

**Collaboration Agreement**

**Protocollo d'intesa**

between

tra

La Maddalena Archipelago  
National Park

Parco Nazionale dell'Arcipelago  
di La Maddalena

and

e

CYBERCULTUS

CYBERCULTUS

on behalf of the SENSEA  
Consortium

per conto del Consorzio SENSEA

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**SENSEA Project – Progetto SENSEA**

(Sustainable, Environmental & Safe tourism in protected areas  
*Turismo sostenibile, ambientale e in sicurezza nelle aree protette*)

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THIS AGREEMENT made as of the 5th  
day of April 2013 **BY AND BETWEEN:**

IL PRESENTE ACCORDO è sottoscritto in  
data 5 aprils 2013 **TRA:**

**CYBERCULTUS, on behalf of the SENSEA Consortium composed of Cybercultus, GeoVille, Centre de Recherche Public Gabriel Lippmann and SIEL, whose registered principal office is situated in 25 Rue du Quartier, Esch-sur-Alzette, L-4289 Luxembourg, and is represented by Farid Meinköhn for all the aspects linked to the present collaboration Agreement, (hereinafter party called "CYB")**

**CYBERCULTUS, in nome e per conto del Consorzio SENSEA, composto da Cybercultus, GeoVille, Centre de Recherche Public Gabriel Lippmann e SIEL, la cui sede legale è ubicata in Rue du Quartier 25, Esch-sur-Alzette, L-4289 Luxembourg, rappresentata da Farid Meinköhn per tutti gli aspetti direttamente attinenti al presente protocollo d'intesa, (e di seguito denominata "CYB")**

of the one part

da una parte

**and LA MADDALENA ARCHIPELAGO NATIONAL PARK, whose registered**

**e il PARCO NAZIONALE DELL'ARCHIPELAGO**

**DI LA**

principal office is situated in via Giulio Cesare 7, La Maddalena, Province of Olbia-Tempio, 07024 Italy, and is represented by Giuseppe Bonanno, legal representative of La Maddalena Archipelago National Park Authority (*Ente Parco Nazionale dell'Arcipelago di La Maddalena*, hereinafter party called "PNALM"),

of the other part

**MADDALENA**, la cui sede legale è ubicata in via Giulio Cesare 7, La Maddalena, Provincia di Olbia-Tempio, 07024 Italia, e che è rappresentata da Giuseppe Bonanno in qualità di legale rappresentante dell'Ente Parco (di seguito denominato "PNALM"),

dall'altra parte

WHEREAS, the ARTES 20 IAP (Integrated Applications Promotion) of ESA (European Space Agency) is dedicated to the development, implementation and pilot operations of Integrated Applications of space systems that combine different types of satellites, such as Telecommunications, Earth Observation and Navigation,

CONSIDERATO che il programma ARTES 20 IAP (Integrated Applications Promotion) dell'ESA (Agenzia Spaziale Europea) è dedicato alle operazioni di sviluppo e implementazione e alle attività pilota con riferimento ad applicazioni integrate, per sistemi spaziali che offrono diversi tipi di satelliti, come le telecomunicazioni, osservazione della terra e di navigazione;

WHEREAS, the Party CYB has asked Party PNALM to show its interest and availability to participate to ARTES 20 IAP Programme's Call AO/1-6124/09/NL/US with the SENSE Project, of which a draft was sent to Party PNALM during the month of August, 2012;

CONSIDERATO che la Parte CYB ha chiesto alla parte PNALM di manifestare il suo interesse e la sua disponibilità a partecipare, nell'ambito della Call AO/1-6124/09/NL/US del Programma ARTES 20 IAP, al Progetto SENSE, del quale è stata consegnata alla Parte PNALM, nel mese di agosto 2012, una bozza di lavoro;

WHEREAS, the Party PNALM has shown, on the 30<sup>th</sup> of August, 2012, its preliminary to be involved, with other European and international protected areas, in the SENSE Project,

CONSIDERATO che in data 30 agosto 2012, la Parte PNALM ha manifestato il proprio interesse preliminare, insieme ad altre aree protette europee internazionali, ad essere coinvolto nell'ambito del Progetto SENSE,

WHEREAS, in the months of January and February, 2012, the European Space Agency (ESA) Tender Evaluation Board committee has positively evaluated the SENSE project;

CONSIDERATO che nei mesi di gennaio e febbraio 2012 il Comitato dell'ESA (Agenzia Spaziale Europea) preposto alla valutazione delle proposte progettuali ha valutato positivamente il progetto ESA;

WHEREAS, the European Space Agency (hereinafter referred to as the "Client") has concluded the ESA Contract No. 4000107741/13/NL/NR (hereinafter

CONSIDERATO che l'Agenzia Spaziale Europea (di seguito denominata come "Cliente") ha stipulato il contratto n. 4000107741/13/NL/NR (di seguito

referred to as the “Contract”) with Cybercultus, on behalf of the SENSE Consortium, for the conception, implementation and pilot testing of the SENSE Environment;

WHEREAS, the Parties have agreed to their mutual benefit to collaborate and act as a team for the purpose of executing their respective contributions to SENSE project;

NOW, THEREFORE, to effectuate the foregoing, in consideration of the mutual covenants and Agreements herein set forth, each of the Parties agree with each other:

## 1. Collaboration scope

The present collaboration Agreement covers activities and contributions to be provided by the Party PNALM in support to the environmental & ecotourism SENSE requirements, to the awareness and best practices definition and to the organisation of SENSE field trials in the La Maddalena Archipelago National Park, as follows:

- ✓ Specification of environmental, safety, and ecotourism user requirements;
- ✓ Specification of environmental, safety, and ecotourism awareness and best practices;
- ✓ Collecting and delivering existing geo-localized environmental, safety, and ecotourism information from La Maddalena Archipelago National Park;
- ✓ Securing the local logistic needed for organizing field trials in La Maddalena Archipelago National Park (ex: access by the travellers to the park, access to planned travel

denominato “Contratto”) con Cybercultus, in nome e per conto del Consorzio SENSE, per l’ideazione, l’implementazione e la sperimentazione della piattaforma SENSE;

CONSIDERATO che le parti acconsentono, a proprio beneficio, a collaborare e ad agire come gruppo di lavoro nell’esecuzione dei rispettivi compiti all’interno del Progetto SENSE;

TUTTO CIO’ PREMESSO, al fine dare applicazione a quanto sopra e in considerazione del reciproco impegno e della necessità di definire un apposito Protocollo d’intesa, ciascuna delle parti concorda su quanto segue:

## 1. Finalità della collaborazione

Il presente Protocollo d’intesa riguarda attività e contributi che il PNALM dovrà fornire a supporto dei requisiti ambientali e afferenti all’ecoturismo della piattaforma SENSE, alla consapevolezza e alla definizione delle “best practice” e all’organizzazione dei test sul campo nel Parco Nazionale dell’Arcipelago di La Maddalena, come di seguito dettagliati:

- ✓ Definizione dei “prerequisiti utente” di carattere ambientale, di sicurezza e afferenti all’ecoturismo;
- ✓ Definizione della consapevolezza in ambito ambientale, di sicurezza e afferente all’ecoturismo, nonché relative “best practice” in materia;
- ✓ Acquisizione e messa a disposizione delle esistenti informazioni georeferenziate in ambito ambientale, di sicurezza e afferente all’ecoturismo;
- ✓ Garantire la necessaria logistica nell’organizzazione dei test sul campo nel Parco Nazionale dell’Arcipelago di La Maddalena (ad esempio, garantire l’accesso dei

itineraries in the park, installation of the communication infrastructure, using the SENSE Preservation Platform);

- ✓ Evaluation of the results and findings stemming from the field trials / demonstrators in La Maddalena Archipelago National Park (ex: experience reported by the parks managers, difficulties encountered, enhancement suggestions, recommendations, etc.);
- ✓ Participation to the SENSE Exploitation Plan definition

visitatori al Parco, l'accesso agli itinerari programmati, installazione dell'infrastruttura necessaria per le comunicazioni e utilizzo della Piattaforma SENSE);

- ✓ Valutazione dei risultati e delle risultanze derivanti dai test sul campo / attività di dimostrazione nel Parco Nazionale dell'Arcipelago di La Maddalena (ad esempio, situazioni segnalate dagli amministratori dell'Ente Parco, difficoltà incontrate, suggerimenti circa miglioramenti, raccomandazioni, etc.);
- ✓ Partecipazione alla definizione del Piano di utilizzo di SENSE

The Party CYB and the SENSE Consortium will provide the Party PNALM with the detailed SENSE project description documents as well as with the use during the project of the SENSE maps and facilities to be implemented by the SENSE Consortium as needed by the Party PNALM for the implementation of their collaboration activities under the present Agreement, such as the GIS (Geographical Information System) maps to be generated by the Centre de Recherche Public Gabriel Lippmann, the SENSE Preservation Platform to be implemented by GeoVille and the SENSE Eco-Tourism Platform to be implemented by Cybercultus.

La parte CYB e il Consorzio SENSE forniranno alla Parte PNALM tutta la dettagliata documentazione afferente al progetto, così come l'utilizzo delle mappe SENSE e le strutture che saranno implementate dal Consorzio SENSE e che si renderanno necessarie alla Parte PNALM per garantire l'implementazione delle attività di collaborazione nell'ambito del presente Protocollo d'intesa, come ad esempio le mappe GIS (Sistema Informativo Geografico) che saranno generate dal Centre de Recherche Public Gabriel Lippmann, la Piattaforma di Tutela SENSE, che sarà implementata da GeoVille e la Piattaforma di Ecoturismo SENSE che sarà implementata da Cybercultus.

The detailed descriptions of the activities involving the Party PNALM are specified in Annex A (*in English only*).

La descrizione dettagliata delle attività che coinvolgeranno la parte PNALM sono specificate nell'Annex A (*disponibile in sola lingua inglese*).

## **2. Equipment acquisition and subscriptions**

## **2. Acquisto delle attrezzature e abbonamenti ai servizi**

Under the present Agreement the Party PNALM will be responsible for the acquisition, when not already available,

Ai sensi del presente Protocollo d'intesa, la Parte PNALM avrà a proprio carico l'acquisizione, qualora non altrimenti

and for organising the delivery / installation, as needed, for carrying out the collaboration activities of the Party PNALM, of the following equipment and subscriptions:

- a) 1 workstation (PC or laptop)
- b) 1 smartphone + communication costs
- c) 1 GPS tracking device + 1 year subscriptions
- d) 1 Astra2Connect satellite terminal + 1 year subscription

With the foreseen maximum budget for the acquisition, installation & subscription of the elements in “b”+“c”+“d” being of €5.560.

The exact models of the equipment to be purchased will be decided jointly by the two parties during the course of the project; for the workstation an onsite available computer connected to the Internet will be sufficient.

### 3. Planned workshops

Three workshops will be planned during the course of the project and attendance by an English-fluent representative from PNALM will be required, as well as the attendance of the representatives of the SENSE Consortium Partners.

Planned workshop costs are estimated in a total of € 3.000.

The following three workshops are planned:

**The Workshop 1** at the start of the project will be in the premises of one of the SENSE partners (in Luxembourg or Austria) and intends to enable the Parks entities (PEACE Parks Foundation & Kgalagadi Transfrontier Park, PAN Parks Foundation & Peneda-Gerês National

disponibile, e la distribuzione / installazione, necessaria per svolgere le attività di collaborazione a proprio carico, del seguente materiale e abbonamenti a servizi:

- a) 1 postazione informatica (PC o notebook)
- b) 1 smartphone + costi di comunicazione
- c) 1 apparecchio di tracking GPS + 1 abbonamento annuale
- d) 1 terminale satellitare Astra2Connect + abbonamento annuale.

Il budget massimo per costi di cui ai punti “b”, “c” e “d” è fissato in € 5.560.

I modelli esatti delle attrezzature che dovranno essere saranno definiti congiuntamente dalle due parti nel corso del progetto; per quanto concerne la postazione informatica, sarà sufficiente disporre sul posto di un computer collegato ad internet.

### 3. Partecipazione a workshop

Nel corso del progetto è previsto lo svolgimento di tre workshop ed è richiesta la partecipazione di un delegato, con ampia conoscenza della lingua inglese (lingua di lavoro) del PNALM, così come la partecipazione di delegati dei partner del Consorzio SENSE.

I costi di partecipazione ai tre workshop sono stimati in un totale di € 3.000

E' previsto lo svolgimento dei seguenti tre workshop:

Il **Workshop 1** avrà luogo all'inizio del progetto e si terrà nei locali di uno dei partner SENSE (in Lussemburgo o Austria); ha lo scopo di garantire alle istituzioni legate al settore delle aree protette (PEACE Parks Foundation & Kgalagadi Transfrontier Park, PAN

Park, La Maddalena Archipelago National Park) to meet the SENSE Consortium Partners, to better understand the detailed undertakings of the project and to engage into knowledge exchange processes in a physical 2 days meeting, with a clear focus on User Requirements Specifications

**The Workshop 2** will be organized in one of the participating European Parks (presumably in Portugal) with the participation of all the SENSE Consortium Partners and all the Parks Entities and will focus on the deployment phase of the SENSE Platform and on organizing the demo phase. The meeting is planned to take place at around T0+18 and will have a duration of two days. It will address issues such as third party equipment to be procured and installed by the parks, mastering and familiarization with the use of the SENSE facilities by the Park Managers, local administrative and logistic issues, organization of the planned trips, safety concerns, etc.

**The Workshop 3** will be organized in the participating South African PEACE Park Foundation or Kgalagadi Transfrontier Park (in South Africa) with the participation of the SENSE Consortium Partners and all the Parks Entities and will focus on the evaluation of the Alpha and Beta Demonstrators with debriefing sessions and field facts finding undertakings. The meeting will take place at around T0+29 and will have a duration of 3 days. The aim would be to agree on what was positive, what needs to be improved, what needs to be changed in preparation of the next operational /roll out phase of the post ESA project.

Parks Foundation & Peneda-Gerês National Park, Parco Nazionale dell'Arcipelago di La Maddalena) di incontrare i partner del Consorzio SENSE, al fine di comprendere in dettaglio le finalità del progetto e di impegnarsi in un scambio di conoscenze, in un meeting di due giorni, in cui argomento sarà la definizione dei prerequisiti utente

Il **Workshop 2** sarà organizzato in uno dei parchi europei partecipanti (presumibilmente, in Portogallo) con la partecipazione dei Partner del Consorzio SENSE e le istituzioni legate alle aree protette, ed avrà ad oggetto la fase di distribuzione della Piattaforma SENSE e l'organizzazione della fase dimostrativa. Il meeting è programmato all'incirca al diciottesimo mese di avvio del progetto ed avrà una durata di due giorni; saranno definiti aspetti quali l'acquisto e l'installazione, da parte dei parchi, delle attrezzature di terze parti, l'approfondimento e l'apprendimento nell'uso delle strutture SENSE da parte dei gestori dei parchi, questioni di carattere amministrativo e logistico, l'organizzazione dei viaggi, aspetti legati alla sicurezza, etc.

Il **Workshop 3** sarà organizzato presso la South African PEACE Park Foundation o nel Kgalagadi Transfrontier Park (in Sud Africa) con la partecipazione dei partner del Consorzio SENSE e le istituzioni legate alle aree protette, ed avrà quale argomento la valutazione delle fasi di dimostrazione Alfa e Beta con sessioni di debriefing e analisi delle risultanze dei test sul campo. Il meeting dovrà tenersi attorno al ventinovesimo mese dall'inizio del progetto ed avrà una durata di tre giorni. Lo scopo dovrebbe consistere nel definire gli aspetti positivi del progetto, quali devono essere migliorati, quali devono essere

modificati nell'ottica di una successiva fase operativa successiva al Progetto ESA.

#### **4. Confidentiality Conditions**

The Party PNALM shall not at any time either during or after the termination of this Agreement divulge either directly or indirectly any confidential information it may have acquired during their collaboration with the SENSE project without the written consent of the Party CYB.

The Party CYB shall not at any time either during or after the termination of this Agreement divulge either directly or indirectly any confidential information it may have acquired during its collaboration with the Party PNALM without the written consent the Party PNALM.

Information classified as public by either party may be divulged and disseminated following mutual consent.

#### **5. Financial Conditions**

A budget of 20 000 EUR has been set aside by the SENSE Consortium (Party CYB, Centre de Recherche Public Gabriel Lippmann and SIEL) to the Party PNALM in support of their collaboration with the SENSE Project. This budget of 20 000 EUR will cover expenses related to the equipment acquisition and subscriptions specified in article 2 of this Agreement, as well as the travel expenses and human resources. The payment of the 20 000 EUR will be carried out along 4 instalments plan as follows.

#### **4. Clausola di non divulgazione**

La Parte PNALM non può, in alcun momento, sia durante che dopo la cessazione del presente accordo, divulgare, direttamente o indirettamente, le informazioni riservate che può aver acquisito durante la sua collaborazione con il progetto SENSE senza il consenso scritto della Parte CYB.

La Parte CYB non può, in alcun momento, sia durante che dopo la cessazione del presente accordo, divulgare, direttamente o indirettamente, le informazioni riservate che può aver acquisito durante la sua collaborazione con la Parte PNALM senza il consenso scritto della Parte PNALM.

Le informazioni classificate come pubbliche da entrambe le parti possono essere divulgate e diffuse a seguito di comune accordo.

#### **5. Condizioni finanziarie**

Un budget di € 20.000 (ventimila/00) è stato accantonato dal Consorzio SENSE (Parte CYB, Centre de Recherche Public Gabriel Lippmann e SIEL) alla Parte PNALM a sostegno della sua collaborazione con il progetto SENSE. Il bilancio di 20.000 euro coprirà le spese relative all'acquisizione di apparecchiature e abbonamenti di cui all'articolo 2 del presente accordo, nonché le spese di viaggio e delle risorse umane. Il pagamento di 20.000 euro sarà effettuato con versamento di 4 rate

programmato nel modo seguente.

Invoices or a declaration signed by the Park's Director will be required for each instalment payment.

L'emissione di una fattura o di una dichiarazione firmata dal Direttore del Parco si renderà necessaria per ogni pagamento.

<b>Payment Plan</b>	<b>Month 3</b> <i>(advance payment)</i>	<b>Month 16 +1</b> <i>(after WP205)</i>	<b>Month 24 +1</b> <i>(after 1st pilot)</i>	<b>Month 30 +1</b> <i>(after 2nd Pilot)</i>	<b>TOTAL</b>
La Maddalena Archipelago National Park allocated amounts per payment milestone	6 000,00 €	4 000,00 €	5 000,00 €	5 000,00 €	20 000,00 €

## **6. Validity of Agreement**

This Agreement will be valid from the date of its signature between the Party CYB and the PARTY PNALM and will remain valid until the official end of the SENSEA Contract (ESA Contract No. 4000107741/13/NL/NR), currently planned for September 2015, whilst the article 3 (Confidentiality Conditions) will remain valid 3 years after the end of the SENSEA Contract.

## **6. Validità dell'accordo**

Il presente accordo sarà valido a partire dalla data della sua firma tra la Parte CYV e la Parte PNALM e rimarrà valido fino alla fine ufficiale del Contratto SENSEA (Contratto ESA n 4000107741/13/NL/NR), attualmente prevista per il mese di settembre 2015 mentre l'articolo 3 (condizioni di riservatezza) sarà valido fino a 3 anni dopo la fine del contratto SENSEA.

## **7. Law and Settlements of Disputes**

This Agreement is subject in all respects to the Luxembourg Law.

All disputes arising in connection with this Agreement and which cannot be settled by mutual Agreement shall be settled finally by the Competent Courts in Luxembourg.

## **7. Legge e composizione di qualsiasi controversia**

Il presente Accordo è soggetto a tutti gli effetti alla legge lussemburghese.

Tutte le controversie che dovessero insorgere in relazione al presente accordo e che non possono essere risolte di comune accordo sarà risolta definitivamente dai tribunali competenti in Lussemburgo.

## **8. Termination**

If the SENSEA Contract is terminated by the Client (European Space Agency), then the Party CYB may at any time thereafter

## **8. Cessazione**

Qualora il contratto SENSEA fosse risolto dal Cliente (Agenzia spaziale europea), la Parte CYV può in qualsiasi momento

terminate the present Agreement forthwith by notice in writing to Party PNALM.

recedere dal presente accordo con notifica per iscritto alla Parte PNALM.

If for any reason whatsoever, including "force majeure", the Party PNALM cannot accomplish their collaboration duties as defined under the present Agreement, then the Party CYB may at any time thereafter terminate the present Agreement forthwith by notice in writing to Party PNALM.

Qualora per qualsiasi motivo, incluse le cause di forza maggiore, la Parte PNALM non fosse in grado di realizzare i suoi compiti di collaborazione come definito ai sensi del presente accordo, la Parte CYB può, in qualsiasi momento, receder dal presente accordo con notifica per iscritto al Partito PNALM.

If for any reason whatsoever, including "force majeure" the Party CYB cannot accomplish its collaboration duties as defined under the present Agreement, then the Party PNALM may at any time thereafter terminate the present Agreement forthwith by notice in writing to Party CYB.

Qualora per qualsiasi motivo, incluse le cause di forza maggiore, la Parte CYB non fosse in grado di assolvere ai propri obblighi di collaborazione come definiti ai sensi del presente accordo, la Parte PNALM può, in qualsiasi momento, recedere dal presente accordo con notifica per iscritto al Partito CYB.

Should the Party PNALM not be able, following the reception by the Party PNALM of the advanced payment from the Party CYB, for any reason whatsoever, including "force majeure", to accomplish their collaboration duties for the first "User Requirements" phase of the SENSEA project, as defined under the present Agreement, then the Party PNALM should return the advanced payment received to the Party CYB.

Qualora la Parte PNALM non fosse in grado, successivamente alla ricezione del pagamento anticipato dalla Parte CYB, per qualsiasi motivo, tra cui le cause di forza maggiore, di adempiere ai propri doveri di collaborazione nella prima fase di definizione dei "Prerequisiti utente" del SENSEA progetto, come definito ai sensi del presente accordo, la Parte PNALM è tenuta a restituire l'acconto ricevuto dalla Parte CYB.

## **9. General**

## **9. Varie ed eventuali**

This Agreement may not be assigned or otherwise transferred by any party, in whole or in part, without the express prior written consent of the other party.

Il presente accordo non potrà essere ceduto o trasferito da alcuna delle due parti, in tutto o in parte, senza il previo consenso scritto dell'altra parte.

In case the Ministry of Environment of Italy, in the execution of its powers of supervision on the Park authority (Party PNALM), indicates that modifications to the this Agreement shall be carried out, both parties agree to modify this Agreement in order to satisfy its indications.

Qualora, a seguito dell'esercizio dell'attività di vigilanza sull'Ente Parco (Parte PNALM), il Ministero dell'ambiente italiano indichi modifiche da apportare al presente accordo, le parti sono d'accordo nel modificare il presente Accordo al fine di recepire le indicazioni.

No provision of this Agreement may be waived except in writing by the party whose rights are affected. This Agreement may not be amended except in writing executed by all parties involved.

Nessuna disposizione del presente accordo può essere revocata se non per iscritto dalla Parte i cui diritti sono lesi. Questo accordo non può essere modificato se non per iscritto da tutte le parti coinvolte.

No purported variation of the present Agreement shall take effect unless made in writing and signed by an authorised representative of each party.

Nessuna variazione presunta del presente accordo entrerà in vigore se non in forma scritta e firmata da un rappresentante autorizzato di ciascuna parte.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorised representatives, as of the date first set forth above.

A TESTIMONIANZA DI QUANTO SOPRA, le parti danno atto che l'accordo è efficace a seguito della firma dei loro rappresentanti debitamente autorizzati, a partire dalla data sopra indicata.

For / per CYB

For / per PNALM

Name/Nome: Farid Meinköhn  
Title/Titolo: CEO

Name/Nome: Giuseppe Bonanno  
Title/Titolo: President/Presidente

Date/Data:

Date/Data:

Signature/Firma: .....

Signature/Firma: .....

## ANNEX A

This Annex A specifies the « Workpackages » from the SENSE project in which the Party PNALM will be involved and collaborating with the SENSE Consortium and with the other collaborating Parks Organisations.

### a) Workpackage list and associated participating partners:

<b>Workpackage</b>	<b>Partners involved</b>
<b>WP 100: System Specification</b>	<b>Leader: SIEL</b>
<i>WP 101: Scenario Specification</i>	<i>SIEL &amp; Natural Parks</i>
<i>WP 102: User Needs &amp; Requirements</i>	<i>SIEL &amp; Natural Parks, All Partners</i>
<i>WP 103: Functional &amp; System Requirements</i>	<i>CRP-Gabriel Lippmann, Cybercultus, GeoVille, SIEL &amp; Natural Parks</i>
<i>WP 104: System Architecture &amp; Validation Plan</i>	<i>GeoVille, Cybercultus, CRP - Gabriel Lippmann</i>
<b>WP 200: Environmental and Ecotourism Mapping</b>	<b>Leader: CRP - Gabriel Lippmann</b>
<i>WP 201: Mapping Methodology &amp; Processes Definition</i>	<i>CRP-Gabriel Lippmann</i>
<i>WP 202: Protected Areas Mapping</i>	<i>CRP-Gabriel Lippmann, Natural Parks, GeoVille</i>
<i>WP 203: Risk Areas Mapping</i>	<i>CRP-Gabriel Lippmann, Natural Parks, GeoVille</i>
<i>WP 204: Ecotourism Areas Mapping</i>	<i>CRP-Gabriel Lippmann, Natural Parks, GeoVille</i>
<i>WP 205: Geo-localised Awareness &amp; Best practices</i>	<i>SIEL &amp; Natural Parks</i>
<b>WP 300: Background Information Customisation</b>	<b>Leader: GeoVille</b>
<i>WP 301: Customisation of the EO / GIS facilities</i>	<i>GeoVille</i>
<i>WP 302: Customisation of the Online Travel facilities</i>	<i>Cybercultus</i>
<b>WP 400: Foreground Information Development</b>	<b>Leader: Cybercultus</b>
<i>WP 401: Environmental Distribution &amp; Reporting Tools</i>	<i>GeoVille</i>
<i>WP 402: Location based Observation &amp; Awareness Tools</i>	<i>Cybercultus</i>
<b>WP 500: System integration and Deployment</b>	<b>Leader: GeoVille</b>
<i>WP 501: Background &amp; Foreground Integration</i>	<i>GeoVille, Cybercultus</i>
<i>WP 502: SENSE Environment Deployment</i>	<i>Cybercultus, GeoVille, SIEL &amp; Natural Parks</i>
<i>WP 503: Technical Support and Enhancements</i>	<i>GeoVille, Cybercultus</i>
<b>WP 600: Running Pilot Demonstrators</b>	<b>Leader: SIEL</b>
<i>WP 601: Running Alpha Demonstrator</i>	<i>SIEL &amp; Natural Parks</i>
<i>WP 602: Running Beta Demonstrator</i>	<i>SIEL &amp; Natural Parks</i>
<b>WP 700: Demonstrators Evaluation</b>	<b>Leader: SIEL</b>
<i>WP 701: Evaluation Methodology</i>	<i>CRP-Gabriel Lippmann</i>
<i>WP 702: Alpha Demonstrator Evaluation</i>	<i>SIEL &amp; Natural Parks</i>
<i>WP 703 Beta Demonstrator Evaluation</i>	<i>SIEL &amp; Natural Parks</i>
<b>WP 800: Exploitation Plan</b>	<b>Leader: Cybercultus</b>
<i>WP 801: Strategic Plan</i>	<i>All Partners</i>
<i>WP 802: Exploitation Agreement</i>	<i>All Partners</i>
<i>WP 803: Dissemination</i>	<i>All Partners</i>
<b>WP 900: Project Management</b>	<b>Leader: Cybercultus</b>
<i>WP 901: Project Planning</i>	<i>All Partners</i>
<i>WP 902: Project Control</i>	<i>All Partners</i>
<i>WP 903: Project Reporting</i>	<i>All Partners</i>

**Note:** in the Column “Partners Involved” of the above table the expression « Natural Parks » refers to PAN Parks Foundation & Peneda-Gerês National Park, PEACE Parks Foundation & Kgalagadi Transfrontier Park, and La Maddalena Archipelago National Park.

**b) SENSE Workpackages detailed description:**

WP 101 : Scenario Specification

PROJECT: SENSEA	WP REF: 101
<p>WP Title: WP 101 - Scenario Specification</p> <p>Contractor: Cybercultus</p> <p>Start event: Kick off meeting                      Planned Date: T0+0          End Event: Scenario Specification                      Planned Date: T0+3</p> <p>WP Manager: B. De Greef (SIEL)</p>	<p>Sheet: 1 of 27</p> <p>Issue Ref: SENSE FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: To identify and generate a set of typical use &amp; interaction scenarios of the SENSE platform by the key field actors and end-users (<i>Protected Areas Management Authorities the Travel Operators, Travel Services Providers and the Travellers</i>).</p> <p>Inputs: SENSE Proposal</p> <p>Tasks: Elaborating and specifying typical field scenarios for the use of the SENSE facilities by the different SENSE actors and identifying the typical operational interactions between those different SENSE actors. Care will be taken to portray real cases usage scenarios by the different actors in order to identify what sort of concrete contexts the different actors are faced with and what sorts of solutions could be provided by the SENSE facilities.</p> <p>Tasks excluded: No pilot at this stage</p> <p>Output / Deliverable:</p> <ul style="list-style-type: none"> <li>• D 101 SENSE Field Use Scenarios (report)</li> </ul>	

WP 102 : User Needs & Requirements

<p>PROJECT: SENSA</p>	<p>WP REF: 102</p>
<p>WP Title: WP102 – User Needs &amp; Requirements</p> <p>Contractor: Cybercultus</p> <p>Start event: Use Scenario Overview                      Planned Date: T0+2          End Event: User Needs &amp; Requirements                      Planned Date: T0+</p> <p>WP Manager: B. De Greef (SIEL)</p>	<p>Sheet: 2 of 27</p> <p>Issue Ref: SENSA FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: to specify the user needs and requirements of the different SENSA field actors and end-users (<i>Protected Areas Management Authorities, the Travel Operators, Travel Services Providers and the Travellers</i>).</p> <p>Inputs: Background components and facilities (Trip à la Carte travel platform, RegioCover Image Processing tools, Satellite Earth Observation data sources, GIS data sources), Scenario specification</p> <p>Tasks: Analysing the needs and requirements of the different actors in a SENSA chain, namely those of the Protected Areas Organizers, of the Ecotourism Travel Operators, and of the Travellers. Also indirectly associated stakeholders needs &amp; requirements will be looked at such as public environmental protection and sustainable development authorities, as well as the local providers of ecotourism services. A mapping between the User Requirements and User Needs will be performed.</p> <p>Tasks excluded: No pilot at this stage</p> <p>Output / Deliverable:</p> <ul style="list-style-type: none"> <li>• D 102-1 SENSA User Needs (report)</li> <li>• D 102-2 SENSA User Requirements (report)</li> </ul>	

WP 103 : Functional & System Requirements

<p>PROJECT: SENSA</p>	<p>WP REF: 103</p>
<p>WP Title: WP 103 - Functional &amp; System Requirements</p> <p>Contractor: Cybercultus</p> <p>Start event: User Requirements &amp; Scenario      Planned Date: T0+4          End Event: Functional &amp; System Requirements      Planned Date: T0-</p> <p>WP Manager: F. Meinköhn (Cybercultus)</p>	<p>Sheet: 3 of 27</p> <p>Issue Ref: SENSA FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: to identify and specify all SENSA platform functionalities and system requirements</p> <p>Inputs: Use scenarios, user needs &amp; requirements</p> <p>Tasks: Specifying all the core functionalities of the SENSA platform and facilities . For each stakeholder of the SENSA environment a set of system functions will be established. The functions will also be linked to the targeted infrastructure contexts (in an office, on the move, in the openwilderness, etc.). The system and software requirements will be identified and established for the different facilities of the SENSA environment and a mapping between the System Requirements and User Requirements will be performed.</p> <p>Tasks excluded: No pilot at this stage</p> <p>Output / Deliverable:</p> <ul style="list-style-type: none"> <li>• D 103 SENSA Platform Functional &amp; System Requirements (report)</li> </ul>	

## WP 202 : Protected Areas Mapping

<p>PROJECT: SENSEA</p>	<p>WP REF: 202</p>
<p>WP Title: WP 202 : Protected Areas Mapping</p> <p>Contractor: Cybercultus</p> <p>Start event: User Requirements &amp; Scenario, Mapping Methodology &amp; Processes Planned Date: T0+</p> <p>End Event: Protected Areas Mapping Planned Date: T0+15</p> <p>WP Manager: M. Schlerf (CRP – Gabriel Lippmann)</p>	<p>Sheet: 6 of 26</p> <p>Issue Ref: SENSEA FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: to map the landscape, fauna and vegetation of the SENSEA participating Protected Areas, with a focus on environmental protection and ecotourism activities.</p> <p>Inputs: Satellite Earth Observation data, Parks Own Data</p> <p><b>Task 202-1: Land cover (landscape) mapping</b> The landscape will be mapped into coarse land cover classes using an unsupervised procedure. Image classes will be assigned following a visual assessment of the images using contextual information.</p> <p><b>Task 202-2: Vegetation mapping</b> Vegetation mapping will include field data collection (according to the existing sampling design), image classification and interpretation and map construction but also existing data sets and ecological mapping. Qualitative and quantitative vegetation attributes , percentage cover, presence/absence of species and habitats, dominant species, etc.) will be used (if existing) or collected for different strata and classified into suitable vegetation/habitat classes. Maps will be classified, interpreted and finally their accuracy will be assessed.</p> <p><b>Task 202-3: Fauna mapping</b> At biodiversity hotspots, key animal species will be mapped through reporting from Park staff, tourists (WP 402) and existing data sets using available EO data and maps (target and endangered species), environmental layers (e.g., DEM) and presence/absence field observations (collected by the parks or from available database or new observations).. By integrating tourists' information on detected animal species, potential habitats of these species can be visualized The occurrence probability of the species can be an important information for the tourists interested in animal watching. Additionally, reported animals for only a recent time period can be visualised and the tourist to have a higher chance to see animals in the Park.</p> <p>Tasks excluded: No pilot at this stage</p>	

Output / Deliverable:	
<ul style="list-style-type: none"> <li>D 202 Protected Areas Mapping (GIS Maps)</li> </ul>	

### WP 203 : Risk Areas Mapping

PROJECT: SENSA	WP REF: 203
WP Title: WP 203 : Risk Areas Mapping	Sheet: 7 of 26
Contractor: Cybercultus	
Start event: User Requirements & Scenario, Mapping Methodology & Processes Planned Date: T0+6	Issue Ref: SENSA FP
End Event: Risk Areas Mapping Planned Date: T0+15	Issue Date: 9/10/2012
WP Manager: M. Schlerf (CRP - Gabriel Lippmann)	
<p>Objective: to map areas that potentially could represent a safety risk, both in terms of landscape (ex: potential flooding areas, ancient mines, landslide areas, frozen lakes, etc.) and in terms of fauna (ex: bears, snakes tigers, etc.)</p> <p>Inputs: Satellite Earth Observation data, Parks Own Data, Other sources</p> <p><b>Task 203-1: Maps indicating potential natural hazards</b> High resolution earth observation data and elevation models provide important information on different environmental attributes (e.g. floodings, snow, slope steepness, geological unit for landslide hazards). Together with existing maps and the expertise of the Nature Park management, risk zones are defined.</p> <p><b>Task 203-2: Maps indicating the potential occurrence of selected animal species</b> Tourists and management of the Park have the possibility to mark areas or points (described in WP 402), where they saw dangerous species (poisonous plants or dangerous animals). The expertise of the Park management in combination with this occurrence data and satellite data allow the mapping of areas with high and low risk. If sufficient species data is available, species distribution models (e.g. MAXENT) can additionally produce species distribution maps.</p>	

Tasks excluded: No pilot at this stage	
Output / Deliverable: <ul style="list-style-type: none"> <li>D 203 Risk Areas Mapping (GIS Maps)</li> </ul>	

#### WP 204 : Ecotourism Areas Mapping

PROJECT: SENSEA	WP REF: 204
WP Title: WP 204 : Ecotourism Areas Mapping Contractor: Cybercultus	Sheet: 8 of 26
Start event: User Requirements & Scenario, Mapping Methodology & Processes Planned Date: T0+	Issue Ref: SENSEA FP
End Event: Ecotourism Areas Mapping T0+15 Planned Date:	Issue Date: 9/10/2012
WP Manager: M. Schlerf (CRP – Gabriel Lippmann)	
Objective: to map the ecotourism dimension of the protected areas (environmental preservation levels, accessible trail, activities to be pursued, available shelters, infrastructure, local services, etc.)  Inputs: Parks Own Data, Other sources  <b>Task 204-1: Ecotourism mapping</b> High resolution maps of the natural parks will provide relevant infrastructural and touristic information for the traveller. Information provided will include environmental constraints, points of interests, available tourism infrastructure, transport network (car, bike, boat, kayak, on foot, etc.), available touristic activities and local services providers. Existing GIS data layers will be complemented by on-site data collection. For instance, hiking tracks will be traced by walking the tracks with a high accuracy DGPS device. The final product can additionally contain alternatively high resolution satellite data instead of only having a map, which can help for orientation in the Park (like Google Maps). Therefore the satellite data will be prepared and combined with other GIS data.  Tasks excluded: No pilot at this stage	

Output / Deliverable:	
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- D 204 Ecotourism Areas Mapping (GIS Maps)

WP 205 : Geo-localized Awareness & Best Practices

<p>PROJECT: SENSA</p>	<p>WP REF: 205</p>
<p>WP Title: WP 205 : Geo-localized Awareness &amp; Best Practices</p> <p>Contractor: Cybercultus</p> <p>Start event: User Requirements &amp; Scenario, Mapping Methodology &amp; Processes Planned Date: T0+6</p> <p>End Event: Geo-localized Awareness &amp; Best Practices Planned Date: T0+15</p> <p>WP Manager: Bruno De Greef (SIEL)</p>	<p>Sheet: 9 of 26</p> <p>Issue Ref: SENSA FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: to collect, to geo-localize, and to organise all the environmental and ecotourism awareness content and best practices linked to the protected areas of the SENSA project.</p> <p>Inputs: User Requirements and Scenarios</p> <p>Tasks: Collecting from different relevant sources environmental and best practice content linked to the targeted protected areas, organizing them into different thematic, editing them into multimedia presentations and geo-localising them.</p> <p>Tasks excluded: No pilot at this stage</p> <p>Output / Deliverable:</p> <ul style="list-style-type: none"> <li>D 205 Geo-localised Awareness &amp; Best Practices Content (Multimedia assets)</li> </ul>	



## WP 601 : Running Alpha Demonstrator

<p>PROJECT: SENSEA</p>	<p>WP REF: 601</p>
<p>WP Title: WP 601 : Running Alpha Demonstrator</p> <p>Contractor: Cybercultus</p> <p>Start event: Deployed SENSEA Environment Planned Date: T0+20 End Event: Alpha Demonstrator Ended Planned Date: T0+24</p> <p>WP Manager: Bruno De Greef (SIEL)</p>	<p>Sheet: 16 of 26</p> <p>Issue Ref: SENSEA FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: to run for 4 months the entire SENSEA environment in a full field context with the Natural Parks and the Tour Operators involved and to report back to the SENSEA technical partners any conceptual and technical issues encountered.</p> <p>Inputs: Integrated SENSEA Preservation and Ecotourism Platforms</p> <p>Tasks: an ALPHA pilot scenario will be established and run with 3 groups of Travellers between 2 to 6 members each (average 5 tourists). The 3 groups will stem from the Travel Operators organised multiday trips to the 3 protected areas / natural parks, whilst two additional "single day visitors" groups (2 * 10 tourists in all) will be selected by the 2 European parks from "on the site" visitors to the protected areas. The Travellers / Parks Visitors will be fully equipped with the SENSEA devices and applications. Reporting of the pilot finding from the different involved actors will be performed. In particular any functional, technical and usability shortcomings will be reported.</p> <p>Tasks excluded: No evaluation here.</p> <p>Output / Deliverable:</p> <ul style="list-style-type: none"> <li>• D 601 Running Alpha Demonstrator (Pilot)</li> </ul>	

WP 602 : Running Beta Demonstrator

<p>PROJECT: SENSEA</p>	<p>WP REF: 602</p>
<p>WP Title: WP 602 : Running Beta Demonstrator</p> <p>Contractor: Cybercultus</p> <p>Start event: Finalised Alpha Demonstrator   Planned Date: T0+25 End Event: Beta Demonstrator Ended           Planned Date: T0+30</p> <p>WP Manager: B. De Greef (SIEL)</p>	<p>Sheet: 17 of 26</p> <p>Issue Ref: SENSEA FP</p> <p>Issue Date: 9/10/2012</p>
<p>Objective: to run for 6 months the entire SENSEA environment in a “near commercial exploitation” setting with the Natural Parks and the Tour Operators involved and to report back the findings</p> <p>Inputs: Integrated SENSEA Preservation and Ecotourism Platforms</p> <p>Tasks: a BETA pilot scenario will be established and run with 3 groups of Travellers between 2 to 6 members each (average 5 tourists).</p> <p>The 3 groups will stem from the Travel Operators organised multiday trips to the 3 protected areas / natural parks, whilst two additional “single day visitors” groups (2 * 10 tourists in all) will be selected by the 2 European parks from “on the site” visitors to the protected areas.</p> <p>The Travellers / Parks Visitors will be fully equipped with the SENSEA devices and applications. Reporting of the pilot findings from the different involved actors will be performed. In particular system performance, reliability, usability and added value will be looked at, with a commercial exploitation in sight.</p> <p>Tasks excluded: No evaluation here.</p> <p>Output / Deliverable:</p> <ul style="list-style-type: none"> <li>• D 602 Running Beta Demonstrator (Pilot)</li> </ul>	





