Challenges and Opportunities of media communication

Sandy Song, Senior Scientific Officer
Hong Kong Observatory
5 Nov 2014
Challenges and Opportunities of Media Communications

- Coordination
- Communication
- Social Media
- WMO Guidelines
Coordination

• Coordination – Liaison Group
  – Regular meeting
  – Media: contacts available
  – How media obtains weather information
  – For reporters, for computers (automatic)
  – Time latency
  – Regular liaison

• Dissemination
• Communication
• Education
Media communication

Build up partnership
Challenges and Opportunities of Media Communications

- Coordination
- Communication
- Social Media
- WMO Guidelines
The Observatory will consider the need to issue the Gale or Storm Signal No. 8 tonight.

18:45 15 Sep
The Observatory will consider the need to issue the Gale or Storm Signal No. 8 before midnight.

20:45 15 Sep
The Gale or Storm Signal No. 8 is expected to be issued at or before 10:40 p.m.

22:45 15 Sep
With Kalmaegi moving towards the western part of Guangdong and Hainan Island, winds will likely subside gradually in the morning...... The public should pay close attention to the latest information on the tropical cyclone before going to work or school tomorrow morning.

04:56 16 Sep
It is expected that the No. 8 Gale or Storm Signal will remain in force for some time. With Kalmaegi moving further away from Hong Kong, local winds will subside gradually later in the morning. The Observatory will then consider replacing the No. 8 Gale or Storm Signal with the Strong Wind Signal, No. 3.

07:45 16 Sep
The Observatory will consider issuing the Strong Wind Signal, No. 3 between 10 a.m. and noon.

Clear message of replacing signal
Public can get prepared with advance notification.

3 between 10 a.m. and noon.

Strong Wind Signal, No. 3 tonight.
TC Forecast Tracks
Uncertainty

To the lay person, uncertainty implies a lack of knowledge.

To the scientist, it can represent a lot of knowledge.
Communications

- Common Situational Awareness
  - Forecast and Uncertainty Information
  - “Certain” of the “Uncertain”
Existing resources

WMO Guidelines on Communicating Forecast Uncertainty (WMO/TD No. 1422)

Communicating Uncertainty
Communicating Uncertainty

Tropical Storm CHARLEY
Initial Pos. Aug 11 / 12 noon
16.5 N 76.1 W
175 km SE Kingston, JAM
860 km SE Isle of Youth
Max. Sust. Winds: 110 km/h
Use map to illustrate uncertainty
TC Forecast Tracks

Use map to illustrate uncertainty
Communications

- Information on impact and risk
- Action when “certain”?  
- Impact-based forecast
Before Super T Usagi arrives

- HKO blog
- An uninvited guest during mid-autumn festival holiday

An uninvited guest during mid-autumn festival holiday

Today (19 September) is the Mid-Autumn Festival. It is followed by a long holiday. Guess you have planned to celebrate the holiday. While it will be cloudy tonight, there will be breaks in between clouds, allowing us to have glimpses of the moon while celebrating with family and friends.

You may also be aware that there is a tropical cyclone to the east of the Philippines, named Usagi. Although she is still quite far away from Hong Kong, according to the present forecast track, she is expected to cross the Luzon Strait over the weekend and approach the coast of Guangdong this Sunday (Figure 1). We expect the weather in Hong Kong to deteriorate significantly on Sunday, with high winds and seas as well as squally showers. You are advised to stay on the alert. The change in weather may affect your plan in the long holiday.

From past record, those tropical cyclones approaching the coast of Guangdong from the east via the Luzon Strait would pose a threat to Hong Kong. We should remain vigilant. Anyhow, there may still be changes to the track of Usagi. A small change in the forecast track of Usagi (yellow and blue arrows in Figure 1) may result in vastly different effects on Hong Kong’s weather. For instance, if Usagi adopts a slightly northerly track (yellow arrow) and makes landfall to the east of Hong Kong, Usagi will weaken on her way to Hong Kong. We will be affected by northerly winds for a while. Due to terrain effect, the wind strength over Hong Kong will be relatively lower. In case Usagi takes a slightly southerly track (blue arrow), she will not weaken significantly on her way to Hong Kong. We will also be more prone to the effect of storm surge. As it is near the Mid-Autumn Festival, tide level is already on the high side. If storm surge does materialize, the aggregate effect of high tide and storm surge may cause flooding to low-lying areas. Anyhow, the approach of Usagi from the east will cause significant change to weather in Hong Kong this Sunday. Let’s better prepare for the uninvited visit of Usagi.

Wish everyone a happy Mid-Autumn Festival!

CM Cheng
2013年9月
超強颱風
天兔 Usagi

Storm surge pushed to shore
No significant storm surge
Storm surge at HK

Scenario of red track (100 km from actual
Usagi actual track (black)

2013 年 9 月 超強颱風 天兔 Usagi
Storm surge at HK

Scenario of green track (200 km from actual)

Usagi actual track (black)
# Risk management

<table>
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<th>Probability</th>
<th>Impact</th>
<th>Risk</th>
<th>Action</th>
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<tbody>
<tr>
<td>High</td>
<td>V. High</td>
<td>High</td>
<td>Yes</td>
</tr>
<tr>
<td>Medium</td>
<td>V. High</td>
<td>High</td>
<td>Action</td>
</tr>
<tr>
<td>&lt;50%</td>
<td>V. High</td>
<td>Medium High</td>
<td>Action?</td>
</tr>
<tr>
<td>&lt;50%</td>
<td>High</td>
<td>Medium</td>
<td>Action??</td>
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## Landfall to the East of Hong Kong

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<th>Risk</th>
<th>Action</th>
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</thead>
<tbody>
<tr>
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<td>Low</td>
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## Landfall to the West of Hong Kong

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<tbody>
<tr>
<td>Low</td>
<td>V. High</td>
<td>Medium High</td>
<td>Yes</td>
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</table>
A narrow escape from repeating history

Storm surge during S.T. Hagipit in 2008

Actual 2.8 m (eastward track)

If adopts southward track: ~4 m
Press coverage before arrival

HK prepares for strongest typhoon of the year

Ada Lee, Mandy Zuo and Agence France-Presse

Hong Kong should brace itself for what was likely to be this year’s strongest typhoon, the Observatory warned yesterday as Super Typhoon Usagi closed in.

It issued a very hot weather warning yesterday, and the heat and haze is likely to continue today. Heavy squally showers, strong winds and rough seas were expected tomorrow and on Monday, with Usagi forecast to be closest to the city tomorrow night, it said.

At 11pm yesterday, Usagi was located 680km north-northeast of Manila, with wind speeds of 205km/h near the centre. It was forecast to pass between Taiwan and the Philippines before reaching the southern Chinese coast.

Observatory senior scientific officer Cheng Yuen-chung said Usagi could be the strongest typhoon to affect Hong Kong this year, especially if it took a more southerly route. Assistant director Cheng Cho-ming wrote in the department’s blog that low-lying areas could be flooded due to the combined effects of a storm surge and high tide.

City University’s Professor Johnny Chan Chung-leung said Usagi’s strength could be on a par with that of 2010’s Typhoon Megi, which killed 31 people in the Philippines and 36 in Taiwan. Typhoons passing between these places have a history of being stronger as they reached Hong Kong, he said.

Taiwan meteorological officials issued a maritime warning on Thursday night and a land warning yesterday morning, expecting the worst of the typhoon today. Taiwan news reported that Dutch artist Florentijn Hofman’s Rubber Duck, which debuted in Kaohsiung on Thursday, was deflated yesterday.

Provinces including Guangdong and Fujian (福建省) were prepared for strong storms, with transport and maritime departments suspending their Mid-Autumn Festival holiday, the Ministry of Transport said.

Both Cathay Pacific and Dragonair last night advised passengers departing tomorrow and Monday to postpone non-essential travel due to the likelihood of delays at Hong Kong airport. Rebooking fees will be waived for flights scheduled between tomorrow and Tuesday.
Challenges and Opportunities of Media Communications

• Coordination
• Communication
• Social Media
• WMO Guidelines
The Old Broadcast Model

Broadcasters and advertisers decide what is popular...

Source: Jonah Peretti’s LA Breakfast Deck [http://tinyurl.com/ViralContent13](http://tinyurl.com/ViralContent13)
Emerging of Social Media

- Publishing
- Sharing
- Networking
- Discussing
Communication

Social Media

Popularity of smart mobile phones
Yearly Page Views Statistics of HKO Website & MyObservatory

<table>
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<tr>
<th>Year</th>
<th>HKO Website</th>
<th>MyObservatory</th>
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<td>49</td>
<td></td>
</tr>
<tr>
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<td>2014</td>
<td>21,231</td>
<td>33,673</td>
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Up to Sep 2014
Netizen shapes public opinion in HK

### No. of News Article mentioned netizen

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Articles</th>
<th>% Increase</th>
</tr>
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<tbody>
<tr>
<td>2011</td>
<td>14,760</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>15,973</td>
<td>8.2%</td>
</tr>
<tr>
<td>2013 (Jan - Sep)</td>
<td>18,240</td>
<td>14.2%</td>
</tr>
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</table>

Source: K-Matrix

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【網民hot talk】雙非媽媽「公義論」
中港網民都唔like

【本報綜合報道】有網民近日拍到一批照片，稱在一長假期間，參加了在北京一個豪華別墅的派對，派對上各式各樣的美女雲集，更有不少「土豪」在場內穿梭。
The New Networked Model

Everyone can be the reporter and broadcaster

Source: Jonah Peretti’s LA Breakfast Deck [http://tinyurl.com/ViralContent13](http://tinyurl.com/ViralContent13)
HKO Evolution

Using Radio to deliver Weather Forecast and warnings

1928

Dial-A-Weather System

1985

HKO Internet Website

1996

Blog

2008

HKO@Twitter

2009

HKO@YouTube

2010
Social Media -- Twitter

- HKO launched a new service to deliver the latest weather warnings and information.
Thematic Facebook

Community Weather Observing Scheme (CWOS)

Timeline | About | Photos | Events | More

1,283 likes

Invite your friends to like this Page

You're welcome to post the weather photos you've taken on this page to share with others. 欢迎各位氣

http://co-win.org/

Suggest Edits

Apps

Thematic Facebook (Partnership)

Weather observations
#NCR_PRSO 10:15 AM, Light to moderate #rains affecting portions of #Quezon, #Laguna and #Cavite which may persist for 1-2 hours.
With more #fog in the forecast for central and southern parts of the country tomorrow, find out more about what it is and how it forms at http://bit.ly/X6uXye

Photo credit: met_efekt on Flickr
Social Media

- **Strengths**
  - Reach
  - Multi-media
  - Always available
  - Quick, though uncertain distribution

- **Weaknesses**
  - Credibility
  - Authority
Hail event on 30 Mar 2014
Rumours through social media
HKO

Community Weather Observing Scheme (CWOS)

• Encourage public to make weather observations and reports
• Via web, Facebook, mobile app to share weather photos and reports

website
www.co-win.org

Facebook
www.facebook.com/icwos

iOS mobile app
iCWeatherOS
Weather Observation competition
And Ambassador Scheme
Weather Reports by students

27-02-2014 16:08
2月27日云天氣報告

上載者：Team 6 Bishop Hall Jubilee School

27-02-2014 14:08

上載者：Team 4 Hei Piu Chamber Of Commerce Secondary School

24-02-2014 07:10
2014.02.24 天氣報告

Sophie Chan

天氣報告：陽光充足，溫度10至19度。

上載者：Team 4 Hei Piu Chamber Of Commerce Secondary School

環境：18.2°C 相對溼度：68%

風速：4.7 公里/小時 風向：東

過去24小時雨量：0 毫米

上載者：Team 4 Hei Piu Chamber Of Commerce Secondary School

環境：18.2°C 相對溼度：68%

風速：4.7 公里/小時 風向：東

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Photo contribution to HKO Calendar
Social Media

So should we put much effort into using Social Media as a medium for weather information?

What we need to beware of?
Social media for NHMSs

• Basic
  – Complement/back-up “old” service delivery channels
  – Strengthen community understanding and hence resilience
  – Improve organizational transparency, visibility and reputation

• Advanced
  – Use digital intelligence technologies to better understand its audience and gauge the effectiveness of the organization’s activities, what people are concerned about, interact with users and gather information on their needs, knowledge and expectation, and fill such gaps, if any
The Holy Grail of Social Media

What’s your business objectives?
• raise awareness of NHMS, increase visibility
• disseminate real-time warning information
• engage in two-way communication with the public

Platform/technology?
• Facebook, Twitter, Youtube
• Google’s Blogger, LiveJournal, ...
• video editing programmes
• Monitoring tools

Who is the audience?
• fan/friend of NHMS, a man-in-the-street, special users, or a mix of all
• the audience determines the nature of the content
Education

- Youtube & TV – Cool Met Stuff
- Blog and Educational Resources on website
- Public seminar
- Open day
Learn from history (1874, 1906, 1937)
TV Documentary on typhoons, rainstorms, drought, climate change

Collaboration with Radio Television Hong Kong

English version and DVD production are in progress
Coming soon

Short Youtube video on Typhoon-related hazards

Typhoon Committee
Working Group of Disaster Risk Reduction

- Making the information more understandable to the public and make them react (led by HKO)

- Short video of around 5 minutes, with overall theme on tropical cyclone-related hazards, and with clear message for people to respond: “Run from the Water; Hide from the Wind”

- Then, shorter, separate films to cover the following:
  a) Wind
  b) Waves
  c) Storm surge

- Will be shared via Youtube platform
Challenges and Opportunities of Media Communications

• Coordination
• Communication
• Social Media
• WMO Guidelines
WMO guidelines

– 27 guidelines produced so far covering key skills required for effective service delivery
– The guidelines are freely available in pdf format at: http://www.wmo.int/pages/prog/amp/pwsp/publications_en.htm
Guidelines related to Communications & Media

WORKING WITH THE MEDIA

This summary guide is for National Meteorological and Hydrological Services (NMHSs) staff who work with the media. It provides advice on how to approach media interviews, how to handle questions and what to do when faced with difficult situations.

Understanding the world of the reporter

- Reporters, like meteorologists, work under a great deal of time constraints. They often have to cover a huge range of subjects and need to produce stories quickly.
- Non-science reporters often have a poor understanding of Meteorology.
- Media companies/organizations often give simple weather stories to inexperienced junior reporters who need guidance to understand what they are writing about.
- There is a high turnover of reporters, so you will often be educating new ones, and reiterating previous information to the others.

Why is there a need to work with the media?

The media are the main vehicle to get the perishable information contained in warnings and forecasts to the public. Establishing and maintaining a good working relationship with them helps NMHSs get their message out on time.

How can NMHSs develop good working relationships with the media?

Sources of comment

- Not all sources of media who comment about the weather are credible and authoritative. Try to always correct misinformation. Accuracy is a common

Have rules

- NMHSs need to establish clear internal protocols for working with the media. Develop official positions on matters of policy and ensure that the staff understand them before talking to the media. Use your most senior staff to handle sensitive media issues.

When you have finished, stop talking!

- When you have answered a question, the reporter will probably ask for another opinion. It is up to you to consistently provide credible and authoritative information for the media.

Distinguish facts and opinions

- Some questions seek factual answers (How much rain fell? What’s the forecast for the weekend?). These are more likely to be asked by less experienced reporters.
- Some questions seek your opinion about the performance of the NMHS. Unless you have authority to do so, do not answer them. Instead, refer the journalist to senior staff.
- Some questions will be politically sensitive. If such questions are likely, be prepared to stick to the facts, or pass the journalist to the relevant senior NMHS staff.
- Many of these sorts of questions will be asked by more experienced reporter s – they will often ask difficult, more focused questions than junior reporters.

GUIDELINES ON THE IMPROVEMENT OF NMSs – MEDIA RELATIONS AND ENSURING THE USE OF OFFICIAL CONSISTENT INFORMATION

PWS-3  WMO/ TD No 1088
Guidelines related to Communications & Media

COMMUNICATING FORECAST UNCERTAINTY

This summary guide is for forecasters who are required to include uncertainty information in weather and climate forecasts and want to know the best way to present it. It provides advice on communicating probability forecasts, or other kinds of uncertainty information.

Why communicate forecast uncertainty?

Uncertainty information helps people make better decisions: People can make good plans and the right choices when they know the options they are facing. These plans range from simple things such as what clothes to wear, to major emergency responses such as community evacuation.

Communicating uncertainty helps manage user expectations: Meteorologists are routinely faced with forecast uncertainty. This can be stressful when users have an expectation that the forecast is always right. Communicating forecast uncertainty leads to a realistic understanding of the accuracy and reliability of the service.

Communicating uncertainty promotes user confidence: Surveys show that uncertainty information does not undermine people’s confidence in the service. Instead, it reassures people that they are getting the full story, and gives them confidence that the service is being provided objectively and scientifically.

Forecast uncertainty reflects the state of the science: Meteorological services must be based on good science. Uncertainty is inherent in forecasts and it is appropriate that this uncertainty be incorporated into the services that are provided.

How should forecast uncertainty be communicated?

Tailor the information to the audience: Different users have different requirements and varying levels of understanding. For some, detailed information can be provided, including complex graphics. They may even have in place, specific response plans that describe certain actions to be taken according to defined thresholds. Less sophisticated users will prefer simpler information.

Understand how people interpret uncertainty: A person’s interpretation of uncertainty can be influenced by personal feelings of risk and vulnerability. Make sure that your terminology is clearly defined so that people have an accurate understanding of the uncertainty involved.

Use colour wisely: Colour can be a powerful way to communicate meaning. Save the strongest colours for when they are needed. For example, use red only when there is a strong likelihood of a high-impact event.

Examples of uncertainty information

Uncertainty information can be presented in all sorts of ways – simple plain language such as “chance of” and “possible”; numerically using indices and probabilities; descriptions of alternative scenarios, pictorially using icons, graphs and charts.
Meteorological Services have to work on both science and human aspects.
• Thank you