SERVICE LEVEL AGREEMENT RELATED TO THE RE-COVER PROJECT

First project year

This agreement is concluded between VTT Technical Research Centre of Finland, Finland on behalf of the Re-Cover project consortium, hereafter referred to as the Service Provider, and Comision Nacional Forestal (CONAFOR) (Forestry Inventory and Geomatics Department), hereafter referred to as the User for the duration of three years with annual service revision and starting from the project kick-off date (to be defined in the approved project). The project lifecycle will be three years.

The agreement will be applicable only if the project proposal results in a grant agreement with the EC. In case of conflict between this Service Level Agreement and the project grant agreement with the EC, the latter will apply.

This Service Level Agreement specifies in transparent and measurable terms the services to be provided, including quality requirements, and the obligations of the Service Provider and of the User respectively.

1. Service description

The Re-Cover project provides pilot services that support efforts to curb deforestation and forest degradation with a particular reference to the REDD (Reducing Emissions from Deforestation and forest Degradation) mechanism. The services use satellite, airborne and *in-situ* data. The services that are funded from the European Commission's and participating organizations' research budgets reach beyond the state-of-the-art, which emphasizes their pilot nature. In addition to strictly serving the monitoring of deforestation and forest degradation, the services will support development of sustainable forestry in general.

In the pilot service novel forest monitoring methods for the monitoring of forest cover and biomass change are being developed, implemented and evaluated.

All the Products and Services hereby mentioned will be developed free of charge to the User in the context of the Re-Cover project, co-founded by the European Commission, in the framework of the FP7-2010 Theme 9-Space call.

2. Obligations of the Service Provider:

- The Service Provider agrees to provide the User with the service according to the Detailed Service Specifications below.
- The Service Provider agrees to ensure adequate quality control is performed.
- The Service Provider agrees to ensure validation is performed according to the agreed Validation Plan.
- The Service Provider agrees to ensure that needed technical support to the User to fully utilise the service will be provided within reasonable limits.

3. Obligations of the User:

- The User agrees to fully participate in the assessment/consolidation of user requirements.
- The User agrees to integrate the service within his operational mandate as far as practically possible.
- The User agrees to fully participate in the assessment of the utility of the service.

4. Detailed Service Specifications

The service to be delivered by the Service Provider to the User has the following contents and characteristics:

Products:

Product	Chiapas State
Image mosaic map of year 1992-1994 (optical)	X
Image mosaic map of year 2004-2011 for baseline	X
Forest/land cover map of year 1992-1994, 2004-2011	X
Forest biomass map of year 1992-1994, 2004-2011	X
Forest degradation map of year 1992-1994, 2004-2011	X
Forest area change map 1992-1994, 2004 – 2011	X
Forest biomass change map 1992-1994, 2004 – 2011	X

Service Area

Selected areas of Chiapas state in Mexico

Other Deliverables

The Service provider organizes annual training for the User according to the training plan in the approved project.

Service Delivery Mode

ftp is the primary alternative for product delivery.
If this is not applicable a DVD delivery with courier will be used.

Delivery Schedule

Image mosaic maps: According to the schedule in the approved project
Thematic maps: According to the schedule in the approved project

The delivery schedule is however subject to image provision by the image distributor agencies.

Product Specifications

Geometric characteristics	Target*	Acceptable*
Map projection	UTM	LCC
Geometric accuracy	Subpixel	1.5 pixels
Minimum mapping unit	4 pixels	9 pixels
Class definitions		
Land/forest deforestation cover class: Forest – non forest	overall 90 % prod. acc. 90% user acc 90 %	overall 80 % prod. acc. 80 % user acc 80 %
Land/forest degradation cover class:	overall 80 %	overall 70 %

Low vegetation cover, medium vegetation cover and high vegetation cover	prod. acc. 80 % user acc 80 %	prod. acc. 70 % user acc 70 %
Change class from Forest to Non Forest	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Forest (degradation)	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Biomass (t/ha)	20 % mean stock (t/ha)	30 % mean stock (t/ha)

*The target and acceptable accuracy levels will be re-considered for the next SLA reflecting the pilot nature of the project. It is also possible to relax the figures if user's need change or if achievement of the original target accuracy is too costly, for instance.

To guarantee long-term data accessibility, the Service Provider will deliver the products with a set of metadata deriving from the implementation of the INSPIRE directive of the European Union.

Target Service Delivery Model

The Service Provider aims at outsourcing the service to an industrial party or participate in establishing a user in-house service. The most appropriate service model will be agreed in the successive SLA's.

5. Other terms

- The reserves and credits will be the ones established in the final contract of the approved project.

Service Level Agreement signed by:

On behalf of Re-Cover (the Service Provider)

Dr. Tuomas Häme,
Coordinator, Re-Cover Project
VTT Technical Research Centre of Finland

On behalf of CONAFOR (the User)

Ing. Rigoberto Palafox
Head
Forestry Inventory and Geomatics Dept.
CONAFOR, Mexico

Mexico Chiapas state

SERVICE LEVEL AGREEMENT RELATED TO THE RE-COVER PROJECT

First project year

This agreement is concluded between VTT Technical Research Centre of Finland, Finland on behalf of the Re-Cover project consortium, hereafter referred to as the Service Provider, and Programa Mexicano del Carbono (PMC), hereafter referred to as the User for the duration of three years with annual service revision and starting from the project kick-off date (to be defined in the approved project). The project lifecycle will be three years.

The agreement will be applicable only if the project proposal results in a grant agreement with the EC. In case of conflict between this Service Level Agreement and the project grant agreement with the EC, the latter will apply.

This Service Level Agreement specifies in transparent and measurable terms the services to be provided, including quality requirements, and the obligations of the Service Provider and of the User respectively.

1. Service description

The Re-Cover project provides pilot services that support efforts to curb deforestation and forest degradation with a particular reference to the REDD (Reducing Emissions from Deforestation and forest Degradation) mechanism. The services use satellite, airborne and *in-situ* data. The services that are funded from the European Commission's and participating organizations' research budgets reach beyond the state-of-the-art, which emphasizes their pilot nature. In addition to strictly serving the monitoring of deforestation and forest degradation, the services will support development of sustainable forestry in general.

The need accurate information for GHG national inventories is one of the most demanding tasks regarding international efforts. The use of state-of-the-art remote sensing technology is one of the most promising areas of research, especially for expanding national forestry inventories in an exhaustive spatial way.

In the pilot service novel forest monitoring methods for the monitoring of forest cover and biomass change are being developed, implemented and evaluated.

All the Products and Services hereby mentioned will be developed free of charge to the User in the context of the Re-Cover project, co-founded by the European Commission, in the framework of the FP7-2010 Theme 9-Space call.

2. Obligations of the Service Provider:

- The Service Provider agrees to provide the User with the service according to the Detailed Service Specifications below.
- The Service Provider agrees to ensure adequate quality control is performed.
- The Service Provider agrees to ensure validation is performed according to the agreed Validation Plan.
- The Service Provider agrees to ensure that needed technical support to the User to fully utilise the service will be provided within reasonable limits.

3. Obligations of the User:

- The User agrees to fully participate in the assessment/consolidation of user requirements.

- The User agrees to integrate the service within his operational mandate as far as practically possible.
- The User agrees to fully participate in the assessment of the utility of the service.

4. Detailed Service Specifications

The service to be delivered by the Service Provider to the User has the following contents and characteristics:

Products:

Product	Chiapas State
Image mosaic map of year 1992-1994 (optical)	X
Image mosaic map of year 2004-2011 for baseline	X
Forest/land cover map of year 1992-1994, 2004-2011	X
Forest biomass map of year 1992-1994, 2004-2011	X
Forest degradation map of year 1992-1994, 2004-2011	X
Forest area change map 1992-1994, 2004 – 2011	X
Forest biomass change map 1992-1994, 2004 – 2011	X
Calibration/validation of remote sensing estimations (carbon) using sampling sites (all IPCC pools) 1992-1994, 2004-2011	X
Assimilation of remote sensing carbon estimation in Mexico carbon budget of GHG emissions 1992-1994, 2004-2011	X

Service Area

Selected areas of Chiapas state in Mexico

Other Deliverables

The Service provider organizes annual training for the User according to the training plan in the approved project.

Service Delivery Mode

ftp is the primary alternative for product delivery.
If this is not applicable a DVD delivery with courier will be used.

Delivery Schedule

Image mosaic maps: According to the schedule in the approved project
Thematic maps: According to the schedule in the approved project

The delivery schedule is however subject to image provision by the image distributor agencies.

Product Specifications

Geometric characteristics	Target*	Acceptable*

Map projection	UTM	LCC
Geometric accuracy	Subpixel	1.5 pixels
Minimum mapping unit	4 pixels	9 pixels
Class definitions		
Land/forest deforestation cover class: Forest – non forest	overall 90 % prod. acc. 90% user acc 90 %	overall 80 % prod. acc. 80 % user acc 80 %
Land/forest degradation cover class: Low vegetation cover, medium vegetation cover and high vegetation cover	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Non Forest	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Forest (degradation)	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Biomass (t/ha)	20 % mean stock (t/ha)	30 % mean stock (t/ha)
Calibration/validation exercises for remote sensing estimations using field sampling sites 1992-1994, 2004-2011	± 1 standard deviation	± 1.5 standard deviation
Predictions of the calibated Mexico carbon budget of GHG emissions 1992-1994, 2004-2011	± 1 standard deviation	± 1.5 standard deviation

*The target and acceptable accuracy levels will be re-considered for the next SLA reflecting the pilot nature of the project. It is also possible to relax the figures if user's need change or if achievement of the original target accuracy is too costly, for instance.

To guarantee long-term data accessibility, the Service Provider will deliver the products with a set of metadata deriving from the implementation of the INSPIRE directive of the European Union.

Target Service Delivery Model

The Service Provider aims at outsourcing the service to an industrial party or participate in establishing a user in-house service. The most appropriate service model will be agreed in the successive SLA's.

5. Other terms

- The reserves and credits will be the ones established in the final contract of the approved project.

Service Level Agreement signed by:

On behalf of Re-Cover (the Service Provider)

Dr. Tuomas Häme,
Coordinator, Re-Cover Project
VTT Technical Research Centre of Finland

On behalf of PMC (the User)

Dr. Felipe García-Oliva
Chairman
PMC, Mexico

Mexico Chiapas state

SERVICE LEVEL AGREEMENT RELATED TO THE RE-COVER PROJECT

Background

This agreement is concluded between Wageningen University (WU), the Netherlands on behalf of the Re-Cover project consortium, hereafter referred to as the Service Provider, and the Guyana Forestry Commission, hereafter referred to as the User for the duration of three years with annual service revision and starting from the project kick-off date (to be defined in the approved project). The project lifecycle will be three years.

The agreement will be applicable only if the project proposal results in a grant agreement with the European Commission (EC) for the Recover project proposal. In case of conflict between this Service Level Agreement and the project grant agreement with the EC, the latter will apply.

This Service Level Agreement specifies in transparent and measurable terms the services to be provided, including quality requirements, and the obligations of the Service Provider and of the User respectively.

1. Service description

The Re-Cover project provides pilot services that support efforts to map and monitor changes in forests (invl. Degradation) and forest carbon stocks with a particular reference to the REDD (Reducing Emissions from Deforestation and Forest Degradation) mechanism. The Guyana Forest Commission is requesting this service development and implementation in support of their plan and activities for a REDD monitoring, reporting and verification system. The service further builds upon synergies with ongoing international efforts of the Group on Earth Observations (GEO) Forest Carbon Tracking task, where Guyana is a key demonstration country, and the remote sensing survey of FAO's Forest Resources Assessment 2010 and their sample sites. The services use satellite, airborne and *in-situ* data. The services that are funded from the European Commission's and participating organizations' research budgets reach beyond the state-of-the-art, which emphasizes their pilot nature. In addition to strictly serving the monitoring of deforestation and forest degradation, the services will support development of sustainable forestry in general.

In the pilot service, novel forest monitoring methods for the monitoring of forest cover and biomass change are being developed, implemented and evaluated beyond the current state of the art in terms of using Earth Observation technologies.

All the Products and Services hereby mentioned will be developed free of charge to the User in the context of the Re-Cover project, co-founded by the European Commission, in the framework of the FP7-2010 Theme 9-Space call.

2. Obligations of the Service Provider:

- The Service Provider agrees to provide the User with the service according to the Detailed Service Specifications below.
- The Service Provider agrees to ensure adequate quality control is performed.
- The Service Provider agrees to ensure validation is performed according to the agreed Validation Plan.
- The Service Provider agrees to ensure that needed technical support to the User to fully utilise the service will be provided within reasonable limits.

3. Obligations of the User:

- The User agrees to fully participate in the assessment/consolidation of user requirements.

- The User agrees to integrate the service within his operational mandate as far as practically possible.
- The User agrees to fully participate in the assessment of the utility of the service.

4. Detailed Service Specifications

The service to be delivered by the Service Provider to the User has the following contents and characteristics:

Products:

	Product	Area
1	ALOS PALSAR image mosaic map of year 2007-2011	National
2	Forest/land cover map of year 2010/11	Demonstration sites
3	Map products and analysis for forest changes (incl. degradation)	Demonstration sites
4	High resolution forest biomass map of year 2010/11	Test sites

Product 1: This service ensures consistent and continuous coverage of Guyana's forest areas in support of the national REDD implementation strategy of early actions and for national reporting and ensuring compliance given a set of interim performance indicators agreed between the Governments of Guyana and the Norway. The service will be implemented by Wageningen University in cooperation with Sarvision.

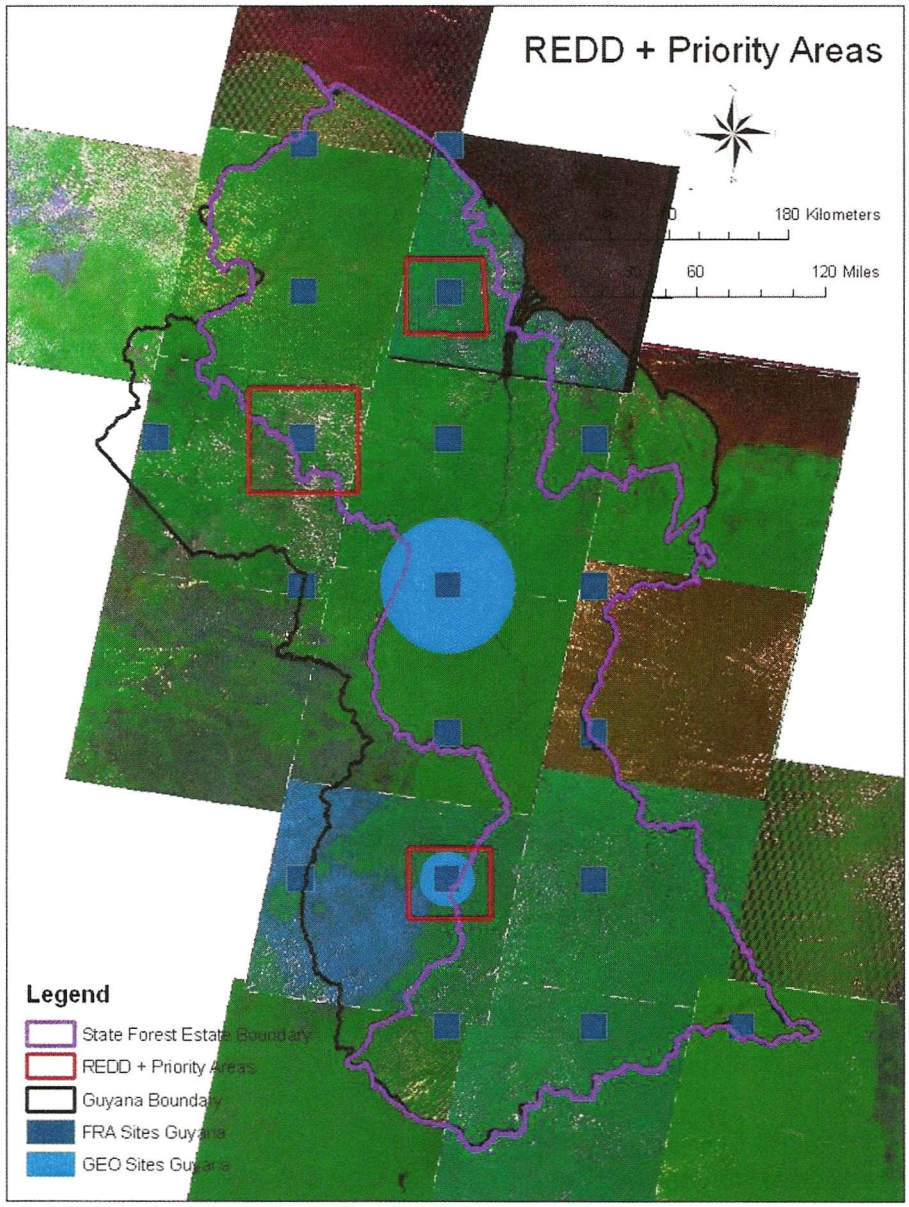
Product 2: This service provides more detail and accuracy in forest area and forest type mapping using optical and Radar satellite data and explores the synergy multiple remote sensing datasets acquired by the GEO and Kyoto and Carbon initiative for that purpose. The service is anticipate in selected demonstration sites that are defined by the user and reflect regions of importance to REDD, GEO task verification sites and FRA 2010 sampling points. The service will be implemented by Wageningen University.

Product 3: This service monitors changes in forest land such deforestation (from different drivers and processes) and forest degradation using a high-temporal (annual) coverage of optical and Radar satellite data acquired by the GEO and Kyoto and Carbon initiative and for that purpose. The service is anticipate in selected demonstration sites that are defined by the user and reflect regions of importance to REDD, GEO task verification sites and FRA 2010 sampling points. The service will be implemented by Wageningen University.

Product 4: This service aims to deliver a high-resolution biomass map using a combination of satellite and in-situ data. The service is anticipate in a selected test site of particular importance for REDD activities as specified by the user.

Service Area

The map below shows the different areas where the different services will be implemented (shown in red). The selection aims to maximize the utility of the service to the user (national REDD implementation roadmap), the synergy with ongoing international activities (GEO, FAO-FRA) and the representativeness to expand the service after successful demonstration. Thus, the purpose is to develop the GMES services in selected and representative areas with the option to expand to full national scale implementation in the post-project period.



Other Deliverables

The Service provider organizes annual training for the User according to the training plan in the approved project.

Service Delivery Mode

Dissemination through ftp is the primary alternative for product delivery. If this is not applicable a DVD delivery with courier will be used.

Delivery Schedule

Image mosaic maps: According to the schedule in the approved project

Thematic maps and analysis: According to the schedule in the approved project

The delivery schedule is however subject to image provision by the image distributor agencies.

Product Specifications

Geometric characteristics	**Target***	**Acceptable***
Map projection	LCC	UTM
Geometric accuracy	Subpixel	1.5 pixels
Minimum mapping unit	4 pixels	9 pixels
Class definitions		
Land/forest deforestation cover class: Forest – non forest	overall 90 % prod. acc. 90% user acc 90 %	overall 80 % prod. acc. 80 % user acc 80 %
Land/forest degradation cover class: Such as low vegetation cover, medium vegetation cover and high vegetation cover	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Non Forest	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Forest (degradation)….	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Biomass (t/ha)	25 % mean stock (t/ha)	35 % mean stock (t/ha)

*The target and acceptable accuracy levels will be re-considered for the next SLA reflecting the pilot nature of the project. It is also possible to relax the figures if user's need change or if achievement of the original target accuracy is too costly, for instance.

To guarantee long-term data accessibility, the Service Provider will deliver the products with a set of metadata as specified by the user and/or deriving from the implementation of the INSPIRE directive of the European Union.

Target Service Delivery Model

The Service Provider aims at outsourcing the service to an industrial party or participates in establishing a user in-house service. The most appropriate service model will be agreed in the successive SLA's.

5. Other terms

- The reserves and credits will be the ones established in the final contract of the approved project.

Service Level Agreement signed by:

On behalf of Re-Cover (the Service Provider)

Prof. Dr. Martin Herold

On behalf of Guyana Forestry Commission (the User)

James Singh / Forest Commissioner

Commissioner Of Forests
GUYANA FORESTRY COMMISSION

SERVICE LEVEL AGREEMENT RELATED TO THE RE-COVER PROJECT

Background

This agreement is concluded between Wageningen University (WU), the Netherlands on behalf of the Re-Cover project consortium, hereafter referred to as the Service Provider, and the Department of Forestry in Fiji, hereafter referred to as the User for the duration of three years with annual service revision and starting from the project kick-off date (to be defined in the approved project). The project lifecycle will be three years.

The agreement will be applicable only if the project proposal results in a grant agreement with the European Commission (EC) for the Recover project proposal. In case of conflict between this Service Level Agreement and the project grant agreement with the EC, the latter will apply.

This Service Level Agreement specifies in transparent and measurable terms the services to be provided, including quality requirements, and the obligations of the Service Provider and of the User respectively.

1. Service description

The Re-Cover project provides pilot services that support efforts to map and monitor changes in forests (invl. Degradation) and forest carbon stocks with a particular reference to the REDD (Reducing Emissions from Deforestation and Forest Degradation) mechanism. The Fiji Forestry Department is requesting this service development and implementation in support of their plan and activities for a REDD monitoring, reporting and verification system. The service further builds upon synergies with ongoing international efforts of the remote sensing survey of FAO's Forest Resources Assessment 2010 and their sample sites. The services use satellite, airborne and *in-situ* data. The services that are funded from the European Commission's and participating organizations' research budgets reach beyond the state-of-the-art, which emphasizes their pilot nature. In addition to strictly serving the monitoring of deforestation and forest degradation, the services will support development of sustainable forestry in general.

In the pilot service, novel forest monitoring methods for the monitoring of forest cover and biomass change are being developed, implemented and evaluated beyond the current state of the art in terms of using Earth Observation technologies.

All the Products and Services hereby mentioned will be developed free of charge to the User in the context of the Re-Cover project, co-founded by the European Commission, in the framework of the FP7-2010 Theme 9-Space call.

2. Obligations of the Service Provider:

- The Service Provider agrees to provide the User with the service according to the Detailed Service Specifications below.
- The Service Provider agrees to ensure adequate quality control is performed.
- The Service Provider agrees to ensure validation is performed according to the agreed Validation Plan.
- The Service Provider agrees to ensure that needed technical support to the User to fully utilise the service will be provided within reasonable limits.

3. Obligations of the User:

- The User agrees to fully participate in the assessment/consolidation of user requirements.
- The User agrees to integrate the service within his operational mandate as far as practically possible.

- The User agrees to fully participate in the assessment of the utility of the service.

4. Detailed Service Specifications

The service to be delivered by the Service Provider to the User has the following contents and characteristics:

Products:

	Product	**Area**
1	Accuracy assessment for national forest area change assessment	National
2	An updated forest map using a synergy of optical and Radar data	National
3	An pre-processed annual coverage with satellite data	National
4	A detailed analysis for forest change (incl. degradation) in selected areas for recent years	Demonstration sites
5	Biomass mapping using high-resolution optical data	Demonstration sites

Product 1: This service provides a robust, best-efforts accuracy assessment framework and implementation support for the historical in forest area change assessment of Fiji. The assessment itself will be implementation by Fiji partners incl. the user and SOPAC and the service is to develop the methodologies and implement a joint accuracy assessment of the forest area change estimates as required by international IPCC estimation and reporting requirements.

Product 2: This service provides more detail and accuracy in forest area and forest type mapping using optical and Radar satellite data and explores the synergy multiple remote sensing datasets. The service is building upon the forest type map existing for Fiji for the year 2002 and is anticipated for the main island as defined by the user and will be validated in regions of importance to REDD and FRA 2010 sampling points.

Product 3: This service provides a prototype on consistent and continuous satellite coverage using multiple observing sources of Fiji forest areas in support of the national REDD implementation strategy of early actions and for national reporting and ensuring compliance.

Product 4: This service monitors changes in forest land such deforestation (from different drivers and processes) and forest degradation using a high-temporal (i.e. annual) coverage of optical and Radar satellite data acquired. The service is focused in selected demonstration sites that are defined by the user and reflect regions of importance to REDD and FRA 2010 sampling points.

Product 5: This service aims to deliver a high-resolution biomass map using a combination of satellite and in-situ data. The activities will build upon the ongoing capacity development activities in Fiji to provide, for the first time, forest carbon and biomass data. The service is focused in a selected test site of particular importance for REDD activities as specified by the user. The service will be implemented by … .

Service Area

Different areas are designted for developing the services. The selection aims to maximize the utility of the service to the user (national REDD implementation roadmap), the synergy with ongoing international activities (FAO-FRA) and the representativeness to expand the service after successful demonstration. Thus, the purpose is to develop the GMES services targets the national level and selected and representative areas with the option to expand some services to full national scale implementation in the post-project period.

Other Deliverables

The Service provider organizes annual training for the User according to the training plan in the approved project.

Service Delivery Mode

Dissemination through ftp is the primary alternative for product delivery. If this is not applicable a DVD delivery with courier will be used.

Delivery Schedule

Image mosaic maps: According to the schedule in the approved project
Thematic maps and analysis: According to the schedule in the approved project

The delivery schedule is however subject to image provision by the image distributor agencies.

Product Specifications

Geometric characteristics	**Target***	**Acceptable***
Map projection	LCC	UTM
Geometric accuracy	Subpixel	1.5 pixels
Minimum mapping unit	4 pixels	9 pixels
Class definitions		
Land/forest deforestation cover class: Forest – non forest	overall 90 % prod. acc. 90% user acc 90 %	overall 80 % prod. acc. 80 % user acc 80 %
Land/forest degradation cover class: Such as low vegetation cover, medium vegetation cover and high vegetation cover	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Non Forest	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Forest (degradation)….	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Biomass (t/ha)	25 % mean stock (t/ha)	35 % mean stock (t/ha)

*The target and acceptable accuracy levels will be re-considered for the next SLA reflecting the pilot nature of the project. It is also possible to relax the figures if user's need change or if achievement of the original target accuracy is too costly, for instance.

To guarantee long-term data accessibility, the Service Provider will deliver the products with a set of metadata as specified by the user and/or deriving from the implementation of the INSPIRE directive of the European Union.

Target Service Delivery Model

The Service Provider aims at outsourcing the service to an industrial party or participates in establishing a user in-house service. The most appropriate service model will be agreed in the successive SLA's.

5. Other terms

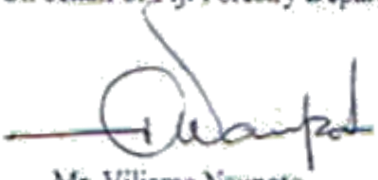
- The reserves and credits will be the ones established in the final contract of the approved project.

Service Level Agreement signed by:

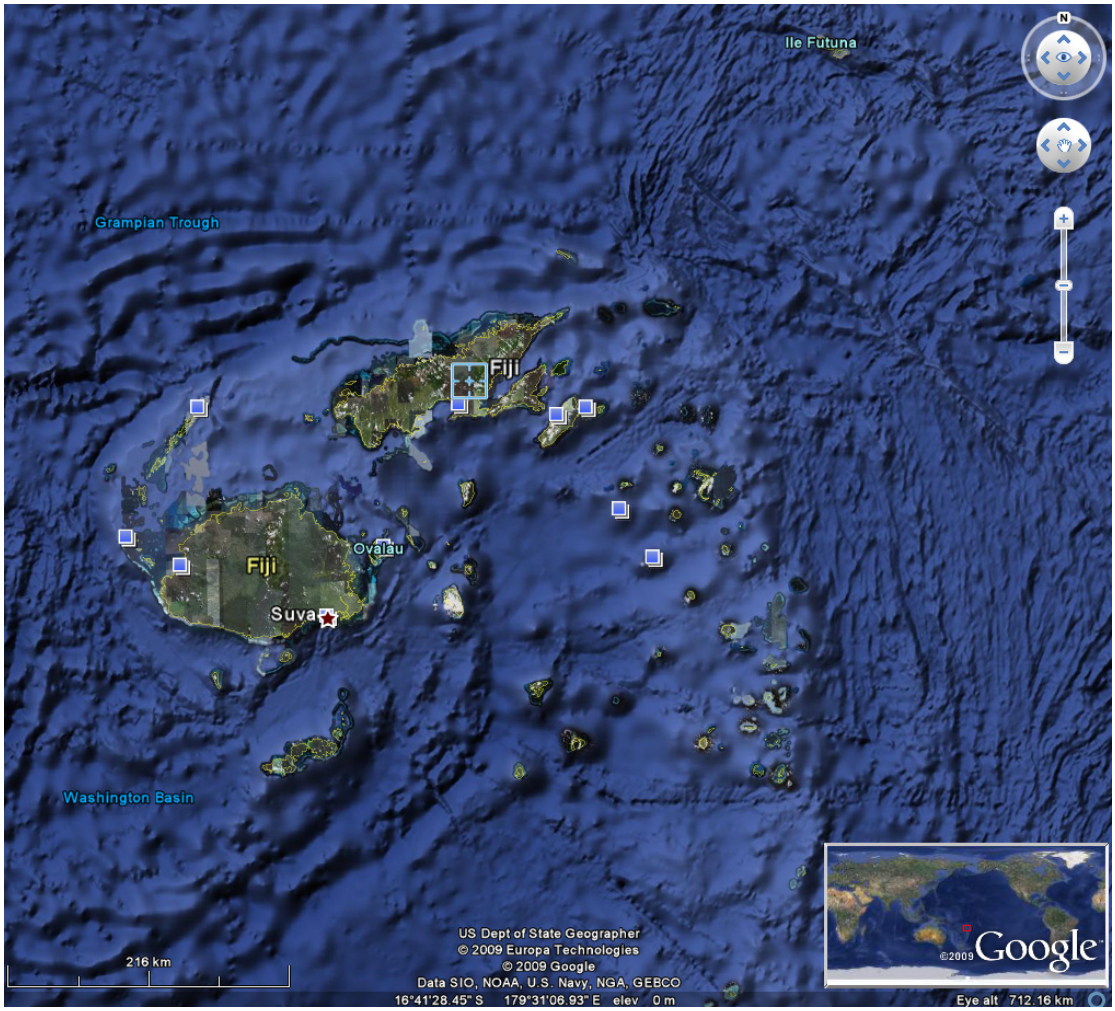
On behalf of Re-Cover (the Service Provider)

Prof. Dr. Martin Herold

On behalf of Fiji Forestry Department (the User)



Mr. Viliame Naupoto
Permanent Secretary for Fisheries and Forests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Washington Basin
US Dept of State Geographer
© 2009 Europa Technologies
© 2009 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
16°41'28.45" S 179°31'06.93" E elev 0 m
216 km
©2009 Google
Eye alt 712.16 km

Fiji

SERVICE LEVEL AGREEMENT RELATED TO THE RE-COVER PROJECT
First project year

This agreement is concluded between the **Northern Research Institute Tromsø (Norut)** on behalf of the Re-Cover project consortium, hereafter referred to as the Service Provider, and the **Instituto Nacional de Pesquisas Espaciais (INPE)**, hereafter referred to as the User for the duration of three years with annual service revision and starting from the project kick-off date. The project lifecycle will be three years.

The agreement will be applicable only if the project proposal results in a grant agreement with the EC. In case of conflict between this Service Level Agreement and the project grant agreement with the EC, the latter will apply.

This Service Level Agreement specifies in transparent and measurable terms the services to be provided, including quality requirements, and the obligations of the Service Provider and of the User respectively.

1. Service description
The Re-Cover project provides pilot services that support efforts to curb deforestation and forest degradation with a particular reference to the REDD (Reducing Emissions from Deforestation and forest Degradation) mechanism. The services use satellite, airborne and *in-situ* data. The services that are funded from the European Commission's and participating organizations' research budgets reach beyond the state-of-the-art, which emphasizes their pilot nature. In addition to strictly serving the monitoring of deforestation and forest degradation, the services will support development of sustainable forestry in general.

In the pilot service novel forest monitoring methods for the monitoring of forest cover and biomass change are being developed, implemented and evaluated.

All the Products and Services hereby mentioned will be developed free of charge to the User in the context of the Re-Cover project, co-funded by the European Commission, in the framework of the FP7-2010 Theme 9-Space call.

2. Obligations of the Service Provider:
- The Service Provider agrees to provide the User with the service according to the Detailed Service Specifications below.
- The Service Provider agrees to ensure adequate quality control is performed.
- The Service Provider agrees to ensure validation is performed according to the agreed Validation Plan.
- The Service Provider agrees to ensure that needed technical support to the User to fully utilise the service will be provided within reasonable limits.

3. Obligations of the User:
- The User agrees to fully participate in the assessment/consolidation of user requirements.
- The User agrees to integrate the service within his operational mandate as far as practically possible.
- The User agrees to fully participate in the assessment of the utility of the service.
- Support the validation beyond the utility assessment, e.g. taking part in accuracy assessments
- Provide access to user-owned or -operated data gathering infrastructure, other equipment or software, specifically the facilities already made available by INPE on the internet (CBERS data, PRODES, etc.).

- In-kind contribution from the user including lobbying support to access third party funding, promotion of service capabilities and utility to collaborating organisations within the same demand sector and operation and maintenance of in-situ data gathering networks and service support infrastructure (e.g. data warehouses)].

4. Detailed Service Specifications

The service to be delivered by the Service Provider to the User has the following contents and characteristics:

Products:

Product	**Tapajós, Pará State**
Image mosaic map of year 1990, 2000, 2010 (optical)	X
Image mosaic map of year 1990s, 2005, 2010 (SAR)	X
Forest/land cover map of year 1990, 2000, 2010	X
Forest biomass map of year 2010	X
Forest degradation map of year 1990-2000, 2000-2010	X
Forest area change map 1990-2000, 2000-2010	X

Service Area:

Tapajós, Pará state, Brazil

For the Tapajós study area, the coverage can be similar to the Landsat WRS 227/62 and 227/63, which covers around 43000 km2 (120 km x 360 km, extent of 2 Landsat images). The delivered products will be inside this area (UTM coordinates around 680000, 9720000 and 760000,9540000, see attached map). Although it is not an area of a very dynamic land use, there is the contrast between a protected area (Tapajos National Forest) and surroundings (with plenty of crops and grazing activities). Also, since 2002 timber exploitation inside the Forest is allowed, which can be a source of interesting data for forest degradation studies.

(Alternative area: Boca do Acre, Amazonas State, Brazil)

Other Deliverables

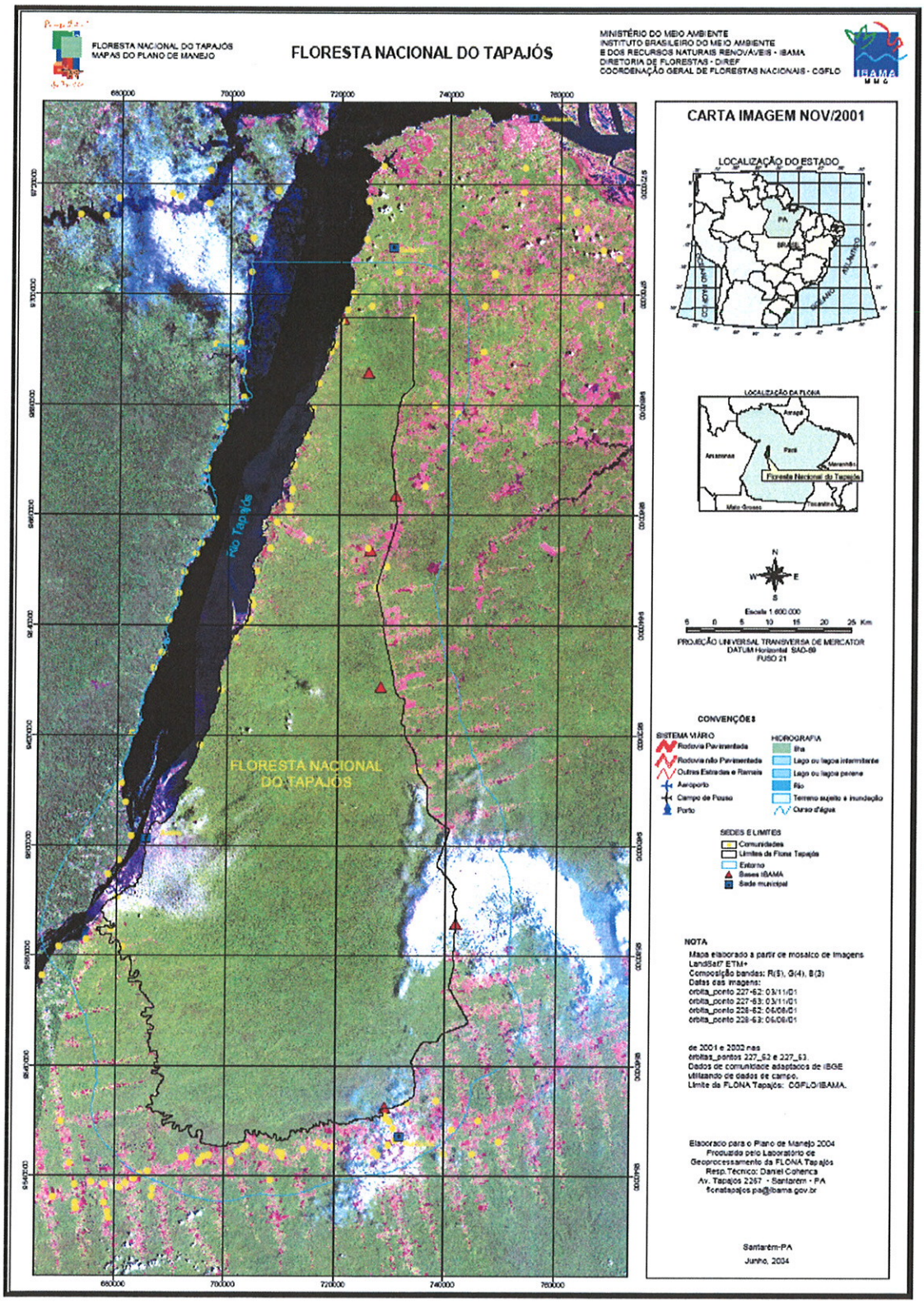
The Service provider organizes annual training for the User according to the training plan. The first training will be organized in the context of the delivery of the first map product (T0+11)

Service Delivery Mode

ftp is the primary alternative for product delivery.
If this is not applicable a DVD delivery with courier will be used.

Delivery Schedule

Image mosaic maps: According to the schedule in the approved project
Thematic maps: According to the schedule in the approved project.
The delivery schedule is however subject to image provision by the image distributor agencies.


FLORESTA NACIONAL DO TAPAJÓS
MAPAS DO PLANO DE MANEJO
FLORESTA NACIONAL DO TAPAJÓS
MINISTÉRIO DO MEIO AMBIENTE
INSTITUTO BRASILEIRO DO MEIO AMBIENTE
E DOS RECURSOS NATURAIS RENOVÁVEIS - IBAMA
DIRETORIA DE FLORESTAS - DIREF
COORDENAÇÃO GERAL DE FLORESTAS NACIONAIS - CGFLO
IBAMA
MMA
680000
700000
720000
740000
760000
9720000
9700000
9680000
9660000
9640000
9620000
9600000
9580000
9560000
9540000
Rio Tapajós
FLORESTA NACIONAL
DO TAPAJÓS
CARTA IMAGEM NOV/2001
LOCALIZAÇÃO DO ESTADO
PA
BRASIL
OCEANO ATLÂNTICO
OCEANO ATLÂNTICO
LOCALIZAÇÃO DA FLONA
Amapá
Pará
Amazonas
Maranhão
Floresta Nacional do Tapajós
Mato Grosso
Tocantins
N
W
E
S
Escala 1:600.000
5 0 5 10 15 20 25 Km
PROJEÇÃO UNIVERSAL TRANSVERSA DE MERCATOR
DATUM Horizontal SAD-69
FUSO 21
CONVENÇÕES
SISTEMA VIÁRIO
Rodovia Pavimentada
Rodovia não Pavimentada
Outras Estradas e Ramais
Aeroporto
Campo de Pouso
Porto
HIDROGRAFIA
Ilha
Lago ou lagoa intermitente
Lago ou lagoa perene
Rio
Terreno sujeito a inundação
Curso d'água
SEDES E LIMITES
Comunidades
Limites da Flona Tapajós
Entorno
Bases IBAMA
Sede municipal
NOTA
Mapa elaborado a partir de mosaico de imagens
LandSat7 ETM+
Composição bandas: R(5), G(4), B(3)
Datas das imagens:
orbita_ponto 227-62: 03/11/01
orbita_ponto 227-63: 03/11/01
orbita_ponto 228-62: 06/08/01
orbita_ponto 228-63: 06/08/01
de 2001 e 2002 nas
orbitas_pontos 227_62 e 227_63.
Dados de comunidade adaptados de IBGE
utilizando os dados de campo.
Limite da FLONA Tapajós: CGFLO/IBAMA.
Elaborado para o Plano de Manejo 2004
Produzido pelo Laboratório de
Geoprocessamento da FLONA Tapajós
Resp.Técnico: Daniel Cohenca
Av. Tapajós 2267 - Santarém - PA
flonatapajos.pa@ibama.gov.br
Santarém-PA
Junho, 2004

Product Specifications

Geometric characteristics	**Target***	**Acceptable***
Map projection	UTM	LCC
Geometric accuracy	Subpixel	1.5 pixels
Minimum mapping unit	4 pixels	9 pixels
Class definitions		
Land/forest deforestation cover class: Forest – non forest	overall 90 % prod. acc. 90% user acc 90 %	overall 80 % prod. acc. 80 % user acc 80 %
Land/forest degradation cover class: Low vegetation cover, medium vegetation cover and high vegetation cover	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Non Forest	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Change class from Forest to Forest (degradation)	overall 80 % prod. acc. 80 % user acc 80 %	overall 70 % prod. acc. 70 % user acc 70 %
Biomass (t/ha)	-	-

*The target and acceptable accuracy levels will be re-considered for the next SLA reflecting the pilot nature of the project. It is also possible to relax the figures if user's need change or if achievement of the original target accuracy is too costly, for instance.
To guarantee long-term data accessibility, the Service Provider will deliver the products with a set of metadata deriving from the implementation of the INSPIRE directive of the European Union.

Target Service Delivery Model

The Service Provider aims at outsourcing the service to an industrial party or participates in establishing a user in-house service. The most appropriate service model will be agreed in the successive SLA's.

[Outsourced service or User in-house service (the Service Provider performs development and technology transfer / user capacity building in the project and plans for future revenues from maintenance and/or further development of the processing chain)]

Service Level Agreement signed by:

Dr Jörg Haarpaintner
Senior Scientist at Norut
On behalf of Re-Cover (the Service Provider)

Dra Tatiana Mora Kuplich
Senior Scientist at INPE
On behalf of INPE (the User)

SERVICE LEVEL AGREEMENT RELATED TO THE RE-COVER PROJECT
First project year

This agreement is concluded between the **Northern Research Institute Tromsø (Norut)** on behalf of the Re-Cover project consortium, hereafter referred to as the Service Provider, and the **Observatoire Satellital des Forêts d'Afrique Centrale (OSFAC),** hereafter referred to as the User for the duration of three years with annual service revision and starting from the project kick-off date. The project lifecycle will be three years.

The agreement will be applicable only if the project proposal results in a grant agreement with the EC. In case of conflict between this Service Level Agreement and the project grant agreement with the EC, the latter will apply.

This Service Level Agreement specifies in transparent and measurable terms the services to be provided, including quality requirements, and the obligations of the Service Provider and of the User respectively.

1. Service description
The Re-Cover project provides pilot services that support efforts to curb deforestation and forest degradation with a particular reference to the REDD (Reducing Emissions from Deforestation and forest Degradation) mechanism. The services use satellite, airborne and *in-situ* data. The services that are funded from the European Commission's and participating organizations' research budgets reach beyond the state-of-the-art, which emphasizes their pilot nature. In addition to strictly serving the monitoring of deforestation and forest degradation, the services will support development of sustainable forestry in general.

In the pilot service novel forest monitoring methods for the monitoring of forest cover and biomass change are being developed, implemented and evaluated.

All the Products and Services hereby mentioned will be developed free of charge to the User in the context of the Re-Cover project, co-funded by the European Commission, in the framework of the FP7-2010 Theme 9-Space call.

2. Obligations of the Service Provider:
- The Service Provider agrees to provide the User with the service according to the Detailed Service Specifications below.
- The Service Provider agrees to ensure adequate quality control is performed.
- The Service Provider agrees to ensure validation is performed according to the agreed Validation Plan.
- The Service Provider agrees to ensure that needed technical support to the User to fully utilise the service will be provided within reasonable limits.

3. Obligations of the User:
- The User agrees to fully participate in the assessment/consolidation of user requirements.
- The User agrees to integrate the service within his operational mandate as far as practically possible.
- The User agrees to fully participate in the assessment of the utility of the service.
- Support the validation beyond the utility assessment, e.g. taking part in accuracy assessments
- Provide access to user-owned or -operated data gathering infrastructure, other equipment or software.

- In-kind contribution from the user including lobbying support to access third party funding, promotion of service capabilities and utility to collaborating organisations within the same demand sector and operation and maintenance of in-situ data gathering networks and service support infrastructure (e.g. data warehouses)].

4. Detailed Service Specifications

The service to be delivered by the Service Provider to the User has the following contents and characteristics:

Products:

Product	**DRC* ND site**
Image mosaic map of year 1990, 2000, 2010 (optical)	X
Image mosaic map of year 2000, 2005, 2010 (SAR)	X
Forest/land cover map of year 1990, 2000, 2010	X
Forest biomass map of year 2010	X
Forest degradation map of year 1990, 2000, 2010	X
Forest area change map 1990-2000, 2000-2010	X

*** DRC = Democratic Republic of Congo**

Service Area

The service area will be in the Democratic Republic of Congo (DRC) inside the area shown on the map below (Figure 1) bounded by:

- the Congo River to the west,
- Lake Mai Ndombe (DRC) (1° 42' S, 18° 17' E) to the east,
- the city of Mbandaka (DRC) (0° 2' N, 18°15' E) in the north, and,
- the city of Bandundu (DRC) (3° 18' S, 17°23' E) in the south.

This area (suggested as a National Demonstrator Site for GEO FCT), approximately bounded by the Congo River to the west, Lake Mai Ndombe on the east, and the cities of Mbandaka and Bandundu to the north and south respectively, contains swamp or flooded forest as well as upland forest / savanna mosaic. It also contains the newly created Tumba Ledima Reserve. According to our sources, this area is accessible for field data collection. In addition, this is an area for which forest cover and change has been mapped by South Dakota State University / UMD using MODIS and Landsat data as part of their basin wide mapping activities; and forest type has been mapped by UCL/JRC using SPOT data.

Figure 1: Service Area in the Democratic Republic of Congo

Other Deliverables

The Service provider organizes annual training for the User according to the training plan. The first training will be organized in the context of the delivery of the first map product (T0+11)

Service Delivery Mode

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Biomass (t/ha)	-	-

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Target Service Delivery Model

The Service Provider aims at outsourcing the service to an industrial party or participates in establishing a user in-house service. The most appropriate service model will be agreed in the successive SLA's.
[Outsourced service or User in-house service (the Service Provider performs development and technology transfer / user capacity building in the project and plans for future revenues from maintenance and/or further development of the processing chain)]

5. Other terms

- [Restrictions on use of the products and services delivered or of the items provided by the user to the Service Provider; credits / copyright statements; other terms of access, …]
- [Licensing and maintenance agreements for service generation and delivery infrastructure provided by the service network where service generation is undertaken in-house];
- [Service performance levels, back-up provisions and recovery procedures and timescales];

Service Level Agreement signed by:

On behalf of the Re-Cover consortium

Dr Jörg Haarpaintner
(Senior scientist at Norut)

On behalf of OSFAC

Dr Landing Mane
OSFAC Director

ADMINISTRATION OSFAC COMPTABILITE