MOUNTAIN WEATHER SERVICE: RESEARCH & APPRAISAL FULL REPORT: SEP 2015

Neen Kelly

Bluebell Scotland

neen@bluebellscotland.com

07776 164107

Sue Smith

Motomo Ltd

ssmith@motomo.co.uk

01250 882200

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EXECUTIVE SUMMARY

This study was undertaken during 2015, for the management of **sport**scotland who required a market appraisal of the current service provision of mountain weather forecasts by MWIS and the Met Office. In particular the project has undertaken a review of the current Scottish mountain weather forecasts offered to the public and offers some recommendations on improvements that could take place for the future. The specific objectives were:

- To develop a market segmentation of mountain weather forecast users, considering their decision making and use of weather forecasts
- To determine the aspects of Met Office, MWIS and other mountain weather forecasts that are valued by users
- To ascertain how different users and market segments access forecast information and any changing trends
- To identify improvements that could be made to the service

The outcome of this project will help to support or challenge the future direction of a **sport**scotland/public sector funded mountain weather forecast service and deliver the vision:

'A sustainable mountain forecast for Scotland through the provision of reliable, authoritative forecasts which are relevant to outdoor activities, which enable forecast users to make informed judgements about their chosen activities.'

Industry Consultation

Initially a number of 1-1 discussions took place with a range of mountain activity specialists to give an overview of the issues that affect the provision of mountain weather services today as well as challenges for the future.

Organisations consulted included:

Cairngorm National Park	**sport**scotland Glenmore Lodge National Outdoor Training Centre
Cairngorm Mountain	Plas y Brenin the National Mountain Sports Centre
Nevis Range	Snowsports Scotland
Glencoe Mountain	Scottish Adventure Activities Forum
Mountain Training Scotland	Developing Mountain Biking in Scotland
Mountain Training UK	Scottish Athletics
Mountaineering Council of Scotland	Scottish Canoe Association

A number of themes came out consistently from these discussions with 'professional mountain users' and these are categorised below:

Importance of the mountain weather services

- Most rely heavily on weather services to undertake their business
- For ski centres accurate weather forecasts over the short season are vital to determine whether they will open the following day/need to work overnight to prepare
- They appreciate that accurate weather forecasting is difficult and especially in mountain terrains, but they are hungry for as much detail and accuracy as possible
- There is an appreciation that forecasters will not commit to specifics if they are not sure

Number of services used

- Most have a preferred weather service they use out of habit before consulting other sites
- Mixed response to which site is preferred MWIS/Met Office/BBC
- Many other sites are used to supplement weather information
- Most use a number of sites then use their own judgement and experience to make weather related decisions. The more uncertain the weather the more sites consulted
- Only if weather is settled with clear certainty in the forecast will they rely on just 1 forecast
- Some use weather widgets on their own websites, some provide a link, some write their own weather report based on findings from a variety of sources
- Even if some weather services were merged, they would almost certainly still look at other services to make their own judgement

Timings

- Most checked the forecast mid-afternoon – evening for the following day
- Earlier issuing of forecasts (around 3pm) would help for decision making but not if the accuracy of the forecast would be compromised at that time
- Most would like updates as frequently as possible, especially if there is a significant change in conditions or timing
- Many find the hourly Met Office & BBC forecasts vital to their activities, but if only updated once or twice per day they would not be accurate as weather patterns change too much

Seasons

- Consultations were mostly with those involved in winter activities and therefore there is more focus on the winter months
- Mountain weather services are used most frequently during the winter, which peters out over the summer months when more general weather watching takes place

Technology

- Technology has moved on rapidly from the time of dialling into recorded messages
- Now increased choice of services, with access, even when out and about (subject to coverage)
- Low graphic version of the MWIS pdfs are helpful in remote mountain areas with only 2G
- In the office, computers are mainly used to access the internet, as well as smart phones if coverage allows. At home this is more likely to be a tablet or smartphone. When out on the hill, smartphones are used if there is a signal
- In the future, network coverage will increase the use of smartphones for information
- More weather apps are expected to be developed and used
- An app that can send updated weather automatically based on current location would be useful

- There could be more integration of weather info into other technologies that people are using eg fitness gadgets, sat nav/GPS devices etc
- Handheld radios and phones may have specific weather functions
- Weather forecasters need to keep abreast of technological developments and be proactive
- Concern that smart watches won't be able to show weather info on such a small screen

Likes and Dislikes

Likes are shown with + dislikes/suggestions with - comments with •

- No consistent patterns in likes/dislikes, opinions are based on preferences or specific needs
- Lots of suggestions for improvements, especially in relation to wind speed, update frequency, accuracy and specific/local information

Style of forecast

+ The 'human element' to the MWIS and Scottish Avalanche Information Service is appreciated, as it feels as though there's local knowledge and understanding of conditions, and uncertainty is specified. MWIS forecasts are also consistent across the country
– Met Office forecasts can feel computer-generated to some and given its size there are clearly different forecasters for different regions, which leads to inconsistencies in language and presentation. However the organisation's size makes it more resilient

Presentation Format

+ MWIS inclusion of the probability of certain conditions is useful, along with comments on different weather models agreeing/disagreeing, which helps confidence levels for the user
+ MWIS video forecasts are useful, but they don't always have time to watch them
- No consistency on which services' presentation of graphics was preferred over others
+ General agreement that graphics work better than text, especially for an initial look
- MWIS graphics can be too general, with detail in the text, but subtleties could be lost if the text was replaced with graphics. For the professional user they need this level of detail
- Met Office graphics can be too cluttered
- Met Office graphic forecasts might appeal more to users with less detailed knowledge
+ Met Office animations are liked
+ MWIS printable pdfs are liked and used widely

Geographic Areas

- Met Office area of North & West Highlands is too big and not specific enough, prefer MWIS
- Overall would like more localised information as geographic areas are too big
- Some consultees were not aware of the Met Office Summit Forecasts

Timing

+ Hourly breakdowns are liked

Planning Outlook

- Mixed reaction to the MWIS Planning Outlook section
+ Wetterzentrale used by some for planning ahead
- One consultee uses a nearby location hourly forecast then adapts with own local knowledge and weather data for the summits. Trend information useful for wind patterns

Winter Forecasts

+ Winterhighlands used by skiers as it uses a number of weather services and local knowledge
- Avalanche Service does not use MWIS, so is felt to be less reliable

Rain Forecasts

+ Rain Today is widely used as it gives rain radar information in 3 hourly chunks

Wind Forecasts

– Better localised wind speed information is needed by most as it has a major influence on a day in the hills. For ski centres it can be the difference between open and closing.
– Wind forecasts need more detail, and are usually far better for water-based forecasts than they are for inland forecasts, though that is in part due to topography of the land
– Maps with arrows showing wind direction would be helpful
– MWIS wind speed at 900m is vital and felt to be more useful than the Met Office at 500m. Wind information at different elevations is needed
– MWIS wind speeds too general, giving a speed for an area which won't apply to all summits
– MWIS forecasts also under-read wind speeds when compared to their own readings
+ The MWIS '*effect of wind on you'* section is liked
– There appear to have been more wind speed discrepancies between MWIS & Met Office over the 2014/15 winter
+ SAIS, Windguru and Windty all have good graphics for wind and the latter 2 have good models for the bigger picture

Temperature Points

+ Freezing point is useful
+ Dew point is shown visually on SAIS which is useful
– MWIS 'chill factors' could be better clarified

What's Missing

In addition to the points contained in the likes & dislikes section above, the following have also been identified. They are a mixture of some very specific requests and some more general requests:

- Want 100% accuracy and enough detail to plan ahead, with updates of significant changes
- Some supplement the weather service sites by checking specific weather stations on Aonach Mor and on the Cairngorms – these provide real time information about freezing levels
- MWIS forecast should have the time updated at the top rather than at the bottom
- Often difficult to spot changes when a forecast is updated – make it clearer
- Include next weather update time on websites so users know when to comeback and check
- Some would appreciate being able to access historic forecasts and synoptic charts, as recent conditions may influence on the ground conditions
- River levels, or links to SEPA data should be added
- Homepage link to precipitation radar charts for last 12 hours (for canoers/kayakers/skiers)
- Access to precipitation like the Avalanche Service get in winter
- More detail on how the rain is moving through – Rain Today frequently mentioned
- Improved wind information and modelling for how the wind behaves in specific communities. Magic Seaweed, Windty, Windguru all mentioned. Hour by hour wind forecast so the trend can be seen - Wind Finder does this
- More hourly forecasting
- An indication of probability and confidence eg Yr.no use a colour code in each information box wind, precipitation etc, green = certain, orange = probably, red = really not sure
- Indication of jet stream position showing the 528 line where the cold northerly air is meeting the warmer southern air
- Show moving synoptic charts for 5-7 days ahead to get an overview, as Weather Badger

The General Publics' Understanding of the Weather

- Many visitors to the mountains do not really understand the weather and the depth of information that can be provided by the specialist forecasts
- Organisations we consulted often distil the mass of information available to them from different sources, into a 'customer friendly/lay-person' version
- It would help if all relevant weather information could be contained in 1 service
- Some organisations run training courses, including item on understanding weather forecasts
- The public need more education on mountain weather and in particular the effects of height gain on wind and temperature – production of detailed videos could help this.
- Many would like to see the main stream weather forecasts carry more detail weather information as the norm – not just on specialist programmes
- Mountain weather should not be dumbed down though, just to ensure the general public can understand it

User Surveys

Following the consultation exercise and reviewing the key themes that were identified, 3 user surveys were devised and agreed between **sport**scotland and the Met Office. The first survey was a full detailed survey aimed towards serious mountain users, the second was a shorter version of the first, aimed at more ad-hoc leisure users and finally the third survey was a short survey to be used with a cross-section of the general public to ascertain their awareness of mountain weather services.

The first and second surveys were distributed widely to mountain users (both professionals and leisure users) during May/June through 3rd party partners via websites, newsletters, social media etc. The third general public survey was distributed via an audience builder system to Scottish residents.

More than 2,200 responses were received overall and this report shows a full analysis of the results received. Key points from the report are:

Demographics (pg 20)

- The demographic breakdown of responses was as expected given the topic - 74% male; 42% aged 25 – 44 and 46% aged 45 – 64; 70% Scottish residents

Frequency of Use (pg 24)

- On at least a daily or weekly basis, over 72% of respondents are looking at a BBC forecast, over 72% looking at the MWIS forecast and 59% look at at least one of the Met Office forecasts. Comparing with a smaller survey of the general public, only the BBC was used on a regular basis by more than one third of these respondents

Work & Leisure Use (pg 29)

- 66% of respondents state that they use a mountain weather forecast for leisure only, 33% for work and leisure, 1% for work only
- Over 60% of those that use a mountain forecast for some work purposes, check a specialist forecast daily. Of these respondents, 71% use MWIS, 54% use at least 1 Met Office product.
- For leisure only users, these figures are 54% check a forecast daily and of these 50% use MWIS and 45% use a Met Office product

Combinations of Forecasts Used (pg 31)

- Mountain users check multiple weather forecasts on a daily or weekly basis – 59% check 2, 3 or 4, with 26% checking more than 4 regularly
- The most usual combinations of forecasts checked regularly involve MWIS, BBC, Met Office, SAIS

Activities (pg 44)

- When asked to name the top two activities undertaken when using a mountain weather forecast, the results were hill walking/running 59%; climbing / mountaineering 32%; snowsports 31%;

Advance Planning (pg 45)

- The main points in time that respondents check forecasts for advance planning are 2-3 days ahead and keeping it constantly under review

Influence on Decision Making (pg 46)

- 98% of respondents indicated that mountain weather forecasts were vitally or slightly important when deciding on activities

Continuous Monitoring (pg 48)

- Once embarking on an activity only four activities showed a higher response for those always monitoring the forecast as opposed to sometimes. These were mountain guide/leader, activity centre operator, Mountain Rescue and youth groups. In all of these cases, the activity involved responsibility for customers or group members

Most Important Forecast (pg 54)

- Respondents were asked to select the mountain forecast that was most important to them. From a list of 30 forecasts, more than 50% selected MWIS, 16% selected one of the Met Office forecasts and 13% selected the BBC

Characteristics of Most Important Forecast (pg 57)

- Given a series of statements to agree or disagree with, in relation to the forecasts selected as the most important by respondents, Yr.no consistently received a higher proportion of strongly agree ratings than the other forecasts for 8 of the 9 statements about accuracy, timeliness, geographic area covered, local detail, media channels, information needed, easy to understand and confidence to use alone. The only statement that it was placed 2nd for was when used in combination with other forecasts, where SAIS received the greatest strongly agree %

Seasonal Use (pg 70)

- Not surprisingly, when asked about the seasons that respondents used their most important forecasts, SAIS, Winterhighland and Snow-forecast.com all had more than 65% of respondents indicating winter. Of the other 10 most important forecasts, they all showed more than 55% of respondents saying All year

Most Used for Planning Purposes (pg 95)

- 67% of respondents are most likely to use MWIS as their preferred mountain forecast for planning purposes. This compares to 15% for any one of the Met Office forecasts and 8% for the BBC

Most Used Whilst 'Out on the Hill' (pg 96)

- 55% selected MWIS, 20% Met Office, 9% BBC

Most Likely to have Used 5 Years Ago (pg 97)

- 47% MWIS, 29% BBC, 17% Met Office

Presented in the Best Way (pg 98)

- MWIS 58%, Met Office 14%, BBC 11%

Future Changes to the Provision of Mountain Weather Forecasts (pg 104)

- The most popular changes requested were: include recent past of actual weather; smaller geographic areas; more frequent updates; more apps for specialist weather forecasts

Changing Use of Media Channels (pg 112)

- Traditional media such as TV, radio, newspapers have seen a steady decline over the last 5 years and in the main are expected to continue to decline. In contrast technological solutions such as computers, tablets, smart phones have seen sharp increases over the last 5 years, which are expected to continue but steady off in the next 5 years (though decline expected for computer based media). The very new technologies of smart watches have seen only small usage in the last 5 years but are expected to rise quite steeply in the next 5 years.

Challenges to Overcome (pg 120)

- 8 'likely challenges to overcome' in the future were suggested, relating to better mobile coverage, faster internet and more app development. Better mobile coverage was selected by twice as many respondents as the other factors.

In addition to this report, the following documents have been supplied to **sport**scotland:

- A short version of this report which does not include the detailed survey analysis
- An info-graphic of key results from the survey
- A tabulated representation of the segmentation
- raw data results from the full survey, by question
- raw data results from the short survey, by question

Note: the raw data results tables have 12 more responses in them, than the extract that the data analysis was based on, this is because the raw data was not extracted until October, whereas the data tables for analysis were extracted in late July.

A breakdown profile was also considered for a 'typical' Met Office forecast user vs a 'typical' MWIS forecast user, however, when looking at the data, less than 10% of the total respondents could be categorised as Met Office users, and of these more than 20% had come from survey results distributed directly by the Met Office, therefore it was felt that the sample size was too small and potentially biased, to be representative.

Recommendations

The results of the consultation and survey analysis have been collated into recommendations (below) for the future provision of mountain weather forecast services. Thousands of comments were received as part of the user survey and these have been incorporated into the recommendations. More detailed free text comments are shown with the full survey analysis.

Timings

Weather forecasts are issued at various times and some are updated as the day goes on. It can be difficult for users to know when the updates have taken place or when they are next expected. The following comments were received.

- More regular updates; more than once a day
- Guaranteed update times
- Add the time the forecast has been issued

Content and Presentation

Weather forecasts are presented in a variety of ways and therefore display the detail differently. Some have apps or downloadable pdfs. There were a wide range of comments about the language used, use of maps, specific detail users are looking for and the functionality they would like to see:

- Mountain forecasts need to be written by mountain people for mountain people – human interpretation using local knowledge is appreciated
- Real time reporting/blogs from people on the ground
- State when the forecast has not changed, or point out what the changes are
- Don't dumb it down; many need the detail
- Should be mountain specific and smaller geographic areas
- Clear (clickable) maps of areas covered
- Town search requested
- Easy to navigate/use – fewer clicks to get key information
- Longer than just a 3 day forecast – up to 10 days requested
- Forecasts in hourly segments are appreciated
- More synoptic charts/isobar maps requested
- Probability of, and confidence in, certain conditions liked
- Overnight conditions requested
- More altitude specific details
- Add in expected daylight hours
- Snow/avalanche reports should be integrated into mountain weather forecasts, not just links
- Add snow on ground/levels

- Include more specific details for ski areas
- Freezing and dew points requested
- Add in severe weather warnings
- % chance of cloud free summits
- More accuracy and detail on wind speeds requested for different elevations
- More details on precipitation and how the rain is moving through
- Add river/water levels and tides
- Include more on lowland hills
- Explanation of terms used and symbols in summaries for non-English users
- Extend coverage to other areas in UK
- Historic forecasts requested (summarised)
- More webcams
- No advertising

Technology development

There is a desire from most to be able to access weather conditions from everywhere at any time, however connectivity issues are key to future development. Some respondents recognise this as a key issue and have stated potential solutions to overcome this problem:

- Easy to access
- Low bandwidth version
- Better functionality for use on phones – dropdown menu options better, information in a quick downloadable format, a layout that does not get jumbled
- Battery life for phones to be taken into account in any development
- Text version
- Text alerts
- App service, which can also send alert updates
- More integration of weather information into other technologies that people are using, sat nav/GPS, fitness gadgets etc. Handheld radios/phones to have specific weather functions.

General

The following represents other comments from respondents, although only a few respondents made these comments they have been included due to their specific nature

- Meta forecasts comparing/sharing forecasts from various providers and/or links between sites
- Forecasters should monitor/publish their performance
- Promote mountain weather more and educate public about what weather conditions feel like

Mountain Weather Segmentation

Finally a segmentation exercise was carried out using the survey responses and stakeholder consultations. The size of each segment is determined by the number of responses, and is not necessarily representative of the UK population.

Essential Planners

This group accounts for around one third of the sample.

These individuals use mountain weather forecasts for both their work and for their own leisure. This dual use is explained by the fact that those working in an outdoor/active environment are more likely to undertake outdoor activities in their own time.

Some of these Planners use mountain forecasts for their own personal use for work, others will use it to advise work colleagues/group members and others to specifically advise their customers.

Activities undertaken include hill walking/running, climbing/mountaineering, multi-day backpacking or snow sports. Hillwalking/running is by far the most popular activity. Specifically this group includes those involved in mountain rescue, or who are mountain guides/leaders or activity/ski centre operators. It can also include those responsible for youth groups.

Many will access the forecasts 2-3 days before and also the night before an activity is due to take place. Others will look further in advance and many will keep the forecast under constant review. Some, due to the environment they operate in and personal interest, could be classed as sophisticated users, or weather 'addicts'. The majority will access the weather forecasts through websites and any available apps, and where connectivity allows will check them throughout the day by smartphone. Failing this they will use their own knowledge and skills to judge the weather and also, where relevant some will take a print out of specific pdfs with them.

Due to the nature of their job many of these users could be classed as specialist consumers of mountain forecasts. They will have more of an in depth knowledge of the weather than other users and will better understand the impact of certain conditions. Their local knowledge will help inform their decision making and will be used in conjunction with their interpretation and understanding of the detailed information in the forecasts. They will tend to use more than one weather service, mostly checking up to three, sometimes more, but they will have a favourite that they will check first. If conditions are settled then fewer forecasts will be checked.

For those working with individuals or groups these forecasts may determine if a trip or activity can go ahead or what route is taken. To some a forecast will dictate whether a ski or activity centre can open or not. For those involved in mountain rescue it may provide essential insight into a potential break in the weather. On the whole they will know what certain conditions feel like and understand the dangers associated with them. These Essential Planners often have to consider the safety of others they are responsible for, or the satisfaction of their customers.

A mountain forecast can play a vitally important role to these individuals and those they are responsible for/advise and they need as much accurate detail as they can access.

17% of this segment are aged 25-34, with 55% aged 35-54 and 24% are over 55. 76% of respondents were male. 93% stated they were in some form of employment – full time, part time or self-employed (the assumption being the balance are perhaps volunteers). 68% were based in Scotland, 28% in England and less than 1% in Wales.

Frequent Leisure Users

This group is much bigger and makes up around two thirds of the sample and is a much broader group, less specialist.

These individuals do not need to access the mountain weather for their job; rather they use the forecasts to inform the activities they undertake during their own leisure time. They are more likely to be small groups of friends or individuals. They only have responsibility for themselves or perhaps a shared responsibility for the few that may accompany them.

Although not working in the outdoor sector many will have a good understanding of the weather due to the frequent trips they make to undertake a range of activities throughout the year. Some will have a better understanding of the more detailed elements of the forecasts where others will have an adequate understanding. Most will use their experience to help interpret the forecasts. Tips on what weather conditions can feel like should assist those who are less experienced.

A good number will only venture out if there is fair weather forecast whereas others are much more experienced and are more accepting of a wider range of weather conditions. Some activities undertaken may in fact require specific weather conditions to allow the participants to get the most out of their trip.

Hill walking/running is once again the most popular activity followed by snow sports, climbing, mountaineering and low level walking/rambling. Multi-day backpacking and cycling/mountain biking also feature highly. Many will undertake a number of activities and the weather may dictate what activity they do.

Many will check the forecasts daily or up to 2-3 days before with a view to identifying a window to undertake their particular activity. Many will check the night before a planned activity to double-check conditions. There is little evidence of spontaneity with more forecasts being viewed in advance rather than on the day itself. With a shift in working patterns people are not just keeping an eye on weekend weather. Many will check at least three forecasts to verify the information on their favoured forecast.

Most will access weather forecasts online and some will use apps where available and this is a trend that will continue. There is evidence of a slightly slower uptake of smartphones and apps by some of the older age groups.

16% of this segment are aged 25-34, with 52% aged 35-54 and 27% are over 55. 74% of the respondents were male. 78% stated that they were in some form of employment – full, part time or self-employed. A further 17% stated they were retired. 73% were based in Scotland, 26% in England and less than 1% in Wales.

Fair Weather Watchers

The smallest segment from this survey is made up of people who do not use or have no interest in mountain weather forecasts. These individuals may be less interested in undertaking strenuous outdoor activities and may only pay a passing interest in the weather for more generic activities, ie they are less likely to plan an activity in what they might class as poor, or more extreme conditions.

They are more likely to consume the weather via the updates on local and national TV or radio, or alternatively whilst browsing online.

These individuals will be interested in the weather to help them plan activities with family or friends, bank holiday weekend trips and soft adventure such as shorter walks, picnics, BBQs or beach trips.

USER SURVEY ANALYSIS

Methodology

The outcomes of the industry consultations, along with discussions with **sport**scotland and the Met Office, were used to draft three formats of survey to review Mountain Weather Forecasts:

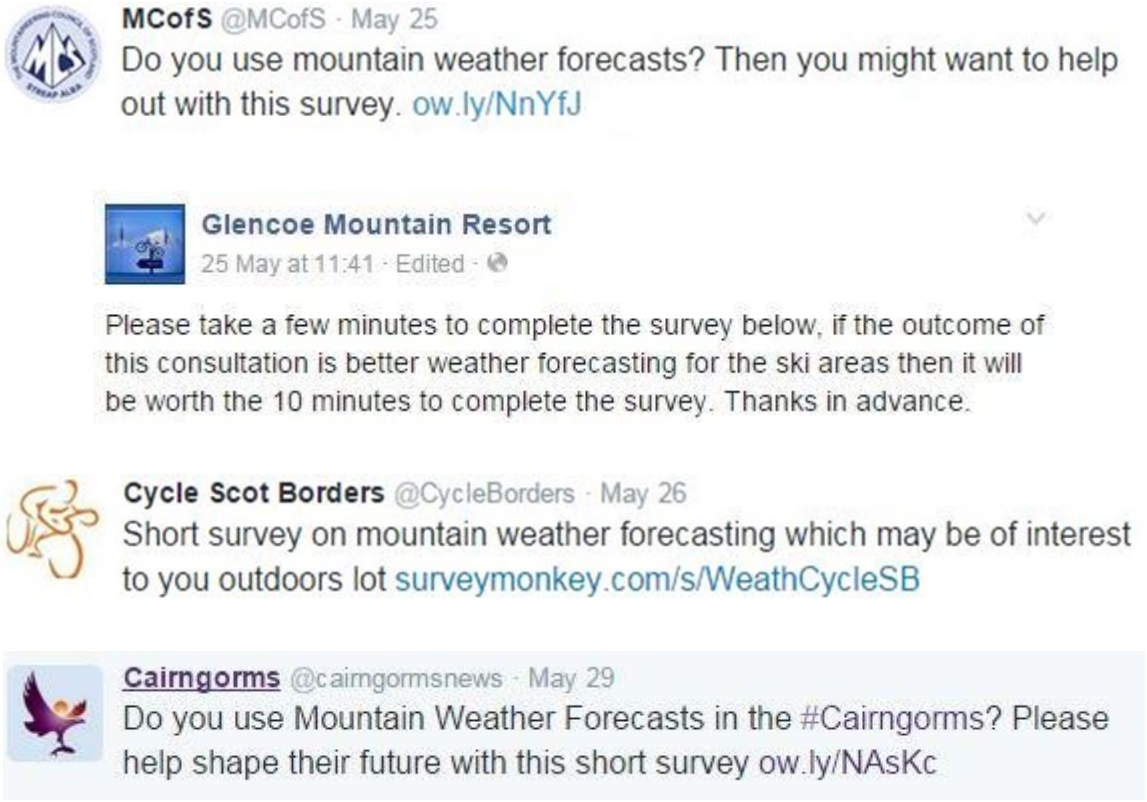
- A full detailed survey to be completed by professionals and real mountain enthusiasts
- A shorter survey that followed the same pattern as the full survey, but in less detail, and this was intended to be completed by more leisure mountain users
- Thirdly a short 'general public' survey was created with just a few questions to ascertain the awareness and use of mountain weather forecasts by ordinary members of the public

The table below indicates what was covered in each of the 3 surveys:

Question Topics	Full Survey	Short Survey	General Public
Awareness of mainstream services			
Frequency of use of mainstream services			
Awareness of specialist services			
Frequency of use of specialist services			
Use of Mountain Weather Forecasts for work/leisure			
Activities undertaken when using MWFs			
Work roles undertaken when using MWFs			
Activity undertaken the most when MWFs are accessed			
How far in advance are MWFs looked at when planning			
Influence on decisions MWFs have when planning			
Monitoring MWFs once out			
2nd choice of activity, including above factors			
Most important MWF used throughout year			
Most important MWF used in summer/winter			
Opinions on most important MWF			
Best & worst thing about this forecast			
Season that MWF is used regularly			
Other forecasts used alongside the most important one			
MWF you are most likely to use for . . .			
How MWFs are used . . .			
Which parts of the UK are MWFs used for			
Changes to the provision of MWFs in the future			
Changes in media usage past, current, future			
Media channels most used			
Biggest challenges			
Demographics			

Either the full or shorter survey was then issued to partners, industry associations, National Parks, businesses etc, who had each agreed to forward to members, place on websites, post on social media Facebook and Twitter accounts, add to newsletters etc. For each organisation we had made a judgement about whether their audience would be predominantly serious mountain users or more leisure orientated to determine whether they were sent the full or short survey.

The full survey was circulated to partners initially and within a few short hours was being widely circulated, forwarded and re-tweeted around social media sites, with positive encouragement from the partner organisations – see examples from social media sites below:



When we circulated the shorter survey a day or two after the full survey, we are aware that some of these partner organisations had already picked up the full survey from other partners and made it available to their members/followers. Therefore when the survey results were collated we found a far greater number of individuals had completed the full detailed survey, and less the shorter survey than we had expected.

In total we received 2,000 responses to the full survey and 206 to the shorter survey.

In our experience these results were much higher than we had expected (our aim was to generate around 1,000 results overall), and given what was a lengthy and detailed survey, without incentive (other than a chance to influence future improvements to the weather forecasting service), over 79% of respondents that started the full survey went right through to the end to complete it. In addition, across the survey there were a number of opportunities to leave free text comments (often left blank when respondents are not really that interested in genuinely responding to a survey), but in this case over 10,000 comments were made! Summaries of these comments have been collated by question, and are provided in this analysis.

We know that the following survey links were actively used, but we believe that due to social media the circulation was much wider that these organisations immediate members.

The numbers shown in brackets indicate the number of responses made for each specific link, however these figures should be used with caution as:

- it is known that many individuals will have seen more than 1 link to the survey, so it is most likely that they will have completed the first one they saw, which will depend on how quickly the partners acted on the links we had sent eg Glencoe and Mountaineering Council of Scotland circulated their links on social media within minutes of us notifying them, so they both had over 400 responses in total
- some organisations had already forwarded a different link from another organisation to its members, so responses may have been made against the first organisation rather than the actual membership one.

In summary, the figures shown below are indicative only and should not be taken too literally in relation to where responses came from:

Full survey

- Loch Lomond & Trossachs National Park Authority (10)
- Cairngorms National Park Authority (16)
- Glencoe Ski Centre (402)
- Nevis Ski Centre (39)
- Cairngorm Ski Centre (123)
- Glenshee Ski Centre (54)
- Mountain Training Scotland & UK (493)
- Mountaineering Council of Scotland (510)
- Scottish Canoe Association (12)
- Ramblers Scotland (21)
- Triathlon Scotland (29)
- Scottish Orienteering Association (23)
- Developing Mountain Biking in Scotland (24)
- Sottish Advisory Panel for Outdoor Education (7)
- Scottish Adventure Activities Forum (246)

Short Survey

- Met Office (154)
- Scottish Youth Hostel Association (38)
- 7stanes (6)
- Cycle Scottish Borders (2)
- Glenshee Tourist Association (4)
- Blairgowrie & East Perthshire Tourist Association (3)

General Public

In order to also have a baseline of awareness and use of mountain weather forecasts by the general public with no specific interest in mountain activities, we undertook an exercise with an 'audience builder' to generate 55 responses from Scottish residents, across a wide range of ages, gender, employment etc. The results of this exercise are shown in the initial pages of this report, but the awareness and use of specialist mountain weather forecasts was very low, indicating the full and short surveys had reached the appropriate audiences of mountain weather users.

This report includes a detailed analysis of the results of these 3 surveys, which then fed into the Recommendations and Segmentation.

Demographics

Key Points: *The demographic breakdown of responses was as expected given the topic:*

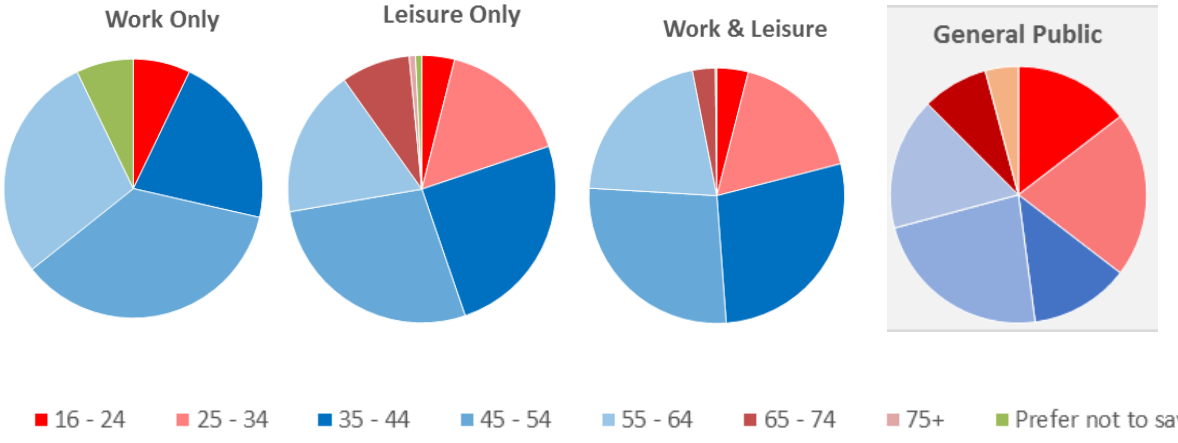
74% male *42% aged 25 – 44*

70% Scottish residents *46% aged 45 – 64*

Respondents were asked to leave their age, gender, work status and home address.

Age

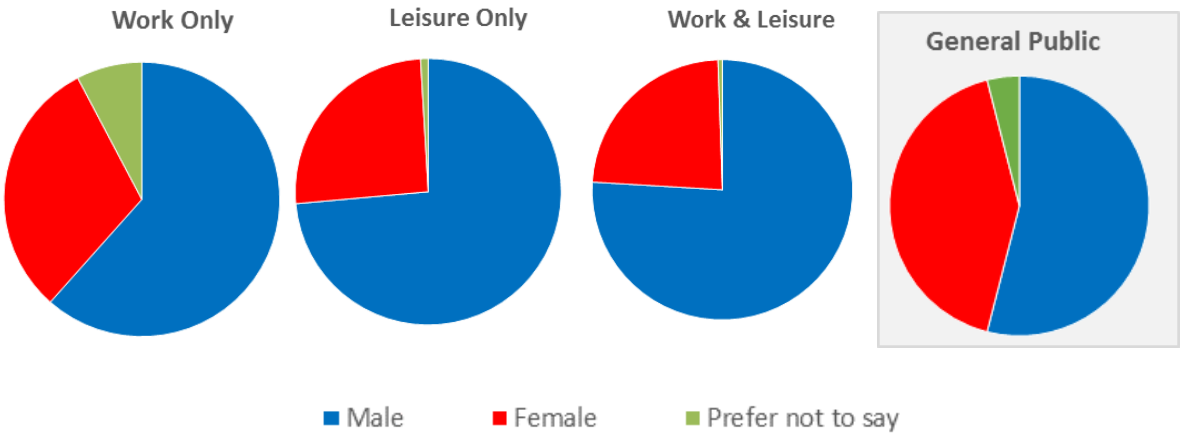
Age	Work Only	Leisure Only	Work & Leisure	Total
16 - 24	1	47	22	**70**
25 - 34		189	94	**283**
35 - 44	3	297	154	**454**
45 - 54	5	328	150	**483**
55 - 64	4	213	116	**333**
65 - 74		99	16	**115**
75+		9		**9**
Prefer not to say	1	9	1	**11**
Total	**14**	**1191**	**553**	**1758**



Because of the low number of 75+ aged respondents, this category has been combined with 65 – 74, to make a 65+ age category used in this report.

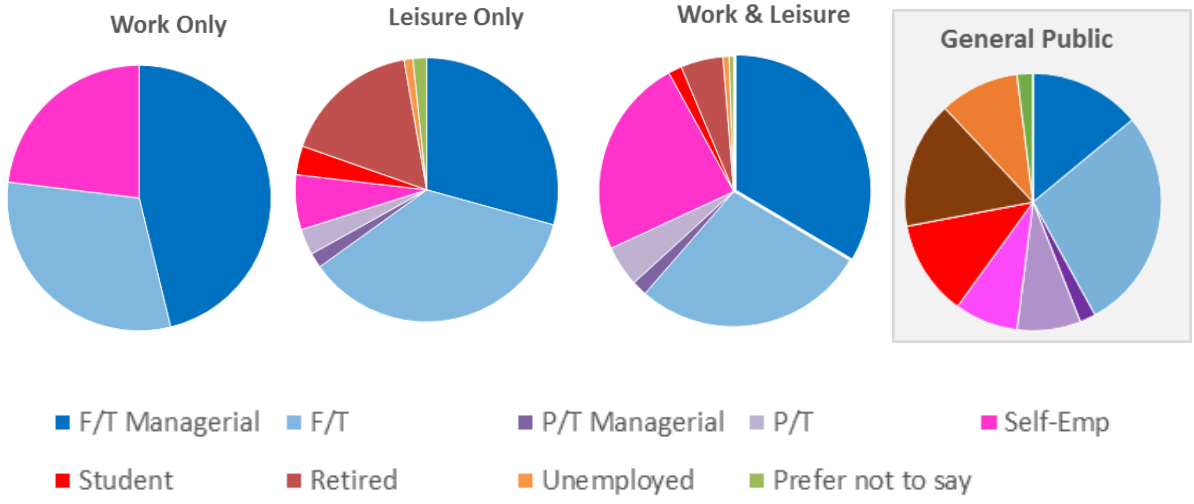
Gender

Gender	Work Only	Leisure Only	Work & Leisure	Total
Male	8	874	420	1302
Female	4	303	130	437
Prefer not to say	1	11	3	15
	13	1188	553	1754



Work Status

	Work Only	Leisure Only	Work & Leisure	Total
Full-time Managerial	6	349	185	**540**
Full-time Employment	4	427	154	**585**
Part-time Managerial		22	10	**32**
Part-time Employment		38	27	**65**
Self-Employed	3	80	132	**215**
Student		42	9	**51**
Retired		201	28	**229**
Unemployed		13	4	**17**
Prefer not to say		20	3	**23**
Total	**13**	**1192**	**552**	**1757**



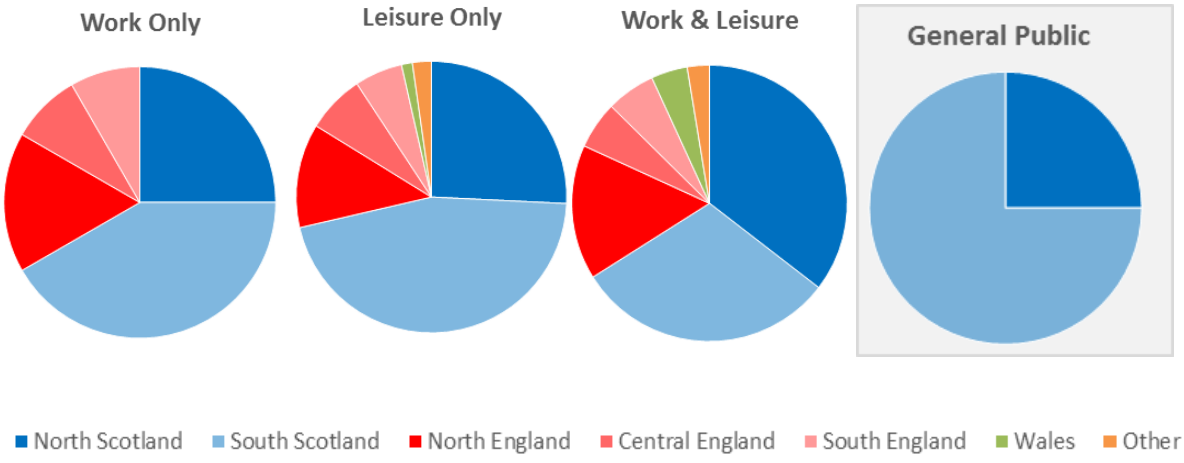
Due to the very low number of respondents stating that they use the mountain weather forecasts for work only purposes, any analysis on this division would be inappropriate.

However, within the survey a question was asked about all of the activities that are undertaken by the respondent and also the activity undertaken the most. Where the activity undertaken the most is work related, we have assigned those as a work only response for some of the analysis in this report (this is clearly stated as appropriate), though it should be born in mind that for other activities they may use forecasts for leisure purposes as well.

Home Address

Respondents' home addresses were collected by the first part of their postcode and have been grouped as shown on the map below into the following regional categories:

Residency	Work Only	Leisure Only	Work & Leisure	Total
NS - North Scotland	3	297	191	**491**
SS - South Scotland	5	526	165	**696**
NE - North England	2	143	85	**230**
CE - Central England	1	80	30	**111**
SE - South England	1	66	31	**98**
WA - Wales		15	23	**38**
OT - Other		26	14	**40**
Total	**12**	**1153**	**539**	**1704**



Awareness and Use of All Weather Forecasts

Key Points: *On at least a daily or weekly basis, respondents to the full and short surveys showed:*

- *72% look at a BBC forecast*
- *72% look at the MWIS forecast*
- *59% look at at least one of the Met Office forecasts*

Compared to a survey of the 'general public', only the BBC forecasts were looked at daily of weekly by more than 33% of respondnets

All respondents were asked about their awareness and level of use of a list of different weather forecasts. Those responding to the full survey were asked to categorise each of the 30 forecasting systems into 1 of the following based on their level of awareness and usage:

- I use daily
- I use weekly
- I use occasionally
- I am aware but never use
- I was not aware of

For those responding to the shorter survey, they were only asked to use the above 5 categories for the 'main' weather forecasts of:

- BBC
- ITV/STV
- Channel 4
- MSN
- Google
- Yahoo
- Met Office Mountain Forecast
- Met Office Summit Forecast
- MWIS
- SAIS
- SEPA

For the other 19 more specialist forecasts they were just asked to indicate their awareness of each.

For the General Public survey, as the short survey they were asked to categorise the above list by usage and the remaining specialist forecasts by awareness, however the list of 11 forecasts above were further grouped into TV forecasts (BBC/ITV/STV/Channel 4), search engine forecasts (MSN/Google/Yahoo), Met Office (Mountain & Summit), then MWIS, SAIS and SEPA.

As there were a number of options for the various Met Office forecasts, as well as showing each separately, a separate field was calculated as a ***Met Off Any Comb*** result, which is calculated as:

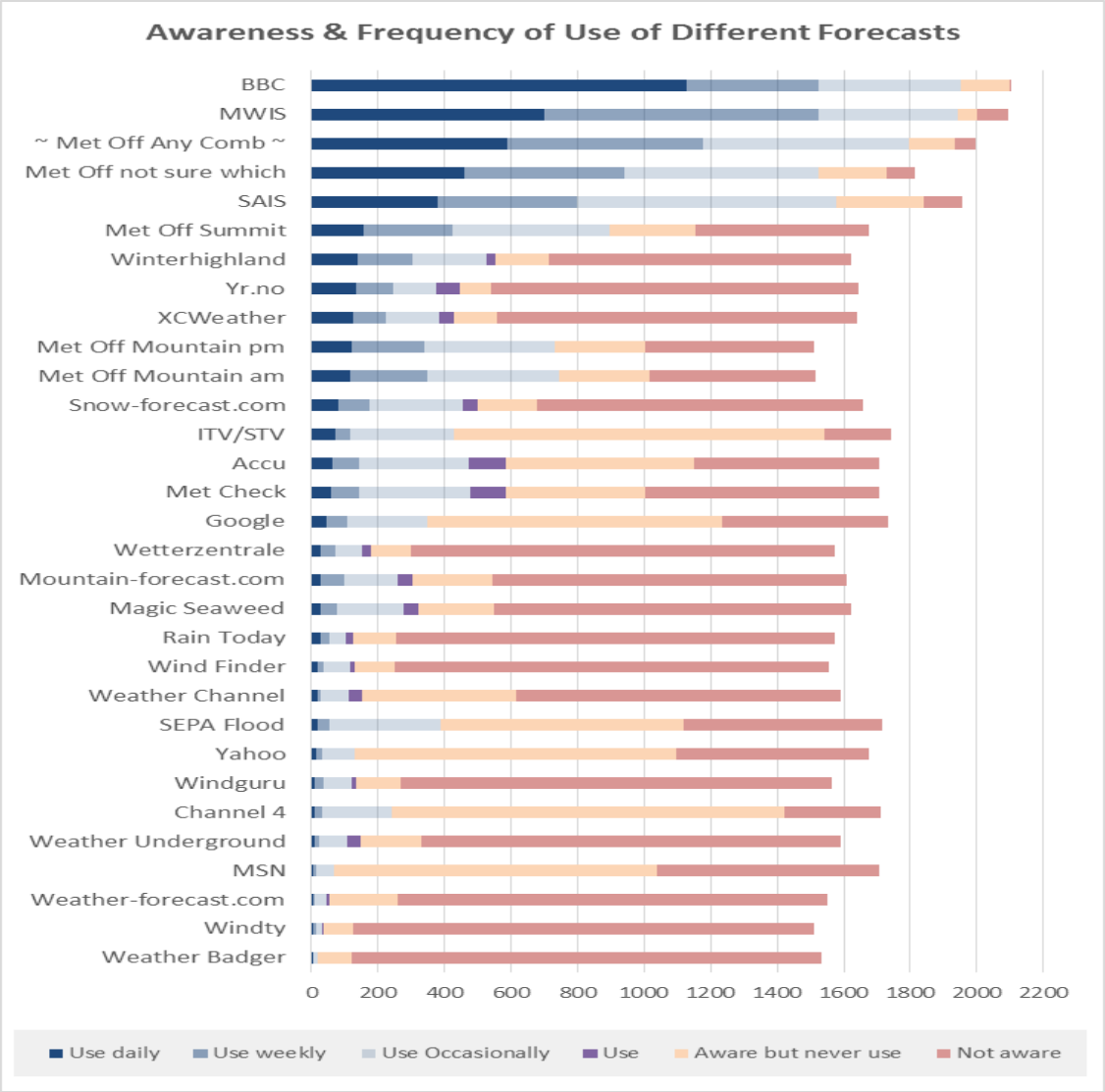
- If any 1 of the Met Office forecasts is viewed daily, then record as daily,
- If none are viewed daily but at least 1 is viewed weekly, then record as weekly
- . . . . .

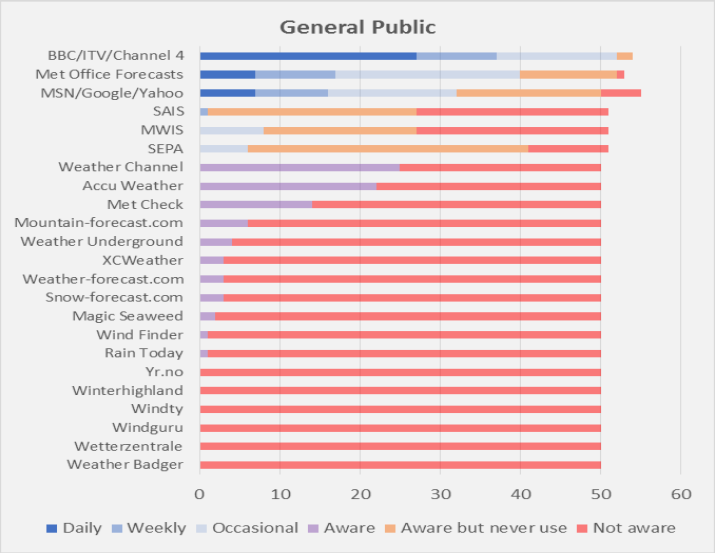
The chart below shows the responses received from all of the respondents. The forecasts have been ordered based on the number of respondents that use the forecasts on a daily basis.

All 30 of the listed forecasts had at least 1 person that used it on at least a daily basis.

For the mainstream TV media forecasts there is a high level of awareness even though the usage is low, other than the BBC.

As would be expected, the BBC is the forecast that is used on a daily basis by the most respondents, however, when looking at the daily and weekly usage combined, there is only a 0.1% difference in these overall figures between the BBC and MWIS.

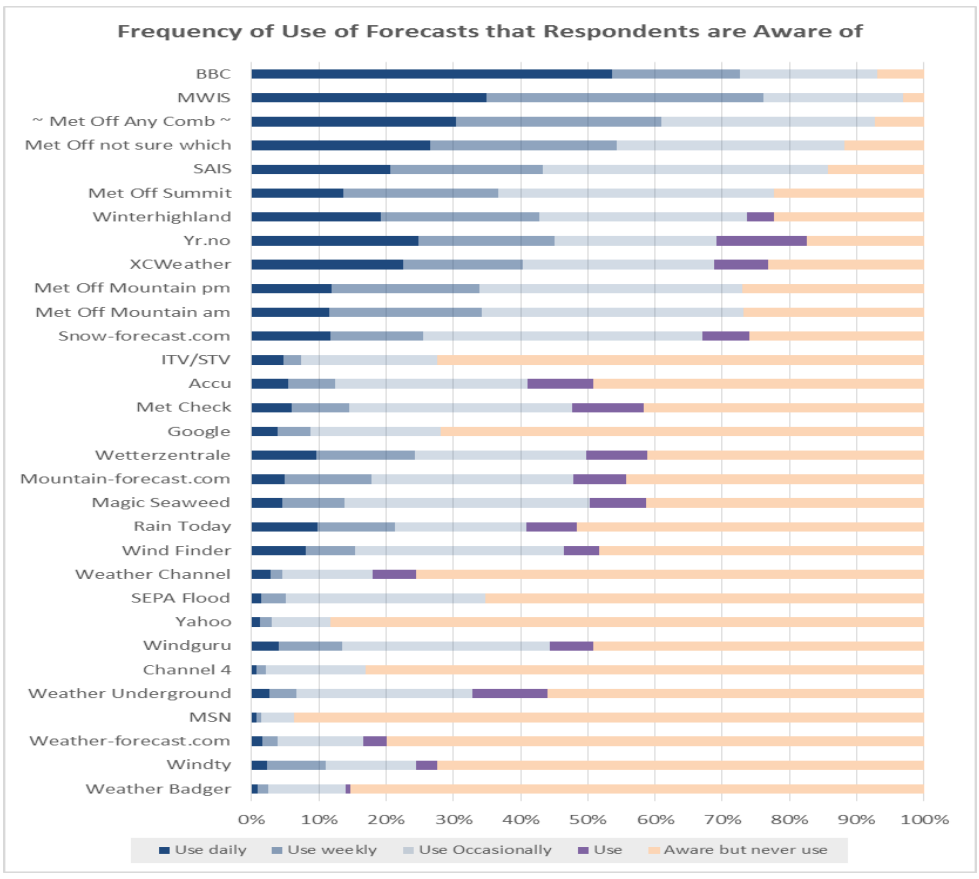




When looking at the General Public awareness chart, it can clearly be seen that there is a very low awareness, and even lower usage of the more specialist weather forecasts, compared to the respondents of the main survey, indicating that mountain weather forecasts are known and used by mountain enthusiasts and not the general public.

When these figures are re-worked as a % of the usage where a respondent is aware of a particular forecast, the chart showing the level of use produces some slightly different results.

The results, shown in the chart below (in the same order as the main chart on the previous page), again demonstrates a high awareness of and frequent use of BBC and MWIS forecasts and to a lesser extent the combined Met Office results, but what is more obvious, is that some of the more specialist forecasts show that although overall awareness is not as high, the level of frequent usage (daily or weekly) is proportionately higher eg Wetterzentrale, Mountain-forecast.com, Rain Today, Windguru and Windty. In contrast, the following forecasts have a high awareness level, but low usage - ITV/STV, Google, Weather Channel, Yahoo, Channel 4 and MSN.



Freetext Responses: Which Other Weather Forecasts Are You Aware Of?

21	Net Weather (jetstream forecast / .tv / weather radar)
13	Meteox.co.uk
12	MeteoGroup (WeatherPro / app / .eu / France / .ch)
11	Windy Wilson (facebook)
7	Highland Weather (Facebook)
7	WeatherOnline.co.uk
6	myweather2.com
5	Facebook - local alerts & ski centre alerts
5	RASP (Regional Atmospheric Soaring Prediction)
5	Weather app on (i)phone
4	Lake District Weatherline
4	Meteoblue
4	The Weather Outlook
3	Dark Sky app
3	Met Office - App
2	BBC Radio 4 Shipping & Inshore Forecast
2	BBC Radio Scotland - Outdoor activities forecast / Outdoor conditions
2	BenNevisWeather.co.uk
2	en.vedur.is/weather
1	Aeroweather iOS app
1	Arcus
1	Authentic Weather
1	Aviation Weather App
1	BBC Weather App
1	Cairngorm Auto weather stn
1	CairngormWeather.eps.hw.ac.uk
1	FifeWeather.co.uk
1	findafishingboat.com for Met Office synoptic charts
1	Flyer Weather
1	fmi.fi
1	FNMOC
1	Foreca.com
1	Freemeteo
1	Home weather station
1	Icelandic Met Office
1	Look out of the window!
1	Met Forecaster
1	Met Office - 5 day
1	Met Office - F214 F215 TAF's METAR's
1	Met Office - Location specific forecast
1	Met Office - Marine
1	Met Office - Post code specific
1	Met Office - Rain map
1	Met Office - Real time mountain observations
1	Met Office - Shipping Forecast
1	Met Office - Synoptic charts
1	Met Office - Weather map
1	Metbrief

1	Metvue
1	N W Snow Radar - precipitation radar
1	Needle sports for the Lake District weather
1	Netstream - Jetstream forecaster
1	Newspapers - local and national
1	On line weather/mountain
1	Onjara app
1	s4c.co.uk/twydd
1	Sat24
1	UGRIB - for sailors
1	UKWeatherWorld Mountain Forecast
1	USGS/NASA international weather
1	Walk Highlands
1	Weather 2
1	Weather Charts.org
1	Weather Duck
1	WeatherBomb
1	WeatherSpark.com
1	WeatherWeb
1	Whatsthefuckingweather.com
1	Where's the water

Reason for Looking at Mountain Weather Forecasts

Key Points: *66% of respondents state that they use a mountain weather forecast for leisure only, 33% for work & leisure and just 1% for work only*

Over 60% of those that use a mountain forecast for some work purposes check a specialist forecast daily. Of these respondents, 70% use MWIS and 54% use at least 1 Met Office product

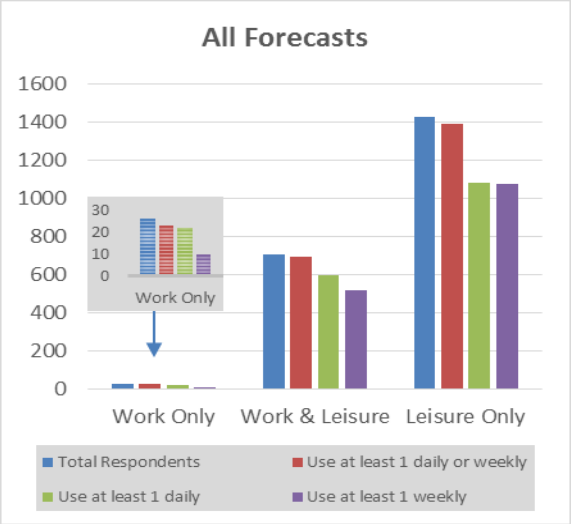
For leisure only users, 54% of respondents check a forecast daily, 50% using MWIS and 45% a Met Office product

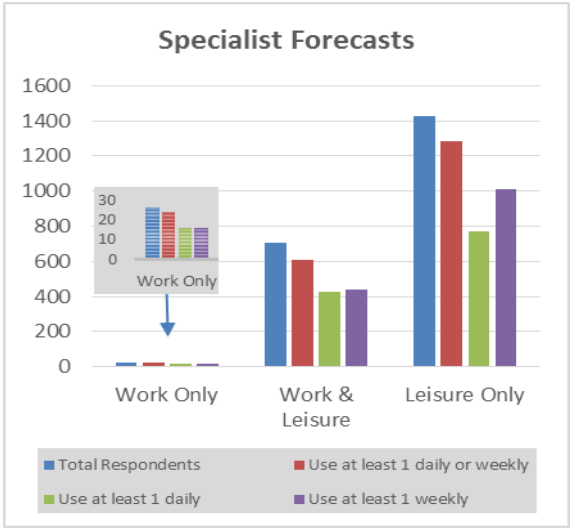
Respondents were asked whether they viewed mountain weather forecasts for work and/or leisure purposes and this has been collated against the frequency of viewing weather forecasts.

Of the 2,206 total responses, only 26 use the mountain weather forecasts for ***work only***, whilst over 700 use the forecasts for ***work and leisure purposes***, and over 1,400 are using them for ***leisure only***.

The charts below show 2 sets of results. The first chart shows responses for all forecasts including the mainstream BBC, ITV, Channel 4, MSN, Google and Yahoo. The chart on the right removes these from the analysis and just looks at the more specialist forecasts.

Use of Mountain Weather Forecasts Daily and/or Weekly for Work and Leisure





As would be expected, both charts show that respondents are more likely to check weather forecasts daily if they are using them for work rather than just leisure, however the figures for leisure only users checking forecasts on a daily basis are still high, even when discounting the BBC forecasts etc, still over 50% of respondents are checking forecasts daily.

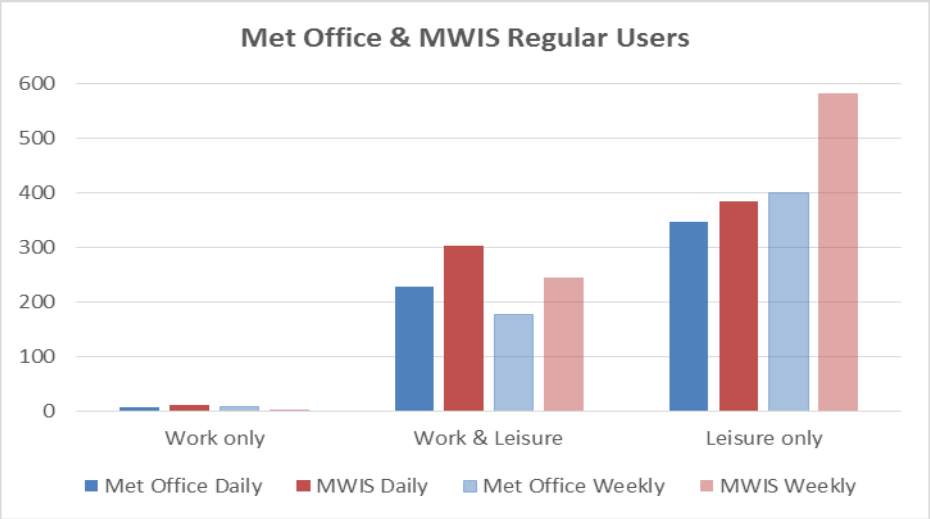
% that use a forecast daily	Work Only	Work & Leisure	Leisure Only
Total Respondents	26	707	1429
All Forecasts	22 (84.6%)	595 (84.2%)	1082 (75.7%)
Specialist Forecasts	16 (61.5%)	426 (60.3%)	772 (54.0%)

Use of Met Office and MWIS Forecasts

The following section looks in more depth at the frequency and user type of Met Office and MWIS forecasts. For the purpose of this section, each Met Office forecast user has been recorded as follows:

- If a respondent said that they used 1 or more of the Met Office forecasts on a daily basis, they have been tagged as a daily user
- If they said that they used 1 or more forecasts on a daily basis, and 1 or more other Met Office forecasts on a weekly basis, they have been tagged as a daily user
- If they used one or more forecasts on a weekly basis, they have been tagged as a weekly user
- Occasional and non-users have been left blank

When looking at just the Met Office and MWIS forecasts the chart below shows the number of respondents that are looking at the Met Office and MWIS forecasts on a daily and weekly basis:



In almost all cases there are more respondents using the MWIS forecasts than any of the Met Office forecasts, and some of the reasons for this are given later in this report.

Looking at those respondents that said they use at least 1 specialist forecast on a daily basis, the following table shows how many of these are using a Met Office forecast and the MWIS forecast:

% that use a specialist forecast daily	Work Only	Work & Leisure	Leisure Only	Total
Total Respondents	16	426	772	1,214
Met Office	6 (37.5%)	228 (53.5%)	346 (44.8%)	580 (47.8%)
MWIS	10 (62.5%)	303 (71.1%)	384 (49.7%)	697 (57.4%)

71.1% of users that look at a specialist forecast daily for work and leisure, use the MWIS service compared to only 53.5% that look at one or more of the Met Office forecasts.

Of the leisure only users 50% are looking at the MWIS forecast daily, compared to 45% looking at Met Office.

Combinations of Forecasts Used

Key Points: *Mountain users check multiple weather forecasts on a regular (daily or weekly) basis:*

- *59% check 2, 3 or 4 forecasts regularly*
- *26% check 5 or more regularly*

The most usual combinations of forecasts checked regularly involve MWIS, BBC, Met Office & SAIS

This study has shown that for many people they look at more than 1 forecast in order to make an assessment of the weather. An analysis of the 'combinations' of forecasts that are most widely used, was undertaken, though given the sheer amount of information and possible options, this was limited to include only forecasts where at least 10% (220) of respondents had selected that they used the forecast daily, weekly, or from the short survey, that they were aware of the specialist forecast.

This resulted in the following 12 forecasts being included in this analysis:

BBC

Met Office Forecast – not sure which one

Met Office am Mountain Forecast

Met Office pm Mountain Forecast

Met Office Summit Forecast

MWIS

SAIS

Accu Weather

Met Check

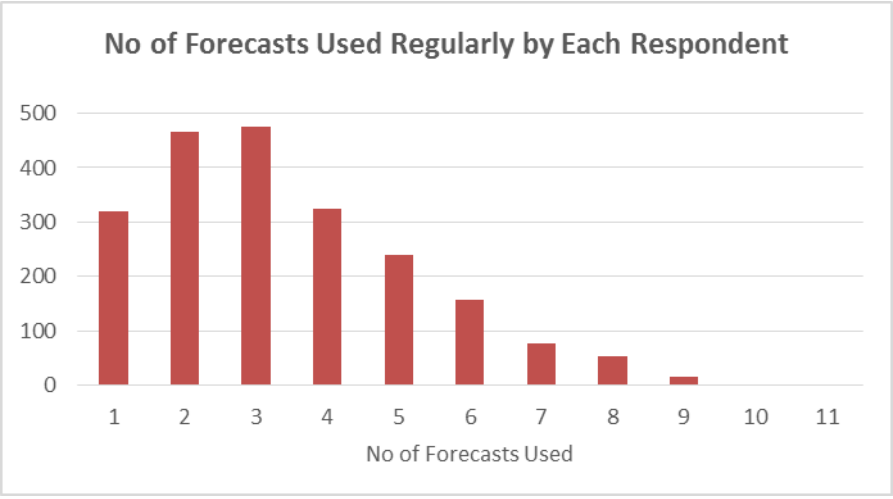
Winterhighland

XCWeather

Yr.no

As can be seen above, the BBC was the only 'mainstream' general forecast that made the list, with the others being more specialist forecasts.

When looking at the number of forecasts that respondents said they were checking, the chart below shows that only 319 (15.0%) checked just one forecast, but 1,266 (59.4%) are checking 2, 3 or 4 of the 12 forecasts above on a daily or weekly basis. The chart below shows the number of respondents that checked particular numbers of forecasts:



In total there were over 450 different combinations of these 12 forecasts selected by respondents.

The table below shows shading for all those combinations that were selected by at least 10 respondents, with the total column showing how many selected each particular combination.

Respondents who only selected 1 of the 12 forecasts are also shown in this table.

Met Check is the only forecasting system that was part of the top 12 overall forecasts, but has no shading in the list below, as less than 10 selected it in any particular combination.

BBC	MO not sure	MO Mtain am	MO Mtain pm	MO Summit	MWIS	SAIS	Accu	Met Check	Winterhighland	XCWeather	Yr.no	Tot
■												181
■					■							173
■					■	■						96
■	■				■							83
■	■											79
					■							58
■	■				■	■						50
	■											46
	■				■	■						33
					■	■						33
	■				■							29
■					■	■			■			27
■	■				■	■			■			22
■					■	■					■	20
■					■				■			18
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■										■		10
		■	■		■	■						10
					■	■					■	10
					■		■					10

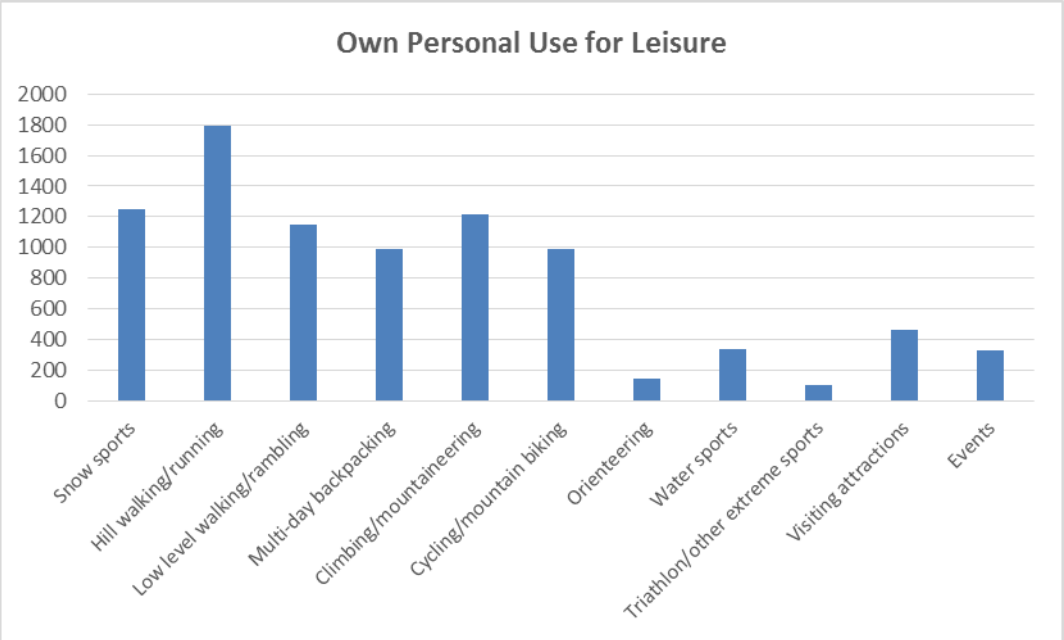
Looking at the forecasts that came up most often in these top 36 forecast combinations, shows the following:

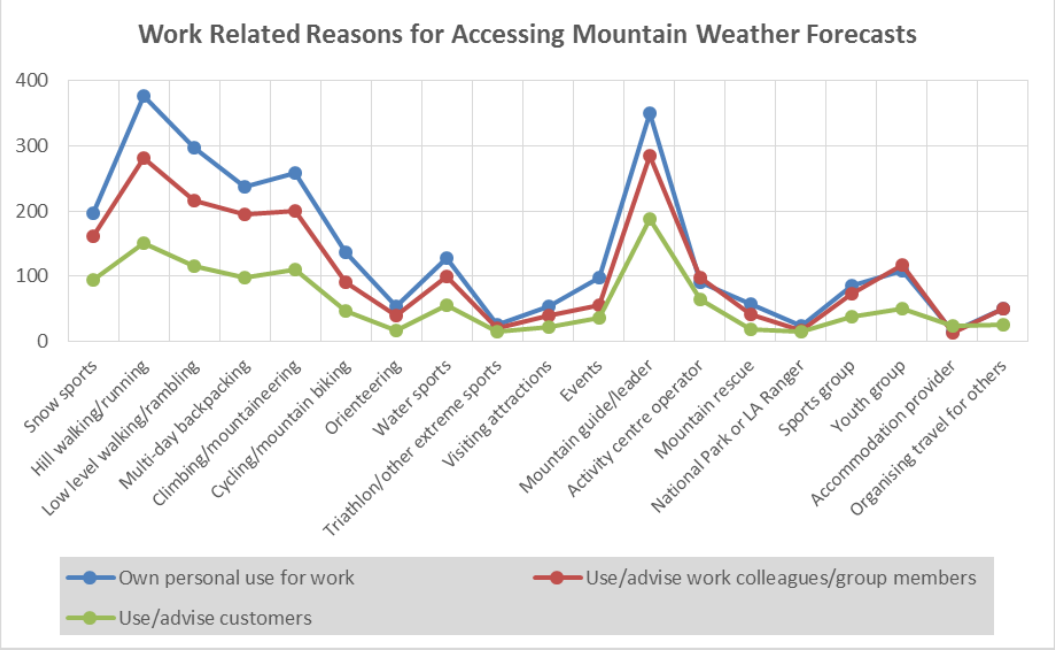
MWIS	27
BBC	25
Met Office not sure which one	15
SAIS	12
Met Office Summit	9
Met Office Mountain am	6
Met Office Mountain pm	6
Winterhighland	6
Yr.no	4
Accu	3
XCWeather	2
Met Check	0

Although MWIS is a more specialist forecast and respondents would need to make a particular point of checking it (unlike the BBC where respondents are likely to have the TV or radio news on anyway and would catch the weather daily), MWIS still came out as the most popular forecast to use in combination with other forecasts – as a single use forecast MWIS was 6th on the overall list.

Reasons for Accessing Mountain Weather Forecasts

When looking at the leisure and work activities that respondents are undertaking when accessing mountain weather forecasts, the 2 graphs below show the results, with the first chart showing the leisure activities and the second chart showing the work related activities:





Both charts show that whether for work or leisure, the main activity undertaken is hill walking/running.

On the work related chart, with the exception of accommodation providers, all other activities are undertaken for personal use and/or to use/advise work colleagues/group members, more than to use/advise customers.

Freetext Comments: Other Activities you Pursue when you use a Mountain Weather Forecast

Activity	Work & Leisure	Leisure	Personal Work	Work Colleagues	For Customers	Short Survey
Own/family use	10	9	6		1	5
Geocaching		1				
Gorge walking	1		1	1	1	
Canyoning & Ghyll scrambling	2	2	3	3	3	
Caving	4	5	4	4	3	2
Kayaking (incl sea & white water)	3	4	2	1		
Power kiting		1				
Wild swimming		1	1	1		
Adventure Racing		1				
Mountain Marathons	1	1				
Camping		7				1
Flying / Gliding / Paragliding / Hang gliding / Drones	8	15	3			
Fishing / Angling		5				1
Archery	1					
Golf		1				
Horse Riding		1				
General sports		1				
Photography / Aerial filming	5	3	2	1		2
Ornithology		1	1			
Gardening		2				
Ranger	1		1	1	1	
Duke of Edin / Air Cadets / Scouts	5	3	1	4		1
Teacher / Tutor / Inspector	8	2	8	3	2	
Forces	1				1	
Rescue training (water, air, fire service, mountain)	3	5	3	3	1	
Event Organiser	1		3	1	1	
Field Studies / Surveying / Environmental Monitoring	10	3	17	12	2	
Conservation	1	1	2	2	1	1
Bothy Maintenance	2	1	1	1		
Land management	1	1	2			
Hunting / Deer management	1		3			
Upland work			3			
Forestry	1		3	3		
Farming	1					
Vet			1			
Construction industry			5	2	1	
Renewable energy			2	2		
Distillery in remote areas			1			
Retailer			2		1	
Journalist/author/media	1		2	2		

Forecasts Used for Different Activities

When looking at which forecasts respondents used and the activities that they said they undertook, the analysis has been divided into activities undertaken for leisure and work separately.

Leisure

The number of respondents that indicated that they used a mountain weather forecast on a daily or weekly basis, when undertaking different leisure activities is shown in the table below:

	Total
Snow Sports	1253
Hill walking / running	1793
Low level walking / rambling	1147
Multi-day backpacking	986
Climbing / mountaineering	1219
Cycling / mountain biking	986
Orienteering	143
Water sports	338
Triathlon / other extreme sports	104
Visiting attractions	459
Events	330

When analysing which forecasts they were using, and whether there were any trends between particular forecasts being used for particular activities, the following charts have been created using the % usage rate for each forecast, shown as the % of participants that undertook each particular activity, rather than raw figures.

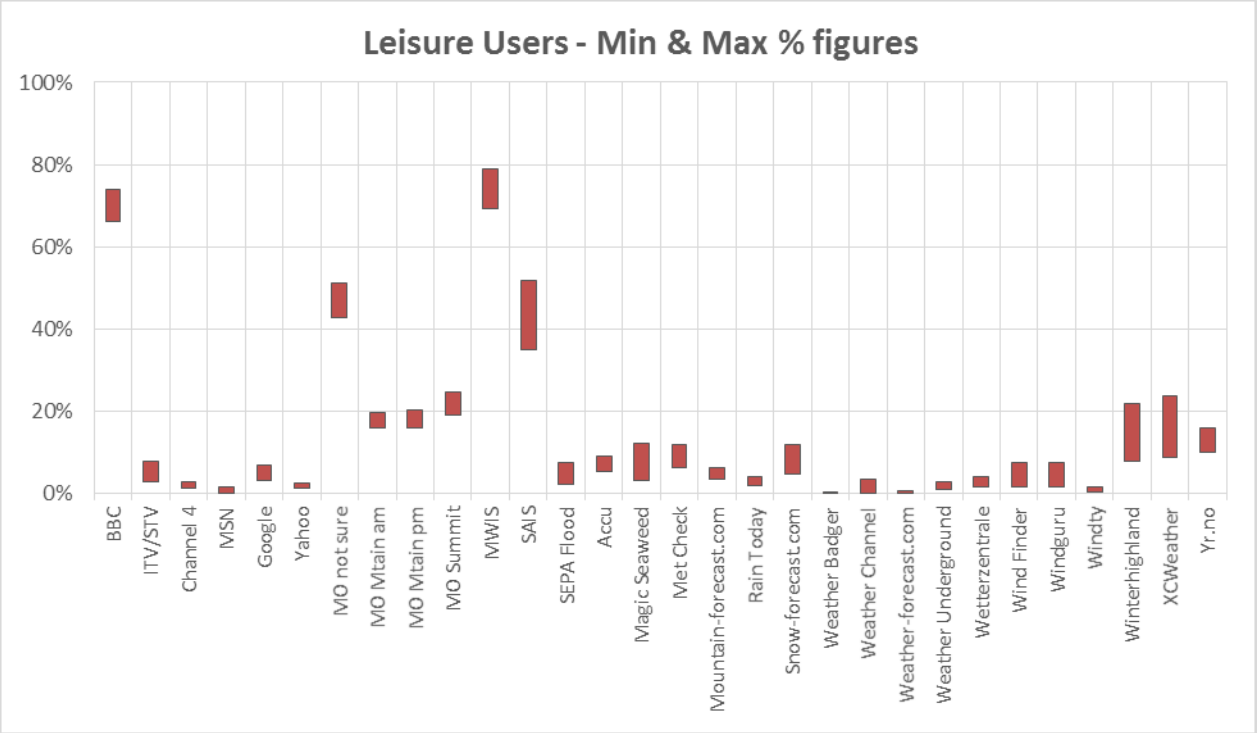
The chart below shows the min and max range of values that were calculated for each individual activity, for each forecast, to show the spread of usage that occurs.

The closer to the top of the chart the bars are, indicates that a greater proportion of respondents are using that forecast on at least a daily or weekly basis.

The shorter the bars are, indicates that irrespective of the activity being undertaken by the respondent, the % of participants that use that particular forecast is quite consistent, albeit that for many of the forecasts these %s are quite low eg at the bottom of the graph.

For example, the BBC forecasts show that for each and every one of the activities undertaken, there are between 66% and 74% of participants of that activity that check a BBC forecast on a daily or weekly basis.

In contrast, the Winter Highland forecast only has at most 22% of respondents for any particular activity, checking its forecast daily or weekly (this is snowsport participants), but this % drops to 8% for the activity of multi-day backpacking.



As before, this chart gives another clear indication that the BBC and MWIS are the 2 main forecast systems used when undertaking leisure activities, followed by specific Met Office products and SAIS.

The forecast that shows the greatest divergence of min and max figures is SAIS, which is perhaps not surprising, with the min figure of 35% being recorded for those visiting attractions, and the max figure of 52% for those undertaking triathlons and other extreme sports.

The following page has the detailed % figures used in the above chart:

The figures in the chart below are calculated as the no of respondents using a forecast / total no participating in that activity for leisure purposes:

Using Forecasts for Own Personal Leisure	Total	BBC	ITV/STV	Channel 4	MSN	Google	Yahoo	MO not sure	MO Mtain am	MO Mtain pm	MO Summit	MWIS	SAIS	SEPA Flood	Accu	Magic Seaweed	Met Check	Mountain-forecast.com	Rain Today	Snow-forecast.com	Weather Badger	Weather Channel	Weather-forecast.com	Weather Underground	Wetterzentrale	Wind Finder	Windguru	Windty	Winterhighland	XCWeather	Yr.no
Snow sports	1253	68%	4%	2%	0%	5%	2%	43%	17%	17%	20%	73%	45%	3%	6%	5%	7%	5%	3%	12%	0%	1%	1%	1%	4%	3%	2%	1%	22%	12%	12%
Hill walking / running	1793	69%	4%	1%	1%	4%	2%	43%	16%	16%	20%	73%	38%	2%	6%	3%	6%	4%	2%	6%	0%	1%	0%	1%	4%	2%	2%	0%	12%	10%	11%
Low level walking / rambling	1147	71%	5%	2%	1%	4%	1%	46%	16%	16%	22%	73%	36%	3%	5%	4%	7%	4%	2%	5%	0%	1%	0%	1%	3%	1%	2%	1%	11%	10%	11%
Multi-day backpacking	986	66%	4%	1%	1%	3%	1%	44%	19%	19%	23%	79%	44%	3%	6%	4%	6%	5%	2%	5%	0%	1%	0%	1%	4%	2%	2%	0%	8%	9%	12%
Climbing / mountaineering	1219	68%	4%	1%	1%	4%	1%	44%	19%	19%	22%	78%	47%	2%	5%	4%	6%	5%	2%	6%	0%	1%	0%	1%	4%	2%	2%	1%	10%	11%	13%
Cycling / mountain biking	986	70%	4%	2%	1%	4%	1%	44%	16%	16%	19%	75%	43%	3%	6%	5%	7%	4%	3%	9%	0%	1%	1%	1%	3%	2%	2%	1%	16%	12%	13%
Orienteering	143	71%	4%	1%	1%	3%	2%	51%	20%	20%	24%	78%	38%	5%	9%	3%	12%	6%	3%	7%	0%	3%	0%	3%	1%	3%	4%	1%	11%	10%	14%
Water sports	338	66%	3%	2%	1%	5%	1%	50%	19%	18%	23%	74%	45%	7%	6%	12%	12%	4%	4%	7%	0%	1%	1%	2%	4%	7%	7%	1%	16%	24%	16%
Triathlon / other extreme sports	104	74%	3%	3%	0%	7%	2%	44%	18%	19%	22%	79%	52%	7%	8%	10%	11%	6%	2%	9%	0%	0%	0%	3%	4%	5%	4%	1%	15%	22%	14%
Visiting attractions	459	73%	8%	2%	2%	6%	2%	48%	19%	17%	24%	69%	35%	4%	9%	4%	10%	5%	3%	7%	0%	2%	0%	2%	3%	2%	2%	0%	16%	11%	10%
Events	330	71%	6%	2%	1%	6%	2%	50%	16%	16%	23%	72%	38%	4%	8%	4%	11%	3%	3%	6%	0%	2%	1%	2%	2%	2%	2%	0%	13%	12%	12%
	Min	66%	3%	1%	0%	3%	1%	43%	16%	16%	19%	69%	35%	2%	5%	3%	6%	3%	2%	5%	0%	0%	0%	1%	1%	1%	2%	0%	8%	9%	10%
	Max	74%	8%	3%	2%	7%	2%	51%	20%	20%	24%	79%	52%	7%	9%	12%	12%	6%	4%	12%	0%	3%	1%	3%	4%	7%	7%	1%	22%	24%	16%
	Diff	8.1%	5.0%	1.6%	1.5%	3.7%	1.2%	8.4%	3.8%	4.5%	5.4%	9.7%	16.8%	5.1%	3.7%	9.0%	5.8%	3.0%	2.2%	7.4%	0.3%	3.5%	0.6%	1.9%	2.6%	6.0%	5.8%	1.2%	14.0%	15.0%	6.0%

The data table above shows the Min and Max %s recorded for each forecast along with the difference.

16 of the 30 forecasts show a variation of 5% or less between different leisure activities

11 have a variation of 5% - 10%

3 have a variation of more than 10%, as shown below:

Forecast	Difference	Lowest Activity	Highest Activity
SAIS	16.8%	35.1% Visiting attractions	51.9% Triathlons & other extreme sports
XC Weather	15.0%	8.6% Multi-day backpacking	23.7% Watersports
Winterhighland	14.0%	7.7% Multi-day backpacking	21.7% Snowsports

Although it might have been expected that specialist forecasts such as SAIS were predominantly used by snowsports enthusiasts and mountaineers, ⅓ – ½ of all respondents stated that they used this forecast on a regular basis.

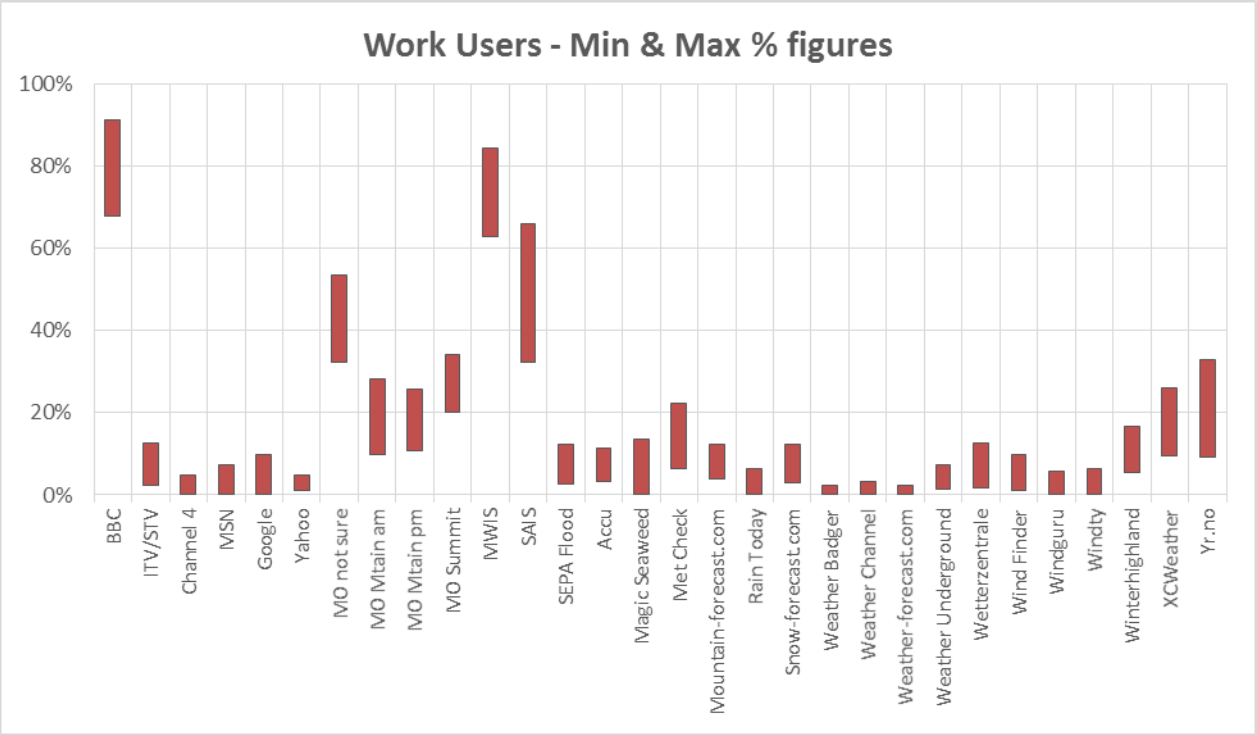
Work

When looking at the same analysis for those respondents that said they were using a mountain weather forecast on a daily or weekly basis for a work related reason, the following can be seen:

	Own personal use for work	Use/advise work colleagues/group members	Use/advise customers
Snow sports	197	162	94
Hill walking/running	376	282	150
Low level walking/rambling	297	217	116
Multi-day backpacking	237	195	98
Climbing/mountaineering	258	200	111
Cycling/mountain biking	136	90	47
Orienteering	54	39	16
Water sports	128	99	56
Triathlon/other extreme sports	25	21	15
Visiting attractions	54	39	22
Events	98	56	36
Mountain guide/leader	351	285	188
Activity centre operator	91	98	65
Mountain rescue	57	42	19
National Park or LA Ranger	23	16	15
Sports group	86	73	38
Youth group	108	117	50
Accommodation provider	14	13	24
Organising travel for others	51	50	26

When analysing which forecasts they were using, and whether there were any trends between particular forecasts being used for particular activities, the following charts have been created using the % usage rate for each forecast, shown as the % of participants that undertook each particular activity, rather than raw figures.

The chart below shows the min and max range of values that were calculated for each individual activity, for each forecast, to show the range of values that were achieved. The smaller bars show that irrespective of the activities undertaken by respondents, the % of those participants that use a particular forecast is quite consistent, albeit that for many of the forecasts these %s are quite low.



This time there are much larger bars, indicating greater discrepancies between the min and max %s for different activities, although this analysis does include a greater range of activities (eg as well as the particular activity pursuits of snowsports, climbing etc, it also includes a number of work-related roles eg mountain leader).

The forecast that shows the greatest divergence of min and max figures is again SAIS, with the min figure of 32% recorded by National Park/Local Authority Rangers and the max % of 66% for triathlon and other extreme sport participants. Again ⅓ - ⅔ of all respondents stated that they use this forecast on a regular basis.

The following page has the detailed % figures used in the above chart:

The figures in the chart below are calculated as the no of respondents using a forecast / total no participating in that activity for work purposes:

Using Forecasts for Work Related Activities	Total	BBC	ITV/STV	Channel 4	MSN	Google	Yahoo	MO not sure	MO Mtain am	MO Mtain pm	MO Summit	MWIS	SAIS	SEPA Flood	Accu	Magic Seaweed	Met Check	Mountain-forecast.com	Rain Today	Snow-forecast.com	Weather Badger	Weather Channel	Weather-forecast.com	Weather Underground	Wetterzentrale	Wind Finder	Windguru	Windy	Winterhighland	XCWeather	Yr.no
Snow sports	260	70%	7%	2%	1%	3%	1%	39%	24%	24%	27%	81%	59%	5%	8%	8%	11%	7%	5%	12%	0%	2%	2%	2%	10%	5%	2%	1%	15%	16%	23%
Hill walking / running	464	69%	4%	2%	1%	3%	1%	43%	22%	21%	25%	80%	46%	4%	5%	5%	10%	6%	3%	6%	0%	1%	0%	2%	8%	4%	1%	1%	6%	13%	18%
Low level walking / rambling	367	69%	5%	2%	1%	3%	1%	45%	22%	22%	28%	78%	43%	4%	5%	6%	11%	4%	2%	4%	0%	1%	0%	2%	6%	4%	1%	1%	7%	14%	17%
Multi-day backpacking	306	69%	6%	2%	1%	4%	2%	43%	24%	23%	30%	84%	51%	6%	6%	7%	11%	5%	3%	5%	0%	1%	1%	2%	8%	5%	1%	1%	6%	14%	20%
Climbing / mountaineering	320	74%	6%	2%	1%	4%	2%	44%	25%	25%	29%	83%	56%	5%	6%	8%	13%	8%	4%	7%	0%	1%	1%	2%	10%	4%	1%	2%	7%	16%	23%
Cycling / mountain biking	172	71%	5%	2%	2%	5%	3%	49%	20%	22%	23%	80%	48%	7%	4%	10%	10%	6%	5%	8%	1%	1%	1%	2%	5%	5%	2%	1%	9%	20%	17%
Orienteering	81	75%	7%	2%	2%	2%	5%	48%	23%	22%	31%	75%	37%	7%	6%	14%	15%	7%	2%	6%	0%	2%	0%	2%	2%	6%	2%	2%	6%	16%	15%
Water sports	162	72%	6%	1%	2%	3%	1%	52%	23%	22%	25%	75%	49%	10%	6%	14%	15%	6%	3%	7%	1%	1%	1%	3%	8%	9%	4%	2%	7%	26%	23%
Triathlon / other extreme sports	41	78%	7%	5%	7%	10%	5%	54%	22%	20%	34%	76%	66%	12%	7%	10%	15%	12%	2%	5%	2%	2%	2%	7%	2%	10%	0%	2%	7%	15%	15%
Visiting attractions	86	73%	9%	2%	1%	3%	1%	47%	17%	16%	28%	80%	43%	8%	7%	6%	13%	5%	3%	5%	0%	0%	0%	5%	5%	1%	2%	0%	10%	14%	9%
Events	129	73%	5%	3%	2%	5%	2%	53%	13%	11%	23%	73%	44%	9%	9%	5%	12%	5%	1%	4%	1%	2%	1%	4%	2%	3%	1%	2%	12%	12%	12%
Mountain guide / leader	387	71%	5%	2%	1%	4%	2%	41%	27%	26%	25%	80%	50%	4%	7%	7%	12%	7%	3%	7%	0%	1%	1%	2%	9%	4%	2%	1%	7%	15%	22%
Activity centre operator	117	73%	5%	2%	2%	3%	3%	51%	19%	21%	24%	73%	44%	9%	4%	9%	22%	9%	3%	6%	1%	2%	1%	3%	3%	7%	1%	3%	8%	20%	21%
Mountain rescue	64	70%	13%	2%	0%	5%	3%	50%	28%	23%	30%	84%	64%	6%	8%	13%	14%	6%	2%	8%	0%	3%	0%	3%	13%	9%	2%	2%	11%	16%	33%
National Park or LA Ranger	31	68%	3%	0%	0%	0%	3%	32%	10%	13%	26%	71%	32%	6%	3%	0%	6%	6%	6%	3%	0%	3%	0%	3%	3%	6%	0%	6%	16%	10%	10%
Sports group	107	74%	5%	3%	1%	7%	1%	45%	21%	19%	21%	72%	52%	7%	11%	9%	16%	9%	2%	11%	0%	1%	0%	6%	5%	7%	6%	1%	17%	16%	15%
Youth group	148	70%	5%	3%	2%	3%	2%	39%	17%	19%	20%	72%	41%	3%	10%	3%	13%	5%	2%	6%	1%	2%	1%	3%	2%	5%	0%	1%	7%	10%	14%
Accommodation provider	35	91%	3%	0%	0%	3%	3%	43%	17%	20%	23%	63%	34%	6%	11%	11%	20%	6%	0%	3%	0%	0%	0%	3%	6%	6%	3%	6%	9%	14%	14%
Organising travel for others	84	79%	2%	2%	2%	8%	4%	46%	25%	23%	26%	71%	38%	7%	7%	10%	11%	5%	4%	7%	0%	0%	0%	6%	2%	4%	1%	1%	11%	10%	10%
	Min	68%	2%	0%	0%	0%	1%	32%	10%	11%	20%	63%	32%	3%	3%	0%	6%	4%	0%	3%	0%	0%	0%	2%	2%	1%	0%	0%	6%	10%	9%
	Max	91%	13%	5%	7%	10%	5%	54%	28%	26%	34%	84%	66%	12%	11%	14%	22%	12%	6%	12%	2%	3%	2%	7%	13%	10%	6%	6%	17%	26%	33%
	Diff	23.7%	10.1%	4.9%	7.3%	9.8%	4.0%	21.4%	18.4%	15.0%	13.9%	21.5%	33.6%	9.5%	8.2%	13.6%	15.8%	8.4%	6.5%	9.5%	2.4%	3.2%	2.4%	5.8%	10.9%	8.6%	5.6%	6.5%	11.2%	16.4%	23.5%

The data table above shows the Min and Max %s recorded for each forecast along with the difference.

5 of the 30 forecasts show a variation of 5% or less between different work-related activities

11 have a variation of 5% - 10%

9 have a variation of 10% - 20%

5 have a variation of more than 20%, as shown below:

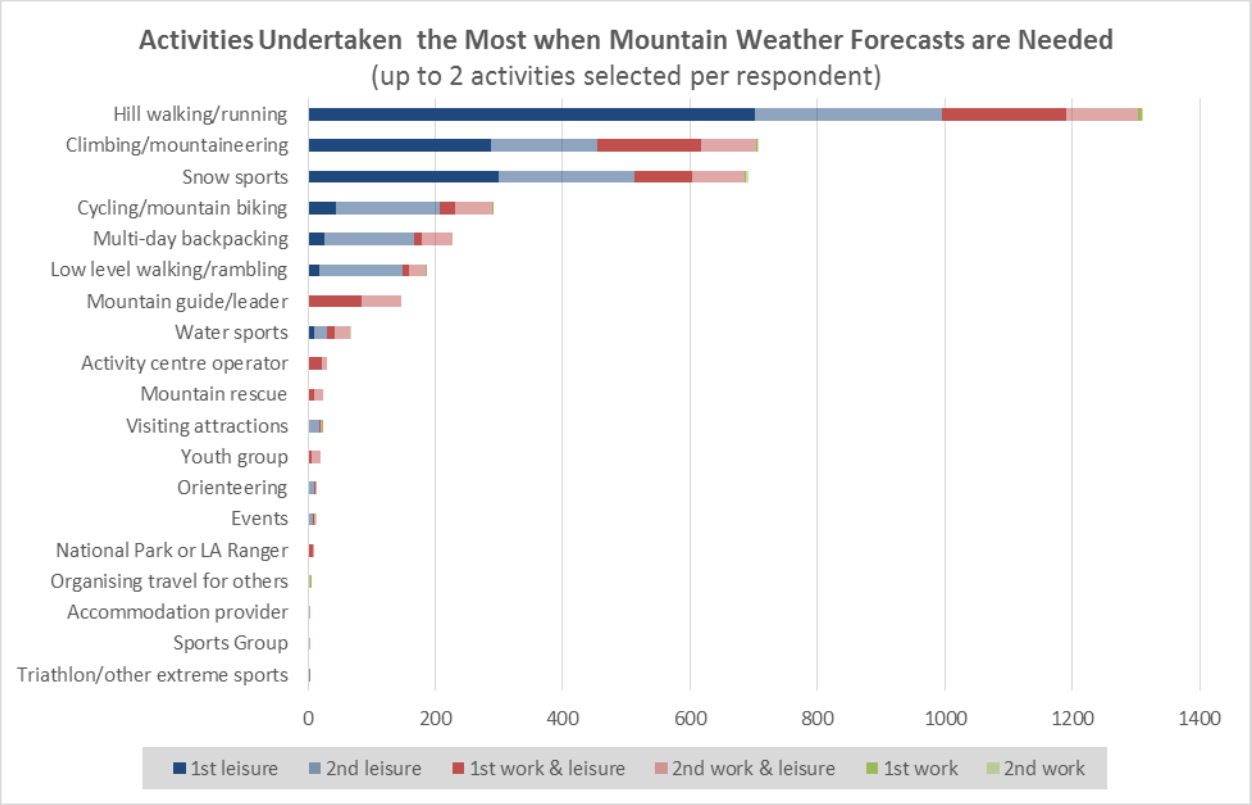
Forecast	Difference	Lowest Activity	Highest Activity
SAIS	33.6%	32.3% National Park or LA Ranger	65.9% Triathlon & other extreme sports
BBC	23.7%	67.7% National Park or LA Ranger	91.4% Accommodation provider
Yr.no	23.5%	9.3% Visiting attractions	32.8% Mountain rescue
MWIS	21.5%	62.9% Accommodation provider	84.4% Mountain rescue
Met Office Not sure which	21.4%	32.3% National Park or LA Ranger	53.7% Triathlon & other extreme sports

Activities Undertaken when Mountain Weather Forecasts are Needed

Key Points: *when asked to name the top 2 activities undertaken when using a mountain weather forecast, the most popular activities were:*

- *59% hill walking / running*
- *32% climbing / mountaineering*
- *31% snowsports*

Respondents to the full survey were asked to indicate up to 2 activities they undertook the MOST, for which they needed to access a mountain weather forecast. Respondents to the short survey selected just their main activity and these responses were combined giving 3,776 overall results. These responses were then split between those that indicated they used mountain weather forecasts for work only, leisure only, or work and leisure.



From the chart above, by far the most popular activity was ***hill walking/running***, with over 900 respondents selecting it as their 1st choice and over 400 as their 2nd choice activity.

Because there were so few overall respondents (just 26) who said they used mountain weather forecasts for work purposes only, no analysis can be undertaken on the different uses for work or leisure purposes.

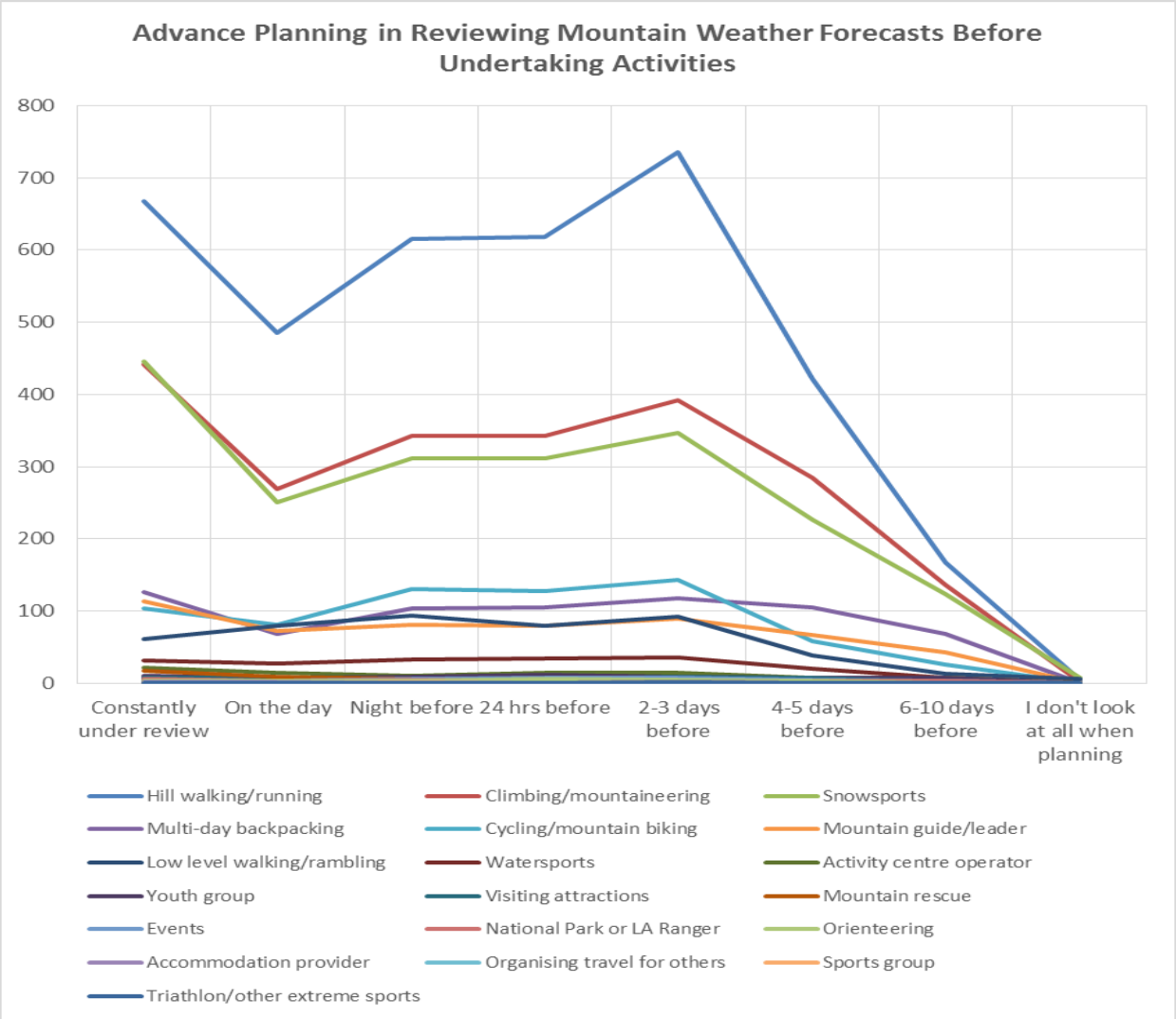
Advance Planning by Activity

> ***Key Points:*** *the main points in time that respondents check forecasts for advance planning are '2-3 days ahead' and 'keeping it constantly under review'*

When looking at the main 2 activities undertaken by respondents when looking at mountain weather forecasts, they were asked how far in advance they looked at the forecasts. Each respondent could select multiple time frames for each activity.

The chart below shows 1 line for each activity. Although other than the top 7 activities (hill walking/running, climbing/mountaineering, snowsports, multi-day backpacking, cycling/mountain biking, mountain guide/leader and low level walking/rambling), it is not possible to distinguish the lines between the actual activities, what can clearly be seen is the similarity in the pattern of forecast checks. In particular:

- peaks that occur for most activities ***2-3 days ahead***
- relative drop ***on the day***
- peak in those keeping forecasts ***constantly under review***

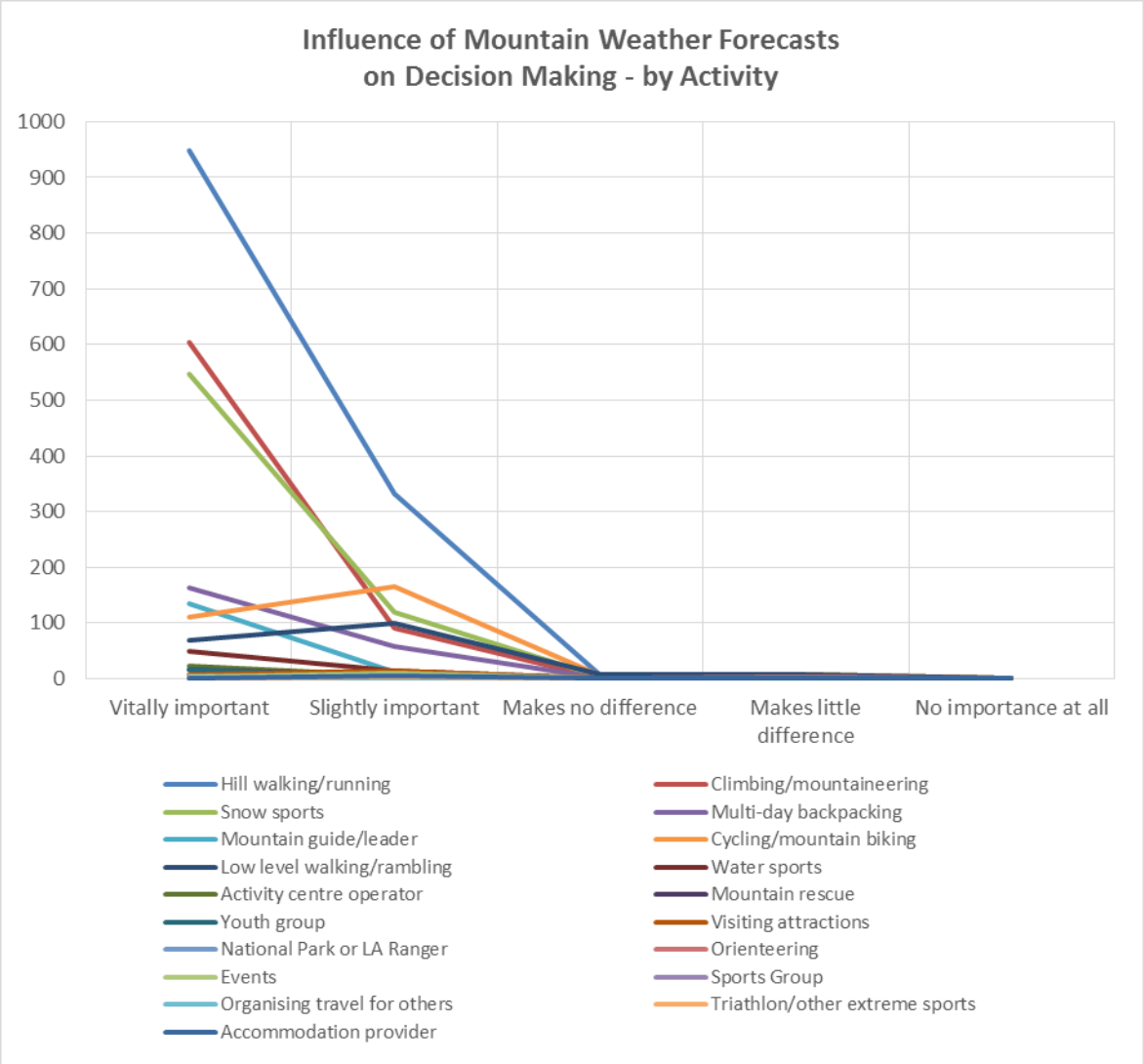


Influence on Decision Making

Key Points: *98% of respondents indicated that mountain weather forecasts were vitally or slightly important when deciding on activities*

When asked how much influence the mountain weather forecasts have on decisions when planning their main 2 activities, overall 98.2% of responses said that it was vitally or slightly important – 72.7% indicated that forecasts were vitally important, with a further 25.5% saying slightly important. Only 1.8% said it made no difference, or was of little or no importance.

However these figures mask some differences between actual activities, as can be seen in the chart below:



Whilst most activities have a significant peak at ***vitally important***, which is 3 – 4 times greater than ***slightly important***, cycling/mountain biking and low level walking/rambling, were considerably less with more respondents stating ***slightly important*** rather than ***vitally important*** when planning activities.

The chart shows a drop off to near 0 for all respondents feeling that it made ***little or no difference*** to the planning process.

Results shown as %s for each activity are in the table below (those with less than 10 responses have been excluded):

	No of responses	Vitally important	Slightly important	Makes no difference	Makes little difference	No importance at all
Hill walking/running	1290	73.5%	25.8%	0.5%	0.2%	0.0%
Climbing/mountaineering	699	86.3%	13.2%	0.3%	0.1%	0.1%
Snow sports	679	80.7%	17.5%	0.6%	1.2%	0.0%
Multi-day backpacking	225	72.4%	26.2%	0.9%	0.4%	0.0%
Mountain guide/leader	147	91.2%	8.8%	0.0%	0.0%	0.0%
Cycling/mountain biking	289	38.4%	57.1%	1.7%	2.8%	0.0%
Low level walking/rambling	184	38.0%	54.3%	3.8%	3.8%	0.0%
Water sports	65	75.4%	21.5%	0.0%	3.1%	0.0%
Activity centre operator	28	78.6%	21.4%	0.0%	0.0%	0.0%
Mountain rescue	22	77.3%	22.7%	0.0%	0.0%	0.0%
Youth group	19	84.2%	15.8%	0.0%	0.0%	0.0%
Visiting attractions	24	33.3%	62.5%	0.0%	4.2%	0.0%
Orienteering	14	21.4%	50.0%	7.1%	21.4%	0.0%
Events	13	23.1%	69.2%	7.7%	0.0%	0.0%

This clearly shows that mountain weather forecasts are an important factor when undertaking specific activities in mountainous areas, regardless of the activity.

Continuous Monitoring of Mountain Forecasts

Key Points: *once embarking on an activity only 4 activities showed a higher response for those always monitoring the forecast as opposed to sometimes. These were:*

Mountain guide/leader *Mountain rescue*

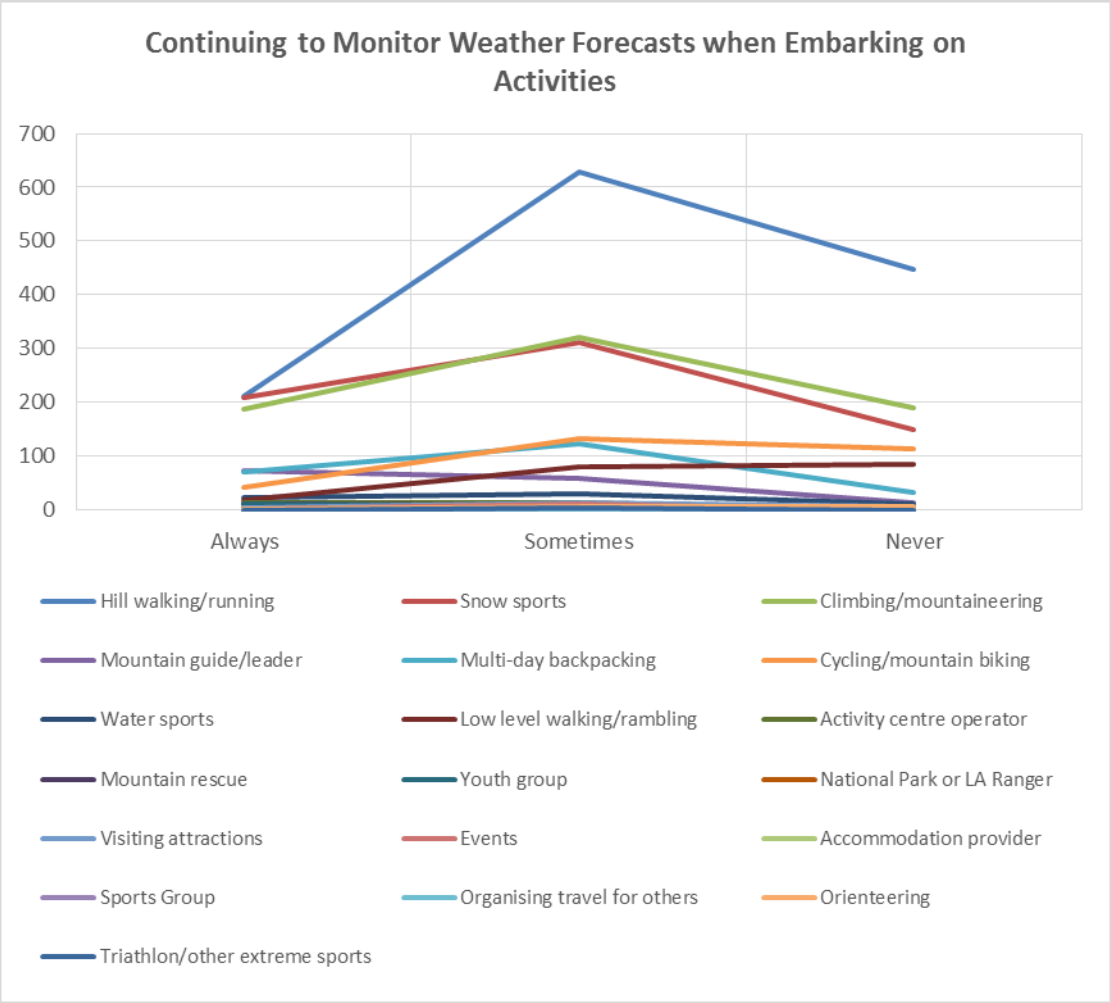
Activity centre operator *Youth groups*

In all of these cases, the activity involved responsibility for customers or group members

In relation to the 2 main activities selected by respondents, they were asked if once embarking on the activity, they continued to monitor weather updates.

Again the overall chart of responses by activity below, does not show many obvious differences in the patterns, although cycling/mountain biking, low-level walking/rambling and orienteering do not have such a drop at the ***never*** response as other activities do, though that is perhaps expected given the lower risk involved with low/level walking and the inability to 'check whilst on the go' with cycling activities.

It can also be seen that mountain guide/leaders have a higher no of ***always*** responses compared to ***sometimes.***



When the % results are looked at in more detail in the table below, another trend becomes clear – there are 4 activities where the % of respondents ***always*** monitoring once embarking on an activity, is higher than those ***sometimes*** monitoring. These 4 activities are:

- mountain guide/leader
- activity centre operator
- mountain rescue
- youth group

These activities are all related to being out in the mountains with responsibility for customers, staff or group members, as opposed to more leisure orientated activities where people are more likely to responsible for themselves and their immediate family and friends.

	No of Responses	Always	Sometimes	Never
Hill walking/running	1287	16.4%	48.9%	34.7%
Snow sports	671	31.1%	46.5%	22.4%
Climbing/mountaineering	699	26.9%	45.8%	27.3%
Mountain guide/leader	146	50.7%	39.7%	9.6%
Multi-day backpacking	225	31.6%	54.2%	14.2%
Cycling/mountain biking	288	14.6%	45.8%	39.6%
Water sports	66	36.4%	45.5%	18.2%
Low level walking/rambling	184	10.3%	44.0%	45.7%
Activity centre operator	28	46.4%	50.0%	3.6%
Mountain rescue	22	54.5%	40.9%	4.5%
Youth group	19	57.9%	36.8%	5.3%
Visiting attractions	24	16.7%	58.3%	25.0%
Events	13	15.4%	84.6%	0.0%
Orienteering	14	7.1%	42.9%	50.0%

Freetext Comments: What Factors Other Than the Weather do you take into Account when Undertaking this Activity

Finally, thinking specifically about the 2 main activities selected by respondents, they were asked about any other factors they took into account when deciding whether to embark on the particular activity.

Over 2,000 comments were received and these have been summarised for each particular activity. The table below shows the activity, followed by the number of responses received and then a summary of statements about the other factors that are considered:

Hill walking / Running - 807
Ability/fitness/motivation, group size, objective/availability of group, daylight hours/time of day/day of the week, season, height of walk, descriptions of the route, ability to park, quiet areas, access to routes, access to public transport, difficulty/length/time/terrain, stalking season, alternative activities, cost of transport, money, work/family commitments, amount of free time available, appropriate clothing/equipment food and drink, accommodation availability & cost, desire to walk in certain areas, dog friendly route, avalanche/flood risk, snow depth, freezing level, road conditions, recent weather, ground/snow conditions, distance from home/travel time, how I feel, photography opportunities, wildlfie, natural beauty, location, midgies, logistics, bank holidays

Snowsports - 482
snow/run conditions, avalanche risk/forecast, accessibility of resorts, other commitments, ability/objectives of group, road conditions, accommodation availability, availability of friends, day of the week/holidays (avoid peak times - queues), phase of the moon (evening), options for other activities, events (crowds), equipment, transport, distance, visibility, cost, ski centre updates, daylight, experience, fatigue/titness, webcams, reports from other skiers, which resort has best snow, events (avoid)

Climbing / mountaineering - 487
Clients, ability, ages, experience, group size, timing, recent weather history, avalanche risk, location, difficulty, travel, busyness, aims, crag aspect, grade of climb, length of walk in, water levels/tide times, kit, safety, injuries, options for plan B, partner availability, instructor availability, energy, enthusiasm, social media reports, available shelter, midgies, stalking, bird bans, work/family commitments, finances, accommodation, good food nearby

Cycling / mountain biking - 143
Bike condition, fitness, route distance/difficulty/condition/location, group availability/experience, busyness, timing, recent weather history, water levels, stalking/birds nesting, travel, distance from home, parking availability, kit, support available, options for plan B, cost of entry, dog friendly, work/family commitments, accommodation, cafe availability

Multi-day backpacking - 136
Ability/size of group, access, wildlife/stalking restrictions, access to public transport,travel, weather (and history)/ground conditions, road conditions, clothing/equipment (plus weight of these), camping/wild camping locations, availability of water, re-supply points, scenic appeal, daylight, oher commitments, available time, avalanche/flood risk, difficulty/distance/exposure/elevation/terrain, midges, cost, fitness, local events, logistics, fatigue, Munro bagging, area, solitude, route choice

Mountain guide/leader - 111
Ability/aspirations/size of group, route/underfoot conditions/river levels/tides, client experience, weather/temperature, time of year/daylight, fitness, equipment, avalanche, locations/topography/remoteness, logistics, weather history, travel distances/ease/road conditions, other commitments, pay

Low level walking/rambling - 67
Accessibility, distance, ability, objective/availability of group, daylight hours, busyness, appropriate clothing, food and drink, fitness, time available, road conditions, distance from home, type/length/difficulty of walk, motivation, ground conditions, public transport, time of year, weather, stalking

Water sports - 41
Ability/size of group, terrain/topograhpy, overnight rainfall, river/water levels/ocean swell/surf conditions/tide times, knowledge/experience, transport, available boats, dam releases, previous weather, temperature, season, fitness, vailability of friends

Activity centre operator / leader - 22
Group ability, size, experience, age, location, current and previous activity, water levels/tide times, course aims, timings, kit available, options for plan B, course leader

Mountain Rescue - 20
daylight/season, terrain, training requirements, incident type, equipment, number of people, previous/current weather conditions, manpower, assets (helicopter), risk to assets, knowledge, fitness,

Youth group - 12
ability/objectives/size of group, contingency planning, fitness, ground conditions, daylight, stalking, scenery/route, educational outcomes, access, distance,

Visiting Attractions - 12
cost, popularity of attractions, provision of wet weather facilities, time/friends availability, travel, road conditions, clothing

Orienteering - 10
Distance/complexity of course, distance to travel, terrain type, fitness, location, road conditions, ground conditions

Paragliding - 7
Travel distance, available time, opinions of other enthusiasts, location, time of day, actual conditions

Events – 5
Travel, access, availability of volunteers, line up, dog friendly

National Park or LA Ranger - 3
Season, avalanche conditions, objectives/ability of group

Other activity - 3
availability of interviewees, deadline, priorities, actual weather, daylight, fitness, weather conditions

Accomodation provider - 2
Guests

Bothy maintenance - 2
Water level/tides, timing

Communication installations - 2
Timing, terrain

Environmental surveys - 2
Location, access, timing, logistics, availability of others, H&S

Misc comment - 2
I am in the mountains all year. depending on the seasonal conditions s the answer will vary so I'm not prepared to say one over the other.

Organising travel for others - 2
Daylight, terrain, time, fatigue, accommodation

Triathlon - 3
safety, access, location, commitments/time available

Angling / camping - 1
Recent weather history

Caving - 1
Recent weather history, rainfall gauges, group factors

Construction Planning - 1
wind dependent

Construction Planning - 1
To check weather on site for projects.

Deer stalking - 1
Timing

Duke of Edinburgh Expeditions - 1
Timing, location

Farming - 1
Availability of people

Fishing - 1
Timing

Flying / Gliding - 1
Field conditions

Geomorphology - 1
Physical exhaustion

H&S Work - 1
Timing

Kayaking/white water - 1
Driving distance

Marshall for running/adventure events - 1
Always fulfil volunteer role

Media reporting - 1
Travel distance

Military - 1
Group competency and any incidents in the area

Mountain bothy work parties - 1
Abiliy to get to location

Mountain Photography - 1
daylight/season, height of area, accessibility of location

Multi activity instructor - 1
ability of group

NTS Ranger - 1
type of activity and whether volunteers are involved

Outdoor Instructor - 1
Group capabilities

Photograhy - 1
Events

Sea kayaking - 1
Tide

Soaring - 1
Finances

Sports Group - 1
Transportation

Volunteer path maintenance - 1
previous weather which might affect work

Wildlife surveys - 1
logistics, staff availability, stalking, access

Winter - ski touring, summer - mountain biking - 1
avalanche/weather forecasts in weeks/days previous to assess conditions

Most Important Weather Forecasts

Key Points: *respondents were asked to select the mountain forecast that was most important to them. From a list of 30 forecasts, more than 50% selected MWIS, 16% selected one of the Met Office forecasts and 13% selected the BBC*

Respondents were asked about the weather forecast that was most important to them. This was not necessarily the one that they looked at the most, but the one they felt was most vital to them.

Those answering the full survey could either select 1 forecast as being important to them throughout the year (711 responses), or could select different forecasts for summer and winter (1,065 and 1,132 respectively). Those answering the short survey just indicated the 1 forecast that was important to them throughout the year (195 responses).

The results of these questions are shown below, ordered by the total column:

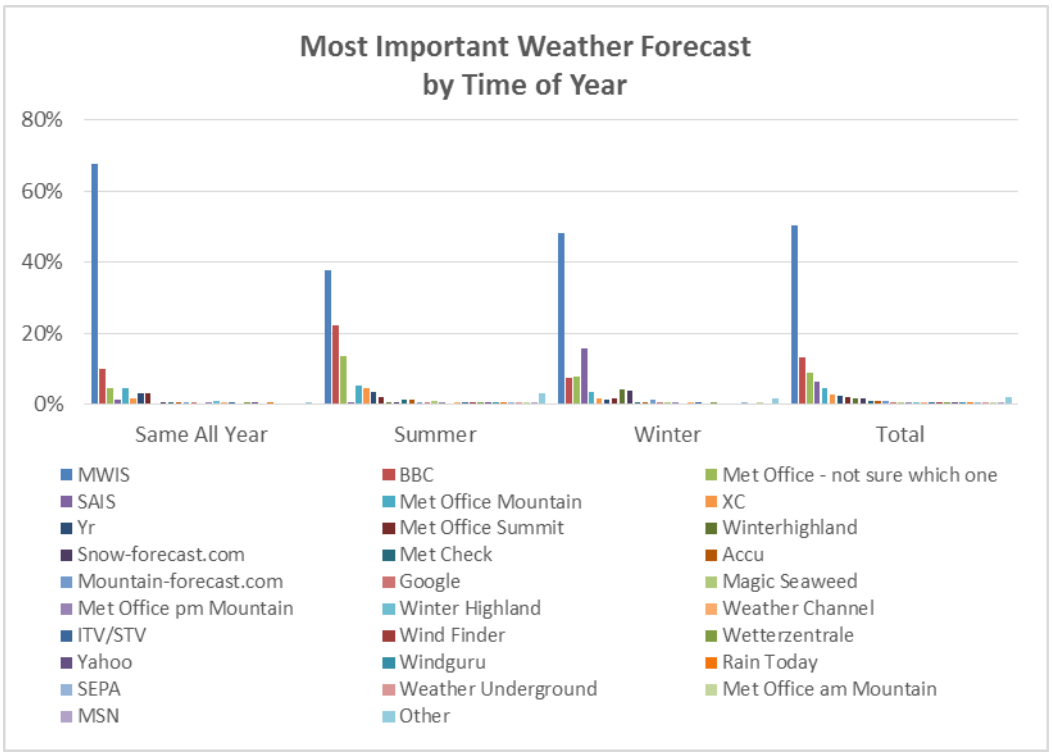
	Same All Year	Summer	Winter	Total
MWIS	614	400	546	**1560**
BBC	91	235	83	**409**
Met Office - not sure which one	42	145	87	**274**
SAIS	11	2	179	**192**
Met Office Mountain	41	57	40	**138**
XC	16	48	17	**81**
Yr	28	36	13	**77**
Met Office Summit	26	22	16	**64**
Winterhighland		1	46	**47**
Snow-forecast.com	3	1	42	**46**
Met Check	4	15	7	**26**
Accu	6	15	4	**25**
Mountain-forecast.com	4	7	14	**25**
Google	1	7	4	**12**
Magic Seaweed		10	1	**11**
Met Office pm Mountain	1	3	4	**8**
Winter Highland	7			**7**
Weather Channel	2	2	3	**7**
ITV/STV	1	4	1	**6**
Wind Finder		6		**6**
Wetterzentrale	2	1	2	**5**
Yahoo	1	4		**5**
Windguru		5		**5**
Rain Today	1	3		**4**
SEPA		1	2	**3**
Weather Underground		2		**2**
Met Office am Mountain		1	1	**2**
MSN		1		**1**
Other	4	31	20	**55**
	906	**1065**	**1132**	**3103**

MWIS is overwhelmingly the most important forecast to respondents, with over 50% of all respondents giving MWIS as their preferred choice.

Looking in more detail at the results as %s, only the top 4 forecasts had at least 10% of respondents selecting them for any particular time of year.

	Same All Year	Summer	Winter	Total
MWIS	67.8%	37.6%	48.2%	50.3%
BBC	10.0%	22.1%	7.3%	13.2%
Met Office - not sure which one	4.6%	13.6%	7.7%	8.8%
SAIS	1.2%	0.2%	15.8%	6.2%

When all of the % results are shown graphically, the following can be seen:



The overwhelming dominance of MWIS as the most important forecast is clearly shown.

Also standing out from this chart is the importance of SAIS in the winter months.

Combinations of Forecasts

Where respondents have indicated that they felt different forecasts were most important in winter and summer, an analysis of the combinations of forecasts selected has been undertaken. The table below shows all those pairings selected by at least 10 respondents:

Winter	Summer	No of respondents
MWIS	BBC	98
	Met Off - not sure which	71
	XCWeather	23
	Met Off - Mountain	21
	Yr.no	15
SAIS	MWIS	110
	Met Off - Mountain	16
	BBC	11
	Met Off - not sure which	11
Met Off - not sure which	BBC	19
	MWIS	10
Snow-forecast.com	BBC	19
Winter Highland	BBC	16
	MWIS	10
BBC	MWIS	14

In total, MWIS was selected as the most important forecast for winter by 311 respondents, whilst 179 said SAIS.

For the summer period, BBC was selected as the most important forecast by 181 respondents, followed by MWIS at 161 and Met Off - not sure which at 105

Characteristics of Most Important Forecast

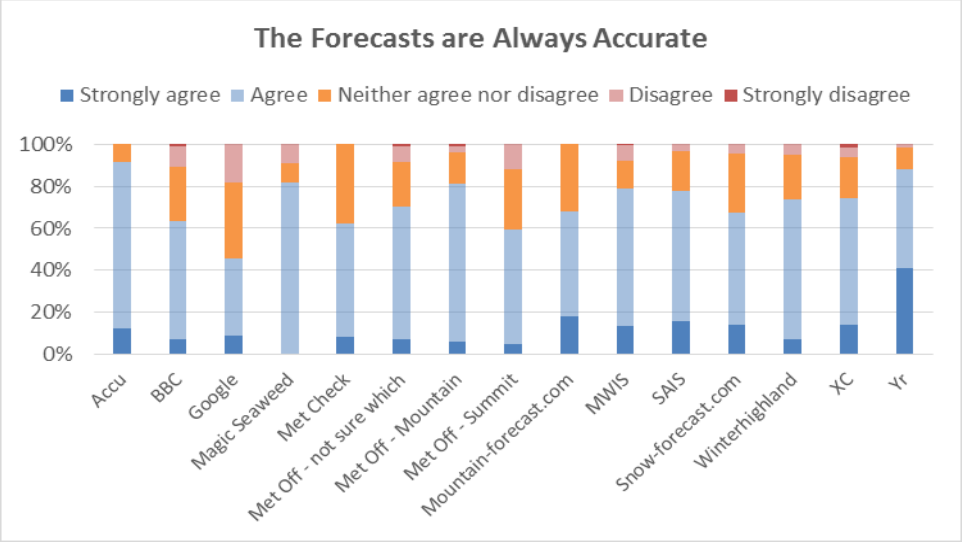
Key Points: *given a series of statements to agree or disagree with, in relation to the forecasts selected as the most important, Yr.no consistently received a higher proportion of strongly agree ratings than the other forecasts for 8 of the 9 statements – these related to:*

Accuracy	*Local detail*	*Easy to understand*
Timeliness	*Media channels*	*Confidence to use alone*
Information needed	*Geographic area covered*	

The only statement it was placed 2nd for was, 'When used in combination with other forecasts', where SAIS received the greatest strongly agree %

Respondents were asked to rate a series of statements specifically about the most important forecast(s) that they had selected. The results have been charted below, for all forecasts where at least 10 respondents had selected it. Each chart is shown by % rather than raw numbers:

Accuracy



Although respondents have answered these questions in relation to the forecast that is most important to them at any particular time of the year, looking at the above chart, with the exception of Yr.no, less than 1 in 5 people would strongly agree that the forecasts are always accurate.

Looking at the overall figures (regardless of specific forecast), only 12% strongly agree that the forecasts are always accurate.

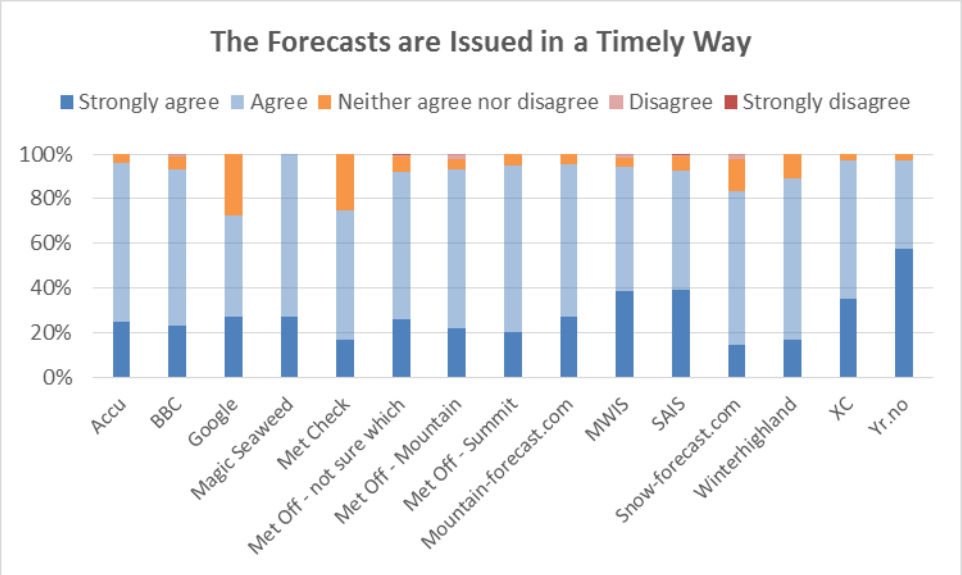
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
355	1795	490	203	13	2856
12.4%	62.9%	17.2%	7.1%	0.5%	

To put the overall figures in context, the table overleaf shows the number of respondents that have rated each forecast (not every respondent has answered every question, so there is a small margin of discrepancy)

	Approx no of Respondents
Accu	24
BBC	383
Google	11
Magic Seaweed	11
Met Check	24
Met Off - not sure which	256
Met Off - Mountain	127
Met Off - Summit	59

	Approx no of Respondents
Mountain-forecast.com	22
MWIS	1513
SAIS	187
Snow-forecast.com	43
Winterhighland	42
XC	78
Yr	76

Issued in a Timely Way



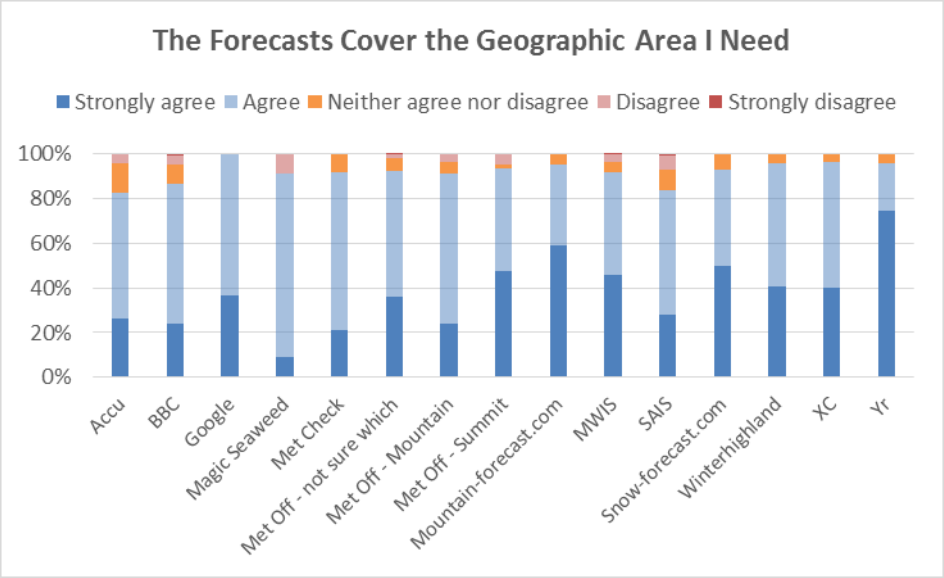
Responses about the timely issuing of forecasts is much more positive, with all forecasts except Google and Met Check, getting agreement from at least 80% of respondents.

Again it is Yr.no that receives the greatest proportion of strongly agree responses.

Looking at the overall data, less than 2% disagree with this statement, and for 9 of the 15 forecasts, no respondents disagreed:

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
953	1707	145	38	4	2847
33.5%	60.0%	5.1%	1.3%	0.1%	

Geographic Area Covered



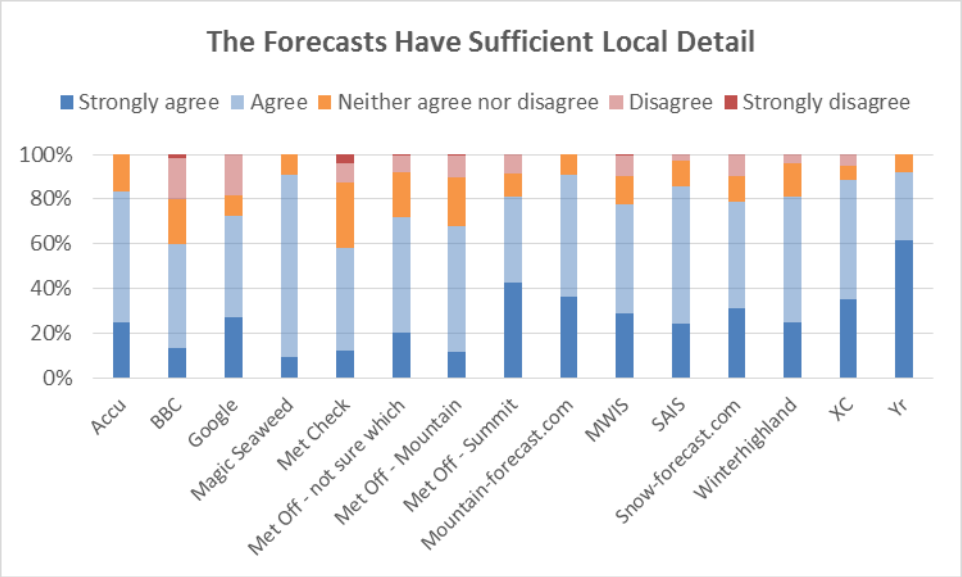
The chart above shows that over 80% of respondents for each forecast, agree that they cover the geographic areas needed by users.

Once again, it is Yr.no that has the best perceived geographic coverage, with over 70% strongly agreeing.

The table below shows the overall figures:

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
1140	1452	162	93	7	2854
39.9%	50.9%	5.7%	3.3%	0.2%	

Sufficient Local Detail



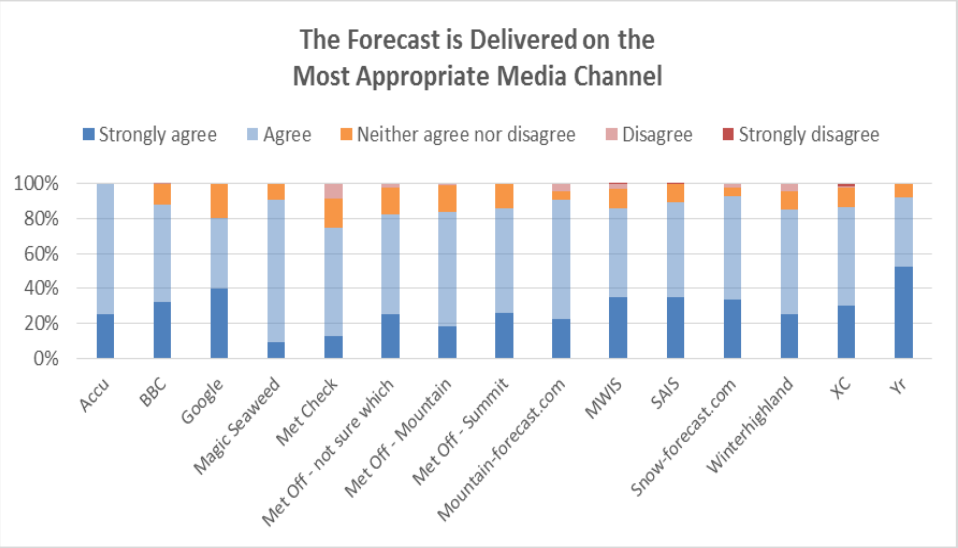
Compared to the previous question which asked about the geographic areas covered, this question is asking about the details provided for each local area, and the ratings are not as positive, though 50% or above are in agreement that sufficient local detail is provided.

There are nearly 10% of respondents overall that disagree with this statement overall, and it can be seen from the chart above that providers such as the BBC and MWIS are at or near the 10% mark.

Accu, Magic Seaweed, Mountain-forecast.com and Yr.no received no disagreement responses.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
744	1415	412	261	19	2851
26.1%	49.6%	14.5%	9.2%	0.7%	

Appropriate Media Channels

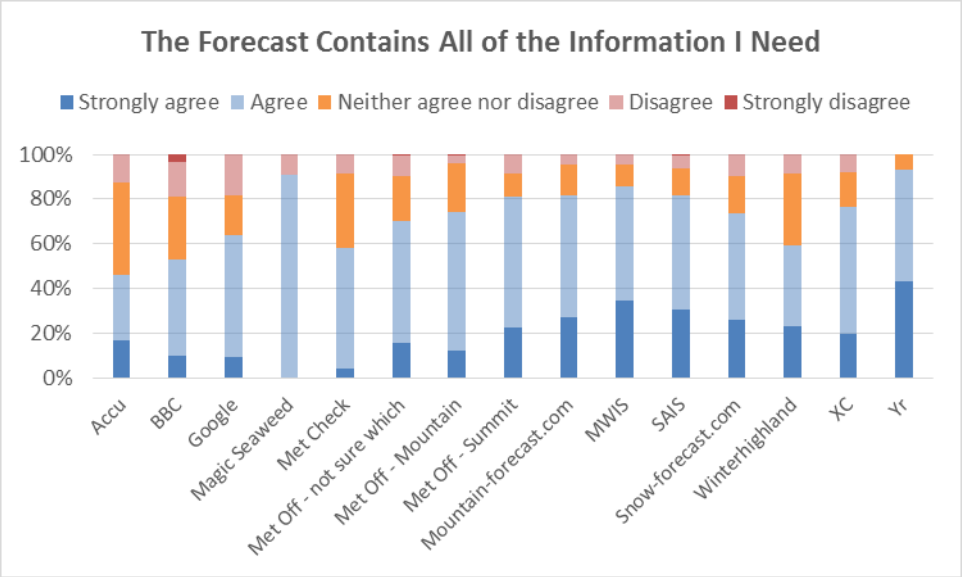


Accu Weather has recorded the most positive response here, with all 24 respondents agreeing or strongly agreeing that delivery uses appropriate media channels. Accu deliver their forecasts in a multitude of media including: smart phones, tablets, free wired and mobile Internet sites, connected TVs, and Internet appliances, as well as via radio, television, and newspapers.

The least satisfied were those respondents that use Met Check and Google, with 80% or less of respondents agreeing with the statement. In addition MWIS had 6 respondents who strongly disagreed with this statement.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
919	1512	331	50	8	2820
32.6%	53.6%	11.7%	1.8%	0.3%	

Contains All of the Information I Need

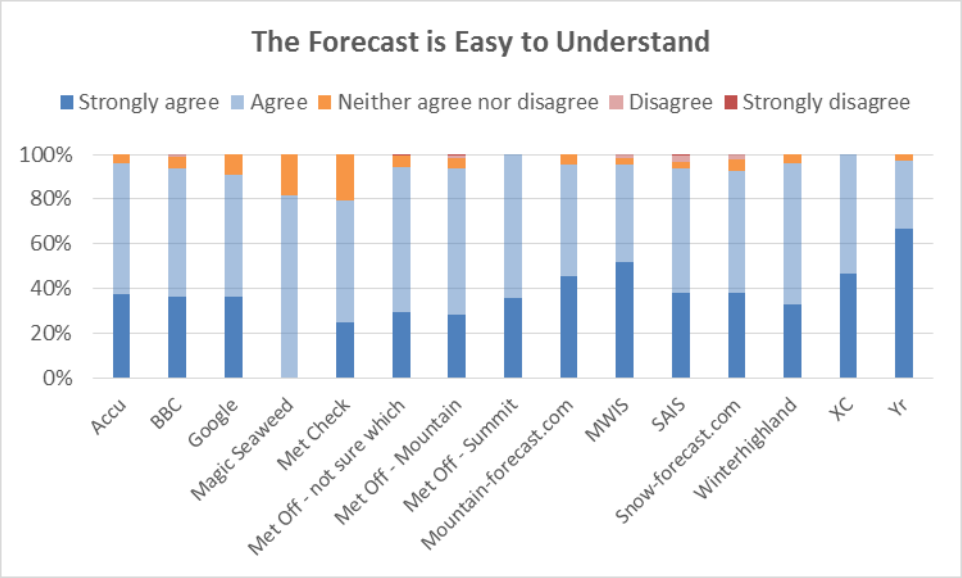


In the above chart it can be seen that other than Yr.no, all other forecasts had some respondents who disagreed with this statement.

Also, all forecasts other than Magic Seaweed had at least some respondents that strongly agreed with this statement.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
769	1448	421	191	18	2847
27.0%	50.9%	14.8%	6.7%	0.6%	

Easy to Understand

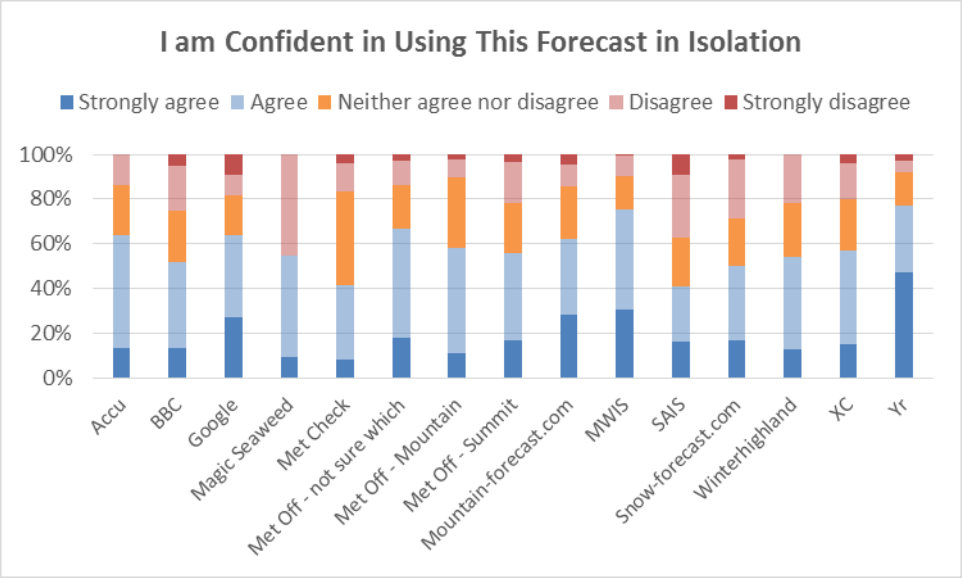


This is the statement that overall most respondents strongly agreed with. The Met Office Summit Forecast and XC Weather had all respondents agreeing or strongly agreeing with the statements.

MWIS and Yr.no were the only 2 forecasts where more than 50% of respondents strongly agreed with the statement.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
1268	1440	103	35	5	2851
44.5%	50.5%	3.6%	1.2%	0.2%	

Confident to Use this Forecast Alone

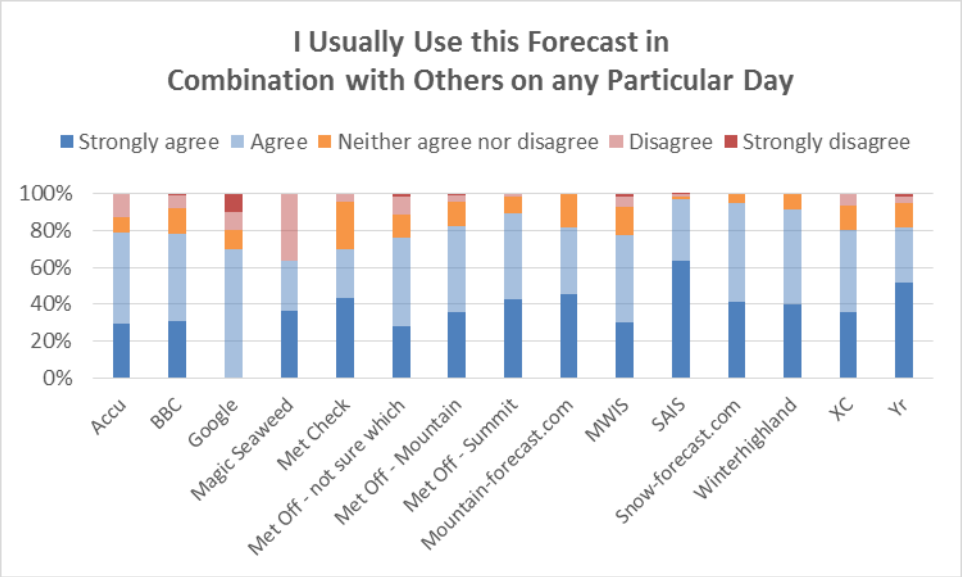


Unlike all of the previous statements, this has received less positive agreement as can be seen by the orange and red in the above chart.

Again MWIS and Yr.no have the highest agreement levels, whilst SAIS and Met Check have particularly low agreement levels.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
689	1191	520	367	69	2836
24.3%	42.0%	18.3%	12.9%	2.4%	

Use in Combination with Others



It can be seen from the above and answers to other questions in this survey, that significant numbers of users will use more than 1 mountain weather forecast system on any particular day. Other than Magic Seaweed and Google, more than 75% of respondents for each forecast agree or strongly agree with this statement.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
957	1282	376	160	38	2813
34.0%	45.6%	13.4%	5.7%	1.4%	

Main Attributes of Each Forecast

These results are now shown based on each individual forecast, with the attributes sorted by the number of 'Strongly Agree' responses. The forecast tables below, are shown below based on the total number of responses received:

MWIS	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Easy to Understand	782	660	44	23	2
Geographic Area	688	697	71	52	2
Timely	580	839	60	26	2
Media Channel	525	751	172	35	6
Has Information Needed	524	769	146	65	2
Use in Isolation	465	672	220	138	12
Use in Combination	450	700	230		
Local Detail	437	734	193	135	9
Accurate	208	986	197	117	5

Met Office - All Total of Mountain, Summit & Not Sure	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	152	256	22	12	1
Use in Combination	140	208	53	30	6
Easy to Understand	131	287	18	2	2
Timely	106	303	27	5	1
Media Channel	102	263	67	6	0
Local Detail	92	227	84	37	2
Has Information Needed	69	253	85	32	3
Use in Isolation	69	207	103	49	12
Accurate	29	289	91	30	3

BBC	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Easy to Understand	137	218	19	4	
Media Channel	120	210	44	2	
Use in Combination	115	173	51	26	4
Geographic Area	91	237	34	16	2
Timely	87	265	20	5	
Use in Isolation	51	145	86	77	19
Local Detail	50	177	75	70	7
Has Information Needed	37	164	106	60	12
Accurate	27	215	99	38	4

Met Off not sure which	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	93	143	15	4	1
Easy to Understand	74	165	12	1	1
Use in Combination	71	123	32	1	
Timely	66	169	18	2	1
Media Channel	64	146	39	5	
Local Detail	52	132	50	20	1
Use in Isolation	45	124	50	28	7
Has Information Needed	40	140	51	23	2
Accurate	18	162	55	19	2

SAIS	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Use in Combination	119	62	3	85	25
Timely	74	100	12	1	1
Easy to Understand	71	104	6	5	1
Media Channel	65	102	19		1
Has Information Needed	58	96	22	11	1
Geographic Area	52	104	18	11	2
Local Detail	46	115	22	5	
Accurate	30	115	36	6	
Use in Isolation	30	46	41	52	17

Met Off - Mountain	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Use in Combination	45	59	16	24	5
Easy to Understand	36	84	6	1	1
Geographic Area	31	86	6	5	
Timely	28	90	6	3	
Media Channel	23	83	20	1	
Has Information Needed	16	79	28	4	1
Local Detail	15	72	28	12	1
Use in Isolation	14	60	40	10	3
Accurate	8	95	19	4	1

XC	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Easy to Understand	36	41			
Geographic Area	31	43	3		
Timely	27	48	2		
Local Detail	27	41	5	4	
Use in Combination	27	34	10		
Media Channel	23	43	8	1	1
Has Information Needed	15	44	12	6	
Accurate	11	47	15	4	1
Use in Isolation	11	31	17	12	3

Yr.no	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	56	16	3		
Easy to Understand	50	23	2		
Local Detail	46	23	6		
Timely	43	30	2		
Media Channel	39	29	6		
Use in Combination	39	22	10	5	
Use in Isolation	35	22	11	4	2
Has Information Needed	32	37	5		
Accurate	31	36	8	1	

Met Off - Summit	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	28	27	1	3	
Local Detail	25	23	6	5	
Use in Combination	24	26	5	5	1
Easy to Understand	21	38			
Media Channel	15	34	8		
Has Information Needed	13	34	6	5	
Timely	12	44	3		
Use in Isolation	10	23	13	11	2
Accurate	3	32	17	7	

Snow-forecast.com	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	21	18	3		
Use in Combination	17	22	2	2	1
Easy to Understand	16	23	2	1	
Media Channel	14	25	2	1	
Local Detail	13	20	5	4	
Has Information Needed	11	20	7	4	
Use in Isolation	7	14	9	11	1
Timely	6	29	6	1	
Accurate	6	23	12	2	

Winterhighland	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	20	27	2		
Use in Combination	19	25	4		
Easy to Understand	16	31	2		
Media Channel	12	28	5	2	
Local Detail	12	27	7	2	
Has Information Needed	11	17	15	4	
Timely	8	34	5		
Use in Isolation	6	19	11	10	
Accurate	3	28	9	2	

Accu	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Easy to Understand	9	14	1		
Use in Combination	7	12	2	3	
Media Channel	6	18			
Timely	6	17	1		
Local Detail	6	14	4		
Geographic Area	6	13	3	1	
Has Information Needed	4	7	10	3	
Accurate	3	19	2		
Use in Isolation	3	11	5	3	

Met Check	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Use in Combination	10	6	6	4	
Easy to Understand	6	13	5		
Geographic Area	5	17	2		
Timely	4	14	6		
Media Channel	3	15	4	2	
Local Detail	3	11	7	2	1
Accurate	2	13	9		
Use in Isolation	2	8	10	3	1
Has Information Needed	1	13	8	2	

Mountain-forecast.com	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	13	8	1		
Easy to Understand	10	11	1		
Use in Combination	10	8	4	1	
Local Detail	8	12	2		
Timely	6	15	1		
Has Information Needed	6	12	3	1	
Use in Isolation	6	7	5	2	1
Media Channel	5	15	1	1	
Accurate	4	11	7		

Google	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Geographic Area	4	7			
Easy to Understand	4	6	1		
Media Channel	4	4	2		
Timely	3	5	3		
Local Detail	3	5	1	2	
Use in Isolation	3	4	2	1	1
Has Information Needed	1	6	2	2	
Accurate	1	4	4	2	
Use in Combination		7	1	1	1

Magic Seaweed	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Use in Combination	4	3			
Timely	3	8			
Local Detail	1	9	1		
Media Channel	1	9	1		
Geographic Area	1	9		1	
Use in Isolation	1	5		5	
Has Information Needed		10		1	
Easy to Understand		9	2		
Accurate		9	1	1	

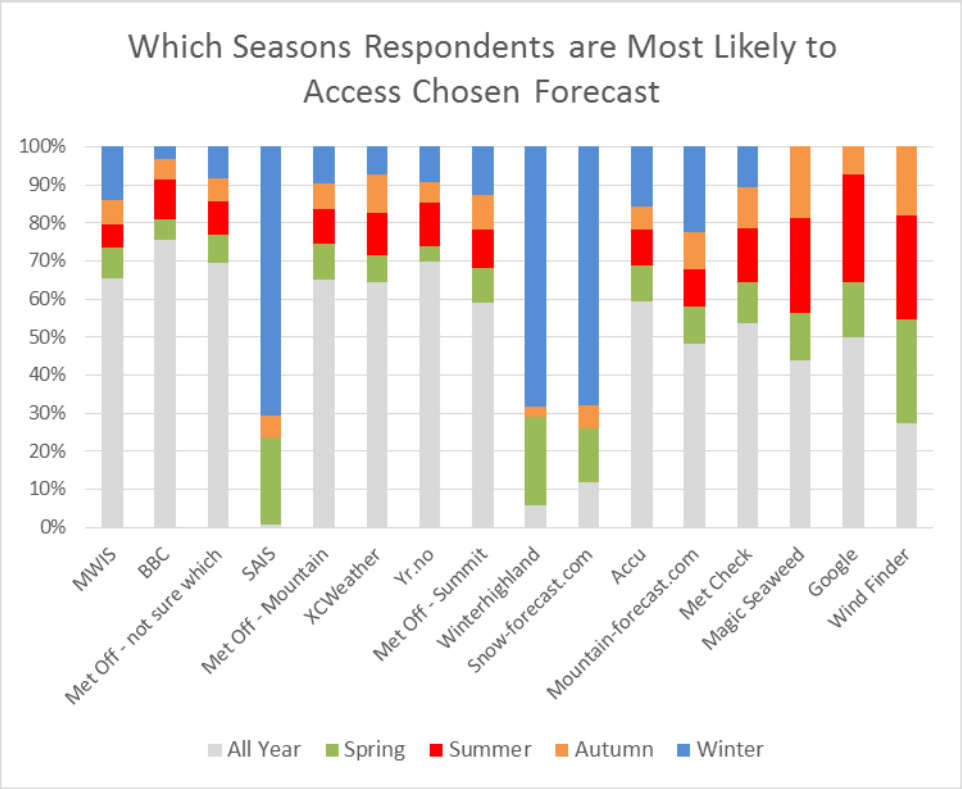
Seasonal Use of Forecasts

Key Points: *When asked in which seasons respondents used their most important forecast, not surprisingly SAIS, Winterhighland and Snow-forecast.com all had more than 65% of respondents saying winter*

Of the other 10 most important forecasts, they all had more than 55% of respondents saying All year

Still thinking about the most important mountain weather forecast, respondents were asked which seasons they were most likely to access the weather forecast.

For all forecasts with at least 10 responses, the chart below shows the feedback that was received. The chart is ordered left to right by the total number of responses received, but each forecast is shown by proportion, so that seasonal differences for each forecast can be easily seen:



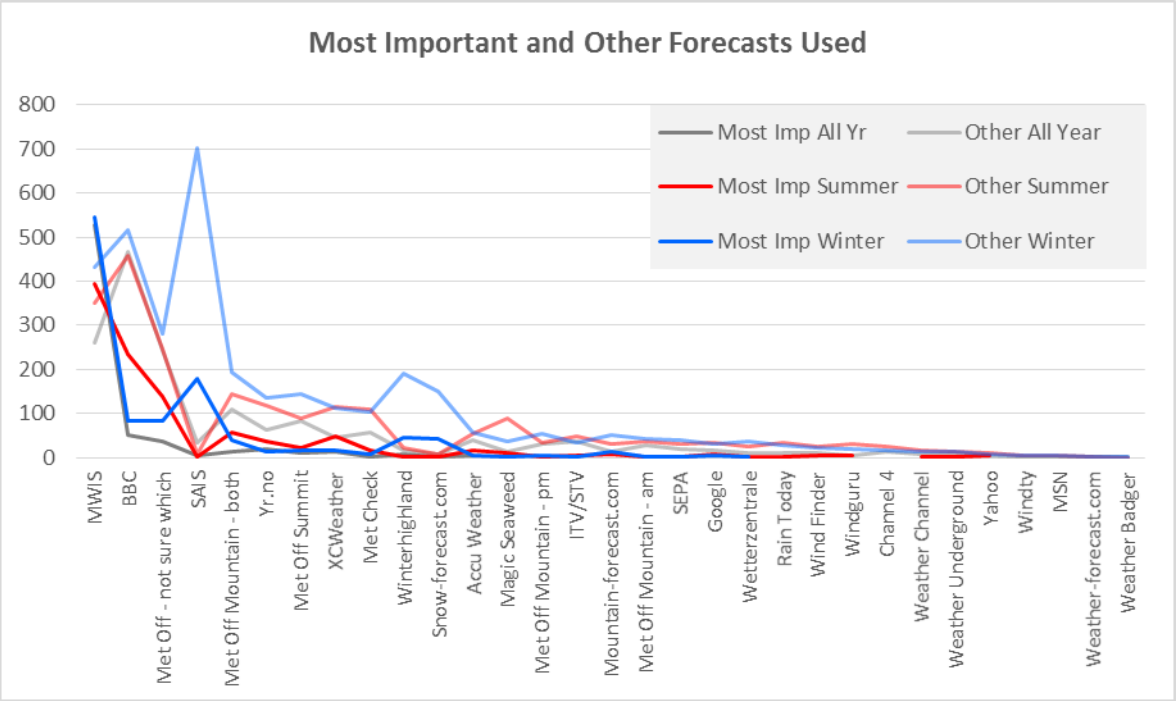
There is a clear emphasis on the use of SAIS, Winterhighland and Snow-forecast.com over the winter months – as would be expected.

Also to note is the lack of winter usage of Magic Seaweed, Google and Wind Finder, though each of these forecasts is only based on 11 – 16 responses.

Other Important Forecasts

As well as the most important forecast used by respondents, they were also asked about other forecasts they used at particular times of the year. This question was only asked in the full survey and each respondent could select as many additional forecasts as required.

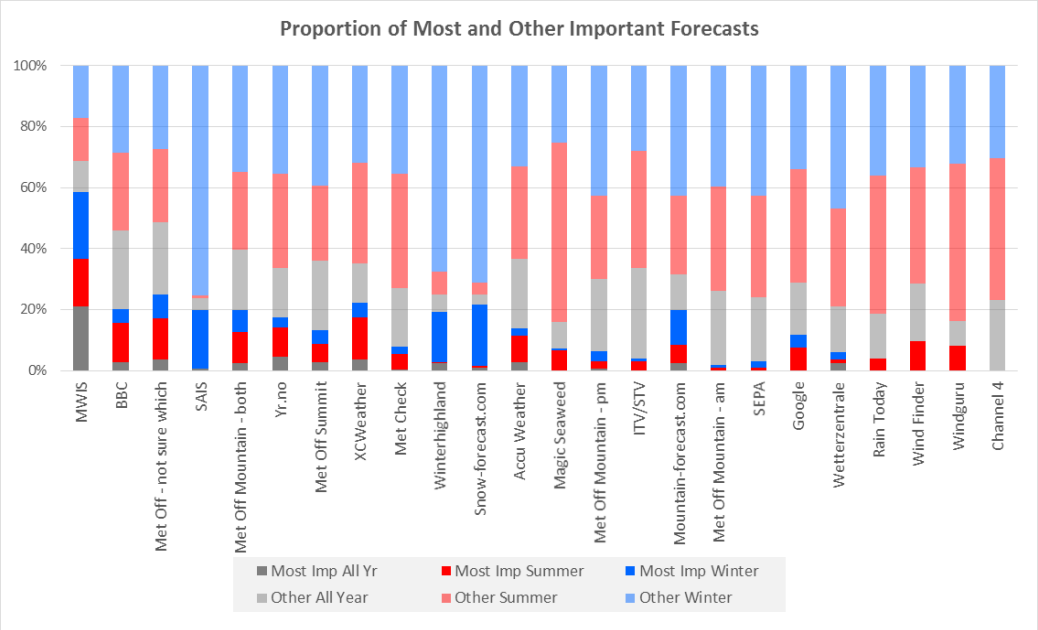
The chart below shows the results for all forecasts, ordered left to right by the total no of responses:



Key points from the chart are:

- SAIS has an extreme peak of respondents selecting it as an additionally important forecast in the winter
- For each season, MWIS was selected by more respondents as being the most important forecast compared to other forecasts
- Perhaps because of the point above, MWIS in all 3 instances, was the only forecasts to have fewer respondents selecting it as an additionally important forecast, compared to the most important
- In general, a greater number of forecasts were selected as being important over the winter

Looking at these results as proportions for each forecast, keeping the same order as the chart above, and only showing those with at least 50 responses overall, gives the following results:



This chart now clearly shows the proportion of respondents that selected MWIS as their most important forecast, compared to it being selected as a secondary forecast of importance.

The importance of SAIS, Winterhighland and snow-forecast.com winter forecasts is again evident.

To put these forecasts in context of the total overall proportion of respondents that selected each forecast, the table below shows the % of respondents that answered this section, by the total that selected each forecast.

In total 715 respondents selected 1 forecast as their most important for the year, 1,065 selected a summer forecast and 1,129 selected a winter forecast, giving a total possible response of 2,909:

Forecast	No of Responses	%	Forecast	No of Responses	%
MWIS	2510	86.3%	**Magic Seaweed**	150	5.2%
BBC	1808	62.2%	**Met Off Mountain - pm**	127	4.4%
Met Off - not sure which	1030	35.4%	**ITV/STV**	125	4.3%
SAIS	931	32.0%	**Mountain-forecast.com**	120	4.1%
Met Off Mountain - both	556	19.1%	**Met Off Mountain - am**	111	3.8%
Yr.no	385	13.2%	**SEPA**	96	3.3%
Met Off Summit	363	12.5%	**Google**	94	3.2%
XCWeather	349	12.0%	**Wetterzentrale**	81	2.8%
Met Check	293	10.1%	**Rain Today**	75	2.6%
Winterhighland	281	9.7%	**Wind Finder**	63	2.2%
Snow-forecast.com	209	7.2%	**Windguru**	62	2.1%
Accu Weather	175	6.0%	**Channel 4**	56	1.9%

Freetext Comments: Which Other Mountain Weather Forecasts Do You Use Throughout the Year?

Alternative Forecasts	All year	Summer	Winter
Aberdeenshire Council		1	1
Arcus			1
BBC Weather app		1	
Big Salty		1	
Buxton weather		1	1
Dartcom		1	
ECMWF - European Centre for Med Range Weather F'casts	1	1	
en.vedur.is		2	2
Facebook			2
Findafishingboat.com		1	1
FNMOC		1	
GRIB files		2	
Highland Weather	1	1	3
Inshore weather	1	1	
i-phone app	1		
Lake District Weather Line	2	1	1
Live weather station data		1	2
Live web cams			1
Local resort sites			1
Mark 1 eyeball	1		
Met & shipping forecast coastal weather		1	
Met Office app	1		1
Met Office inshore waters		1	
Met Office postcode specific			1
Met Office synoptic		1	
Met Office UK forecast		1	
Meteo Blue		1	2
Meteo Chamix			1
Meteo Earth		1	
Meteo France		1	1
Meteo Summer	1		
Meteo Swiss		1	1
Meteociel			1
Meteox	1		
Metvue	1		
Myweather2	4	1	2
National Park forecast			1
NetWeather	5	5	9
Norwegian forecast			1
Passage weather	1		
Radio 4 shipping f'cast	1	2	2
Radio Scotland Outdoor Activities f'cast		1	2
Rain chasers	1		
RASP	2	2	2
s4c.co.uk	1		
Scottish Canoe Association White Water River Level Data Map			1
Ski Scotland			2
theyr.com	1		
TWO - The Weather Outlook		4	4
UK Weather World Mountain Forecast	1		
Weather Bomb		1	1
Weather Pro (Meteo Group)	2	5	5
Weather.co.uk			1
Weatherline	1		1
WeatherOnline	2	2	3
WeatherSpark		1	1
WePowder			1
WhatsTheFuckingWeather			1
Where's the water		2	
Wind Alert		1	1
Windy Wilson	2	2	4

Freetext Comments: What is the Best Thing about the Most Important Mountain Weather Forecast

The following pages show comments made by respondents about the most important forecast that they had selected. The comments have been summarised, and show the no of respondents that commented on each forecast:

Respondents were asked to comment about the best and worst things about the weather forecasting system that they felt was most important. For respondents that felt different forecasts were most important in summer and winter, these questions were answered twice. The tables below show the responses received:

Accu: All year - 5
Accuracy, on phone, good for my home area, app

Accu: Summer - 8
Accuracy, app, ease of use, hourly f'cast, med/long term projection, radar maps, minute cast

Accu: Winter - 2
convenience/ease of access via smartphone

BBC: All year - 77
Accessibility/convenience, accuracy, clarity, ease of use, comprehensive detail, frequent - hour by hour, clear isobar charts, local information and national overview, appreciated, pictorial, updated regularly, personable presenters, timings of broadcasts, video prediction of weather movements, always available, app, appealing design, can be personalised, long-range forecast, professional, reliable

BBC: summer - 141
Accessibility/convenience, accuracy, smplicity/clarity, available on different media, covers UK and overseas, reliability, frequent updates, locally specific, on tv at specific times, presented well, rainfall animation, hour by hour, app, presenters, trusted, can be trusted, professional, rainfall prediction

BBC: Winter - 50
Accessibility, easy to use, clarity, convenience, accuracy, it's on tv, fast, good coverage, trusted, timely, location specific

Google: All year - 1
Easy to use

Google: Summer - 3
Easy to use, location specific, app

Google: Winter - 2
clarify of information

ITV/STV: Summer - 4
acccurate, local, general view, interesting details

ITV/STV: Winter - 1
accuracy& extra info of interest

Magic Seaweed: Summer - 8
7 day Atlantic pressure chart with indicative rainfall, specific surf forecasts, tide times, long range, swell direction, wind

Magic Seaweed: Winter - 1
easily consumable details on sea state/expected surf

Met Check: All year - 2
accessibility, good coverage of climbing areas

Met Check: Summer - 4
accurate, details and sumbols, good geographic coverage, layout

Met Check: Winter - 4
ease of use, widely available, local information

Met Off Mtain am: Summer - 1
Location as time

Met Off Mtain both: All year - 26
Accuracy, well presented, comprehensive, concise, trusted, easy to use, mountain area specific, relevance, frequent updates, raw data, wind/winter freezing/precipitation forecasts

Met Off Mtain both: Summer - 39
specific/range of locations, accuracy, coverage, authorative, comprehensive, convenient, reliable, easy to use/access, consistent, regular updates, summit forecasts, ground conditions, synoptic chart, level of detail

Met Off Mtain both: Winter - 24
accuracy, windspeed, freezing level, detail, altitude differences and timing, area coverage, provided with developing weather systems over time, ease of access/use, clarity, available through different platforms, Met Office should get it right, gives a broad picture over UK, local information

Met Off Mtain pm: All year - 1
wardens report on ground conditions(WINTER)

Met Off Mtain pm: Summer - 3
Accuracy, covers more days, specific forecast

Met Off Mtain pm: - 3
Accurate, updated, wind speeds are accurate

Met Off not sure: All year - 25
accessible via different platforms, accuracy, frequency, comes from the source, mountain and lowland, detail, ease of access/use, hour by hour, widget for other sites, trustworthy, specify location, national service with scientific background, rainfall radar, reliable, app, map function allows general then specific, precipitation probability

Met Off not sure: Summer - 72
5day forecast, hourly breakdown, localised information, accuracy, alerts to phone, app, covers all areas clarity, comprehensive, covers Northern Ireland, concise, detailed, direct from Met Office, easy to use/access, freely available, frequent updates, hour by hour, location specific, covers most summits, different altitudes on the same mountain, lots of detail, rigorous, symbology, rainfall radar

Met Off not sure: Winter - 54
accessibility, accuracy, across platforms, always available, clear, comprehensive, easy of access/use, source information, considers altitude, hourly forecast in one simple screen, good graphics, local information, covers Northern Ireland, good overview, surface pressure charts, long range forecast, rigorous, symbol accessibility

Met Off Summit: all year - 16
From Met Office, accuracy, localised, details for individual mountains/Munros, easily understood, updated frequently

Met Off Summit: Summer - 16
Ease of use, frequently updated, individual summits, altitude adjusted weather, accuracy, broad picture of UK weather, but also specific areas

Met Off Summit: Winter - 16
accuracy, detail, localised, easy to use/access, reliability, historical accuracy, updated regularly, specific locations

Met Office - post code specific: Summer - 1
5 days ahead 3-hourly to next day 24/24 hours.

Met Office 24hour/5day: All year - 1
Hour by hour forecasting for 5 days, location specific, updated frequently.

Met Office Aviation Briefing Service: Winter - 1
Local Airport actual & forecast weather

Met office east highland forcast: Winter - 1
It gives accurate forecast for 1000+ ft

MET Office F214's and F215's: All year - 1
Accurate, slightly 'pesimistic' forecasters err towards safety

Met Office Inshore Waters forecast: Summer - 1
Accuracy and availability on VHF from the coastguard

Met office non mountain: Summer - 1
Regular updates

Met Office presure chart: All year - 1
its a good indicator

Met Office rain map: Winter - 1
Simple visualisation of what rain is coming, shows any area

Met office synoptic charts: All year - 1
ability to predict essential weather info from the charts

met ofice web site: Summer - 1
5 day synoptic charts in conjunction with specific local detailed forecast

Mountain-forecast: All year - 4
accuracy, regular updates, altitude splits

Mountain-forecast: Summer - 3
localised forecasts for base and hill tops, easy to understand, long term outlook, maps and symbols

Mountain-forecast: Winter - 9
accurate, easy to understand, detailed local coverage, summit forecasts, provides conditions were you need it, several days forecast

MSN: Summer - 1
Enough detail to make an informed decision re the outing

MWIS: All year - 554
% chances of cloud free tops, ability to download as a pdf, accessibility, accuracy, clarity, detail, good descriptions, mountain specific, regular updates, concise, wind speed/wind chill/precipitation/cloud base statements important, reliable, altitude specific, region specific, length of forecast, aimed at mountaineers, synoptic charts, format, effects of weather on a person, consistency, trustworthy, ease of use, probabilities, free, good descriptive language (not jargon), local intepretation important, produced by a person, realistic, simple, text option,

MWIS: Summer - 257
length of advance forecast, mountain specific, accuracy, ease of use, frequent updates, pdf version, tailored for mountain users, area specific, clarity, cloud free summit %s, convenient, coverage, detail, relevance, ease of access across different platforms, different elevations, reliable, impact of the weather, level of confidence, good layout, simple

MWIS: Winter - 431
Accuracy detail, mountain specific, relevance, simple, altitude information, local knowledge, areas covered, cloud free summit forecasts, concise, effect of conditions on you, ease of access/use, details conditions that may occur, human interpretation, free, reliable, pdf download, precipitation prediction, timely updates, written for mountain users

Rain Today: Summer - 3
local detail, used for kayaking, radar pattern easy to understand

SAIS: All year - 10
clarity, verification 'from the hill', daily blogs and reports, pictorial, warnings, wind speed & temperature at higher levels

SAIS: Winter - 140
accuracy, relevance, easy to understand, assessors blog and pictures actual conditions, clarity, concise, comprehensive, coverage, frequency, experts on the spot, easy to intepret rose/pie chart diagrams, level of detail, free, unique, local knowledge, simple

SEPA: Summer - 1
Covers local area

Snow-forecast: All year - 2
Level of localised detail, fast, easy to navigate

Snow-forecast: Summer - 1
On my phone

Snow-forecast: Winter - 27
accuracy, easy to use, detail, resort specific, different altitudes covered, freezing level, snow as well as weather conditions, regular updates

Weather Channel: All year - 1
Good gauge for planning

Weather Channel: Summer - 1
Localised

Weather Channel: Winter - 2
detail, specialist sections on ski areas

Wetterzentrale: All year - 2
access to variety of weather models, synoptic charts

Wetterzentrale: Summer - 1
gives long term forecast

Wetterzentrale: Winter - 1
The 850hp charts

Windfinder: Summer - 8
Access, app, frequency of updates, actual reports as well as forecast, most accurate for wind.

Windguru: Summer - 2
geographically precise, tends to be very accurate, accurate for wind

Winterhighland: All year - 4
Accuracy, good layout, specific to ski area, updated regularly, reliable

Winterhighland: summer - 1
very informative

Winterhighland: Winter - 30
accessibility, accuracy, aggregates other forecasts, resorts in one page, detail, geographically specific, simple

XCWeather: All year - 15
accuracy, clear, ease of use, concise, simple, wind forecast, weather developments during day

XCWeather: Summer - 34
accuracy, historical data, easy to read, hourly wind info, simple, detail, real time information, good wind forecasting

XCWeather: Winter - 15
3 hourly detailed infor for 7 days ahead, accuracy, small areas covered, easy and quick, rain in mm, simple

Yahoo: Summer - 4
accuracy, detail, easy to access, multiple geographic areas at a glance

Yr.no: All year - 26
accuracy, ease of use, hourly, long range, good coverage, level of detail, mountain specific, metrogram, clear use of location rather than weather station

Yr.no: Summer - 27
10 day forecast correct, localised forecasts, accuracy, clear presentation, easy to use, app, local details, hourly breakdown, not Met Office based,reliable

Yr.no: Winter - 10
localise forecasts, presentation, accuracy, good detail, just seems to make sense, quick and simple

Apple weather: Winter - 1
it's where it is needed on phone/watch

Arcus: Summer - 1
accurate localised forecast including rain forecasting

EA river levels: Summer - 1
Access to flood guages

Highland weather facebook page: Summer - 1
Local and accurate

Highland Weather man from Carbridge: All year - 1
Up today's on Facebook Others say what the weather like where they are so it is a real time update of the weather rather than forecadting

http://www.weatheronline.co.uk/: Summer - 1
It holds a wide range of meteorological information

I use the BBC for general conditions, MWIS for hill work and Windguru for sailing: Summer - 1
MWIS has a good level of accuracy, BBC generally OK, Windguru can be hit and miss

ios WeatherPro (Meteogroup): Summer - 1
Plenty of detail at a very local level

Lake District Weatherline: Winter - 1
it is specific to the area i will walk.

LDNP WEATHERLINE: Summer - 2
detail, alternative to compare with MWIS, also includes fell top assessors report

LDNP WEATHERLINE: Winter - 1
conditions underfoot and cloudbase/freezing levels

meteo.fr: Winter - 1
Very good information relating to snowsports in the mountains

Meteox: Winter - 1
visualising the trend

Misc comment: winter - 1
Equal split between Met Office, MWIS and SAIS. Met office gives forecast for actual hill

Mountain weather forecast: All year - 1
Gives 1-hourly forecasts for next day plus 3-hourly forecast for following three days for ALL Highland hills.

MWIS & SAIS: Winter - 2
regular, accuarte, prepared by mountain users

myweather2.com: Summer - 1
detailed for a very localised area and tends to be accurate in our area

Netweather: Summer - 4
accurate, variety of forecast models, local detail, 24 hours or 5 days, easy symbols

Netweather: Winter - 3
reasonably reliable, wide varity of forecastng models, mountain forecast function and hourly local forecast

Netweather.tv & river level data: All year - 1
real time

onjara weather forecast app viewed every day: Winter - 1
mountain forecast function within + hourly local forecast

Only use MWIS in summer: Summer - 1
Simple easy to access w hood local info

radio 4 weather: Summer - 1
gives a general overview

RASP: All year - 1
specific

RASP: Summer - 3
Accurate locally for wind-speed and cloudbase etc, star ratings, good details

RASP: Winter - 1
Much more detail than any other widely available forecast model

RASP - Regional Atmospheric Soaring Prediction BLIPMAP FORECASTS For Great Britain: Summer - 1
Level of detail provided

shipping forecast: Summer - 1
good coverage

Ski Club of Great Britain: Winter - 1
Covers all the ski resorts in different countries

The Weather Outlook: Winter - 1
Its forecasting

UNYSIS: Winter - 1
ACCURACY

Weather Po: Summer - 1
Its an app

Weather.co.uk: Summer - 1
The hourly presentation for trends over a period

weather2: Summer - 1
it is consistent

WeatherOnline expert charts: All year - 1
Updated every 6 hrs; great detail & many different aspects shown

wheres the water: Summer - 1
only river level info

Freetext Comments: What is the Worst Thing about the Most Important Mountain Weather Forecast

Accu: Summer - 6
Does not cover areas needed, fahrenheit only, app is slow, so summit forecasts

Accu: All year - 4
Hourly f'cast inaccurate, no reception in remote areas, only on phone

Accu: Winter -
next day detail is slim

BBC: All year - 51
accuracy, general/vague, does not reflect mountain ranges, be more specific, imprecise, insufficient wind speed information, over cautious, poor outlook, overly pessimistic, TV forecast is broadbrush, windspeeds only for sea level, focus on urban areas, no dedicated TV channel, variable presenters, lacks synoptic chart

BBC: Summer - 103
accuracy, southern bias, lack of detail, changing format, no dew point, not all Europe covered, insufficient mountain detail, dumbed down - no pressure charts, not specific enough, too general/vague, not enough on altitude/only sea level, not as reliable, presenter's outfits, slow to load, local info not always available, too consevative, height in both metres and feet.

BBC: Winter - 49
3d map, too general/vague, not enough on mountain conditions, graphics a bit general, pessimistic, insufficient local details, lack of ski centre specific information, no synoptic charts, long range too vague, only accurate at ground level, southern bias, too conservative.

Google: All year - 1
Lack of specific cloud level/temperature ar different altitudes

Google: Summer - 3
accuracy, no 3G or wifi, not designed for mountain use

Google: Winter - 2
It won't show more than an hour break down, longer term accuracy

ITV / STV: Winter - 1
lack of numbers for baro pressures

ITV/STV: Summer - 3
no numbers for barometric pressures, general info only

Magic Seaweed: Summer - 5
no webcams, or notification of last update, reliability, accuracy, not specific enough, clicking a second button to get detail forecast, not mountaineering specific

Met Check: All year - 2
overly optimistic, would like to access mountain info online

Met Check: Winter - 4
adverts, internet is needed, not mountain forecast, too much info

Met Check: Summer - 2
layout and adverts, little local detail

Met Off Mtain both: Summer - 27
Accuracy, areas too big, lacks detail, always check other sites, no summits on mobile site, not generated locally so not nuanced enough, bit pessimistic, ,rain info limiting,

Met Off Mtain both: All year - 22
layout, accuracy, am tends to repeat the previous pm forecast, too subjective, vague, not easy to understand, website poor/hard to find/not coherent, no degrees of uncertainty in rainfall/wind speeds,sun risk given same level as blizzard/storm force winds, more local areas needed/East Highlands too large an area, can't see previous days forecast, changes to next day forecast too soon, words, poor print-out version, poor signal, no mobile app

Met Off Mtain both: Winter - 17
no % chance of cloud free hills, accuracy, areas too large, no summits on mobile site, rain info limiting, late updates in evening, wind spped could be more prominent.

Met Off Mtain pm: Summer - 2
I want a better summary, regions are too vague

Met Off Mtain pm: Winter - 2
late update, too much writing in places

Met Off Mtain pm: All year - 1
Only covers specific areas, snowdonia, beacons, east higlands, west highlands

Met Off not sure: Winter - 40
accuracy, app is too basic, website too messy, conservative, dropdowns awkward on some devices, no tidal information, not enough detail, slow to load, not local enough, not mountain specific, infrequent updates,

Met Off not sure: Summer - 49
accuracy, areas too large, slow, unreliable, not specific enough/generic, in app adverts, no underfoot conditions, no element of risk of bad weather, no mountain top info, page freezes often, slow iphone app, reduce graphics to help with loading, vague, understimates wind, rain forecast needs to be clearer - constant or showers

Met Off not sure: All year - 19
app crashes, doesn't cover mountains, mixed detail, ages to update on phone with poor reception, accuracy, not good for snow coverage, only available online, only two mountain areas for Highlands, phone app only stores a limited number of favourite locations, rainfall radar is only for 2 days, map function slow to load/not detailed enough, warnings are vague and cover large areas.

Met Off Summit: All year - 11
doesn't cover all summits, pessimistic, lack of detail after 2 days, best one only available hours before, need wifi, warnings are over the top and so devalued, website slow and has much that is not needed, needs a reference map to see which summits have a forecast

Met Off Summit: Summer - 12
fiddly to drill down to the summit you want, doesn't cover all areas, map is poor on mobiles, windspeed inaccuracy, not great on small mobile devices, accuracy, not always user friendly, slow on mobiles

Met Off Summit: Winter - 10
slow to load on phones, lots of stuff on site not needed, needs good signal, not all summits covered, not easy to access/user friendly, not enough details, map not good on mobile

Met office - non-mountain: Winter - 1
Changes to website made it cumbersome to access when mobile coverage intermittant/week signal

Met Office - post code specific: Summer - 1
forecasts issued at end of night shift somtimes very different to subsequent morning shift forecast

Met Office 24hour/5day: All year - 1
No weather map.

Met Office Aviation Briefing Service: Winter - 1
It only lists weather/cloud up to 5000'

MET Office F214's and F215's: All year - 1
Update times for the F214 a bit behind F215 update times

Met Office Inshore Waters forecast: Summer - 2
Confusion about the boundaries of sea areas, no text only version

Met Office presure chart: All year - 1
not long enough

Met Office rain map: Winter - 1
Only short period in advance (to end of following day)

Met office synoptic charts: All year - 1
Not updated often enough, always seems to be 24 hours old

met ofice web site: Summer - 1
short period covered by inshore forecasts

Mountain-forecast: All year - 1
forecast range 1-3 days

Mountain-forecast: Summer - 1
accuracy isn't fantastic, fluctuates day by day

Mountain-forecast: Winter - 1
it can be complex and as the weather changes quickly in scotland its not always up to the minute accurate but provides a detialed potential picture of conditions and changes.

MWIS: All year - 427
Areas too large/could be more specific/localised - weather can be different over these areas - reduces certainty, accuracy, over hype bad weather, access via web only/no apps/no SMS, of national importance, bit general, bit pessimistic/err on the side of caution, too much on Munros - more on lower hills required, no current snow/avalanche reports, no overnight conditions, could be more long range, cloud indication, more frequent updates/advice on when next update will be, issued too late in the day, poor coverage outside of Scotland, dated presentation, definition of areas - a map, difficult to get on iphone, does not cover all mountain/ski areas, less clicks on webpage to get forecast, graphical snapshot would enhance narrative, frustration about walking in boundary areas, wind details could be more accurate (over-estimated), phone access not great, its name

MWIS: Winter - 312
long winded, pessimistic, advertising, need SAIS info, areas are too big - too general, not enough detail/accuracy, quicker view might help, no town search, difficult to navigate from phone, clunky - needs a refresh, more specific to ski areas, valley conditions required, infrequent/unpredictableupdates, lower hills info required, wind speed exaggeration,night time info would be good for camping, longer range needed, animated visual interpretaton, layout gets jumbled on some devices, little social media presence, app needed, better way to describe snow conditions - light, slushy, etc, no coastal version for sailing,

MWIS: Summer - 178
poor access in remote areas, accuracy, large forecast areas, pessimistic, doesn't look back, app required, better advance planning, doesn't cover night time weather, no comment on water levels or SAIS, exaggerates wind speed, over-complex wording, only web based, longer forecast required, more frequent updates, long time to load on mobiles

MWIS & SAIS: Winter - 1
SAIS limited coverage

Rain Today: All year - 1
limited to rain

Rain Today: Summer - 2
confusing colour scheme, not always accurate

SAIS: Winter - 78
sporadic blogging, mobile app required, covers only hotspots/not all mountain areas, doesn't always match the arrival/departure of winter weather (finishes too soon), confusing until you understand the charts, needs to be used with other forecasts for overall picture, not updated in the morning, too short term, too much jargon, historical information should go back longer

SAIS: All year - 3
Too often orange warning, ie considerable risk of avalanche, limited area coverage, no live imagery

Snow forecast: Winter - 17
Wind values are usually wrong, accuracy, not updated enough, more detail required, have to pay for 9 day forecast, difficult to switch between imperial/metric,

Snow-forecast: Summer - 1
cant say there is one

Snow-forecast: All year - 1
Inaccurate more than 24hrs in advance. Can change dramatically within a short space of time.

Weather Channel: All year - 1
inaccuracies

Weather Channel: Summer - 1
Possibly not very accurate in medium to long term

Weather Channel: Winter - 1
sometimes it has trouble loading

Wetterzentrale: Winter - 1
Navigation and trying to find euro max/min temps

Wetterzentrale: Summer - 1
not local

Wetterzentrale: All year - 1
not suitable for those with little meteorological knowledge

Wind Finder: Summer - 4
Accuracy, not easy to find areas, difficult to load on phone

Windguru: Summer - 1
adverts

Winterhighland: Winter - 17
Could do with more detail and more frequent updates, finding the correct forecast, am and pm not provided, reliant on a volunteer,

Winterhighland: All year - 2
could do with more updates, not detailed enough

Winterhighland: Summer - 1
I wish I could be there

XCWeather: All year - 8
changes regularly, no cloud height, precipitation, inaccuracies

XCWeather: Winter - 11
no feels like temperature, a bit basic, not accurate enough longer term, accuracy, detail, no wind info at different altitudes, not mountain specific

XCWeather: Summer - 23
presented better, adverts, no visuals, not long term enough, precipitation info not good, no charts, not mountain specific, rainfall map wanted

Yahoo: Summer - 1
Can be short on the detail

Yr.no: Summer - 17
accuracy, info on freezing level required, difficult to compare different areas, location spellings, long term forecast layout, only web based, sometimes optimistic, wind speed forecasting, wind in m/s

Yr.no: All year - 16
no indication of likely cloud cover, lack of detail, inaccuracies in medium term, location search on android app not good, no historic weather info, accuracy, infrequent updates, some glitches with English translation, no synoptic chart

Yr.no: Winter - 7
not easy to manage different locations, only web based, hard to get an overview, windspeed m/s, could do with an app

Apple weather app: Winter -
not as detailed

arcus: Summer -
missing maps unlike darkskies alternative on IOS

EA river levels: Summer - 1
Hasn't realised it's not only anglers using it.

Equal split between Met Office, MWIS and SAIS: Winter - 1
MWIS forecast wind speeds are often stronger than actual.

Highland Weather man from Carbridge: All year - 1
Is general

Lake District Weatherline: Winter - 1
it could give more specific detailed information.

LDNP Weatherline ;net weather: Summer - 1
weather line now only once a day and often late in being published

meteo.fr: Winter - 1
Difficult to access unless familiar with the French systems

Mountain weather forecast = http://www.metoffice.gov.uk/public/weather/mountain-forecasts/west-highlands#?tab=mountainMap&map=allmapsites&zoom=7&lon=-5.38&lat=57.24&locId=undefined (May be same as Met Office Summit Forecasts?): All year - 4
Can be hard to find on internet, being able to print off for guests, doesn't show snow line

myweather2.com: Summer - 1
randomly changes windspeed to knots/mph/kmph - it's not always clear which time period is covered by a time given

netweather: Summer - 4
often wind speeds are way out (strong winds predicted), navigating the site, cost of subscription

Netweather: Winter - 2
the way it records wind speed, cost of subscription

netweather.tv & river level data: All year - 1
it costs £15 a year

onjara weather forecast app viewed every day: Winter - 1
little to criticise

radio 4 weather: Summer - 1
lack of detail

RASP: Summer - 3
accuracy, slow on mobiles, very complicated, only daylight hours

RASP: All year - 1
can be complex

RASP: Winter - 1
Raw model output - no interpretation

RASP - Regional Atmospheric Soaring Prediction BLIPMAP FORECASTS For Great Britain: Summer - 1
Model used is not as current as some of the other forrecasts

shipping forecast: Summer - 1
tends to over predict bad weather leading to lack of faith and possible hazardous decisions

Ski Club of Great Britain: Winter - 1
Sometimes too generalised

The Weather Outlook: Winter - 1
some of the interfaces

Weather.co.uk: Summer - 1
Exacvt location sometimes difficult

weather2: Summer - 1
not 100% accurate (but none can be)

WeatherOnline expert charts: All year - 1
Not very quick to load

weatheronline.co.uk: Summer - 1
The weathermaps are a bit dated.

wheres the water: Summer - 1
time lag, not current

Freetext Comments: Other Comments about the Most Important Mountain Weather Forecast

Accu: All year - 2
No ski area forecasts, can't access in remote areas

Accu: Summer - 3
Needs different altitude forecasts, Easy to understand, Good for quick updates

BBC: All year - 19
Generally good, not good for mountains, accurate, don't change it, accurate trends, consistent, easy to use on any device, needs cloud base & 3,000ft temp/wind info

BBC: Summer - 21
BBC Scotland radio version not good, doesn't get updated at weekends, dropping deg F has taken too long, could have more detail, better wind forecast needed, general synopsis and barometric chart useful, was more accurate 1-2 years ago, most accurate, not great for mountain areas, educational, inconsistent with low pressure systems - cross-check needed, over-simplified, good clear presentation, helpful semi-technical information, good app

BBC: Winter - 16
available of a variety of media, doesn't explain about wind at height, don't like angled graphics, easy to use, rain levels would be good, regional forecasts should be more detailed, should include dew point, winter forecast only a Friday, more detail

BBC weather app: All year - 1
Quick and simple

ITV / STV: Summer - 1
don`t like those read out &no maps

ITV / STV: Winter - 1
far better with maps rather than read out

Met Check: All year - 1
User interface is fairly navigable

Met Check: Winter - 1

Use it when group on site not out in the mountains

Met Off Mtain both: All year - 11
excellent, over-emphasis on risk/safety, don’t need to see the alerts first, pictures do not always match text, maps good/words not, use actual wind speeds not terms (brisk, strong etc), precipitation probability is good, more frequent updates needed, keep up good work

Met Off Mtain both: Summer - 8
annoying navigation, marketed better, good visual aids, often good, too many clicks to get all the info

Met Off Mtain both: Winter - 7
more specific area based forecast, don't like the new website, used in conjunction with other sites, needs a brief summary highlighting details of windspped direction

Met Off not sure: All year - 5
better than the rest, no longer rely on one service, inconsistent

Met Off not sure: Summer - 13
add seasonal link to SAIS, generally good data, like radar rainfall and forecast maps, should identify if weather from a station or best guess, app sets it apart, need more use of isobars and fronts, wind speed usually overstated, prefer a 10 day forecast

Met Off not sure: Winter - 12
best of the lot, convenient, good global overview, seems to be dumbing down in recent upgrades, isobar maps not detailed enough, lack of longer range forecast

Met Off Summit: All year - 7
limited info on winter ground conditions, more frequent updates required, very accurate & reliable, some summits missing (Goat Fell on Arran), advertising intrudes

Met Off Summit: Summer - 3
App would be useful, trust it more than others

Met Off Summit: Winter - 1
Excellent forecast for local spots (Cairngorm summit) takes skill to extrapolate for other locations

Met Office - post code specific: Summer - 1
More consideration to popular walking areas eg moors above Largs has to be extrapolated from Largs Beach; similarly Whitelee Windfarm has a Met mast, and there is a road weather station nearby beside M77, but the nearest forecast offered is Eaglesham, down in the lee of the hills.

MET Office F214's and F215's: All year - 1
10's of thousands of safe hours flying thanks to MET Offica Aviation info! CHEERS!

Met Office Inshore Waters forecast: Summer - 1
I access this by both VHF radio and internet.

Met Office rain map: Winter - 1
Very useful for kayaking in conjunction with river levels websites

Mountain-forecast: All year - 3
more useful than MWIS, smaller geographic areas and longer range, fantastic service

Mountain-forecast: Summer - 1
longer than 7 day forecast would be useful

Mountain-forecast: Winter - 3
Is there an App? Nice geogrpahic representation, very useful, vitally important

MWIS: All year - 256
needs dedicated app, guaranteed update times, very valuable resource, accuracy, good hill specific information, good broad base, good synoptic chart & % chance of cloud-free summits, split northwest and north, update mob forecast at same time as main service, extend to 4 or 5 day forecast, can be pessimistic, bring back the maps, grammar/text mistakes, clear and simple, consistent, add avalanche comments, add in expected hours of daylight, add more educational info, like a zoomed out pressure chart, should be accessible by text, indispensable, understands the users, keeps us safe, first one I go to, excellent, keep up the good work, please keep supporting it, keep it going, essential, humourous, best available, brilliant, crucial, free, really value it, rely on it

MWIS: Summer - 87
a larger synoptic chart would be useful, app would be good, explanation of the terms would be useful, invaluable, brilliatn, can MWIS be merged with SAIS to provide one consolidated report, excellent, good that it is free, want better solution for time of bad phone signal, keep it going, more updates please, more webcams, please don't cancel it, should be proof read, UV and humidity,

MWIS: Winter - 180
a clean rss feed would be useful, a mobile text http version, all 3 days info in a single HTMP format would be nice, essental for Scottish snowsports, excellent aide, a life saver, bring back clickable map, add a bit of colour, an iphone app, version on a TV station, please, please, please do not scrap it, clear skies % would be useful, depth of snow, you're doing a fantastic job

Rain Today: All year – 1
Simple, easy to understand

SAIS: All year - 2
It cannot be accurate as triggered avalanches are not that well predicted, negative predictions

SAIS: Winter - 51
life saving service, keep it up, blog useful, combine with MWIS, excellent, vital, encourage expansion, earlier forecasts in morning, great tool, invaluable, hill folk talking to hill folk, keep it going for another month, make hillwalkers (not just climbers) aware of it, wind speed & density tests helpful

Snow-forecast: All year - 1
More accurate than Met Office/BBC, but all forecasts are unreliable more than 24hrs in advance in my experience.

Snow-forecast: Winter - 6
Generally use others in combination with this due to the requirement to register and pay, good app, use with Met Office and MWIS to get full picture

Weather Channel: All year - 1
Only use because its linked to HTC as an app

Wetterzentrale: All year - 1
need to understand weather models to use it

Wind Finder: Summer - 2
excellent detail, though aimed at water users rather than mountaineers.

Windguru: Summer - 1
very useful presentation of low/mid/high cloud levels - identifies fronts more clearly than any other.

Winterhighland: All year - 2
Has live weather updates. Great. Pulls together snow reports, forecasts and avalanche info

Winterhighland: Winter - 7
excellent service combined with independent assessment of conditions, great use of local knowledge and rain radar, webcams and photos useful for trip planning

XCWeather: All year - 4
easy to use, free, needs an app

XCWeather: Summer - 7
great service, quick and easy, hasn't got some of the wave and swell info, the best weather forecaster for lowland areas

XCWeather: Winter - 7
easy to follow and load on phone, good presentation, love the real time data, wind and %cloud cover data useful.

Yr.no: All year - 11
hour by hour detail, most accurate, short URL is good, clear, easy to use, quick to navigate, effective, excellent graphic display, good mobile website, works well with poor signal

Yr.no: Summer - 7
used to be better, usually very accurate, verty intuitive on smart phone

Yr.no: Winter - 3
Best I've found, hour by hour forecast is handy

Equal split between Met Office, MWIS and SAIS: Winter - 1
SAIS only covers specific areas - understandably.

Highland Weather man from Carbridge: All year - 1
Easy access and understandable

ios WeatherPro (Meteogroup): Summer - 1
It's great.

LDNP WEATHERLINE: Winter - 1
PEOPLE REPORT FROM 'ON THE GROUND'

LDNP Weatherline ;net weather: Summer - 1
15 years ago weather line was much better with regular twice daily forecasts and giving valley as well as mountain top conditions

Netweather.tv: Winter - 1
I also use MWIS for more localised forecasts

netweather.tv & river level data: All year - 1
sepa can have delayed feeds and only update periodically through the day, be good if it was every 15 min

netweather-seems more accurate for isolated locations: Winter - 1
shows that different models and diverse data works well

onjara weather forecast app viewed every day: Winter - 1
also a widget on phone

RASP: All year - 1
Brilliant

rasp: Summer - 1
good in combination with others

RASP: Winter - 1
Useful for viewing GFS wind at different altitudes, but not as good as e.g. Windyty for this

RASP - BLIPMAP FORECASTS For Great Britain: Summer - 1
In spring/ summer it's my primary forecast for paragliding, supplemented with info from yr.no. In winter or for mountain running/ mountaineering I use MWIS

UNYSIS: Winter - 1
SYNOPTIC CHARTS

Weather.co.uk: Summer - 1
Has proved very reliable

WeatherOnline expert charts: All year - 1
Not suitable for use on a mobile

Weatheronline.co.uk: Summer - 1
This doesn't have mountain forecasts which is unfortunate.

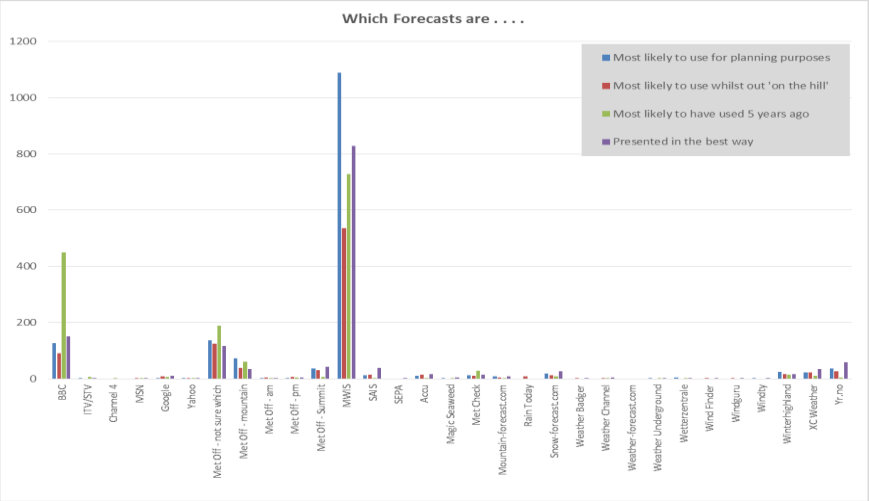
wheres the water: Summer - 1
more info for fort william area

Mountain Weather Forecasts that are Best For . . . .

Respondents of the full survey were asked to select which forecast they were most likely to use for the following different purposes:

- Most likely to use for planning purposes
- Most likely to use whilst 'out on the hill'
- Most likely to have used 5 years ago
- Is presented in the best way (irrespective of accuracy or appropriateness)

Overall, as in all other questions, the selected forecasts were dominated by MWIS, as can be seen in the chart below:



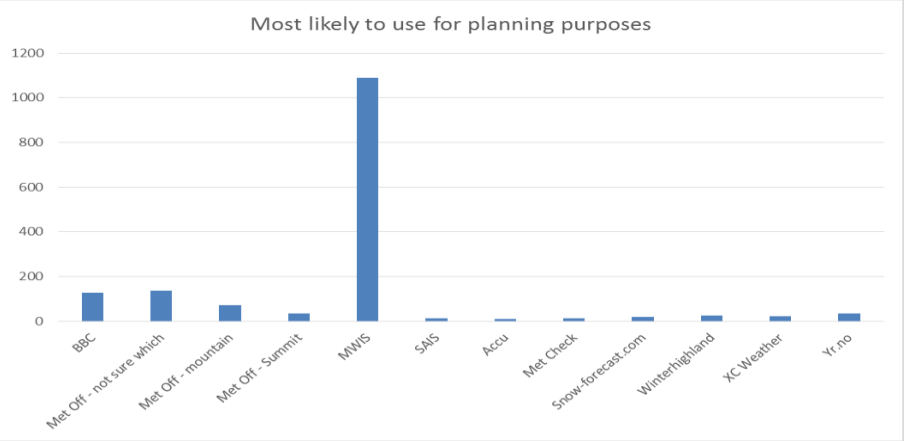
It may appear that MWIS is less popular for users whilst out on the hill and to a lesser extent by those used 5 years ago, and best presented, though this should be considered against the total number of responses for each of the 4 questions (all not applicable/blank responses have been excluded):

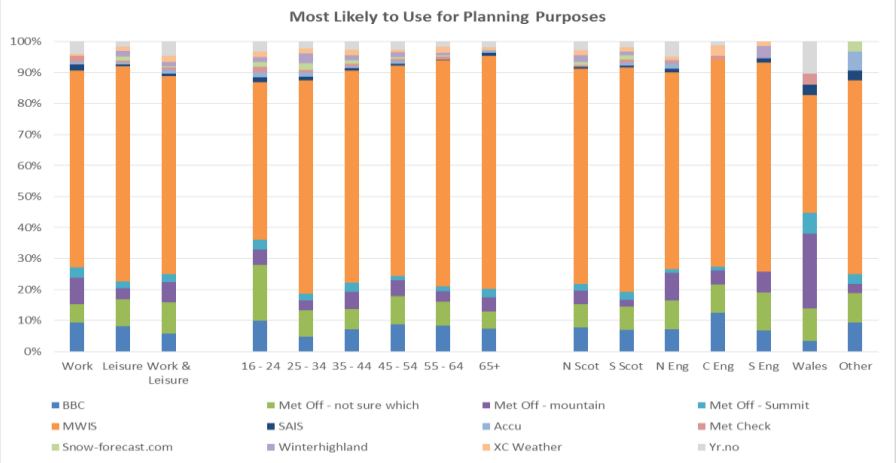
Most likely to use for planning purposes	1625
Most likely to use whilst out 'on the hill'	979
Most likely to have used 5 years ago	1534
Presented in the best way	1429

The following section looks at each of these 4 questions in more detail, (excluding those forecasts that did not get at least 10 votes in at least 1 of the questions). Each question shows the number of overall responses (all shown to the same scale for comparative purposes between questions) and then responses broken down by demographics (work/leisure breakdowns are based on each respondent's reason for looking at forecasts when undertaking their most frequent activity):

Most Likely to Use for Planning Purposes

Key Points: *67% of respondents are most likely to use MWIS as their preferred mountain forecast for planning purposes. This compares to 15% for any one of the Met Office forecasts and 8% for the BBC*



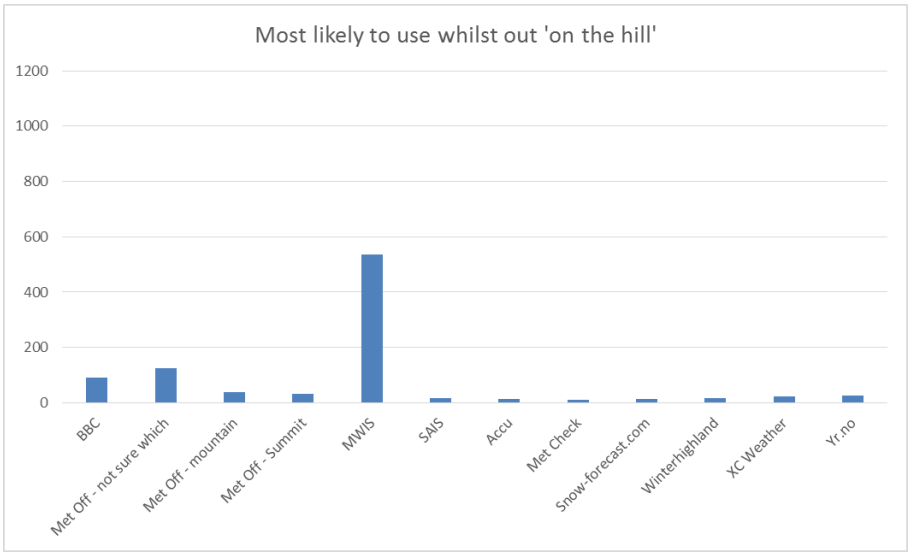


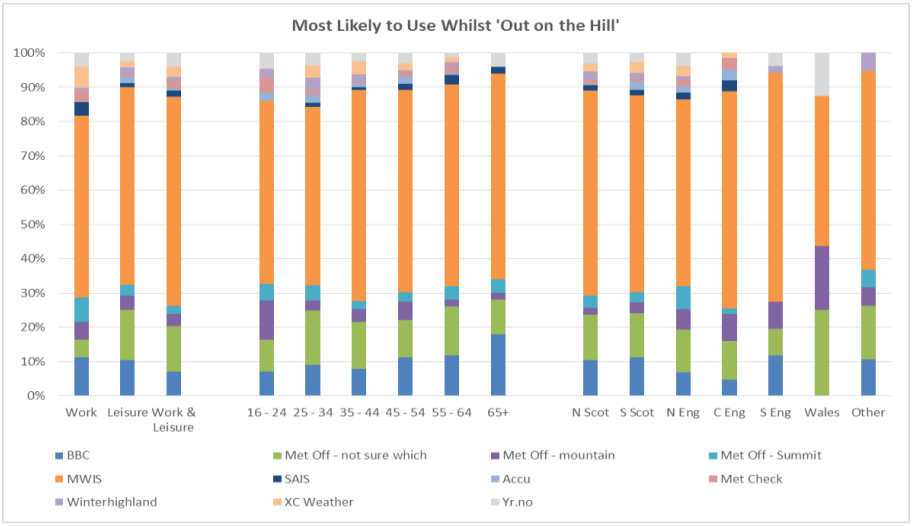
The above 2 charts both show the dominance of MWIS as the forecast of choice for planning purposes (67.0%, while the Met Office combined forecasts account for 15.1% and BBC 7.8%), but a number of points can be seen from the demographics charts, which show as overall % of responses per category:

- Users looking at forecasts for work purposes are slightly more likely to use the Met Office mountain forecasts, than other users
- 16 – 24 year olds are also more likely to use a Met Office forecast, though they are not sure which one. Their usage of MWIS is proportionately less than other age categories
- Respondents from Wales are more likely to use Met Office mountain forecasts, but this is based on a small number of responses (29).
- Respondents from Wales are also less likely to use MWIS and more likely to use Yr.no, than respondents from other areas.

Most Likely to Use Whilst 'Out on the Hill'

Key Points: *55% selected MWIS, 20% selected Met Office and 9% the BBC*



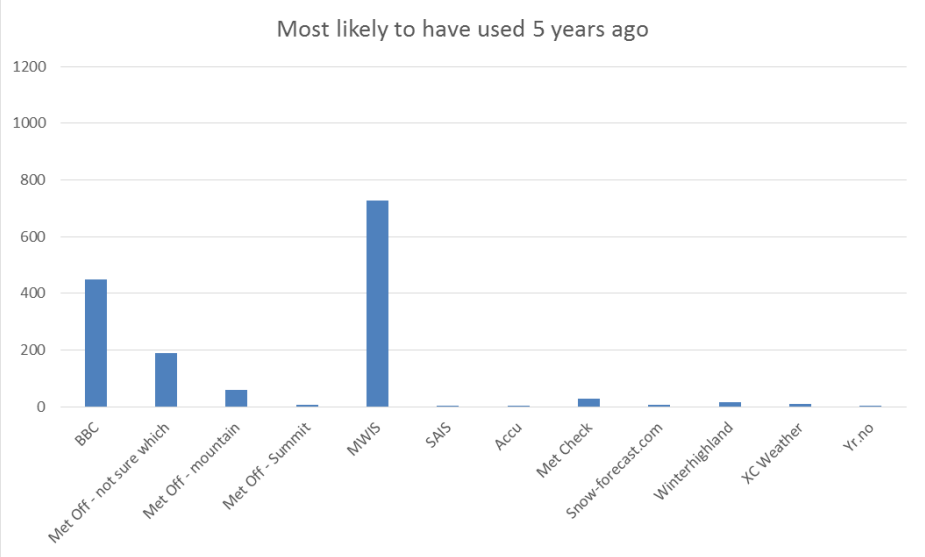


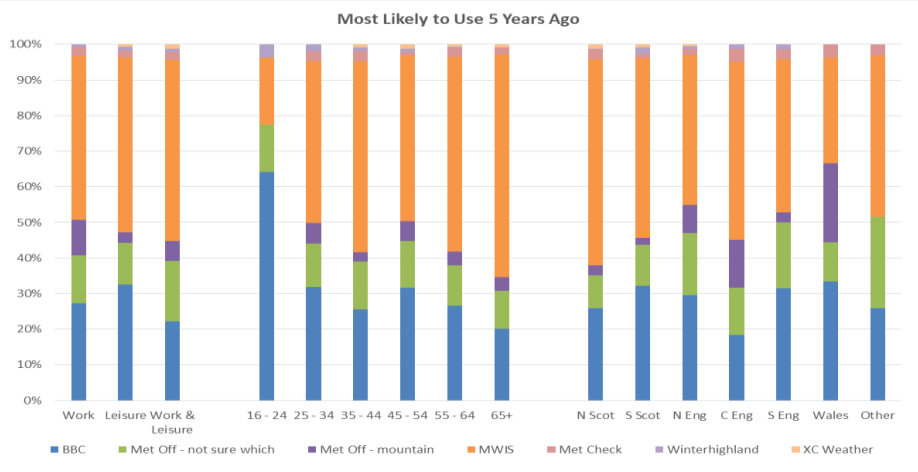
Again, little can be observed from the overall chart, with MWIS accounting for 54.6% of responses, Met Office 19.8% and BBC 9.3%. The demographic breakdown shows:

- Work only users are more likely to use Met Office forecasts than other user types
- Over 65s are more likely to use the BBC than other age groups
- 16 – 24s are more likely to use the Met Office mountain forecasts
- Again Wales respondents were more likely to use the Met Office and Yr.no than other regions, and less likely to use MWIS
- Central and North England users were less likely to use the BBC

Most Likely to have Used 5 Years Ago

Key Points: *47% MWIS, 29% BBC, 17% Met Office*





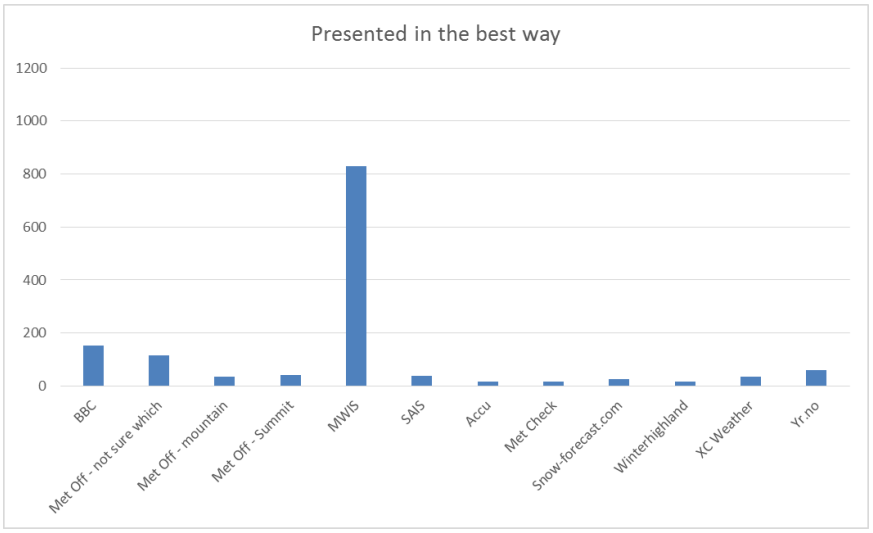
For this question, although MWIS is still the main response, it is not as dominant as previous questions. MWIS accounts for 47.4% as opposed to the BBC 29.3% and Met Office 16.6%.

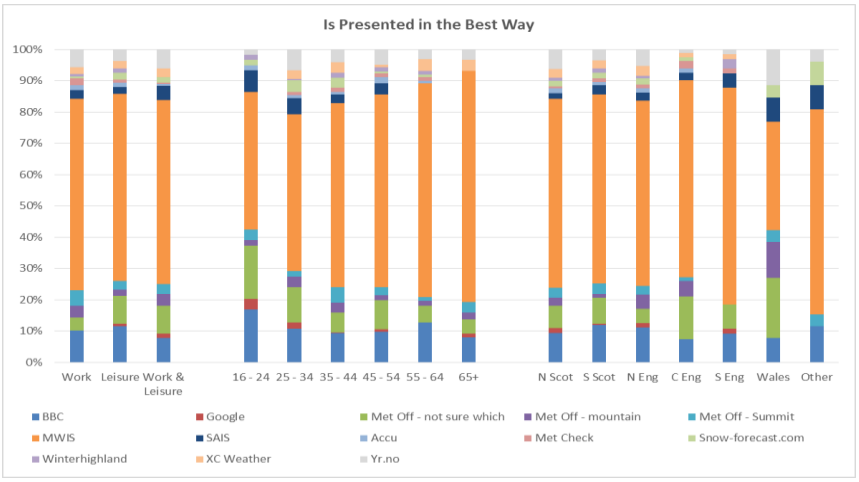
The demographics show:

- Leisure only users were slightly more likely to use the BBC and less likely to use the Met Office mountain forecasts
- The 16 – 24 age group were much more likely to use the BBC, but they would only have been aged 11 – 19, so these results should be used with caution
- Older age groups were more likely to use MWIS, and less likely to use the BBC
- Scottish and Central England users were more likely to use MWIS
- Scottish users were less likely to use any of the Met Office forecasts

Presented in the Best Way

Key Points: *MWIS 58%, Met Office 14%, BBC 11%*





Again MWIS dominates the overall figures, with 58.0%, followed by Met Office at 13.5% and BBC at 10.6%.

The demographics show:

- No real differences in response by work/leisure type
- The % of age groups selecting MWIS increases with age
- The 2 younger groups prefer SAIS slightly more than older respondents
- The 16 – 24 age group prefers BBC and Met Office compared to older respondents
- Wales respondents have equally selected MWIS and Met Office forecasts, though numbers are small (9 responses each)

In addition to the selections made here, this question also asked respondents to explain what they liked about the presentation of this forecast. The following comments were made:

MWIS - 530
Clear and easy to use, Mixed response on use of text- either positive allowing readers to interpret or needing repeated readings to make sense, Sense of familiarity and trust, Provides good locallity-specific information, Reflects effects of weather conditions on users experiences, downloadable/printable as a PDF , Concise with absence of drop down menus or clutter

BBC - 100
Clear presentation - logical and visually appealing, ease of use V Strong, gives detailed & longer term forecasts, regularly updated, available across platforms, accurate, range of elements - detailed isobars, animations, allowing users to explore in more detail

Met Off not sure - 77
Accurate and detailed most responses, some "good generally but not detailed" (usage?), Provides specific data applicable to elevation and areas for walking, Mixed response on clarity mostly positive- "text based", "reasonably easy to interpret", Identifies hazards relevent to activities, when used in real time accurate but reception an issue (due to location?)

Met Off Summit - 27
Accurate and detailed - hourly/3 hourly forecasts, Comments about accuracy in detailed forecasts, Clear and easy to use, raw data on weather directions for users to interpret (seen as a positive)

Met Off Mtain both - 21
Accurate and detailed, Provides specific data applicable to elevation and areas for walking, Mixed response on clarity mostly positive- "text based", "reasonably easy to interpret", Identifies hazards relevent to activities, when used in real time accurate but reception an issue (due to location?)

Met Off Mtain pm - 3
Gives ground conditions

Mat Off Mtain am - 1
Ease of use

Yr.no - 47
Clear and simple to use, Quick to get information from, Good local information, Good range of information

SAIS - 34
Clear and 'beautiful' graphics, Easy to use, Wide range of relevent data, Concise text covering specific hazards

XC Weather - 31
Clear well organised layout, Accurate, Quick to get information from, Good local and up to date (3hr) forecasts

Snow Forecast - 17
Clear and Easy to use, Accurate and detailed information, Extended information for interpretation of conditions and planning

Met Check - 11
Gives lots of detail, clear & easy to use

Accu - 10
apps good, multiple channels, clear/easy to use, minutecast, showing when precipitation is due,

Winter Highland - 9
Simple and easy to use, Good level of detail, Accurate

Google - 7
Ease of use on phone, clear graphics

Moutain Forecast - 6
Clear and easy to use, detailed information on summits

Magic Seaweed - 4
Simple and clear

Weather Channel - 3
Hour by hour forecast, usable app

Weather Underground - 2
very 'graphical'

ITV/STV - 1
Plenty of information

MSN - 1
Available as an app

SEPA - 1
Clear and authorative

Weather Badger - 1
Nice graphics (not sure about this)

Wind Guru - 1
"less accurate forescasts"

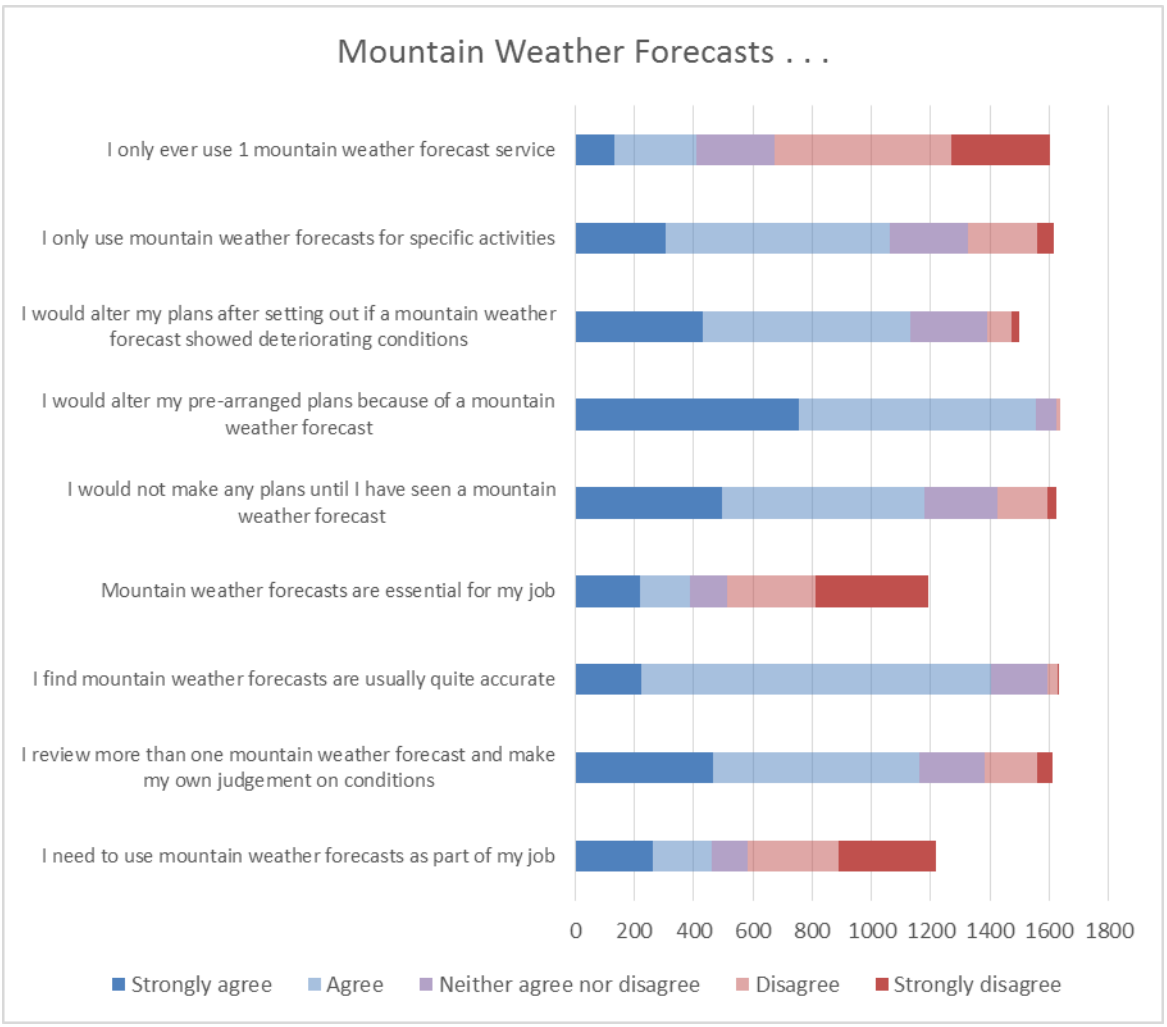
Windty - 1
"very pretty"

General - 58
Clear and easy to use, Good use of graphics and text, available on a range of platforms, Good range of information about differing aspects, Range of forecasts 1hr - 10day updated regularly, Familiarity/trust often the criteria cited for use, Accuracy and reliability, Good availability of apps and ease of acccess via internet, Accuracy - not identified if positive or negative

Other - 26
Using other links (facebook) to discuss and clarify forecast, Cross referencing between a number of sites to guage accuracy, Referencing to other bodies (SEPA) forecasts

Views on Mountain Weather Forecasts

The full survey included a series of statements to which respondents were asked to what extent they agreed or disagreed. The results are below:



Key points are:

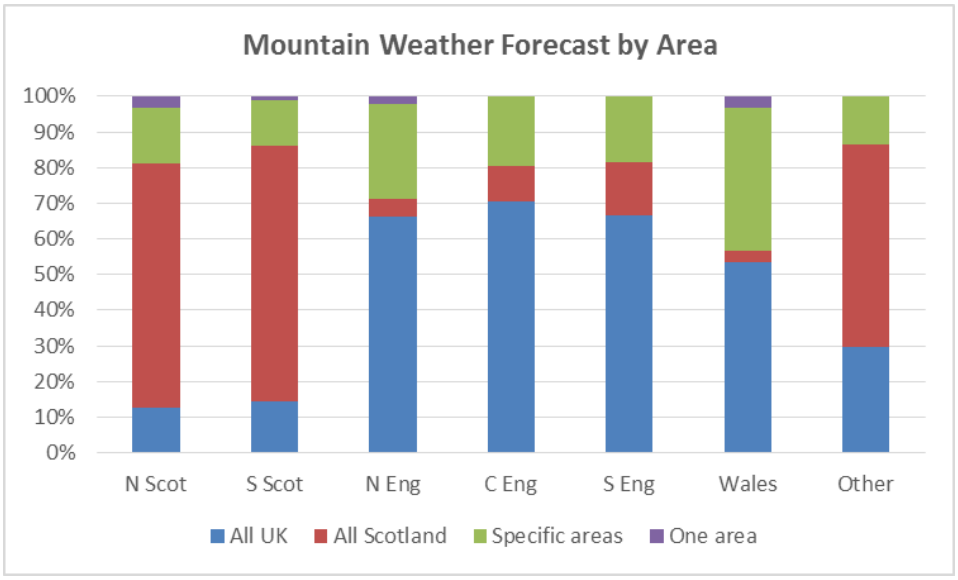
- Most respondents use more than 1 mountain weather forecast and make their own judgement about the conditions, though find the forecasts to be usually quite accurate
- Most respondents use the mountain weather forecasts for specific activities
- Most regard mountain weather forecasts as essential at all stages of their activity planning

Looking specifically at those respondents who use mountain weather forecasts for work (including those whose main activity is work related, as well as those that use mountain weather forecasts for work and leisure purposes:

- 88.5% agree or strongly agree that they need to use mountain weather forecasts as part of their job
- 80.2% agree or strongly agree that mountain weather forecasts are essential for their job

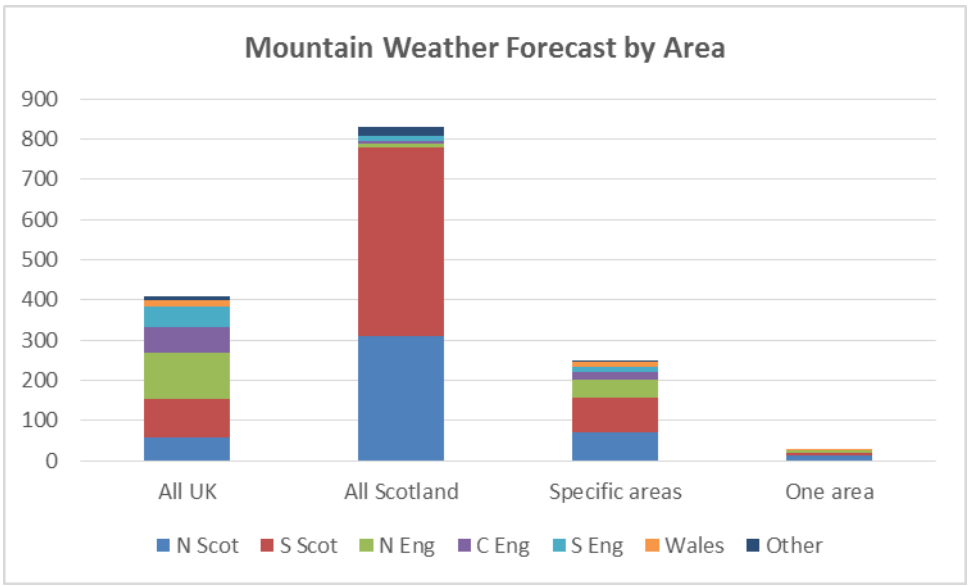
Parts of the UK

Respondents to the full survey were also asked for which parts of the UK they accessed mountain weather forecasts.



The chart above is based on region of residence of respondents and shows that over 70% of Scottish based residents access mountain weather forecasts across the whole of Scotland, whereas more than 60% of England residents access forecasts across the whole of the UK.

When this data is show as raw numbers, based on the amount of people that searched across the UK, Scotland etc, the following results were shown:



On this chart it can clearly be seen that most of the respondents that search across the whole of Scotland were from Scotland, whereas most of those that search the whole UK were from England.

Freetext Comments: For Which Specific Areas of the UK do You Access Mountain Weather Forecasts For?

Whole UK - Cairngorms NP, Europe, Lake District, Peak District, mainly Scotland, North Wales, East Highlands, Wales, Cumbria,

Whole Scotland - north of Glasgow, all hillwalking in Scotland, Lake District, all ski centres, Wales, N England, Brecon Beacons, Cairngorms, Highlands,

Specific areas only - Derbyshire, Exmoor, Dartmoor, Yorkshire Dales/Moors, all mountain areas, all Scotland, Lake District, N Wales/Wales, Peak District, anywhere north of Perth, Argyll, Glencoe Cairngorm, Glenshee, Scottish Borders, Brecon Beacons, Snowdonia, Lochaber, Glencoe, Cuillin/Skye, Ben Nevis, Arran, English-Welsh forecasts, Findhorn River Catchment, Dartmoor (not covered), Grampians, ski resorts,Pentlands, Pennines, Angus Glens, Spain,

One area only - Badenoch & Strathspey, Ben Nevis, Cairngorms (NP), East Loch Lomond, Glencoe, Highlands, Lake District, Lochaber, Lowther Hills, NW Highlands, Scottish ski resorts, Snowdonia, Southern Uplands, West Highlands,

General comments - Cairngorms, Scotland, Lake District, N W Highlands, North Wales, Munro Bagging, Scottish ski resorts, Scottish Highlands, Scottish mountain areas

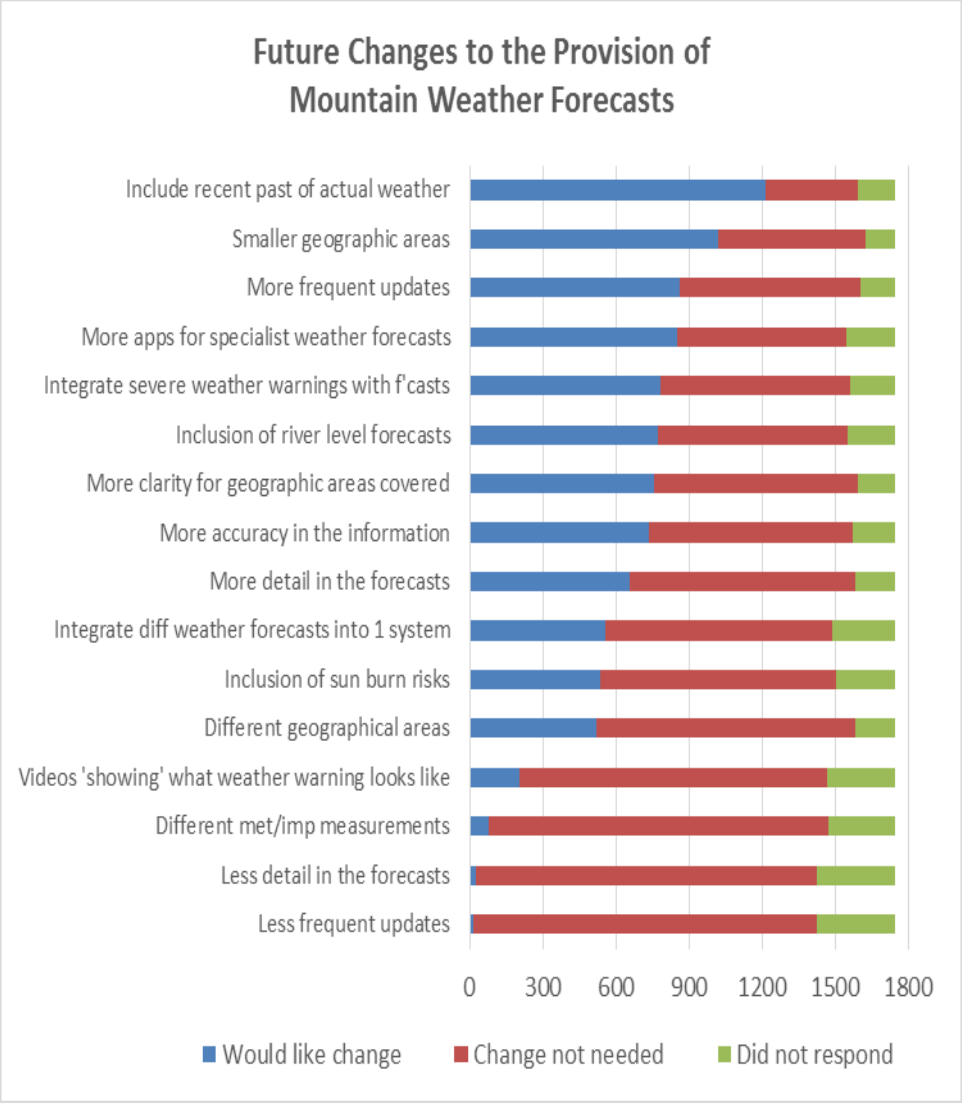
Changes to the Provision of Mountain Weather Forecasts

Key Points: *The most popular changes requested were to:*

- *include the recent past of actual weather*
- *use smaller geographic areas*
- *have more frequent updates*
- *develop more apps for specialist forecasts*

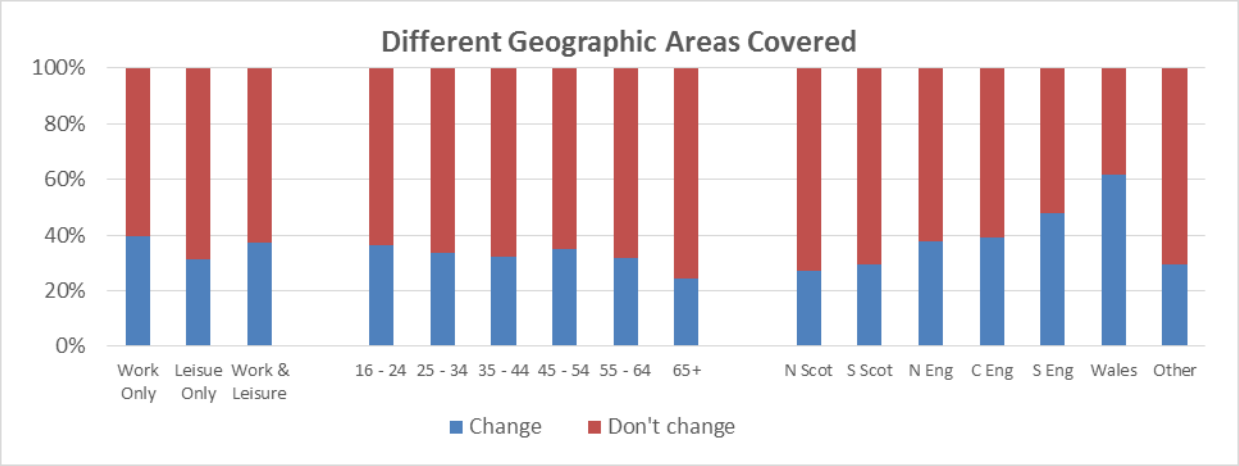
Respondents to both full and short surveys were given a number of statements and for each were asked whether they would like to see this change made, or whether a change was not necessary. In total 1,747 respondents gave an opinion on at least 1 of these statements.

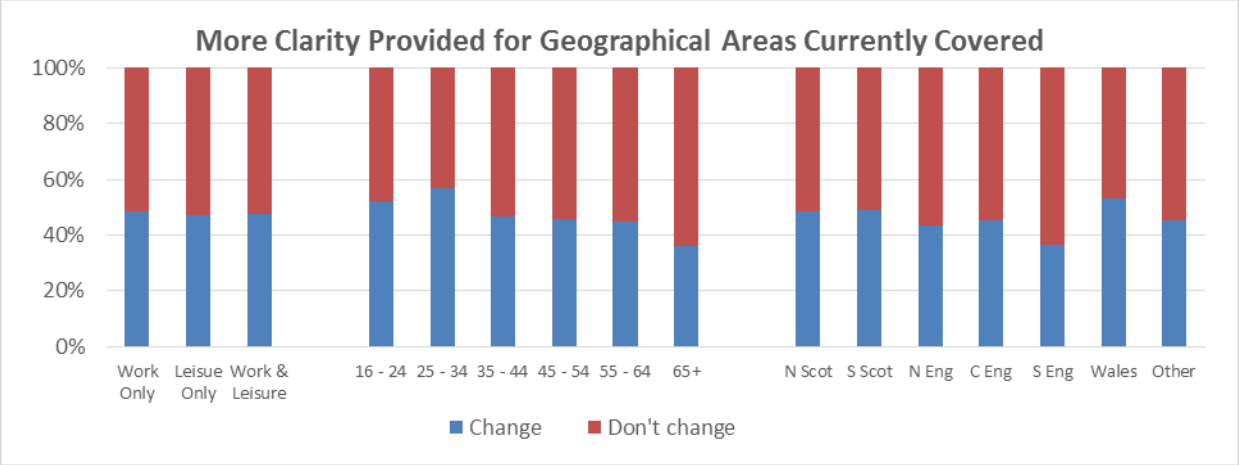
The chart below has been ordered by decreasing number of respondents that would like to see a change made:

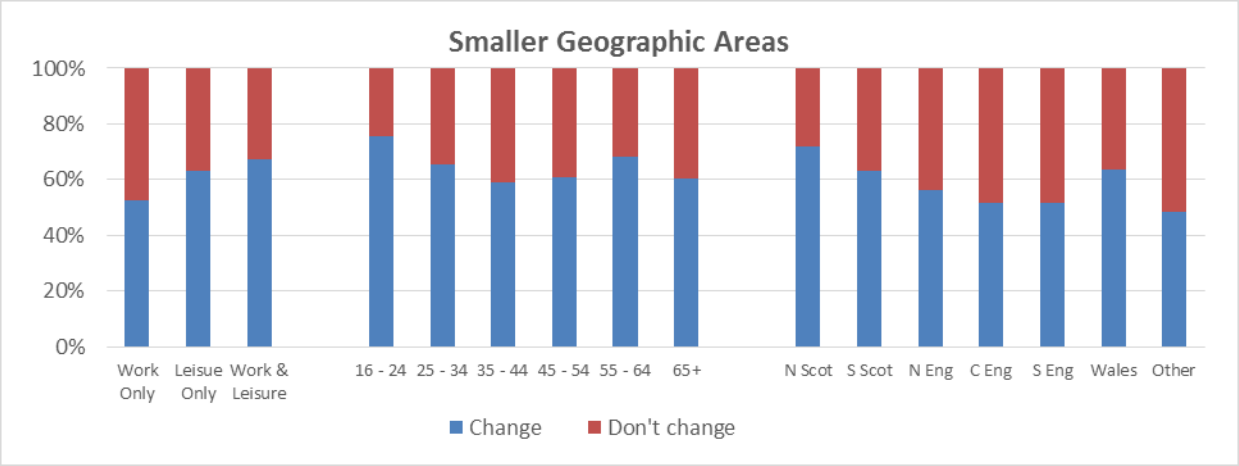


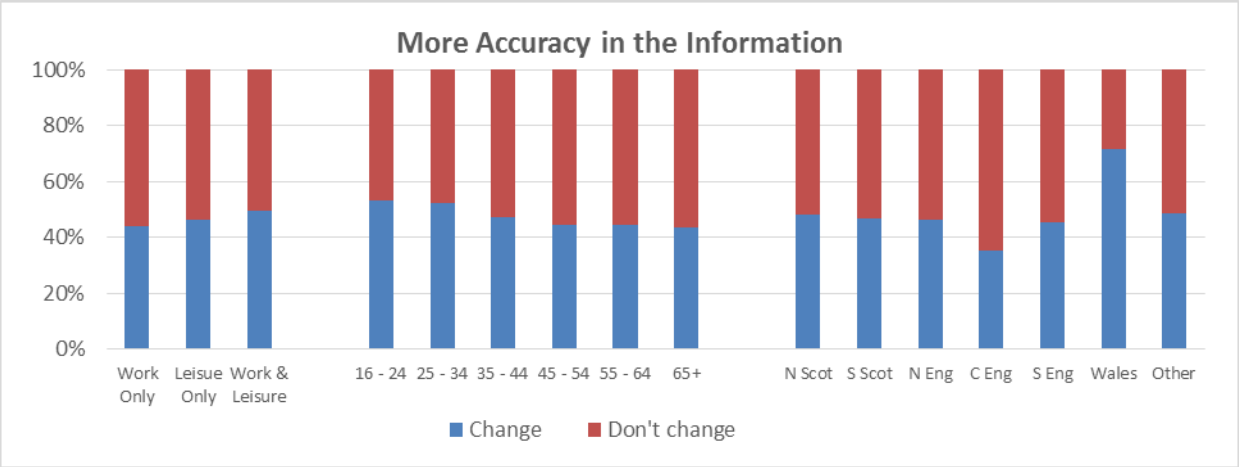
These factors have then been analysed individually by demographics to see if there are any significant differences. As before the work/leisure breakdown is based on the activity that they undertake the most.

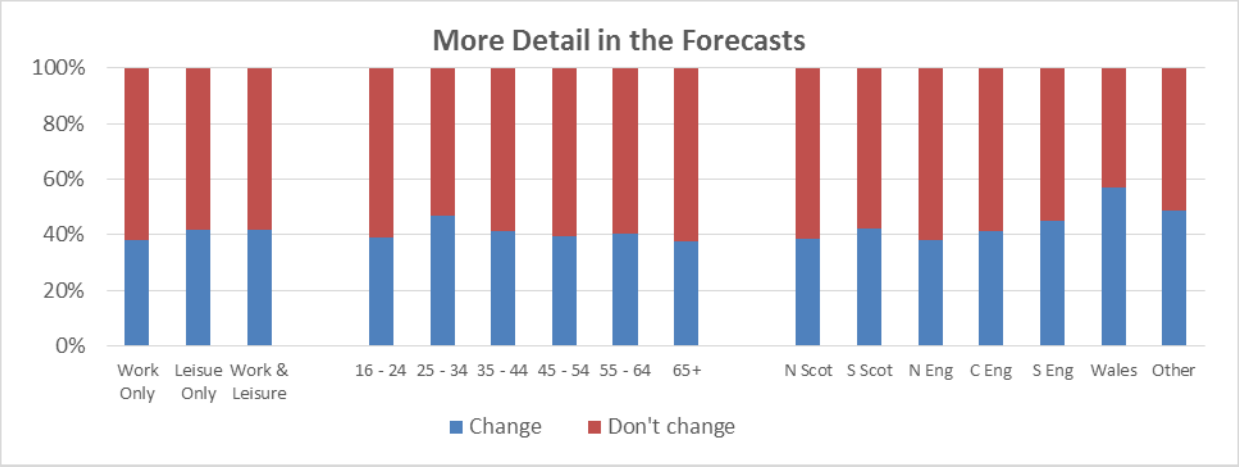
In a number of cases the Wales regional response is different to the rest of the UK – these results are based on 34 respondents.

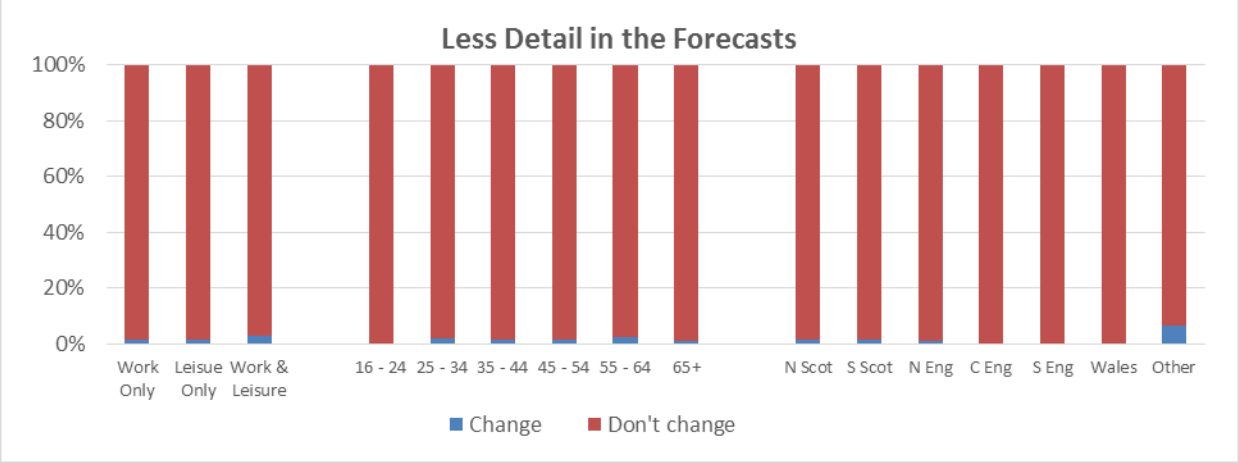


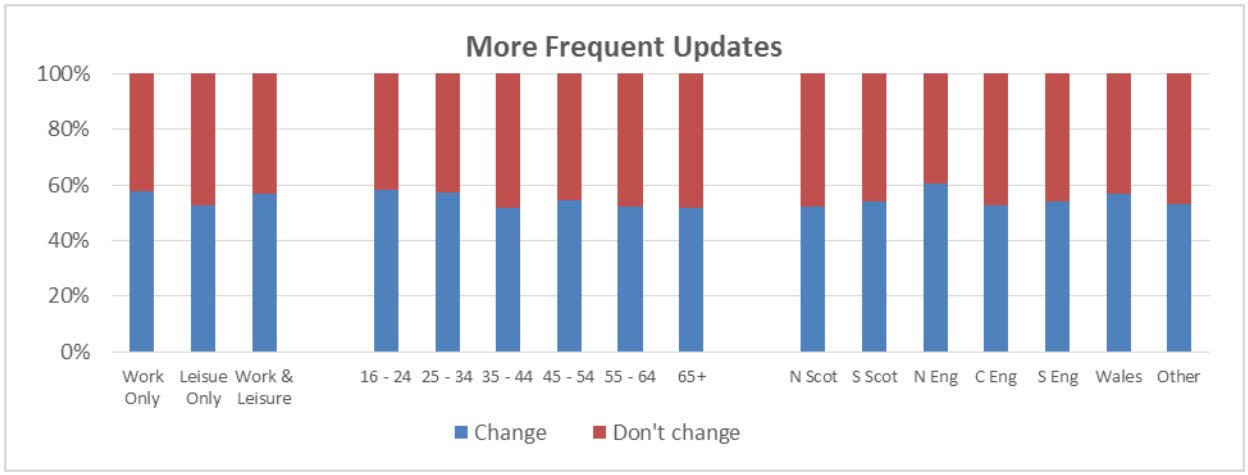





More Accuracy in the Information
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+
N Scot
S Scot
N Eng
C Eng
S Eng
Wales
Other
Change
Don't change


More Detail in the Forecasts
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+
N Scot
S Scot
N Eng
C Eng
S Eng
Wales
Other
Change
Don't change


Less Detail in the Forecasts
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+
N Scot
S Scot
N Eng
C Eng
S Eng
Wales
Other
Change
Don't change


More Frequent Updates
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
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65+
N Scot
S Scot
N Eng
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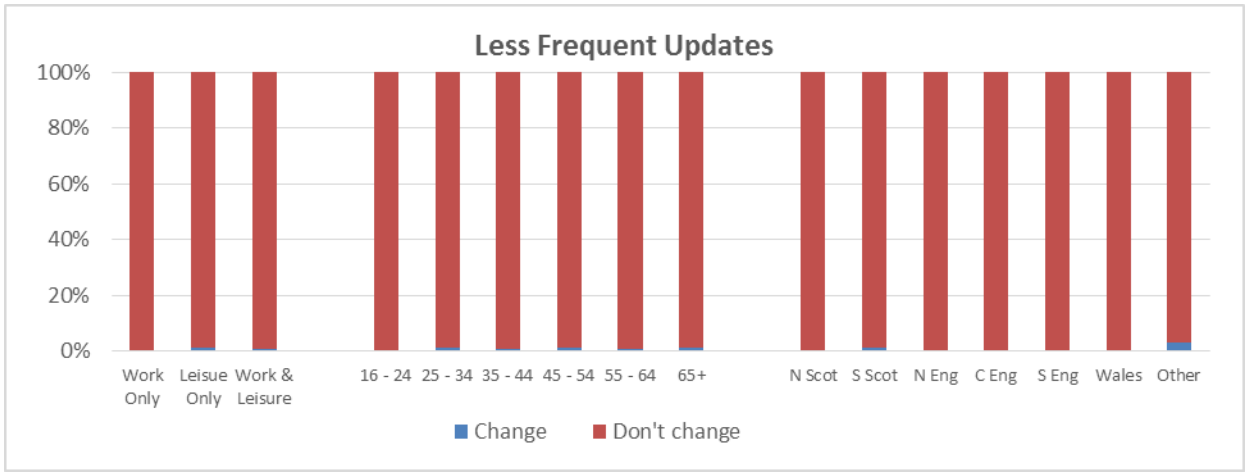
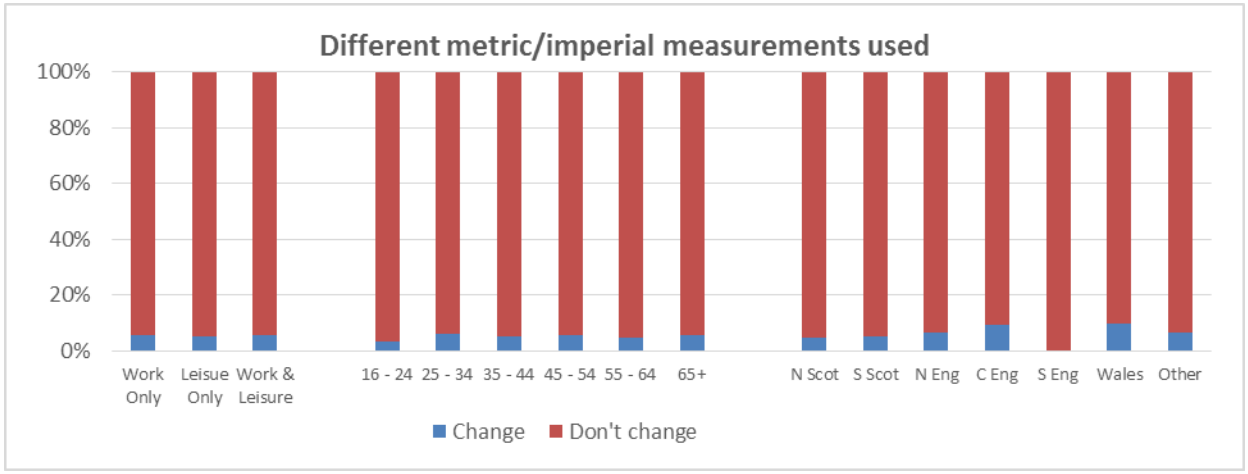
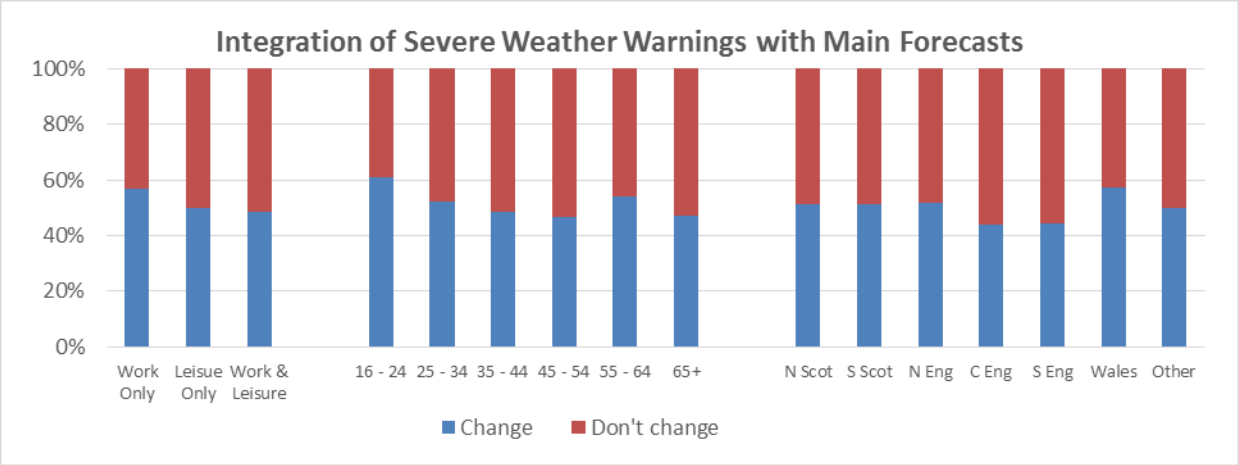
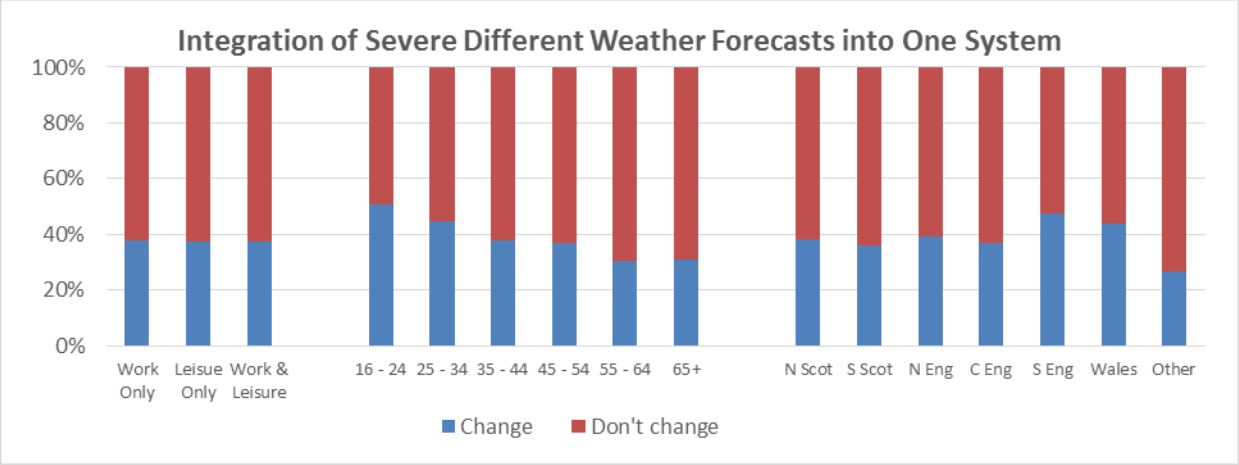
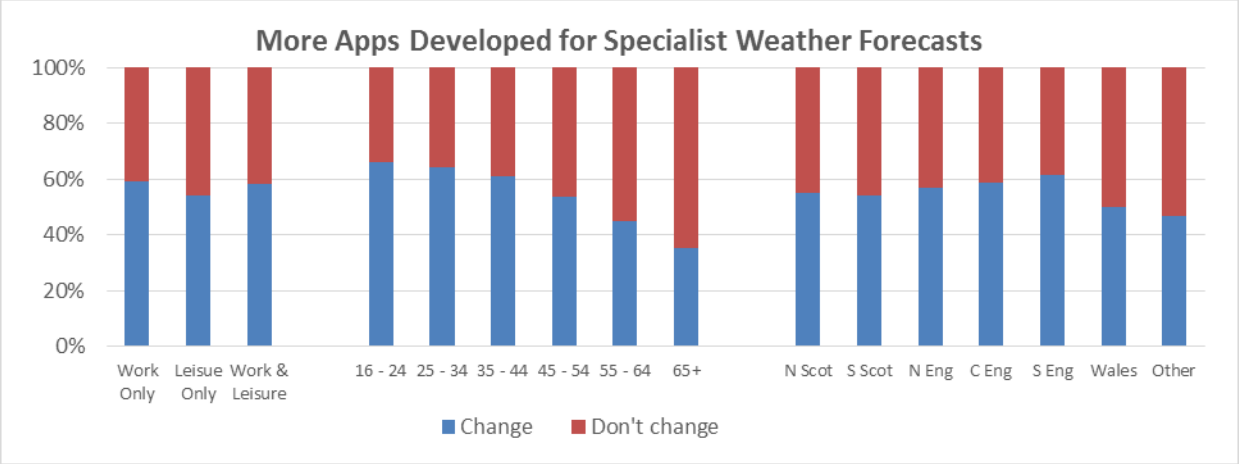
Wales
Other
Change
Don't change


Less Frequent Updates
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+
N Scot
S Scot
N Eng
C Eng
S Eng
Wales
Other
Change
Don't change

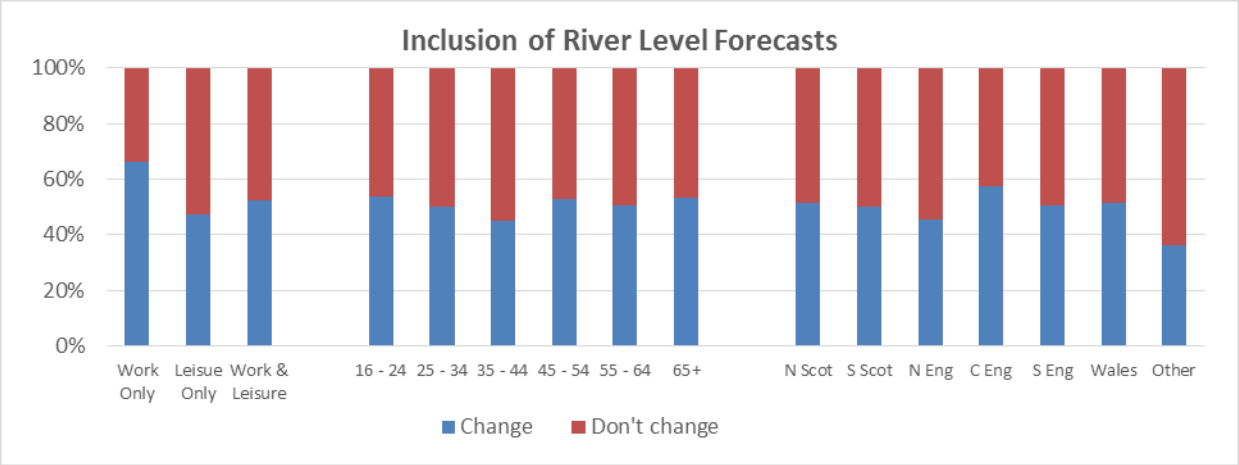

Different metric/imperial measurements used
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+
N Scot
S Scot
N Eng
C Eng
S Eng
Wales
Other
Change
Don't change



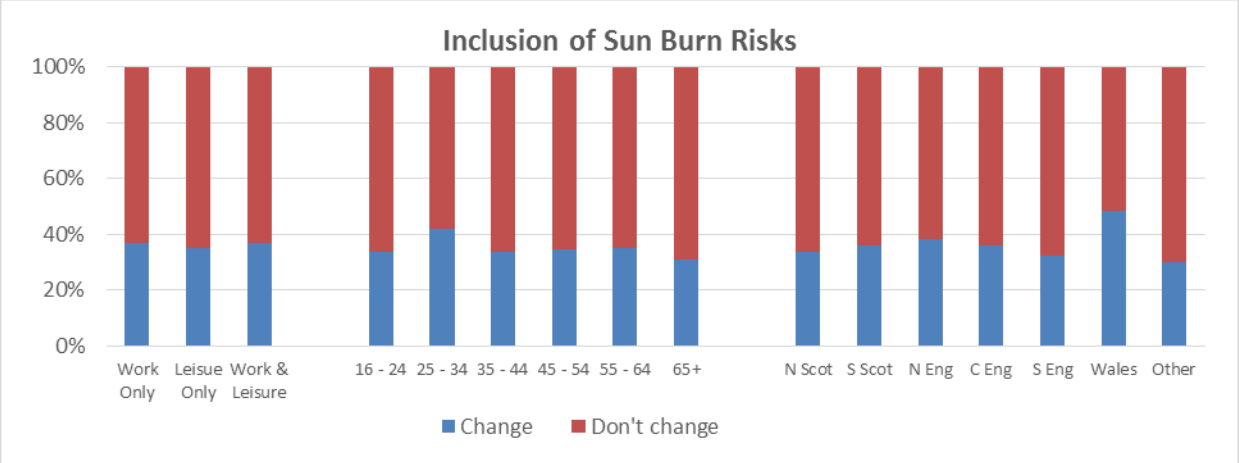


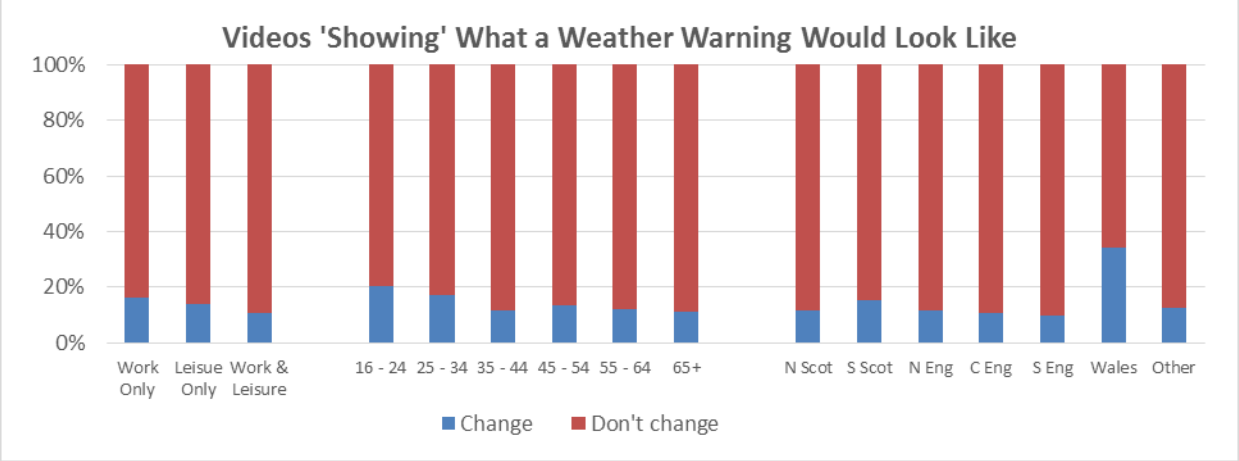


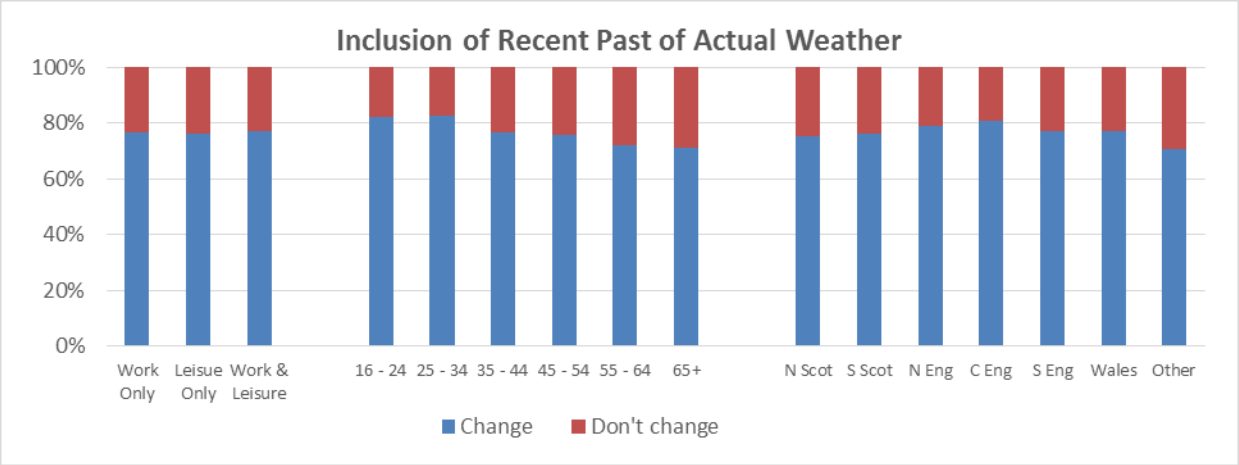
As might be expected the desire for more apps to be developed is higher amongst the younger age groups, and decreases with older respondents.



River level forecasts are requested by a higher % of those using the forecast for work only, compared to other sectors.






Inclusion of Recent Past of Actual Weather
100%
80%
60%
40%
20%
0%
Work Only
Leisue Only
Work & Leisure
16 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+
N Scot
S Scot
N Eng
C Eng
S Eng
Wales
Other
Change
Don't change

Freetext Comments: Please Add Comments to Help Explain the Changes You Would Like to See Made to Mountain Weather Forecasts

More detailed forecasting for smaller sized areas within current descriptions eg 'West Highlands'and help identifying where these are (maps or key in name of destination?)

Targeted forecasts for specific locations eg skiing areas, Glencoe, National Parks, Tay Valley etc

Extended coverage to increase or introduce Welsh, NI and English upland areas (MWIS and SAIS)

One interface showing multiple forecasts

Meta forecasts summarising/reconciling/comparing/sharing MWIS, Met Office and SAIS data and/or links between sites

Ability to view or have summarised previous weather to help make judgements about actual conditions, including previous nights weather

Predictive synoptic charts linked to effects on the ground - identified for MWIS to allow flexible self-evaluation of conditions/forecast

Maps rather than descriptive text of areas

Include confidence levels

Lighter interface/apps or information as PDFs to be used when signal is poor or battery life short. (or increasing awareness of their availability?)

Improved accuracy

No change service is good - change may make a good service over-complex/less accessible/over cautious/confusing/less useable

More regular updates of forecast (MWIS) or state when situation has not changed.

Accurate but not over stated risks

More detailed risk assessments to include flooding, midges, sun etc…

Water levels for water sports but also to assess safe fording of streams etc

Specific on site conditions eg snow-depth, snow-line altitude, cloud base, wind speed against altitude

Real time reporting from locations eg video links, blogs, social media.

Standardise units across sites (wind in km/h, M/s mp/H…)

New Met Office website too slow, difficult to navigate, too many clicks & scrolling pages, late updates, mobile version doesn’t work with older phones

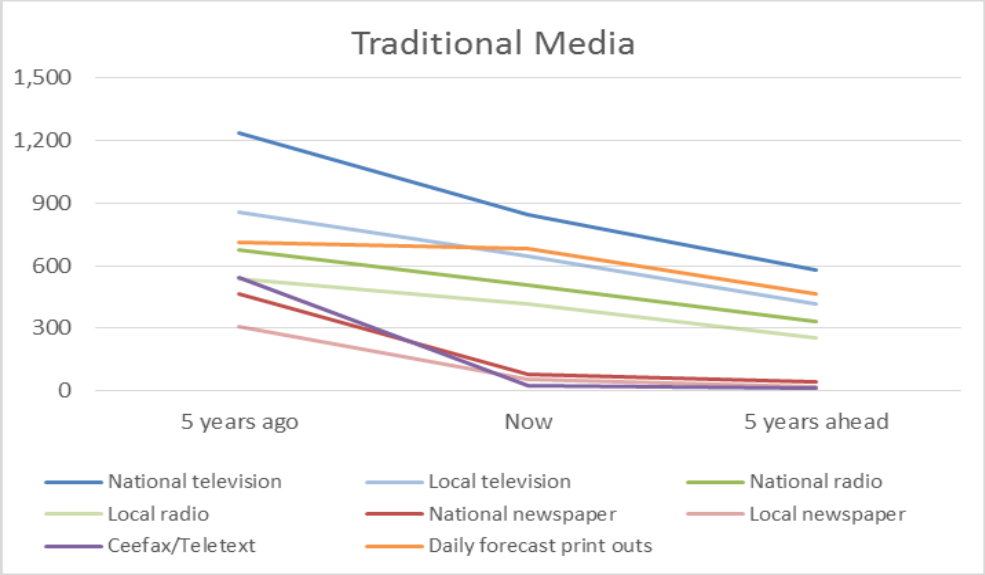
Media Channels

Key Points: *Main changes:*

- ***Traditional media*** *such as TV, radio and newspapers have seen a steady decline over the last 5 years*
- *This decline is expected to continue*
- ***Technological services*** *such as computers, tablets and smart phones have seen sharp increases over the last 5 years*
- *These increases are expected to continue (except for computers), though the level will steady off*
- ***New technology*** *such as smart watches have seen only small usage over the last 5 years*
- *Steep increases are expected over the next 5 years*

Respondents were asked about how their use of different media channels had changed over the last 5 years and how they expected it to change over the next 5 years.

18 options were presented to the respondents and the results have been split between 2 charts below:



The first chart above shows 8 'traditional' media solutions – TV, radio, newspapers, print outs.

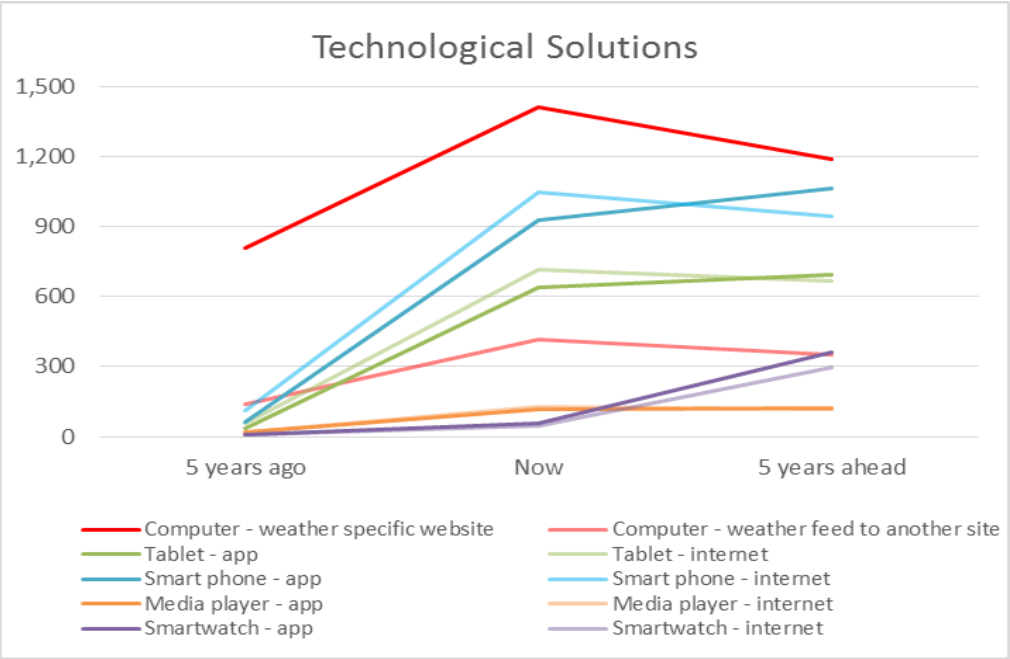
It can very clearly be seen that without exception, each of these delivery mechanisms has declined over the last 5 years and is expected to continue to decline over the next 5 years.

In fact national and local newspapers, along with the Ceefax/Teletext service, are currently used by less than 5% of respondents, and this will continue to decline in the future.

When looking at the gradients of the lines, there have been steady decreases and in most cases these are expected to continue.

The slight exception is in the print-out of daily forecasts put up in shops/hotels/cafes etc, which has remained quite steady over the last 5 years, but is expected to decrease more rapidly over the next 5 years.

In contrast, the 2nd chart below – which is shown at the same scale – shows the responses received in relation to technology solutions – computers, tablets, smart phones, media players and smart watches.



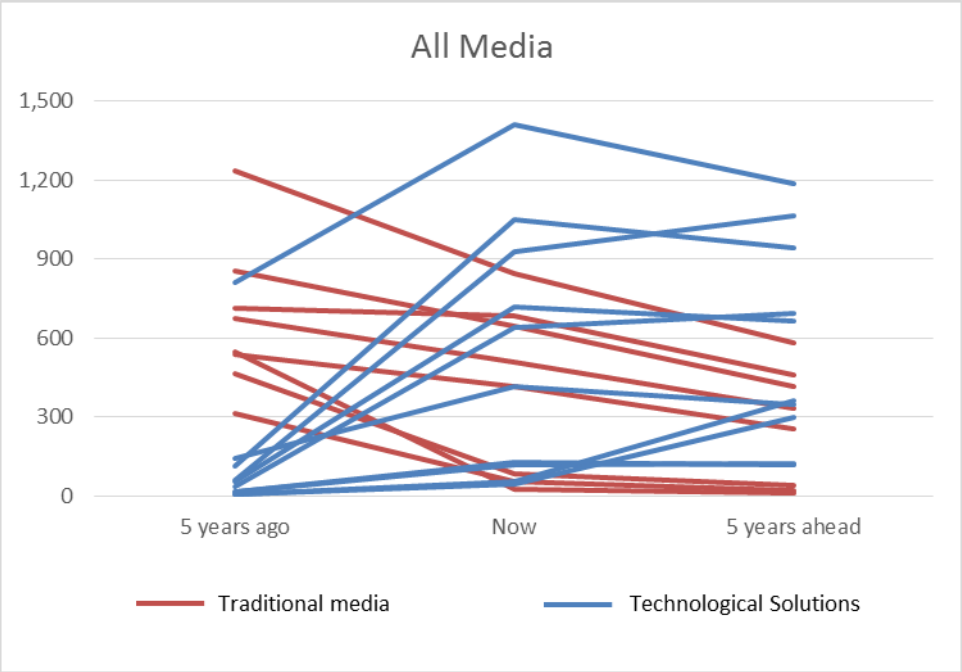
In all of these cases there has been an increased usage over the last 5 years and in most cases there are expected to be continued increases over the next 5 years.

The exception to this is in the use of computers, and also internet access over tablets and smart phones. These are all showing slight declines in the future and the responses are indicating that the future will be in specific apps, along with smart watches.

Looking at the gradients of the lines in the chart below, there has been quite a sharp increase in usage over the last 5 years, but future predicted trends are much flatter – both increasing and decreasing.

The greatest increase over the next 5 years looks to be in the use of apps on smartwatches, which responses indicate could increase 6-fold over the next 5 years.

When showing all media solutions on the same chart, with colour coding distinguishing between traditional media and technological solutions, the following can be seen:



To note:

- 5 years ago, more people used the traditional media to access weather forecast information, than any of the technological solutions with the exception of weather specific websites on computers
- Currently there is a mix of usage, with 5 of the top 10 access methods being traditional and 5 being technological
- In 5 years' time 7 of the top 10 access methods are expected to be technological, with national and local TV, and print outs in shops/hotels/cafes, being the only traditional methods left

Age Breakdown & Media Access

A further analysis of the above past, current and future media usage has been undertaken, this time breaking the results down by age sector.

The results are shown below as a % of the number of respondents in each age category. The blue lines indicate younger respondents aged 16 – 24, 25 – 34 and 35 – 44. The red lines represent older respondents aged 45 – 54, 55 – 64 and 65+.

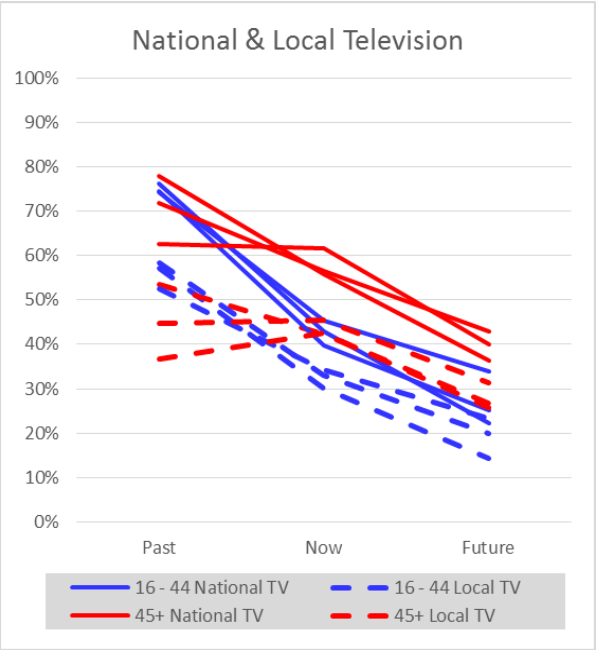
Traditional Media

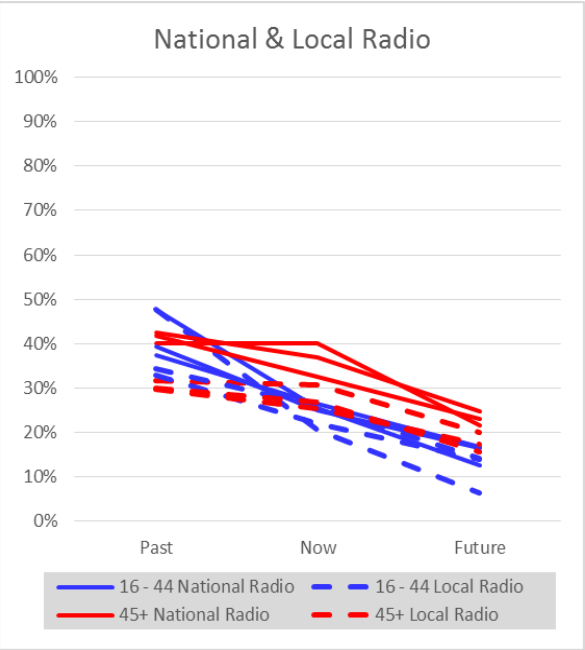
The 4 graphs below showing the changing use of more traditional media – television, radio, newspapers, teletext and print outs.

Almost all age groups and media types on the television and radio graphs, show declines from 5 years ago to the present time, with these decreases being more pronounced for the younger age groups.

The small increases that can be seen in the TV and radio categories are from the age 65+ category.

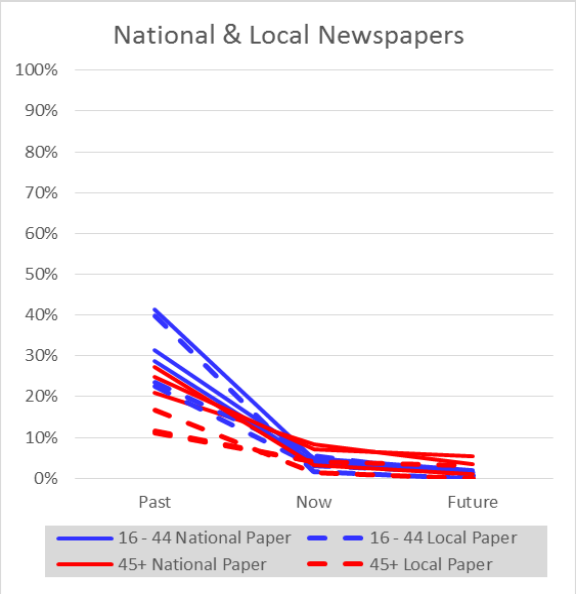
The expected future changes show declines for all media types and all ages.

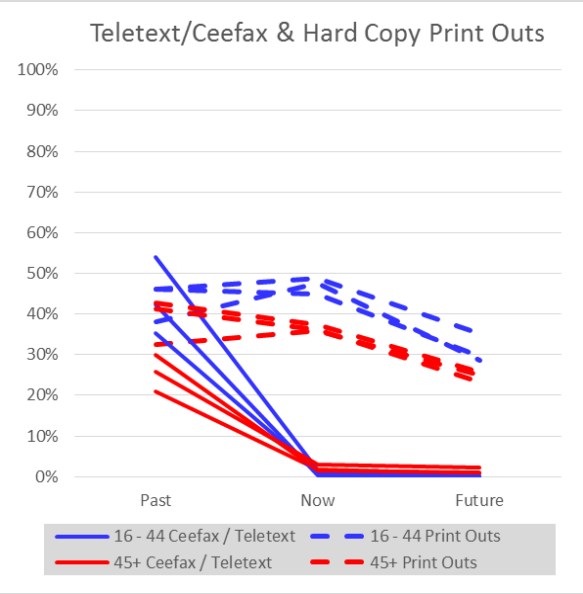




Looking at the 2 graphs below, there has been a marked decline for all age groups over the last 5 years, to below 10% for all newspapers and teletext/Ceefax. Usage is expected to remain at this low level into the future.

Historic usage of hard copy print outs has increased slightly for younger respondents, but decreased for older respondents. For all age groups there is expected to be a small decline in the future.

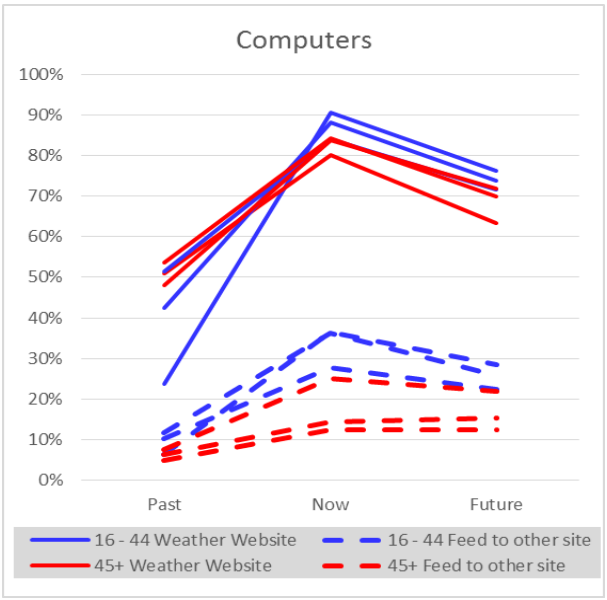


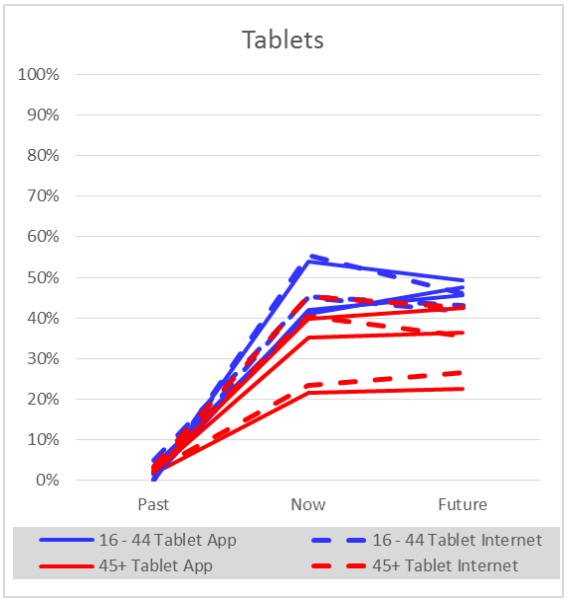


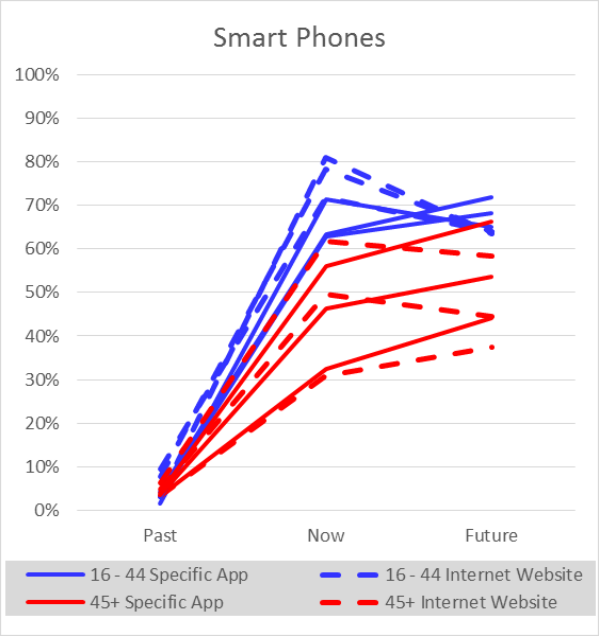
Technological Solutions

Historic usage of computers, tablets and smart phones show significant increases to the present day, though current usage is higher for younger respondents.

All age groups expect to see decreases in usage in the next 5 years, with younger respondents remaining as the main users.

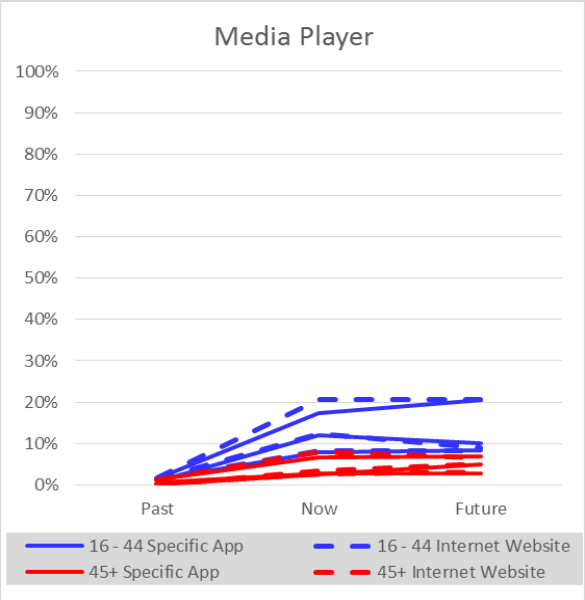


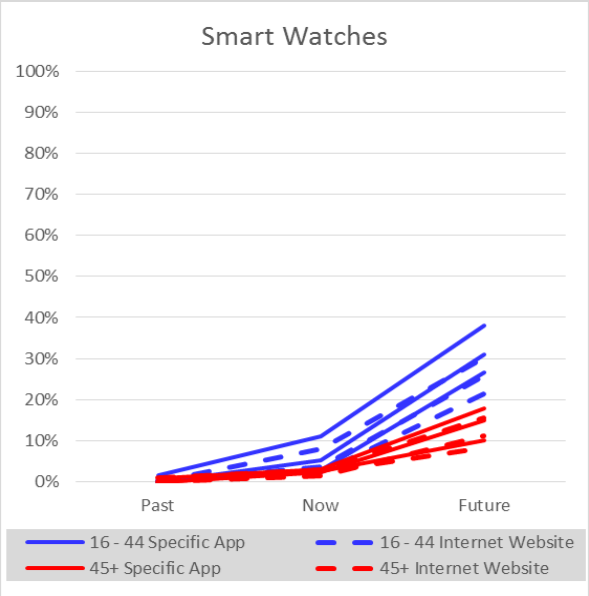




The use of media players is much lower than other technologies, and whilst increases of up to 20% have been seen over the last 5 years, these are expected to remain steady or decline in the future. Usage although low, is higher for younger respondents compared to older respondents.

The historic usage of smart watches has also seen small increases over the last 5 years, up to 10% currently. However, this is the area where significant increases are expected in the future. Like the media player, it is the younger respondents that are most likely to make use of this technology.





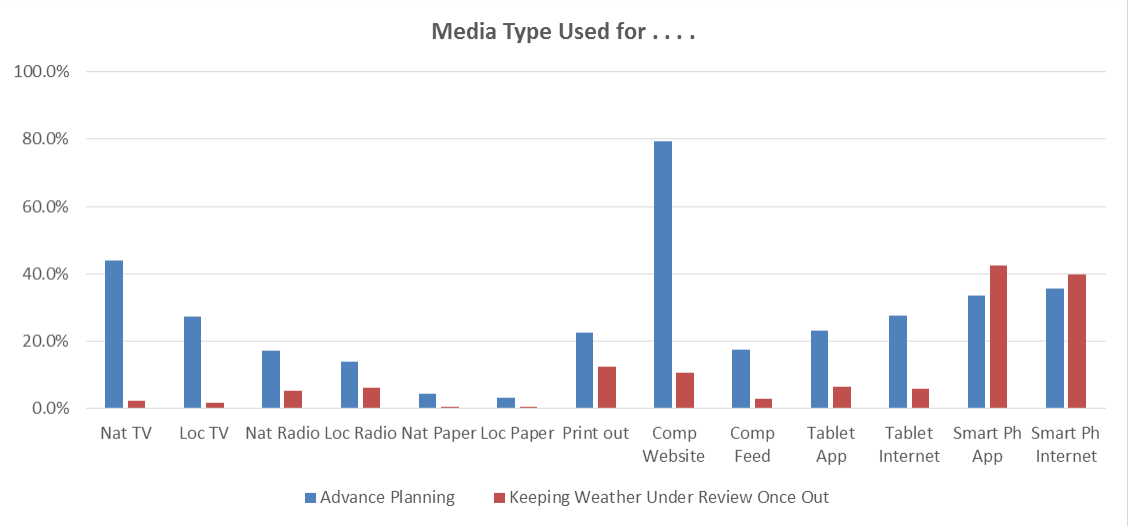
Comparing all of the charts above (which use the same scale):

- for the traditional media, many of the points lie in the 10% - 50% range
- on the technologies chart, the current media of tablets and smart phones lie in the range 30% - 70% usage
- emerging technologies of media players and smart watches are lower at 0% - 30%.

Media Channels Used in Advance and When Out

Respondents of the full survey were also asked about which media channels they used for advance planning before going out and then also which media channels they used to keep weather under review once out.

The results are shown in the chart below:



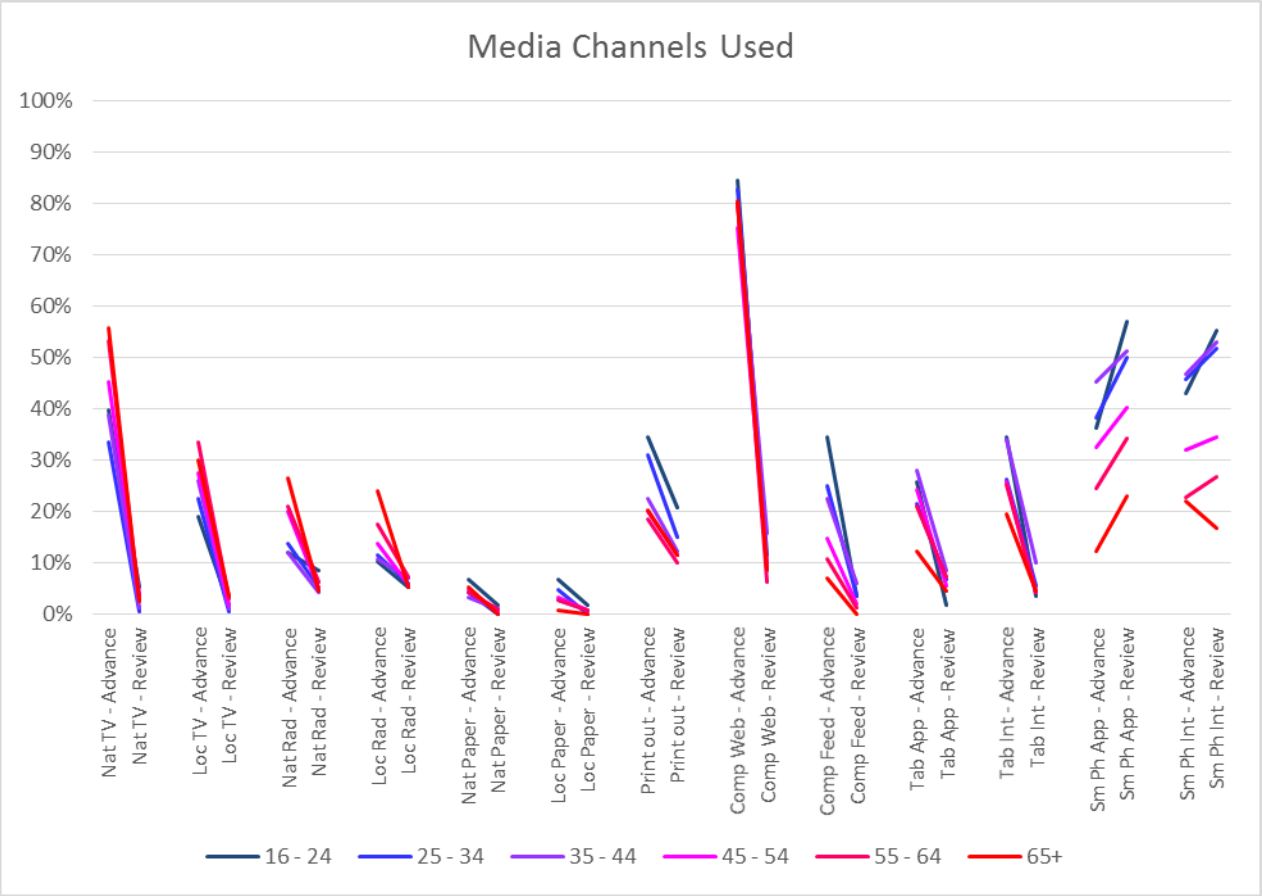
This clearly shows that computer based websites are currently by far the most popular way to check weather forecasts before going out, with 79.3% of respondents stating that this was a channel they used. This was followed by National TV weather forecasts which 43.8% of respondents used.

However, once embarking on an activity, a number of these channels become difficult or impossible to check. The results above show that the solution most favoured by respondents was the use of smart phones. The difference between using specific apps and just accessing weather forecasts over the internet was small at 42.5% and 39.9% respectively.

Interestingly, smartphone technology was the only media type to have fewer respondents using it for advance planning as opposed to once out and about. Unfortunately the survey does not give us the answer to why this is, but it could be:

- better alternatives before setting out
- smart phones & tablets are the only options that utilise mobile technology when out on the hill
- easy to transport
- screen size doesn't make it the channel of choice at home/work, but is better than nothing when out

When looking at this data, but broken down by age group, shown as % of respondents from that age group, the following can be seen:



The graph above shows 1 line for each age grouping (blue/purple lines showing younger respondents, pink/red lines showing older respondents), with the line moving from the amount of respondents that use a particular media for advance planning, to the amount that use that media to keep forecasts under review once out.

This shows that as before, the more traditional media channels are used by more of the older generations and more IT based solutions are used by a greater % of younger respondents.

The 'middle ground' though is clearly weather forecasting websites accessed by computer, this is both the most popular means of accessing information before going out, but there is also very little discrepancy by age.

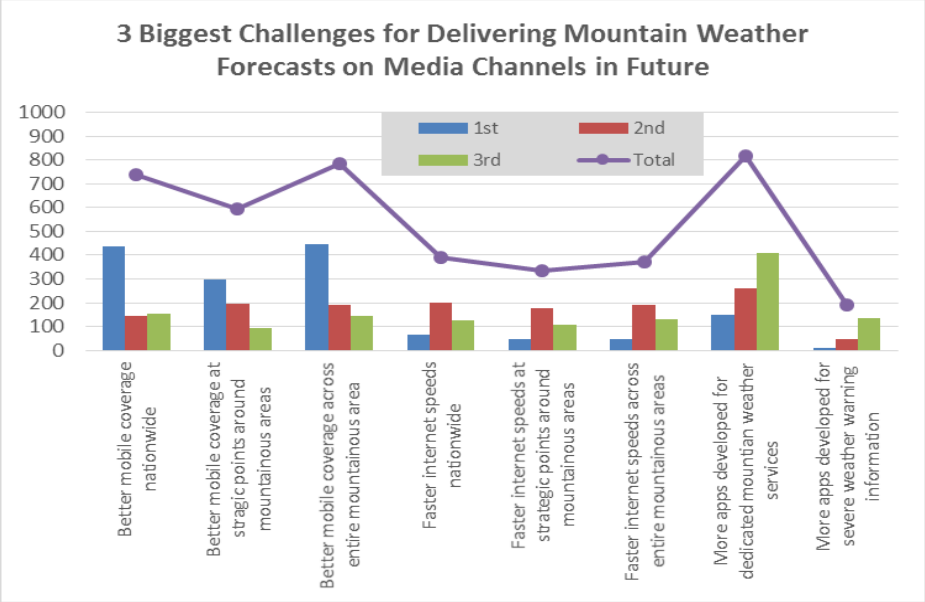
Although smart phone technologies are used by a greater % of young people than older, there is still an increasing trend of usage once out and about, even with older respondents.

Challenges to Overcome

Key Points: *Better mobile coverage was felt to be a much more important challenge to overcome, compared to faster internet or more specialist apps developed*

Respondents of both surveys were asked to select from a list of 8, the 1st, 2nd and 3rd most important challenges which they felt needed to be overcome in order to deliver mountain weather forecasts on different media channels in the future.

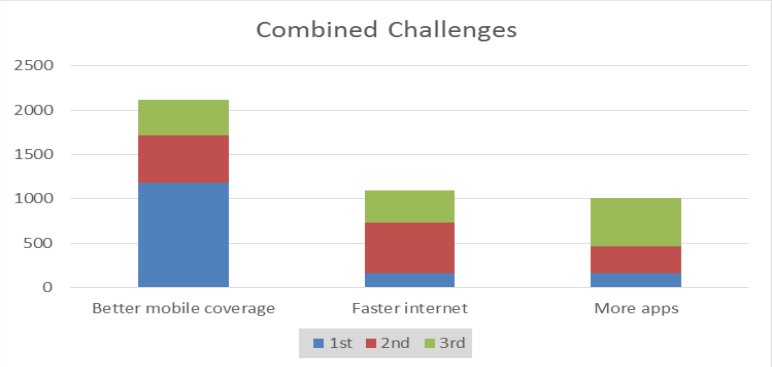
The results are shown in the chart below, with the 3 bars representing 1st, 2nd and 3rd and the line representing the total number of respondents that selected that challenge as 1 of their 3.



By looking at the bars alone, it shows that better mobile coverage was the top priority for the vast majority of respondents (78.7% of respondents selected 1 of the 3 mobile coverage options as the most important challenge).

However, when you look at the total line which combines together the 1st, 2nd and 3rd choices, the overall most important challenge becomes the development of more apps dedicated to mountain weather services.

The combined groupings of better mobile coverage, faster internet and more apps, shows overwhelmingly below that better mobile coverage was twice as important to respondents than the other challenges.



Challenges with Demographics

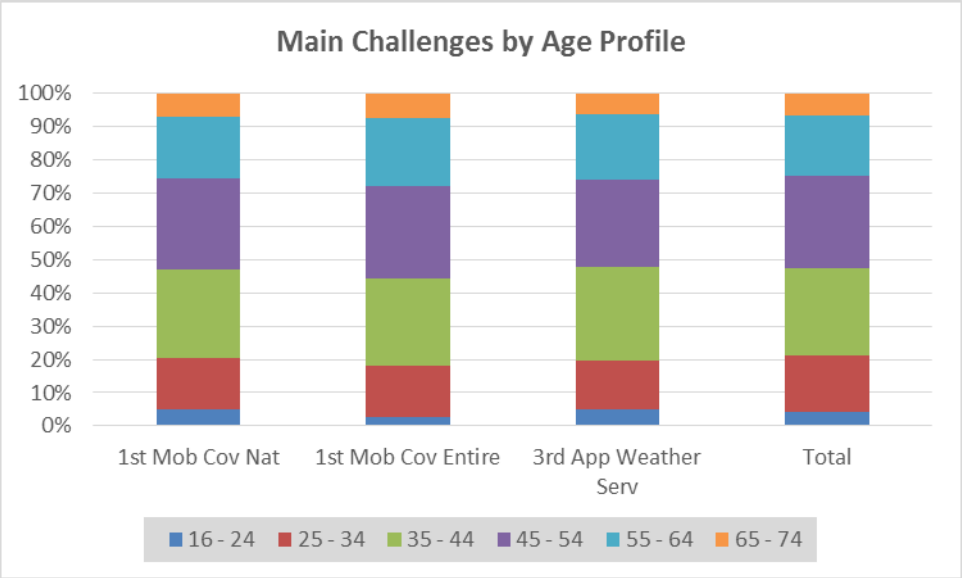
Looking at the 3 responses above that received the greatest proportion of responses:

- top challenge – better mobile coverage nationwide
- top challenge – better mobile coverage across entire mountainous area
- 3rd challenge – more apps developed for dedicated mountain weather services

The response have been broken down different demographic data to see if there are any significant differences.

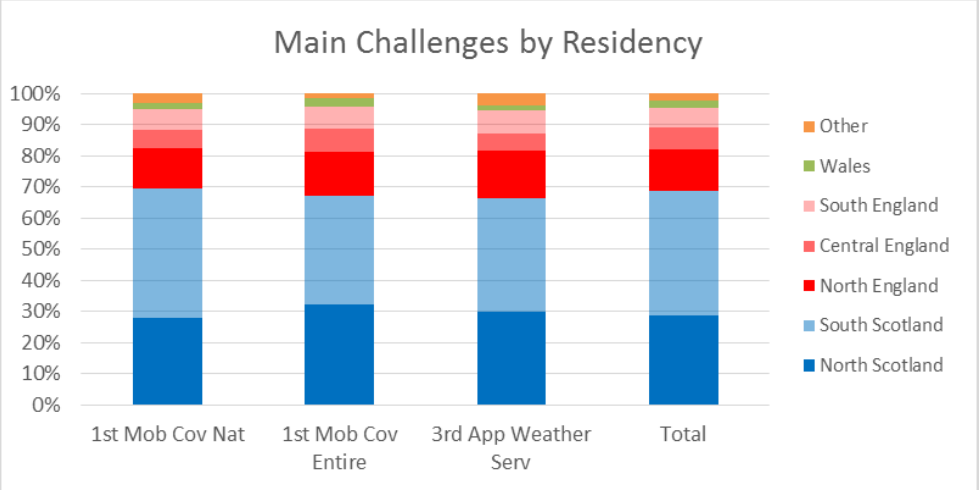
By Age

The chart below shows that although each of the above 3 responses was voted for by more than 400 respondents, the difference in age profile between the 3 questions and also against the total respondents to this question, is minimal.



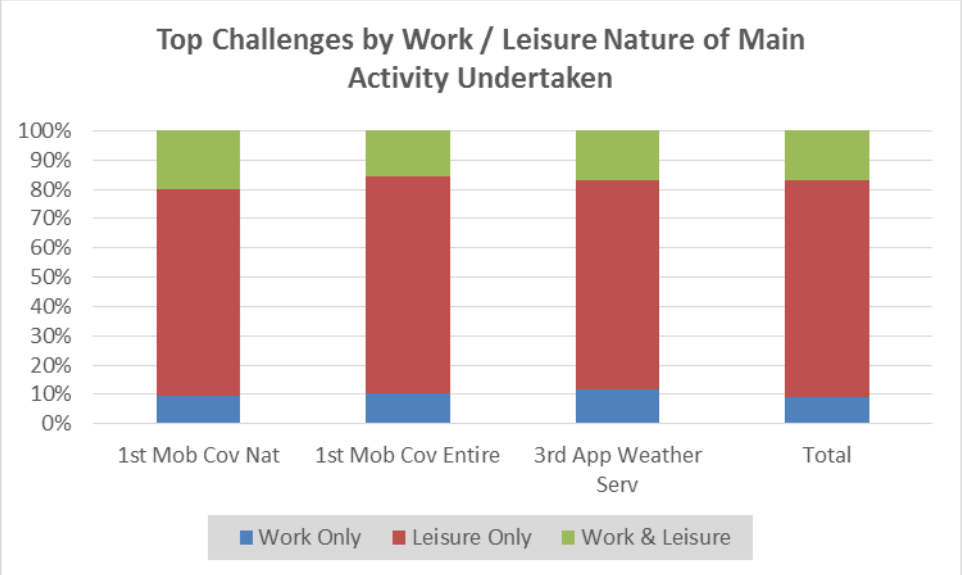
By Residency

The chart below shows the breakdown by region and again shows no significant differences.



By Work/Leisure

Finally the results of the main challenges have been charted based on whether the main activity undertaken by each respondent was work or leisure based. Again this shows no significant differences between categories:



Freetext Comments: Please Add Any Other Comments You Would Like to Make About Mountain Weather Forecasts

Alert system that can best work in remote areas taking into account actual conditions - text for detrimental changes. Automatic text to mobiles in an area if weather changes,

Watch the sky for the weather rather than trying to check updates when out on the hill, A forecast is just that - a forecast, use experience.

Simple access to synoptic charts - some comment about these getting worse, and forecasters hedging bets more

Promoting the forecasts could be better

All forecasters should monitor and publish their performance

An indication of confidence level - this is currently achieved by people looking at more than one to see if they agree

Apps drain mobile batteries - text service gets round this, Few comments about not wanting an App developed. Not everyone has a smartphone. Some use a 'basic' phone on the hill with longer battery life so text is better.

Develop simpler low-bandwth internet page rather than rolling out high speed internet to rural areas

Survey does not cover radio forecasts enough

I've had the app idea for a couple of years now but don't have the time to work on it myself, i believe it would be extremely valuable but I'm sure this research will reveal how viable it is. It could be a revenue stream but most of all it could help sa

Don't over complicate

MWIS - summary required with symbols for non English users

Live feed app with filter for the area of interest

Freezing levels requried

Shipping forecast not mentioned