

Contribution of RAIDEG to MTG

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

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WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

Overview

- Established in 2010 by WMO, in cooperation with EUMETSAT
- Endorsed by WMO RA-I at its 16th session in 2015, as part of its Working Group on Observations Telecommunications and Infrastructures
- **Its overall role is: to improve satellite data accessibility and user awareness in RA-I.**
- **Its purpose is:** to optimise data and products dissemination through EUMETCAST and usage by the African community



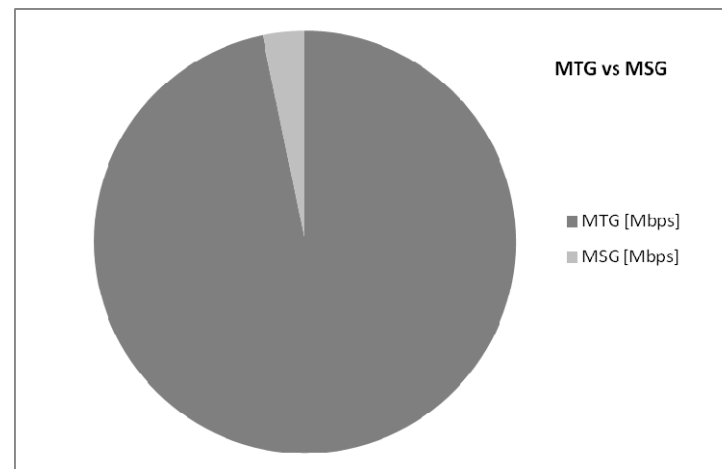
What does MTG offer?

- A better spectral resolution: 16 channels, with 4 more visible than MSG
- A better spatial resolution (IR 2km, Vis 1km) with a total coverage of Africa
- A better spatial resolution (every 10min)
- A better radiometric resolution (12bits/pixel)
- A lightning imager
- An IR sounder
- A UVN sounder



But at which costs?

Loads of data



Infrastructures to cope with this expansion:
MORE Bandwidth to transmit the data
adequate equipments to receive the data,
analyse and visualise

WE NEED TO PRIORITISE TO GET BEST OF IT

Several consultations with EUMETSAT

- Questionnaire on products used for atmosphere, cloud, convection, aerosol/visibility, environment and agricultural services, marine and their frequency
- Questionnaire on lightning products
- Survey of the institutions profile
- Questionnaire on the RGBs we use and their applications

Followed by a MAPS workshop during 2015

RAIDEG meeting



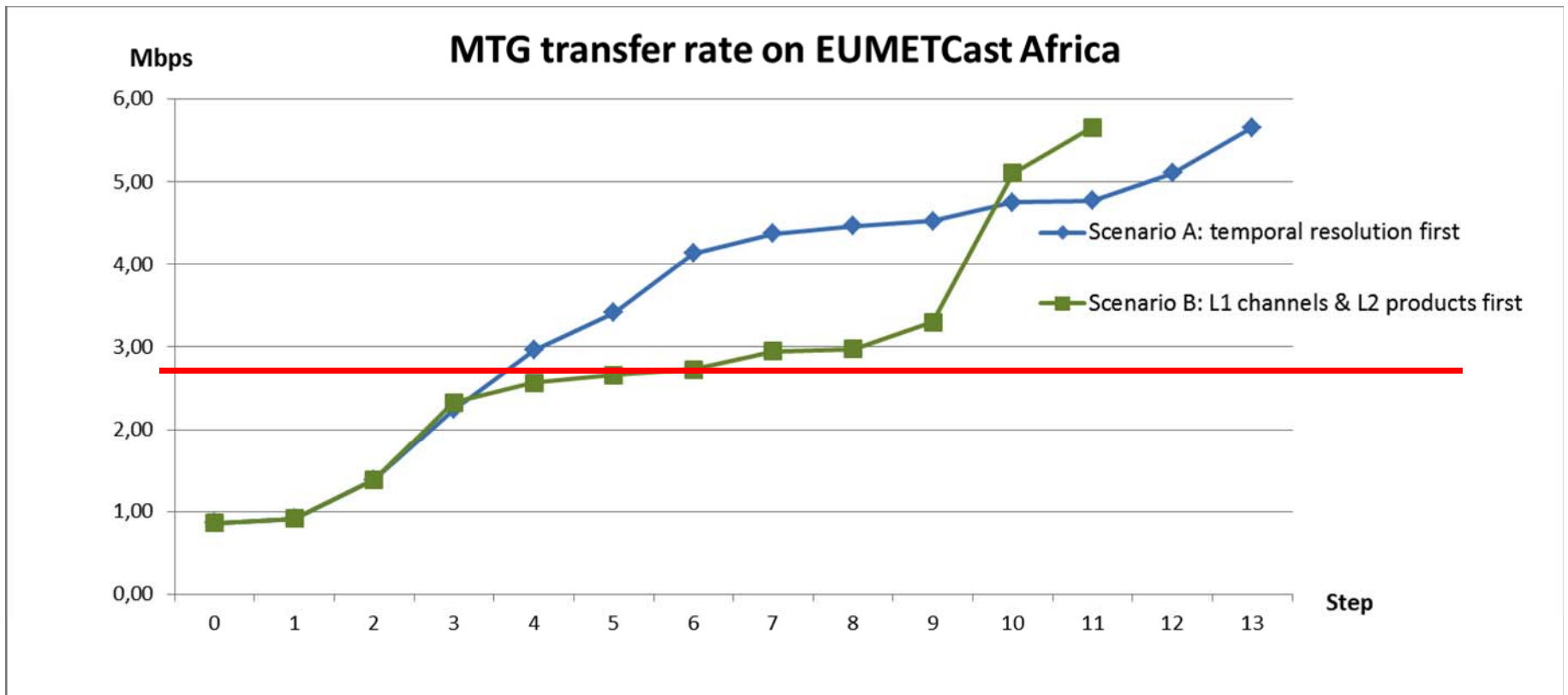
Leading to 2 proposed scenarii both starting with **actual MSG** dissemination but every **20min**, then lighting

A: SAF L2 products, then add **MTG channels progressively every 10min**, fire, then AMV, cloud and radiance products

B: SAF L2 products, then add **MTG every 20min**, then, fire, etc



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analysis of choices unconvulsive

Need a scenario balancing both temporal
resolution and spatial resolution ...work out
optimal solutions



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Proposed transition scenarios

- A. One step: one bang: MTG replaces immediately MSG
- B. 2 steps: transition period both MSG and MTG, then gradually MTG replaces MSG
- C. 3 steps too complicated

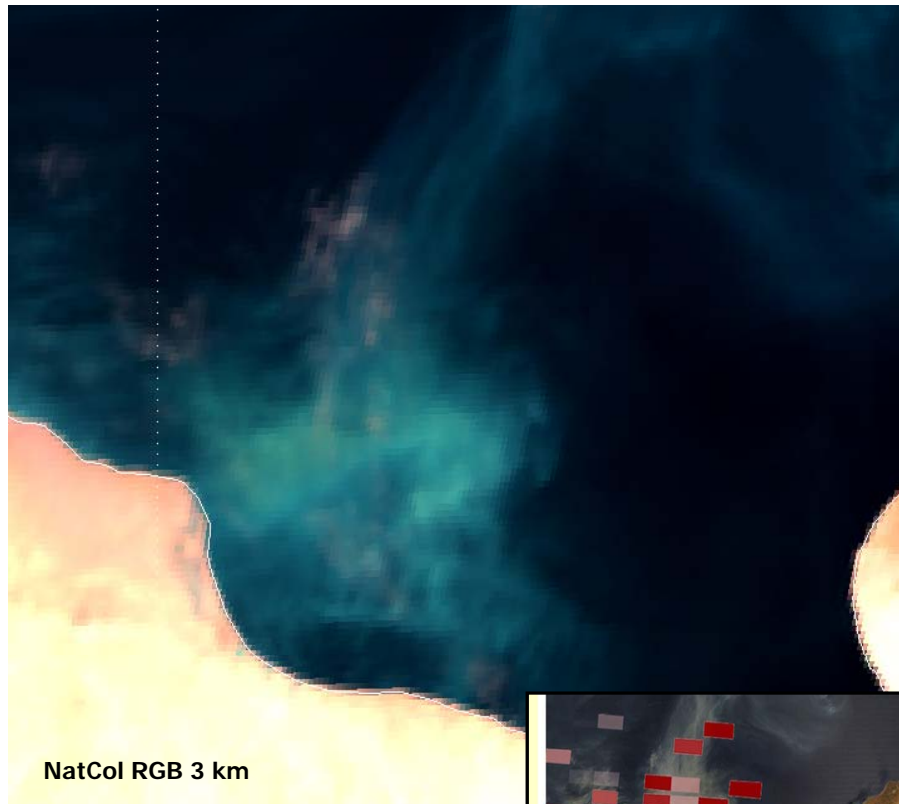
Recommendations

1. PRs: Nominate focal points to better address the African community needs
2. RICs: to work with RAIDEG for their needs
3. Eumetsat: To continue investigations optimising both temporal and spatial resolutions
4. Noting the bandwidth limitations, appreciating the efforts of EUMETSAT to garanty continuity of optimum service, we recommand the African community to seek **extra funding** with (for bandwidth and infrastrures) in order to make best use of MTG



MTG Improvements: smoke detection

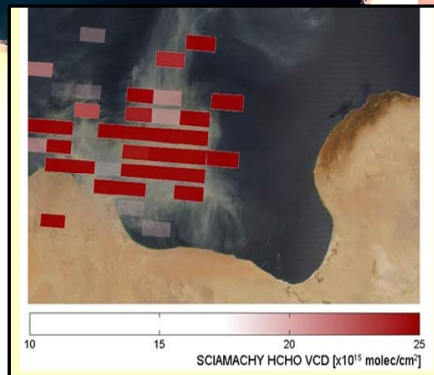
SEVERI (11:00 UTC)



MODIS (09:35 UTC)



Formaldehyde concentration
from SCIAMACHY:
Poisonous gas reaches the
WMO coast of Libya!



26 August 2007

Source: EUMETSAT User Forum 2014

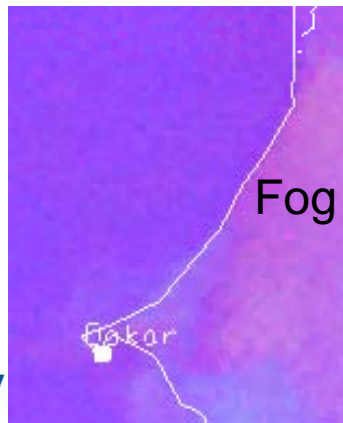
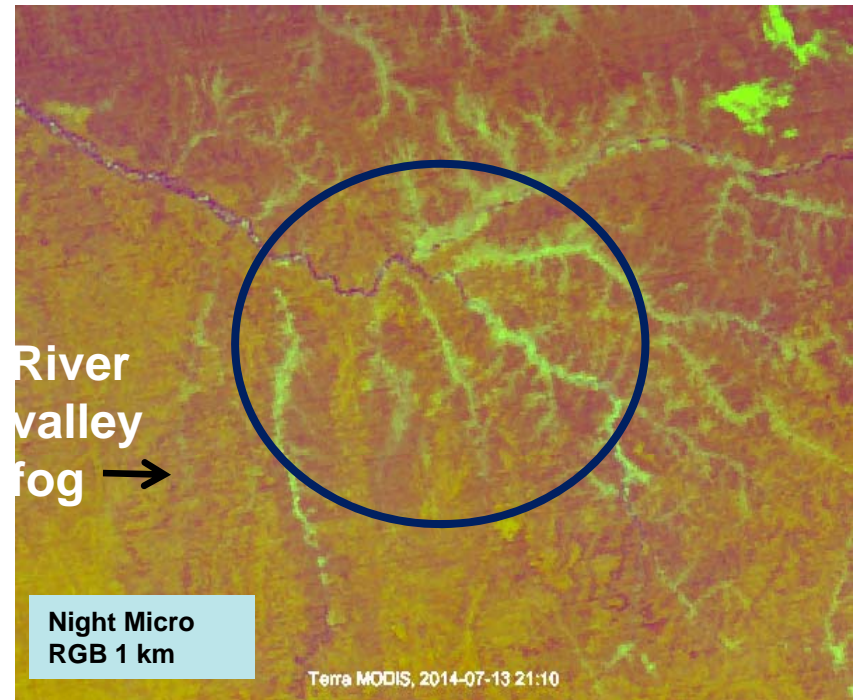
MTG Improvements: fog monitoring

SEVERI (21:00 UTC)

Shallow river valley fog often not detected in MSG (too thin and too small area)



MODIS (21:10 UTC)

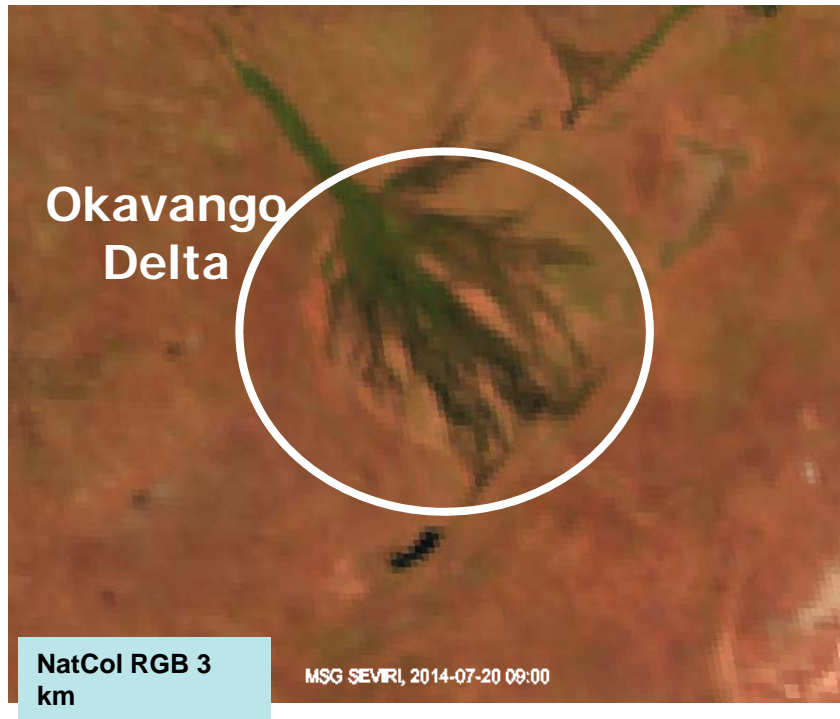


Source: EUMETSAT User Forum 2014

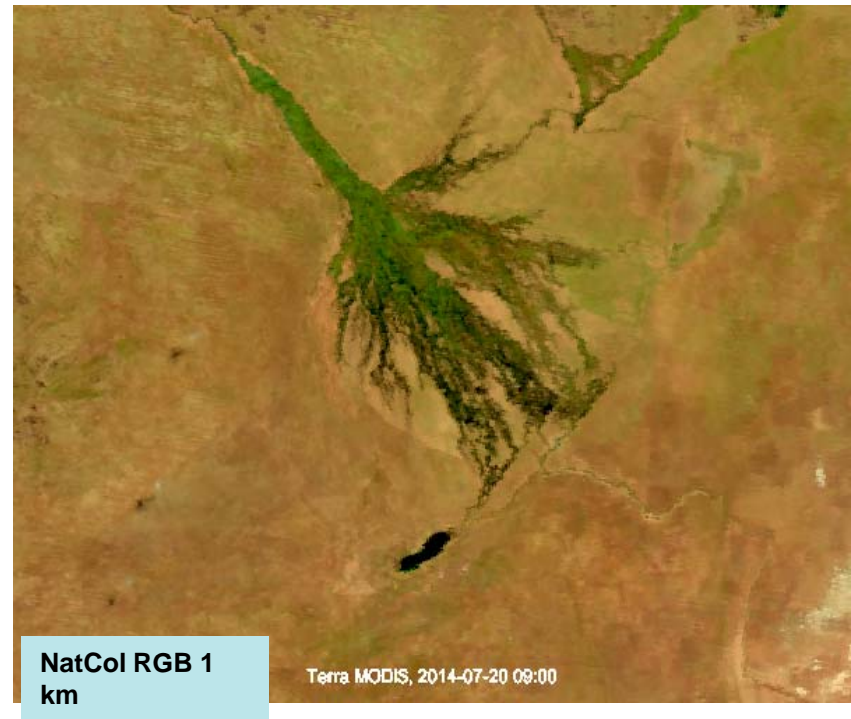


MTG Improvements: vegetation monitoring

SEVERI (09:00 UTC)



MODIS (09:00 UTC)

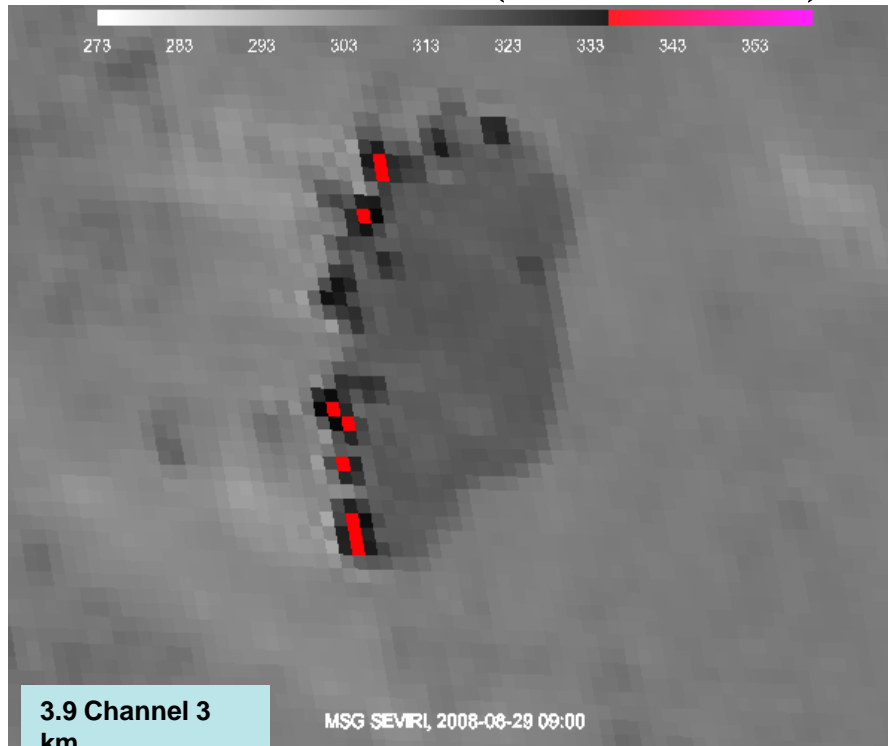


20 July 2014

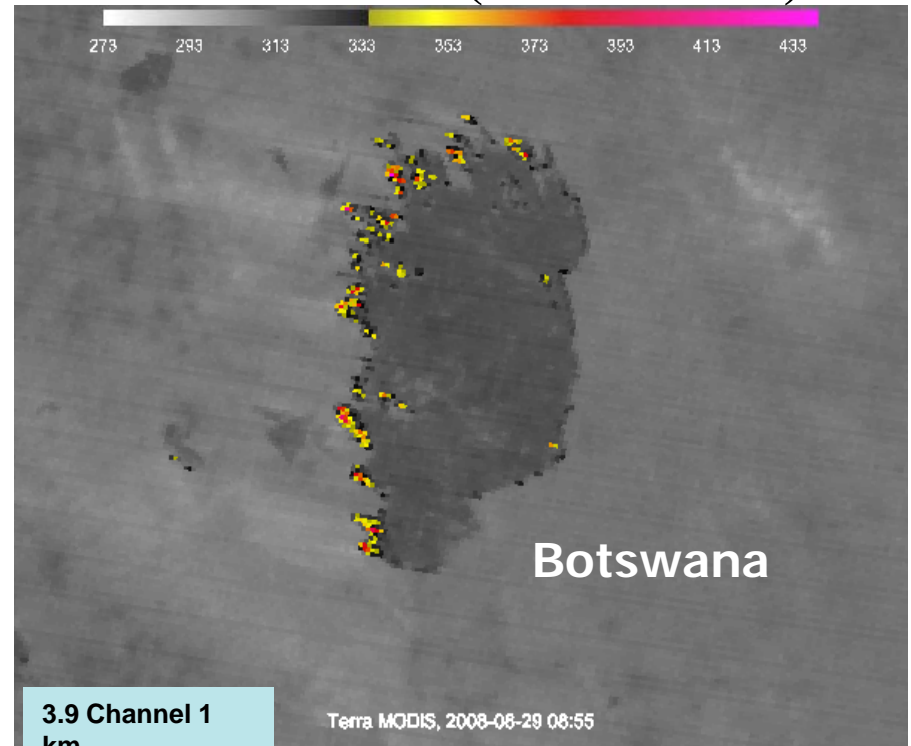
Source: EUMETSAT User Forum 2014

MTG Improvements: fire detection

SEVIRI IR3.9 (09:00 UTC)



MODIS IR3.9 (08:55 UTC)



29 August 2008

Thank you Merci



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