

MarCoast Oil Spill Monitoring Service Service Level Agreement

**Service provider
User(s)**

**(Name)
X**

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DOCUMENT AUTHORISATION

Function	Name	Date	Signature
Author			
Checked by			
Authorised by			

DOCUMENT STATUS SHEET

Version	Date	Section	Change(s)

1. INTRODUCTION

ESA has released an Invitation To Tender (ITT) for scaling up consolidated services in stage 2 of the Earthwatch Service Element. In response to this tender, a consortium has been set up under the management of Alcatel, France, to offer a set of marine services under the project MarCoast.

Oil spill monitoring is one of the primary services in the MarCoast project. The aim of this service is to provide routine satellite based surveillance of an area under the responsibility of national/regional authorities or other organisations who exercise surveillance, supervision and/or control of sea based oil pollution.

This SLA for the XXarea defines the relations between the service provider (name) and the user(s) associated with this SLA.

2. PARTNERS

This SLA is an agreement between (**name**) and users represented by the following legally mandated organizations with responsibilities for oil spill surveillance and counter pollution management:

- Names of users

3. GENERAL TERMS AND CONDITIONS

3.1. Definitions

Service Level Agreement:	The relationship between the MarCoast oil service network and the end-user(s) shall be governed by a Service Level Agreement (SLA).
User:	Individual or institutional body staking a commitment to use the service.
Service Provider:	Oil spill detection service partner included in the MarCoast consortium committed to deliver the specified service.
Service:	Oil spill detection service delivered by a service provider..

3.2. The service

The service provided during the first year is based on the existing capabilities offered by **(name)**. A detailed service description is included as Appendix A. The table below includes the key elements of the service and the service quality parameters.

Oil Spill Monitoring Service	
Service chain stage	Description
Data input	<p>Satellite data input:</p> <ul style="list-style-type: none"> ▪ Radarsat ScanSAR Narrow: <ul style="list-style-type: none"> - Data tasking time: 3 days (36 hours – extra fee charged) - Spatial resolution 50m - 300 x 300 km - Polarisation: HH - Product description: Level 1B - Delivery characteristics: Direct downlink ▪ Envisat ASAR Wide Swath: <ul style="list-style-type: none"> - Data tasking time: 14 days (2 days -extra fee charged) - Spatial resolution 150m - 405 x 405 km - Polarisation: VV - Product description: Level 1B - Delivery characteristics: Direct downlink
	<p>Non satellite data:</p> <ul style="list-style-type: none"> ▪ Meteorologic/Oceanographic <ul style="list-style-type: none"> - Predicted wind speed and direction: <ul style="list-style-type: none"> - 12 km resolution (TBC) - Updated: twice daily - T0+12, intervals at 3 hours ▪ Ship identification: <ul style="list-style-type: none"> - AIS information (if access is provided by user) ▪ GIS information: <ul style="list-style-type: none"> - EEZ borders - Offshore installation /pipelines (must be provided by end user) ▪ Main ship routes
Extract information	<p>Processing:</p> <ul style="list-style-type: none"> ▪ Automatic ship detection ▪ Image geocoding <p>Analysis:</p> <ul style="list-style-type: none"> ▪ Visual inspection, identification and classification of possible oil slick. ▪ Data assimilation

Information Output	Oil Spill information: <ul style="list-style-type: none"> ▪ Slick location, position and extent ▪ Time of observation ▪ Possible source (if present): <ul style="list-style-type: none"> - AIS based vessel identification (if available from the end user). - Oil rigs, wreck and/or pipeline (if available from the end user) ▪ Confidence assignment (High, Low) ▪ Country (EEZ) where the spill is located
	Additional information: <ul style="list-style-type: none"> ▪ Reduced Resolution Image ▪ Ship detection from satellite image ▪ Identified ships in the area (if AIS is available) ▪ Predicted wind speed and direction ▪ EEZ borders ▪ Offshore installation /pipelines (if available) ▪ Main ship routes (if available)
Information Delivery	<ul style="list-style-type: none"> ▪ Oil spill report (text format) ▪ Reduced resolution image (Geotif) ▪ Visard application file (Hdf5)
Information Delivery mechanism	<ul style="list-style-type: none"> ▪ Phone call (just in case of oil spill occurrence) ▪ Email (text report only) ▪ Website/ftp
User tools	<ul style="list-style-type: none"> ▪ Web browser ▪ Visard application (to be provided fee of charge from service provider)
Service quality parameters	
Delivery time	<ul style="list-style-type: none"> ▪ As soon as possible and maximum 60 minutes after end of acquisition
False Alarm Rate	<ul style="list-style-type: none"> ▪ max 10 % false alarms
Probability of detection	<ul style="list-style-type: none"> ▪ Better than 80% for minor spills in wind speeds up to 12 m/s ▪ Better than 90% for major spills in wind speeds up to 12 m/s
Location accuracy	<ul style="list-style-type: none"> ▪ Better than 250m
Service performance level	<ul style="list-style-type: none"> ▪ 90% of data acquisitions accepted for scheduling at 15 days before acquisition date to be acquired and processed

Table 1 Service characteristics

3.3. Data ownership

The original satellite data will remain the ownership of the service provider or the satellite operator.

The report submitted to the national users will be the ownership of the member states and could be made available for third parties after a time delay of 6 hours after acquisition, exception is made for identified project observers.

In the case of data being furnished by the user partners or third parties contracted by them as part of the process of generating the MARCOAST information products, these data shall remain the property of the organization providing the data to **(name)**. The user(s) can make use of the satellite images provided in compliance with this agreement given that the copyright of **(name)** is appended. **(name)** can use SLAR images/videos, AIS data and other non satellite data provided by service member states for training and validation purposes. Copyright must be appended for use of all user data.

3.4. Commitment from the service provider

The service provider undertakes to:

- Provide the user with the service according to the quality requirements associated with the service as listed in table 1 and appendix A.
- Be available and be able to provide the service 24 hours a day throughout the year.
- Apply all best effort to secure the agreed satellite coverage of the service area.
- Provide the user with access to the service web-interface
- Provide the user with the current version of the any visualisation software developed by **(name)** which is necessary to make effective use of the services being delivered. This shall include all upgrades planned during the service period.
- Train the users
- Upgrades the service chain according to high priorities upgrades agreed between the supplier and the user.

All reports delivered during the service period will be available on the dedicated service web-page, and name will be responsible for maintaining the online web archive. By the end of the service period **(name)** will produce CDs with all images delivered during the service period. The CDs will be distributed to all users.

3.5. Commitment from the user

The user will:

- Include the service into their operational system
- Be responsible for any actions taken based on the information delivered from supplier
- Provide the supplier with geographic information necessary to perform a customised service (oil rigs, other off-shore installations, pipelines, wreck databases).
- Provide user requirements for a fully operational service
- Assessment of service performance in the demonstration period
- Provide day to day feedback on checked reports

The user will contribute with input to the following documents:

- Service evaluation and validation reports
-

4. SERVICE SPECIFICATION

4.1. Duration

The duration of the MarCoast project is three years. This SLA covers the first 12 months of the MarCoast project (Phase I) and the service will be initiated one month after project kick-off (KO). Tentative KO is August 2005

	<i>Project period</i>	<i>Tentative Date</i>
Service Start:	KO + 1	1 September 2005
Service End:	KO + 13	31 August 2006
Number of Months		12

Table 2 Service duration

4.2. Area

The area covered with this service is defined as follows.

Lat/long description of area

The area is illustrated in figure 1

MAP FIGURE

4.3. Satellite Acquisition

An average of N Envisat ASAR WS images and between M Radarsat SN images per month will be used in this service. The selection of images is based on requirements from each end user.

Coverage maps are included in Appendix B.

Please note that the final selection of images will be based upon approval from satellite owners.

4.4. Anomalies

In the case of anomalies in the service delivery chain, all users shall be informed immediately after the service provider (**name**) has determined the impact on the performance of the service being provided. In this case, each user shall have the possibility to renegotiate the terms of service delivery. (**Name**) undertakes to complete this impact assessment within 12 hours of an anomaly being detected.

5. FINANCIAL AGREEMENT

5.1. Service cost and funding model

The requested satellite coverage differs for each user and the funding model is therefore based on the actual satellite coverage of each user's EEZ, not the area of the EEZ. The service cost is given in table 3 below. The

MarCoast project will cover part of the actual service cost and table 3 contains the normal service cost, the service cost to be covered by the project users and the cost to be covered by the project. The per scene cost for project users are X for ASAR and Y for Radarsat.

Satellite	Number of images	Normal Service cost	Service cost for users	Cost to be covered by the project
Envisat	N			
RSAT	M			
Total	N+M			

Table 3 Service cost in Euro for the service period (one year)

The funding model for the service period is given in table 4 below.

	Payment in Euro	%
MarCoast		
User 1		
User 2		
User N		
Total service cost		

Table 4 Funding model for the service

The total MarCoast funding for the baseline service for the **three project years** is given in table 5 below.

	Year 1	Year 2	Year 3	Total Funding
Service Delivery				
User activities				

Table 5 Total MarCoast project funding for the Baseline Service

Please note that Validation activities will be funded through the user federation activity performed outside this service delivery. Within the MarCoast proposal this will be managed by BFG; Germany.

The user activity funding for the first year is given in table 6 below.

	Payment in Euro
User 1	
User 2	
User X	
Total user funding	

Table 6 Project funding of user activities for the service period (one year)

The proposed funding model will depend on final approval of project budget.

APPENDIX A SERVICE PERFORMANCE SPECIFICATION

APPENDIX B SATELLITE COVERAGE MAPS

Radarsat data

The repeat cycle for Radarsat is 24 days, i.e. the acquisition scheme will be repeated every 24 days. The images included in this proposal for one Radarsat repeat cycle is illustrated in figure B-1 and B-2 below. The images for one repeat cycle are illustrated in two figures to better show the coverage for each image. Date and time for each acquisition is given in table B-1.

Envisat data

The repeat cycle for Envisat is 35 days, i.e. the acquisition scheme will be repeated every 35 days. The images included in this proposal for one Envisat repeat cycle is illustrated in figure B-3 and B-4 below. The images for one repeat cycle are illustrated in two figures to better show the coverage for each image. Date and time for each acquisition is given in table B-2.

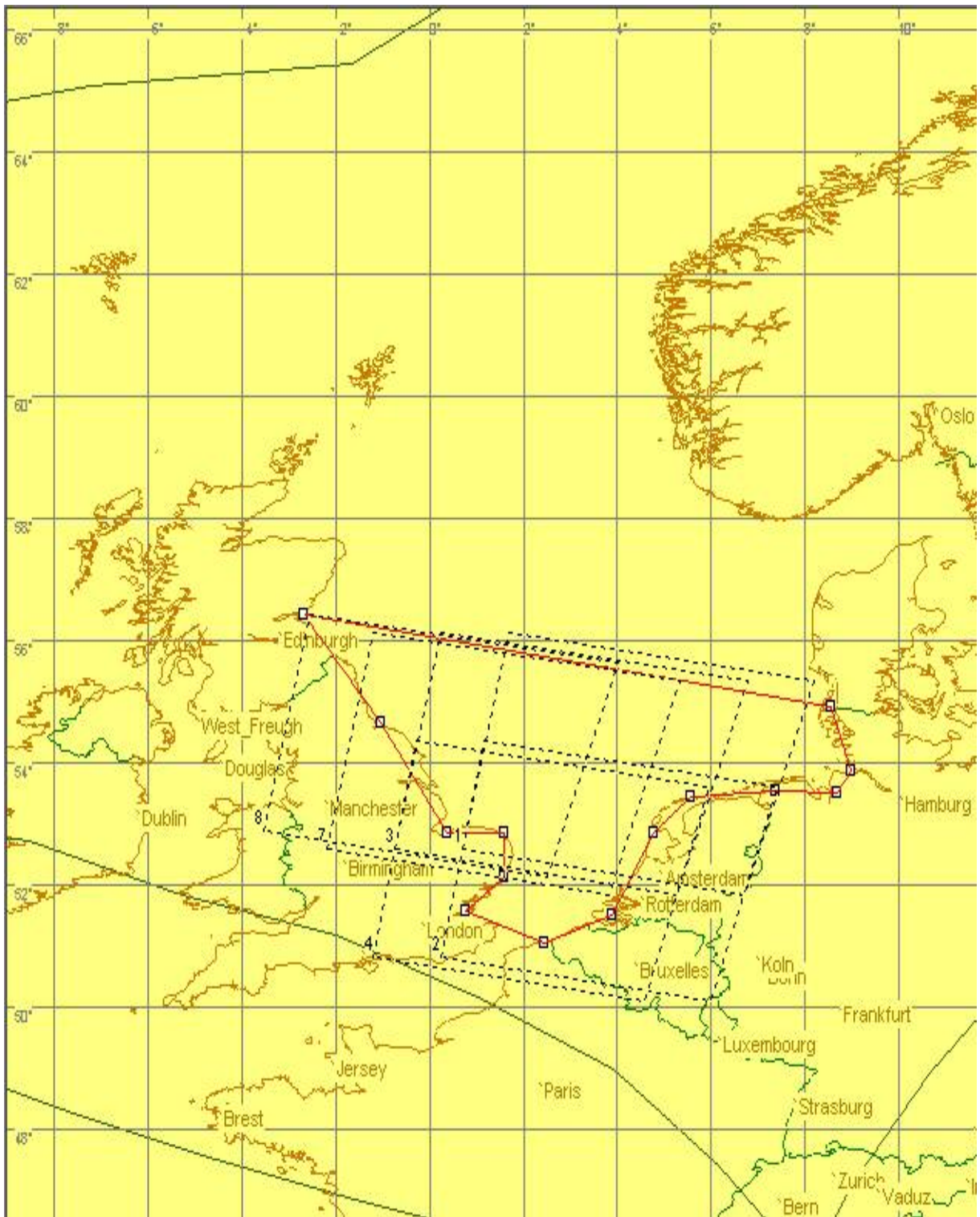


Figure A-4 Envisat coverage for the second half of a 35 days repeat cycle

ID	Prod	Date	Time	Asc/Desc
1	EW	20050826	10:04:00	Descending
2	EW	20050826	10:04:30	Descending

3	EW	20050829	10:09:45	Descending
4	EW	20050829	10:10:15	Descending
7	EW	20050901	10:15:30	Descending
8	EW	20050904	10:21:10	Descending

Table A-4 Radarsat coverage for the second half of a 35 days repeat cycle.