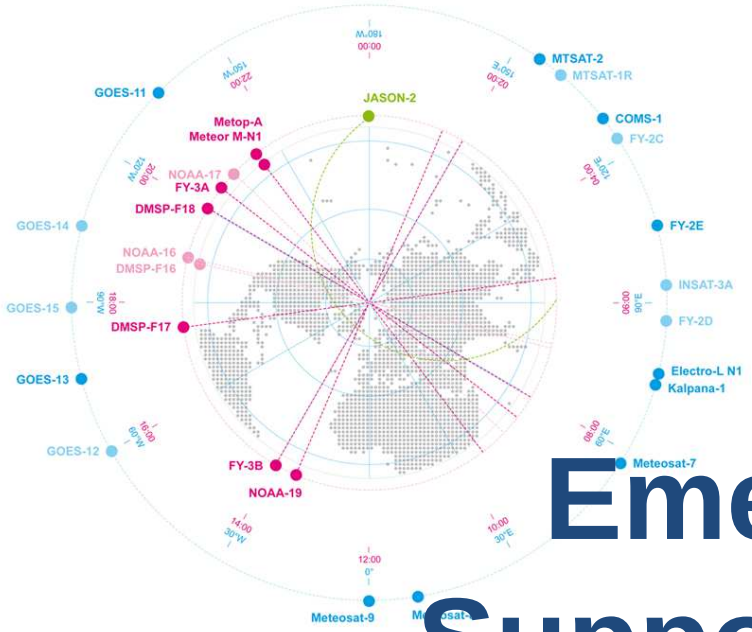


Emergency Satellite Support to Disaster Risk Reduction

Presented to CGMS-42, Plenary, agenda item C.2

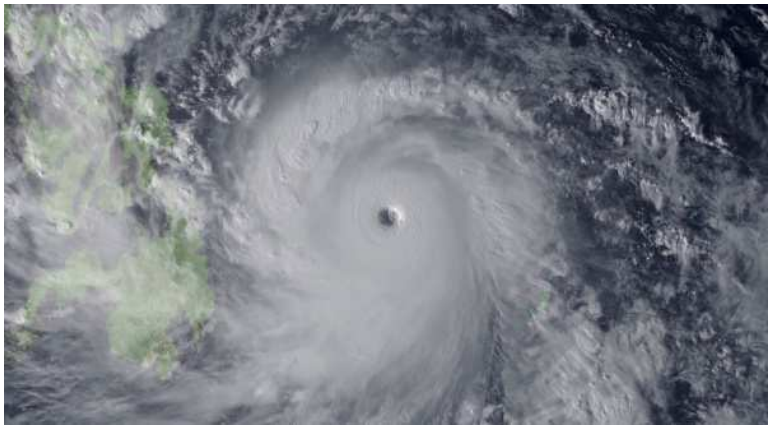
Outline: Emergency Satellite Support to Disaster Situations

- An imperative !
- Existing international framework
- Meteorological Satellite Use by NMHSs in DRR
- Suggested actions

Based on feedback from recent disaster events and ET-SUP discussion

An imperative !

- Over a decade, hydro-meteorological disasters represent 80-90 % of the material losses, and heavy casualties



- It is an imperative to strive to best use meteorological satellites to save lives and protect infrastructures and properties

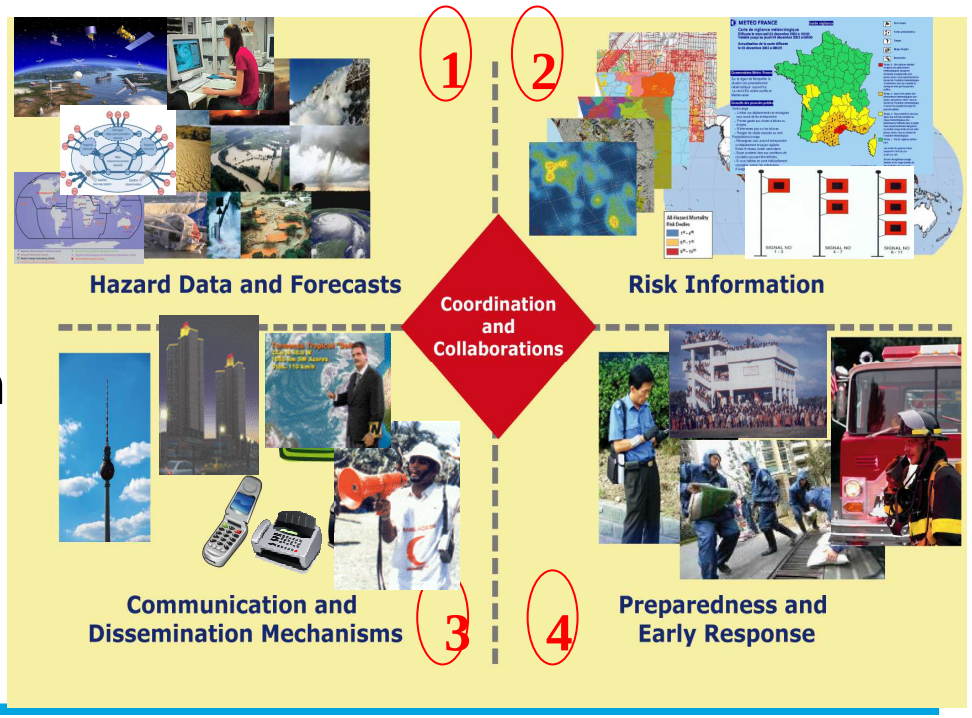
- A case of evident socio-economic benefit

Existing international framework

- UN ISDR
  - 1994: Yokohama strategy for a safer world
  - 2005: Hyogo Framework for Action (HFA)
  - Post-2015 Framework for Disaster Risk Reduction
- WMO DRR Programme and many stakeholders
  - Comprehensive framework involving the NMHSs
  - User-Interface Expert Advisory Groups
- EO community
  - International Charter « Space and Major Disasters »
  - GEO Disaster Theme
  - CEOS Working Group on Disasters
  - UN-SPIDER
  - UNITAR « UNOSAT » programme

Highlights

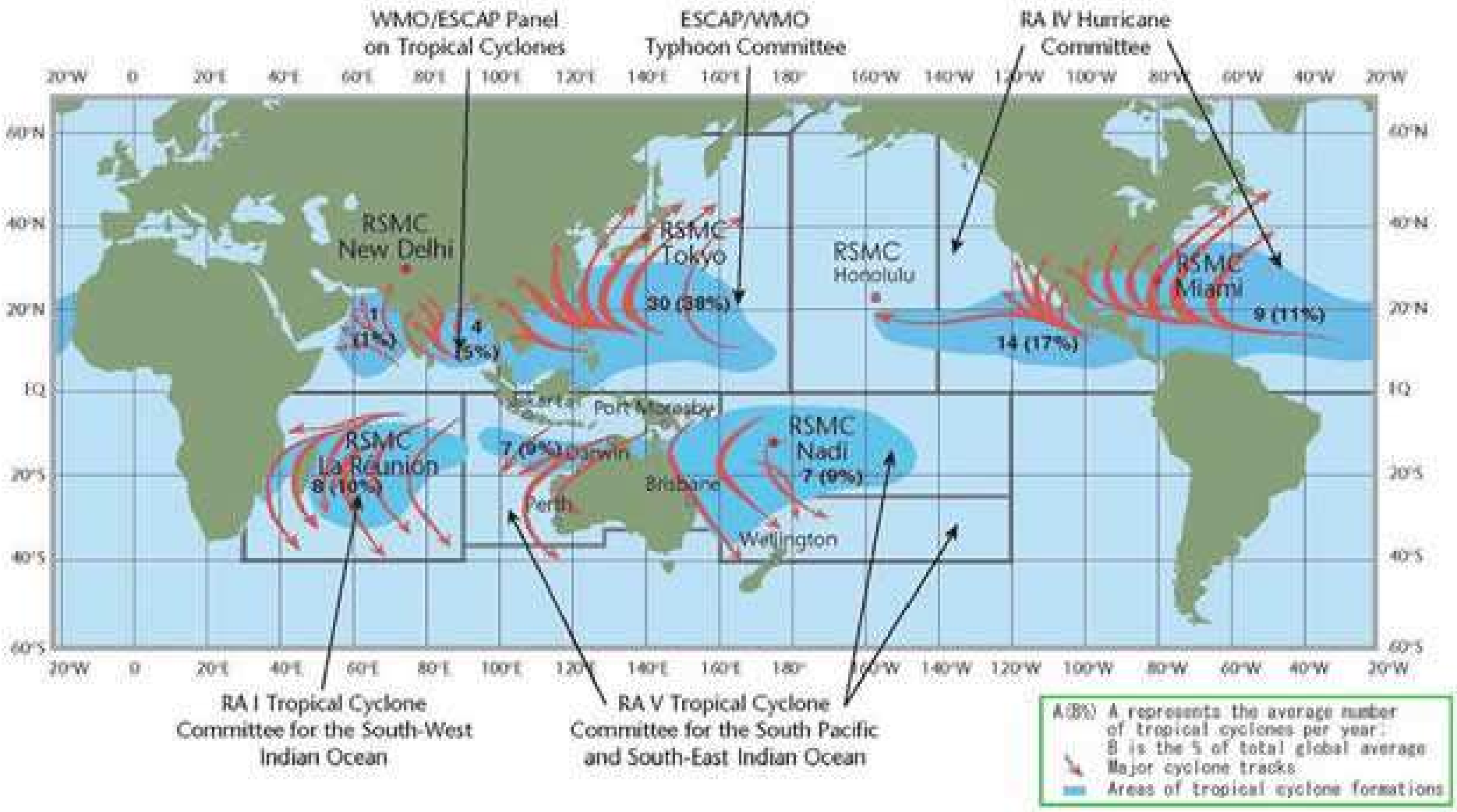
- DRR requires a comprehensive approach
  - Risk analysis, early warning & monitoring, preparedness, response & recovery, risk factor reduction, institutional basis, education, insurance
- DRR is increasingly multi-hazard
- Increased risks linked to
  - Urban concentration
  - Climate change
- Trans-boundary, needing regional cooperation
- GEO, CEOS, Charter, UNOSAT main focus on high resolution satellite imagery



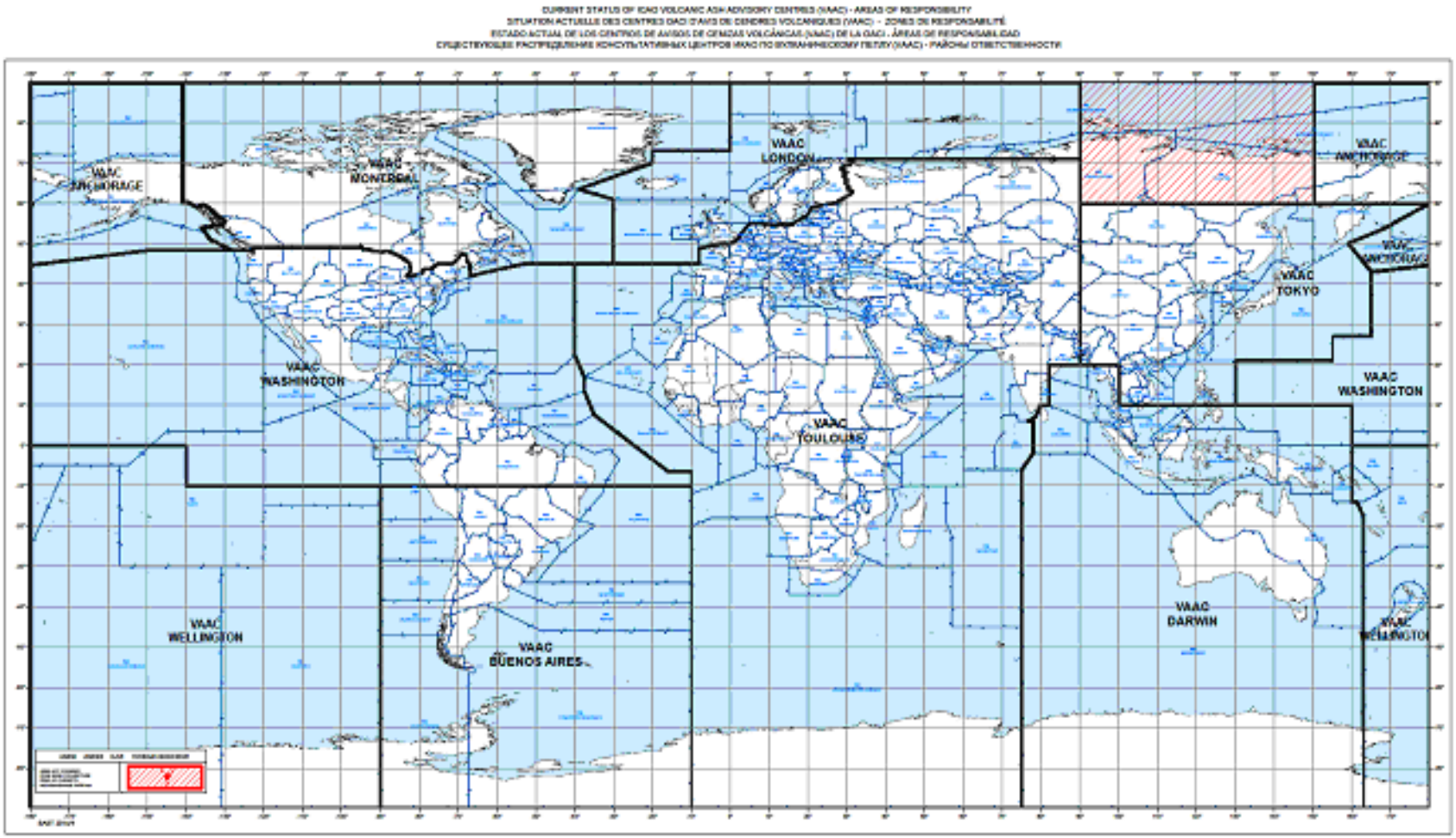
Use of met satellites by NMHSs in DRR

- Essential support in most disaster cases at different stages
  - early warning, monitoring, and/or rescue
- In general, unlike high resolution imagery, met satellite data are routinely available and operationally used by NMHSs, but detailed situation depends on the countries
- Regional structures are in place for various disaster types
  - Tropical Cyclones RSMC
  - Volcanic Ash Advisory Centres
  - Emergency Response Activities RSMC
  - Sand and Dust Warning and Assessment (Being implemented)

Tropical Cyclone Warning Coordination



Volcanic Ash Advisory Centres



Building on the existing assets

- Do all RSMCs, VAACs, .. have routine access to, and ability to use, all relevant satellite data?
- Is there scope for enhancing their data feed in anticipation of/during emergency situations ?
- Is the information reaching all interested NMHSs (when no regional structure is in place) ?

Use of Satellite data by RSMCs

- Wide range of satellite data used e.g. by NHC Miami, RSMC Tokyo-Typhoon Centre
  - Situation may depend on the regions
  - New generations of satellites, new products
- Possible actions
  - Systematic review of needs and available data
  - Workshop on use of satellites for TCs
  - Representation of satellite operators in regional bodies in charge of TC warning coordination

Enhanced access to satellite data in emergencies

- Technical opportunities
  - On-demand rapid-scan (flexible imagers)
  - Higher resolution products on target areas
  - Imagery loop for media and public warning
  - Data from a secondary operational satellite
  - Temporary open access to restricted information
- Constraint: flexibility should not disturb operational processes
  - System configuration, product interpretation
  - Additional data/products collected on separate resources (FTP server)
  - Would need clear procedures with trained staff
- Particularly relevant for environmental emergencies where no regional structure is in place

Conclusions: suggestions for CGMS-42

- CGMS to consider including enhanced support to DRR in its HLPP
- Support a review of meteorological satellite data use by RSMCs and other NMHSs in DRR
  - with DRR and Tropical Cyclone Programmes
- Explore possibility to provide on-demand additional data/products in certain emergency situations
  - Procedures to be specified, identified points of contacts