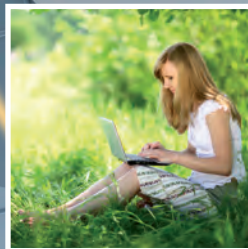
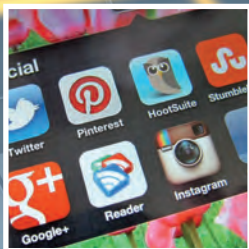
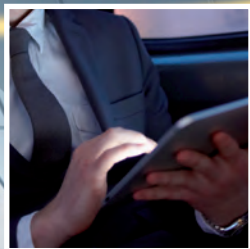


# Guidelines on Strategies for use of Social Media by National Meteorological and Hydrological Services



**World  
Meteorological  
Organization**

Weather · Climate · Water

WMO-No. 1086

PWS-24



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## 1. INTRODUCTION

### About these guidelines

Increasingly, Social Media meet the information needs of individuals and communities. Social Media provide enormous opportunities for National Meteorological and Hydrological Services (NMHSs) to enhance the delivery of information and services and to interact with users to better understand their needs and interests.

The purpose of these Guidelines is to assist NMHSs who may be considering the use of Social Media. The Guidelines address the challenges and highlight the benefits of Social Media, suggest some principles for an effective strategy, and encourage NMHSs to consider Social Media as an important element of a complete service delivery framework.

Social Media are not a substitute for well-established and highly effective means for communicating information such as television (TV) or radio. What they do offer are new ways to interact more with the user community through on-line conversations and information sharing.

## 2. SOCIAL MEDIA

### 2.1 What is social media?

Social Media can mean many things to many people. For some, it is the web technology that allows people with common interests to share ideas. For others, it is communities of people having conversations online. Figure 1 illustrates a word cloud<sup>1</sup> that is built from a large number of different definitions of Social Media.

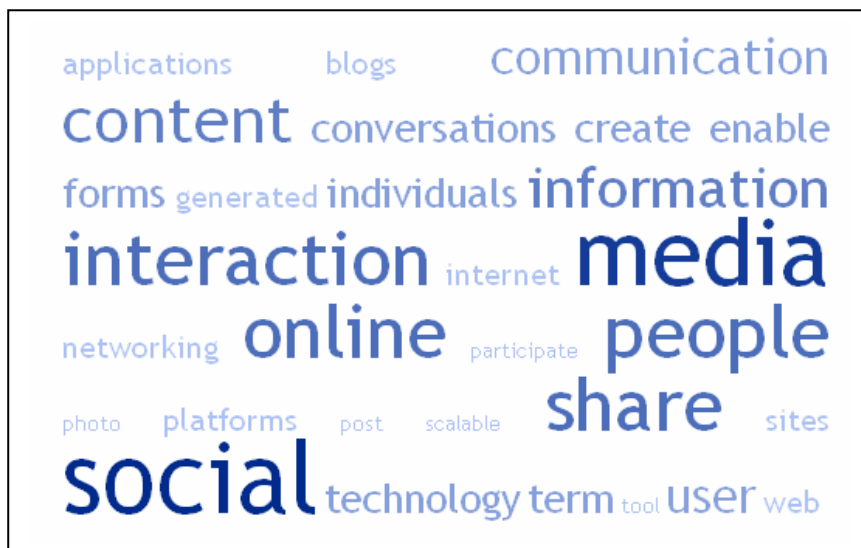


Figure 1. A social media word cloud

It paints a clear picture of some of the key elements of Social Media – it happens online, it is social, and it involves people sharing and discussing information.

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<sup>1</sup> A **word cloud** is a visualization of the frequency of words in a given body of text, usually formatted so that the most common words appear large and bold.

A good definition<sup>2</sup> of Social Media that will serve the purpose of these guidelines is:

Social Media: Forms of electronic communication through which users create online communities to share information, ideas, personal messages, and other content.

With this definition, the emphasis is on the form of the communication (electronic, online) and the outcome (communities, sharing). The key here is that it is an interactive conversation between content provider and audience, as well as between the audience members themselves.

## **2.2 Understanding the social media landscape**

Social Media are among the main driving forces behind the continued increase in Internet usage in recent years. The number of people online has doubled over the last five (5) years, with over two billion people connected. Mobile telephone coverage stands at 90 per cent of the global population, and is expected to reach close to 100 per cent within the next five (5) years. Social networking and user-centred content are among the main online activities in which people actively engage. In some countries, over half of all mobile telephone traffic is on Facebook alone. This kind of coverage offers enormous opportunities for NMHSs who wish to enrich their relationship with their users.

There is a very wide range of Social Media services available, and it is important to understand what each service has to offer before developing a Social Media strategy. Facebook, for example, is particularly effective for sharing information and facilitating discussions and has the widest audience reach. One of the strengths of YouTube is its video hosting functionality. Twitter offers immediacy, and is increasingly being used during natural disasters to issue urgent warning messages; community members are also using Twitter to report on the conditions they are experiencing.

Throughout these Guidelines, examples of some of the main Social Media services – Facebook, Twitter and YouTube – will be presented, focussing on their use by NMHSs and key stakeholders. Other services also offer opportunities to NMHSs, but it is the popular ones that will involve the greatest audience.

## **2.3 Characteristics of social media**

Social Media have a number of characteristics that make them a valuable addition to any service delivery framework.

### ***Collaborative and participatory***

For NMHSs, Social Media offer the opportunity to provide information to users and to receive feedback. Feedback is valuable, because from it, NMHSs can learn how to improve their services, visibility and reputation. Online discussions can give NMHSs improved awareness of the situation, not just during extreme weather events but at any time when there is a need to understand the circumstances of users.

### ***Decentralized***

Social Media provide a framework for everyone to participate and share information. If people are interested in an item prepared by a Meteorological Service – perhaps a seasonal climate outlook, or a story about a new weather radar, or the latest warning on a tropical cyclone – they may share it with their family, friends or colleagues. Other organizations, such as emergency services agencies, may directly link to the NMHSs items on their own Social Media site(s). In this way, important information produced by NMHSs is spread in a rapid, decentralized and – for NMHSs – effortless way.

---

<sup>2</sup> Merriam-Webster Dictionary.





**Figure 2. Facebook page of the New Zealand Met Service, accessible at: <http://www.facebook.com/MetService?ref=ts>**

Decentralized communication is not disorganized communication. NMHSs that participate in Social Media can respond quickly to questions and misunderstandings, helping to ensure that users have authoritative and accurate information. Rumours are contained and misunderstandings are corrected. It is also common for the ‘wisdom of the crowd’ to correct misinformation, which can be very helpful for NMHSs.

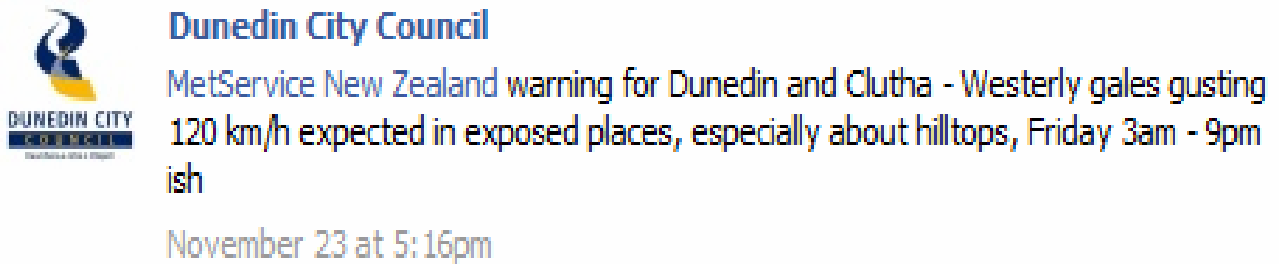
### **Complementary**

Social Media complement, rather than substitute for, existing service delivery channels that NMHSs may be using. Indeed, one very effective function of Social Media is to alert the community to other sources of information. An increasingly common practice on Twitter, for example – since it is constrained to short messages only – is to send information to users' mobile phones advising them to seek details via traditional means such as radio or the Meteorological Service's Website.

It is known that during extreme events, people often seek confirmation of a warning message by checking multiple sources. NMHSs that provide consistent and complementary information through a variety of different channels will increase the effectiveness of community response.



**Figure 3. Twitter page for the New Zealand Met Service, accessible at: <https://twitter.com/#!/MetService>**



**Figure 4. Example of a warning issued through Facebook by the New Zealand Met Service**

### ***Popular and accessible***

With over two billion people connected to the Internet, and over 90 per cent of the world's population having a mobile telephone, the opportunities for NMHSs to directly reach their users are immense. Information can be provided immediately, and the linkage between provider and user is direct, allowing for fast, accurate and comprehensive information exchange.

In summary, Social Media provide opportunities to:

- a. Strengthen community understanding and resilience;
- b. Interact with users and gather information on their needs;
- c. Extend the reach of organizational information; and,
- d. Improve organizational transparency, visibility and reputation.

### **2.4 The role of social media during natural disasters**

Natural disasters generate an enormous amount of information from official sources – and from individuals directly or indirectly affected by them. Commonly, people describe their own personal situations on Facebook and Twitter – which can help NMHSs and emergency services agencies to map the disaster and identify where people are being most affected and need help. Even those who are remote from the situation can be involved in such an event and feel connected.

During emergencies, Social Media can play an important back-up role in disseminating warning and response information if traditional services are overwhelmed by demand. For example, during the 2011 floods in Queensland, Australia, Facebook was used to share warning information when official emergency services Websites failed to cope with the heavy traffic. It was also used by people to share first-hand knowledge and to offer assistance to those in need.

Social Media can also play a valuable role in directing people to NMHSs' own Websites. Again, taking the 2011 Queensland floods as an example, Figure 5 shows the number of visits to the Australian Bureau of Meteorology (BoM) Website that were referred by Social Media networks during the peak of the event. The increased number of people visiting the Website from Facebook and other Social Media sites is clearly shown.



**Figure 5. Number of visits to the Australian Bureau of Meteorology Website referred by Social Media networks**

During the Japanese earthquake and tsunami of 2011, Social Media sites like Twitter, Mixi and YouTube played key roles in communicating information. Less than an hour after the quake, parts of Japan's phone system were disabled, yet information continued to be disseminated – TV networks were able to show live footage on social networks of the tsunami approaching and update people via Twitter. The next day alone, over 15 million people used YouTube to view the information, and Google, Facebook and Mixi were used to locate loved ones and mobilize donations to people in need.

### 3. DEVELOPING A SOCIAL MEDIA STRATEGY

To develop an effective NMHSs strategy for Social Media, it is important to have a clear understanding of the benefits and risks of using Social Media and to have a firm idea of the organizational goals. This section addresses these questions in the form of a Ten-Point Plan.

When developing the strategy, make sure it addresses the needs of the users of the strategy – what should the reader take away from it? The strategy should focus on the things that NMHSs do rather than what they can't do. The spirit of Social Media is about focussing on the positive benefits of communication and this spirit should be evident from the strategy that is developed.

#### The ten-point plan

##### 3.1 What are the goals?

What are you trying to achieve through the use of Social Media? Is it to raise awareness about the Meteorological Service, to disseminate real-time warning information, or something else? The answers to these questions have important implications on how the Social Media activities will be structured, resourced and maintained.

To what extent will two-way communication be supported? Set standards for how responsive the Meteorological Service will be to user comments and enquiries. Online conversations can be useful and informative for both parties, but it does take time and effort; make sure there are adequate ongoing resources to maintain the level of interactivity desired.

If a primary goal is to strengthen the visibility of NMHSs, then the Social Media strategy should seek to address the most popular Social Media channels and focus on information that is most sought after.

An objective might be to use Social Media to communicate information about the services provided by NMHSs, as well as to provide educational material about the science of meteorology. If this is the case, make sure that the information is pitched at the right levels for the intended audience and use the interactive nature of Social Media to solicit feedback and suggestions.

### **3.2 Who is the audience?**

This might be the most important question of all. The messaging and content that NMHSs push through Social Media channels is defined by the intended audience.

Always ask whether the proposed Social Media strategy is meeting the needs and expectations of the audience. Promote conversations that allow users to express their requirements and use this information to refine the strategy.

There are many tools available to help assess the nature of an audience. Online feedback, either as structured surveys or ad hoc feedback is only the most obvious. Consider running short pilot projects to test different approaches; ideas can be measured through the levels of interest and audience participation that they generate.

### **3.3 What is the strategy for the content?**

Content is the cornerstone for building relationships via Social Media channels. Once the goals and audience are known, content can be built accordingly. Try and make it as relevant and engaging as possible.

Note that different types of content require different amounts of effort. Although blogs can be time consuming, they can capture a lot of information and can be ideal for communicating detailed messages. Tweets, on the other hand, are confined to 140 characters and are perfect for quick updates or to provide links to other sources. Act on what works and what doesn't.

### **3.4 What tools will be used?**

Once the goals have been identified, the audience determined and the types of content defined, it is time to choose suitable tools. These may include the following:

- a. Platforms such as Facebook, Twitter, and YouTube;
- b. Monitoring tools like Google Alerts, Tweet Deck, Hoot Suite or Radian 6;
- c. Online programmes like WordPress or Blogger for writing blogs; and,
- d. Video editing programmes for making YouTube videos.

Important reminder: don't bite off more than can be chewed. It is not necessary to have a presence across all Social Media channels, so only choose the tools that meet the immediate objectives.

The screenshot shows the YouTube channel page for the Bureau of Meteorology. At the top, there is the YouTube logo, a search bar, and links for 'Browse' and 'Upload'. A notification banner states: 'We're changing our privacy policy. This stuff matters. Learn more Dismiss'. The channel header includes the Bureau of Meteorology logo, a 'Subscribe' button, and statistics: 76 subscribers and 3,389 video views. Below the header are navigation tabs for 'Featured', 'Feed', and 'Videos', along with a 'Search Channel' box. The main content area is titled 'Uploads (8)' and features a dropdown menu set to 'Date added (newest - oldest)'. A 'Uploaded Videos' tab is active, showing a grid of video thumbnails. The videos include: 'Seasonal Stremflow Forecasting Se...' (5:11, 159 views), 'The Australian Hydrological Geosp...' (1:41, 151 views), 'Large Swells Impact Southeastern ...' (1:25, 270 views), 'Tropical Cyclone Yasi Forecast Tr...' (0:17, 399 views), 'Climate Information Explained' (2:54, 379 views), and 'Careers at the Bureau of Meteorology' (3:19, 542 views).

Figure 6. The Australia Bureau of Meteorology YouTube site, accessible through the following link: <http://www.youtube.com/user/BureauOfMeteorology/videos>

### 3.5 How will the content be maintained?

Once the content strategy has been developed, and the tools have been chosen, the day-to-day management processes should be mapped out. To do this, the following sorts of questions should be addressed:

- How often will new material be posted?
- How frequently will the NMHSs' Social Media sites be monitored?
- How will material be prepared and authorised?
- How will content be archived?

It will be important to determine roles and responsibilities for generating new content. Some staff will be good at posting on Facebook or Twitter, whilst others might be good at writing blogs or have the Information Technology (IT) skills to format online material.

### 3.6 What human resources will be needed?

The answer to this question will depend on the content strategy, and on the chosen tools. More resources will be needed if the scope of the content and the number of channels to be used is large. It may be worth considering a single Facebook page that provides news items only to start with, in order to get an initial feel for the Social Media landscape and to learn how to most effectively engage with the audience.

## Met Office wins social media award

30 November 2011 - The Met Office has won the Best Use of Social Media award in the public sector at the Computer Weekly's Social Media Awards 2011, sponsored by IBM.

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[Share by email](#)  
[Print](#)



Using [Twitter](#), [Facebook](#), [YouTube](#) and our [news blog](#) we help people keep up to date about the latest weather so that they know what to expect and how best to deal with all that the British weather can throw at us as a nation.

Through our social media channels, we're reaching more than 75,000 people every month. Our @metoffice Twitter channel has over 40,000 followers, and we are available to respond to weather queries 24 hours a day, 7 days a week so that our followers are

Our [events calendar](#) was introduced in January 2010 and covers events such as Glastonbury, Wimbledon and Bonfire night. Year on year growth has seen an increase of 183% and, as well as generating visits, it also drives revenue through advertising and sponsorship.

Some of the specific issues to address when assessing the resources situation include:

- a. Does the Meteorological Service have sufficient capacity inside the organization, or is external assistance required? Bear in mind that nobody knows your Service better than the people who work in it;
- b. Maintaining Social Media channels has the potential to be a round-the-clock activity, especially if they are used for communicating warning information. This is an important matter to consider when deciding the content strategy. The example above illustrates the success of the UK Met Office in their social media programme, and shows the important population of users it was reaching by November 2011;
- c. Ensure that the right people with the right skills are doing the job. It may be necessary to recruit a content manager – that is, someone who understands Social Media and has the required communication and outreach skills; and,
- d. Be mindful of which channels are being used. The skills required for preparing a blog entry are not the same as those required to produce a short video or maintain an image library.

### 3.7 How will staff be engaged?

All NMHSs staff can play a useful role when it comes to Social Media. Many of them will already have their own Social Media presence, including a personal Facebook page, and they can use this to 'spread the word' when some new content is provided by NMHSs. The network of friendships and associates that staff has can be a very useful channel through which the NMHSs messages can be shared.

Providing staff with the right Social Media training and awareness will help ensure that they participate in an effective way, consistent with the organization's principles and policies.

It may also be worth considering an internal Social Media platform (such as Yammer) that is accessible only to staff and allows them to communicate amongst themselves. This gives staff exposure to the workings of Social Media and can be a very valuable information sharing and team-building exercise.



**Figure 7. PAGASA: The Philippines Meteorological Service Facebook page which can be accessed at:**  
[https://www.facebook.com/pages/Dost\\_pagasa/164659536930397](https://www.facebook.com/pages/Dost_pagasa/164659536930397)



**Figure 8. The Malaysian Meteorological Department Facebook page, which can be accessed at:**  
<https://www.facebook.com/malaysiamet?ref=pb>



Figure 9. The Saudi Arabia Meteorological Service Facebook page, which can be accessed at: <https://www.facebook.com/pme.gov.sa>



Figure 10. The Peru Meteorological Service Facebook page, which can be accessed at: <https://www.facebook.com/senamhiperu?>



The image shows a screenshot of the Met Office Twitter page. On the left, there are sections for 'Tweets', 'People' (listing various Met Office accounts), and 'France trends'. The main content area shows a tweet from 'Living Safely' (@LS\_Health) with the text: 'RT @LivingSafely: Misty or clear? What weather does the Met Office forecast for the UK for Tuesday, March 27? ow.ly/4qSm9'. Below this is another tweet from 'Living Safely' (@LivingSafely) with the text: 'UK/London: Misty or clear? What weather does the Met Office forecast for the UK for Tuesday, March 27? ht.ly/9TAvE'. Further down, there are tweets from 'David Roberts' (@drgrist) and 'charlotte newman' (@charlottewom).

Figure 11. The United Kingdom (UK) Met Office Twitter page, which can be accessed at: <https://twitter.com/#!/search/uk%20met%20office>

The image shows a screenshot of the Met Office News Blog. The header includes the text 'Met Office News Blog' and 'Official blog of the Met Office news team'. Below the header is the Met Office logo and a navigation menu with links for 'HOME', 'NEWS', 'IN THE MEDIA', 'IMAGES', 'DIARY', and 'ABOUT'. The main content area features a guest blog post titled 'Guest blog: It's raining - why have we still got a drought?' by Trevor Bishop, dated 20/04/2012. The post discusses the drought and the recent rain. To the right of the post is an 'ABOUT THIS BLOG' section and an 'AWARDS' section featuring a 'Computer Weekly social media awards' logo.

Figure 12. The United Kingdom (UK) Met Office Blog page, which can be accessed at: <http://metofficenews.wordpress.com>

### **3.8 How will the success of the social media strategy be measured?**

There are many tools available to help gauge whether the Social Media strategy is a success. Measuring can involve:

- a. Web analytics – page hits, numbers of visits, referrals, etc.
- b. Social listening – how often is the Meteorological Service being talked about? Are the comments favourable?
- c. Strength and size of the networks – how many ‘Likes’ does the Facebook page have?
- d. Market research – audience surveys, feed-back forms, etc.

Think about how these measurements will be reported and with whom the performance information will be shared. Positive results may be worth communicating to the audience through the very same Social Media channels that are being measured.

Without such measurements, NMHSs will be unable to determine whether the Social Media strategy has any value, and will miss out on valuable information on how to improve.

### **3.9 How will the social media strategy be reviewed?**

The Social Media strategy is a living document. The Social Media landscape is continually changing and adapting and it is important to keep abreast. Social Media strategies should be reviewed and updated based on information gathered as part of the measurement activity.

Be prepared to shift resources away from components of the strategy that are not working well.

Be mindful not to make changes that are too large for the audience to deal with. Try ‘testing the waters’ first. Best of all, ask the users themselves to comment on proposed changes – an engaged and appreciative audience can be an enormous asset when seeking ideas for improvement.

### **3.10 Final considerations**

Don’t re-invent the wheel – draw on the experiences and use materials of other organizations to help develop the Social Media strategy. One of the good things about Social Media is the willingness of people to share.

Make sure the organizational risks are recognized. For example, if the decision is taken to not use Social Media for real-time warnings, then the Social Media site should clearly state this so that audience expectations are managed.

Make sure that there are sufficient resources to keep the Social Media channels active. A dormant Social Media page that hosts out-of-date information will damage the reputation of NMHSs and not maintain a large or engaged audience.

Be mindful of fakes. There are no formal controls on Facebook pages, so keep an eye out for ones that claim to represent your Meteorological Service. Make sure the official status of the Service’s page is clearly identified, using appropriate logos for example, so that visitors know that they are dealing with authoritative information.

## **4. SOME GENERAL PRINCIPLES FOR PROVIDING SOCIAL MEDIA CONTENT**

In concluding these Guidelines, it is worth considering some general principles that should be applied when engaging in Social Media activities. These principles will help NMHSs to develop effective relationships with their audience through constructive, mutually beneficial online dialogue.

#### **4.1 Act responsibly**

The open, interactive nature of online discussions means that participants who wish to be disruptive, or express views that are provocative or lack factual basis, may become involved. NMHSs will need to establish clear protocols on how to engage in these circumstances; it is important to remain professional. Any content provided by NMHS staff is official information and should be consistent with the NMHSs' information policies.

#### **4.2 Be authentic**

Make sure that the Meteorological Service's 'brand' is clearly presented and that staff who are involved in communicating through Social Media identify themselves. This helps build the relationship with the audience - an essential element for Social Media success.

#### **4.3 Consider the audience**

The audience will consist of users with a wide variety of interests and attitudes. Be careful when framing messages so that the discussion is inclusive.

#### **4.4 Exercise good judgment**

Focus on positive messages and avoid comments that have the potential to offend or inflame. Being overly defensive in response to criticism can be counter-productive; instead, take such feedback as an opportunity to learn. Admit mistakes and explain what measures will be taken to prevent them happening again.

It is important that NMHSs have a policy on staff usage of Social Media. Such a policy should have clear guidelines about using Social Media outside work and dealing with comments that do not reflect the official position of the organization.

#### **4.5 Respect copyright and fair use**

Always give people proper credit for their work and make sure that all material is properly attributed. Aside from the copyright and intellectual property aspects, correct attribution is consistent with the collaborative spirit that is the hallmark of Social Media.

#### **4.6 Protect confidential and proprietary information**

Just because Social Media tools are designed to share information quickly and easily does not mean it is always okay to do so. Make sure that the Social Media policy is consistent with broader organizational policies on dealing with confidential or proprietary information.

#### **4.7 Bring value**

A Social Media strategy will more likely pay dividends for NMHSs if the information they provide is of value to the audience. Make sure to address questions and concerns that are raised by participants. By providing useful information, the community will be more willing to engage with the Meteorological Service, support it in its mission and offer valuable suggestions.

### **5. CONCLUSION**

These Guidelines have been developed to assist NMHSs who may be considering the use of Social Media. The challenges and benefits of Social Media have been highlighted, and some principles for an effective strategy have been presented to encourage NMHSs to consider Social Media as an important element of a complete service delivery framework.

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