

CAP Implementation Workshop 2017

WMO Global Multi-hazard Alert System

**WWIS & SWIC as platforms to disseminate
weather warnings in CAP**

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU



WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

20-21 Sep 2017

WMO GLOBAL MULTI-HAZARD ALERT SYSTEM (GMAS)

- Decision 3.2(1)/1 (EC-69) on GMAS
- Vision
 - Recognized globally by decision makers as **authoritative warnings and information** related to high-impact weather, water, ocean and climate events
- Rational
 - Sendai framework – NMHSs and WMO agreed to do more to enhance services, strengthen regional and global collaboration to support Multi-Hazard Early Warning System (MHEWS)
 - To make warning information from all countries more easily available for decision makers



WMO GLOBAL MULTI-HAZARD ALERT SYSTEM (GMAS)

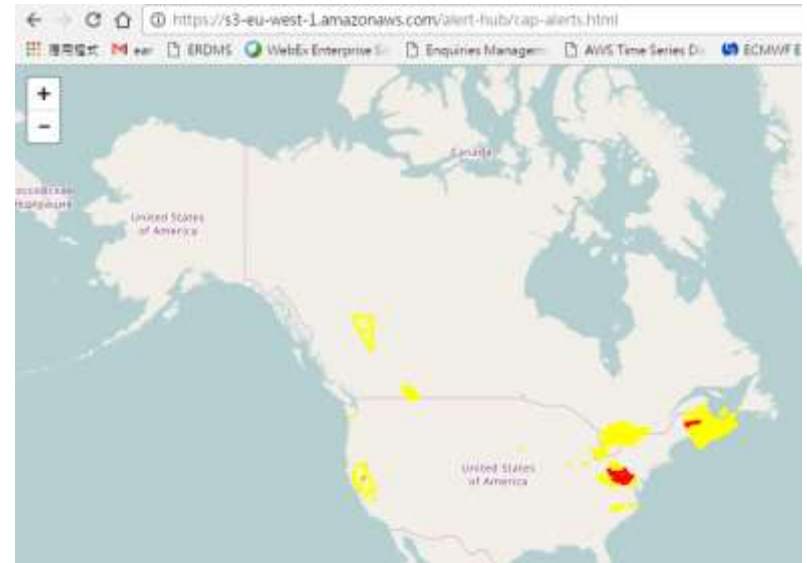
○ Rational (Cont'd)

- Share vital lessons learnt by NMHSs in delivering vital multi-hazard services with global DRR community
- Strengthen NMHSs as official authoritative source
- Ensure global community receives the multi-hazard information from authoritative source
- Ensure complex hydrometeorological language is translated into information which can be “actioned” by decision makers

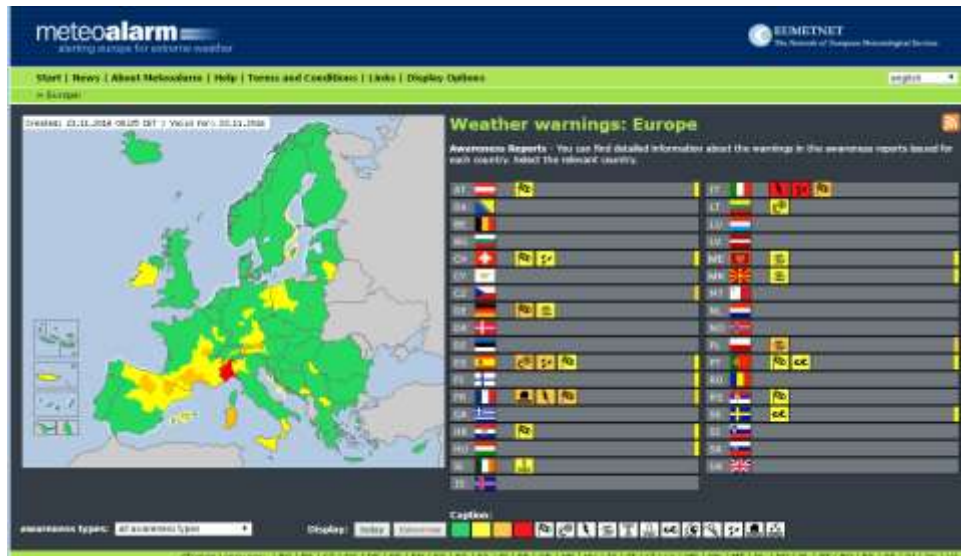


WMO ALERT HUB

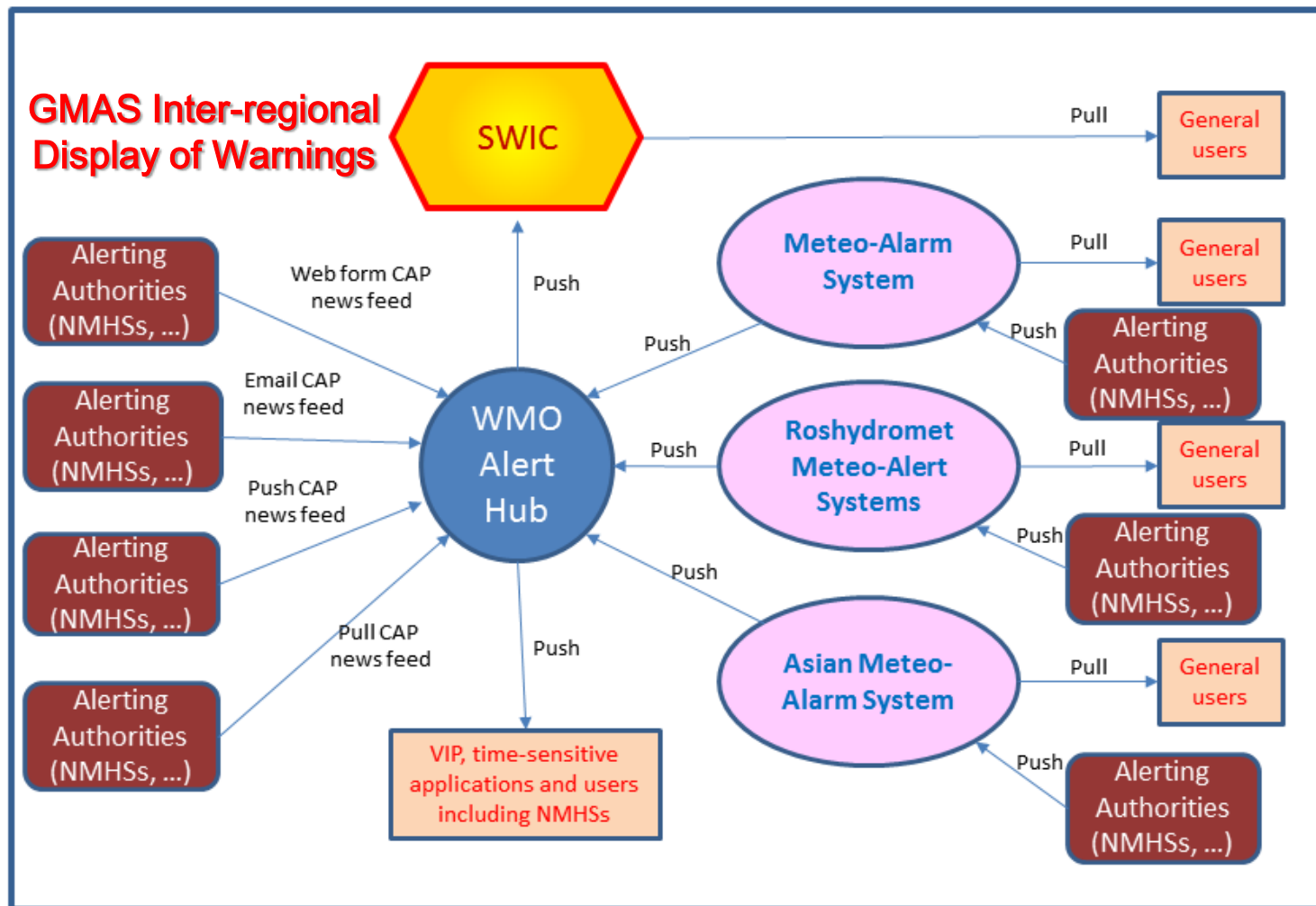
- WMO working with NOAA to develop an alert hub for free service to all alerts from Members (*Partners: Open Commons Consortium, Amazon Web Services, IBM/TWC, Hong Kong Observatory, Honeycomb Networks*)
- Hub to provide one-stop platform for alerts issued by authorized agencies/institutions
- Prototypes developed



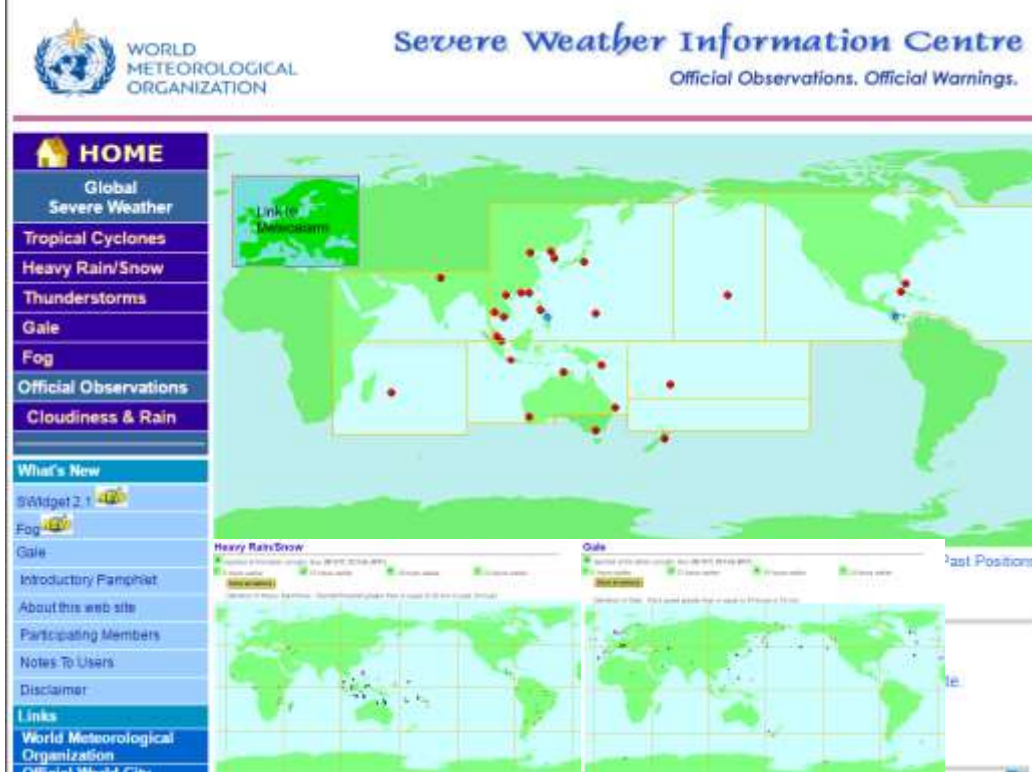
Other WMO Systems featuring Warnings



AN INITIAL IDEA



SEVERE WEATHER INFORMATION CENTRE (SWIC)



- Centralized platform to provide **official authoritative** warnings and information issued by NMHSs
- Contains advisories issued by RSMCs
- Features warnings on tropical cyclones and worldwide information on severe weather

Challenges

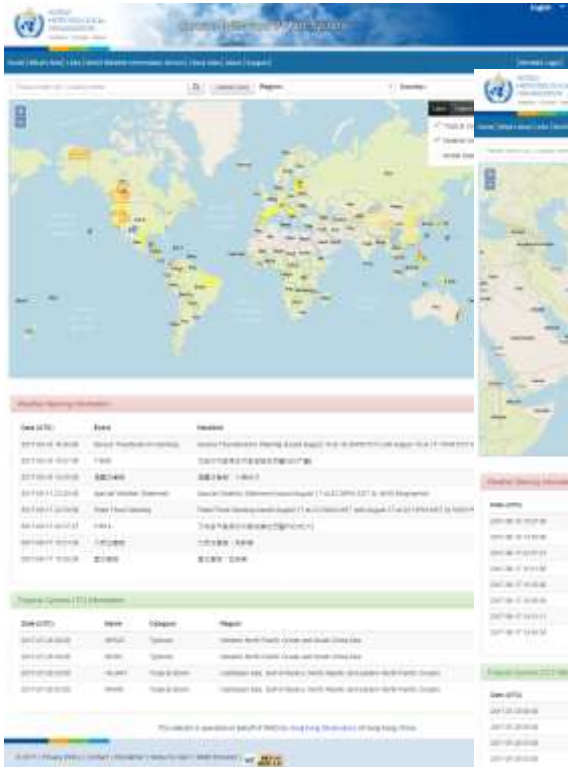
- Not all hazards covered
- Inconsistent content/format
- **Proliferation of warning websites from other sectors**



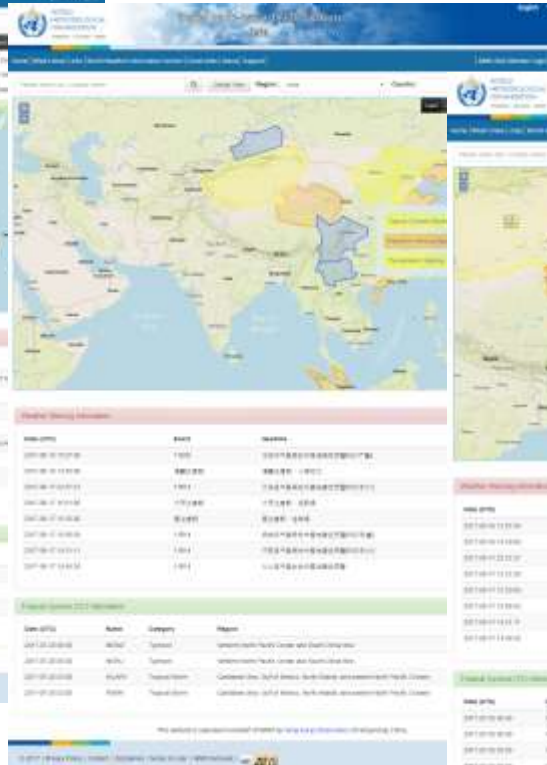
ENABLING CAP IN **SWIC** (*PROTOTYPE*)

COMMON PLATFORM TO COLLATE, DISPLAY & SHARE WARNINGS IN CAP FORMAT ISSUED BY NMHSSs

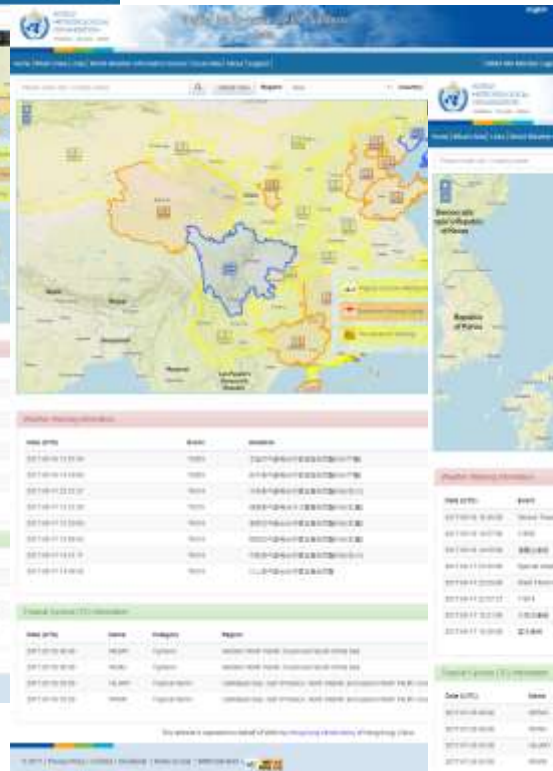
Global View



Regional View



National View

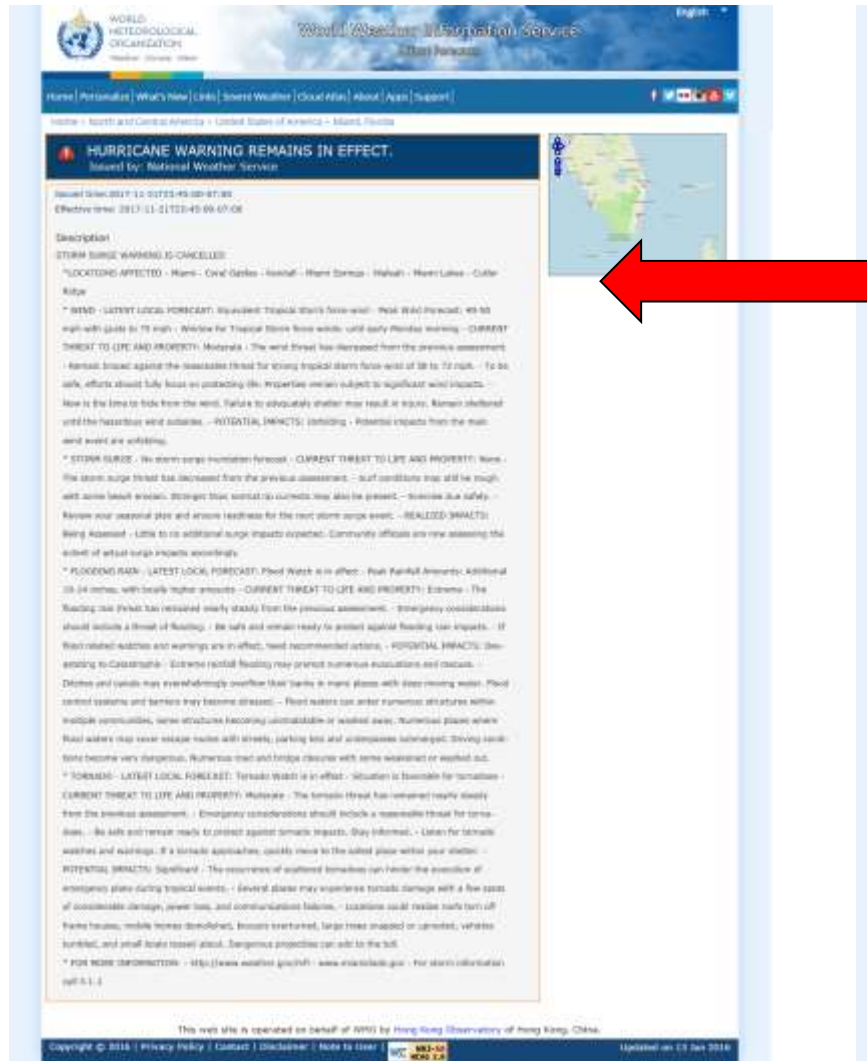


Tropical Cyclone



ENABLING CAP IN OTHER APPLICATIONS

E.G. IN WWIS

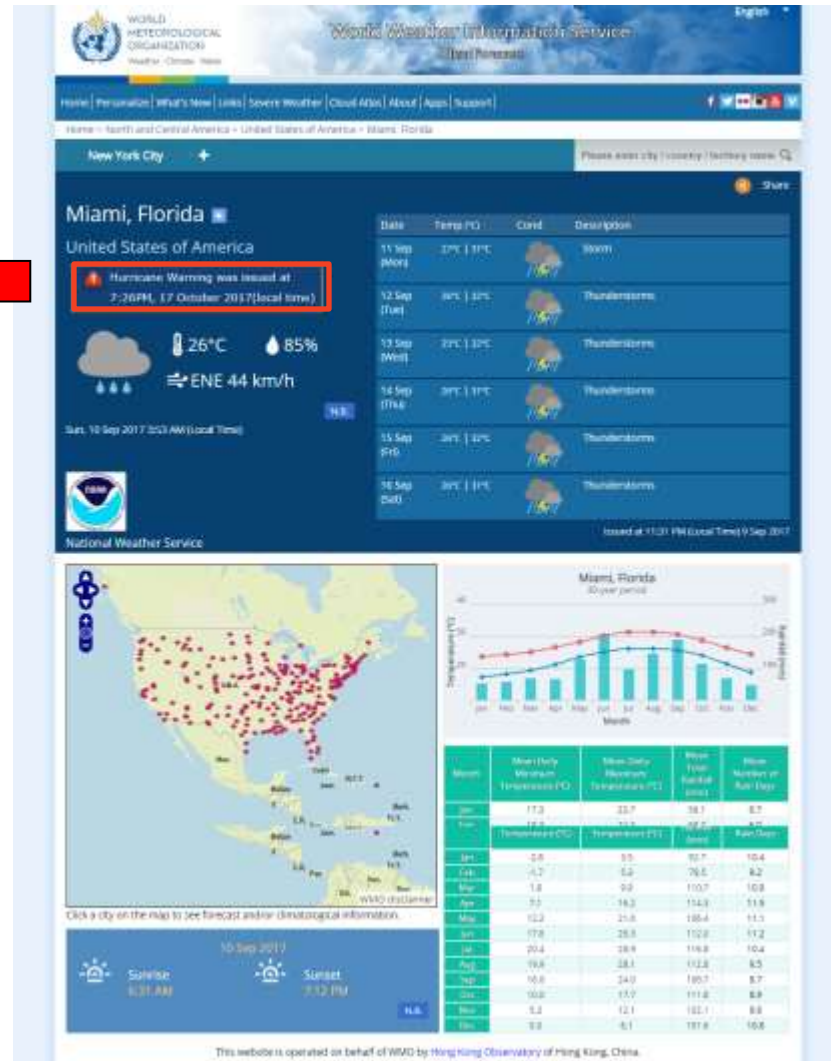


HURRICANE WARNING REMAINS IN EFFECT.
Issued by: National Weather Service

Issued 09/10/2017 12:02:00-09/10/2017 06:00:00
Effective time: 09/10/2017 06:00:00

Description:
STORM SURGE WARNING IS CANCELLED:
* LOCATIONS AFFECTED: Miami - Coral Gables - Hialeah - Miami Springs - Hialeah - Miami Lakes - Cutler Ridge
* RISK: LATEST LOCAL FORECAST: Hurricane Tropical Storm force wind - Peak WMO forecast: 45-55 mph with gusts to 75 mph. - Outlook for Tropical Storm force winds: until early Monday morning. - CURRENT THREAT TO LIFE AND PROPERTY: Moderate. The wind threat has increased from the previous assessment. - Remarks: Issued against the reassessed threat for strong tropical storm force wind of 38 to 72 mph. - To be safe, efforts should fully focus on protecting life; properties remain subject to significant wind impacts. - Now is the time to take from the wind. Failure to adequately shelter may result in injury. Remains sheltered until the hazardous wind subsides. - POTENTIAL IMPACTS: (including: - Potential impacts from the main wind event are continuing.
* STORM SURGE: No storm surge inundation forecast. - CURRENT THREAT TO LIFE AND PROPERTY: None. - The storm surge threat has decreased from the previous assessment. - Surf conditions may still be rough, with some beach erosion. Stronger than normal rip currents may also be present. - Exercise due safety. - Review your prepared plan and ensure readiness for the next storm surge event. - REALIZED IMPACTS: Being assessed. - Little to no additional surge impacts expected. Community officials are now assessing the extent of actual surge impacts according to.
* FLOODING RAIN: LATEST LOCAL FORECAST: Flood Watch is in effect. - Peak Rainfall Amount: Additional 25-34 inches, with locally higher amounts. - CURRENT THREAT TO LIFE AND PROPERTY: Extreme. - The flooding rain threat has remained nearly steady from the previous assessment. - Emergency considerations should include a threat of flooding. - Be safe and remain ready to protect against flooding risk impacts. - If flood-related notices and warnings are in effect, heed recommended actions. - POTENTIAL IMPACTS: (including: - Catastrophic. - Extreme rainfall flooding may prevent numerous evacuations and rescues.
- Ditches and canals may overwhelmingly overflow their banks in many places with deep rising water. Flood control systems and barriers may become stressed. - Flood waters can enter numerous structures within multiple communities, some structures becoming uninhabitable or washed away. Numerous places where flood waters may reach include roads with street, parking lots and underground culvertages. Driving conditions become very dangerous. Numerous trees and bridges collapse with some weakened or washed out.
* TORNADOES: LATEST LOCAL FORECAST: Tornado Watch is in effect. - Situation is favorable for formation. - CURRENT THREAT TO LIFE AND PROPERTY: Moderate. - The tornado threat has increased nearly steady from the previous assessment. - Emergency considerations should include a moderate threat for tornadoes. - Be safe and remain ready to protect against tornado impacts. Stay informed. - Listen for tornado watches and warnings. If a tornado approaches, quickly move to the safest place without your vehicle. - POTENTIAL IMPACTS: Significant. - The occurrence of scattered tornadoes can hinder the possibility of emergency plans during tropical events. - Several places may experience tornado damage with a few cases of considerable damage, power loss, and communication failure. - Locations could include parts torn off from houses, mobile homes demolished, business destroyed, large trees snapped or uprooted, vehicles overturned, and small boats tossed about. Dangerous projectiles can enter the toll.
* FURTHER INFORMATION: - <http://www.weather.gov/hkf> - www.miami.gov - For storm information call 311.

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Miami, Florida
United States of America

Hurricane Warning was issued at 7:26 PM, 17 October 2017 (local time)

26°C 85%
ENE 44 km/h

Sat, 10 Sep 2017 00:00 AM (Local Time)

National Weather Service

Miami, Florida
Sky period

Date	Temp (°C)	Cond	Description
11 Sep (Mon)	27°C 81°F	Partly Cloudy	Sunny
12 Sep (Tue)	30°C 86°F	Thunderstorm	Thunderstorms
13 Sep (Wed)	29°C 84°F	Thunderstorm	Thunderstorms
14 Sep (Thu)	30°C 86°F	Thunderstorm	Thunderstorms
15 Sep (Fri)	30°C 86°F	Thunderstorm	Thunderstorms
16 Sep (Sat)	30°C 86°F	Thunderstorm	Thunderstorms

Issued at 11:01 PM (Local Time) 9 Sep 2017

Click a city on the map to see forecast and/or climatological information.

Month	Mean Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Mean Total Rainfall (mm)	Mean Number of Rain Days
Jan	21.3	22.7	76.1	6.7
Feb	22.6	23.7	72.2	6.0
Mar	23.9	24.9	68.3	5.3
Apr	25.2	26.2	64.4	4.6
May	26.5	27.5	60.5	3.9
Jun	27.8	28.8	56.6	3.2
Jul	29.1	30.1	52.7	2.5
Aug	30.4	31.4	48.8	1.8
Sep	31.7	32.7	44.9	1.1
Oct	33.0	34.0	41.0	0.4
Nov	34.3	35.3	37.1	0.0
Dec	35.6	36.6	33.2	0.0

10 Sep 2017
Sunrise 6:37 AM
Sunset 7:12 PM

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PLANS

- Upgrade **SWIC** to become an online GIS-enable platform to aggregate, display and share authoritative warnings and alerts in CAP format from WMO Alert Hub and other industry standards
- A example of display platform for the **GMAS**
- Mature WMO Alert Hub aggregating official alerts and warnings from NMHSs and officially Registered Alerting Authorities (RAAs)
- Encourage NMHSs to adopt CAP format for their warnings and disseminate these warnings to WMO Alert Hub and thus **SWIC**
- Enhance **WWIS** to become a online GIS-enable platform for official weather observations, authoritative forecasts and warnings provided by NMHSs around the world
- To implement RA II Pilot Project on **Regional GMAS** (Resolution 5.2/10 (RA II-16))



Thank you



WORLD
METEOROLOGICAL
ORGANIZATION

REGIONAL GMAS IN ASIA

- RAII-16 approved the pilot project to enhance the capability of meteorological disaster risk reduction (Resolution 5.2/10)
- To establish a regional system, based on the implementation of CAP and the experience in WMO WWIS and SWIC
- To promote experience sharing among NMHSs in RAII in disaster risk reduction
- To organize training courses
- To provide assistance to relevant RAII members to improve operational capability in meteorological risk reduction
- CMA and HKO as co-coordinators



TARGETS OF RAII PILOT PROJECT

- To develop a prototype of Alert Hub for aggregating CAP alerts issued by NMHSs and an upgraded SWIC website for displaying the CAP alerts with GIS interface by end of 2017
- To develop a prototype website for sharing of advisory products among RAII members by mid-2018.
- To develop plans for training and development of advisory products for RAII members in early 2018

