consortium

Resp CLS

## CLS

CLS, established in 1986, is a subsidiary of the French Space Agency (CNES) and the French Research Institute for Exploration of the Sea (IFREMER), for operating satellite based systems, either for data collection, location or earth observations (cf. Argos, Doris, satellite altimetry, SAR). Through its Satellite Oceanography Division (over 60 oceanographers and remote sensing specialists), CLS is active in the field of operational oceanography and especially through the following activities:

1. On behalf of EUMETSAT, CNES and ESA, the operations, validation and quality control (routine and scientific long term) of satellite altimetry products ;
2. Its contribution to the French operational oceanography program, Mercator Ocean, for the support to the development forecasting systems and for the acquisition, quality control and pre-processing of data sets ;
3. Its support to the French Navy and SHOM, in the development of their modelling system and its maintenance ;
4. The distribution and promotion of derived products and services;
5. CLS is strongly involved in research and development activities related to the definition and the processing and the valorisation of existing and future satellite-based systems for science and applications (cf. AltiKa, SMOS and GOCE for instance).

CLS is also a major contributor the **GMES Marine Core Service** implementation project **MyOcean**, aiming at deploying the first concerted and integrated pan-European capacity for Ocean Monitoring and Forecasting.

CLS is responsible of the **Sea Level TAC** (Thematic Assembly Center) thanks to 20 years of experiences in processing, validation and disseminating satellite altimetry data.

CLS is also responsible for cross-cutting **system engineering**, data management and information systems.

CLS actively participates to the Global MFC (Monitoring and Forecasting Centre), Central Desk/Service provision (web portal, product discovery and browse, time aggregation), and communication/outreach issues (outreach, education, capacity building).

CLS is a major worldwide supplier of maritime services for fisheries management, maritime surveillance and environmental monitoring. CLS is used to work in an international and European environment as well as for industrial partners (US National Oceanic and Atmospheric Administration (NOAA), US National Aeronautics and Space Administration (NASA), Eumetsat, ESA). CLS has participated to several European and international projects and before as mentioned below. Finally, CLS is certified ISO 9001 for its main activities related to satellite data development and operations.

## LEGOS

## CGI

## DTU Space

## ECMWF

## GFZ

## IsardSAT

## NERSC

## NOC

## PML

## University of Hamburg

## University of Porto

# Organisation and Management

Resp CLS with support form CGI

## Organisation structure

## Roles of the Consortium partners

## Prime Contractor’s Role

## Project Management Office

### Project Management Support Team

### CGI’s experience in PMO

## Product assurance management

## Settling disagreements

# Facilities

## CLS

## LEGOS

## CGI

## DTU Space

## ECMWF

## GFZ

## IsardSAT

## NERSC

## NOC

## PML

## University of Hamburg

## University of Porto

# Key Personnel

This section introduces the staff from each partner who will work on the project. CVs are to be found in Appendix XX.

## CLS

***SL CCI Project Manager: Gilles LARNICOL***

He is responsible of the Oceanographic Department of CLS/DOS. He holds an engineering degree plus a PhD, and has well recognized scientific expertise both in operational and research oceanography. He has participated to numerous EC and national projects (e.g. DIADEM, TOPAZ, MFSPP, MFSTEP, GYROSCOPE, MERCATOR, MEDSPIRATION, MERSEA IP, ECOOP, BOSS4GMES). He is currently Leader of the Work Package “Sea Level Thematic Assembly Centre” within the project MyOcean. He is also the co-leader of the GODAE Ocean View Observing System Evaluation task team.

***SL CCI Earth Observation Science Team Leader: Michaël ABLAIN***

M. Ablain holds a 10-year experience in altimetry, especially in data assessment. He is responsible of the Cal/Val and cross-calibration activities carried out at CLS. He is also responsible of the validation of T/P, Jason-1 and Jason-2 missions in the frame of the SALP project supported by the CNES.

He is also in charge of MSL studies performed at CLS in relationship with CNES and LEGOS teams. He paid a particular attention in the long-term errors of the altimetry impacting the global and the regional MSL trends. He is also responsible of the in-situ and altimetry data comparison studies supported by the CNES (SALP) and ESA (FPAC).

He holds an applied mathematics engineering degree from the Institut National des Sciences Appliquees (INSA) in Toulouse.

***SL CCI research & project engineer: Yannice FAUGERE***

Y. Faugère holds a 10-year experience in altimetry, especially in satellite merging processing. He is responsible of the ENVISAT Cal/Val and cross-calibration activities carried out at CLS for ESA (F-PAC), and is an active contributor of ENVISAT/ERS Quality Working Groups (QWG).

More recently, he is the technical project manager of SLOOP project dedicated to the improvement of altimetry data processing algorithms dedicated to open ocean applications (2-year project, more than 20 experts involved). He has also been involved in the CLS study conducted for CNES dedicated to the mission analysis of an Iridium-based constellation for altimetry.

He holds a marine engineering degree from the École Supérieure d'Ingénieurs de Marseille (ESIM).

## LEGOS

## CGI

## DTU Space

## ECMWF

## GFZ

## IsardSAT

## NERSC

## NOC

## PML

## University of Hamburg

## University of Porto

# Risks

The following risks have been identified at this stage. This risk list is implemented in Project Management Plan, and will be maintained and updated all along the project.

# Implementation proposal

## Planning





## List of deliverables

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task** | **Deliverable** | | | **Partner Responsible** | **Date of delivery** |
|  | Code | Ref | title |  |  |
| **1000** | **D1.1** | URD | User Requirement document | NERSC | K0+3, KO+12, KO+21 |
| **1000** | **D1.2** | PSD | **Product Specification Document** | **CLS** | K0+3, KO+12, KO+21 |
| **1000** | **D1.3** | CECR | **Comprehensive Error Characterization report** | **CLS** | K0+3, KO+12, KO+21 |
| **1000** | D1.4 | DARD | Data Access Requirement document | CLS | K0+3, KO+12, KO+21 |
| **2000** | **D2.1** | ATBD | Algorithm Theorical Baseline Document | CLS | K0+6, KO+15, KO+24 |
| **3000** | **D3.1** | SSD | System specification document | CGI | K0+6, KO+15, KO+24 |
| **3000** | **D3.2** | SVR | System verification Report | CGI | K0+16, KO+21, KO+30 |
| **3000** | **D3.3** | PUG | Product User Guide | CLS | K0+12, KO+21, KO+30 |
| **4000** | **D4.1** | PIVR | Product validation & Intercomparison report | CLS | K015, KO+24, KO+33 |
| **4000** | **D4.2** | CRDP | Climate Research Data Package | CLS | K0+15, KO+24, KO+33 |
| **5000** | **D5.1** | CAR | Climate Assessment Report | LEGOS | K0+18, KO+27, KO+36 |
| **6000** |  |  | Project Management Plan | CGI | Each Progress Meeting |
| **6000** |  |  | Monthly report | CGI | Each month |
| **6000** |  |  | quarterly report | CGI | Each 3 months |
| **6000** |  |  | Minutes of meetings | CGI | For each meeting |
| **6000** |  |  | SL CCI web site | CGI | Monthly update |

## Workbreakdown Structure

The SL CCI project Work Breakdown Structure (WBS) is shown in the figure XX.

The 6 higher level Work Packages (WP1000 to WP 6000) correspond to the Task 1 to Task 6 identified in the SoW. The corresponding WP leaders are mentioned on the WBS.

Apart from the WP 6000 – Project Management, all the other WP are further broken into sub-level WP, as shown on the figure. Each second-level WP is led by a WP leader, identified in the Work Packages Descriptions (WPD), provided in (PSS A20 forms).

# Compliance Statement

1. Issues

|  |  |  |  |
| --- | --- | --- | --- |
| **Chronology Issues:** | | | |
| Issue: | Date: | Reason for change: | Author: |
| 1-0 | 05/11/2010 | Initial Issue | M. Ablain Y. Faugère G. Larnicol |
| 2-0 | 07/08/2010 | Revised by the GAC | DT/AQM |
| 3-0 | 19/12/2012 | Adding ok custom properties | DT/AQM |

1. List of applicable and reference documents

AD Plan d’assurance produit de CLS  
CLS-ED-NT-03-394

AD Applicable Document title  
Document reference

|  |
| --- |
|  |

RD 1 Manuel du processus Documentation  
CLS-DOC

RD Referenced Document title  
Document reference

|  |
| --- |
|  |

1. Key Personnel Curriculum Vitae
2. Work Package Descriptions (PSS A20)
3. List of tables and figures

List of tables:

Table 1= table xxxx for example 2

List of figures:

Figure 1= figure xxxx for example 2

1. List of acronyms

|  |  |
| --- | --- |
| TBC | To be confirmed |
| TBD | To be defined |
| AD | Applicable Document |
| RD | Reference Document |