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Bureau of Meteorology

Ensuring the Preparedness of Users to the New Generation of Satellites

WMO Executive Council, 65th Session, 17th May 2013





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New Satellites for the Australian Region

Direct GEO:

Himawari-8 & -9

Fengyun-4B & -4D

Electro-L & -M

COMS-1

Indirect GEO:

GOES-R and -T

Meteosat-10 & -11

LEO:

Suomi NPP

JPSS-1 & -2

METOP-C

Fengyun-3 Series

Sentinel-3 Series

OceanSat-3

Meteor-M & MP Series

Aquarius

SMAP

ALOS-2

GCOM-C

EarthCARE

Other:

DSCOVR

IRIS

Solar Orbiter

Arctica



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User Requirements of Operators

- Synthetic data sets in advance of operations
- Early release of software for processing data
- Early advice on formats and technical data such as downlink frequency, signal characteristics
- Coordination between operators on product generation and delivery



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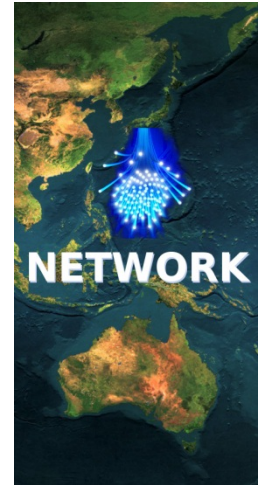
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Actions for Users

- Staff readiness
 - training for staff (forecasters and other users)
- End-to-end testing of systems using synthetic data
- Engagement in available training events
- Sharing of information between users
- Establishing prioritised requirements
 - clear priorities for current and future products allow the best preparations to be made for establishing data access and delivery capabilities.

Challenges and Opportunities

- Paradigm shift for data ingest
- Increased data volume; network cost, processing, archive, access, metadata.
- Increased demand on forecasters with increased data volumes
- Integration with other observations
- Continuity of service
- Planning for redundancy
- New Products
- New Customers;
- Collaborations across national and international agencies





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Himawari-8

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- **Scoping project – 6 months**
 - ICT, forecasting, Research, operations
 - Developing action plan for the next two years
- **Readiness activities – 2 years**
 - Identifying users and their requirements
 - Appraisal of technical capability
 - Product research and development
 - Systems testing
 - Training and integration with data visualisation tools
- **Engagement with JMA**
 - Situational Awareness
 - Cooperation



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Fengyun-3 and Fengyun-4

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- **Upgrading ground stations for reception and improved service levels**
- **Readiness activities – 2 years**
 - Leverage off Himawari work for imagery capability
 - Ingest of Sounder data into NWP
 - Systems testing
 - Training and integration with data visualisation tools
- **Engagement with CMA**

User Readiness – Other Initiatives

- **Proving ground for GOES-R**
 - Collaborations with NOAA, NASA and SSEC
 - Software testing and improvement
- **EUMETSAT RGB and RARS/APRARS**
 - Leverage off RGB Composite imagery work for improved forecast capability
 - Continue involvement in RARS community
 - Expand RARS to include more data sets



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Linked activities

- **JMA Symposium – Canberra/Melbourne May 2013**
 - Linking with broader remote sensing community
 - Identifying specific areas of collaboration
- **SCOPE-NWC**
 - WMO Space Programme activity
 - Driving uniform products across satellite operators
 - Driving uniform delivery mechanisms and formats



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Regional Readiness

- **4th Asia Oceania Meteorological Satellite Users Conference – Melbourne 9-11 October 2013**
 - Following on from successful conferences hosted by CMA, JMA and KMA
 - Proposed RA-V Training Event focused on preparedness for Himawari-8 and other advanced sensors
- **RA-V Satellite User Requirements**
 - Workshop held in Melbourne in April 2013
 - A draft table of priority requirements will be ready for final review in a side meeting at the 4th Asia Oceania Meteorological Satellite Users Conference.

Thank you

