# RESOLUTION ON THE METEOSAT THIRD GENERATION (MTG) PROGRAMME

**Presented for adoption at the 69th Meeting of the EUMETSAT Council on 26 March 2010, adopted on 25 February 2011**

**The EUMETSAT Member States,**

**HAVING REGARD** to the objectives of EUMETSAT, which are to establish, maintain and exploit European systems of operational meteorological satellites, and to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**HAVING REGARD** to the EUMETSAT Convention, which establishes that mandatory EUMETSAT Programmes are the basic Programmes required to continue the provision of observations from geostationary and polar orbits,

**BEARING IN MIND** that for the accomplishment of the EUMETSAT objectives in the geostationary orbit, the first satellite of a third generation of Meteosat should be available for a launch in late 2016,

**TAKING INTO ACCOUNT** that the way forward for the Phase A of the Meteosat Third Generation (MTG) Programme was unanimously endorsed at the 59th meeting of the EUMETSAT Council, with the understanding that, as a goal, an overall cost of the MTG Programme to Member States shall be comparable to that of MSG, for an equivalent lifetime,

**TAKING INTO ACCOUNT** the Council Resolution EUM/C/61/07/Res.I on the Preparation of the MTG Programme which defined the space segment configuration of the MTG system,

**TAKING INTO ACCOUNT** the Resolution EUM/C/62/07/Res.I on the MTG Preparatory Programme, which established a programmatic framework for MTG preparatory activities commencing in 2008 and lasting until the start of the full MTG Programme expected to be no later than mid 2010,

**TAKING INTO ACCOUNT** that the Resolution EUM/C/62/07/Res.I on the MTG Preparatory Programme tasked the Director-General with elaborating a Programme Proposal for the full MTG Programme and related Resolution, and to submit them for Council consideration no later than autumn 2009,

**TAKING INTO ACCOUNT** the Resolution EUM/C/65/08/Res.I on the MTG payload complement, in which the EUMETSAT Member States approved the MTG payload including the following instruments as baseline for the preparation of the full EUMETSAT MTG Programme Proposal, on the understanding that the final decision on the MTG payload complement will only be taken when approving the full Programme: Flexible Combined Imager; Infrared Sounder; Lightning Imager; and the GMES Sentinel-4 to be provided by ESA as a part of the GMES Space Component (GSC) Programme co-funded by ESA and the EC,

**NOTING** that the draft cooperation agreement with ESA on the MTG System was agreed in principle at the 65th Council meeting in October 2008, on the understanding that the final text will be submitted for Council approval when the financial figures can be inserted;

**AWARE** that, as a result of the ESA Council at Ministerial level in November 2008 (ESA C-Min-08), the ESA Participating States approved the ESA Declaration on the MTG Space Segment Development Programme,

**CONSCIOUS** that the above ESA Declaration foresees a discontinuation of the MTG Space Segment development activities by the end of 2010 in case the EUMETSAT MTG Programme has not been approved by the EUMETSAT Council at that time,

**NOTING** that the Framework Agreement between EUMETSAT and ESA on GMES approved by Council at its 67th meeting was signed on 20 July 2009,

**NOTING** that, as one of the Implementing Arrangements established under the GMES Framework Agreement, the draft Implementing Arrangement on GMES Sentinel-4 was approved at the 68th Council meeting in December 2009, on the understanding that the arrangement will only be signed upon entry into force of the MTG Programme,

**WISHING** to capitalise on the successful completion of the Phases 0 and A and the progress achieved in Phase B activities for the establishment of the MTG System, and on the related investments made by European Governments through EUMETSAT and ESA,

**FOLLOWING** the roadmap for the approval of the MTG Programme as agreed at the 60th Council meeting, as updated for the 67th Council meeting (EUM/C/67/09/DOC/07),

**TAKING INTO ACCOUNT** the Programme Proposal on the MTG Programme contained in document EUM/C/69/10/DOC/02,

**IN CONFORMITY** with Articles 3, 5 and 10 of the EUMETSAT Convention,

**AGREE:**

**I** To establish a Programme for the Meteosat Third Generation (MTG) with a first imaging satellite planned to be available for launch in late 2016 and a first sounding satellite planned for launch in 2018, and with operations expected to last for at least 20 years.

**II** That the mission objectives, system description and Programme content shall be as described in the EUMETSAT MTG Programme Definition attached to this Resolution.

**III** That the financial envelope of the MTG Programme shall amount to 2,369 MEUR at 2008 economic conditions, with an indicative expenditure profile as described in the Programme Definition.

**IV** That, in order to improve value for money of the MTG Programme, every effort will be made to ensure that the lifetime of the satellites is maximised, and that overall flexibility regarding the schedule of launches is preserved with a view to a possible extension of the operational period of the programme.

# METEOSAT THIRD GENERATION PROGRAMME DEFINITION

## 1 INTRODUCTION

The establishment of the MTG Programme derives from the EUMETSAT Convention, where the primary objective of EUMETSAT to establish, maintain and exploit European systems of operational meteorological satellites is stated, together with the further objective to contribute to the operational monitoring of the climate and the detection of global climatic changes.

## 2 MISSION OBJECTIVES AND MTG MISSIONS

MTG is the basic Programme required to continue the provision of observations from geostationary orbit following MSG and as such is a mandatory Programme. As successor of MSG, it has the capability and capacities to provide the geostationary satellite data needs to continue supporting and improving meteorological applications and services at Meteorological Centres. The Imagery mission provides substantially enhanced information compared to that currently delivered by SEVIRI on MSG to improve the Nowcasting (NWC) and regional/global Numerical Weather Prediction (NWP) systems. The novel Infrared sounding mission delivers unprecedented information on the dynamic features of atmospheric moisture and temperature profiles in high vertical, horizontal and temporal resolution, beyond serving emerging applications of operational chemistry and air pollution. Nowcasting applications are further supported by the lightning imaging mission delivering continuously and simultaneously information on total lightning (cloud to cloud and cloud to ground) over the full disc with a high timeliness and homogeneous data quality. Finally the Sentinel 4 mission of GMES will be implemented via MTG, supporting the need for continuous monitoring of the atmospheric composition and air quality.

### 2.1 Observation Missions

The nominal MTG system will be based upon two types of satellites, MTG-I, the imaging satellite, and MTG-S, the sounding satellite. MTG-I will embark an imaging radiometer, the Flexible Combined Imager (FCI), and an imaging lightning detection instrument, the Lightning Imager (LI). MTG-S will embark an imaging Fourier interferometer, the InfraRed Sounder (IRS), and a high resolution spectrometer, the Ultraviolet- Visible Near infrared (UVN) spectrometer, provided by ESA as a part of the GMES Space Component programme.

The MTG System is designed, in support to nowcasting (NWC) and Numerical Weather Prediction (NWP), to fulfil the objectives agreed for the following observation missions:

- the **F**ull **D**isk **H**igh **S**pectral resolution **I**magery (**FDHSI**) mission, which will be provided via measurements taken by the FCI. In FDHSI mission mode data

from the FCI will be provided over the full earth disc at a repeat cycle time of 10 minutes with a spatial resolution of 1 km;

- the **H**igh spatial **R**esolution **F**ast refresh **I**magery (**HRFI**) mission, which will be provided via measurements taken by the FCI. In HRFI mission mode data from 4 channels of the FCI will be provided on regional scales (e.g. about $1/4^{th}$ or $1/3^{rd}$ of the full disk seen from the geostationary position) at a repeat cycle rate of 2.5 or 3.3 minutes and a spatial resolution of 0.5 km and 1.0 km;

- the **I**nfra**R**ed Sounding (**IRS**) mission able scan the full earth disc within 60 minutes providing a spatial resolution of 4 km, and hyperspectral imaging and sounding information at a spectral resolution of 0.625 $cm^{-1}$ in two bands, a **L**ong **W**ave **I**nfra**R**ed (**LWIR**: 700 – 1210 $cm^{-1}$) and **M**id **W**ave **I**nfra**R**ed (**MWIR**: 1600 -2175 $cm^{-1}$) band;

- the **L**ightning **I**magery (**LI**) mission, continuously detecting optical pulses, over almost the full earth disc in view from the geostationary satellite position;

Moreover, the MTG missions comprise the accommodation of the GMES Sentinel -4 **(S4)** sounding mission, achieved through the **U**ltraviolet, **V**isible & **N**ear-infrared **(UVN)** Instrument, covering Europe every hour taking measurements in three spectral bands (UV: 305 - 400 nm; VIS: 400 - 500 nm, NIR: 750 - 775 nm) with a resolution around 8 km.

In addition, the MTG mission will make a major contribution to climate monitoring activities providing high quality radiances, reprocessed product supporting generation of Essential Climate Variables (ECVs), providing also stewardship of decadal geostationary data records of the First and Second Generation of Meteosat.

## 2.2 Other MTG System Functions

Besides the essential functions covering the optical observations, the MTG system includes essential support functions necessary to fulfil its operational services, including:

- The Level 2 product generation and extraction;
- The processing of data received from Data Collection System (DCS) platforms collecting data of in-situ observations gathered from the land beacons, buoys, ships, balloons or airplanes;
- The Foreign Satellite Dissemination, that collects selected data from other EUMETSAT and Third Party satellite systems for support to global applications;
- Delivery and Data services to users, including:
  - Near real-time and direct data distribution services;
  - Data stewardship and re-analysis support;
  - Off-line data delivery;
  - On line services to Users;
  - Data exploitation support, reach-out, training, and help desk;
- The Search and Rescue mission: similarly to MSG, the MTG system will accommodate a SAR terminal, enabling the operations of the mission under the aegis of the COSPAS-SARSAT system;

- Extension of the DCS capabilities to support the relay and delivery to Argos ground stations of messages transmitted by Argos platforms.

# 3 MTG SYSTEM DESCRIPTION

## 3.1 System Architecture

The operational architecture of the MTG system consists of a Space Segment made up by a nominal configuration of two MTG-I and one MTG-S satellites linked to a distributed Ground Segment comprising functional facilities at various sites.

The MTG system consists of the following main segments and services:

- Space Segment, embedding the protoflight and recurrent MTG-I and MTG-S satellites, ground support elements (Ground Support Equipments – GSE - and tools) and services used for the space segment development or delivered in support to the system development and verification (Satellite Simulator, TT&C Suitcase, Payload Data Generator, etc) ;

- Ground Segment, supporting the planning, management, control and monitoring of the missions and acquiring, processing, and distributing to the users the observations taken and the products extracted. To fulfil the functions required to meet the mission objectives, substantial new developments associated with the new MTG missions will be undertaken for the MTG Ground Segment. In addition, the Ground Segment will rely on maintained infrastructure from the current systems as Infrastructure Facilities and Multi Programme Facilities.

- Launch and LEOP Provider services.

## 3.2 Space Segment

The MTG Space Segment consists of four imaging satellites (MTG-I1 to 4) and two sounding satellites (MTG-S1 to 2) with the payload complements given below:

- MTG-I1 to 4: FCI, LI, DCS and SAR

- MTG-S1 to 2: IRS and UVN

### 3.2.1 Satellites

The imaging and sounding satellites are based on 3- axis stabilised platforms taking as much technological heritage from commercial communication satellites as is pertinent and safe to fulfil the MTG service requirements. The platform shall be based on a common architecture.

### 3.2.2 Payload Elements

#### 3.2.2.1 Flexible Combined Imager (FCI)

The FCI simultaneously provides data for 16 FDHSI, 4 HRFI channels and 2 channels with an extended radiometric range for fire detection.

The FCI can be commanded to operate in either:

- a Full Disc Coverage (FDC) over a repeat cycle of 10 minutes with a mandatory coverage described by a circle of 17.7° diameter centred on the Sub-Satellite Point (SSP), and

- a Local Area Coverage (LAC) over a repeat cycle of 10/2, 10/3 or 10/4 minutes, with the coverage reduced proportionally. The LAC zone can be positioned anywhere over the FDC.

#### 3.2.2.2 Infra-Red Sounder (IRS)

The IRS is a Fourier Transform Spectrometer (FTS) providing measurements in two bands mid-wave infrared (MWIR) and long-wave infrared (LWIR).

The IRS takes data according to a repeat sequence selected from four Local Area Coverage (LAC) zones. Each LAC zone covers a quarter of the Full Disc Coverage (FDC), described by a circle of 17.7° diameter centred on the Sub-Satellite Point (SSP) and can be positioned anywhere over the FDC. A LAC zone is scanned within 15 minutes.

#### 3.2.2.3 Lightning Imager (LI)

The LI continuously monitors lightning flashes during day and night, covering an area of the earth disk within a circle of $16^{o}$ in diameter subtended from the geo-stationary position and shifted northward to cover EUMETSAT Member States.

#### 3.2.2.4 UVN – Sentinel 4 Spectrometer

The satellite will have the possibility to embark the UVN-Sentinel-4 instrument. The instrument will be developed as part of GMES in compliance with MTG interfaces and within the capabilities allocated to the satellites to fulfil the Sentinel-4 mission.

### 3.3 MTG Ground Segment

The Ground Segment contains the main ground elements necessary to support the mission.
They are logically decomposed in Facilities as follows:

- Ground Station Facilities (GSTF);
- Mission Operations Facility (MOF);
- Instrument Data Processing Facility (IDPF);
- Multi-Programme Facilities (MPF);
- Infrastructure Facilities and Supporting Facilities;
- and, as part of the Application Ground Processing System:
  - the Level 2 Processing Facility (L2PF),
  - the Satellite Application Facilities (SAF) network;

The Ground Station Facilities are made up of Telemetry Tracking & Command (TT&C) Ground Stations which include the functions to support acquisition of satellites housekeeping telemetry, transmission of telecommands, tracking and ranging. The Mission Data Acquisition (MDA) Ground Stations receive the scientific data from the satellite payload and interfaces with the front end applications of the IDPF.

The Mission Operations Facility will include the capability to command and control multiple MTG spacecraft.

The processing of the Instrument data will ingest the data and generate Level 1 and Level 2 products. The Level 1 products will be generated by the IDPF. The Level 2 products will be partially centrally generated via the L2PF and partially generated by the Satellite Application Facilities network. Tasks and outputs of the Satellite Application Facilities (SAF) network will be the subject of dedicated proposals for the Continuous Development and Operations Phase to be agreed by Council.

The MTG Ground Segment will make use of and extend as appropriate existing MPF for such aspects as dissemination and archiving/retrieval of products, following a continuity of maintenance and a credible upgrade path. MPF will include the EUMETSAT Data Centre, previously known as the Unified Meteorological Archive and Retrieval Facility (U-MARF) which receives and archives images and meteorological products from EUMETSAT satellites (METEOSAT and METOP), the EXGATE and INGATE to provide a secure file transfer service between operational environments within EUMETSAT and with remote locations through external network interfaces, and EUMETCast to disseminate data and products to the users.

The EUMETSAT Headquarters, the Central Site of the MTG Ground Segment will include the main components needed for mission operations and exploitation (e.g. MOF, IDPF, L2PF
and MPF). It will also include other infrastructure and supporting facilities and possibly the prime MDA Ground Station.

In addition, the Ground Segment will include other sites, as follows:

- Backup Spacecraft Control Centre (BSCC), having same MOF functionality as the one in the Central Site in order to continue monitoring & control of the in-orbit spacecraft constellation;
- Diversity MDA Ground Station, to minimise impact of link outages caused by heavy precipitation;

- Prime and Secondary TT&C Ground Stations, with site diversity foreseen for availability and ranging considerations;
- EUMETCast uplink station, for satellite based dissemination.

Finally, the Satellite Application Facilities (SAF) network is not centrally hosted.

## 4 MTG IN-ORBIT DEPLOYMENT PLAN

The deployment of the MTG system is driven by the required duration of the operational services, associated availability and readiness of the prototype satellites. This has been defined to ensure the optimal continuity of MTG services to the User Community in-line with the definition of high system and spacecraft availability figures, as well as to ensure the continuity of the services provided by MSG in articulation with the deployment of the last MSG satellites and in preparation for the post-MTG satellites.

The resulting MTG satellite deployment scenario will take account of actual operational serviceability of MSG and MTG satellites to maximise the useful life of each satellite whilst maintaining the required operational availability, developing from a baseline of earliest launch dates:

- MTG-I1: Dec 2016
- MTG-S1: June 2018
- MTG-I2: Dec 2021
- MTG-I3: Jan 2025
- MTG-S2: June 2026
- MTG-I4: Dec 2029

Measures for allowing extended satellite in orbit lifetime will be implemented: in this respect, the propellant margin embarked on board the satellite will allow a possible scenario of 25 years of operational service for the imagery mission.

In support to this MTG satellites deployment, the Ground Segment infrastructure will be developed and deployed according to a staggered incremental approach (through a Ground Segment versioning concept).

## 5 SCOPE OF EUMETSAT PROGRAMME

The scope of the EUMETSAT MTG Programme encompasses the following main elements:

- A fixed financial contribution to the ESA MTG Space Segment Development Programme;
- Procurement of the four recurrent satellites and related activities;
- Procurement of Launch and LEOP services for all six MTG satellites;

- Establishment of a ground segment system to support the operation of the MTG System;
- At least twenty years of routine operations of the imagery mission, encompassing fifteen and half years of routine operations of the sounding mission;
- Ten years of continuous development and operations (CDOP) activities of the EUMETSAT SAFs;
- The management of the developments and procurements, and the conditioning of the infrastructure to host components of the system, including back-up services and related systems.

# 6 IMPLEMENTATION ARRANGEMENTS

## 6.1 Interaction with Users and Experts

The process for involvement of users and experts established during the initial phases of the MTG activities will continue during the development and operations phases. The MTG Mission Team which has been instrumental to integrate and consolidate the information base and help EUMETSAT Secretariat and the MTG Team to shape the discussions with Delegates, will continue to be involved in the implementation phases of the Programme.

A key result of the coordinated efforts is the end user requirements document (EURD) subject to approval by Council. A list of products to be generated centrally at EUMETSAT HQ is established for reference, design and sizing of the core functionality of the ground segment. The initial set products in the list emphasises the continuity of MSG services into the next generation and the most direct and essential derivates from the new instruments.

Users support will still be needed in the implementation phase to ensure that optimum benefit is obtained from the observations and system under development. Further support from users will also be essential in preparing for and implementing the calibration and validation plans, and preparedness of user will be an objective of the efforts of the Programme.

## 6.2 Coordination Mechanisms between EUMETSAT and ESA

The roles of EUMETSAT and ESA are detailed in a dedicated Agreement with ESA on MTG to be approved by EUMETSAT Council, specifying, among others, the roles of EUMETSAT and ESA within the MTG, financial liabilities, procurement policy, implementation mechanisms, and ownerships of data.

## 6.3 Sentinel 4 Implementation

The implementation of the Sentinel 4 on the MTG-S satellites will be formalised through an “Implementing Arrangement” with ESA, to be signed upon entry into force of the MTG Programme. This Implementing Arrangement is based on the Framework Agreement between EUMETSAT and ESA on the cooperation on GMES signed on 20 July 2009. ESA is responsible for the GMES Space Component, and as

such will develop the Sentinel 4 mission and instrument, in compliance with MTG interfaces and within the capabilities allocated to the satellites to fulfil the Sentinel-4 mission

It is to be noted that the above Implementing Arrangement with ESA does not cover the funding of the operational cost of the mission which EUMETSAT Member States expect to be provided from a yet to be defined EC GMES operational Budget.

### 6.4 Coordination with SAFs

SAFs are part of EUMETSAT's multi-mission infrastructure and thus an integral part of the EUMETSAT Programmes and their ground segments, which together with the central level-2 product generation facilities constitute the Application Ground Processing System.

Through the development of the MTG system SAFs will enter the second 5-year slice of their Continuous Development and Operation Phase (CDOP), which will span from 2012 to 2017. Subsequently a third phase of CDOP for addition five years will be supported through MTG. Almost coincidently with the start of the third CDOP slice SAFs will have to transition from using MSG observations to the use of MTG Imager data.

### 6.5 Other Partner Agencies

In order to continue the provision of support and services for Search and Rescue operations a cooperation scheme with COSPAS-SARSAT will be established.

Should the technical ongoing discussions with CNES conclude fruitfully with an agreement to support and supplement the ARGOS mission with a geostationary component, a dedicated agreement will be set up.

## 7 PROGRAMME ENVELOPE & INDICATIVE EXPENDITURE PROFILE

The proposed EUMETSAT MTG Programme envelope amounts to M€ 2,369 at 2008 economic conditions. It is equivalent to M€ 2,470 at 2010 e.c.

The following table shows the indicative expenditure profile of the MTG Programme:

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEUR at 2008 e.c. | 62 | 121 | 149 | 200 | 213 | 198 | 177 | 161 | 104 | 105 | 119 | 81 | 76 | 71 | 72 | 65 | 64 | 59 | 56 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 2369 |

***Figure 7-1: Preliminary MTG expenditure profile***

# RESOLUTION ON

# THE PREPARATION OF THE EPS SECOND GENERATION

**Adopted at the 70th Meeting of the EUMETSAT Council on 21-22 June 2010**

**The EUMETSAT Member States,**

**HAVING REGARD** to the objectives of EUMETSAT, which are to establish, maintain and exploit European systems of operational meteorological satellites, and to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**HAVING REGARD** to the EUMETSAT Convention, which establishes that mandatory EUMETSAT programmes are the basic programmes required to continue the provision of observations from geostationary and polar orbits,

**BEARING IN MIND** that for the accomplishment of the EUMETSAT objectives in the low Earth orbit, the first satellite of an EPS Second Generation (EPS-SG) should be available for a launch in 2018,

**TAKING INTO ACCOUNT** that the Post-EPS Phase A Approach and Planning was endorsed at the 68th meeting of the EUMETSAT Council,

**WISHING** to build on the results of the pre-phase A studies for the establishment of Post-EPS,

**TAKING INTO ACCOUNT** that the Post-EPS preparatory activities are covered through the General Budget until the end of 2011, and that there is a need to ensure the continued funding of EPS-SG activities from beginning of 2012,

**FOLLOWING** the roadmap for the approval of the EPS-SG Preparatory Programme as submitted to the 68th Council meeting,

**NOTING** that the payload complement for the EPS-SG to be targeted in Phase B/C/D will be decided by Council by the end of the Phase A Industrial Studies, and that the related final in-orbit configuration will be consolidated in the same context,

**NOTING** that the number of satellites to be procured will be defined by Council during the Phase B of EPS-SG as an essential input for the preparation of the full programme proposal,

**NOTING** the progress made in the negotiations with EUMETSAT's international partners ESA, NOAA, DLR and CNES,

**AGREE:**

**I** That the satellite configuration to be targeted in the Phase A activities of EPS-SG should be a **two** satellites configuration. The first satellite would embark, as main missions, the Imaging, Infrared and Microwave Sounding, Aerosol, Radio Occultation and host the GMES Sentinel-5. The second satellite would embark, as main missions, Microwave Imaging, Scatterometry and Radio Occultation. Both satellites series would be based on common design elements.

**II** That, in order to improve the value for money of the EPS-SG, every effort should be made during the preparation phase to ensure that the design lifetime of the satellites is maximised, and that overall flexibility regarding the schedule of launches is preserved.

**III** To task the Director-General with coordinating with ESA the initiation of all necessary preparatory activities to obtain a timely approval of their part of the programme by the end of Phase A in the 2011 timeframe in order to secure data continuity in the low earth orbit.

**IV** To task the Director-General with consolidating a joint road map with ESA, taking into account the contributions of other partners, leading to a coordinated approval of the EPS-SG programmes by both Organisations.

**V** To task the Director-General with elaborating an EPS Second Generation Preparatory Programme Proposal and related Programme Resolution, and to submit them for approval to Council at the earliest opportunity.

**VI** To task the Director-General with negotiating the required cooperation agreements with EUMETSAT's international partners ESA, NOAA, DLR and CNES.

# RESOLUTION ON

# A NEW PENSION SCHEME FOR NEW ENTRANTS

## Adopted at the 70th Meeting of the EUMETSAT Council on 21-22 June 2010

**The EUMETSAT Council**

**RECALLING** that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**RECALLING** that the Convention entrusts the Director-General with the implementation of the decisions taken by the Council and with the execution of the tasks assigned to EUMETSAT,

**RECALLING** that the conditions of service at EUMETSAT should be defined in such a way as to ensure EUMETSAT attracts staff of the highest ability and integrity, account being taken of the international character of EUMETSAT,

**RECALLING** Member States' commitment in the Protocol on the Privileges and Immunities of EUMETSAT to providing EUMETSAT staff with adequate social security benefits, thereby enabling EUMETSAT to discharge the obligations of intergovernmental international organisations in terms of social protection, as an employer, but also as a public body substituting for state legislators responsible for social policy and guaranteeing social minima,

**HAVING REGARD** to Article 28 of the Staff Rules and its Annex VI laying down the Pension Scheme Rules, adopted by Council at its 2nd meeting,

**CONSIDERING** that the Pension Scheme Rules provide that benefits paid shall be charged to the budgets of EUMETSAT,

**TAKING INTO ACCOUNT** that the Pension Scheme Rules provide that EUMETSAT Member States shall jointly guarantee the payment of the EUMETSAT pension benefits,

**TAKING INTO ACCOUNT** the changes to pension schemes over recent years at international organisations, and notably at certain Coordinated Organisations, including ESA,

**CONCERNED** to take measures to ensure long-term cost control of the pension expenditure charged to EUMETSAT's budgets, and desiring to adopt a new Pension Scheme for new entrants that is not fundamentally different from the original Pension Scheme currently in force,

**RECALLING** Council's unanimous endorsement at its 68th meeting of the proposed principles for the establishment of a new Pension Scheme to be applied to new entrants and approval of the main elements of such new Pension Scheme,

**HAVING DUE REGARD** to Article 5.2(b)(vi) of the Convention,

**AGREES:**

**I** to adopt the new Pension Scheme Rules for new entrants, the text of which is attached as Annex 2 to EUM/C/70/10/DOC/27, which constitute the "2011 Pension Scheme";

**II** that these Rules shall take effect on 1 January 2011;

**III** that whenever it is proposed to amend the original Pension Scheme Rules, the same amendments shall be implemented in the new Pension Scheme Rules in so far as this is compatible with its fundamental principles;

**IV** that the Member States shall collectively guarantee to contribute to funding the EUMETSAT Pension Schemes and to payment of the related benefits until the cessation of entitlement of the last beneficiary.

**V** that the collective obligation to contribute to funding both Pension Schemes and to payment of the related benefits shall continue even in the event of EUMETSAT's dissolution under Article 20 of the Convention and shall not be affected by a Member State denouncing the Convention;

**VI** to amend Article 9 of the Staff Rules and Article 9 of Annex V to the Staff Rules, the text of which is attached as Annex 3 to EUM/C/70/10/DOC/27, so as to reflect the introduction of the new Pension Scheme in the Staff Rules.

# RESOLUTION ON

# AMENDMENTS TO THE METEOSAT IMPLEMENTING RULES

## Adopted at the 70th Meeting of the EUMETSAT Council on 21-22 June 2010

**The EUMETSAT Member States,**

**RECALLING** that the current consolidated Meteosat Implementing Rules were adopted by Council at its 56th meeting in December 2004 through Resolution EUM/C/04/Res. V, as amended by Resolution EUM/C/64/08/Res. II at the 64th Council meeting in July 2008 and Resolution EUM/C/66/08/Res. I at the 66th Council meeting in December 2008,

**TAKING INTO ACCOUNT** that one of the objectives of the EUMETSAT Data Policy is to extend the use of Meteosat Data and Products,

**CONSIDERING** that, at its 67th Council meeting, the EUMETSAT Council adopted the Oslo Declaration which aims to offer more and better products and services whilst continuing to protect the underlying digital data and products,

**CONSIDERING** that at its 68th meeting, the EUMETSAT Council agreed to increase the Essential data set to include Three-hourly data and to expand the data provided without charge to National Meteorological Services of Non-Member States to include Hourly data,

**WISHING** to implement such decisions,

**AGREE** to abolish Resolutions EUM/C/64/08/Res. II and EUM/C/04/Res. V and replace them as follows:

**I** The Implementing Rules for Meteosat Data and Products shall be replaced by the updated version attached as Annex I to this Resolution.

**II** The Meteosat Catalogue shall be replaced by the updated version attached as Annex II to this Resolution;

**III** The EUMETSAT Fees for Access to Non-Essential Meteosat Data by Commercial and Other Users shall be replaced by the updated version attached as Annex III to this Resolution;

**IV** This Resolution shall take effect on 1 July 2010.

# IMPLEMENTING RULES FOR METEOSAT DATA AND PRODUCTS

## 1 THE METEOSAT CATALOGUE

For the purpose of distribution, dissemination and commercial application, a list of data, products and services is contained in the Meteosat Catalogue attached hereto as Annex II.

## 2 DEFINITIONS

"Archived Data and Products": image data, older than 24 hours, generated by a Meteosat satellite, hardcopy image prints and other meteorological products stored and/or supplied by EUMETSAT's Archive and Retrieval Facility, as listed in the Meteosat Catalogue.

"Broadcasters": those users who disseminate an item from the Meteosat Catalogue or images based on Meteosat Data through electronic public information systems including, but not limited to, Internet, terrestrial and satellite transmissions.

"Educational Use"*: any use of an item from the Meteosat Catalogue by a school, university, scientific institute or similar (private or institutional), solely for educational purposes, without transmission or redistribution of these data, products and services to any further third party, or use of them to generate a Value Added Service.

"End Users"*: those users who use an item from the Meteosat Catalogue for their own commercial, industrial or personal purposes and do not pass on such item to any further user or use it to generate a Value Added Service.

"Essential Meteosat Data and Products": Meteosat Data and Products which are declared "Essential" in accordance with WMO Resolution 40 (Cg-XII), as agreed by Council.

"Exclusive Licensing Agent": a NMS of a Member State exclusively representing EUMETSAT within that State for the purpose of licensing Meteosat Data.

"Half-hourly Meteosat Data": those Meteosat Data referenced by EUMETSAT in time to each clock hour and 30 minutes after each clock hour (UTC).

"Hourly Meteosat Data": those Meteosat Data referenced by EUMETSAT in time to each clock hour (UTC).

"High Rate SEVIRI Data ": high rate image data from the SEVIRI instrument of a Meteosat Second Generation satellite, processed to level 1.5 by the EUMETSAT Ground Segment.

“HRI Data”: high resolution image data generated by a Meteosat First Generation satellite.

* For the purposes of direct reception of Meteosat data, personal use by private individuals shall be treated under the definition of “Educational Use”. In such cases the same conditions apply as for educational users.

"Low Rate SEVIRI Data ": low rate image data from the SEVIRI instrument of a Meteosat Second Generation satellite, processed to level 1.5 by the EUMETSAT Ground Segment.

"Member States": the States which are parties to the Convention for the Establishment of a European Organisation for the Exploitation of Meteorological Satellites.

"Meteosat Catalogue": the list of Meteosat Data and Products and Services attached hereto as Annex II.

“Meteosat Data”: all HRI Data and High Rate/Low Rate SEVIRI Data generated by the Meteosat First and Second Generation satellites.

"Meteosat Derived Products": products generated by the EUMETSAT ground segment from Meteosat Data and transmitted to users within 24 hours, as listed in the Meteosat Catalogue.

“Meteosat Internet Service”: Certain Meteosat Data and Meteosat Derived Products as defined in the Meteosat Catalogue, retransmitted by EUMETSAT via the Internet.

"National Territory": the national territory of a state, including its internal waters, its archipelagic waters, its territorial sea and its exclusive economic zone, as defined in the United Nations Convention on the Law of the Sea (UNCLOS) signed in Montego Bay on 10 December 1982 and having entered into force on 16 November 1994.

"NMS" (National Meteorological Service): service responsible at national level, in conformity with its legal status, for the gathering, classification and production of meteorological information in the national interest, and responsible at international level for participating in WMO programmes.

"Official Duty": all activities which take place within the organisation of a NMS and external activities of a NMS resulting from legal, governmental or intergovernmental requirements relating to defence, civil aviation and the safety of life and property.

"Quarter-hourly Meteosat Data": those Meteosat Data referenced by EUMETSAT in time to each clock hour and 15 minutes, 30 minutes and 45 minutes after each clock hour (UTC).

“Rapid Scanning Data”: those Meteosat Data acquired by scanning of a certain geographical area within the footprint of a Meteosat satellite in more frequent time intervals than the nominal full disk repeat cycles. For the purposes of access conditions, Rapid Scanning Data shall be provided only in conjunction with the full set of Meteosat Data.

"Research Project": any project organised by a University, a scientific research institute or similar (private or institutional), for non-commercial research purposes only. A necessary condition for the recognition of non-commercial purposes is that all the results obtained are openly available at delivery costs only, without any delay linked to commercial objectives, and that the research itself is submitted for open publication.

"Service Providers": those users who acquire an item from the Meteosat Catalogue in order to supply Value Added Services under specific licence conditions to Third Parties who are clearly identified and known to the Service Provider.

"Six-hourly Meteosat Data": those Meteosat Data referenced by EUMETSAT in time to the main synoptic hours of 00, 06, 12 and 18 UTC.

"Standard Licence Agreement": the standard terms and conditions pursuant to which items in the Meteosat Catalogue must be licensed to users.

"Third Party": any party external to a licence agreement between EUMETSAT or one of its Exclusive Licensing Agents and a user.

"Three-hourly Meteosat Data": those Meteosat Data referenced by EUMETSAT in time to the synoptic hours of 00, 03, 06, 09, 12, 15, 18 and 21 UTC.

"Value Added Services (VAS)": all meteorological services specifically conceived for the needs of users and made available under specific licence conditions.

"Without Charge": at no more than the cost of reproduction and delivery (including the cost of distribution media, documentation, software licences, transmission, direct labour cost and cost of any decryption key units), but without charge for the data and products themselves.

## 3 OWNERSHIP AND INTELLECTUAL PROPERTY RIGHTS

1 EUMETSAT holds the full ownership and Intellectual Property Rights to the Meteosat Data and Products.

2 The Intellectual Property Rights to images based on Meteosat Data are shared between EUMETSAT and the Service Provider generating the images.

3 The Intellectual Property Rights to Value Added Services other than images based on Meteosat Data are considered to be owned by the Service Provider generating the Value Added Service.

## 4 "ESSENTIAL" METEOSAT DATA AND PRODUCTS

EUMETSAT shall make its Three-hourly and Six-hourly Meteosat Data, the Meteosat Derived Products and the data offered through its Meteosat Internet Service available to all users world-wide on a free and unrestricted basis as "Essential" Data and Products in accordance with WMO Resolution 40 (Cg-XII).

## 5 LICENSING FOR NON-ESSENTIAL METEOSAT DATA AND ARCHIVED DATA AND PRODUCTS

1 The NMSs of Member States, acting as Exclusive Licensing Agents on behalf and for the account of EUMETSAT, shall have the responsibility for licensing non-Essential Meteosat Data to users receiving the data within their respective National Territories.

2 Acting as EUMETSAT's Exclusive Licensing Agents, the NMSs shall apply the EUMETSAT fees and conditions defined in Rules 8 and 10 below and shall sign licences applying the EUMETSAT standard licensing conditions with their users. The NMSs shall inform EUMETSAT of the signing of such licences.

3 The NMSs shall retain 25% of the fees received and allocate the remaining 75% to EUMETSAT.

4 Licensing for access to non-Essential Meteosat Data received outside Member States shall always be through a Standard Licence Agreement between the User and EUMETSAT according to the guidelines detailed in Rules 7, 8, 9 and 10 below.

5 EUMETSAT shall be responsible for the licensing of Archived Data and Products.

## 6 CONDITIONS OF ACCESS TO NON-ESSENTIAL METEOSAT DATA BY NMSs OF MEMBER STATES

1 The NMSs of Member States will receive non-Essential Meteosat Data for Official Duty use at no cost except for the cost of decryption key units.

2 Insofar as required for Official Duty use, the NMSs may grant access to other Departments within their respective National Administrations, subject to arrangements in accordance with national legislation, but all conditions defined in these Rules remain attached to the use of the data. Further distribution and all commercial applications of the Meteosat Data are subject to Rules 8, 10 and 11 below.

## 7 CONDITIONS OF ACCESS TO NON-ESSENTIAL METEOSAT DATA BY NMSs OF NON-MEMBER STATES

1 The NMSs of non-Member States will have access Without Charge to Hourly Meteosat Data for Official Duty use.

2 NMSs of non-Member States will have access to Half-hourly and Quarter-hourly Meteosat Data for Official Duty use in accordance with the conditions specified in Annex III.

3 NMSs of non-Member States which provide EUMETSAT with equivalent satellite data will be provided data under conditions to be agreed by the EUMETSAT Council on a case by case basis.

4 For limited periods, to support the monitoring of disasters or emergencies and in accordance with relevant UN resolutions, the full set of Meteosat Data will be made available Without Charge.

5 For Official Duty use by NMSs of non-Member States subject to tropical cyclones, the full set of Meteosat Data will be made available Without Charge.

6 Regarding their commercial activities, the NMSs of non-Member States shall be treated in the same way as Service Providers, in accordance with the fees and conditions listed in Annex IV.

7 EUMETSAT will inform the NMSs of non-Member States of licences signed with other users receiving non-Essential Meteosat Data within their respective territories.

## 8 CONDITIONS OF ACCESS TO NON-ESSENTIAL METEOSAT DATA BY RESEARCH PROJECTS AND FOR EDUCATIONAL USE

Research Projects and Educational Users are given access Without Charge to non-Essential Meteosat Data, in accordance with standard EUMETSAT licensing conditions.

## 9 CONDITIONS OF ACCESS TO NON-ESSENTIAL METEOSAT DATA BY ECMWF

ECMWF is given access Without Charge to non-Essential Meteosat Data for its own use in support of its mission, as defined in the ECMWF Convention. This use shall only cover activities carried out within the ECMWF Secretariat and shall not include retransmission of Meteosat Data to other users, including its Member States.

## 10 CONDITIONS OF ACCESS TO NON-ESSENTIAL METEOSAT DATA BY COMMERCIAL USERS AND OTHER USERS

Commercial and other users shall be given access to non-Essential Meteosat Data against fees and under the conditions laid down in Annex IV.

## 11 COMMERCIAL ACTIVITIES OF NMSs OF MEMBER STATES

1 The fees and conditions laid down in Annex IV shall apply in the relationship between the commercial activities of the NMSs of Member States and the NMSs when acting as EUMETSAT's Exclusive Licensing Agents.

2 In these cases, the NMSs acting as EUMETSAT's Exclusive Licensing Agents, shall be entitled to retain 25% of the fees due and shall allocate the balance to EUMETSAT.

3 The originating NMSs of Member States in their commercial activities shall be free to establish the prices to their users when supplying Value Added Services.

4 The NMSs of Member States shall in their commercial activities have the right to make their Value Added Services available to users within and outside Member States.

## 12 CONDITIONS OF ACCESS TO ARCHIVED DATA AND PRODUCTS

1 All categories of users will receive Archived Meteosat Data and Products in accordance with this Rule at no cost to such users.

2 The volume of Archived Data and Products that may be ordered from the EUMETSAT Archive and Retrieval Facility through a single order or through successive orders is limited to avoid an unmanageable load and a consequential degraded level of service.

## 13 FINANCIAL MATTERS

1 All income arising from the implementation of these Implementing Rules shall be included under a separate budget line into the annual EUMETSAT Budget on the basis of an estimate and shall be treated in accordance with the EUMETSAT Financial Rules.

2 EUMETSAT shall not be liable for the cost of procuring the necessary receiving equipment of any user. All users shall be required to reimburse EUMETSAT for the cost of providing them with decryption key units for the reception of non-Essential Meteosat Data.

# THE METEOSAT CATALOGUE

## 1 INTRODUCTION

This Catalogue is intended for the purpose of information to NMSs, other organisations, the scientific research and education community, end users, service providers and the meteorological user community at large.

Any use of data or products listed in this Catalogue may be subject to the terms and conditions of a standard Licence Agreement to be concluded on a case by case basis with EUMETSAT or an Exclusive Licensing Agent, in accordance with the Data Policy established by the EUMETSAT Council.

Every care has been exercised in the preparation of this Catalogue and, to the best of EUMETSAT's belief, it is accurate as at the date of its issue. Changes, additions and deletions may, however, be made without notice. This Catalogue will be updated periodically to make new information available.

## 2 METEOSAT IMAGE DATA

These image data consist of geographical arrays of various sizes of image pixels, each pixel containing 8 data bits (Meteosat HRI Data) or 10 data bits (Meteosat High Rate and Low Rate SEVIRI Data), representing the received radiation from the earth and its atmosphere in the following spectral channels:

a) Meteosat High Resolution Image (HRI) Data:

- Infra-red band (IR) centred on 11μm
- Water-vapour band (WV) centred on 6 μm
- Visible band (VIS) centred on 0.7 μm

For the IR and WV spectral channels the pixel array size is 2500 x 2500 whereas for the VIS channel the pixel array size is 5000 x 5000.

b) Meteosat High Rate and Low Rate SEVIRI Data:

- Visible band centred on 0.6μm – Channel 1 (VIS 0.6)
- Visible band centred on 0.8μm – Channel 2 (VIS 0.8)
- Near-infra-red band centred on 1.6μm – Channel 3 (NIR 1.6)
- Infra-red band centred on 3.9μm – Channel 4 (IR 3.9)
- Water Vapour band centred on 6.2μm – Channel 5 (WV 6.2)
- Water Vapour band centred on 7.3μm – Channel 6 (WV 7.3)
- Infra-red band centred on 8.7μm – Channel 7 (IR 8.7)
- Ozone band centred on 9.7μm – Channel 8 (IR 9.7-O3)
- Infra-red band centred on 10.8μm – Channel 9 (IR 10.8)
- Infra-red band centred on 12.0μm – Channel 10 (IR 12.0)
- Carbon Dioxide band centred on 13.4μm – Channel 11 (IR 13.4 – CO2)
- Broadband high-resolution visible band – Channel 12 (HRV)

For all spectral channels the pixel array size is 3712 x 3712 except for the HRV channel for which the pixel array size is 11136 x 5568 (N/S x E/W).

All disseminated Meteosat High Rate and Low Rate SEVIRI Data are processed to level 1.5 by the EUMETSAT Ground Segment. For a description of this format, please refer to the EUMETSAT website at www.eumetsat.int.

For the current dissemination schedule, please turn to the EUMETSAT website at www.eumetsat.int.

## 2.1 Meteosat HRI and High Rate SEVIRI Data

These image data, from all spectral bands, are disseminated in digital form via operational services in formats that represent full spatial coverage and at full spatial resolution.

## 2.2 Meteosat Low Rate SEVIRI Data

These image data, from the spectral bands listed below, are disseminated in digital form via operational services in formats that represent full spatial coverage and at full spatial resolution.

- Channel 1 (VIS 0.6)
- Channel 3 (NIR 1.6)
- Channel 4 (IR 3.9)
- Channel 5 (WV 6.2)
- Channel 9 (IR 10.8)

Note: All data are subject to lossy compression.

## 2.3 Meteosat Internet Service

Certain Meteosat High Rate and Low Rate SEVIRI Data are freely distributed via the Internet. This service contains:

- all “essential” image data from all available channels in real-time;
- hourly (Europe domain) and three-hourly data (full-disk domain) from four spectral channels in real-time;
- image size reduced to 800 x 800 pixels;
- graphical format using lossy compression to ensure that data is only suitable for qualitative applications;
- effective spatial resolution after compression in the order of 15 km;
- image animation loops, image colouring, addition of coastlines/grids.

### 2.4 Rapid Scanning Service

The Rapid Scanning Service consists of quasi-permanent rapid scan imaging of a certain geographical sub-area of the full Earth disc which is performed by the Meteosat satellites for a certain period and more frequently than the nominal full disc imaging, and it is then interrupted for a short time. The period between rapid scanning sessions is used to perform full Earth scanning, needed to derive navigation information for the image processing system.

## 3 METEOSAT DERIVED PRODUCTS

These meteorological products are derived from level 1.5 Meteosat Data and they are disseminated to users in formats corresponding to WMO coding requirements that represent full spatial coverage. This includes the products generated by the EUMETSAT Satellite Application Facilities (SAFs).

For a complete list of availability of the Meteosat Derived Products please turn to the EUMETSAT website at www.eumetsat.int. This list includes the products generated by the EUMETSAT Satellite Application Facilities (SAFs) and which can be ordered via EUMETSAT.

## 4 METEOSAT ARCHIVED DATA AND PRODUCTS

Meteosat Data and Derived Products older than 24 hours are distributed on request from the EUMETSAT Data Archive in digital and graphical form via the associated operational service in formats which represent both full and partial spatial coverage as well as both full and partial spatial resolution.

For a complete list of the archived Meteosat Data and Derived Products please turn to the EUMETSAT website at www.eumetsat.int. This list includes SAF products, which are archived at the relevant EUMETSAT SAFs and which can be ordered via the EUMETSAT Data Archive.

# EUMETSAT FEES FOR ACCESS TO NON-ESSENTIAL METEOSAT DATA BY COMMERCIAL AND OTHER USERS

The attached Table contains the annual EUMETSAT fees applicable to commercial and other users for non-Essential HRI Data and High Rate SEVIRI Data. These fees will be reviewed by the EUMETSAT Council at regular intervals in light of experience.

The fees for the use of non-Essential Low Rate SEVIRI Data by commercial and other users shall be 75% of the corresponding fees for corresponding use of High Rate SEVIRI Data.

The fees are based on the following considerations:

- All Service Providers shall be charged a basic fee, in accordance with the attached Table.

- In cases where a Service Provider wishes to retransmit Meteosat Data without transformation to End Users, an additional fee shall be charged per end user equivalent to 75% of the End User fee for direct reception in accordance with the attached Table.

- In cases where a Service Provider wishes to broadcast or to supply for broadcasting Meteosat Data or images based on Meteosat Data, an additional fee shall be charged per channel or web site in accordance with the attached Table.

- For Broadcasters procuring Meteosat Data or images based on Meteosat Data from a Service Provider, no fee will be charged to the Broadcaster, as such fee is already included in the fee charged to the Service Provider.

- All Broadcasters receiving Meteosat Data directly shall be charged a basic fee in accordance with the attached Table.

- An additional fee will be charged per channel, depending on the size of the Actual Audience as defined in the attached Table. Should broadcasting consist of open-site Internet dissemination, the additional fee will be charged per web site containing images based on Meteosat Data. This fee shall depend on the number of page consultations made to the web site.

- Licences to Service Providers will allow redistribution of Meteosat Data to another Service Provider only if this other Service Provider has the appropriate licence with EUMETSAT or one of its Exclusive Licensing Agents.

## FEES FOR ACCESS TO METEOSAT DATA

| Data Frequency | User Categories | | | | | |
|---|---|---|---|---|---|---|
| | End User | Broadcaster | | Service Provider | | |
| | | Basic fee | Additional fee for broadcasting images based on Meteosat Data | Basic fee | Additional fee for the right to re-transmit Meteosat Data without transformation to End Users | Additional fee for broadcasting images based on Meteosat Data or supplying to broadcasters Meteosat Data or images based on Meteosat Data |
| Full set (1/4 hourly) | 12 KEUR | End User fee according to data frequency requested | a) Fee per channel: EUR 150 per 10,000 actual audience*** with a minimum of EUR 250 and a maximum of KEUR 30. b) Fee per Broadcaster running web site(s): EUR 150 per 10,000 page consultations**** accumulated over one year with a minimum of EUR 250 and a maximum of KEUR 60. | 0.5% of Service Provider turnover** max. KEUR 36, min. KEUR 12 | n* x 75% of the relevant end user fee | a) Fee per channel: EUR 150 per 10,000 actual audience*** with a minimum of EUR 250 and a maximum of KEUR 30. b) Fee per Service Provider or Broadcaster running web site(s): EUR 150 per 10,000 page consultations**** accumulated over one year with a minimum of EUR 250 and a maximum of KEUR 60. |
| 1/2 hourly data | 10 KEUR | | | 0.5% of Service Provider turnover** max. KEUR 30, min. KEUR 10 | | |
| 1 hourly data | 8 KEUR | | | 0.5% of Service Provider turnover** max. KEUR 24, min. KEUR 8 | | |
| | | | | | | |

* n = number of end users

** Turnover means the meteorological turnover, being the total annual revenue derived from the commercial activity in any way based on meteorological data and products acquired by the Service Provider (excluding revenue derived from services to civil aviation in accordance with the ICAO Convention, Annex III). Should the turnover figures not be available, the maximum fee will apply.

*** Actual audience is defined as the arithmetic average of the total actual audience (total audience except children under 3 years old), based on the full 24-hour period and over a period of approximately 1 year, expressed as average audience per day. The result of this calculation will be rounded up to the next 10,000. Should the audience figures not be available, the maximum fee will apply.

**** One page consultation is defined as any single "click" originated from one IP address on a web page containing images based on Meteosat Data. Should the number of page consultations not be available, the maximum fee will apply.

**NOTE: The fees for access to Low Rate SEVIRI Data shall be 75% of the corresponding fees for High Rate SEVIRI Data according to this table.**

# RESOLUTION ON

# SPECIAL PAYMENT ARRANGEMENT CONCERNING THE CONTRIBUTION OF THE UNITED KINGDOM TO THE OPTIONAL EUMETSAT JASON-3 ALTIMETRY PROGRAMME

**Adopted at the 70th Meeting of the EUMETSAT Council on 21-22 June 2010**

**The EUMETSAT Council,**

**HAVING REGARD** to the Optional EUMETSAT Jason 3 Altimetry Programme entered into force on 1 February 2010,

**NOTING** that the United Kingdom declared its position regarding level payments when signing the Declaration EUM/C/67/09/Dcl.I on the Optional EUMETSAT Jason 3 Altimetry Programme,

**ACKNOWLEDGING** the efforts made by the United Kingdom in agreeing to participate to the Optional EUMETSAT Jason 3 Altimetry Programme and declaring a subscription rate within the timeframe and subscription levels necessary for a timely entry into force of the programme,

**BEARING IN MIND**, the funding constraints and internal budgetary procedures of the United Kingdom,

**CONSIDERING** that agreement to this special payment arrangement has no impact in the smooth execution of EUMETSAT's activities and in particular with regard to Treasury levels and stressing that this is an exceptional measure, and the low impact on the EUMETSAT Treasury is viable only because this measure is for one country, and, in overall EUMETSAT terms, for a relatively small amount.

**AGREES:**

**I** That UK pays its share to the Programme in equal instalments over the whole period of the Optional EUMETSAT Jason-3 Altimetry Programme.

**II** That UK shall bear any cost arising from this payment arrangement.

# RESOLUTION ON

# THE EUMETSAT CONTRIBUTION TO THE GOVERNANCE OF SPACE ACTIVITIES IN EUROPE INCLUDING GMES

**Adopted at the 70th Meeting of the EUMETSAT Council on 21-22 June 2010**

**The EUMETSAT Member States,**

**RECALLING** that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, taking into account as far as possible the recommendations of the World Meteorological Organization (WMO), and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**RECALLING** that the "EUMETSAT Strategy: 2030" approved at the 59th Council Meeting in July 2006 foresees EUMETSAT becoming the operational agency for relevant GMES missions that will complement EUMETSAT mandatory programmes,

**CONSIDERING** the value of the EUMETSAT contributions to the European Space Programme, which has been recognised in the Resolution on the European Space Policy adopted at the occasion of the 4th Space Council meeting in May 2007, and the Resolution Taking Forward the European Space policy adopted by the 5th Space Council in September 2008 which recalls that GMES is a user-driven initiative that should maximise the use of existing Earth observation centres, capacities and services in Europe, including EUMETSAT,

**CONSIDERING** that the Resolution adopted by the 6th Space Council meeting in May 2009 invited the EC and ESA to lead a dialogue with EU and ESA Member States and with EUMETSAT and its Member States to explore options for the role of EUMETSAT to coordinate the user requirements for space observations,

**TAKING INTO ACCOUNT** the decisions taken at the 64th and 67th EUMETSAT Council meetings in July 2008 and July 2009 to provide free access to all data, products and services from EUMETSAT satellites to the GMES Core Services, in the expectation that access to GMES data will be free of charge, on the understanding that each user within these services will sign a licence with EUMETSAT and subject to commitment from the European Union and national authorities to fund these Core services on a sustainable basis,

**TAKING FURTHER INTO ACCOUNT** that EUMETSAT Member States agreed, at the 64th Council meeting in July 2008, on the approach for implementation of GMES Sentinels 4 and 5 on EUMETSAT satellites, including a contribution by EUMETSAT to accommodate these instruments on EUMETSAT satellites, and also to the EUMETSAT involvement in GMES Sentinel 3 activities,

**RECALLING** the decision of the 68th EUMETSAT Council in December 2009 that encouraged EUMETSAT to participate in a working group with EC and ESA in charge of analysing how synergies could be developed between meteorology and GMES, taking into account the respective priorities of the different user communities, the lessons learned in operational meteorology and the particular constraints of GMES,

**RECALLING** that the same 68th Council meeting reaffirmed that EUMETSAT should support the EU in the preparation of user requirements for space observations related to operational oceanography and atmospheric composition monitoring, underlining that this role could also apply to Climate Monitoring and should encompass international cooperation elements,

**NOTING** that, with the entry into force of the Lisbon Treaty on 1 December 2009, the European Union has acquired an explicit competence to coordinate the exploration and exploitation of space, which is shared with Member States,

**NOTING** further that the Lisbon Treaty requires the EU to elaborate a space policy and to establish any appropriate relations with ESA, also enabling the EU to establish a space programme or any coordination measures for the exploration and exploitation of space,

**AWARE** that the above new competence of the EU has triggered a debate on governance of space activities among space actors in Europe,

**AWARE** that one strategic objective of the European Space Policy adopted in April 2007 is to deliver user-driven services in support to EU policies, and that this user-driven dimension has been reflected in the selection of Galileo and GMES as two flagship programmes aiming at delivery of operational services to a broad user community,

**AWARE** that long-term operational programmes developed in user governed entities such as EUMETSAT are also supporting the strategic objectives of the European Space Policy related to the competitiveness of European space industry and European independence on critical space technologies,

**WISHING** to support the EU in its new competence in accordance with the strategic objectives of the European Space Policy,

**STRESSING** that the role that EUMETSAT can play in support to the EU shall be complementary to the EUMETSAT mandatory programmes required by the EUMETSAT Convention to continue the provision of observations from geostationary and polar orbits,

**AGREE:**

**I** That in defining the scope of a future EU space programme and the related governance of space activities in Europe, the EU should also make effective use of the capacities and added-value of Organisations representing large and well-coordinated user communities like EUMETSAT.

**II** That such Organisations can play a unique role in the transition from research to operations of space missions as demonstrated by European Member States in the context of meteorology, launch services and telecommunications.

**III** That this is particularly important for GMES which is now entering into a deployment and operational phase which can profit from the involvement of user governed entities like EUMETSAT, with a proven track-record of establishing sustainable operational space programmes.

**IV** That EUMETSAT, on the basis of its demonstrated experience and competence, can play a major role for those parts of the GMES programme which are related to oceanography, atmospheric composition and climate monitoring, where EUMETSAT can support the EU in effectively preparing user requirements, considering the ever increasing interactions between the related user communities.

**V** That the role of EUMETSAT as a user governed entity responsible of ensuring the fulfilment of user needs in a sustained manner in support of the EU should include the following main aspects:

- To establish and maintain continuous interfaces with user communities and to collect their requirements and priorities;
- To translate agreed user requirements into end-to-end system specifications for operational space missions and ground infrastructures;
- To cooperate with space development agencies for the development and procurement of the required space infrastructure and related services, based on a clear mandate from users;
- To define and procure operational ground infrastructures;
- To take responsibility for long term operations and continuous adaptation of the space and ground infrastructure to serve evolving user needs;
- To deliver agreed data services to users.

**VI** To task the Council Chairman and the Director-General to communicate the position of the EUMETSAT Member States to the co-Chairs of the Space Council, i.e. to the EU and ESA Presidencies and their related Executives.

# RESOLUTION ON

# THE AUTHORISATION TO PROCEED WITH THE METEOSAT THIRD GENERATION PROGRAMME

**Presented for adoption at the 71st Meeting of the EUMETSAT Council on 30 November-1 December 2010, adopted on 24 January 2011**

**The EUMETSAT Member States,**

**CONSIDERING** that the EUMETSAT Council, at its 70th meeting on 21-22 June 2010, agreed on the contents of the programme proposal for the Meteosat Third Generation (MTG) as contained in document EUM/C/69/10/DOC/02,

**CONSIDERING** that the EUMETSAT Council, at its 70th meeting, agreed to open the voting of Resolution EUM/C/69/10/Res.I on the MTG Programme,

**NOTING** that, although 22 of the 26 Member States have voted in favour of the MTG Programme Resolution unconditionally, thus achieving a programme funding level of almost 86%, the votes of Belgium, Portugal, Spain and Switzerland are still to be confirmed,

**NOTING** that, due to the mandatory nature of the programme, the MTG Programme Resolution will only formally enter into force upon approval by all Member States,

**EXPECTING** that the above Delegations expect to be able to confirm their votes within a short period of time, and that the formal entry into force of the Resolution on the MTG Programme is expected to take place at the latest by 30 June 2011,

**RECOGNISING** the need to start the full MTG Programme activities from beginning of 2011 to avoid additional costs and programme risks,

**AGREE:**

**I** That the activities under the MTG Programme can start with effect from 1 January 2011.

**II** That Belgium, Portugal, Spain and Switzerland will be legally obliged to contribute financially to the Programme only after finalisation of national approval procedures, and that their contributions will only become due 30 days after notification thereof.

**III** That in the MTG Programme Budget 2011 an amount corresponding to the contributions from Belgium, Portugal, Spain and Switzerland remains blocked until the finalisation of national procedures has been notified to the Director-General.

**IV** That if Belgium, Portugal, Spain and Switzerland would not be in a position to confirm finalisation of national approval procedures by 30 June 2011 at the latest, those Member States who have agreed unconditionally to contribute to the programme will decide on the action to be taken.

# RESOLUTION ON

# THE EXTENSION OF THE METEOSAT THIRD GENERATION PREPARATORY PROGRAMME

## Adopted at the 71st Meeting of the EUMETSAT Council on 30 November-1 December 2010

**The EUMETSAT Member States,**

**RECALLING** EUMETSAT Resolution EUM/C/62/07/Res.I on the Meteosat Third Generation (MTG) Preparatory Programme, presented for adoption at the 62nd Council meeting and entered into force on 25 June 2008,

**RECALLING** that the MTG Preparatory Programme was envisaged to last until the start of the full MTG Programme, expected to be not later than mid 2010,

**TAKING INTO ACCOUNT** that the financial envelope of the MTG Preparatory Programme was expected to be exhausted in 2010,

**NOTING** that Resolution EUM/C/69/10/Res.I on the Meteosat Third Generation (MTG) Programme, presented for adoption at the 69th Council on 26 March 2010 is expected to be fully adopted at the 71st Council meeting on 30 November – 1 December 2010,

**TAKING INTO ACCOUNT** that the assumption for the envelope of the full MTG Programme was that the envelope of the MTG Preparatory Programme would be fully used,

**NOTING** that there are still a number of preparatory activities to be finalised in parallel with the activities under the full MTG Programme,

**WISHING** to make use of the amounts still available within the MTG Preparatory Programme envelope after the entry into force of the full MTG Programme,

**AGREE:**

**I** To extend the MTG Preparatory Programme until 31 December 2011.

**II** To maintain the financial envelope of the MTG Preparatory Programme at the agreed level of 30 MEUR at 2007 economic conditions.

# RESOLUTION ON

# THE PREPARATION OF A THIRD PARTY PROGRAMME FOR THE ESTABLISHMENT OF USER REQUIREMENTS FOR FUTURE OCEANOGRAPHY SYSTEMS ON BEHALF OF THE EC

**Adopted at the 71st Meeting of the EUMETSAT Council on 30 November-1 December 2010**

**The EUMETSAT Council,**

**RECALLING** that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, taking into account as far as possible the recommendations of the World Meteorological Organization (WMO), and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**RECALLING** that the "EUMETSAT Strategy: 2030" approved at the 59th Council Meeting in July 2006 foresees EUMETSAT becoming the operational agency for relevant GMES missions that will complement EUMETSAT mandatory programmes, and that third party activities and optional programmes, consistent with EUMETSAT mandatory programmes and the Convention, will be the natural route for such new missions,

**CONSIDERING** the Communication of the European Commission COM(2008)748 Final, of 12 November 2008, which highlighted the role that EUMETSAT could play in interfacing with the user communities to compile requirements for global observations of atmosphere and oceans,

**CONSIDERING** that the Resolution adopted by the 6th Space Council meeting in May 2009 invited the EC and ESA to lead a dialogue with EU and ESA Member States and with EUMETSAT and its Member States to explore options for the role of EUMETSAT to coordinate the user requirements for space observations,

**CONSIDERING** the Communication of the European Commission COM(2009)589 Final, of 28 October 2009, which indicated the need for EUMETSAT to establish structures in order to adequately manage delegated tasks for and on behalf of the EC,

**TAKING INTO ACCOUNT** the decision of the 68th EUMETSAT Council in December 2009 that encouraged EUMETSAT to participate in a working group with EC and ESA in charge of analysing how synergies could be developed between meteorology and GMES, taking into account the respective priorities of the different user communities, the lessons learned in operational meteorology and the particular constraints of GMES,

**TAKING INTO ACCOUNT** that the same 68th Council meeting reaffirmed that EUMETSAT should support the EU in the preparation of user requirements for space observations related to operational oceanography and atmospheric composition monitoring, underlining that this role could also apply to Climate Monitoring and should encompass international cooperation elements,

**TAKING INTO ACCOUNT** the 70th EUMETSAT Council Resolution on the EUMETSAT Contribution to the Governance of Space Activities in Europe including GMES, which encourages EUMETSAT to support the EU in effectively preparing user requirements for oceanography, atmospheric composition and climate monitoring, considering the ever increasing interactions between the related user communities,

**STRESSING** that the role that EUMETSAT can play in support to the EU shall be complementary to the EUMETSAT mandatory programmes required by the EUMETSAT Convention to continue the provision of observations from geostationary and polar orbits and should not adversely impact such programmes,

**BEARING IN MIND** that Article 2 of the EUMETSAT Convention foresees that EUMETSAT may carry out activities not in conflict with its objectives requested and funded by third parties, and that the mechanism of third party programmes can adequately address the requirements of the EC,

**HAVING REGARD** to the Preliminary Programme Proposal for a Third Party Programme on User Requirements Definition Process for Future Oceanography Systems for Europe contained in document EUM/C/71/10/DOC/10,

**IN CONFORMITY** with Resolution EUM/C/66/08/Res. II on the Approval of Third Party Programmes,

**AGREES:**

**I** That the proposed Third Party Programme for the establishment of user requirements for Future Oceanography Systems on behalf of the EC is consistent with EUMETSAT's objectives, with EUMETSAT role in GMES as defined by the EUMETSAT Council, and should be established and implemented as a Third Party Programme within the framework of the EUMETSAT Convention.

**II** To task the Director-General to draw up a full programme proposal, to be submitted for Council approval in 2011.

**III** To task the Director-General to prepare the necessary cooperation arrangement with EC to be agreed by Council, regarding the respective roles, tasks and responsibilities concerning this Third Party Programme.