

## UKSA CDSSG - TASK 2:

# Report on Data licensing issues for Operational Climate Data Processing on JASMIN-CEMS

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### Change Record

Issue	Date	Change Status	Reason for Change
1.0	18.3.16	Initial release	

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## 1 INTRODUCTION

This report discusses the licensing constraints and requirements on the input datasets needed for operational processing of climate data. The input datasets under consideration have been taken from the report ‘UKSA CDSSG - TASK 2 – Requirements for a system design for routine climate data processing at JASMIN-CEMS’, which summarises the needs of groups wishing to process their existing climate data records in an operational manner. The input datasets are made available by a number of third party suppliers, particularly EUMETSAT, NOAA, NASA, ESA and ECMWF, and come with a variety of constraints on their useage. Although many datasets are made available to all users with few license issues, in particular Near Real Time data from EUMETSAT and ECMWF are subject to limitations to their useage which will require license negotiations with these organisations on a case by case basis. This report discusses these restrictions in further detail.

An additional factor to consider is the processing location; if the data is being provided to multiple users via JASMIN-CEMS (or any other external processing infrastructure), then this may count as redistribution of the data, and may require different licensing to cases where the data producer obtain the data directly themselves. This has been an issue for near-real-time data from EUMETSAT (and ECMWF), and will be discussed further in the appropriate sections.

## 2 Datasets considered within EO4CDS

The sources of data from the required data products have been analysed and are summarised in Table 1. The main sources of data are: EUMETSAT, NASA, NOAA, ESA, ECMWF, and some of the Copernicus Services.

Processing definitions have been taken from [], which defines:  
“**batch, near real-time, short-delay** - three common modes of data processing distinguished by their timeliness. ‘Batch’ processing is where a complete pre-defined historical period is processed at once. ‘Short-delay’ implies a timeframe of several days between data ingest and processing, and ‘near real-time’ usually suggests a timeframe of hours, or very few days.”

The term offline processing is also use to define data which falls under either the ‘Batch’ or ‘Short Delay’ categories.

Product	batch processing	Short Delay	NRT	Source of Data	Comments
AVHRR GAC, (L1,L2,L3)	X	X		NOAA Class	
AVHRR FRAC (L1,L2,L3)	X	X	X	EUMETSAT	
(A)ATSR (L1,L2,L3)	X	N/A	N/A	ESA	
MODIS L1	X	X	X	NOAA Class	
VIIRS (Suomi-NPP L1)	X		X	NOAA	
SEVIRI L1 High rate, full disk	X	X?	X	EUMETCAST	
GOME-2 L1	X		X	EUMETSAT	
IASI L1	X		X	EUMETSAT	
CRIS (Suomi-NPP L1)	X		X	NOAA	Available on EUMETCAST
OCO2 (NASA)		Several days	X	NASA	
SeaWifs	X			NASA	
Meris	X	N/A	N/A	ESA	
AMSU-A + MHS			X	EUMETSAT	EUMETCAST
SLSTR L1	X		X	ESA / EUMETSAT	Copernicus open data policy
Tropomi L1,L2	X		X	ESA	Future mission
OLCI	X	~1 month	X	ESA/ EUMETSAT	Copernicus open data policy
ERA-interim / ECMWF reanalysis	X	Several days	Historical	ECMWF	
ECMWF operational analysis + forecast	X	X	X	ECMWF	
OSI-SAF sea-ice conc data	X			OSI-SAF (EUMETSAT)	
NASA OBPG auxiliary data			X	NASA OBPG	
NISE snow/ice cover (NRT)	X	X		NISE	
CIMSS (Monthly emissivity)	X			U. Wisconsin	
Globcover and Land Cover CCI (Biome data)	X			ESA	
Copernicus Land Service (FCOVER)	X	Within 3 days		Copernicus land service	

(rolling archive))		of synthesi s period			
IMS+OSTIA (land snow / sea-ice cover (daily))	X		X (<12 hrs)	OSTIA available from Copernicus Marine Service	
static spectroscopy	X				Need to know what data

*Table 1: Data products that have been considered in this report. Sources of the data have been taken from the report 'UKSA CDSSG - TASK 2 – Requirements for a system design for routine climate data processing at JASMIN-CEMS', which summarises the needs of groups wishing to process their existing climate data records in an operational manner*

### 3 Conditions for Use of Individual Datasets

#### 3.1 Open Data Licensing

Many of the datasets are made available on an open license. There are therefore no licensing bars to using these data in an operational framework. However, there may still be some minor conditions such as registering to use the data, appropriate citation and acknowledgement of the data provider and provision of any publications. The individual conditions for each of the datasets are not described further in this document, but should be checked by the data producers before using the data. Where CEDA obtains such data and makes this available for use on JASMIN-CEMS, it should ensure that the data conditions are also made available with the data.

This covers the data products in the table not discussed in more detail below.

#### 3.2 EUMETSAT Data Licensing

Eumetsat's data licensing conditions are described in detail at: <http://www.eumetsat.int/website/home/Data/DataDelivery/DataRegistration/DataLicensing/index.html>, and data conditions vary between METOP data (IASI, GOME, AVHRR) and METEOSAT (SEVIRI), and between NRT (<24 hrs old) and older products.

##### 3.2.1 For METOP datasets:

Offline: For GOME and IASI data offline data (and also Near Real Time (NRT) data over 24 hrs old), access is available to everyone free of charge and subject to signing a simplified licensing agreement. CEDA has been advised that redistribution of these products is allowed, as the only obligation under this license is to respect EUMETSAT's copyright. AVHRR FRAC data appears to be free of any licensing conditions.

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Near Real Time (NRT): Near Real Time data is available via EUMETCAST on a user basis, and typically assumes reception via the users own EUMETCAST dish. Access to NRT IASI and GOME-2 data is granted to all users without charge, and against the signature of a licence agreement, but they may not be redistributed without transformation. CEDA has a free license that covers research use for STFC, and has an agreement with EUMETSAT to be able to make data available to University of Oxford for a specific project, but access to this data by other institutions in support of their processing on CEMS would currently need negotiating on a case by case basis. It is also possible to pay to obtain a redistribution license, but this would have a financial cost. NRT data over 24 hours old can be redistributed as per the offline data above.

### **3.2.2 For METEOSAT datasets**

This has a slightly different licensing structure to METOP. Certain SEVIRI ‘low-rate’ images (with limited spectral coverage) are classed as ‘essential’, and therefore available to anyone worldwide, with no restrictions, whilst other products, both NRT and offline require a license, and the full ‘high-rate’ SEVIRI product is more restricted in use. For NRT data licensing responsibilities lie with the National Meteorological Service within Europe, so the Met Office has licensing responsibility in the UK, whilst for offline data the licensing is via EUMETSAT. If high rate NRT SEVIRI data is required via CEMS by users outside of STFC, then more investigation will be required as to licensing requirements. Note, that for the NRT data, the free licensing covers research and educational uses only, so if any operational activity fell outside of these bounds there would also be a cost.

### **3.3 ESA data licensing**

ESA’s data policy is described in the following document:  
[https://earth.esa.int/pi/docs/doc/download/revised\\_ESA\\_data\\_policy.pdf](https://earth.esa.int/pi/docs/doc/download/revised_ESA_data_policy.pdf)

#### **3.3.1 For ERS, ENVISAT and Earth Explorer missions:**

If the dataset is classified as a ‘free dataset’ (which encompasses their online data and includes most of the data generated by ESA EO missions, and includes (A)ATSR and MERIS), then the data is made available with “full and open” online access (from ESA) free of charge, upon electronic online registration with ESA and the user accepting the ESA Terms and Conditions, for all types of use.

For ‘Restrained Data’ i.e. data that is not currently available online (which encompasses SAR data and requests for datasets of very large volume), then ESA requires submissions and acceptance of a project proposal and acceptance of the ESA Terms and Conditions.

The ESA Terms and Conditions are given at:  
<https://earth.esa.int/pi/esa?type=file&ts=1127284911811&table=aotarget&cmd=image&id=122>



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Note, that onward distribution of the data is granted by ESA upon request and needs to be confirmed in writing by ESA.

### 3.3.2 Sentinel data

The Sentinel data terms and conditions can be found at [https://sentinel.esa.int/documents/247904/690755/Sentinel\\_Data\\_Terms\\_and\\_Conditions](https://sentinel.esa.int/documents/247904/690755/Sentinel_Data_Terms_and_Conditions).

This states that:

*“The access and use of Copernicus Sentinel Data and Service Information is regulated under EU law.1 In particular, the law provides that users shall have a free, full and open access to Copernicus Sentinel Data2 and Service Information without any express or implied warranty, including as regards quality and suitability for any purpose.*

*EU law grants free access to Copernicus Sentinel Data and Service Information for the purpose of the following use in so far as it is lawful:*

- (a) reproduction;*
- (b) distribution;*
- (c) communication to the public;*
- (d) adaptation, modification and combination with other data and information;*
- (e) any combination of points (a) to (d).*

*EU law allows for specific limitations of access and use in the rare cases of security concerns, protection of third party rights or risk of service disruption.”*

There are some requirements on acknowledging the data (see the Terms and Conditions above for specific details)

### 3.4 NASA / NOAA data licensing

Data obtained from the NOAA CLASS archive doesn't require signing up to any conditions to obtain, and no information on data licensing is given.

NASA Data policy can be found at: <http://science.nasa.gov/earth-science/earth-science-data/data-information-policy/>. In general, data products are freely available and open, although citation conditions may apply. Where there are agreements for supply of data from commercial companies, there may be restrictions.

### 3.5 ECMWF Data Licensing

The different ECMWF products have different licensing requirements as summarised below

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### 3.5.1 Reanalysis products:

CEDA has recently secured a new license to redistribute ERA reanalysis products held in the CEDA archive (including ERA interim). The new license permits use of the products for Research, Educational and Commercial purposes, including the provision of services by all registered CEDA users worldwide.

However, redistribution unchanged is not allowed and would require separate permission from ECMWF. For any derived products produced, it should not be possible to retrieve the original ERA products from them.

The Terms and Conditions for access to the ERA products through CEDA can be found at: [http://licences.ceda.ac.uk/image/data\\_access\\_condition/ecmwf-era-products.pdf](http://licences.ceda.ac.uk/image/data_access_condition/ecmwf-era-products.pdf)

### 3.5.2 Operational Data:

CEDA also holds operational analysis products within the CEDA archives, with the permission of the UK Met Office who are responsible for licensing this data in the UK. This data is available for UK-based academic use only, and users are required to register individually for access. The license details are given here: [http://licences.ceda.ac.uk/image/data\\_access\\_condition/ecmwf\\_op\\_agreement.pdf](http://licences.ceda.ac.uk/image/data_access_condition/ecmwf_op_agreement.pdf)

For non-academic activities within the UK, licenses will need to be negotiated in the first instance with the UK Met Office on behalf of ECMWF.

### 3.5.3 Near Real Time data:

There are two types of Near Real Time data products, with different licensing requirements:

- 1) ECMWF can provide data via a disseminated feed within around 6 hours of the analysis time at the start of the model run, as per the agreed set up and licence. Licenses for this feed would need to be negotiated on a case by case basis. Currently they supply data for the NRT processing for STFC and U. Oxford, but this cannot be made available to other users, or for other projects, without further agreement.
- 2) CEDA can also get output from the MASS archive in 'Near Real Time' (typically within the hour following the disseminated feed). This would be covered by the standard CEDA offline operational product license described above.

## 4 Conclusions

This report has analysed the data licensing conditions for the required datasets specified in the context of this study. Many of the datasets are freely available with only minor

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conditions of use, and these require no further action when using the data. Datasets that may require additional licensing before use are:

- ECMWF operational and particularly Near Real Time data
- Near-real-time IASI and GOME-2 and data from EUMETSAT.
- Near real-time SEVIRI data from EUMETSAT

These near real time datasets require licenses on an individual use case basis. Restrictions on retransmission of the data mean that making these data available on CEMS beyond the scope of the current projects already utilising the data will require further negotiations with the service providers.

Where the use of the data could be construed to be commercial, for some of the above products (ECMWF, SEVIRI) there are different licensing arrangements, and there will be a financial cost.

## 5 Summary of Actions

1. CEDA to negotiate with EUMETSAT / ECMWF / Met Office on a case by case basis as required, for any new projects undertaking data processing on CEMS. Estimated effort would be 1 week per provider per use case.
2. Operational activity which may be considered to be commercial will require different licenses to apply. CEDA and / or the data providers should negotiate these as appropriate. Note, that in this case there will be a financial cost for some datasets.

## 6 References

EUMETSAT, 2015, 'EUMETSAT DATA Policy', available from <http://www.eumetsat.int/website/home/Data/DataDelivery/DataRegistration/DataLicensing/index.html>, accessed Feb 2016

ESA, 2010, 'Revised ESA Data Policy for ERS, Envisat and Earth Explorer missions', available from [https://earth.esa.int/pi/docs/doc/download/revised\\_ESA\\_data\\_policy.pdf](https://earth.esa.int/pi/docs/doc/download/revised_ESA_data_policy.pdf), accessed Feb 2016

ESA, 2011, 'Terms and Conditions for the Utilisation of ESA's Earth Observation Data', available from <https://earth.esa.int/pi/esa?type=file&ts=1127284911811&table=aotarget&cmd=image&id=122>, accessed Feb 2016

European Commission, 'Legal notice on the use of Copernicus Sentinel Data and Service Information', available from [https://sentinel.esa.int/documents/247904/690755/Sentinel\\_Data\\_Terms\\_and\\_Conditions](https://sentinel.esa.int/documents/247904/690755/Sentinel_Data_Terms_and_Conditions), accessed Feb 2016

NASA, 'Data and Information Policy', <http://science.nasa.gov/earth-science/earth-science-data/data-information-policy/>, accessed Feb 2016