**Appendix II to the Tender Specifications**

**EMSA/NEG/7/2023 for Oil spill thickness and volume estimation using satellite images from the Sentinel-2 constellation**

**Selection Criteria, Quality Criteria and Technical Requirements**

# Tenderer’s Identification

**In case of Individual submission**

Name of the company

**Contact person**

Name:

Address:

E-mail:

Fax:

**Date and Signature**

|  |  |  |
| --- | --- | --- |
|  |  | Done at ,on 2023  Signature of the authorised representative |

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# Introduction

## Requirement’s information

All requirements are defined with the following elements:

* Title: Title of the requirement
* Requirement ID: unique code (“EOS\_XXX\_nnnn”) where:
  + EOS: “Earth Observation Services” (EOS) requirements
  + XXX: code of the type of requirement:
    - MIN – Minimum requirements – mandatory requirements which the Tenders must be compliant with in order not to be rejected and to be considered for Award.
    - QUA – Quality requirements - requirements that are scored under Quality Criteria under Award Criteria;
    - INF – Informative requirements;
    - CON – Contractual mandatory requirements – mandatory requirements which the contractor shall comply during contract implementation.
  + nnnn: 4-digit sequential number for the requirement.
* Definition of the requirement.
* Compliance: Three levels of compliance might be declared by the Tenderer - see section 1.2.
* Description: field to be completed by the Tenderer in accordance with the information requested in each definition of the requirement and acceptance criteria when applicable.

## Instructions to Tenderers

Where term “Tenderer” is used in this document, the Tenderer shall address the respective requirement in their tender. A reference to “Contractor” refers activities, conditions or terms that shall be considered during the execution of the contract. Equivalents will be accepted only if they meet the requirements as defined in this document. EMSA reserves the right to disagree with the proposed equivalents.

For each non-informative requirement, the Tenderer shall provide:

* **Compliance with the requirement**: the Tenderer shall select relevant option Not Compliant/Partially Compliant/Compliant in the drop-down menu set by default to “Please choose”.
* **Description**: the Tenderer shall provide the description of compliance in this field for each requirement, when requested:
  + - * In case of full compliance: description of the approach or capability referred to in the requirement, including details on how the Tenderer aims at fulfilling this compliance.
      * In case of partial compliance: the Tenderer shall clearly identify the level and extent of compliance, clearly indicating any elements that may decrease or mitigate the impact of the partial fulfilment of requirements.
      * In case of non-compliance: Explanation why the Tenderer is not compliant, indicating elements that can mitigate the lack of compliance.

The Tenderer shall use the formatting styles already available in the Word document provided by EMSA. If needed, Page Breaks between sections can be removed or added by the Tenderer.

# Selection Criteria (to be filled in by the Tenderer)

## Technical and professional capacity by staff

Please complete Table 1 with the relevant information on **the key persons of the Team** who will execute the work described in the Tender Specifications.

Table 1 Selection Criteria: Technical and professional capacity by staff

| **Team Member Name** | **Profile** | **Description** | **Fulfilment** | **Description** |
| --- | --- | --- | --- | --- |
|  | **Project Manager (PM)** | University degree | Please choose: |  |
| C1 English verbal and writing skills | Please choose: |  |
| At least 2 years of experience as a project manager in areas related with Earth Observation | Please choose: |  |
|  | **Senior EO Specialist** | University degree | Please choose: |  |
| B2 English verbal and writing skills | Please choose: |  |
| At least 2 years of experience in technical projects related with EO Optical Services | Please choose: |  |

Note: Only one person per profile shall be included in the above table. This person shall fulfil all the selection criteria associated to the respective profile for the Tenderer to be considered as fulfilling Selection Criteria. Failure to fulfil Selection criteria will lead to the rejection of the tender.

## Technical and Professional capacity by the Tenderer

Provide the following information:

Table 2 Selection Criteria: Technical and professional capacity by the Tenderer

| **Description** | **Fulfilment** | **Description** |
| --- | --- | --- |
| The Tenderer shall fulfil the following criteria: | | |
| The Tenderer shall have relevant experience in at least one project in the past 5 years, with a minimum duration of six months, related with oil spill detection and analyses using optical based satellite images. | Please choose: | Please indicate (max one page per project):   * + - Name and duration of the project     - Year(s) of execution     - Description of the project objectives     - Main project results |

# Minimum requirements (to be filled in by the Tenderer)

The Tenderer shall be compliant with minimum requirements in order not to be rejected and to be considered for Award.

## Geographical scope of services

|  |  |  |
| --- | --- | --- |
| **Title: Geographical scope of services** | | |
|  | | TYPE: Minimum Requirement |
| EMSA is currently delivering EO Services to a wide user community with on-going activities in several locations (e.g. EU Member States territorial waters; EU Member States Exclusive Economic Zone (EEZ); Mediterranean Sea territorial and EEZ waters; Black and Caspian Sea territorial and EEZ waters, Greenland, Newfoundland, Gulf of Guinea, South Atlantic, West Africa, Indian Ocean; Antarctica).  The Tenderer shall confirm that it can provide Oil spill thickness and volume estimation (OSV) products for any area worldwide, within the Sentinel-2 mission coverage. | | |
| Compliance | Please choose: | |
| Description: | | |

|  |  |
| --- | --- |
| **Title: Derivative Products** | |
|  | TYPE: Informative Requirement |
| Derivative Products refers to:   * value added products (VAP), which consist of products that are derived from satellite images, (e.g. Oil spill thickness and volume estimation (OSV) products). * print-screen of the clip images, which consist of images with no georeferentiation without metadata and in an image file format e.g. PNG, JPEG. | |

|  |  |
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| **Title: Ownership and distribution of satellite image and derivative products** | |
|  | TYPE: Informative Requirement |
| EMSA has the ownership of the Derivative Products and may distribute all products, for non-commercial purposes as shown in the table:  Table 3 – Ownership and distribution of satellite image and derivative products   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **EMSA’s ownership** | **Distribution to EMSA’s stakeholders** | **Distribution to EMSA’s Contractors** | **Distribution to the public** | | **Derivative products** | Yes | Yes | Yes | Yes | | **Image products** | No | Yes | Yes | Yes |   The Contractor does not retain or acquire the ownership of any of the products associated with this contract. | |

|  |  |
| --- | --- |
| **Title: Derivative products’ distribution** | |
|  | TYPE: Informative Requirement |
| EMSA may export and display Derivative Products, for non-commercial purposes to:   * EMSA stakeholders. * EMSA Contractors. * General public: as content of reports, presentations, communications activities, publications, creation and publication of statistics for studies. | |

|  |  |
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| **Title: EMSA stakeholders** | |
|  | TYPE: Informative Requirement |
| EMSA stakeholders include:   * EU Member States, European Free Trade Association Countries, EU Acceding, Candidate and Potential Candidate countries, Overseas Countries and Territories (OCT’s), third Countries sharing a regional sea basin with the EU, or third Countries benefiting from a service provided by EMSA at the request of the European Commission (example: European Neighbourhood Policy countries). Access to EMSA managed maritime applications is granted to users belonging to public organisations in these States, countries or OCT’s in accordance with the associated Conditions of Use signed between EMSA and users. * EU Institutions and bodies and other public organisations including, but not limited to: European Commission, Council of the EU, European Fisheries Control Agency, European Environment Agency, European Border and Coast Guard Agency, European Union Satellite Centre, Joint Research Centre, European Space Agency, European Union Naval Forces, European Union Agency for Law Enforcement Cooperation and Maritime Analysis and Operations Centre – Narcotics. * International Organisations, International and Regional Agreements and associated working groups including, but not limited to: the International Maritime Organization, International Commissions, the Black Sea Commission/the Bucharest Convention, the Barcelona Convention and its Regional Marine Pollution Emergency Response Centre, the Baltic Marine Environment Protection Commission, the Bonn Agreement, the Copenhagen Agreement, the Helsinki Convention, the Lisbon Agreement, the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) and the United Nations bodies. | |

|  |  |
| --- | --- |
| **Title: EMSA’s Contractors** | |
|  | TYPE: Informative Requirement |
| EMSA’s Contractors refers to several sub-categories of Contractors:   * Contractor: successful Tenderer, under this Call for Tenders, following the signature of the FWC. * Other EMSA Contractors: entities which have signed contracts with EMSA for the provision of services, including, but not limited to application development, set up and testing activities and quality control activities. | |

## Service Desk

|  |  |  |
| --- | --- | --- |
| **Title: Service Desk – Point of Contact** | | |
|  | TYPE: Minimum Requirement | |
| The Tenderer shall provide a unique point of contact (POC) composed of email and phone number for the following activities (note that voicemail service will not be accepted):   * Service Request for Feasibility and Ordering; * Issue management and Quality assessment; * Project Management; * Financial Report and Invoices – for closing financial reports and delivery of Invoices. | | |
| Compliance: | | Please choose: |
| Description: | | |

|  |  |  |
| --- | --- | --- |
| **Title: Delivery of OSV Services: 24/7 365 days/year** | | |
|  | | TYPE: Minimum Requirement |
| The Tenderer shall confirm that it can deliver OSV Services to EMSA 24/7, 365 days of the year. | | |
| Compliance | Please choose: | |
| Description: | | |

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| --- | --- | --- |
| **Title: Request of OSV Services: Service Desk** | | |
|  | TYPE: Minimum Requirement | |
| The Tenderer shall confirm that it can provide a Service Desk 7 days per week Monday to Sunday 08:00 – 17:00 Lisbon time, handled by an on-call duty officer (no voicemail service will be accepted), to support EMSA’s request activities according to Appendix IV – OSV Planning and Ordering procedure including, but not limited to:   * Acknowledging EMSA’s request; * Drafting a feasibility plan based on user requirements; * Validating a feasibility plan generated by EMSA; * Informing EMSA without delay about satellite events that might have an impact on future acquisitions. | | |
| **Compliance:** | | Please choose: |
| Description: | | |

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| --- | --- |
| **Title: Definition of EMSA’s Service Desk** | |
|  | TYPE: Informative Requirement |
| EMSA will define EMSA Service Desk Points of Contact (POCs) that shall interact with the Contractor for:   * Feasibility, Ordering; * Contract Management; * Financial Report and Invoice.   During the Kick Off Meeting, EMSA will provide the abovementioned information. | |

## OSV Products

|  |  |  |
| --- | --- | --- |
| **Title: Sentinel-2 data from Copernicus Open Access Hub** | | |
|  | | TYPE: Minimum Requirement |
| The Tenderer shall confirm that it is able to retrieve Sentinel-2 data from Copernicus Open Access Hub. | | |
| Compliance | Please choose: | |
| Description: | | |

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| **Title: Maximum number of oil spill detections** | | |
|  | | TYPE: Minimum Requirement |
| The Tenderer shall confirm that it will not impose any limitations on the number of oil spill detections in one Area of Interest (AOI). | | |
| Compliance | Please choose: | |
| Description: | | |

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| --- | --- | --- |
| **Title: Ortho rectified products** | | |
|  | | TYPE: Minimum Requirement |
| The Tenderer shall confirm that it can provide Sentinel-2 products in geotiff format. | | |
| Compliance | Please choose: | |

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| --- | --- | --- |
| **Title: sftp** | | |
|  | | TYPE: Minimum Requirement |
| The Tenderer shall confirm that it can provide to EMSA the access to a sftp for transfer of Data outside of the EMSA systems (e.g., Data used to produce the Report).  sftp details shall be provided to EMSA at the Kick Off meeting. | | |
| Compliance | Please choose: | |
| Description: | | |

|  |  |  |
| --- | --- | --- |
| **Title: Nautical Charts** | | |
|  | | TYPE: Minimum Requirement |
| EMSA will make available to the Contractor the Electronic Nautical Charts (ENC) through a System-to-System interface. If the Tenderer uses a different dataset, the Tenderer shall confirm that the following conditions are guaranteed:   * Nautical charts with Worldwide coverage (S-52); * Nautical charts updated at least 3 times a year.   and the Tenderer shall identify the following in the tender:   * Source and description of the dataset; * Update interval of the used datasets. | | |
| Compliance | Please choose: | |
| Description: | | |

# Quality criterion 1: Assessment of technical specifications (to be filled in by the Tenderer)

## Module 1 – Provision of Services

|  |  |
| --- | --- |
| **Title: Ancillary data** | |
|  | TYPE: Informative Requirement |
| Ancillary information refers to data that shall be used by the Contractor in the analysis and production of the Derivative Products. Examples:   * Nautical charts; * Met-ocean layers; * Sea surface wind (speed and direction) from remote sensing sources; * Sea state * Ice Charts | |

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| **Title: Contractor Ancillary data** | | |
|  | | TYPE: Quality Requirement |
| The Tenderer should describe in detail the ancillary datasets used to support the production of each derivative product focusing on:   * Ancillary datasets description; * Identification of the source and producer of the dataset; * Geographical coverage; * Ratio/frequency of update (if applicable); * Applicability ancillary data to OSV | | |
| Compliance | Please choose: | |
| Description: [Maximum 3 pages for this description] | | |

### OSV product

|  |  |
| --- | --- |
| **Title: OSVproduct** | |
|  | TYPE: Informative requirement |
| * The OSV Product shall be based on the analysis of optical images from the Sentinel-2 constellation. The estimation shall be based on the methodology that utilises the Bonn Agreement Oil Appearance Code (BAOAC)[[1]](#footnote-2) to identify specific characteristics (optical product specific colours) of the discharged substances.   Table 4: Bonn Agreement Oil Appearance Code (BAOAC)   | BAOAC  Code | Description – Appearance | Layer Thickness Interval (µm) | Litres per km2 | Cubic meters per km2 | | --- | --- | --- | --- | --- | | 1 | Sheen (silvery/grey) | 0.04 to 0.30 | 40 – 300 | 0.04 – 0.3 | | 2 | Rainbow | 0.30 to 5.0 | 300 – 5000 | 0.3- 5.0 | | 3 | Metallic | 5.0 to 50.0 | 5000 – 50,000 | 5.0 – 50.0 | | 4 | Discontinuous True Oil Colour | 50.0 to 200.0 | 50,000 – 200,000 | 50.0 – 200.0 | | 5 | Continuous True Oil Colour | More than 200 | More than 200,000 | More than 200.0 | | |

|  |  |  |
| --- | --- | --- |
| **Title: Production of OSV** | | |
|  | | TYPE: Quality requirement |
| The Tenderer should describe in detail the methods used in the production of OSV products, focusing on the description of:   * Oil Spill detection; * Calculation of centre position of the oil spill; * Method for determining a clean sea status- no potential oil spill(s) in the image; * Possible Polluter Identification; * Used algorithms to estimate attributes for each BAOAC codes (including limitations); * Calculation of the oil thickness; * Calculation of the oil volume; * Workflow to produce the OSV product; * Applicable ancillary data and how each dataset is used to produce the product. | | |
| Compliance | Please choose: | |
| Description: [Maximum 3 pages for this description] | | |

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| --- | --- | --- |
| **Title: Confidence level: Oil Spill Detection** | | |
|  | | TYPE: Quality requirement |
| The detected oil spill classification foresees two classes (based on confidence level provided by Contractor for each spill):   * High Confidence – The detected spill is most probably oil (mineral or vegetable/fish oil) or a chemical product (high confidence, confidence level > 50%). * Low Confidence – The detected spill is less probably oil (mineral/vegetable/fish oil) or a chemical product (low confidence, Confidence level <= 50 %).   The Tenderer should describe the method for determining the confidence level associated with the detection of an oil spill, focusing on:   * Mandatory parameters used; * Ancillary data used as input. | | |
| Compliance | Please choose: | |
| Description: [Maximum 2 pages for this description] | | |

|  |  |  |
| --- | --- | --- |
| **Title: Confidence level: Oil spill thickness estimation** | | |
|  | | TYPE: Quality requirement |
| The oil spill thickness estimation foresees two classes (based on confidence level provided by Contractor for each spill thickness estimation):   * High Confidence: Oil spill thickness estimation parameter is of high confidence (confidence level > 50%). * Low Confidence: Oil spill thickness estimation parameter is of low confidence (confidence level <= 50 %).   The Tenderer should describe the method for determining the confidence level associated with the estimation of oil spill thickness, focusing on:   * Mandatory parameters used; * Ancillary data used as input. | | |
| Compliance | Please choose: | |
| Description: [Maximum 3 pages for this description] | | |

|  |  |  |
| --- | --- | --- |
| **Title: Confidence level: Oil spill volume estimation** | | |
|  | | TYPE: Quality requirement |
| The oil spill volume estimation foresees two classes (based on confidence level provided by Contractor for each spill volume estimation):   * High Confidence – Oil spill volume estimation parameter is of high confidence (confidence level > 50%). * Low Confidence – Oil spill volume estimation parameter is of low confidence (confidence level <= 50 %).   The Tenderer should describe the method for determining the confidence level associated with the estimation of oil spill volume, focusing on   * Mandatory parameters used; * Ancillary data used as input. | | |
| Compliance | Please choose: | |
| Description: [Maximum 3 pages for this description] | | |

|  |  |  |
| --- | --- | --- |
| **Title: Calculation of OSV for each BAOAC code** | | |
|  | | TYPE: Quality requirement |
| The Tenderer should describe the method for the calculation of the OSV for each BAOAC code identified.  Additionally, the Tenderer should also describe any existing limitations associated with any of the BAOAC codes. | | |
| Compliance | Please choose: | |
| Description: [Maximum 2 pages for this description] | | |

|  |  |  |
| --- | --- | --- |
| **Title: Contour polygon of a slick** | | |
|  | | TYPE: Quality requirement |
| The Tenderer should describe the method for the extraction of the contour polygon in both KML and Shape file formats, for each identified BAOAC code pertaining to an oil pollution slick detected within the image. | | |
| Compliance | Please choose: | |
| Description: [Maximum 1 page for this description] | | |

|  |  |  |
| --- | --- | --- |
| **Title: Feasibility Coverage Compliance** | | |
|  | TYPE: Informative Requirement |  |
| Feasibility Coverage Compliance refers to how well coverage requirements are met, by comparing the footprints of the planned Sentinel-2 images versus EMSA Feasibility AOI. The Feasibility Coverage Compliance is a percentage of the EMSA feasibility AOI which is covered by the planned Sentinel-2 image.  **Example:** | | |

|  |  |  |
| --- | --- | --- |
| **Title: Coverage area definition** | | |
|  | TYPE: Informative Requirement |  |
| Coverage Compliance refers to how well coverage requirements are met, by comparing the footprints of delivered acquisition versus ordered. The Coverage Compliance is a percentage of the ordered EMSA AOI which is covered by the delivered Sentinel-2 image.  **Example :** | | |

|  |  |  |
| --- | --- | --- |
| **Title: Usable area definition** | | |
|  | TYPE: Informative Requirement |  |
| The usable area is defined based on data integrity quality criteria – missing data and artefacts – and also on the evaluation of other quality factors, which can corrupt pixels in a way to make them inadequate for analysis. The usable area is a percentage of the part of the image which is in compliance with the order.  **Example :** | | |

|  |  |  |
| --- | --- | --- |
| **Service delivery: Quality parameters** | | |
|  | | TYPE: Quality requirement |
| The Tenderer should describe the method for determining the quality parameters, focusing on:   * Feasibility coverage compliance of the Sentinel 2 image; * Coverage compliance of the Delivered product; * Usable area of the delivered product;   **And the quality parameter is calculated as follows (example provided in the previous requirement)**  Quality parameter = Coverage Compliance x Usable Area = 75% \* 50% = 37.5% | | |
| Compliance | Please choose: | |
| Description: [Maximum 2 pages for this description] | | |

|  |  |
| --- | --- |
| **CleanSeaNet OSV Report types** | |
|  | TYPE: Informative Requirement |
| The following two Report Types are defined:   * CleanSeaNet Report OSV: when 1 or more oil spill is detected. * CleanSea Report OSV: when no oil spill is detected. | |

|  |  |  |
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| **OSV Report Example** | | |
|  | | TYPE: Quality requirement |
| The Tenderer should provide examples for the:   * CleanSeaNet OSV Report types (pdf and word format), including all fields defined in contractual requirement EOS-CON-0018; * Thickness layer (kml and shape file format). | | |
| Compliance | Please choose: | |
| Description: [Maximum 5 pages for this description] | | |

### Ordering Planning type

|  |  |
| --- | --- |
| **Title: Cloud Coverage threshold definition** | |
|  | TYPE: Informative Requirement |
| The cloud coverage threshold refers to the percentage (%) of the ordered area image that was delivered with clouds over the surface. | |

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| --- | --- | --- |
| **Title: Cloud Coverage threshold Confidence level** | | |
|  | | TYPE: Quality requirement |
| The Tenderer should describe the method to determine confidence level of the cloud coverage parameter focused on:   * Method and/or algorithm; * Ancillary data used as input. | | |
| Compliance | Please choose: | |
| Description: [Maximum 1 page for this description] | | |

# Quality criterion 2: Quality of Project and Quality management Plans (to be filled in by the Tenderer)

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| --- | --- | --- |
| **Title: Project Management Plan** | | |
|  | | TYPE: Quality Requirement |
| The Tenderer should provide the Project management plan which should encompass the following elements.   * Project internal control:   + Internal Metrics   + Internal Key performance indicators   + Action items * Main Milestones * Team organigramme * Work Breakdown Structure * Risk Management Plan:   + Risk management process   + Risk control monitoring   + Risk registry and mitigation measures | | |
| Compliance | Please choose: | |
| Description: [Maximum 5 pages for this description] | | |

|  |  |  |
| --- | --- | --- |
| **Title: Quality Management Plan** | | |
|  | | TYPE: Quality Requirement |
| The Tenderer should provide the Quality management plan which should encompass the following elements.   * Quality Management:   + Standards   + Objectives   + Metrics   + Roles and responsibilities   + Plan (list of project deliverables and processes that will be quality reviewed)   + Continuous improvement process   + Quality Audits (internal/external) * Quality Control:   + When and how quality control will be checked including metrics as well as associated thresholds to decide if the product is acceptable for delivery or not:     - Geographical accuracy of the image, including conditions where the Contractor re-process the image for deliver.     - Coverage Area calculation     - Usable Area calculation     - Cloud coverage calculation     - Quality and accuracy of the Derivative Products     - Derivative Products Confidence levels | | |
| Compliance | Please choose: | |
| Description: [Maximum 3 pages for this description] | | |

# Requirements for contract implementation

## Module 1 Provision of Services

|  |  |
| --- | --- |
| **Title:**  **Set-up costs** | |
|  | TYPE: Contractual Requirement |
| EMSA shall not be charged of any costs with activities related with contractor service set-up. | |

|  |  |
| --- | --- |
| **Title:**  **Start of the Service** | |
|  | TYPE: Contractual Requirement |
| The contractor shall be ready to start services up to 3 months after the signature of the FWC. | |

|  |  |
| --- | --- |
| **Title: Sentinel-2 images** | |
|  | TYPE: Contractual Requirement |
| Sentinel-2 image refers to the image (sum of all image granules also called tiles) acquired by the Sentinel 2 mission that covers the AOI defined by EMSA. | |

|  |  |
| --- | --- |
| **Title: Product Specifications** | |
|  | TYPE: Contractual Requirement |
| OSV products encompass:   * CleanSeaNet OSV Report (pdf and word format). * Data used to produce the report:   + Oil Spill thickness layer for each BAOC code identified (kml and shape file format)   + Sentinel-2 data including Sentinel 2 image and Report clip image (geotiff format)   + All used ancillary data (e.g., bathymetry layer) | |

|  |  |
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| **Title: Teleconference system supported by the Contractor** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall have access to at least one teleconference system, which shall be made available to EMSA for teleconferences and meetings. | |

|  |  |
| --- | --- |
| **Title: Service delivery updates** | |
|  | TYPE: Contractual Requirement |
| During the contract implementation, and upon request from EMSA, the Contractor shall support EMSA with the following updates:   * CleanSeaNet OSV Report template update * Parameters update (e.g. image copyrights, units) * Change of ancillary data file format   No costs shall be charged to EMSA regarding the abovementioned updates. | |

|  |  |
| --- | --- |
| **Title: OSV Projection** | |
|  | TYPE: Contractual Requirement |
| OSV raster and vectorial products shall be delivered in WGS84 World Geodetic System 1984 (EPSG:4326).  Upon EMSA’s request the following projections shall be supported:   * Universal Transverse Mercator; * Universal Polar Stereographic (for Polar Regions); * Mercator. | |

|  |  |
| --- | --- |
| **Title: Ortho rectified products order** | |
|  | TYPE: Contractual Requirement |
| Except if EMSA explicitly requests non-orthorectified products in the service order, all products delivered shall be orthorectified. | |

|  |  |
| --- | --- |
| **Title: Ortho rectified products costs** | |
|  | TYPE: Contractual Requirement |
| No additional costs shall be charged to EMSA for products ordered and delivered as orthorectified. | |

|  |  |
| --- | --- |
| **Title: OSV products in raster format -spatial resolution** | |
|  | TYPE: Contractual Requirement |
| For OSV attributes delivered in raster format (e.g., report clip image), the spatial resolution of the product shall be the same as the original EO image. | |

|  |  |
| --- | --- |
| **Title: Definition of Clip Images** | |
|  | TYPE: Informative Requirement |
| Clip images (thumbnails) refer to small images, centred on the detection, that usually are integrated in produced reports that are sent by EMSA to the end users. | |

|  |  |
| --- | --- |
| **Title: Clip images** | |
|  | TYPE: Contractual Requirement |
| The clip images shall be produced by the contractor taking into consideration the following: .   * The size of the clip images shall be of a few KBs and in any case not greater than 1 MB. * The clip image design for Oil Spills is displayed below.     Figure 1- Oil Spill clip image approach   * Extracted from the full resolution image in a UTM map projection, however EMSA may require a change of the projection at ordering level; * Clip image provided in GeoTIFF format; * Clip image overlaid with a geographic grid and scale; * Clip image overlaid with image credits; Image credits shall be set to “© Copernicus Sentinel data (year of acquisition)”. EMSA may request image credits to be updated. * Clip images shall be produced from the delivered OSV Products; * Scale bar and image credits shall be placed on the bottom of the clip image. It is accepted outside the image as long as it is on the bottom; * Font: Arial ; Font Colour: black; bold; * Grid: line colour: Black; * Coordinates: units format: deg min sec (e.g. 21º22'00''N); * Coordinates: labels design: colour black inside a white box; | |

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| **Title: Clip images for OSV Service** | |
|  | TYPE: Contractual Requirement |
| The Contractor must deliver clip images for each oil spill detection contained in the OSV Service. | |

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| **Title: Slick’s pattern** | |
|  | TYPE: Contractual Requirement |
| For each possible spill, the individual oil slick pattern shall be described by a single contour polygon. | |

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| **Title: Length value of a possible spill** | |
|  | TYPE: Contractual Requirement |
| Length value of a slick shall be calculated based on the Minimum Bounding Box which encompasses the polygon contour:    The length of a possible spill shall be the sum of length of all slicks belonging to the spill. | |

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| **Title: Width value of a possible spill** | |
|  | TYPE: Contractual Requirement |
| Width value of a slick shall be calculated based on the Minimum Bounding Box which encompasses the polygon contour:    The width of a possible spill shall be the sum of width of all slicks belonging to the spill. | |

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| **Title: Area value of a possible spill and calculation of slick area** | |
|  | TYPE: Contractual Requirement |
| Area value of a slick shall be calculated based on polygon triangulation method which encompasses the polygon contour:  Decompose the polygon into a set of triangles. Sum all triangles area to calculate the polygon area.    Area of the polygon = A1+A2+A3+A4  The area of a possible spill shall be the sum of the areas of all slicks belonging to the spill. | |

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| **Title: Confidence levels** | |
|  | TYPE: Contractual Requirement |
| The calculation of the confidence level concerning attributes included in the OSV, shall be mandatory for cases where the attribute is delivered by the Contractor.  For instance:   * Example 1: If the Contractor provides a detected oil spill, the associated Confidence level shall be included in the report. * Example 1: If the Contractor provides the thickness layers, the associated Confidence level(s) shall be included in the report.   Confidence levels (linked with all relevant parameters) are defined from 1 to 100:  100% means that the operator is absolutely sure that the identified feature or target is the one being requested;  The lower the value, the lower the confidence, using a linear scale;  Value shall always be greater than zero. Zero stands for no confidence and, in that case, the target should not be reported. | |

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| **Title: CleanSeaNet OSV Report file:** | |
|  | TYPE: Contractual Requirement |
| The contractor shall deliver the CleanSeaNet OSV report in both:   * pdf file format; * word file format   that shall contain the following information:   * Report Header:   + EMSA logo   + Report Title:     - *“Report type name”*: for the first time the OSV product is delivered     - Updated *“Report type name” :* for every time the product is redelivered   + Image acquisition stop time (yyyy-mm-dd hh:mm:ss UTC)   + Satellite name and sensor * Report Footer: EMSA Maritime support services 24/7, phone number and mail address. * First page with information overview:   + context map (zoomed out) (available via API EMSA CMAP (WMS)) including image footprint (available via API EODC Processing) – scale of map to be defined during contract implementation.   + Zoom in map (available via API EMSA CMAP (WMS)) including image footprint and oil spill centre position location.   + Possible Oil spill information:     - Detection confidence level     - Centre position     - Area     - Length     - Width     - Estimated Volume:       * Estimated Minimum Volume       * Estimated Maximum Volume       * Confidence level     - Estimated thickness       * Estimated Minimum thickness       * Estimated Maximum thickness       * Confidence level * Next page(s): One page per detection including:   + Clip image   + Thickness Polygon layer (one colour per BAOC code) geolocated in the map (available via API EMSA CMAP (WMS))   + Detection confidence level   + Centre position   + Area   + Length   + Width   + Possible polluter identification:     - Detected (yes: if detected in the image, no: if not detected in the image)     - Identified (yes: if possible polluter identification is possible, no: otherwise)     - Position     - Type (e.g., vessel, oil platform, wreck, pipeline)     - Name     - IMO     - MMSI     - Call sign   + Legend between polygon colour code and parameters (order by highest to lowest estimated volume)     - Estimated Volume:       * Estimated Minimum Volume       * Estimated Maximum Volume       * Confidence level     - Estimated thickness       * Estimated Minimum thickness       * Estimated Maximum thickness       * Confidence level     - Area     - Length     - Width   The Contractor shall provide the template for the CleanSeaNet OSV Reports at the kick-off meeting.  The Contractor shall provide multiple versions of the template proposed, until the final template is accepted by EMSA. | |

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| **Title: Oil spill layer GIS format** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall include one file per oil spill detection (comprising the thickness layers polygons) in:   * KML file format; * Shape file format.   Thickness layers polygons can be:   * regular (square or rectangle, with 4 vertexes), or * irregular: it can have sides of any length and each vertex angle can be any measure. Irregular polygons are closed polygons without self-interception.     The Contractor shall provide:   * One polygon for each BAOC code detected for each oil spill slick. * Each BAOC code detected shall be represented in a different colour.   The Contractor shall provide multiple examples of Thickness layers one month after the contract signature, until the final version is accepted by EMSA. | |

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| **Title: Ancillary data** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall deliver to EMSA all ancillary data used for the production of the OSV products (e.g., Bathymetry, coastline information, etc.) | |

### Service Delivery

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| **Title: Copernicus Open Access Hub** | |
|  | TYPE: Contractual Requirement |
| The Contractor is responsible for liaising with ESA:   * - for the Copernicus Open Access hub Sentinel-2 data retrieval in order to ensure access to Sentinel-2 products. * - for any issues related with Copernicus Open Access hub Sentinel-2 data retrieval in order to ensure access to Sentinel-2 products. | |

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| **Title: Concepts related with Time** | |
|  | TYPE: Informative Requirement |
| Concepts related with Time in the scope of this procedure:   * **EMSA request form time stamp**: time when EMSA sends the request to the Contractor * **Contractor Service Desk Start time:** defined in requirement EOS-MIN-0004 * **Availability time at Copernicus Open Access hub:** time when the image is available at Copernicus Open Access hub * **Delivery timestamp:** Product delivery completion at EMSA * **Delivery timeliness/ Maximum Delivery Time**: time the Contractor has to deliver the products to EMSA * **OSV Products Delivery time difference** shall be calculated as follows:   Delivery time difference = t1 – t0  Where  t0 is calculated as:   * + - t0= Max (EMSA Request form timestamp, Contractor Service Desk Start time, Availability time at Copernicus Open Access hub)   t1= OSV Service Delivery timestamp at EMSA.   * **Example 1:** * If the EMSA request form time is **09:00:00**, Contractor Start Service Desk **08:00:00** and the Availability time at Copernicus Open Access hub is **10:00:00**, products were delivered at **11:30:00** * t0= Max (09:00:00, 08:00:00, 10:00:00) = 10:00:00 * t1=11:30:00 * Delay time Difference = **01:30:00** * **Example 2 (Sentinel-2 image acquisition occurred before EMSA order):** * If the EMSA request form time is **09:10:00**, Contractor Start Service Desk **08:00:00**, Availability time at Copernicus Open Access hub was at **07:00:00**, products delivered at **11:30:00** * t0= Max (**09:10:00**, 08:00:00, 07:00:00) =09:10:00 * t1=11:30:00 * Delay time Difference = **02:20:00** * **Example 3 (Sentinel-2 image acquisition occurred before EMSA order):** * If the EMSA request form time is **05:00:00**, Contractor Start Service Desk **08:00:00** and the Availability time at Copernicus Open Access hub is **02:00:00**, products were delivered at **11:30:00** * t0= Max (05:00,00, **08:00:00**, 02:00:00) = 08:00:00 * t1=11:30:00 * Delay time Difference = **03:30:00** | |

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| **Title: Maximum Delivery time** | |
|  | TYPE: Contractual Requirement |
| All products shall be delivered at the latest according to table below (minutes).    Table 5- OSV Maximum Delivery Time (minutes).   |  |  | | --- | --- | | **Products** | **Maximum Delivery time**  **(minutes)** | | OSV products | 180 | | |

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| **Title: Post processing products costs** | |
|  | TYPE: Contractual Requirement |
| The post processing products shall be in accordance with the product specification.  No additional costs shall be charged to EMSA for OSV products ordered and delivered as post processed.  No additional time is added to the maximum delivery time of OSV products. | |

### Price

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| **OSV Final Price Calculation** | | |
|  | TYPE: Contractual Requirement |  |
| Base price for OSV Services shall be calculated as defined below:  Note: OSV price in accordance with Appendix III Financial offer | | |

### Price Reductions

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| **OSV products services without costs associated** | |
|  | TYPE: Contractual Requirement |
| EMSA shall not be charged of any costs if at least one of the following situations occurs:   * set-up and testing; * services not formally ordered by EMSA (using a valid request form) * If a file is successfully transferred to EMSA but is either incomplete or corrupted * If the OSV service is partially delivered to EMSA: I * If any of the OSV Product(s) is not delivered according to the ordered specifications. * If the Contractor fails to deliver at least one product that encompasses the OSV product to EMSA (e.g., due to Copernicus Open Access Hub or ground station anomaly) * If the OSV service is cancelled before image service Acquisition Start:   + by EMSA or   + by the Contractor, or   + by ESA. * If the OSV service is delivered with low quality (Quality Coefficient 0%) * If the OSV service is delivered outside the defined maximum delivery delay (Delay Coefficient 0%) * If the OSV service is delivered outside the requested Could Coverage threshold. | |

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| **Service Delivery: Price Reduction** | |
|  | TYPE: Contractual Requirement |
| The following reductions are applied to the prices of the delivered services:   * Delay coefficient: the Contractor delivers the services with a time delay when compared with Maximum delivery time. For these cases, price reduction is associated with the reduction parameter Delivery Delay Coefficient; * Quality Coefficient: the Contractor delivers an OSV product with lower quality than expected. Quality refers to combination of covered area vs ordered area; usage of covered area; Service Quality. The price reduction is associated with the reduction parameter Quality Coefficient. | |

#### Delivery Delay time

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| **Title: Service delivery: delivery delays coefficient** | |
|  | TYPE: Contractual Requirement |
| In case of OSV products delivery delays (based on the Maximum delivery time) the following coefficients will apply to the base price as defined in table below.    Table 6- Delay Coefficient.   |  |  |  | | --- | --- | --- | | **Delivery Category** | **Delivery Delay Time (hh:min:sec)** | **Delivery Delay Coefficient** | | Delivery Category 1 | No Delay | 100% | | Delivery Delay Category 2 | Up to 00:30:00 delay | 80% | | Delivery Delay Category 3 | From 00:30:00 to 01:00:00 delay | 60% | | Delivery Delay Category 4 | From 01:00:00 to 03:00:00 delay | 40% | | Delivery Delay Category 5 | From 03:00:00 or not delivered or anomaly | 0% |   The calculation for each service will be based on the lowest delay coefficient of all OSV products of the service. | |

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| **Title: Service delivery: transmission delay** | |
|  | TYPE: Contractual Requirement |
| The Contractor is responsible for investigating any transmission delay that could originate from the network. | |

#### Delivered Product Quality

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| **Service delivery: Quality parameters** | |
|  | TYPE: Informative Requirement |
| The quality parameter is a percentage value calculated from:   * The coverage compliance of the image; * The usable area of the image; * The quality control of OSV service. | |

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| **Quality parameter of Service** | |
|  | TYPE: Contractual Requirement |
| The service quality parameter is calculated according to the following equation:  **Example 1:**   * Usable area: 100%, Coverage Area: 70%; Usable area x Coverage Area = 70% * Lowest Quality Control of OSV Service (100%) * Quality parameter= 70%   **Example 2:**   * Usable area: 50%, Coverage Area: 90%; Usable area x Coverage Area =45% * Lowest Quality Control of OSV Service (70%) (e.g.: wrong value of a OSV product). * Quality parameter= 45%   **Example 3:**   * Usable area: 50%, Coverage Area: 90%; Usable area x Coverage Area =45% * Lowest Quality Control of OSV Service 0% (missed oil spill visible in the image) * Quality parameter= 0% | |

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| **Title: Quality Control of OSV product** | |
|  | TYPE: Informative Requirement |
| The Quality Control of OSV Service refers to an analysis performed by EMSA, concerning all the provided OSV Products of each EO Service. This control includes:   * Validation of attributes included in the OSV Products (e.g., compare the estimated spill area against a visual analysis of the image). | |

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| **Price Reduction: Quality Control of OSV product** | |
|  | TYPE: Contractual Requirement |
| In case of poor quality or errors, the following Quality Control Parameters shall be applied:   * OSV Products: apply a 0% Quality Control if the following conditions take place:   + Oil spill detection service     - False negative oil spill. The oil spill can be identified visually but was not reported or     - False positive oil spill detected over reported Ice layer (e.g., Copernicus sea ice).   + CleanSeaNet Report     - Any report element missing * All other Issues linked with any OSV attributes (e.g., wrong, missed or incomplete values) a quality control parameter of 70% will be applied.   EMSA will issue incidents to the Contractor in accordance with Appendix V - OSV Service Level Agreement.  The calculation for each service Quality Control reduction will be based on the lowest value of the quality control reduction of all the products of the service. | |
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| **Title: Service Delivery: Quality coefficients** | |
|  | TYPE: Contractual Requirement |
| The following quality coefficients for the Service shall apply to the base price as defined in table below.  Table 7- Quality coefficients   |  |  |  | | --- | --- | --- | | **Quality Category** | **Quality Parameter (%)** | **Quality Coefficient**  **applicable to the price** | | Quality Category 1 | ≥95% | 100% | | Quality Category 2 | ≥90 and <95% | 90% | | Quality Category 3 | ≥70 and <90% | 70% | | Quality Category 4 | ≥50 and <70% | 50% | | Quality Category 5 | <50% | 0% | | |

### Financial Reports and Invoicing

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| **Title: Financial reports** | |
|  | TYPE: Contractual Requirement |
| The Contractor is responsible for issuing monthly financial reports and communicate them to EMSA for agreement.  The financial reports will be the basis for determining the service prices to be invoiced by the Contractor.  The Financial Reports (in pdf and excel) shall include (at least):   * Covered period (start and end); * Contractor; * Applicable FWC; * EMSA budget line; * Total Delivered OSV Services (with Final Price > EUR 0); * List of all requested OSV Services and for each, the following attributes:   + OSV Service Identification (EMSA Request Form number – Service counter)   + EMSA Request timestamp   + Copernicus Open Data hub time stamp   + Base price   + Anomaly (Y/N)   + Cancellation (Y/N)   + Could Coverage threshold   + Delivery Delay coefficient   + Coverage Compliance   + Usable Areas   + Quality Control   + Quality Coefficient   + Price reductions   + Final Price | |

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| **Title: Financial Reports delivery** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall send monthly financial reports to EMSA by the 5th day of the following month.  Due to EMSA payments constraints /deadlines, this schedule might be reduced in order to expedite this EMSA process. The Contractor shall cooperate and provide the necessary invoices respecting the newly defined schedule. | |

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| **Title: Delivery of invoices to EMSA** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall send an invoice on a quarterly basis per EMSA budget line. The timelines for the delivery of invoices to EMSA shall be the following:   * 3 EMSA Working days after the approval of the Financial Reports by the Contractor and EMSA;   Due to EMSA payments constraints/deadlines, this schedule might be reduced in order to expedite this EMSA process. The Contractor shall cooperate and provide the necessary invoices respecting the newly defined schedule.  The initial baseline date for invoicing shall be agreed upon signature of the Framework Contract. | |

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| **Title: Invoice’s amount** | |
|  | TYPE: Contractual Requirement |
| The amount of the quarterly invoice per EMSA budget line shall correspond with the respective amounts in the agreed monthly financial reports. | |

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| **Title: Content of invoices to EMSA** | |
|  | TYPE: Contractual Requirement |
| The delivered invoices shall include (at least):   * Applicable Specific Contracts; * Applicable EMSA budget(s); * Total price per EMSA project budget(s); * Total quantity of OSV services delivered and with price greater than EUR 0.0, per EMSA project budget(s). * EMSA VAT number * Reference of the invoice time period * VAT include or not. Only economic operators established in Portugal shall include the VAT amount.   During the duration of the contract, the content of the invoices may be changed on EMSA’s request. | |

### Cancelations and anomalies

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| **Title: Definition of Cancelation** | |
|  | TYPE: Informative Requirement |
| Cancelation refers to the process of informing EMSA or the Contractor that the OSV Service will no longer be acquired and delivered. The process of cancelling an OSV Service is taken before the acquisition start time.   * EMSA may request a cancelation if the OSV Service is no longer needed by users. * The Contractor may cancel the acquisition, before the acquisition start time, if there is information that the EO acquisition or OSV service will not occur due to technical or other issues. | |

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| **Title: Communication of cancellations by Contractor to EMSA** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall communicate cancelations to EMSA in accordance with Appendix V - OSV Service Level Agreement. | |

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| **Title: Definition of Anomaly** | |
|  | TYPE: Informative Requirement |
| OSV Services, for which the Contractor only identified a disruption on the delivery after the start acquisition time, are identified as Anomalies and can occur for several reasons e.g.:   * Data unavailability at Copernicus Data access hub; * Data processing limitations; * Contractor’s Technical issues. | |

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| **Title: Communication of Anomaly by Contractor to EMSA** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall communicate Anomalies to EMSA within 30 minutes of the Maximum delivery time of the OSV Service in accordance with Appendix V - OSV Service Level Agreement.  EMSA will raise an incident to the Contractor if the latter fails to meet the requested deadline. | |

### Planning and Ordering

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| **Title: Planning and Ordering process** | |
|  | TYPE: Informative Requirement |
| The Planning and Ordering (also designated as Service Acquisition, Planning and Ordering, Tasking and Ordering) process is described in Appendix IV OSV Planning and Ordering Procedure.  This procedure may be updated by EMSA during the duration of the FWC. | |

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| **Title: Responsibilities of Planning and Order Process** | |
|  | TYPE: Contractual Requirement |
| In the Planning and Ordering process the Contractor is responsible for:   * Provide feasibility upon EMSA’s request; * Confirm the final feasibility as requested by EMSA; * Be compliant with Appendix V OSV Service Level Agreement; * Be compliant with Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: Responsibilities and tasks of EMSA under Planning and Ordering** | |
|  | TYPE: Informative Requirement |
| EMSA’s responsibility is defined in Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: Appendix IV OSV Planning and Ordering Procedure** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall be compliant with Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: OSV Services - Feasibility timelines** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall be able to deliver OSV Feasibilities within the requested timeline for all service requests as per the below table.  Table 8- OSV Service request   |  |  |  | | --- | --- | --- | | **Acknowledgement**  **Deadline** (1) | **Feasibility**  **Deadline** (2) | **Confirmation**  **Deadline** (3) | | 0.5 hours | 1 hour | 1 hour |   For all OSV service requests:   * If the request is initiated during the Contractor's Service Desk hours, the Contractor shall adhere to the timeframes specified in the above table. * If the request is initiated outside of the Contractor's Service Desk hours, the Contractor shall begin the countdown for the specified times in the above table from the start of the Contractor’s Service Desk Hours.   Example 1 (Request initiated during the Contractor's Service Desk hours)   * EMSA’s Request for OSV feasibility: Monday at 14:00 Lisbon time, * Contractor’s Acknowledgment **deadline** Monday at 14:30 Lisbon time, * Contractor’s Feasibility **deadline** Monday at 15:00 Lisbon time, * EMSA’s final feasibility request for confirmation: Monday at 16:45 Lisbon time, * Contractor’s Confirmation **deadline** Monday at 17:45 Lisbon time   Example 2 (Request is initiated outside of the Contractor's Service Desk hours)   * EMSA’s Request for OSV feasibility: Monday at 20:00 Lisbon time, * Contractor’s Acknowledgment **deadline** Tuesday at 08:30 Lisbon time (Contractor Service Desk starts at 08:00 Lisbon time), * Contractor’s Feasibility **deadline** Tuesday at 09:00 Lisbon time, * EMSA’s final feasibility request for confirmation: Tuesday at 16:45 Lisbon time, * Contractor’s Confirmation **deadline** Tuesday at 17:45 Lisbon time   In case of complex requests, EMSA may provide additional time.  (1) Period of time between EMSA’s Request for Feasibility and the Request acknowledgement sent by the Contractor to EMSA in accordance with Appendix IV OSV Planning and Ordering Procedure.  (2) Period of time between EMSA's Request for Feasibility and the Feasibility sent by the Contractor to EMSA in accordance with Appendix IV OSV Planning and Ordering Procedure.  (3) Period of time between EMSA’s Request for Confirmation of the final feasibility and the Confirmation by the Contractor in accordance with Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: Feasibility tools and software** | |
|  | TYPE: Informative Requirement |
| EMSA currently uses the following feasibility planning software:   * Taitus SAVOIR- with additional EMSA plug-in for planning file compliance.   EMSA may make EMSA’s SAVOIR plug-in available upon request and signature of the end-user licence agreement by the Contractor.  Should the Contractor opt to implement planning file compliance without utilising the EMSA plug-in, the xsd file is available in Appendix VI. No costs shall be charged to EMSA for this implementation. | |

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| **Title: Interface between EMSA and Contractor for Planning and Ordering** | |
|  | TYPE: Contractual Requirement |
| Interface between EMSA and Contractor for Planning and Ordering shall be done in accordance with Appendix IV OSV Planning and Ordering Procedure.  EMSA reserves the right during contract implementation to release new versions of Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: Support planning files** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall be able to retrieve attributes and order/tasked OSV services from the planning files.  The supported planning files format is the following:   * EMSA’s planning file- defined in EICD Appendix VI – Planning file;   EMSA reserves the right to change to KML format. | |

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| **Title: OSV Service: Confirmation phase** | |
|  | TYPE: Contractual Requirement |
| The Contractor is responsible for confirmation of the Planned OSV Services of the final feasibility. This shall be done in accordance with Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: OSV Services ordered to Contractor** | |
|  | TYPE: Contractual Requirement |
| The OSV Services ordered to Contractor are the ones listed and identified in EMSA’s request form. This shall be done in accordance with Appendix IV OSV Planning and Ordering Procedure. | |

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| **Title: Planning files footprint mismatch** | |
|  | TYPE: Contractual Requirement |
| EMSA has identified in a few situations’ mismatches between ordered OSV Services (in Request forms) and the Satellite orbits:   * If this situation occurs, the Contractor shall update the acquisition start and stop in order to acquire the same area. | |

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| **Title: Reference for an acquisition** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall take as reference for an acquisition the agreed ordered footprint of the image, and not the start and stop time of acquisition. | |

#### Planning and Ordering Type

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| **Title: Ordering Planning Type** | |
|  | TYPE: Contractual Requirement |
| Contractor shall be able to deliver OSV Services considering the Cloud Coverage protection defined at ordering level:   * + - **Cloud Coverage Protection:** The objective of Cloud Coverage Protection ordering type is to ensure an acquisition over a specific AOI with cloud coverage below the defined threshold. This mechanism guarantees, as much as possible, that delivered images have a minimum cloud-free area. In case an image cannot be acquired in compliance with the cloud coverage protection threshold, the Contractor shall not deliver the data and the service shall not be charged to EMSA. | |

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| **Title: Ordering Planning Type Cloud Coverage outside cloud coverage threshold** | |
|  | TYPE: Contractual Requirement |
| OSV Service (Ordering Type including Cloud Coverage) above cloud coverage threshold shall not be delivered and charged to EMSA.  However: if the Contractor detects possible oil spills in the image, the Contractor shall convey this information to EMSA. EMSA may request the service to be delivered. | |

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| **Title: Ordering Planning Type Cloud Coverage – AOI Area** | |
|  | TYPE: Contractual Requirement |
| EMSA may define a priority area (within the AOI of the service) that if uncovered with clouds or lower than the cloud coverage threshold defined for the OSV service, over-rides the cloud coverage threshold. For these specific cases, the OSV service requested shall be delivered to EMSA. | |

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| **Title: Ordering Planning Type Cloud Coverage** | |
|  | TYPE: Contractual Requirement |
| In case the OSV Service is not delivered due to Cloud Protection above threshold value, the communication to EMSA shall include the cloud Protection value. | |

### Service monitoring

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| **Title: Service level Management** | |
|  | TYPE: Contractual Requirement |
| During the contract implementation, EMSA and Contractor may identify issues that need to be analysed and mitigated/solved under the Issue Management- as defined the Appendix V - OSV Service Level Agreement. | |

### Service performance: Key Performance Indicators

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| **Title: Key Performance Indicators** | |
|  | TYPE: Contractual Requirement |
| The Contractor, shall provide EMSA with quarterly and yearly key performance indicators based on the following ratios:   * **Delivery reliability:** (Number of successfully delivered services)/(Number of services ordered by EMSA - Number of services cancelled by EMSA - Number services not delivered due to cloud coverage - Number services not delivered due to data not available in Copernicus Data open Hub)      * **On-time delivery reliability:** (Number of successfully delivered services – Number of successfully delivered services with a Delay) / (Number of ordered services by EMSA - Number of services cancelled by EMSA - Number services not delivered due to cloud coverage - Number services not delivered due to data not available in Copernicus Data open Hub) * **Quality delivered reliability:** (Number of successfully delivered services – Number of successfully delivered services with Quality Issues)/ (Number of ordered services by EMSA - Number of services cancelled by EMSA - Number services not delivered due to cloud coverage - Number services not delivered due to data not available in Copernicus Data open Hub) * **Response reliability**: Number of Contractor’s replies to EMSA requests within required timeliness / Number of EMSA requests.   **Definitions:**   * + - Successfully delivered service = service with a price greater than EUR 0.0     - Services with a Delay = services delivered with a Delay, Delay Coefficient < 100%     - Services with a Quality Issue= services with Quality coefficient < 100% | |

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| **Title: Key Performance Indicators targets** | |
|  | TYPE: Contractual Requirement |
| For each Performance Indicator, the target values are:   * Response reliability: 100% * Delivery reliability: 95%; * On-time delivery reliability: 95%; * Quality delivered reliability: 95%.   The reference period for these performance indicators is quarterly and yearly (based on a calendar year). | |

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| **Title: Additional performance indicators** | |
|  | TYPE: Informative Requirement |
| EMSA reserves the right to define other performance indicators during the lifetime of the contract. | |

### Service Level Agreement

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| **Title: Service Level Agreement** | |
|  | TYPE: Informative Requirement |
| In the scope of this procedure, issues are defined in accordance with Appendix V - OSV Service Level Agreement as:   * **Request** is defined by a Request from EMSA/Contractor for information, advice, support, access to a service or provision of Quality Control Products. * **Event** is defined as the detectable occurrence of a change of state and has significance for the management of the delivery of the service. * **Incident** is defined as an unplanned interruption or reduction in the quality of a service. * **Problem** is the root cause of one or more incidents. | |

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| **Title: Service Level Agreement – provisions rules** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall comply with Appendix V - OSV Service Level Agreement.  EMSA reserves the right to update Appendix V during contract implementation.  If there is any conflict between different provisions in this FWC, the following:  order of priority of provisions applies:   1. The provisions set in the Framework Contract 2. The provisions set out in the Tender Specifications 3. The provisions set out in the Appendix II Selection, Quality and Technical Requirements 4. The provisions set out in the Appendix V OSV Service Level Agreement 5. The provisions set in Appendix IV OSV Planning and Ordering Procedure | |

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| **Title: EMSA collaborative tool** | |
|  | TYPE: Informative Requirement |
| EMSA is in charge of providing a system for managing issues (the ticketing system currently in use in EMSA is JIRA).  One account will be provided by EMSA to the Contractor. | |

### Project and Quality Management

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| **Title: Repository of Documents** | |
|  | TYPE: Informative Requirement |
| A project management collaborative tool shall be defined by EMSA and will be used by both parties during implementation of the contract. Currently the Agency uses Jira (including Confluence and XRAY).  EMSA will setup one account for the Contractor and a project for the activities under this framework contract. | |

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| **Title: Contractor’s documentation** | |
|  | TYPE: Contractual Requirement |
| The Contractor’s produced documentation (e.g., reports; minutes of meetings; procedures, Algorithm Theoretical Basis Document (ATBD), Annual reports) shall be formally accepted by EMSA. | |

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| **Title: Contractor’s communication Language** | |
|  | TYPE: Contractual Requirement |
| All documentation and presentations shall be in the English language. | |

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| **Title: Monthly Meetings** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall participate in a monthly project management meeting. The Contractor is responsible for:   * 3 working days before each meeting:   + providing a detailed agenda and supporting documents for the meetings   + providing a list of open issues * supporting the discussions during the meeting, * 2 working days after each meeting:   + providing the minutes of the meetings, that shall include at least the topics discussed, decisions taken and action items with indication of the responsible person and deadline for the actions;   + Creating issues in EMSA tool for each agreed open action. | |

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| **Title: Annual review Meeting** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall participate in the annual review meetings in accordance with section 5 of the Tender Specifications.  The annual review meetings shall include:   * Approval of Documentation (e.g., Annual Report); * Contract management; * Service performance and capability analysis; * Quality analysis; * Lessons learnt – to be documented in the collaborative project management tool; * Incidents, Problems and Non-Conformances. * The Contractor is responsible for: Defining the annual review meeting agenda, with EMSA inputs, 1 month before the meeting; * Providing presentations to EMSA at least 5 EMSA working days before the meeting; * Presenting the Agenda items assigned to the Contractor; * Drafting the minutes of meeting to be reviewed/accepted by EMSA * Creating issues in EMSA collaborative project management tool for each identified action.   The final content of the annual review meetings shall be agreed by both parties before the meeting (e.g., Agenda). | |

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| **Title: Annual Report** | |
|  | TYPE: Contractual Requirement |
| The Annual Reports are the main deliverable of the Annual Review Meetings and shall be delivered to EMSA at least 1 month before the meetings. The statistics to be reported shall be produced considering the previous contractual year.  Exception is the last year of the FWC where the content of the Annual Report may be integrated in the Final Report.  The Annual Report shall contain a description of the delivered services based on (not limited):   * Contractual status and issues; * Service performance (KPIs) * Service validation * Overall assessment of incidents and problems * Quality assurance and control * Lessons learned * Overall update of staff * Conclusions and Recommendations * Service evolution and suggested improvements * Annex: ATBD Document   This report is subject to final approval from EMSA.  EMSA will provide the Annual report’s Table of contents via EMSA collaborative toll (Confluence).  EMSA will provide the Annual reporting period at the Kick-off meeting.  EMSA reserves the right to update Annual report’s Table of contents during contract implementation. | |

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| **Title: Contract closure** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall be responsible for the production of the Final Report. The content of Final Report shall follow the Annual Report structure and content, having as reporting period the all duration of the contract.  This report is subject to final approval from EMSA. The Final Report shall be delivered by Contractor to EMSA at least 1 month before the closure of the contract. | |

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| **Title: ATBD Document** | |
|  | TYPE: Contractual Requirement |
| As Annex to the Annual report, the Contractor shall deliver an ATBD that shall cover all Input and output data, methodologies, algorithms and processes used to produce OSV Products.  This report is subject to final approval from EMSA.  The document table of contents will be defined by EMSA with inputs from the Contractor.  EMSA reserves the right to request an update of the ATBD table of contents during contract implementation. | |

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| **Title: Communication material** | |
|  | TYPE: Contractual Requirement |
| Following EMSA’s request, the Contractor shall support communication and promotion of the service and provide associated publicity material including the Contractor’s imagery/videos/publications etc. | |

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| **Title: Validation of OSV Services - expected contribution from Contractor** | |
|  | TYPE: Contractual Requirement |
| Following EMSA’s request, the Contractor shall deliver a Quality Report and Assessment of the delivered OSV Services in the scope of EMSA validation campaigns.  This report shall also include recommendations for improvements. | |

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| **Title: OSV service reprocessing** | |
|  | TYPE: Contractual Requirement |
| In case the OSV products present errors associated with the Contractor’s processing chain, and if re-processing could increase the quality, EMSA may request the Contractor to re-process and re-deliver the products. This delivery of OSV products shall be done with no-extra costs to EMSA. | |

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| **Title: Delivery of Quality control Products** | |
|  | TYPE: Contractual Requirement |
| In case of quality issues and/or to validate cloud coverage, EMSA may request the delivery of the following Quality control Products:   * Coverage Area map from the ordered OSV Service that is covered by image and without any quality issue * Usable Area map from the ordered OSV Service, that is covered by image and without any quality issue * Cloud coverage mask - areas considered as clouded by the Contractor * Discarded Areas map   Request mechanism: in accordance with Appendix V Service Level Agreement.  The GIS ESRI Shapefile, KML formats, in Vector format in WGS84 can be requested by EMSA. | |

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| **Title: Quality Indicators** | |
|  | TYPE: Contractual Requirement |
| For quality assessment, to be done by EMSA, a number of standard Quality Indicators (QI) providing information on the radiometric and geometric quality of the image, as well as on the data integrity, may be taken into consideration.  This list may include (but not be limited to):   * Geometric quality and accuracy- spatial resolution; sidelobes energy spread; point target ambiguities; position accuracy; * Data integrity- missing data; artefacts.   EMSA may request the Contractor to deliver information on QIs for selected OSV products. | |

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| **Title: QC OSV service reprocessing** | |
|  | TYPE: Contractual Requirement |
| Under its quality control activities, EMSA may request the Contractor to perform a re-analysis of a service that has already been delivered to EMSA. The re-analysis shall be delivered to EMSA in the same formats as the initial request. This delivery of OSV products shall be done with no-extra costs to EMSA. | |

### Service desk

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| **Title: Contractor’s Service Desk update of POC** | |
|  | TYPE: Contractual Requirement |
| EMSA shall be informed at least two weeks before any change of POC in order to update all documentation and procedures. | |

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| **Title: OSV Service Desk technical support** | |
|  | TYPE: Contractual Requirement |
| EMSA may receive User Requests (e.g., CleanSeaNet users) for which it may need some technical support from Contractor (e.g., if there are satellite acquisition opportunities; support the selection of the most suited Satellite acquisition mode/incidence angle; etc.).  The Contractor shall support EMSA in clarifying any technical questions/doubts in the User Requests received by EMSA. | |

## Module 2 Development

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| **Title: Module 2 Service Development** | |
|  | TYPE: Contractual Requirement |
| Services related to Module 2 refer to further developments of the service upon request of EMSA.  Service set-up costs shall not be charged to EMSA. | |

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| **Title:**  **EMSA’s responsibility under Module 2** | |
|  | TYPE: Contractual Requirement |
| EMSA is responsible for:   * Administrating the Test Management tool, defining Test suites and cases (JIRA-XRAY is currently in use by EMSA); * Setting-up a tool for tracking technical issues (JIRA is currently in use by EMSA); * Providing access/accounts to all EMSA tools required for the tests (e.g., JIRA, Confluence, XRAY, EMSA test or pre-production portal environments; * Accepting the test plan. * Running the test steps assigned to EMSA, according to the test procedures; * Validating and approving the Final Test Report after the testing phase and having as input the test reports from the Contractor. | |

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| **Title:**  **Contractor’s preparatory activities under Module 2** | | |
|  | TYPE: Contractual Requirement |  |
| Before the start of acceptance tests, the Contractor is responsible for   * Drafting Project Management Plan (including timelines) accepted by EMSA * Setting-up Data reception infrastructure to be aligned with EMSA Requirements * Processing chains for the delivery of OVS Products * Setting-up internal procedures for tasking, ordering and planning EO Services * Drafting a Test Plan * Creating the Test plan (including test Cases) in EMSA’s collaborative toll (currently XRAY) * Liaising with ESA. If needed, EMSA may provide support to the Contractor on the contact with ESA. * Providing support to EMSA for the preparation of the tests execution * Providing planning files, | | |

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| **Title:**  **Project management plan Module 2** | |
|  | TYPE: Contractual Requirement |
| During contract implementation, the Contractor shall provide to EMSA a Project Management Plan. This plan shall contain:   * Project charter * Work breakdown structure- include a diagram and Work Package descriptions as well as milestones, deliverables * Project team- associate work breakdown structure/tasks with team members * Person day effort per activity and allocated profiles for executing the work * Gantt chart * Deliverable’s milestones * Working locations * Meeting planning * Report planning * Quality assurance plan: indicate the quality procedures to be used and how the quality of the deliverables will be assured.   This documentation shall be delivered maximum 1 month following the signature of each Module 1 and Module 2 Specific Contracts. | |

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| **Title:**  **Contractor’s Test Execution** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall report in EMSA’s collaborative tool (currently JIRA/XRAY):   * Test Cases * Test Cases’ results * Issues detected during tests, Status, preventive and corrective measures * Tests’ execution evidence | |

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| **Title:**  **Contractor’s Test Results** | |
|  | TYPE: Contractual Requirement |
| The Contractor shall:   * Analyse test results and reported issues and take corrective actions * Log the information in EMSA’s collaborative tool * Keep their set-up chain under configuration control and indicate, in case of corrective actions, which test cases are affected, so that they can be run again if needed | |

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| **Title:**  **Issues in the scope of Module 2 activities** | |
|  | TYPE: Contractual Requirement |
| If issues are identified during testing, the Contractor shall immediately take corrective actions. Activities will restart from the date of the delivery of the corrected deliverable. | |

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| **Title:**  **ATBD** | |
|  | TYPE: Contractual Requirement |
| In the scope of Module 2 activities, the Contractor shall deliver an ATBD that shall cover all inputs and output data, methodologies, algorithms and processes used to produce:   * OSV products * Quality Control Products   The final structure of the document shall be defined by EMSA with inputs from Contractor | |

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| **Title: Monthly Progress Reports Module 2** | | |
|  | TYPE: Contractual Requirement |  |
| The Contractor shall provide a monthly Progress Report on implementation status, and more frequently upon the request of EMSA. The Progress Report shall cover:   * Project Baseline * Updated Gantt chart and project timeline * Actions * Open/pending issues   EMSA may change the frequency of the Progress Reports. | | |

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| **Title:**  **Contractor’s Final Test Report** | | |
|  | TYPE: Contractual Requirement |  |
| The Contractor shall provide, for EMSA’s acceptance, an Final Test Report including:   * Test Cases results (including link to XRAY) * Overview table of the test results * Issues detected during tests, preventive and corrective measures * Test’s evidence (including link to XRAY) * Foreseen limitations * Conclusions and recommendations | | |

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| **Title:**  **Closure of Module 2** | | |
|  | TYPE: Contractual Requirement |  |
| Module 2 activities are considered closed if the following occurs:   * Tests’ evidence are uploaded in EMSA collaborative tool (currently XRAY) * All issues detected in the tests have been corrected and are set to closed (or EMSA has accepted the plan for its resolution) * The Final Test Report is accepted by EMSA * ATBD Document is accepted by EMSA | | |

## Interfaces with EMSA Systems

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| **Title: (Ancillary data) Interfaces between EMSA and Contractor** | | |
|  | TYPE: Informative Requirement |  |
| EMSA will make available the following information and datasets to the Contractor through system-to-system:   * Nautical Charts (ENC) | | |

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| **Title: sftp** | | |
|  | TYPE: Contractual Requirement |  |
| The Contractor shall inform EMSA of any update to its sftp configuration (e.g., login information, IP address, etc.) | | |

# Annex: Definitions and general terms

## Acronyms

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| ACT: Activity Detection Service  AIS: Automatic Identification System  AO: Authorising Officer  AOI: Area of Interest  API: Application Programming Interface  APT: RS-2 Acquisition Planning tool  ATBD: Algorithm Theoretical Basis Document  AWG: Architectural Working Group  BCF: Business Continuity Facilities  BCSEA: Black and Caspian Sea Project (EMSA Project)  BP: Basic Products  CET: Central European Time  CMS: Copernicus Maritime Surveillance (EMSA Service)  CSN: CleanSeaNet (EMSA Service)  CSW: Catalogue Service Interface  CV: Curriculum Vitae  DEM: Digital Elevation Model  DG DIGIT: Directorate General Informatics  DoH: Declaration of Honour  EC: European Commission  EDES: Early Detection and Exclusion System  EICD: External Interface Control Document  EFCA: European Fisheries Control Agency  EMSA: European Maritime Safety Agency  ENC: Electronic Nautical Chart  EDRS: European Data Relay Satellite  EO: Earth Observation  EODC: Earth Observation Data Centre  EU: European Union  ESA: European Space Agency  FO: Financial Officer  FR: Full Resolution  FRONTEX: European Border and Coast Guard Agency  FTP: File Transfer Protocol  FWC: Framework Contract  GIS: Geographical Information System  GS: Ground Station  GSD: Ground Spatial Distance  GUI: Graphical User Interface  HMA: Heterogeneous Mission Accessibility  HR: High Resolution  ICD: Interfaces Control Document  ID: Identification | IMO: International Maritime Organisation  IPR: Intellectual Property Rights  JMS: Java Message Service  Lat: Latitude  Lon: Longitude  KML: Keyhole Markup Language  LRIT: Long Range Identification and Tracking  MAOC(N): Maritime Analysis and Operation Centre-Narcotics  MS: Member State  MR: Medium Resolution  N/A: Not Applicable  NCA: National Competent Authority  NRT: Near Real Time (replaced by QRT)  OCT: Overseas Community Territories  OGC: Open Geospatial Consortium  OSV: Oil Spill Thickness and Volume estimation  PO: Project Officer  QI: Quality Indicators  QRT: Quasi-Real-Time  RCS: Radar Cross Section  RHIB: Rigid-Huller inflatable boat  RIB: Rubber Inflatable boat  RS-2: Radarsat-2  S-AIS: Satellite AIS  SAR: Synthetic Aperture Radar  SC: Specific Contract  SEG: SSN Ecosystem GUI (EMSA application)  SG: Service Groups  SLA: Service Level Agreement  SP: Service Provider  SR: Service Request  ST: Service Type  SWW: SAR Wind and Wave  T-AIS: Terrestrial AIS  TDD: Technical Design Document  TSX: TerraSAR-X  UML: Unified Modelling Language  UR: User Request  UTM: Universe Transfer Mercator  UWI: LRIT User Web Interface  VAP: Value Added Products  VAT: value added tax  VHR: Very High Resolution  WCS: Web Coverage Service |

## Terms specific to the Maritime domain and related with EMSA activities

| **Term** | **Definition** |
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| CleanSeaNet (CSN) | CleanSeaNet is a European satellite-based oil spill and vessel detection service, supporting Coastal states in the following activities: identifying and tracing oil pollution on the sea surface; monitoring accidental pollution during emergencies contributing to the identification of polluters. The service, which is integrated into national and regional pollution response chains, aims to strengthen operational responses to accidental and deliberate discharges from ships, and assist participating States to locate and identify polluters in areas under their jurisdiction. Each coastal State has access to the CSN service through a dedicated user interface, which enables them to view ordered images.  More information at: http://www.emsa.europa.eu/csn-menu.html |
| CleanSeaNet  for European Neighbourhood policy projects | EMSA is implementing two projects for technical assistance bringing together national, European and international stakeholders with the aim to raise the safety, security and protection of marine environment standards in the Mediterranean sea (SAFEMED), Black and Caspian Sea (BCSEA). The CSN service is also made available to the official project beneficiary countries. |
| Coastal State | Refers to a CSN user that not only places EO Service Request to EMSA for the provision of CSN Service, but also is responsible for confirming the allocation of acquisitions to its coverage requirements areas.  Coastal State requirements for monitoring take into account national knowledge of sea areas where illegal oil discharges are known to take place, areas of high traffic density, environmentally sensitive areas, and other factors which influence national monitoring requirements and planning. |
| Copernicus Maritime Surveillance (CMS) | The Copernicus Maritime Surveillance Service provides satellite images to support a better understanding and improved monitoring of activities at sea. The service is available to support a wide range of operational functions, including maritime safety, maritime security, fisheries control (e.g., EFCA), customs, law enforcement (e.g., MAOC (N)), marine pollution monitoring and cooperation with international organisations. |
| Frontex Integrated Maritime Services | Within the framework of the EMSA/Frontex Service Level Agreement (SLA), EMSA provides EO services, information products and tools tailored to Frontex needs for supporting Member States’ border control activities.  With the adoption of the European Border and Coastguard Package by the European Parliament and the Council in September 2016, the mandates of the European Border and Coast Guard Agency (Frontex), the European Fisheries Control Agency (EFCA) and the Agency have been amended and aligned in order to enhance the effectiveness and efficiency of the support provided by the three Agencies to the Member States’ national authorities carrying out coast guard functions; |

## Terms specific to the Earth Observation domain

| **Term** | **Definition** |
| --- | --- |
| Ancillary data | Ancillary information refers to data which can be used by Contractor in the analysis procedure to extract the requested Value Added Products. |
| Coverage | Coverages represent digital geospatial information representing space/time-varying phenomena. |
| Dataset | Dataset is a collection of data, vector or raster. |
| Dataset series | Dataset series is a temporal collection of datasets. |
| Earth Observation | Earth observation is the gathering of information via remote sensing technologies supplemented by earth surveying techniques, encompassing the collection, analysis and presentation of geospatial data. |
| Geospatial | Geospatial are data and software components which deal with a geographic attribute. |
| Geospatial service | Geospatial service is a web service that delivers geospatial data. |
| GML | The Geography Markup Language (GML) is the XML grammar defined by the Open Geospatial Consortium (OGC) to express geographical features. GML serves as a modelling language for geographic systems as well as an open interchange format for geographic transactions on the Internet. |
| Geometric Correction | (also referred to as geo-rectification) is the removal of distortions from sensor geometry which are preventing overlay with map layers, and comparison between image scenes.  These corrections shall account for systematic distortions such as scan skew, mirror-scan velocity, panoramic distortion, along-scan distortion (pixels at edge are slightly larger) and earth rotation etc. Geometric corrections shall also include some non-systematic distortions such as altitude and attitude variations in satellite. |
| Geometric Referencing | Conversion of pixel coordinates to ground coordinates. As a further step images can be mapped to a predefined projection. |
| Ingestion | In this procedure, ingestion has to be considered as synonymous of Data Delivery. |
| Metadata | A Metadata is a document, typically in Extensible Markup Language (XML) format, that describes the content of a dataset or a geospatial service. |
| Process | A process is a software component that transforms data, provides services, or extracts information. |
| Raster | Raster dataset is a representation of the plant Earth as a surface divided into a regular grid of cells. Raster models are useful for storing data that varies continuously, as in an aerial photograph, a satellite image, a surface of chemical concentrations, or an elevation surface. |
| Sensors | Within the context of earth observation, sensors are devices on airborne devices (e.g., satellites) which collect geospatial data |
| Spatial Data Infrastructure | A Spatial Data Infrastructure a set of Geospatial services orchestrated in order to provide a Service. |
| Vector | Vector dataset is a representation of the planet Earth using points, lines, and polygons. Vector dataset are useful for storing data that has discrete boundaries, such as features, cost lines. |

## Terms specific to the ICT or Project Management domain

| **Term** | **Definition** |
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| Catalogue Service Interface (CSW) | This standard specifies a design pattern for defining interfaces to publish and search collections of descriptive information (metadata) about geospatial data, services and related information objects. Providers of resources, such as content providers, use catalogues to register metadata that conform to the provider’s choice of an information model; such models include descriptions of spatial references and thematic information. Client applications can then search for geospatial data and services in very efficient ways. |
| Geospatial Web Services | Involve the exchange and processing of data with a spatial component. |
| Interface | An interface is a shared boundary across which two separate components of system exchange information. |
| Process | A process is a software component that transforms data, provides services, or extracts information. |
| Service | Service “Means of delivering value to the customer by facilitating the outcomes customer want to achieve, without the ownership of specific costs and risks” (ITIL definition). |
| System | A system is a set of interacting or interdependent building blocks forming an integrated whole. |
| System to System | System to systems is a type of interaction between two systems governed by specified interfaces. |
| Solution | The solution is the system implemented by the Contractor |
| Standard | A standard is an established norm or requirement in regard to technical systems. It is usually a formal document that establishes uniform engineering or technical criteria, methods, processes and practices. |
| Subsystem | A subsystem is a self-contained software component that provides a set of functionalities. |
| SWOT | A SWOT analysis is a structured method used to evaluate the strengths, weaknesses, opportunities and threats of topic to address. |
| User interface | Everything designed into an IT system which includes one or more applications which a human being may interact with. This includes, but is not restricted to: display screen, keyboard, mouse, light pen, desktop appearance, illuminated characters, help messages, and how an application program or a Web site invites interaction and responds to it. |
| Web Coverage Service (WCS) | Defines a standard interface and operations that enable interoperable access to geospatial “coverages”. The term “grid coverages” typically refers to content such as satellite images, digital aerial photos, digital elevation data, and other phenomena represented by values at each measurement point. (<http://www.opengeospatial.org/standards/wcs>) |
| Web Feature Service (WFS) | Defines web interface operations for querying and editing vector geographic features, such as roads or lake outlines. (http://www.opengeospatial.org/standards/wfs) |
| Web Mapping Service (WMS) | Provides a simple HTTP interface for requesting geo-registered map images from one or more distributed geospatial databases. The response to the request is one or more map images (returned as JPEG, PNG, etc) that can be displayed a browser and desktop applications. (http://www.opengeospatial.org/standards/wms) |
| Web service | A web service a subsystem designed to support interoperable machine-to-machine interaction over internet.  “Web service" describes a set of software components that communicate over the Internet using published, standardized protocols and messaging languages. Web services may provide information about themselves when queried by a client application and may be invoked for complex operations by a variety of applications without having to exchange information about hardware or software platforms. |
| Workflow | A workflow consists of an orchestrated and repeatable pattern of processes. |
| XML | XML is a [markup language](https://en.wikipedia.org/wiki/Markup_language) that defines a set of rules for encoding documents in a [format](https://en.wikipedia.org/wiki/File_format) which is both [human-readable](https://en.wikipedia.org/wiki/Human-readable_medium) and [machine-readable](https://en.wikipedia.org/wiki/Machine-readable_data). It is defined by the [W3C](https://en.wikipedia.org/wiki/World_Wide_Web_Consortium)'s XML 1.0 Specification and by several other related specifications, all of which are free [open standards](https://en.wikipedia.org/wiki/Open_standard). |

## Terms specific to this Call for Tenders

| **Term** | **Definition** |
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| EO Product | An EO product contains information provided or extracted through an observation on the surface of the planet Earth. In general, an EO product can be a satellite image or derivative information (OSV product). |
| EO Service | OSV service refers to the delivery of services, based on EO data, as requested by EMSA. OSV Service has different attributes associated, such as:  OSV service counter- unique numerical identifier;  Delivered OSV products;  Specific Contract;  Operation(s);  Budget;  Price(s). |
| Feasibility Request | Is a request for EO satellite opportunities placed by EMSA to Contractor. A feasibility request may contain a request for one or more acquisitions/activations, over one or several Areas of Interest (AOI), according to pre-defined criteria, including but not limited to the requested time window, resolution, delivery timeliness.  The feasibility request shall take into account the operational requirements of the end users. |
| Operation | Operation refers to a type of access control where EO Services, and associated EO Products, are being provided to a specific user community. Only users belonging to a certain operation will be able to access EO products from that operation. Association of users to operations is a process handled by specific EMSA application.  Several Operations may be related with one or more Funding Source. |
| Satellite Access | Earth Observation images (which are a type EO product) are ordered by EMSA using satellite acquisition times. Basically, when ordering an EO image, EMSA books a certain amount of satellite time. This amount is defined by the satellite acquisition start time (time when the acquisition ordered by EMSA starts) and the satellite acquisition stop time (time when the acquisition ordered by EMSA stops). |
| Tasked or Ordered | Refers to an OSV Service ordered by EMSA to Contractor for which the Contractor was tasked to retrieve the image, process and deliver the requested OSV Products. |

## Definition of Actors

| **Term** | **Definition** |
| --- | --- |
| Agency | The term “the Agency” refers to EMSA, unless otherwise specified. |
| EMSA Service Desk | The EMSA Service Desk is responsible for the management of user access rights management. |
| Contractor | Successful Tenderer with whom the final Framework contracts has been signed and who shall perform the requested services and shall fulfil the requirements during the execution of the contract |
| Tenderer | Organisations submitting a tender in response to this invitation to tender. |
| User | User refers to the entity that has permissions to access EO Services and its associated Products. |

## Units

| **Term** | **Definition** |
| --- | --- |
| Area | Square kilometres (km2) |
| Days | Calendar days |
| Working days | Monday to Friday |
| Prices | EUR (€) with a maximum of 2 decimal places. |
| Reference Time Zone | Lisbon time |

1. <https://odnature.naturalsciences.be/mumm/en/national/ba-oil-appearance-code> [↑](#footnote-ref-2)