



Australian Government

Bureau of Meteorology



A Review of the Australian VLab Centre of Excellence National Himawari-8 Training Campaign

AOMSUC-6 Conference Session

Bodo Zeschke

Australian Bureau of Meteorology Training Centre

Australian VLab Centre of Excellence



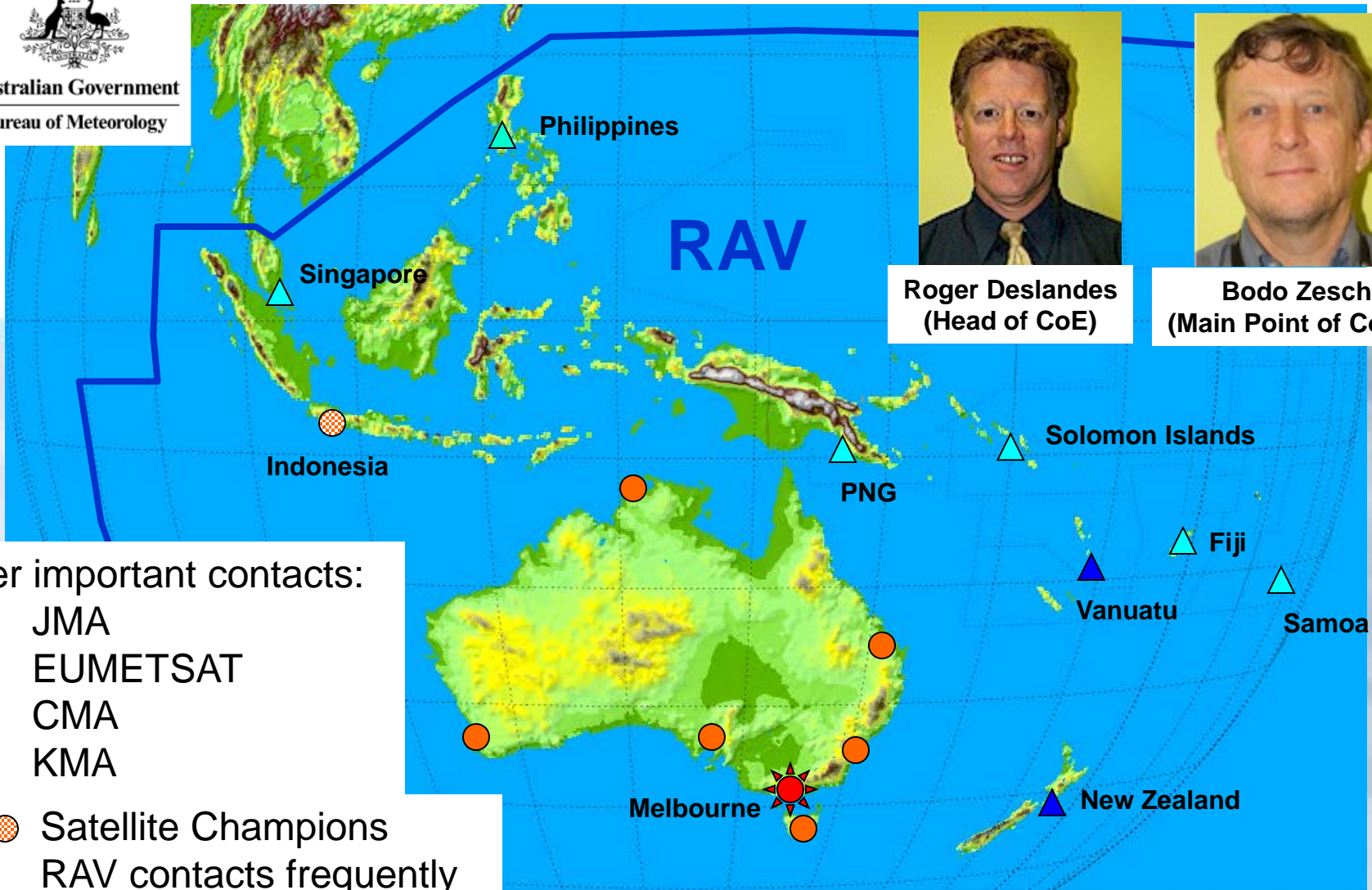
Content

- The National Himawari-8 Training Campaign, including mapping the activities to WMO-1083 capabilities and the BMTC/EUMETSAT Satellite Enabling Skills.
- How existing satellite resources were utilised to simulate Himawari-8 data before July 2015.
- Collaboration with and gaining stakeholder engagement
- The training within the context of the WMO Global Campus concept.
- A summary of the achievements of the Campaign to date, and plans for the future.

Australian VLab Centre of Excellence and RAV contacts (from September 2013)



Australian Government
Bureau of Meteorology



Roger Deslandes
(Head of CoE)



Bodo Zeschke
(Main Point of Contact)

Other important contacts:

- JMA
- EUMETSAT
- CMA
- KMA

- ● Satellite Champions
- ▲ RAV contacts frequently attending our training
- ▲ Other RAV contacts

Integrating WMO-1083 Capabilities and EUMETSAT/BMTC Enabling Skills into the training

Australian Government
Bureau of Meteorology

Melbourne VLab Centre Of Excellence

Home | Satellite Products | Events | **Training** | Blog | News | Archive | Links | Contact Us

Basic Satellite Competencies

Advanced Satellite Meteorology Training

RegionV Case Studies

The use of Satellite data in Tropical Cyclone Analysis

Useful Satellite Training Links

Regional Focus Group Weather and Forecast Discussion Links

National Himawari-8 Training Campaign

Transitioning and upper atmospheric turbulence, MTSAT-1R rapid scan imagery, eastern Australia 22nd January 2014

- Launch of the First Phase of the National Himawari-8 Training Campaign

Resources Library

- Regional Focus Group Weather and Forecast Discussion resources
- Region V Case Studies
- JMA Virtual Laboratory
- EUMETSAT Online Training Library
- COMET (ESRC)
- CIRA Virtual Resources Library
- WMO Virtual Resources Library

Sponsoring Satellite Operator

- JMA/MSC
- JMA Virtual Laboratory
- Himawari 8/9 sample data

Australia (20140901) - BUREAU OF METEOROLOGY - 27 SEP 15 04:32 UTC

Quick Links

- Upcoming Events **UPDATED**
- WMO VLab Homepage
- Melbourne CoE ISOBAR login
- Join a Webinar
- Contact Us

Melbourne VLab Centre Of Excellence

History of the Melbourne VLab Centre of Excellence

Mission Statement

Inspiring people through innovative & engaging development programs.

- WMO BIP-M Learning Objectives
- Basic Satellite Competencies
- "Training Objectives" (Environment Canada)
- Satellite Skills and Knowledge for Meteorological Forecasters Enabling Skills draft document

<http://www.virtuallab.bom.gov.au/>

Integrating WMO-1083 Capabilities and EUMETSAT/BMTC Enabling Skills into the training

Australian Government Bureau of Meteorology Melbourne VLab Centre Of Excellence

Home | Satellite Products | Events | **Training** | Blog | News | Archive | Links | Contact Us

Melbourne VLab Centre Of Excellence

National Himawari-8 Training Campaign

Sponsoring Satellite Operator

- JMA/MSC
- JMA Virtual Laboratory
- Himawari 8/9 sample data

Australian VLab Centre of Excellence National Himawari-8 Training Campaign

The Campaign will assist Australian Bureau of Meteorology, WMO Region V and other stakeholders in preparing for the effective use of Himawari-8 data prior to its availability using existing satellite resources. Ongoing liaison and training to stakeholders will be given once the Himawari-8 data becomes available.

Phase 1: Familiarisation Resources (rapid scan)	Learning Outcomes	Phase 1: Familiarisation Resources (RGB products)
Phase 2: Introduction, Resources and Studies	Instructions and Timeline	Phase 2: Himawari-8 and related satellite Blogs
Phase 2: Tutorial		Phase 1: Tutorial

WMO Learning Objectives

- WMO BIP-M Learning Objectives
- Basic Satellite Competencies
- "Training Objectives" (Environment Canada)

Enabling Skills

- Satellite Skills and Knowledge for Meteorological Forecasters Enabling Skills draft document

<http://www.virtuallab.bom.gov.au/>



Integrating WMO-1083 Capabilities and EUMETSAT/BMTC Enabling Skills into the training

The Campaign will assist Australian Bureau of Meteorology, WMO Region V and other stakeholders in preparing for the effective use of Himawari-8 data prior to its availability using existing satellite resources. Ongoing liaison and training to stakeholders will be given once the Himawari-8 data becomes available.

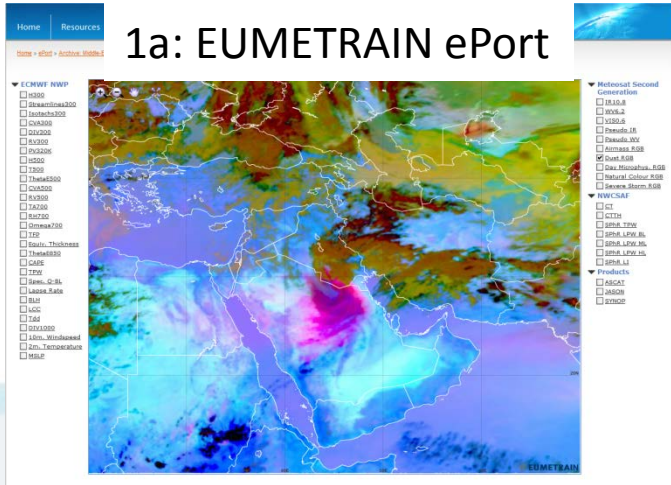
Phase 1: Familiarisation Resources (rapid scan)	Learning Outcomes	Phase 1: Familiarisation Resources (RGB product)
Phase 2: Introduction, Resources and Case Studies	Instructions and Timeline	Phase 2: Himawari-8 and related satellite Blogs
Phase 2: Tutorial Sessions and Feedback	Objectives	Phase 1: Tutorial Sessions and Feedback

Learning Outcomes	
The titles of the Familiarisation Resources are mapped against the underpinning Learning Outcomes, WMO-1083 Capabilities and BOM Enabling Skills in the table below. Components of the WMO-1083 Capabilities and BOM Enabling Skills covered in these Resources are highlighted in bold.	
Familiarisation Resource Title	Underpinning Learning Outcomes, WMO-1083 Capabilities and BOM Enabling Skills
Forecaster Feedback on the use of Rapid Scan Data (Part A)	At the end of this exercise you will: <ul style="list-style-type: none"> Have a better knowledge how 10 minute rapid scan data is an advantage to the Operational Forecaster in monitoring and nowcasting and short term forecasting of tropical cyclone development, thunderstorm development and volcanic ash eruptions
	WMO 1083 2.3.3 – Monitor and observe the weather situation, and use real-time or historic data, including satellite and radar data, to prepare analyses and basic forecasts;
	WMO 1083 2.3.3.4 – Interpreting satellite imagery: Interpret satellite images, including use of common wavelengths (infrared, visible, water vapour and near infrared) and enhancements and animated imagery, to identify cloud types and patterns, synoptic and mesoscale systems, and special features (fog, sand, volcanic ash, dust, fires, etc.);
	WMO 1083 2.3.3.2 – Tropical cyclones: Apply physical and dynamical reasoning to explain the structure and characteristics of tropical cyclones, the main dynamical processes involved in their development, and the techniques used to forecast the development and evolution of tropical storms;
	WMO 1083 2.3.3.3 – Convective systems: Apply physical and dynamical reasoning to explain the structure and formation of isolated convective systems such as thunderstorms and convective storms (including single cell, multicell and supercell storms);
	Enabling Skills Document Element 2, Performance Component 2 – Identify Cumulonimbus clouds, their intensity and their stage of development.
	Enabling Skills Document Element 3, Performance Component 2 – Anticyclones and cyclones (including rapid cyclogenesis), including tropical cyclones and depressions, extratropical and polar lows and cyclones, at upper and lower levels
	Enabling Skills Document Element 3, Performance Component 3 – Convective cells and cloud systems (including pulse convection, multicells, supercells, squall lines, mesoscale convective complexes and systems) and associated mesoscale features including outflow boundaries and storm top features . Mesoscale boundaries and interactions, dry lines
	Enabling Skills Document Element 4, Skills, Performance component pertaining to "Volcanic Ash particulates"

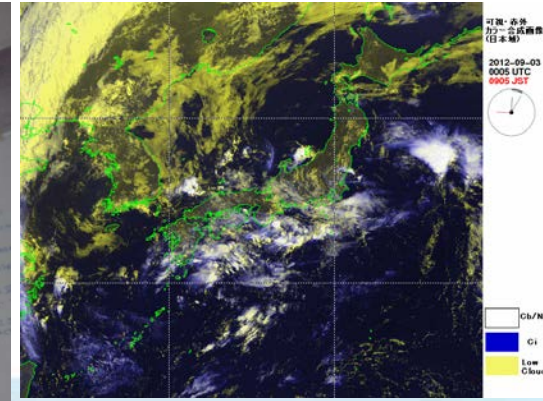
Topic
Relevant WMO 1083
Capabilities
Relevant
EUMETSAT/BOM
Enabling Skills

How existing satellite resources were utilised to simulate Himawari-8 data prior to the availability of this data.

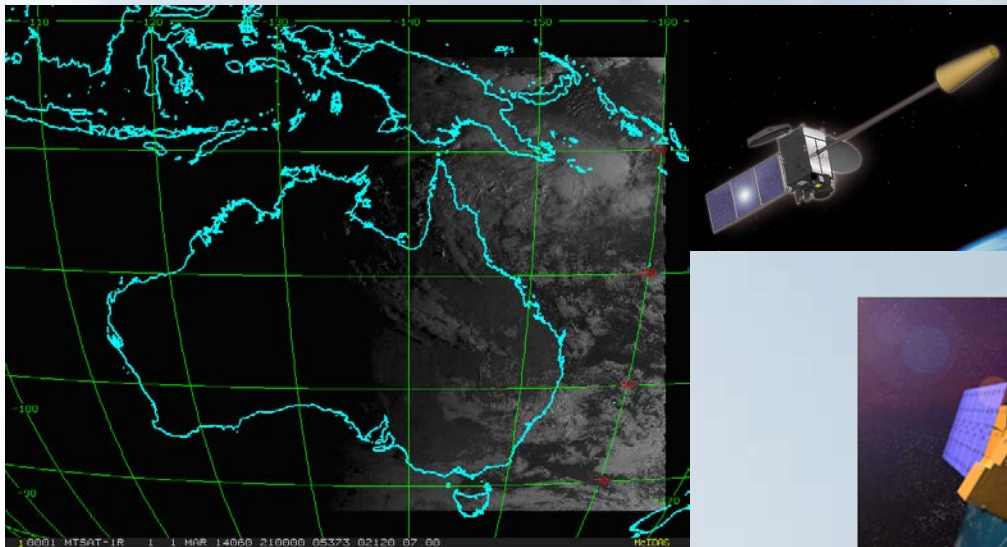
1a: EUMETRAIN ePort



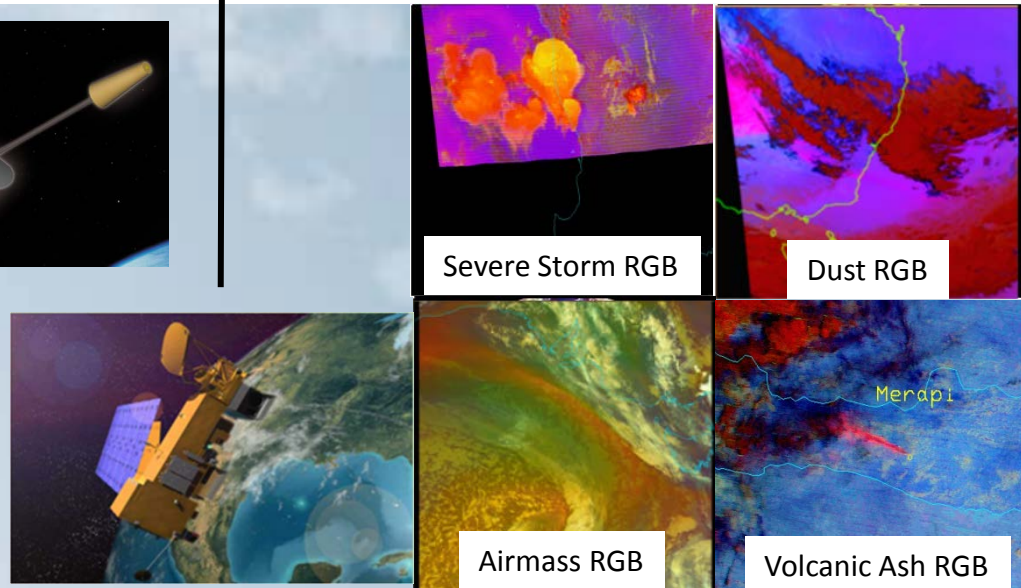
1b: DVD's of case studies from JMA



2a: MTSAT-1R Rapid Scan (HIWC Experiment)



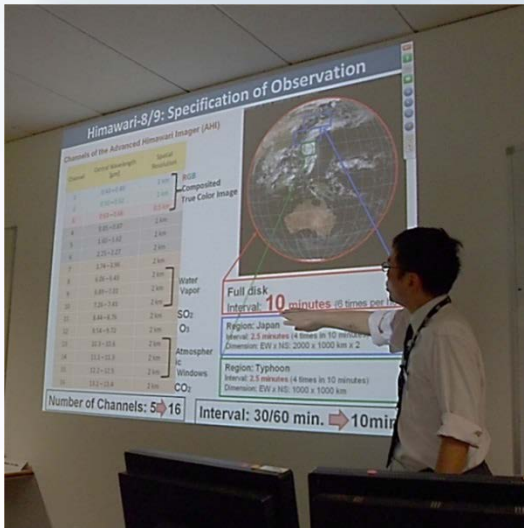
2b: RGB products from MODIS data



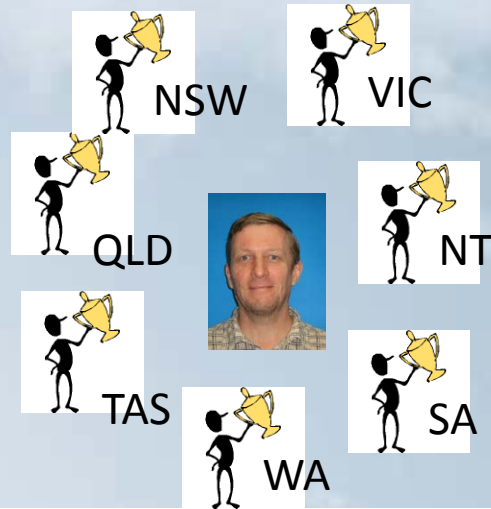
Collaboration with and gaining stakeholder engagement (prior to the availability of the Himawari-8 data)



1: Classroom and remote training (AFC, AOMSUC-4, RFG meetings)



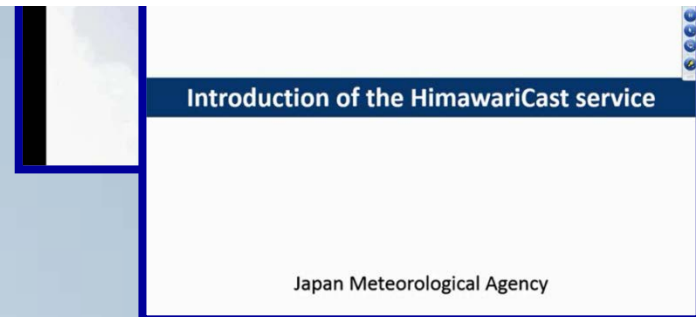
2: Guest Experts



3: Communication with Champions/stakeholders



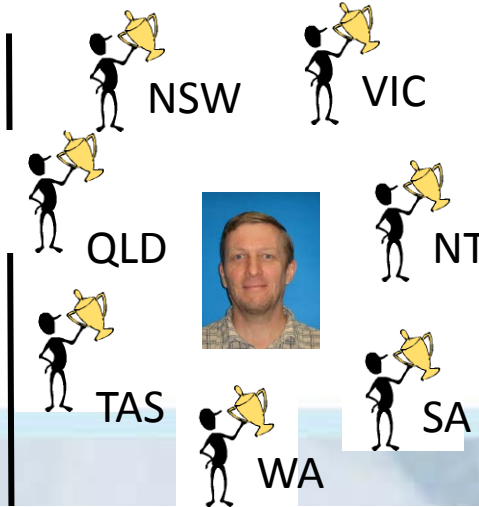
4: Presentations by stakeholders



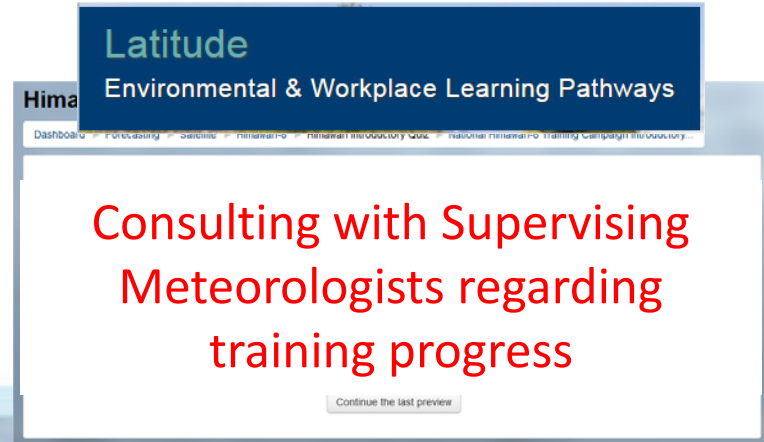
Collaboration with and gaining stakeholder engagement (after Himawari-8 data has become available)



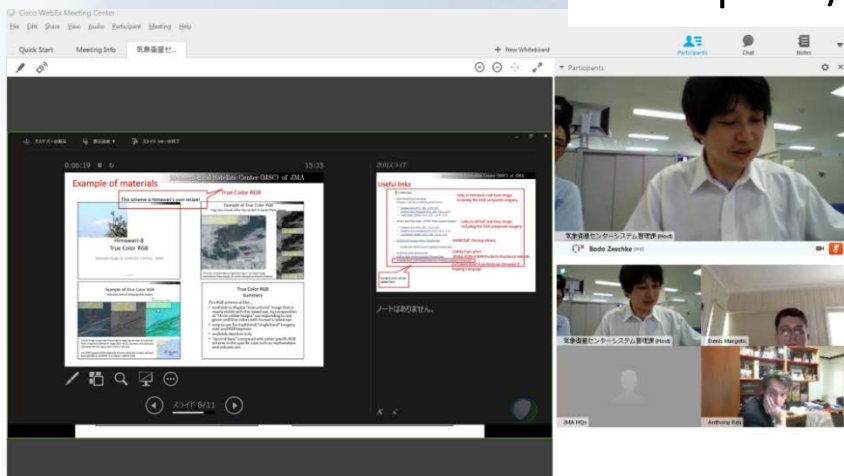
2: Talking to Forecasters



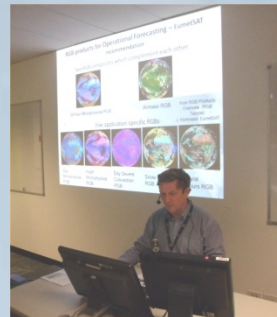
1: Communication with Champions/stakeholders



6: Internal Bureau Quiz



3: Collaboration with principal Satellite Operator (JMA)



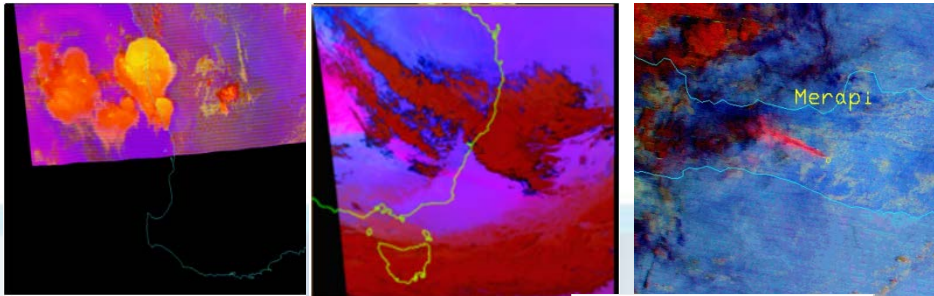
4: Ongoing Tutorial Sessions



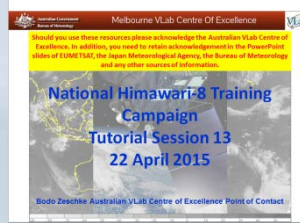
5: Himawari-8 presentations by stakeholders

Sourcing, utilising, compiling and disseminating satellite meteorology training resources to stakeholders within the context of the WMO Global Campus concept

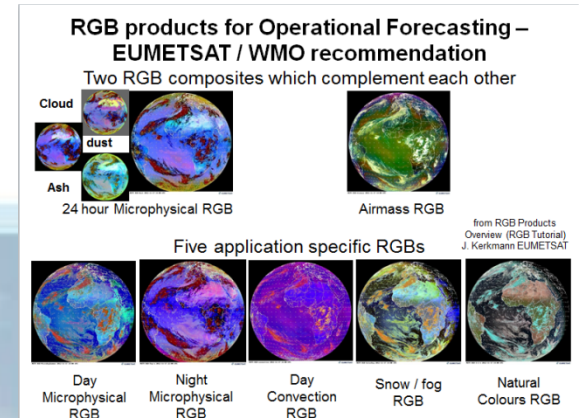
2: Training on RGB products with special emphasis on RAV



Sharing resources

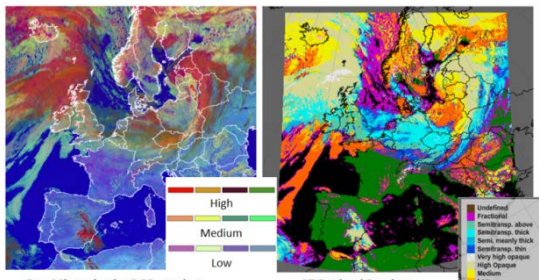


1: Ideas – common standards and products



3: Leveraging off EUMETSAT

Activity: Exploring EUMETRRAIN ePort – Europe – 13 April 12UTC

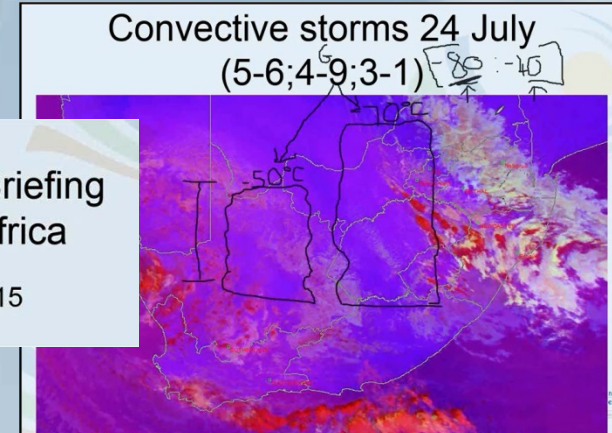


Question: Give one advantage of the RGB product. Give one advantage of the Derived Product.



Weather Briefing South Africa

July 2015



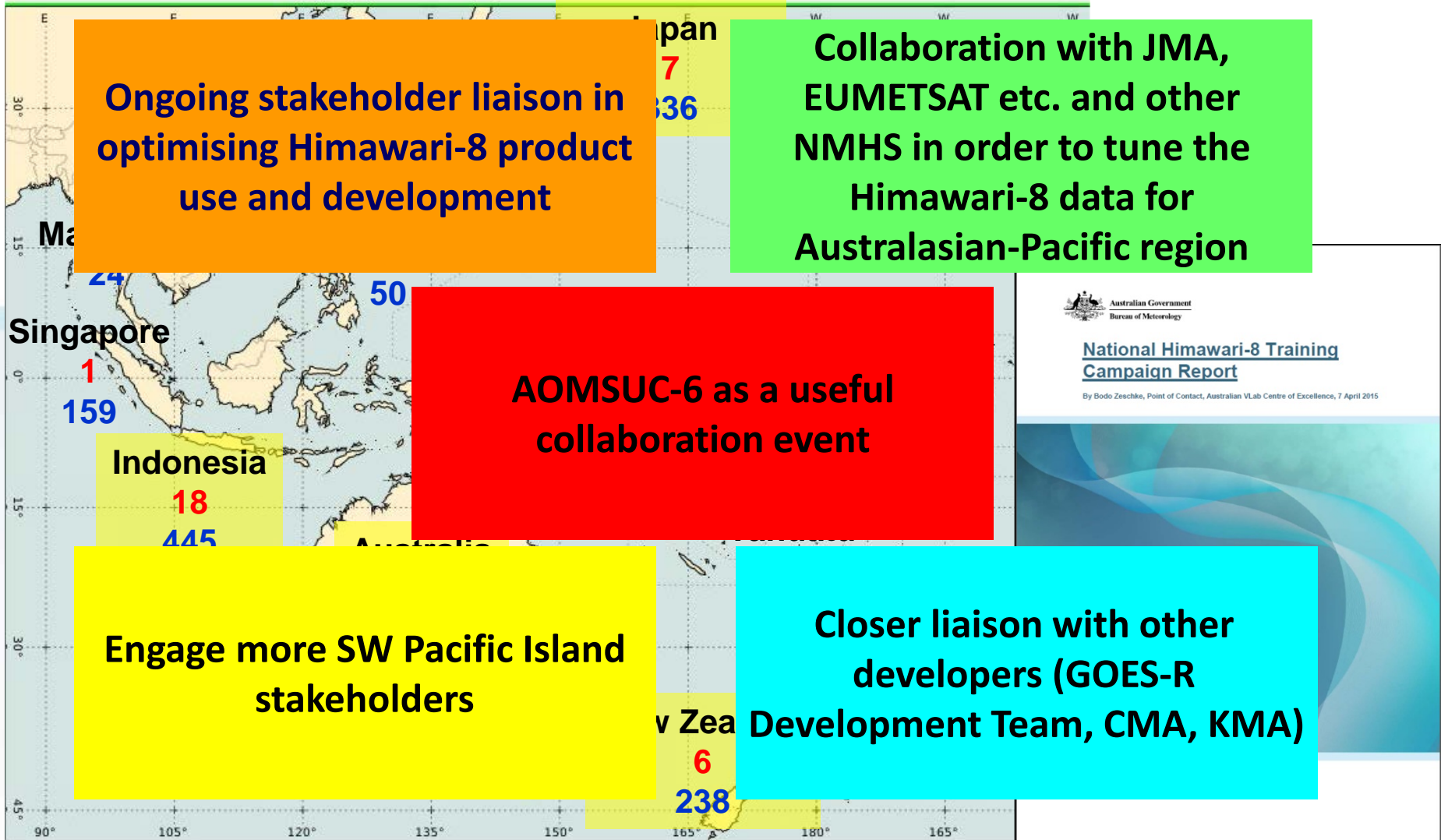
4: CoE's participating in each others training sessions

A summary of the achievements of the Campaign to date, and plans for the future. (January to 27th October 2015 – Google Analytics)



- Attendees to the 15 Tutorial Sessions
- Hits on the National Himawari-8 Training Campaign web page

A summary of the achievements of the Campaign to date, and plans for the future. (January to 27th October 2015 – Google Analytics)



- **Attendees to the 15 Tutorial Sessions**
- **Hits on the National Himawari-8 Training Campaign web page**

Introduction of the HimawariCast service

Japan Meteorological Agency

BMKG

Monthly Regional Focus Group, 13rd August 2015

**HIMAWARI-8 UTILIZATION
FOR VOLCANIC ASH
MONITORING**

ASRI SUSILAWATI
Forecaster in Satellite Data Management, BMKG

Thank you...

**Current and future meteorological satellites
of the China Meteorological Administration**

Dr. Feng LU

Office of System Development
National Satellite Meteorological Center
China Meteorological Administration
(CMA/NSMC/OSD)

NSMC

Regional Training Workshop on Preparation for Advanced Meteorological Imagers (2012. 10. 7)

**Current and future satellite
mission, related products, and
user support**

Dohyeong Kim

National Meteorological Satellite Center
Korea Meteorological Administration
dkim@kma.go.kr