# Report of Working Group III

# OPERATIONAL CONTINUITY & CONTINGENCY PLANNING

Coordination Group for Meteorological Satellites

CGMS

## Participants

Chair: Suzanne Hilding (NOAA)
CMA
CNSA
CSA
EUMETSAT
JMA
KMA
NASA
NOAA
ROSHYDROMET
ROSCOSMOS
WMO

# Scope of the working group

- Monitor status of satellite programmes of CGMS Members to identify any risk that could affect the continuity of observation
- Maintain a contingency planning framework and address potential contingency situations through coordinated actions
- Monitor implementation of the CGMS baseline and contribution to climate monitoring architecture
- Support optimization of the space-based observing system

## Contingency on core meteorological missions

- No contingency situation at the moment
- NOAA, with South America users and WMO, to investigate options for a **follow-on to GOES-12 mission for South America** in order to develop a transition plan involving GOES or other geostationary satellites. (March 2013)
- EUMETSAT to report at CGMS-41 on its plans for **Indian Ocean coverage** beyond 2013. (July 2013)

## Mapping of satellite plans against the CGMS baseline

- Satellite operators to provide updates on satellite programmes to be included in OSCAR, through their report to CGMS and other means
- Satellite operators to review and update their contribution to the mapping of CGMS mission plans against the CGMS baseline, and inform WMO (December 2012)

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# Gap Analysis review - Monitoring the risk

- **Main gap is on LEO early morning IR/MW sounding mission**
- Other points noted by the WMO CBS-15 :
  - incomplete coverage for geostationary hyperspectral sounding
  - no redundancy for TOA upward radiation
  - no planned follow-on for GPM and limb sounding missions
- **Risk of gap on LEO PM between S-NPP and JPSS-1**
  - NOAA taking measures to mitigate the risk
- **Monitoring the risk of delayed programme decisions due to government decision constraints**
  - ➢ CGMS Members to consider opportunities for partnership with NOAA on COSMIC-2 ground segment and DSCOVR follow-on mission and report to CGMS-41. (July 2013)

# Optimization of the space-based observing system (1)

- NWP Observing System Experiments (OSE) provide precise, objective metric to evaluate impact of observing system components
- Satellites are the dominant observation source
- Relative impact of sensors depends on assimilation systems
- Progress due to new data sources and improved knowledge on how to use/assimilate these data

- ➢ CGMS should support scientific developments on satellite applications
- ➢ Impact evaluation to be used to demonstrate the socio-economic benefit of EO and promote the necessary investments

# Optimization of the space-based observing system (2)

**Optimizing the LEO orbital plane distribution:**

- Benefit of 3rd orbit sounding is larger when orbits are distributed, especially in rapidly evolving weather situations, but regional impact requires further analysis
- Potential redeployment of an AM mission to the early morning is being investigated by CMA

➢ NWP centres to perform OSEs on the regional impact of a potential gap of sounding from the early morning orbit.

➢ Support CMA in further investigations of the benefit and technical consequences of potential move of a mid morning mission to an early morning mission.

# Architecture for climate monitoring

- WG-III to focus on space-based segment
- Evaluate the CGMS baseline in the light of the architecture strategy
- Populate space segment part of the physical architecture
- Identify gaps and scenarios to address them

# Space weather

- Two aspects of direct relevance for CGMS:
  - space-based observations for space weather
  - space weather services in support of spacecraft operations and telecommunications (incl. DCS)
- Support the development and use of GNSS radio-occultation for ionospheric monitoring
- Dual-frequency altimeter measurements for ionosphere (TEC)
- Satellite operators to inform the ICTSW via WMO Sect. on their needs for space weather data and warning products.
- Organization:
  - To review organization of space weather matters in CGMS meetings.

# Contribution to HLPP

- New high-level task to demonstrate/advocate the benefits of EO satellite investments
- Coordination/optimization of EO missions
  - specific actions to further investigate potential impact of a redeployment by CMA of a LEO AM mission to early morning
  - Identify partnership opportunities on space and ground segments
  - Identify potential gaps and analyze budget constraints and associated risk assessment
- Space Weather
  - Re-assess how space weather matters are addressed in CGMS agenda and working group structure
- Climate Monitoring
  - Support the architecture strategy by evaluating the CGMS Baseline focusing on space-based observation of the ECV inventory initially