

TMD's Innovation hazard monitoring from new-generation satellites

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6th Asia/Oceania Meteorological Satellite User Conference

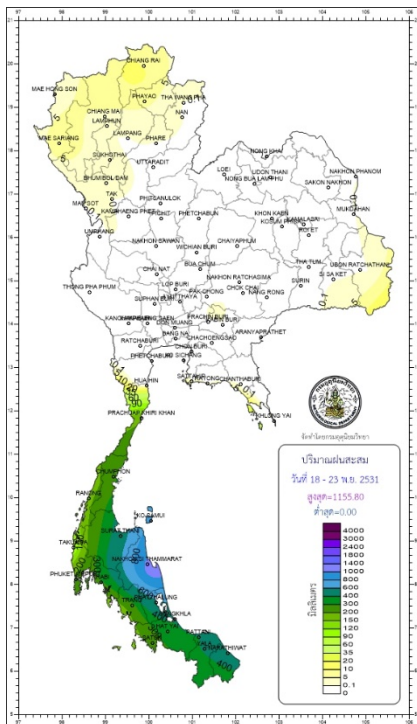
Tokyo, Japan, 9 November 2015

Tokyo International Exchange Center/Plaza Heisei Meeting Facilities

TMD's top three hazards that can be monitored by satellite (Q 1 of the JMA questionnaire)

- Hazard 1: Torrential rain

- A mudslide caused by extremely heavy rain in KaThun Thumpon, PhiPun District ,Nakhon Si Thammarat Province (22 Nov 1988) left 700 people dead.



TMD's top three hazards that can be monitored by satellite (Q 1 of the JMA questionnaire)

- Hazard 2: Severe thunderstorms

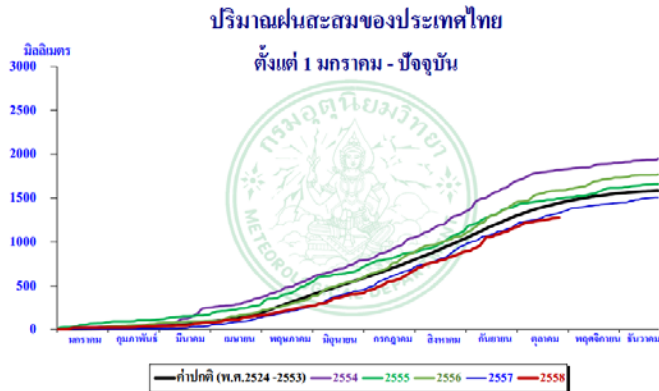
At 11:30 LTC on 2 Oct 2015, severe thunderstorm caused flash flood and traffic jam in Bangkok and surrounding area, rainfall maximum record in 2 hours more than 80 mm.



TMD's top three hazards that can be monitored by satellite (Q 1 of the JMA questionnaire)

- Hazard 3: Drought

continuous drought from early year 2014 to recent year 2015 caused by the unusually long dry season, high heat, lack of rainfall, and strong El Nino



TMD's expectations of new series of satellites for hazard monitoring

(Q 2 of the JMA questionnaire)

Major hazard	Features of new generation GEO met. Satellite
Hazard 1: torrential rain	<p>Multi-spectral bands: New signals derived from multi-spectral band observation before extremely heavy rainfall are expected to be useful.</p> <p>High spatial resolution: Data resolutions of 0.5 and 1.0 km for visible bands and 2.0 km for infrared bands, which will help to clarify atmospheric structure</p>
Hazard 2: severe thunderstorms	<p>Multi-spectral bands: New signals derived from multi-spectral band observation before extremely heavy rainfall are expected to be useful.</p> <p>High spatial resolution: Data resolutions of 0.5 and 1.0 km for visible bands and 2.0 km for infrared bands, which will help to clarify atmospheric structure</p>
Hazard 3: drought	<p>Multi spectral bands: New quantitative products will be derived from multi-spectral band observation data will help to identify drought zone.</p>

JMA's requirements to get desired benefits from the new generation of satellites

(Q 3 of the JMA questionnaire)

Major hazard	Features of new generation GEO met. satellite
Hazard 1: torrential rain	Training in imagery analysis: Training would support the retrieval of new signals from multi-spectral band observation.
Hazard 2: severe thunderstorms	Training in product development: The provision of product development would support the extreme index product tailored to TMD's purposes.
Hazard 3: drought	Stable provision of imagery without communication errors: TMD would be interested in using a product made with multi-spectral band data that indicates new signals prior to drought continue.

TMD's expectations of new-generation satellites for hazard monitoring

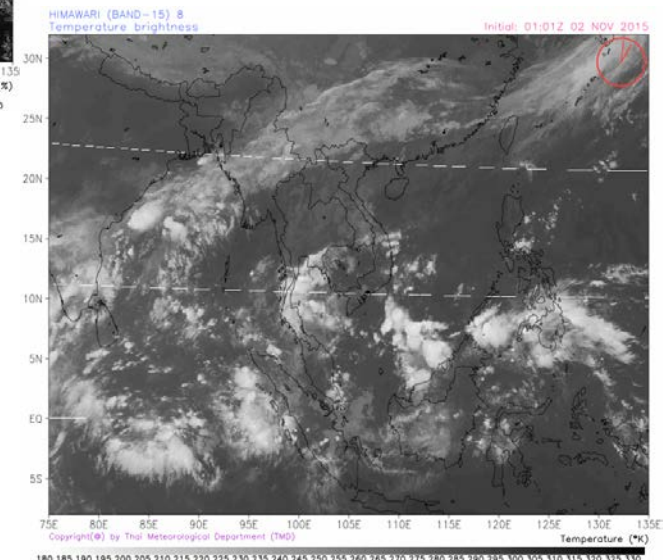
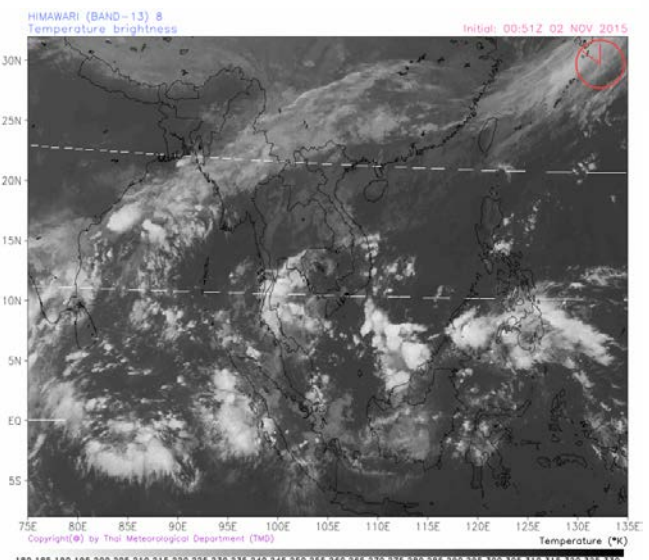
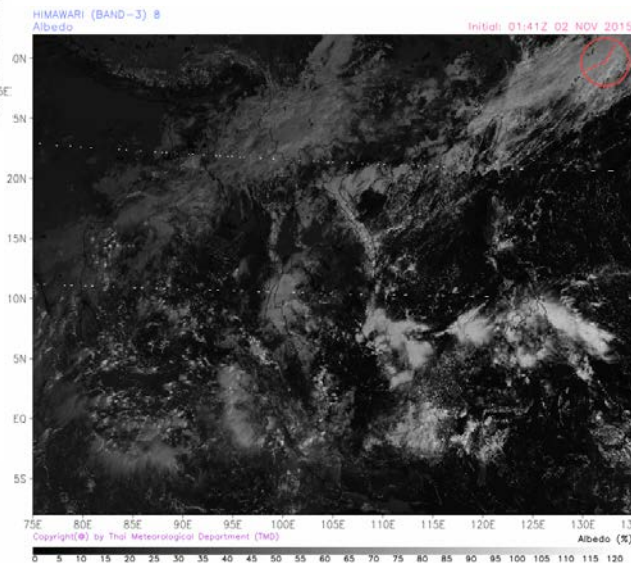
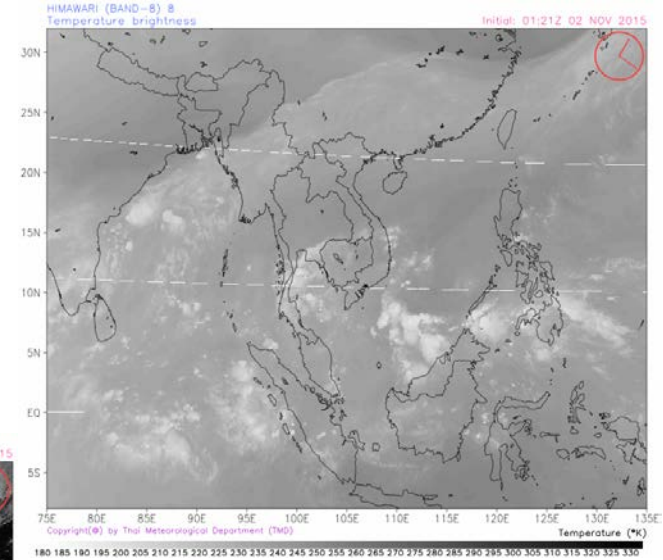
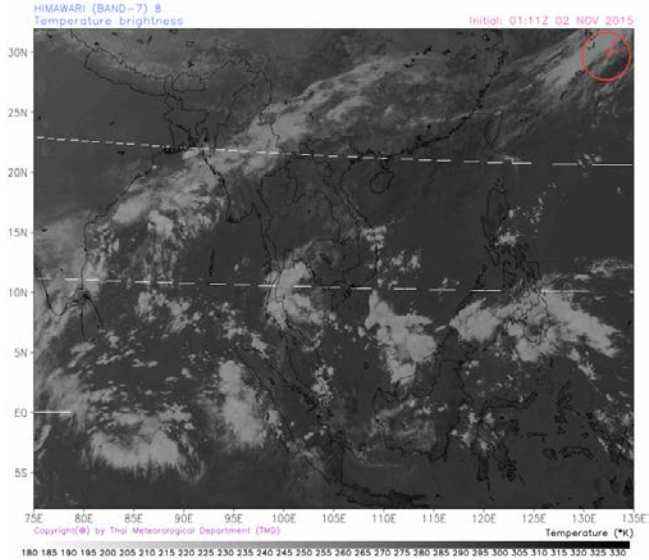
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TMD's plans/expectations for utilization of new-generation geostationary meteorological satellite data

- To conduct Knowledge Management (KM) for new-generation satellite data and information
- To create new innovation approach for multi hazard monitoring and prediction as nowcasting.
- To inform the new-generation not to department but ministry level on Key Performance Index (KPI).



Thank you for your attention