

DRR Report - MVIRI FCDR Release 1

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EUMETSAT
Eumetsat-Allee 1, D-64295 Darmstadt, Germany
Tel: +49 6151 807-7
Fax: +49 6151 807 555
<http://www.eumetsat.int>

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1 INTRODUCTION

This document records the results of the review process for the archive and release of three data records:

- a) First release of MVIRI FCDR – 0 degree (10.15770/EUM_SEC_CLM_0009);
- b) First release of MVIRI FCDR – 57 degree (10.15770/EUM_SEC_CLM_0012);
- c) First release of MVIRI FCDR – 63 degree (10.15770/EUM_SEC_CLM_0013).

1.1 Applicable Documents

Acronym	Document Title	Document Reference/Link
[AD1]	The Climate Data Record Generation Process Description	EUM/OPS/SPE/10/1947
[AD2]	FIDUCEO - GENERAL PROJECT REVIEW CONSOLIDATED REPORT	Ares(2020)564076 - 29/01/2020
[AD3]	ERA-CLIM2 project Review Report	ERA-CLIM2/REV/Final

1.2 Reference Documents

Acronym	Document Title	Document Reference/Link
RD1.	FIDUCEO Webpage	https://research.reading.ac.uk/fiduceo
RD2.	ERA-CLIM2 project (deliverable reports page)	http://www.era-clim2.eu/products

1.3 Acronyms

Acronym	Meaning
AD	Applicable Document
ATBD	Algorithm Theoretical Baseline Document
EC	European Commission
ECMWF	European Centre for Medium range Weather Forecast
ERA-CLIM2	European Reanalysis of the Global Climate System
EU	European Union
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
FCDR	Fundamental Climate data Record
FIDUCEO	Fidelity and uncertainty in climate data records from Earth Observations
IODC	Indian Ocean Data Coverage
IR	Infra-Red
MFG	Meteosat First Generation
MVIRI	Meteosat Visible Infra-Red Imager
VIS	Visible
WV	Water Vapour

2 REVIEW SCOPE AND OBJECTIVES

2.1 Scope

The scope of this review was the release of three data records produced in two European Union (EU) projects (ERA-CLIM2 and FIDUCEO) through EUMETSAT Data Centre:

- a) First release of MVIRI FCDR – 0 degree (10.15770/EUM_SEC_CLM_0009);
- b) First release of MVIRI FCDR – 57 degree (10.15770/EUM_SEC_CLM_0012);
- c) First release of MVIRI FCDR – 63 degree (10.15770/EUM_SEC_CLM_0013).

The MVIRI instrument on-board Meteosat First Generation (MFG) has three channels: One in the visible wavelengths (VIS channel) and two in the infrared wavelengths (IR and WV channels). The recalibration of the VIS channel measurements has been performed in the FIDUCEO project [AD2] and the recalibration of IR and WV channel measurements has been performed in the ERA-CLIM2 project [AD5].

2.2 Objectives

The overall objective is to assess the maturity and readiness of the products and the accompanying documentation for public release from the EUMETSAT Data Centre.

Specific objectives are the following:

- Objective 1: To assess the scientific quality and maturity of the data records considering soundness of the used methods, and the systematic uncertainty and stability of the time series based on the validation report;
- Objective 2: To assess the adequacy of the product user guide considering the clarity, usefulness and correctness of the presented information;
- Objective 3: To recommend to the EUMETSAT management the authorisation to start the data record release process.

3 REVIEW PROCESS

3.1 Review Process

Deviating from the normal Delivery Readiness Review (DRR) process as outlined in [AD1], the formal review was performed within the frame of the FP7 ERA-CLIM2 and Horizon 2020 FIDUCEO projects by reviewers appointed by the Project Officer Monica Kacik, European Commission (EC). EC has appointed Alexia Massacand, Group on Earth Observations (now at MountaiNow.net) as the reviewer for the ERA-CLIM2 and Rainer Hollmann, Deutsche Wetterdienst as the reviewer of the FIDUCEO. The reviewers have reviewed the data sets and associated documents and they have been accepted as successful project deliverables as indicated in [AD3] and [AD4]. This is considered as sufficient to recommend the release of the data records without further review. The resulting data records will become accessible in the EUMETSAT Product Navigator.

3.2 Review Organisation

3.2.1 Documents for Review

The following documents were reviewed and approved for publication:

Document title	Document reference	Link to Objectives
Algorithm Theoretical Baseline Document - MVIRI FCDR Release 1	EUM/OPS/DOC/18/990143, V2A	1, 3
Validation Report - MVIRI FCDR Release 1	EUM/OPS/DOC/18/990949, V2E	1, 3
Product User Guide – MVIRI FCDR Release 1	EUM/USC/DOC/17/906121, V1N	2, 3

Table 1: Documents for review and links to objectives

4 REVIEW BOARD FINDINGS VERSUS OBJECTIVES

4.1 Objective 1

Objective 1: To assess the scientific quality and maturity of the data records considering soundness of the used methods, and the systematic uncertainty and stability of the time series based on the validation report;

The data and associated documents have been accepted by the EC on recommendation by the reviewers nominated by EC, as indicated in the review reports [AD3] and [AD4]. For example, the EC review report for the FIDUCEO project [AD3] says:

“A Metrological assessment of consistency, stability and uncertainty of FIDUCEO FCDRs was performed and documented in D4.6. The FCDR deliverables D4.1, D4.2, D4.3, D4.4 have been made available in final versions and the related reports (D4.5, D4.6, D4.7) are of very good and fully acceptable quality.”

Finding

The Objective 1 is fully met.

4.2 Objective 2

Objective 2: To assess the adequacy of the user guide considering clarity, usefulness and correctness of the presented information.

The product user guide has been accepted by the EC on recommendation by the reviewers nominated by the EC, and is considered complete. For example, the EC review report for the FIDUCEO project [AD3] says:

“The final versions of the initial harmonised FCDRs (AVHRR, HIRS, METEOSAT, MW) have been generated. The FCDRs have been fully documented including Quick-Start User Guides and product user Guides.”

Finding

The Objective 2 is fully met.

4.3 Objective 3

Objective 3: To recommend to the EUMETSAT management the authorisation to start the data record release process

The produced data records and documentation were delivered to and were accepted by the EC on recommendation by the reviewers nominated by the EC, as indicated in the review reports [AD3] and [AD4].

Finding

The Objective 3 is fully met. The reviews nominated by EC consider the data records of sufficient quality and maturity that led to their acceptance as deliverables of the two EU projects. This warrants recommendation to the EUMETSAT management to start the data record release process for the EUMETSAT Data Centre.

5 CONCLUSION

The conclusion of the performed review is:

Based on the review results from the two EU projects ERA-CLIM2 and FIDUCEO, it is recommended to the EUMETSAT management to start the data record archival and release process for the MVIRI FCDR data records.