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GMES DATA ACCESS
SPECIFICATIONS OF THE EARTH OBSERVATION NEEDS OVER THE PERIOD 2011-2013
(DATA WAREHOUSE REQUIREMENTS V1.1)

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Disclaimer : This document is work in progress. It does not necessarily represent the position of the European Commission. Rather, it is designed to trigger an informed debate among stakeholders

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1. INTRODUCTION

1.1. Background

For an initial period of three years, data access management has been funded through a data access grant agreement between the EC and ESA. Current Earth Observation data is provided to GMES Services through this approach.

As from October 2010 the next step of the EC-ESA cooperation, the delegation agreement, ensures continuity of the data access. This new phase intends to widen the scope of the data access to a broader community.

1.2. Scope and objective

This document is version 1.1 of the "Data Warehouse requirements", referred to in the Project Implementation Plan established under the EC/ESA delegation agreement. (ESA ref. GMES-CMDA-EOPG-PL-09-008).

This document serves as the basis for the collection and consolidation of data requirements for the period covered by the EC/ESA delegation agreement.

The approach suggested in this document aims at widening, as far as possible, user access along three major principles:

- (1) extension of licences to meet the needs of a wider range of user activities – beyond existing FP7 projects – for the datasets covered by the current GSC DAP;
- (2) depending on the type of service, predefinition of CORE datasets with fixed specifications that represent the common needs of a broad user community;
- (3) Bulk agreement for ADDITIONAL datasets with flexible specifications, e.g. geographical area, under the establishment of predefined quotas.

The specifications should take account of the requirements of users at large, encompassing the FP7 projects and other GMES connected activities (e.g. operational activities at European level such as EEA, EMSA, JRC, etc. and at National level).

The extension of licences of the datasets covered by the current GSC DAP will be specified in detail by ESA (typically Image 2006 (Image 2009), Geoland2 MR data, African coverages as detailed in Annex 1 CORE_002, CORE_007, CORE_010)

EC will specify in detail the pre-defined CORE Datasets (cf. § 5.2.1 and Annex 1). By definition, the ADDITIONAL datasets are flexible and are not known in advance, therefore detailed specifications cannot be provided at this stage, but only general specifications (cf. § 5.2.2 and Annex 2) and principles on the quota management

mechanism (§5.3). The FP7 needs should be reiterated together with the ADDITIONAL datasets.

The approach for the procurement of the two types of datasets will be different: CORE datasets can be procured on the basis of pre-defined specifications, ADDITIONAL datasets through a quota mechanism and bulk agreements with data providers for the provision of data within a financial envelope (§5.3).

The document is structured as follows:

- Section 1 describes the scope and objectives
- Section 2 defines the overall requirements
- Section 3 defines the user categories and the rights of use of the users
- Section 4 defines the services to be offered by the usage types (services)
- Section 5 details the datasets specifications to be procured under the delegation agreement
- Section 6 defines the amendments needed for version 1.5 of the document.
- Annexes 1, 2 and 3 provide the detailed specifications for the CORE, ADDITIONAL and specific FP7 project datasets. These are given as PDF outputs from an Access DB created for the purpose.

1.3. Document Evolution

The EC will organise a user hearing to collect further comments from GMES Services and other data users. As a next step the requirements collected will have to be screened and prioritised, and a revised version of this document will be generated.

2. OVERALL REQUIREMENTS

2.1. CORE datasets

The requirements for new activities to be considered under the GMES Initial Operations are not fully known in advance. To cope with this situation, and to propose a more robust and cost-effective access mechanism, it is proposed to change the approach with the predefinition of CORE datasets with fixed specifications which will be offered to a broad range of users and activities.

Those CORE dataset specifications should take account of the needs of (i) existing FP7 projects until their termination, (ii) the operational services to be initiated under GIO and (iii) other activities within FP7 to be launched in the continuation of current FP7 projects. It is also enlarged to take account of common needs of user communities:

- (1) Fulfilment of the data needs for establishing an emergency service over the period 01/2012 to 12/2013. As a starting point, the data

needs can be considered as equivalent to the ones requested by SAFER. The CORE dataset will be limited to the data needed for the reference mapping globally, as the rapid mapping is requiring specific satellite tasking and therefore will be covered under 'ADDITIONAL datasets with pre-defined quotas'. The dataset specifications are detailed under § 5.2.1 (3)(b).

(2) Fulfilment of the data needs for establishing the land monitoring services. It should cover:

- (a) pan-EU HR image coverage for the requirements of land cover/land cover change activities (Corine-like), similar to data requested by GeoLand2 for EuroLand (cf. details in § 5.2.1 (1)). It shall include access to archives of previous coverages (§ 5.2.1 (2)).
- (b) One partial or full European VHR coverage over EU services matching the requirements of applications at EU level (Urban Atlas, monitoring of coastal areas, risk areas, protected areas (Natura 2000 sites), Land Parcel Identification...) and at national level (§ 5.2.1 (3)(a)).
- (c) For Dynamic Land monitoring (NRT): daily LR and MR full globe coverage for the production of biogeophysical parameters similar to the BIOPAR service component (cf. § 5.2.1 (4)).
- (d) For seasonal vegetation monitoring: monthly to 15-days composites of HR full EU coverage during the vegetation period March-October (extension of SATCHMO) (cf. § 5.2.1 (5)).
- (e) Outside Europe (Africa): one full sub-Saharan HR coverage. Due to the possible decentralised approach for service implementation, the licensing scheme shall include full access to EU institutions and mandated organisations in the Member States as a baseline (cf. § 5.2.1 (6)).
- (3) Fulfilment of the data needs for establishing the marine, atmosphere composition monitoring (based on MACC and MyOcean project requirements)(cf. § 5.2.1 (7)).

2.2. ADDITIONAL datasets with predefined quotas

ADDITIONAL datasets are needed to complement the establishment of land and emergency services, marine and atmosphere composition services, and the security service, as some data characteristics are not known in advance (e.g. satellite tasking for rapid mapping or security applications).

As for the CORE datasets, these ADDITIONAL datasets are expected to fulfil the needs of (i) existing FP7 projects until their termination not covered by the CORE datasets, (ii) the operational services to be initiated under GIO

over the post 2010 period and (iii) other activities within FP7 to be launched in the continuation of current FP7 projects. In addition other GMES-related activities (EEA, EMSA, EUSC...) should be considered as well.

In the absence of specific requirements, it is assumed that the new FP7 projects and GIO activities will use as a priority the aforementioned 'CORE' datasets which will be complemented by predefined quotas to fulfil their specific needs.

2.3. FP7 projects

For the needs of the current FP7 projects and those under negotiation beyond 2010, the Delegation Agreement shall support the extension or the acquisition of new licences using the same mechanism as in the current Data Access Grant (based on requirements expressed by the service providers). This includes:

- (a) GEOLAND2 over the period 10/2010 to 11/2012
- (b) SAFER, MyOcean, G-Mosaic and MACC over the period 10/2010 to 12/2011.
- (c) Downstream projects EAMNet, GARNET-E, SAGA-EO, PASODOBLE, FIELD_AC, EURO4M, DORIS, AQUAMAR, MONARCH-A, GEO-PICTURES, SubCoast, CARBONES, EVOSS.

2.4. Licensing conditions

The overall principle should be to have a broad access to CORE datasets, whereas access to ADDITIONAL data managed through quotas could be more limited.

Regarding the pan-EU and EU CORE datasets (wall-to-wall HR pan-EU coverage, VHR EU coverages, monthly 15-days HR composites) and the Global MR and LR coverages, the licences should include unrestricted access to the primary products and the altered products and derivative works¹ for EU institutions [EU_Inst], public authorities in the MS [Publ_Auth] and FP7 projects (service providers) [FP7_Proj]. This should be the case as well for the full sub-Saharan HR coverage which also includes access to International organisations and NGOs involved in land monitoring activities in these African countries. As an option, access to Public in View mode should be assessed.

Regarding the ADDITIONAL dataset for emergency service activities, the licences should include unrestricted access to the primary products and the altered products for and EU institutions [EU_Inst] and FP7 projects (service providers) [FP7_Proj]. For crises within the EU, the licensing scheme should

¹— it is considered that there is unrestricted access to derivative works in all further discussion in the document

also include unrestricted access to the primary products and the altered products for Public authorities (civil protection) in the concerned countries (Public_Auth]. And for crises outside the EU, the licensing scheme should include unrestricted access to the primary products and the altered products for Public authorities (civil protection), involved in external crisis management under EU coordination, and involved International Organisations and NGOs [INT_ORG_NGO].

3. USER CATEGORIES AND USAGE RIGHTS

Five User types are defined under the DA, as indicated below. The sections below also define the usage allowed by each user category. These user categories are referred to in the specification by their abbreviation in square brackets.

3.1. Institutions and bodies of the EU [EU_Inst]

It includes:

- (1) The European Institutions set up under the EU Treaties; and
- (2) Agencies set up under the EU Treaties.

The institutions and bodies of the EU, as well as their contractors may use the product and spatial data or services derived from it for activities whose purpose is within the EU Public tasks (development, implementation and monitoring of policies and related activities as defined by the EU Treaties and subsequent EU legislation).

3.2. Public authority [Public_Auth]:

Public authorities include:

- (1) Any government or other public administration, including public advisory bodies, at national, regional or local level;
- (2) any natural or legal person performing public administrative functions under national law, including specific duties, activities or services in relation to an EU policy, and
- (3) any natural or legal person having public responsibilities or functions, or providing public services relating to an EU policy under the control of a body or person falling within a) or b), such as a contractor of a public authority.
- (4) Any research and academic organisation

Public authorities as well as their contractors may Use the Product and Spatial data or services derived from it for activities whose purpose is within the EU Public tasks.

3.3. International Organisations and NGOs [INT_ORG_NGO]

These bodies are defined as:

- (1) Any International Governmental Organisation created by an international treaty which can be looked up in the UN online database of treaties. Specialised agencies of the UN are included.
- (2) Any International Non Governmental Organisation specialised in humanitarian or development activities.

International Organisations, Non-governmental Organisation as well as their contractors may Use the Product and Spatial data or services derived from it for activities whose purpose is within the EU Public tasks

3.4. Participants to a project financed under FP7 [FP7_Proj]

This includes any natural or legal person officially registered as participant of a project funded under the 7th FP.

Participants to a project financed under FP7 may use the products and spatial data or services derived from it for activities within the project.

3.5. Public [Public]

Any natural or legal person.

Any natural or legal person may Use the Product and Spatial data or services derived from it for non-commercial activities.

4. USAGE TYPES (SERVICES), OR USE DEFINITION

The usage types have been defined adhering to the INSPIRE nomenclature. For each dataset the usage type per user category should be specified.

4.1. CATALOGUE Service:

Spatial data services making it possible to search for spatial datasets and services on the basis of the content of the corresponding metadata and to display the content of the metadata.

All users can access such services.

4.2. VIEW Service

The VIEW service shall allow the beneficiary (User Category):

- (1) to access Primary Products by connecting directly to the View service from an individual computer or an internal computer network;
- (2) to produce Derivative works from Products accessed through the View service;

- (3) to make hardcopies of any extract of the Altered Product at any resolution, with the display of the following credit: "includes material (c) Mission name (year of acquisition), all rights reserved";
- (4) to access Altered Products through the View service for internal or external demonstration purposes; and
- (5) to retain all Intellectual Property Rights associated with any Derivative work developed on the basis of the Product.

4.3. DOWNLOAD Service:

The DOWNLOAD service shall allow the beneficiary:

- (1) to make an unlimited number of copies of the Primary products as needed (archiving and backup purposes included);
- (2) to install on as many individual computers as needed, including internal computer network;
- (3) to alter or modify the Primary Product by invoking a computer application to produce Altered Products and Derivative work;
- (4) to post Metadata of the Primary Product or its Altered Products on an internet website with the display of the following credit: "includes material (c) Mission name (year of acquisition), all rights reserved";
- (5) to make hard copies of any extract of the Primary Product or its Altered Products at any resolution, with the display of the following credit: "includes material (c) Mission name (year of acquisition), all rights reserved";
- (6) to use the Primary Product or its Altered Products for internal or external demonstration purposes; and
- (7) to retain all Intellectual Property Rights associated with any Derivative work developed on the basis of the Product.

5. DATASETS SPECIFICATIONS

The needs are expressed in terms of datasets to be procured, in a form allowing a procurement to be initiated. Further detailed specifications are to be added for the document version 1.5.

5.1. Data characteristics, definitions

Each dataset detailed in Annexes is specified according to a specific template. The template includes the following information

- (1) **ID #:** Specifies the ID of the dataset, according to project acronym_sequential numbering.

- (2) **Title Dataset:** Specifies the title of the dataset.

- (3) **Description Dataset:** Describes the content of the dataset and specifies the main application(s) served by the dataset (e.g. soil sealing, EEA 38 land coverage, etc).

- (4) **Usage:** Specifies usage (services) allowed for each user category. User categories and usage (services) are defined in section 3.

- (5) **Priority:** Specifies the priority of the dataset. Possible values are Low, Medium or High. Note: this is a general marking of the datasets versus other datasets.

- (6) **Area of interest & Estimated surface:** Specifies the area of interest (e.g. EEA 32, EU-27, Africa, Romania, etc.) and the estimated area which needs to be covered (e.g. 5 M sq km, etc.). Whenever possible, this information will be accompanied by a shapefile. This information will be complemented by the following sub-elements:

- (a) Area name: Well known name e.g. EU27, EEA32, etc.
- (b) Shapefile Name: If shapefile exists.
- (c) Km2: Dataset size in km2.
- (d) BOX: Delimited by N/S E/W coordinates.
- (e) Contiguous: Yes if area is one block.
- (f) Non-Contiguous: Approximate size of smallest contiguous zone over the AOI, and number of different AOIs.
- (g) Non contiguous grid: statistically sample grid – grid size.

- (7) **Optical characteristics:** Spectral Bands – Placed in order as appears on electromagnetic spectrum, and include red-edge, max. elevation angle, Cloud Cover, composite characteristic. This information will distinguish "mandatory bands to execute the service" from "nice-to-have bands". A field for entering MANDATORY is included for the different bands.

- (8) **Radar characteristics:** Specifies the radar bands of the sensor(s) that makes the dataset. It includes the frequency band (e.g. X or C), the polarisation (Single, Dual, or Quad, stating combination), and whether INSAR is required.

- (9) **Resolution spatial:** Specifies the resolution of the sensor(s) that makes the dataset. Possible values are:

- (a) VHR1: <= 1m
- (b) VHR2: >1m – <=4m

- (c) HR1: >4m – <=10m
- (d) HR2: >10m – <=60m
- (e) MR1: >60m – <=100m
- (f) MR2: >100m- <=300m
- (g) LR: >300m

(10) **Updating frequency:** Specifies the revisit mapping over the area of interest and constraints (if any). For example, the dataset shall be acquired every year during the vegetation season (April –Sept).

(11) **Accuracy product:** Includes the radiometric resolution (i.e. bits/pixel required, saturation %) and the geometric accuracy (max. allowed absolute 1-D RMSE threshold in meter).

(12) **Acquisition programming:** Specifies the acquisition programming for making the dataset. Possible values are Archive, Standard programming, Priority programming.

(13) **Lead time:** Specifies the time before programming, with reference to the dataset ().

(14) **Production time:** Specifies the delivery of data once acquired. Possible values are:

- (a) NRT15min Newly acquired data are made available within 15 min from sensing
- (b) NRT30min... Newly acquired data are made available within 30 min from sensing
- (c) NRT1h: Newly acquired data are made available within 1 hour from sensing.
- (d) NRT3h: Newly acquired data are made available within 3 hours from sensing.
- (e) Fast24h: Newly acquired data are made available within 24 hours from sensing.
- (f) Fast48h: Newly acquired data are made available within 48 hours from sensing.

(g) **Normal:** Newly acquired data are made available several days after sensing, typically after 48-72h hours. This category typically includes fresh data systematically refined off-line with consolidated auxiliary data. Timeliness for refinement depends on the availability of auxiliary data and is to be defined on a Dataset basis. Archive Normal is placed in this category even

though data is normally available within 24 hours after data request.

(h) **Cumulative:** For cumulative datasets, products are made available only at completion of the pre-agreed coverage. This delivery mode is used typically for Land Services.

(i) **Rush archive:** Archived data are made available as soon as possible after (acknowledgement of) data request. Usually this specification applies for emergency requests.

(15) **Delivery media:** Specifies the media for delivery (e.g., DVD, tape, ftp get, ftp push or OGC service).

(16) **Processing:** Specifies the level of pre- processing to be done by the Space Component. This includes bundling, pan-sharpening, and the LUT stretching, the atmospheric correction, ortho-rectification, and mosaicking. For orthorectification a field MANDATORY has been included.

(17) **Reference data to be used:** Specifies the characteristics of reference data and Digital elevation model (Ground control points – GCP- planimetric accuracy, GCP source, DEM source, DEM vertical accuracy). Free text is given for comments and eventual licence restrictions/cost..

(18) **Auxiliary information:** Provides ADDITIONAL information for specifying the dataset. (Free text.)

(19) **Datatype Sensor:** Describes if multiple sensors are allowed.

5.2. Dataset specifications

This section provides an initial definition of datasets, to be further consolidated between EC/ESA and the users (cf. details in Annex 1 to 3).

In the list below, and unless otherwise specified, authorised users have a view and download service access.

5.2.1. CORE datasets

(1) Two new Optical pan EU coverage HR1/2 (5.8 M Km²) (two seasons within the year 2011 or 2012) for the continuation of Corine like exercises by EU, BEA and Member States. Authorised users are [EU_Inst], [Publ_Auth] and [FP7_Proj]. As an option access to [Public] in View mode. (cf. ANNEX 1: CORE 001a, CORE_001b).

(2) Access to Image2006 and Image2009 archive for [EU_Inst], [Publ_Auth] and [FP7_Proj] by extending the existing licenses if required (this should be investigated by ESA). As an option, access to [Public] in View mode. (cf. ANNEX 1: CORE_002).

- (3) Optical VHR2 coverage over EU (4.5 M Km²) covering the requirements of various services (cf. ANNEX 1: CORE_003a, CORE_3b):
 - (a) Land applications at EU level (Urban Atlas, monitoring of coastal areas, risk areas, protected areas (Natura 2000 sites), Land Parcel Identification...) and at national level. The acquisition strategy could be completed within 3 years (e.g. 1/3 of EU covered each year) according to priorities to be established with the stakeholders. It might be necessary to adapt the acquisition plan to specific constraints, e.g. priority to cover urban areas within one year. The requirements at MS level (for Land cover national activities) will also have to be taken into account.
 - (b) Emergency response service: the objective is to have a continuous update of image archive for reference mapping.

Authorised users are [EU_Inst] [FP7_Proj] and [Publ_Auth]. As an option access to [Public] in View mode.
- (4) Optical worldwide MR and LR land coverage with imaging multi-spectral radiometers: Daily coverage in MR and LR data and in NRT for the production of biogeophysical parameters. Authorised users are [EU_Inst], [Publ_Auth] and [FP7_Proj]. (cf. ANNEX1: CORE_004, CORE_005).
- (5) Monthly to 15-days composites of optical HR2 (AWIFS type) full EU coverage during the vegetation period March-October. Authorised users are [EU_Inst], [FP7_Proj] and [Publ_Auth]. As an option access to [Public] in View mode. (cf. ANNEX1: CORE_008).
- (6) One full sub-Saharan optical HR1/2 coverage. Authorised users are [EU_Inst], [Publ_Auth] [FP7_Proj] and [INT_ORG_NGO]. As an option access to [Public] in View mode. (cf. ANNEX1: CORE_009a, CORE_009b, CORE_010).
- (7) Fulfilment of the data needs for establishing the marine, atmosphere composition monitoring (based on MACC and MyOcean project requirements) and possible other datasets. As an option access to [Public] in View mode.

5.2.2. *ADDITIONAL datasets with predefined quotas*

The list of **ADDITIONAL** datasets is the following:

- *New acquisitions in rush mode*

- (8) Optical HR1/2 rapid tasking: This dataset shall serve the objectives of the ERCS (Safer project and emergency service under GIO) as well as EMSA Maritime Surveillance activities. Authorised users are [EU_Inst], [FP7_Proj], [Publ_Auth] and [INT_ORG_NGO] beneficiaries of the ERCS products. The estimation of volumes per

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- (9) dataset shall be based on the FP7 Safer and GMOSAIC requirements. (cf. ANNEX 2: ADD_002a, b).
- (9) Optical VHR1/2 rapid tasking: as above (cf. ANNEX 2: ADD_004).
- (10) X-Band SAR HR1/2 rapid tasking: as above (cf. ANNEX 2: ADD_006a, b).
- (11) X-Band SAR VHR1/2 rapid tasking: as above (cf. ANNEX 2: ADD_008).
- *New acquisitions in standard mode*
- (12) Optical and X-Band SAR HR1/2 images: The objective of these datasets is to feed users with **ADDITIONAL** images both, for emergency and security (outside crisis phase) and land services worldwide. Authorised users are [EU_Inst], [FP7_Proj], [Publ_Auth] and [INT_ORG_NGO] beneficiaries of the ERCS products.
- (13) Optical and X-Band SAR VHR1/2 images: The objective of these datasets is to feed users with **ADDITIONAL** images, both for emergency and security crises (outside crisis phase) and land services worldwide. Authorised users are [EU_Inst], [FP7_Proj], [Publ_Auth] and [INT_ORG_NGO] beneficiaries of the ERCS products.
- (14) C-Band SAR coverage of the arctic areas as defined by the MyOcean project. Authorised users are [FP7_Proj] and [EU_Inst].
- *Archive Rush retrieval*
- (15) Optical HR1/2 archive retrieval: This dataset shall serve the objectives of the ERCS (Safer and its continuation under GIO). Authorised users are [EU_Inst], [FP7_Proj], [Publ_Auth] and [INT_ORG_NGO] beneficiaries of the ERCS products. The estimation of volumes per dataset shall be based on the FP7 Safer and GMOSAIC requirements. (cf. ANNEX2: ADD_001a, b).
- (16) Optical VHR1/2 archive retrieval: as above (cf. ANNEX2: ADD_003).
- (17) X-Band SAR HR1/2 archive retrieval: as above (cf. ANNEX2: ADD_005a, b).
- (18) X-Band SAR VHR1/2 archive retrieval: as above (cf. ANNEX2: ADD_007).
- *Archive normal retrieval*
- (19) Access to contributing missions archive in optical and SAR X band HR1/2 and VHR1/2: in order to be able to build time series, make comparisons etc... [EU_Inst], [FP7_Proj], [Publ_Auth] and optionally [INT_ORG_NGO] should be able to access to existing archives of contributing missions. Two types of access should be

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considered: (i) access to archive on demand and (ii) elaboration of pre-defined long time series (for land cover change monitoring). (not introduced in ANNEX2 but to be assessed).

- (20) A WMS (Web Map Service) to access Optical VHR1 coverage over EU (4.5 M Km²) in OGC (Open Geospatial Consortium), covering the requirements of Land and Emergency reference mapping and as a basis for orthorectification. (cf. ANNEX1: CORE_020).

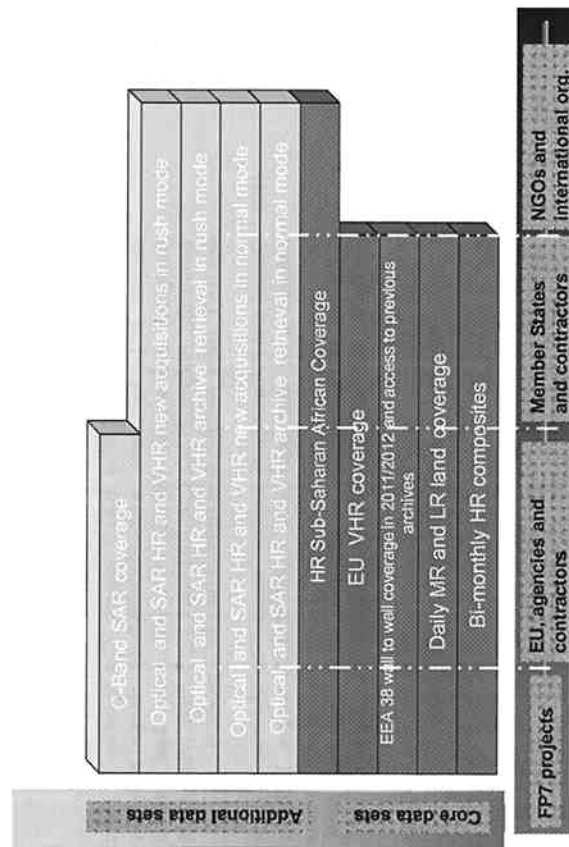


Figure 1: licensing scheme and data needs synthesis

5.2.3. Specific needs of FP7 projects

It is expected that the specifications above will cover most of the needs of the FP7 projects. Data from public missions (ESA, Eumetsat, NOAA, NASA) are not included here, but it is expected they will remain within the final portfolio with the widest possible licensing conditions². The possible omissions for some specific project needs should however be identified and included in the requirements. This should be done in the next edition of the specifications.

² The if all (e.g. CNES, Eumetsat) data in view of wider user communities. It is tbc if all EU_Inst], [FP7_Proj], [Publ_Auth] and INT ORG will get access to those data at no cost like under the grant.

5.3. Procurement mechanism

As for the grant period, this specification covers both data to be procured commercially as well as data being provided free of charge by organisations such as Eumetsat or ESA itself.

There should be a detailed analysis of the most appropriate procurement mechanism for each type of dataset, e.g. considering the following approach:

- Negotiation with mission owners to establish institutional agreements.
- Procurement through Standard ITT or direct negotiation.

The data providers should be asked to provide their cost with a (i) fixed part corresponding to the CORE dataset and (ii) a flexible part corresponding to the ADDITIONAL datasets, for which they should propose a unit price per km2 variable according to the purchased volume.

Quota management

ADDITIONAL datasets aim at fulfilling specific requirements not covered by the CORE datasets, including FP7 projects (ongoing and future) or other GMES-related activity (e.g. EMSA Maritime Surveillance). Quotas should be predefined per category of data to allow bulk procurement and allocated to each service, project or activity. If required, priorities can be established (e.g. Emergency Response and Security might be served in priority). A stepwise approach might be envisaged:

- first establish the envelope required for fulfilling the CORE datasets requirements, with several options if required.
- then define the total quotas on the basis of a financial envelope equal to remaining funds after serving the CORE datasets. Estimate the maximum volumes of data which could be procured within the overall financial envelope, based on estimated breakdown per dataset (e.g. 20% VHR1 data in rush mode, 10% VHR2 in rush mode, 10% VHR data in normal delivery mode, 20% HR archive, etc.) and costs per type of data. Several scenarios will be elaborated to fine-tune the quota envelopes per type of dataset, based on feedback from the User hearing.

The quota management will be based on the following principles:

- The annual breakdown of quota for the whole duration of the DA will aim at covering the foreseen evolution of the services, activities and projects. It is assumed that around 50-60% of available funds will be committed in the first year.
- At the beginning of each year, the EC will adapt the quotas taking into account the real consumption of data and the remaining requirements. Margins should be defined to face unexpected requests.

Annexes

It will enable the adjustment of quotas which may be required during the year (e.g. in case of a large number of crises).

- (3) Data will be provided on demand to the user within the limit of the annual quota.

Annex 1. DETAILED CORE DATASETS SPECIFICATIONS

6. ESTABLISHMENT OF V1.5 OF THE EO DATA REQUIREMENTS:

These specifications are a first rough estimate of the datasets to be procured. There is a need to consolidate the datasets according to the experience of the Data Access Grant in order to establish version 1.5 of the specifications as defined in the Project Implementation Plan. This will be done jointly by EC and ESA. The following support could be provided in the short term in order to consolidate the needs.

Details of this process will be agreed.)

Annex 2. DETAILED ADDITIONAL DATASETS SPECIFICATIONS