Meteosat-8 Indian Ocean Data Coverage (IODC)

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Outline

- Current Met-8 IODC status
- Data acquisition/processing strategy
- Future IODC

Image scan from Meteosat-7
on 31 March 2017 11:30 to 12:00 UTC

Image scan from Meteosat-8
on 31 March 2017 11:45 to 11:57 UTC

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EUMETSAT
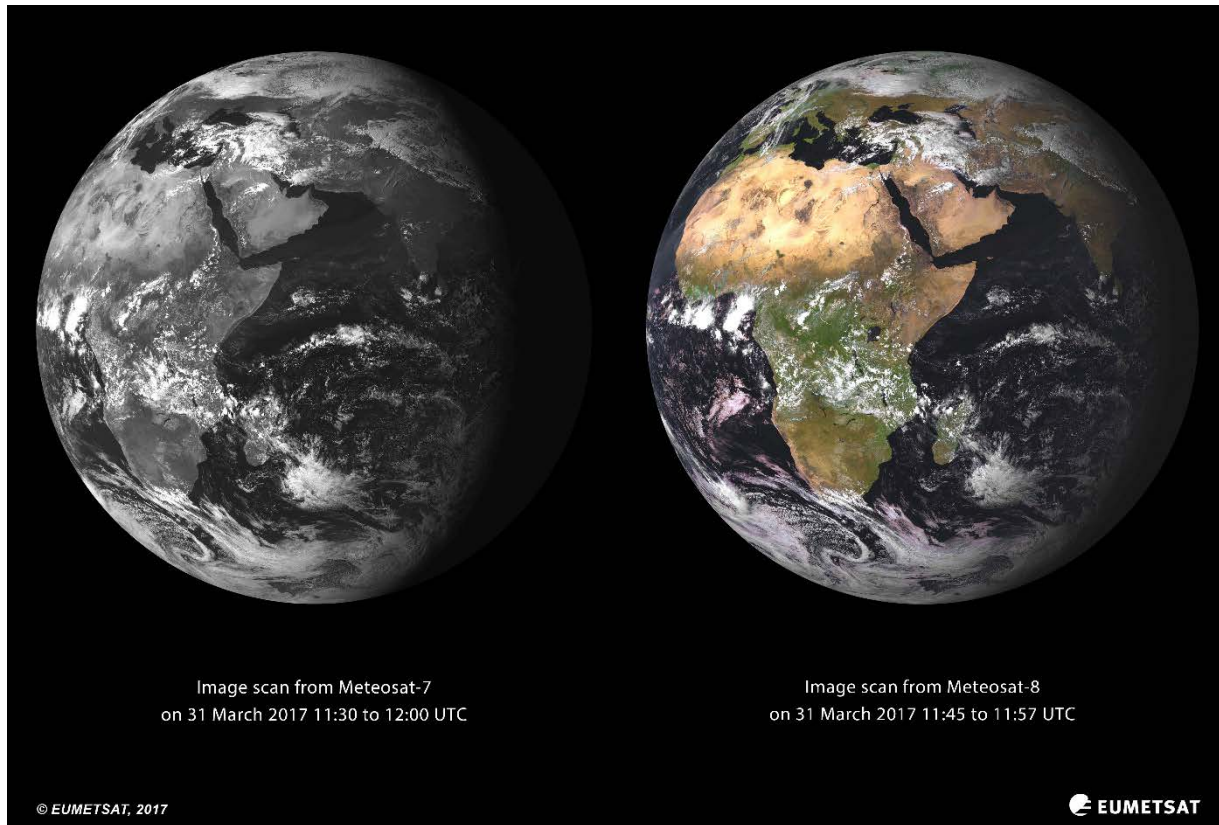
Met-8 IODC Status

- Met-8 (MSG-1) took over as the primary IODC service as of Feb 1, 2017

- Met-8 IODC service period:

  Feb 1, 2017 – **Jun 2020**[*] (TBC)

- Met-7 Status

  - Data dissemination ended on March 31, 2017 at 0900 UTC

  - Re-orbiting / Decommission of Met-7 occurred on April 6, 2017
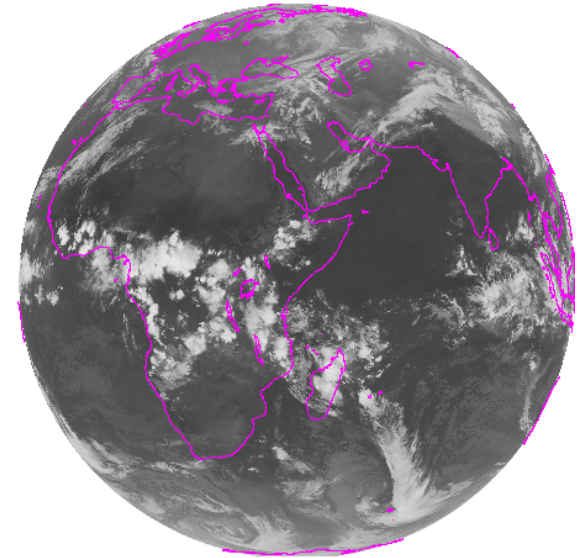
*Life is based on fuel limitations projections and these are periodically reviewed/updated.

Met-8 IODC Data Acquisition & Processing

- EUMETCast-Europe/Africa direct broadcast

  o these data are encrypted

- NOAA receives these data from:

  o **EUMETCast terrestrial-based multicast service (EUM → STAR)**

  o **Secure terrestrial point-to-point protocols (EUM MMDS → PDA)**

  o **WMO GTS circuits (EUM → GTS → WSH RTH)**
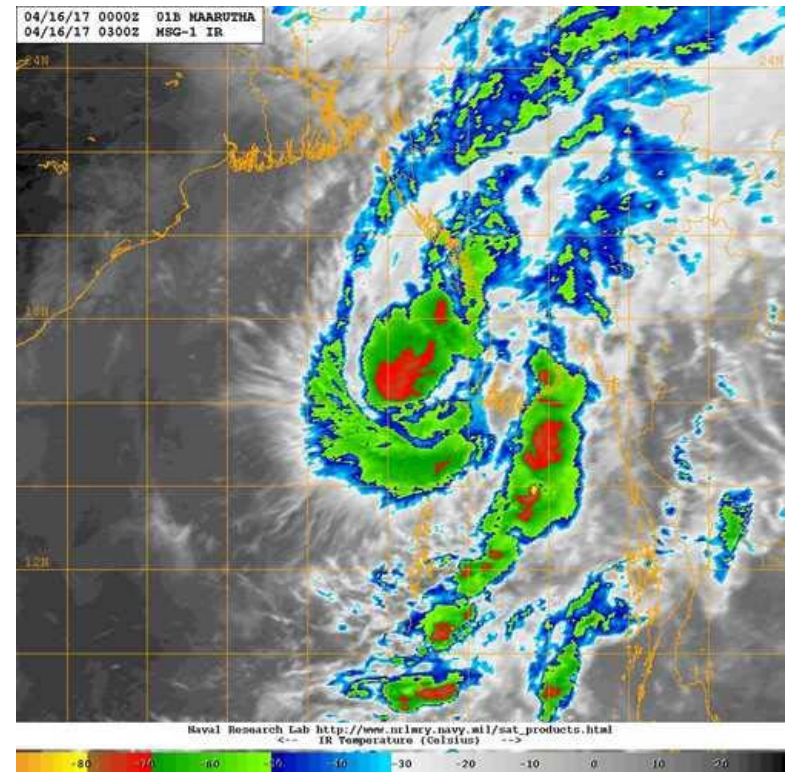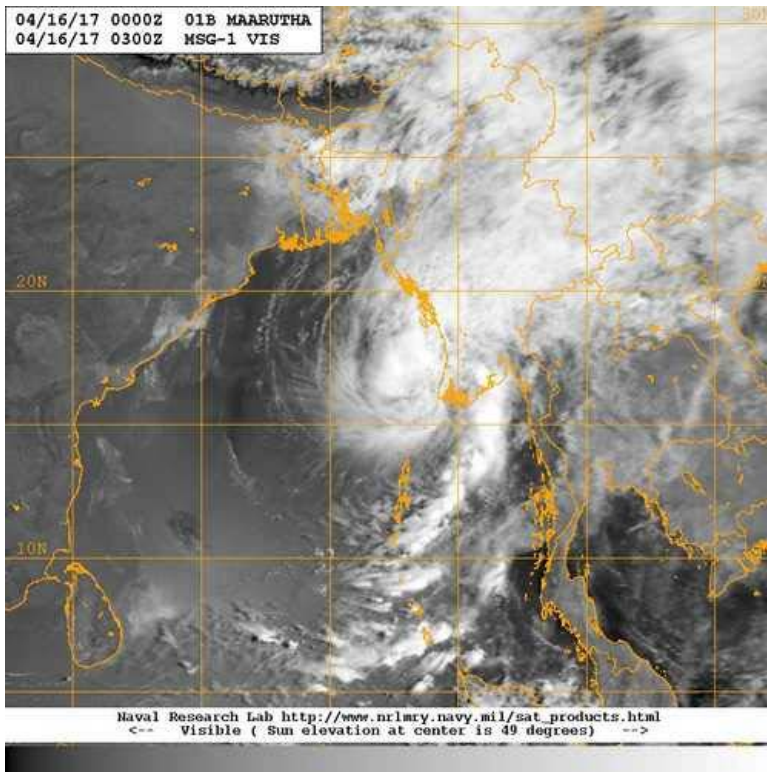
> **8x5 best effort**
>
> **24x7 supported**

Examples – Cyclone Maarutha (IO Basin)

Future IODC Coverage

- Discussion on future IODC coverage after Met-8

Discussion

Backup

Met-8 Imagery on McIDAS
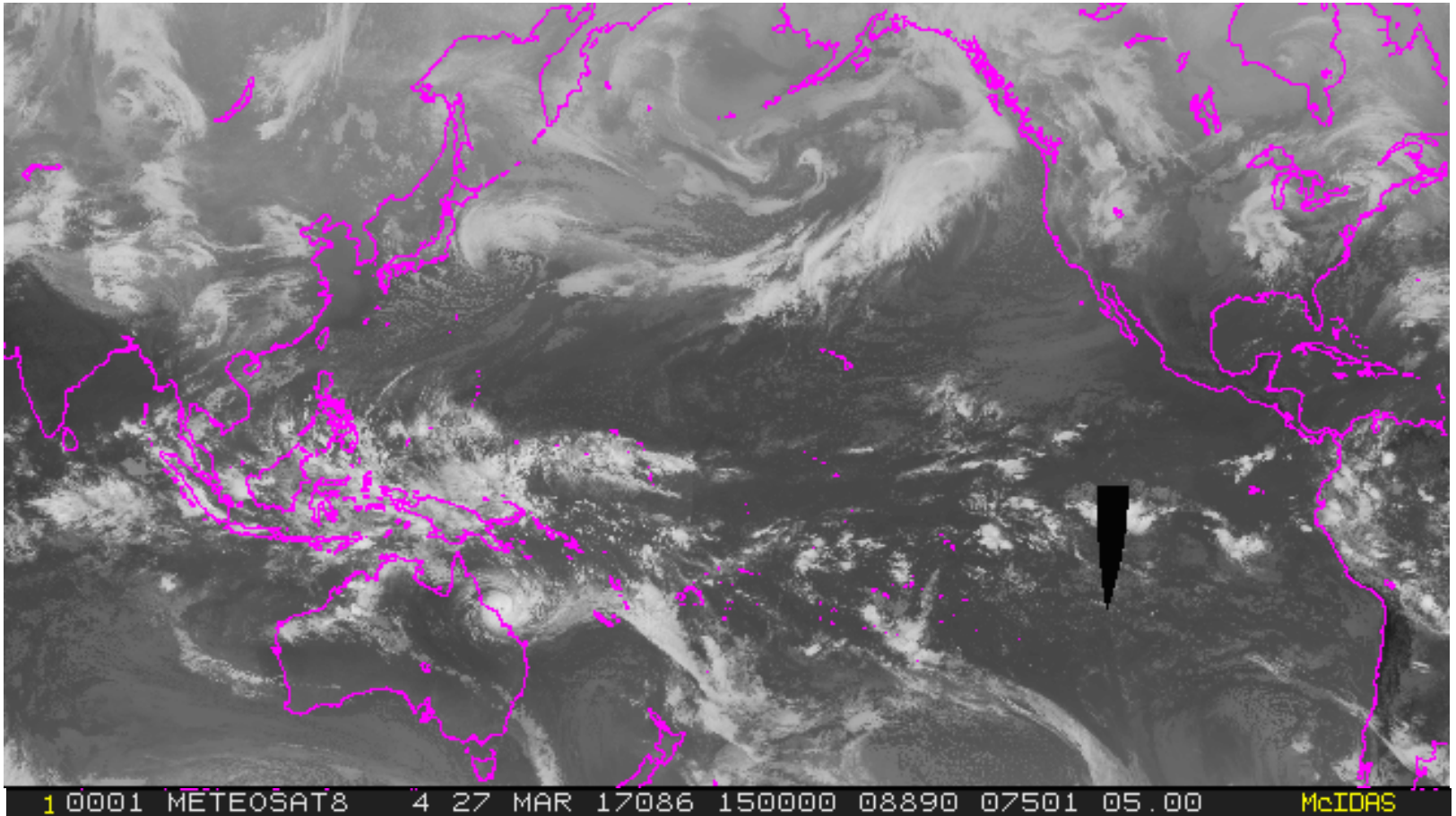
Meteosat Band-9 (10.8 um)

Global Mosaic for IR 8KM

COPC (May 2nd – 3rd, 2017)
Chris Sisko (chris.a.sisko@noaa.gov)

Met-8 Catalog in PDA

Met-8 IODC Data Distribution

- Met-8 data is available for distribution from PDA

- PDA Distribution Policy for Met-8 data

  - NOAA is permitted to deliver a maximum frequency of three-hourly MSG FD data to *all* users without restriction within the US Territory. As a NOAA affiliate/US Government Agency, **DoD has permitted access to the full 15 minute MSG FD imagery**. Non U.S. government agencies or non affiliates requires a licensing agreement with EUMETSAT for full 15 minute FD access.

Met-8 IODC Services – Image Data
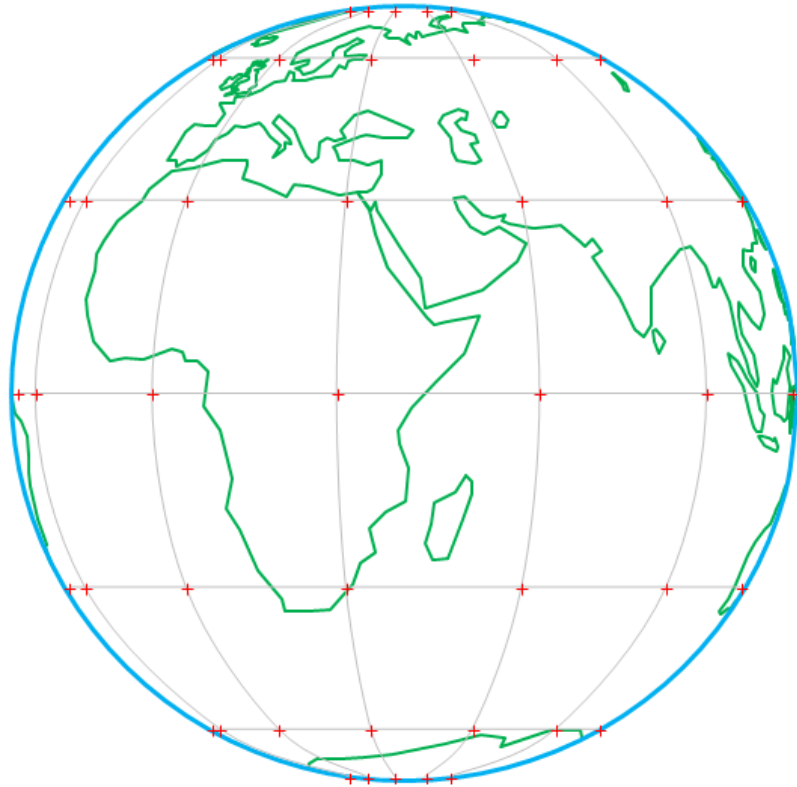
View from 41.5 deg

- Full Earth scan - 12 channels/15 Minutes

- Scan Coverage: ~40°West to ~120°East

- HRV Scan pattern: upper/lower window shift

EUMETSAT   Meteosat IODC Natural Colour, 2017-03-15 10:00:00 UTC

EUMETSAT Proposed Meteorological Products

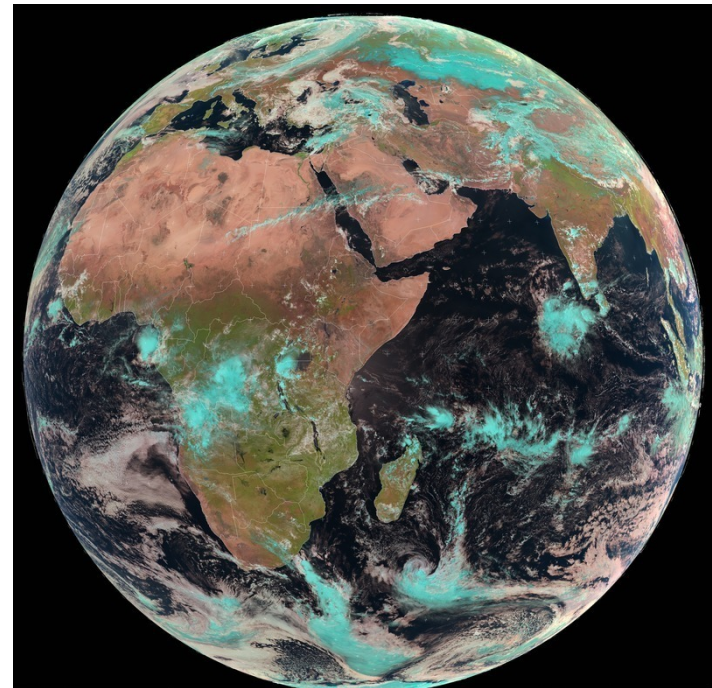| Product Name	Product Acronym	Number/Day	Product Name	Product Acronym	Number/Day
Active Fire Monitoring	FIR	96	Divergence	DIV	24
Aerosol Over Sea	*AES*	*1*	Global Instability Index	GII	96
Atmospheric Motion Vectors	AMV	24	*High Resolution Precipitation Index*	*HPI*	*1*
All-Sky Radiances	ASR	24	Multisensor Precipitation Estimate	MPE	96
Clear-Sky Radiances	CSR	24	Normalized Difference Vegetation Index	NDVI	1
Clear Sky Reflectance Map	CRM	1	Normalized Difference Vegetation Index – decadal	NDVI-D	1/10 days
Climate Data Set	*CDS*	*96*	Optimal Cloud Analysis	OCA	24
Cloud Analysis	CLA	24	Tropospheric Humidity	TH	24
Cloud Analysis Image	CLAI	8	Total Ozone	TOZ	96
Cloud Mask	CLM	96			0
Cloud Top Height	CTH	96	Volcanic Ash	VOL	96 (netCDF) (CAP-on request)

Italic: only to Data Centre
gray background: common MTP & MSG

- Current IODC Service: Meteosat-8 (MSG-Series)

- In service since Aug 28, 2002

- Primary IODC Service since Feb 1, 2017

- Imager Resolution:

  o 1 km VIS (HRV) and 2 km "channels 1-11" VIS, IR and WV

  o Image frequency – every 15 mins

- Operator: EUMETSAT

- Expected Decommission/Re-Orbit Time Frame: June 2020 (TBC)

Met-8 IODC Data Acquisition & Processing

- Regional service is provided by EUMETCast-Europe/Africa direct broadcast – these data are encrypted.

- NOAA receives these data from

  o EUMETCast terrestrial-based multicast service (NESDIS STAR)

    - Staged on STAR FTP servers (latency is ~30 mins)

  o McIDAS Systems

    - Uses ADDE protocol; included M-8 into the global geo and arctic composites processing as well

  o Secure terrestrial point-to-point protocols (EUM MSDS → PDA)

    - Currently receiving data from EUM's ops systems

    - NOAA/NESDIS investigating the feasibility of transitioning M-8 HRIT data pulls from the STAR server to the PDA to support McIDAS image processing

      ▪ Objective is to improve reliability and timeliness for McIDAS users (e.g. NCEP, SAB)

  o WMO GTS circuits (EUM → GTS → WSH RTH)

    - NCEP is acquiring these data from GTS to-date and storing these data in the Supercomputer BUFR tanks

Note - direct broadcast dissemination from Met-8 is **not** available due to a SSPA-C failure that required the transmitter to be disabled for power management purposes to preserve the mission.