

**WORLD METEOROLOGICAL ORGANIZATION**

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WDS/PWS/SG-SDD, ANNEX II

## **PUBLIC WEATHER SERVICES**

**Sample Tried-and-Tested Survey Questionnaires  
on Service Delivery by National Meteorological  
and Hydrological Services (NMHSs)**

# WORLD METEOROLOGICAL ORGANIZATION

## PUBLIC WEATHER SERVICES

### **Sample Tried-and-Tested Survey Questionnaires on Service Delivery by NMHSs**

The Expert Team on Services and Products Improvement (ET/SPI) of the Commission for Basic Systems (CBS) Open Programme Area Group (OPAG) on Public Weather Services (PWS) is mandated under one of its Terms of Reference (TORs) to "*Identify, report and provide recommendations on emerging needs for new and improved products and services with emphasis on key PWS user groups*". The Team identified the key users of PWS as including the public, government agencies, emergency management / civil defense authorities, major economic sectors, media, other hydrometeorological service providers, and organizers of major international events (e.g., Olympics, other major sporting and cultural events). It recognized the need for NMHSs to have a comprehensive understanding of their requirements.

Surveys of key user groups help to identify areas where improvements in PWS can be made. As an example, surveys in some NMHSs have highlighted the need for improved accuracy, detail and timeliness of forecasts and warnings. Surveys targeting key user groups need to be undertaken to clearly identify their emerging needs as well as their level of satisfaction with NMHSs products and services. The results serve as a valuable tool in the evaluation of services that NMHSs deliver.

This document consists of questions extracted from existing tried-and-tested surveys that were provided by the NMHSs of Australia, Germany, Ireland, Kenya, Hong Kong, China, the United Kingdom and the United States of America. These questions are intended to provide examples of styles and types of questions asked by different NMHSs, so as to assist in the design of questionnaires best suiting infrastructural, social, and cultural conditions in each country.

The full questionnaires and accompanying detailed analyses and reports of the seven (7) surveys are available on the WMO Website, and can be located at the following web address: <http://www.wmo.int/pages/prog/amp/pwsp/surveys.htm>.

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**BUREAU OF METEOROLOGY (BOM)****AUSTRALIA**

**Extract questions from the Public  
User Survey – December 2009 –  
METRO & REGIONAL (Ref: 2404)**

**Telephone Survey****INTRODUCTION**

Good (...), my name is (...) calling on behalf of the Bureau of Meteorology from Market Solutions, a social and market research company. Today, we are conducting a study to collect feedback on the community use and perception of weather information. The research will be used to both measure and improve the Bureau's products and services.

For this interview, we need to speak to the person in your household who is aged 16 years or older who had the last birthday - would that be you?

(SCHEDULE CALLBACK -DO NOT  
SUBSTITUTE FOR ANOTHER  
HOUSEHOLD MEMBER)  
(REINTRODUCE IF NECESSARY)

I want to reassure you that your answers will be completely confidential. Only combined results will be provided to the Bureau to help them improve their service. I also need to let you know that my supervisor may listen to parts of this interview to assist in quality control monitoring. The interview will take about 10 minutes - may I continue now?

CONTINUE	1	<input type="checkbox"/>
Schedule Callback	2	<input type="checkbox"/>
Refused	3	<input type="checkbox"/>
Non qualifying	4	<input type="checkbox"/>
Government/Business	5	<input type="checkbox"/>
Terminated early	6	<input type="checkbox"/>
Non working number	7	<input type="checkbox"/>
Communication difficulty	8	<input type="checkbox"/>
No contact on 5 attempts	9	<input type="checkbox"/>
Duplicate	10	<input type="checkbox"/>

**SECTION 1: DEMOGRAPHICS**

Q.1. Firstly we have just a few questions to ensure we have a good cross section of the community.

Male	1	<input type="checkbox"/>
Female	2	<input type="checkbox"/>

Q.2. Which of the following age groups do you fall into?

16 to 24 years	1	<input type="checkbox"/>
25 to 34 years	2	<input type="checkbox"/>
35 to 44 years	3	<input type="checkbox"/>
45 to 54 years	4	<input type="checkbox"/>
55 to 64 years	5	<input type="checkbox"/>
65 to 74 years	6	<input type="checkbox"/>
75 years or older	7	<input type="checkbox"/>
(Refused)	8	<input type="checkbox"/>

Q.3. Do you undertake paid work outdoors?

Yes	1	<input type="checkbox"/>
No	2	<input type="checkbox"/>

**SECTION 2: USAGE**

Q.4. Now we want to talk about accessing and using weather information. Thinking about weather information, do you typically check the weather to make decisions regarding...?

a) Personal activities such as what to wear or how to travel	<input type="checkbox"/>
b) Leisure activities such as having a barbecue or visiting places on the weekend	<input type="checkbox"/>
c) Domestic activities such as hanging out the washing or doing other work around the house	<input type="checkbox"/>
d) Special occasions such as going to a wedding	<input type="checkbox"/>
e) <i>Ask only if work outdoors:</i> Work activities	<input type="checkbox"/>
f) Something else (Specify) _____	<input type="checkbox"/>
g) (Do not check the weather) – TERMINATE	<input type="checkbox"/>

Q.5. And how often do you typically check the weather to make decisions regarding the activities you mentioned?

Daily	1	<input type="checkbox"/>
2-3 days a week	2	<input type="checkbox"/>
Once a week	3	<input type="checkbox"/>
Once a fortnight	4	<input type="checkbox"/>
Once a month	5	<input type="checkbox"/>
Once every 2-3 months	6	<input type="checkbox"/>
Less often	7	<input type="checkbox"/>

Q.6. Typically, which of the following weather types have you **recently** used to **make decisions** about your day to day activities?

Maximum temperature	1	<input type="checkbox"/>
Minimum temperature	2	<input type="checkbox"/>
Rain	3	<input type="checkbox"/>
Wind speed	4	<input type="checkbox"/>
Wind direction	5	<input type="checkbox"/>
Wind chill factor	6	<input type="checkbox"/>

Cloud or sunshine	7	<input type="checkbox"/>	Other websites (Specify)	8	<input type="checkbox"/>
Waves or swell	8	<input type="checkbox"/>	Mobile phones / PDAs	9	<input type="checkbox"/>
Hail	9	<input type="checkbox"/>	SMS	10	<input type="checkbox"/>
Fog	10	<input type="checkbox"/>	Other (Specify)	11	<input type="checkbox"/>
Thunderstorms	11	<input type="checkbox"/>			
Flooding	12	<input type="checkbox"/>			
Fire danger	13	<input type="checkbox"/>			
UV Index or UV alerts	14	<input type="checkbox"/>			
Snow	15	<input type="checkbox"/>			
Frost	16	<input type="checkbox"/>			
(None)	17	<input type="checkbox"/>			

Q.10. Before today, were you aware that the Bureau of Meteorology has a website where you can find weather information?

Yes – aware	1	<input type="checkbox"/>
No – not aware	2	<input type="checkbox"/>

Q.7. Have you **recently** used any of the following weather types to **make decisions** about **sun protection**?

Maximum temperature	1	<input type="checkbox"/>
Minimum temperature	2	<input type="checkbox"/>
Rain	3	<input type="checkbox"/>
Wind	4	<input type="checkbox"/>
Cloud or sunshine	5	<input type="checkbox"/>
Maximum UV Index	6	<input type="checkbox"/>
UV alert times	7	<input type="checkbox"/>
Other (Specify)	8	<input type="checkbox"/>
(Do not use weather information to make decisions about sun protection)	9	<input type="checkbox"/>

Q.8. Which of the following have you used over the past 6 months to get weather information?

Free to air television	1	<input type="checkbox"/>
Pay TV	2	<input type="checkbox"/>
ABC Radio, for example Radio National, Triple J, ABC FM, News Radio or ABC local	3	<input type="checkbox"/>
Other radio	4	<input type="checkbox"/>
Newspapers	5	<input type="checkbox"/>
Bureau of Meteorology website	6	<input type="checkbox"/>
Telephone weather service from the Bureau	7	<input type="checkbox"/>
Other websites (Specify)	8	<input type="checkbox"/>
Mobile phones / PDAs	9	<input type="checkbox"/>
SMS	10	<input type="checkbox"/>
Other (Specify)	11	<input type="checkbox"/>
(None of the above)	12	<input type="checkbox"/>
– TERMINATE		

Q.9. Of those you have mentioned, which one do you find to be the **most valuable** source of weather information to enable you to make weather related decisions?

Free to air television	1	<input type="checkbox"/>
Pay TV	2	<input type="checkbox"/>
ABC Radio, for example Radio National, Triple J, ABC FM, News Radio or ABC local	3	<input type="checkbox"/>
Other radio	4	<input type="checkbox"/>
Newspapers	5	<input type="checkbox"/>
Bureau of Meteorology website	6	<input type="checkbox"/>
Telephone weather service from the Bureau	7	<input type="checkbox"/>

**BUREAU OF METEOROLOGY (BOM)****AUSTRALIA**

**Extract questions from the Public  
User Survey – December 2009 –  
RURAL (Ref: 2404)**

**Telephone Survey**

Wind direction	6	<input type="checkbox"/>
Wind chill factor	7	<input type="checkbox"/>
Cloud or sunshine	8	<input type="checkbox"/>
Evaporation	9	<input type="checkbox"/>
Hail	10	<input type="checkbox"/>
Snow (only VIC, NSW, TAS)	11	<input type="checkbox"/>
Fog	12	<input type="checkbox"/>
Thunderstorms	13	<input type="checkbox"/>
Solar radiation	14	<input type="checkbox"/>

**SECTION 1: DEMOGRAPHICS**

Q.1. What is the **main type** of farming that you are engaged in?

Cattle / beef	1	<input type="checkbox"/>
Cotton	2	<input type="checkbox"/>
Chickens	3	<input type="checkbox"/>
Dairy	4	<input type="checkbox"/>
Forestry / wood lots	5	<input type="checkbox"/>
Fruit growing	6	<input type="checkbox"/>
Vegetable growing	7	<input type="checkbox"/>
Grain or cropping	8	<input type="checkbox"/>
Broadacre	9	<input type="checkbox"/>
Pigs	10	<input type="checkbox"/>
Sheep	11	<input type="checkbox"/>
Sugar	12	<input type="checkbox"/>
Viticulture (grapes)	13	<input type="checkbox"/>
Wool	14	<input type="checkbox"/>
Other (specify)	15	<input type="checkbox"/>

Q.2. Are you engaged in any **other types** of farming?

Cattle / beef	1	<input type="checkbox"/>
Cotton	2	<input type="checkbox"/>
Chickens	3	<input type="checkbox"/>
Dairy	4	<input type="checkbox"/>
Forestry / wood lots	5	<input type="checkbox"/>
Fruit growing	6	<input type="checkbox"/>
Vegetable growing	7	<input type="checkbox"/>
Grain or cropping	8	<input type="checkbox"/>
Broadacre	9	<input type="checkbox"/>
Pigs	10	<input type="checkbox"/>
Sheep	11	<input type="checkbox"/>
Sugar	12	<input type="checkbox"/>
Viticulture (grapes)	13	<input type="checkbox"/>
Wool	14	<input type="checkbox"/>
Other (specify)	15	<input type="checkbox"/>
(Not engaged in any other types)	16	<input type="checkbox"/>

**SECTION 2: USAGE**

Q.3. Typically, which of following weather types have you **recently** used to **make decisions** about your farming activities?

Maximum temperature	1	<input type="checkbox"/>
Minimum temperature	2	<input type="checkbox"/>
Ground temperature	3	<input type="checkbox"/>
Rain	4	<input type="checkbox"/>
Wind speed	5	<input type="checkbox"/>

Tropical cyclones (only North WA, QLD & NT)	15	<input type="checkbox"/>
Flooding	16	<input type="checkbox"/>
Fire danger	17	<input type="checkbox"/>
Frost	18	<input type="checkbox"/>
UV Index or UV alerts	19	<input type="checkbox"/>
Delta T (used for pesticide spraying)	20	<input type="checkbox"/>
Evapotranspiration	21	<input type="checkbox"/>
Sheep graziers warnings	22	<input type="checkbox"/>
Seasonal outlooks	23	<input type="checkbox"/>
(None)	24	<input type="checkbox"/>

**SECTION 3: PERCEPTIONS**

Q.4. Now we want to talk about what you think of the weather information provided. Would you say the weather information you access or receive...?

Regularly meets your requirements	1	<input type="checkbox"/>
Sometimes meets your requirements	2	<input type="checkbox"/>
Never meets your requirements	3	<input type="checkbox"/>
(Unsure / can't say)	4	<input type="checkbox"/>

Q.5. **Weather information does not regularly meet requirements - otherwise skip to next question.** In what way does the weather information you receive not meet your requirements?

*(Interviewer note: probe forecasts / factors e.g. temperature, rainfall, etc.)*

Rain forecasts are inaccurate	1	<input type="checkbox"/>
Maximum temperatures are inaccurate	2	<input type="checkbox"/>
Wind forecasts are inaccurate	3	<input type="checkbox"/>
Long term / 7 day forecasts are inaccurate	4	<input type="checkbox"/>
Longer term / seasonal forecasts are inaccurate (e.g. 3 months)	5	<input type="checkbox"/>
Localised information is insufficient (e.g. suburb)	6	<input type="checkbox"/>
More frequent / updated information required	7	<input type="checkbox"/>
Other (Specify)	8	<input type="checkbox"/>
(Unsure / can't say)	9	<input type="checkbox"/>

Q.6. Typically, how many days ahead of time do you **need to know** the weather forecast?

\_\_\_\_\_

Q.7. Typically, how many days ahead of time would you **like to know** the weather forecast?

(Don't know / can't say) 6

Q.8. Is the weather information available in time to meet your needs?

- Yes – Always 1
- Yes – Most of the time 2
- As often Yes as No 3
- No – Not often enough 4
- No – Never 5
- (Don't know / can't say) 6

Q.9. For your needs, would you say that over the past 6 months, the weather forecasts and warnings provided by the Bureau have been...?

- Always accurate 1
- Usually accurate 2
- Accurate as often as inaccurate 3
- Usually inaccurate 4
- Always inaccurate 5
- (Don't know / can't say) 6

Q.10. Generally do you think that weather forecasts and warnings are getting more accurate, less accurate or haven't changed over the past few years?

- More accurate 1
- No different 2
- Less accurate 3
- Don't know / can't say 4

Q.11. Which part of the weather information has become (insert answer to previous question)?

- Temperature forecasts 1
- Rain forecasts 2
- Wind forecasts 3
- Warnings for hail and thunderstorms 4
- Warnings such as for fire or floods 5
- Other weather warnings (Specify) 6
- 7 day forecasts 7
- Longer term forecasts (e.g. 3 months) 8
- Localised information (e.g. suburb) 9
- Something else (Specify) 10
- (Don't know / can't say) 11

Q.12. Thinking about all aspects of weather information, how satisfied are you with the information you receive from the Bureau of Meteorology through the different sources you use, are you...?

- Very satisfied 1
- Fairly satisfied 2
- Neither satisfied nor dissatisfied 3
- Fairly dissatisfied 4
- Very dissatisfied 5

Q.13. What could be done to make you feel more satisfied with the weather information from the Bureau of Meteorology?

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**SECTION 4: IMPROVEMENTS**

Q14. The term "fine" is currently used to describe when no rain is forecast. The Bureau intends to replace this term with words to describe sky conditions such as "sunny", "cloudy" or "partly cloudy". Do you think this change will be for the better, the worse or will make no difference in helping you understand the weather forecast?

- Better 1
- Worse (Specify – why do you say that?) 2
- No difference 3

Q.15. The Bureau is also looking at ways of improving its forecast services by providing additional rainfall information. Which of the following rainfall information, if any, would you use to make decisions about your day to day activities?

- Daily rainfall totals 1
- Chance of any rainfall in percentage terms 2
- (Would not use either) 3

**CLOSE**

Q.16. As part of quality control procedures, someone from our project team may wish to re-contact you to verify a couple of responses you provided today. For this reason, may I please have your first name? \_\_\_\_\_

Q.17. As this is market research, it is carried out in compliance with the Privacy Act and the information you provided will be used only for research purposes. Your answers will be combined with those of other participants, no individual responses will be identified.

We do re-contact people from time to time for related research projects. Would it be okay if we contacted you again in the future to invite you to participate in any similar research? We will only use this information to contact you to invite you to participate in research, your details will not be passed onto any third party.

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**CLOSE:** That's the end of the interview. Thank you for your time and responses. My name is (...) from Market Solutions, if you have any queries about this survey feel free to call this office during business hours – would you like the number?

**DEUTSCHER WETTERDIENST (DWD)  
METEOROLOGICAL SERVICE OF GERMANY**

**GERMANY**

**Extract Questions from the DWD and  
Severe Weather Warnings Survey (2006)**

**Telephone Survey**

1) How much attention do you pay to severe weather warnings which refer to the German territory?

1. I always pay attention
2. I mostly pay attention
3. I occasionally pay attention
4. I rarely pay attention
5. I never pay attention
6. I don't know
7. not specified

2) Which of the following means do you usually use to obtain information about severe weather situations in Germany?

1. Television
2. Radio
3. Daily newspapers
4. Internet
5. Videotext
6. Other
7. Don't know
8. not specified

3) Which of the following television programmes do you usually use to obtain information about severe weather situations in Germany?

1. ARD / Das Erste
2. ZDF
3. Regional stations, e.g. Rundfunk
4. RTL
5. SAT1
6. N24
7. PRO7
8. n-tv
9. RTL2
10. VOX
11. KABEL
12. Other
13. I don't know
14. not specified

4) Which website do you usually use to obtain information about severe weather situations in Germany?

1. wetter.de / wetter.com
2. google.de / Google/  
search engines in general

3. wetter-online.de
4. Regional websites,  
e.g., meinestadt.de,  
berlin.de, köln.de
5. unwetterzentrale.de
6. Deutscher Wetterdienst /  
Deutscherwetterdienst.de/.dwd.de
7. Online services of news programmes,  
e.g., NTV, N24, Tagesschau
8. web.de
9. t-online.de / T-Online
10. Spiegel.de/Spiegel-online.de/Spiegel
11. AOL.de
12. unwetter.de
13. freenet.de / Freenet
14. Other
15. I don't know
16. not specified

5) Do you know who is responsible for delivering severe weather warnings in Germany? Please indicate all companies and institutions you can think of.

1. Deutscher Wetterdienst / DWD
2. Weather stations / Meteorological  
watch offices / Weather institutes
3. Weather Service
4. Deutsches Wetteramt / Wetteramt  
((German Weather Office)
5. Kachelmann / Kachelmann's weather
6. Regional weather services
7. Media, television, television stations,  
radio, ARD, ZDF
8. Meteorologists in general
9. Deutsches meteorologisches Institut  
(German meteorological institute) /  
Meteorologischer Dienst (Meteorological  
Service of the former GDR)
10. Government / Ministry of the Interior
11. Unwetterzentrale  
(Severe weather centre)
12. Disaster management authority
13. Deutsche Wetterzentrale/Wetterzentrale  
((German) weather centre)
14. Other
15. I don't know
16. Not specified

6) What comes first to your mind when you think of "Deutscher Wetterdienst"?

1. Satellites in general
2. Large computers, computing centres
3. Offenbach, headquarters in Offenbach
4. Meteorologists, meteorological service
5. State-owned, public authority,  
civil servants

**HONG KONG OBSERVATORY (HKO)**

**HONG KONG, CHINA**

**Extract questions from the Public Opinion Survey on the Accuracy of Weather Forecasts in Hong Kong (May 2010)**

**Telephone Survey**

**INTRODUCTION**

Good morning / afternoon / evening, my name is \_\_\_\_\_ and I am calling from ORC International, an independent research firm. We have been commissioned by Hong Kong Observatory (HKO) to conduct an opinion survey on the accuracy of weather forecasts in Hong Kong and would like to conduct a short interview with you. The information you provide will be treated with strict confidence and will be used for aggregate analysis only. Thank you for your cooperation.

**Main Questionnaire**

Q1. Do you usually read, watch or listen to weather reports?

- 1. Yes
- 2. No

Q2. From where do you usually obtain weather information of Hong Kong? Do you obtain it from radio, Television, newspaper, weather hotline, internet, pagers / mobile phones, or other sources?

- 1. Radio
- 2. Television
- 3. Newspaper
- 4. Hong Kong Observatory's Dial-a-Weather hotlines 1878 200
- 5. PCCW's 18 501 / 18 503 / 18 508
- 6. Observatory's website
- 7. Other weather websites
- 8. Other websites' weather information section (e.g., yahoo)
- 9. Mobile Phones
- 10. Pagers
- 11. Friends or relatives
- 12. Other sources, please specify: \_\_\_\_\_

Q3. As you mentioned, you obtain weather information from Internet. Do you use PC, WAP Mobile phone or PDA to access internet for obtaining weather information?

- 1. Personal Computer (PC)
- 2. WAP phone
- 3. Personal Digital Assistant (PDA)
- 4. Others, please specify: \_\_\_\_\_

Q4. Do you consider the weather forecasts of the Hong Kong Observatory over the past several months very accurate, somewhat accurate, average, somewhat inaccurate or very inaccurate?

- 1. Very accurate
- 2. Somewhat accurate
- 3. Average
- 4. Somewhat inaccurate
- 5. Very inaccurate
- 6. Don't know / No comment

Q5. What percentage of weather forecasts of the Hong Kong Observatory over the past several months do you consider accurate?

- 1. \_\_\_\_\_ per cent
- 2. Don't know / No comment

Do you consider the following aspects of weather forecasts of the Hong Kong Observatory over the past several months accurate, somewhat accurate, somewhat inaccurate or inaccurate?



	Accurate	Somewhat accurate	Somewhat inaccurate	Inaccurate	Don't know / No comment
Q6. Temperature					
Q7. Fine / Cloudy					
Q8. Rain storm forecasts / warning					
Q9. Typhoon prediction warning					

Q10. How do you compare weather forecasts nowadays with those 3 to 4 years ago? Are they more accurate, less accurate or about the same?

1. More accurate
2. About the same
3. Less accurate
4. Don't know / No comment

Q11. If you rate on a scale of 0 to 10, with "10" being "excellent service", "5" the passing mark and "0" "poor service", how many marks will you give for the satisfaction level of the services provided by the Hong Kong Observatory?  
\_\_\_\_\_ Mark

Q12. How do you compare the tropical cyclone warning services provided by the Hong Kong Observatory nowadays with those from the past 3 to 4 years ago? Is it better, worse or about the same?

1. Better
2. About the same
3. Worse
4. Don't know / No comment

**Personal Information**

Finally, we would like to ask you some personal information. This information is collected for statistical analysis only and will be kept confidential.

Q13. Which age group do you belong to?

1. 15-17
2. 18-19
3. 20-29
4. 30-39
5. 40-49
6. 50-59
7. 60-64
8. Refuse to answer

Q14. What is your educational attainment?

1. No formal schooling/kindergarten
2. Primary
3. Junior secondary (Form 1 to Form 3)
4. Senior secondary (Form 4 to Form 5)/Springboard Project
5. Matriculation (Form 6 to Form 7)/Technical College
6. Tertiary (non-degree or associate degree)
7. Bachelor Degree
8. Master or Doctor Degree
9. Refuse to answer

Q15. What is your occupation? (If answer – no occupation, ask whether it belongs to 1, 2, 3, or 4)

1. Student
2. Homemaker
3. Job seeker / unemployed
4. Retired
5. Professionals or associate professionals
6. Managers or administrators
7. Clerical staff
8. Technical staff
9. Non-technical staff
10. Service or sales staff
11. Self-employed
12. Others, please specify: \_\_\_\_\_
13. Refuse to answer

Q16. Which of the industry are you engaged in?

1. Agriculture and Fishing
2. Mining and Quarrying
3. Manufacturing
4. Electricity, Gas and Water
5. Construction
6. Wholesale, Retail and Import/Export Trades, Restaurants and Hotels
7. Transport, Storage and Communication
8. Financing, Insurance, Real Estate and Business Services
9. Community, Social and Personal Services

- 10. Other,   
please specify: \_\_\_\_\_
- 11. Refuse to answer

Q17. Which personal monthly income group do you belong to? (including salary, housekeeping money, government subsidy, old age allowance, CSSA, etc)

- 1. No income
- 2. \$1-3,999
- 3. \$4,000-9,999
- 4. \$10,000-14,999
- 5. \$15,000-19,999
- 6. \$20,000-29,999
- 7. \$30,000-39,999
- 8. \$40,000 or above
- 9. Refuse to answer

Q18. Which household monthly income group do you belong to? (including salary, housekeeping money, government subsidy, old age allowance, CSSA, etc)

- 1. No income
- 2. \$1-12,499
- 3. \$12,500-19,999
- 4. \$20,000-29,999
- 5. \$30,000-39,999
- 6. \$40,000-49,999
- 7. \$50,000-59,999
- 8. \$60,000-69,999
- 9. \$70,000 or above
- 10. Refuse to answer

Q19. Gender

- 1. Male
- 2. Female
- 3. Refuse to answer

\_\_\_\_\_

**METEOROLOGICAL SERVICE OF IRELAND (MET ÉIREANN)**

**IRELAND**

**Extract Questions from the Survey on “Usage & Attitudes” (December, 2001)**

**Telephone Survey**

Q.1 What is the name of Ireland’s official provider of weather information?

- Met Éireann
- Met Office
- Irish Meteorological Service
- Other (SPECIFY & CODE)
- Don’t know

(Refer to the table below for Q.2a to Q.2f)

Q.2a Can you please tell me all of the different ways in which you can find out the weather forecasts in Ireland?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Q.2b Apart from the ones you have just mentioned, which of these methods of obtaining the weather forecast are you aware of? Any others?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Q.2c And which of these ways, if any, do you use nowadays to obtain the weather forecast?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Q.2d Which **one** of these ways gives you the most up to date weather forecast?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Q.2e And which **one** of these methods provides the most detailed weather forecast?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Q.2f Which **one** of these methods, in your opinion, provides the easiest way of getting the weather forecast?

	Q.2a Spontaneously Aware	Q.2b Prompt Aware	Q.2c Use Nowadays	Q.2d Most Up to Date	Q.2e Most Detailed	Q.2f the Easiest
Television						
Radio						
Newspaper/Press						
Phone (Weatherdail)						
Aertel						
Internet						
E-mail						
Other (Specify)						

Q.3 Which **one** of the following provides the most reliable weather forecasts?

- RTÉ Television
- TV3 Television

- TG4 Television
  - RTÉ Radio
  - Independent/Local Radio
  - UK TV / Radio (BBC, Sky etc.)
  - Telephone (Weatherdial etc.)
  - Daily Newspapers
  - Internet
  - Other (SPECIFY & CODE)
  - Don't know
- Several times a day
  - Once a day
  - Few times a week
  - Once a week
  - Less often
  - Never

Q.5 From the list of statements that people have made about weather forecasts in general and Met Éireann in particular, I would like you to tell me how strongly you agree or disagree with the statements below

Q.4 How often do you actually see, hear or read the weather forecast nowadays?

	Agree Strongly	Agree Slightly	Neither Agree Nor Disagree	Disagree Slightly	Disagree Strongly	Don't Know
I couldn't be bothered checking the weather forecast because it's never right						
Met Éireann's forecasts are a real help in planning my daily activities						
The forecast provided by Met Éireann is far too general, it needs to be more localised						
Met Éireann's forecasts are not broadcast often enough						
Met Éireann's forecasts make a big impact on how I organise my work						
The style of Met Éireann's weather forecasts is dull and boring						
I only half listen to the weather forecast						
Met Éireann's forecasts give clear-cut, easy to grasp weather information						
I often get confused with the level of detail in Met Éireann's weather forecasts						
Overall, Met Éireann's forecasts are good value for money						
I'm aware that Met Éireann issues warnings of gales, flooding etc.						
Weather warnings issued by Met Éireann are of little importance						
I pay careful attention to warnings of gales, snow etc						
I never pay any heed to severe weather warnings from Met Éireann						
Met Éireann's warnings of strong winds, flooding etc, are essential for public safety						

**KENYA METEOROLOGICAL DEPARTMENT  
(KMD)**

**KENYA**

**Extract Questions from the “Public Weather Services Survey Questionnaire”**

**Printed Survey**

This questionnaire is intended to gather views from the public on Meteorological products and the means by which they are disseminated. Your feedback will help the Kenya Meteorological Department understand your needs and hence serve you better.

1.

(i) Which of the following do you receive your information through?

- Radio
- TV
- Newsprint
- Other

(ii) Which one do you mostly use?

- Radio
- TV
- Newsprint
- Other

2.

(i) Do you listen to Weather forecasts on Radio?

- Yes
- No

(ii) If yes, how often do you listen?

- 1-3 days per week
- 4-6 days per week
- Throughout the week

(iii) If you don't, why not?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(iv) Which times do you consider most appropriate for weather presentation on radio?

- Morning
- Afternoon
- Evening
- Other

3.

(i) Do you watch weather forecasts on TV?

- Yes
- No

(ii) If yes how often do you watch them per week?

- 1-3 days per week
- 4-6 days per week
- Throughout the week

(iii) If you don't, why not?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(iv) Which of the following times are most appropriate for weather broadcasts on TV?

- 7 a.m.
- 12 noon
- 7.30 p.m.
- 9.30 p.m.
- 11 p.m.

4.

(i) Does a weather column exist in the Newsprint you normally read?

- Yes
- No

(ii) If yes, do you read the column?

- Yes
- No

(iii) How often do you read the column?

- 1-3 days per week
- 4-6 days per week
- Throughout the week

5.

(i) Which of the following is related to your occupation?

- School
- Office
- Farming
- Traveling
- Other

(ii) Is your occupation mainly indoors or outdoors?

- Indoors   
 Outdoors

(iii) Does weather affect your work performance?

- Yes   
 No

(iv) Do you consider weather effects when planning your work?

- Yes   
 No

6.

(i) Which one(s) is (are) your Hobby (ies)

- Sports   
 Sightseeing   
 Music   
 Reading   
 Picnicking   
 Other

(ii) Are your hobbies mainly indoors or outdoors?

- Indoors   
 Outdoors

(iii) Does weather affect your hobbies?

- Yes   
 No

7. When do you require weather forecasts most?

- Weekdays   
 Weekends   
 Holidays   
 All days

8. Which weather condition affects your comfort and health most?

- Cold and cloudy   
 Hot and dusty   
 Rainy   
 Flooding   
 Windy   
 Foggy and hazy   
 Other

9. Which forecast would you find appropriate for your needs?

- Nowcast (0-6 Hours)   
 12 hrs   
 24 hrs   
 48 hrs   
 3 days   
 1 week   
 1 month   
 3 months   
 Other

10. Do the forecasts issued help you in your daily activities?

- Very much   
 Just enough   
 A little   
 No

11. How do you rate the KMD forecasts?

- Good   
 Average   
 Fair   
 Poor   
 Bad

12. In what area would you want us to improve ?

- General presentations   
 The skills of presenters   
 Contents   
 TV Graphics   
 Others

**Please give the following information about yourself**

1. Your educational level

- Primary   
 Secondary   
 College   
 University   
 Others

2. Residence

- Urban   
 Rural

3. Your age group

- 15-25 years   
 26-35 years   
 36-45 years   
 Above 45 years.

4. Gender

- Male
- Female

5. Languages well understood

- Mother tongue
- Swahili
- English
- Other

6. Title

- Mr
- Mrs
- Dr.
- Prof.
- Rev.
- Miss
- Ms
- Other

**Your general comments (optional)**

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**THE MET OFFICE (UKMO)**

**THE UNITED KINGDOM**

**Extract Questions from the  
“Public Attitudes and Satisfaction:  
Quantitative Research  
Report (2009)”**

**Telephone Survey**

I would now like to ask you some questions about weather forecasts.

Q1 How often do you usually see or hear a weather forecast? PROMPT IF NECESSARY.

- More than once a day
- Once a day
- Several times a week
- Once or twice a week
- Once or twice a month
- Less often
- Never
- Don't know

IF NEVER GO TO Q11a.

Q2 Where do you see or hear a weather forecast most often? PROMPT IF NECESSARY.

- On television
- On the radio
- In a newspaper
- On the internet
- On mobile phone
- Interactive text services
- Other
- DK

Q3 How often do you usually see or hear a weather forecast

- On television
- On the radio
- In a newspaper
- On the internet
- On your mobile phone

- More than once a day
- Once a day
- Several times a week
- Once or twice a week
- Once or twice a month
- Less often
- Never
- Don't know

IF TV, ASK Q4

Q4 On which TV channel do you see a weather forecast most often?

- BBC
- ITV
- Channel 4
- Channel 5
- Sky
- Other
- Don't Know

IF RADIO ASK Q5

Q5 On which station do you hear a weather forecast most often?

- BBC National Radio
- BBC local radio
- National commercial radio
- Local commercial radio
- Other
- Don't Know

IF INTERNET ASK Q6

Q6 On which website do you see a weather forecast most often?

- Met Office
- BBC
- ITV
- Google
- Other
- Don't Know

ASK ALL WHO EVER SEE/HEAR WEATHER FORECASTS

Q7 Which weather forecast is the easiest to understand?

- BBC TV
- ITV
- Other TV
- BBC radio
- Other radio
- Any newspaper
- Any internet
- Other
- Only see/hear one
- None
- Don't Know

Q8 Which weather forecast that you see or hear is the most accurate?

- BBC TV
- ITV
- Other TV
- BBC radio
- Other radio
- Any newspaper
- Any internet
- Other
- Only see/hear one
- None
- Don't Know



Q9 Which weather forecast is the most likely to give you everything you want from a weather forecast?

- BBC TV
- ITV
- Other TV
- BBC radio
- Other radio
- Any newspaper
- Any internet
- Other
- None
- Don't Know

Q10 Are there any things you want from a weather forecast that you don't usually get? What are these?

- More local information
- Clearer symbols
- More detail by time of day
- Longer range forecast
- Pollution indicator
- Allergy indicators
- Sunburn warnings
- Better accuracy
- Other (write in)
- Nothing

Q11a How much would you say your normal routine for work or housekeeping is affected by the weather?

- A great deal
- A fair amount
- A little
- Not at all
- Don't Know

Q11b How much would you say your normal routine for leisure is affected by the weather?

- A great deal
- A fair amount
- A little
- Not at all
- Don't Know

Q12 Do you make a point of hearing or seeing a weather forecast every day, or do you just watch or listen if one comes on while you are watching TV or listening to the radio?

- Always make special point
- Sometimes make special point
- Just if comes on
- It varies/Don't Know

Q13 If you are watching television or listening to the radio and a weather forecast comes on, do you usually pay particular attention to it, or not pay much attention?

- Always pays attention
- Sometimes pays attention
- Doesn't pay special attention
- Varies/Don't Know

Q14a How often do you do each of the following as a result of a weather forecast? How often do you ...

- Take an umbrella or wear different clothes as a result of a weather forecast?
- Change your travel plans for the day as a result of a weather forecast?
- Plan a different activity for the day as a result of a weather forecast?

- Very often
- Fairly often
- Not very often
- Rarely
- Never
- Don't Know

*For each statement the respondent said 'not very often', 'rarely' or 'never' ask Q14b*

Q14b You say you (statement at Q14) (not very often/rarely/never)? Why is that?

- Don't think the forecast will be right/ not correct for my area
- The weather doesn't affect my travel plans
- I'm not really concerned with the weather/ wouldn't put me off doing things
- I don't go out very much so it doesn't really apply
- Other (specify) \_\_\_\_\_
- Don't know

Q15 When you see or hear a weather forecast, how easy or difficult would you say it is to understand?

- Very easy
- Fairly easy
- Neither easy nor difficult
- Fairly difficult
- Very difficult
- Don't Know

Q16 Generally speaking, how accurate or inaccurate do you think most weather forecasts are?

- Very accurate
- Fairly accurate
- Neither accurate nor inaccurate
- Fairly inaccurate
- Very inaccurate
- Don't know

Q17 And overall, how useful would you say  
weather forecasts are these days?

- Very useful
- Fairly useful
- Not very useful
- Not at all useful

**NATIONAL WEATHER SERVICE (NWS)**

**UNITED STATES OF AMERICA**

**Extract Questions from NWS Overall Customer Satisfaction Survey (2010)**

**Internet Survey**

Weather Note: Section headers will not be included in online survey. Items in **bold** are programmer instructions. Response options will be randomized, except when sequential. All rated questions include a "don't know" or "NA" option.

**INTRODUCTION**

The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) is committed to serving the needs of all of its customers. The NWS is undertaking research on how satisfied users are and would appreciate your feedback. The purpose of this research, conducted in partnership with the federal government as part of the American Customer Satisfaction Index, is to help the NWS improve its services for you and others like you.

Your answers are voluntary, but your opinions are very important for this research. Your responses will be held completely confidential, and you will never be identified by name. CFI Group, a third party research and consulting firm, is administering this survey via a secure server. The time required to complete this survey will depend on how certain questions are answered, but will likely take about 20 minutes, and is authorized by Office of Management and Budget Control No. 1505-0191. Please click on the "Next" button below to begin the survey.

**Information about You**

The following questions are intended to help us better understand your responses by allowing us to classify responses by geographic area and by type of users.

1) From the list below, please select the continent or country in which you live or work. **(drop down list of major countries)**

- 1. United States
- 2. Canada
- 3. Mexico
- 4. Central America and Caribbean
- 5. South America
- 6. Europe
- 7. Africa
- 8. Asia
- 9. Australia
- 10. Other, please specify **(capture)**

2) **(If Q1=1)** What sector do you represent?

- 1. NOAA Employee
- 2. Federal Government (Non-NOAA)
- 3. Local Government
- 4. State Government
- 5. Government Contractor
- 6. Commercial Enterprise
- 7. Non-Profit Business
- 8. Private Citizen
- 9. Academia
- 10. Other (please specify)

3) What is your primary use of information provided by the National Weather Service?

- 1. Agriculture **(skip to Q7)**
- 2. Aviation **(continue)**
- 3. Commerce   
(including retail and ground & water transportation) **(skip to Q6)**
- 4. Commodities Markets **(skip to Q7)**
- 5. Communication/News Media   
**(skip to Q7)**
- 6. Consulting/ Added Value Customer Forecast Services   
**(skip to Q7)**
- 7. Education   
(e.g., formal education or training of children and adults) **(skip to Q7)**
- 8. Emergency Response/Public Safety   
**(skip to Q7)**
- 9. NWS Data Provider   
(e.g., storm spotter, co-op observer) **(skip to Q7)**
- 10. Personal **(skip to Q7)**
- 11. Recreation   
(e.g., boating, flying, fishing, beachgoer, etc.) **(skip to Q7)**
- 12. Research (applied and basic)   
**(skip to Q7)**
- 13. Environmental Resource Management (e.g., energy, utilities, water resource)   
**(skip to Q7)**
- 14. Other (please specify)   
**(skip to Q7) (Capture)**

4) For what type of Aviation do you use National Weather Service information?

- 1. Dispatcher
- 2. Commercial Freight
- 3. Commercial Passenger
- 4. Private Aircraft for Business
- 5. Private Aircraft for Pleasure

5) For what type of Commerce do you use National Weather Service information?

- 1. Retail
- 2. Ground Transportation
- 3. Water Transportation

6) What is the primary scope of your responsibility?

- 1. National
- 2. Regional   
(all or parts of multiple states)
- 3. Single state
- 4. All or parts of multiple counties, parishes or boroughs
- 5. Large city / urban area
- 6. Small city / township / suburban
- 7. Rural
- 8. Personal use
- 9. Other

7) How do you receive Weather, Water, and Climate information? (Select all that apply)

- 1. National Weather Service Web Sources
- 2. Non-National Weather Service Web Sources
- 3. Mobile devices (e.g., PDA, Phone, Smart Phone)

**NOAA Dissemination Services:**

- 4. NOAA Weather Radio / All Hazards
- 5. NOAA Weather Wire
- 6. Family of Services (FOS)
- 7. Emergency Managers Weather Information Network (EMWIN)
- 8. NOAAPort

**FAA:**

- 9. World Area Forecast System (WAFS)
- 10. DUATS
- 11. Flight Services

**Media:**

- 12. Local or cable TV
- 13. Commercial Radio
- 14. Satellite radio
- 15. Satellite TV
- 16. Newspaper

**Marine Broadcasts:**

- 17. U.S. Coast Guard Broadcasts (HF/MF/VHF/NBDP)
- 18. NAVTEX receiver
- 19. Immarsat-C SafetyNET
- 20. Radiofacsimile
- 21. Other

8) How frequently do you typically access National Weather Service information?

- 1. Several times per day
- 2. Once per day
- 3. Several times per month
- 4. Once per month
- 5. Once every six months
- 6. Once per year or less frequently
- 7. Don't know

	Ease of Understanding	Timeliness	Accuracy
9) Tornado Warnings			
10) Severe Thunderstorm Warnings			
11) Winter Storm Warnings			
12) Hurricane Warnings			
13) Flash Flood Warnings			
14) River Flood Warnings			
15) High Surf Warnings			

**General Satisfaction with the National Weather Service**

**Hazardous Services**

The NWS issues flood and hazardous weather watches, warnings, and advisories for the protection of life and property.

Referring specifically to hazardous weather-related warnings provided by the NWS, on a 10point scale, where 1 means "Poor" and 10 means "Excellent," please rate each of the hazardous weather warnings on the following.

**Routine Climate, Water and Weather Services**

16) Which of the following routine weather, water or climate forecast elements have you used within the past year:

- 1. Temperature (Max/Min) forecasts
- 2. Chance (Probability) of Precipitation forecasts
- 3. Cloud Cover forecasts
- 4. Wind (Direction, Speed) forecasts
- 5. Dew Point forecasts
- 6. River Heights / Flow forecasts

- 7. Ultraviolet (UV) Index forecasts
- 8. Air Quality forecasts
- 9. Wave Height forecasts
- 10. 1 to 4-Week National Outlooks for Temperature and Precipitation
- 11. 3-Month National Outlooks for
- 12. El Niño/La Niña Outlooks
- 13. 3-Month Drought Outlook
- 14. 3-Month Local Temperature Outlooks

- 31) 1 day from now
- 32) 3 days from now
- 33) 7 days from now

Forecasts issued by the National Weather Service routinely include a probability of precipitation (PoP) statement, which is often expressed as the "chance of rain" or "chance of precipitation". The PoP, expressed in percent, describes the chance of measurable precipitation (at least 0.01 inch) occurring during a specified 12-hour period.

Referring specifically to elements found in routine weather, water, or climate forecasts provided by the NWS, on a 10-point scale, where 1 means Poor and 10 means Excellent, please rate each of the elements below on the following:

Using a scale from 1 to 10 where 1 is Not at all Confident and 10 is Very Confident, how confident are you in **probability of precipitation** forecasts for the times listed below?

	Meets my needs	Ease of Understanding
17) Temperature (Max/Min) forecasts		
18) Chance (Probability) of Precipitation forecasts		
19) Cloud Cover forecasts		
20) Wind (Direction, Speed) forecasts		
21) Dew Point forecasts		
22) River Heights/Flow forecasts		
23) Ultraviolet (UV) Index forecasts		
24) Air Quality forecasts		
25) Wave Height forecasts		
26) 1 to 4-Week National Outlooks for Temperature and Precipitation		
27) 3-Month National Outlooks for Temperature and Precipitation		
28) El Niño/La Niña Outlooks		
29) 3-Month Drought Outlooks		
30) 3-Month Local Temperature Outlooks		

- 34) 1 day from now
- 35) 3 days from now
- 36) 7 days from now

Using a scale from 1 to 10 where 1 is Not at all Confident and 10 is Very Confident. How confident are you in amount of precipitation in forecasts for the times listed below?

- 37) Less than 1 day from now
- 38) 1 day from now
- 39) 3 days from now

**Decision Support Services**

Value is defined here as economically beneficial or an improvement to quality of life. Using a 1 to 10 scale where 1 means Not at all Valuable and 10 means Very Valuable, please rate the value of each of the following products and services?

- 40) Local NWS climate products and services
- 41) NWS national climate products and services
- 42) NWS hydrological products and Services
- 43) NWS aviation products and services
- 44) Hazardous weather products and services

**Dissemination Services**

Referring specifically to NWS information on the Web, on a 10-point scale, where 1 means Poor and 10 means Excellent, please rate the NWS Web pages on the following:

NWS public weather forecasts are available for up to 7 days into the future. This means that a 1-day forecast is for the weather 1 day (24 hours) from now, that a 3-day forecast is for the weather 3 days (72 hours) from now, and so on. Using a scale from 1 to 10 where 1 means Not at all Confident and 10 is Very Confident, how confident are you in **max/min temperature** forecasts for the times listed below?

- 45) Ease of locating information
- 46) Information is up-to-date
- 47) Please explain any difficulties you had with NWS Web pages: \_\_\_\_\_

48) As technology evolves, what sources will you mostly likely use to get NWS information in the next one to five years? (Select all that apply)

- 1. Desk top / laptop computer
- 2. Mobile Device
- 3. Social Media   
(e.g., Facebook, Twitter)
- 4. Direct Interaction with NWS Staff   
(e.g., in-person, telephone, NWChat)
- 5. NOAA Weather Radio All-Hazards
- 6. File transfer services   
(e.g., map services, RSS feeds, FTP)
- 7. Other (please specify)

\_\_\_\_\_

**Outreach and Weather Education**

49) If you were to visit an NWS booth at an outreach event (e.g., fair, show, open house), please select from the list below your most preferred formats to obtain weather-related awareness and safety information (select all that apply):

- 1. Paper   
(e.g., brochures, bookmarks, business cards, posters, fact sheets)
- 2. Refrigerator magnets, key chains, and pens
- 3. DVDs
- 4. List of Internet Links
- 5. Other

\_\_\_\_\_

50) What do you perceive as the top hazardous weather-related threats in your local area. Please select up to three.

- 1. Tornadoes
- 2. Severe Thunderstorms
- 3. Flash Floods
- 4. River Floods
- 5. Winter Storms
- 6. Hurricanes   
(including storm surge)
- 7. Heat Wave
- 8. Wildfires
- 9. Drought
- 10. Coastal Storms   
(high wind/storm surge)
- 11. Tsunamis
- 12. Extreme Cold
- 13. Air Quality
- 14. Other, please specify

\_\_\_\_\_

51) How useful is NWS awareness and safety information in helping you prepare for or respond to hazardous weather-related threats? Use a 10-point scale where 1 is "Not at all Useful" and 10 is "Very Useful." \_\_\_\_\_

**Customer Satisfaction Index**

Now, please think about your overall satisfaction with the National Weather Service.

52) First, please consider all of your experiences with the National Weather Service. Using a 10-point scale on which 1 means Very Dissatisfied and 10 means Very Satisfied, how satisfied are you with the National Weather Service? \_\_\_\_\_

53) Using a 10-point scale on which 1 now means Falls Short of your Expectations and 10 means Exceeds your Expectations, to what extent has the National Weather Service fallen short of, or exceeded your expectations? \_\_\_\_\_

54) Now, imagine what an ideal organization providing weather information would be like. How well do you think the National Weather Service compares with that ideal organization you just imagined? Please use a 10-point scale on which 1 means Not Very Close to the Ideal, and 10 means Very Close to the Ideal. \_\_\_\_\_

**Desired Outcomes**

55) Using a 10-point scale where 1 means Not at all Likely and 10 means Very Likely, how likely would you be to take action based on the information you receive from the National Weather Service? \_\_\_\_\_

56) Using a 10-point scale, on which 1 means Not at all Likely and 10 means Very Likely, how likely are you to use the National Weather Service as a source of weather information in the future? \_\_\_\_\_

57) Using a 10-point scale on which 1 means Not at all likely and 10 means Very likely, how likely are you to recommend the National Weather Service to a colleague or friend? \_\_\_\_\_

58) What other revolutionary products and services could the National Weather Service offer (today or in the distant future) in order to serve you better? \_\_\_\_\_

\_\_\_\_\_