

## MINUTES

### PWSCG (55) Meeting

10:00 – 16:30 26<sup>th</sup> April 2023

Hybrid meeting

#### Attendees

PWSCG Members	DSIT and Met Office
Duncan Potts (DP) PWSCG Chair	James Shapland (JS) PWSCG Secretariat (DSIT)
Kim Shillinglaw (KS) Independent Member	Paul Riches (PR) PWSCG Secretariat (DSIT)
Andy Wells (AW) Civil Aviation Authority	Eli Johnson (EJ) PWSCG Secretariat (DSIT)
Eleanor Clarke (EC) Maritime and Coastguard Agency	Penny Endersby (PE) Met Office
Mark Cooney (MC) Scottish Government	Alison Wood (AW) Met Office
Andy Brown (AB) Environment Agency	Lisa Martin (LM) Met Office
Dee Payne (DP) Cabinet Office	John Harrison (JH) Met Office
Agostinho Sousa (AS) UK Health Security Agency	Will Lang (WL) Met Office
Eleanor Gormley (EG) Local Government Association	Ian Cameron (IC) Met Office
Daniel Thomas (DT) Welsh Government	Becki Takle (BT) Met Office
James Kelly (JK) Northern Ireland Government	Kristina Costar (KC) Met Office
Stu Long (SL) Ministry of Defence	
<b><u>Apologies</u></b>	
Gemma Cox National Highways England	
Shaun West National Police Chiefs' Council	
Peter Davison Department for Levelling Up, Housing and Communities	
Ben Brook National Fire Chiefs Council	

#### Actions

	Owner	Action	Due date
1.	Met Office (WL)	Met Office and Scottish Government to discuss treatment of warnings and escalation, particularly broad yellow events.	
2.	Met Office (LM)	The Met Office and EA to share results of work into action statements to increase shared knowledge and reduce duplication of effort in this area.	
3.	Met Office and DSIT Secretariat	PR, KS and the Met Office to review how the cold weather warning is discussed with the MARG, including scenario-based workshops to develop a coordinated message and seek feedback	
4.	Met Office (AW)	The Met Office will present an update of the cold warning work, update on the weather ready campaign, MARG	

	Owner	Action	Due date
		feedback and industry feedback at the Autumn 2023 meeting for a final decision	
5.	DSIT Secretariat	DSIT and the Met Office to work to reformat paper requirements to include clear evidence within the papers on a) partnerships, b) duplication and c) budget stipulations	
6.	Met Office (BT)	The Met Office to review how they integrate further information on water quality and the designated list of bathing waters to the forecasts	
7.	DSIT Secretariat (PR)	A discussion on health forecasts and policy ownership to be added to the IMOSG meeting agenda for cross-Government feedback on the issue, particularly using evidence to demonstrate the potential impact of these developments	
8.	DSIT Secretariat (JS) and Met Office (AW)	The DSIT and Met Office secretariat teams will work together to keep up to date on the delivery of phased work and any changing dates for deliverables.	
9.	PWSCG	PWSCG to send comments on the CSA to DSIT Secretariat by the 28 April 2023.	28 April 2023
10.	Met Office and EA	EA and the Met Office to join up to discuss alignment in value assessment work once Met Office team is in place.	

## Decisions

Requirement	Decision
Sign off deliverable	The PWSCG agreed that D1.1 has been delivered and signed-off the deliverable. The PWSCG agreed that this work should continue as BAU.
Sign off deliverable	The PWSCG agreed that D1.2 has been delivered and signed-off the deliverable. This outcomes for this work will be embedded within warnings.
Halt or continue work	The Met Office should continue to work on D1.4, to consider the need for a cold warning, and return to the Autumn 2023 meeting with evidence to make a final decision
Sign off deliverable	For D1.5 the PWSCG agree that the deliverable has been met, and that the work should be continued to develop possible solutions where possible within the resource constraints
Sign off deliverable	The PWSCG agreed that D1.6a been delivered and further improvements should continue to be made.
Agree meeting minutes	Minutes of the PWSCG from Autumn 2022 were accepted as the record.

Requirement	Decision
Halt or continue work	For D2.2 the PWSCG agreed to support continuing discussion with other Government agencies for this deliverable and with the Met Office Sponsorship team, with a focus on cost-benefit of these decisions.
Agree performance of 2022-2023 CSA	The PWSCG agreed to sign off the 2022-2023 CSA as delivered, with the context that some areas will need close monitoring of trends.

## 2. Met Office colleagues joined the meeting

DP welcomed Met Office colleagues and reviewed the purpose of the meeting.

## 3. Updates and reports

### a. DSIT update (PR)

The group were updated on the recent Machinery of Government (MoG) change and the implications for PWS policy and budgets. The Policy home for PWS and Sponsorship of the Met Office now sits in the Department for Science, Innovation and Technology (DSIT), but the budgets for PWS, Hadley Centre, Space Weather and other former BEIS contracts will remain at DSIT. The change brings opportunities to raise the profile of the Met Office with the new SoS, Michelle Donelan and Science Minister George Freeman, due to the new department's more strategic science and technology remit. Discussions on the UK's membership of the Horizon Europe programme are ongoing, Met Office interest is held under the Copernicus programme.

### b. Chair's update (DP)

The Chair provided an overview of the year, with highlights including the development and integration of the Citizens Engagement Strategy into the PWS and re-invigorating the face-to-face meeting, including in Scotland and Northern Ireland – with Wales to be held in Summer 2023.

The CSA is redefined into a rolling 5-year document, which will support the medium- and long-term direction of science and services in the Met Office enhancing the PWS provision. The PWSCG were reminded to be mindful of global impacts that may impact the PWS deliverables.

### c. Independent Member's update (KS)

The Media and Reach Group (MARG) is growing in membership and providing strong impact and advice to the wider customer group and reiterated that the Citizens Engagement Strategy has been an important collaborative piece of work this year. Within the CES, the Met Office needs to ensure that the balance of direct versus indirect reach is clearly defined, and that the Met Office direct channels (Web and App) are continually developed whilst also capitalising on Partner engagement to realises greater reach and impact.

### d. Met Office update (PE)

PE provided an update on recent Ministerial engagement including speaking to Minister Freeman and SoS Michelle Donelan. PE spoke about the delivery of PWS that has been largely positive with key milestones such as the implementation of the Citizen Engagement Strategy achieved and a successful outcome in forecasting and managing the extreme heat warning in summer 2022. PE updated the group on progress with the supercomputer programme including mitigations to cover the delay to the go live date which is expected at the start of 2024.

The Met Office continue to support to BEIS/DESNZ on the energy security portfolio, and approval has been granted for the East Anglia radar. PE said it was unfortunate that post-processed data (IMPROVER) is not yet fully available, but testing demonstrated superior performance compared to Best Data and it will be re-launched as soon as possible. The Met Office have been designated a CAT2 responder under the Civil Contingencies Act and supporting Cabinet Office on the Emergency Alerts system.

PE recognised risks arising due to industrial action over the next few months as the Met Office pay deal is considered by Cabinet Office, and also ongoing inflationary impacts across the Met Office, with efficiencies being made where possible to maintain delivery.

Finally, PE thanked PWSCG members for their input into the Arm's Length Body review of the Met Office which had a positive outcome with the Met Office maintaining its Trading Fund status.

#### **4. Review of this year's weather & warnings (WL)**

A summary of the activity over the year was presented with focus on specific events and warnings. The group were informed that UK government is taking a much greater interest in the 3-month outlook which is being used more widely supporting energy security, Defra, Cabinet Office and wider responders. A cold period in December was one of the most significant cold spells for over 10 years. Views were exchanged on the detail of the event and that the extent of duration, with the Met Office asking the question whether the PWSCG felt the duration was originally captured in communications, and the PWSCG feeling that it was not. The Met Office is actively working to anticipate what customers want to know and responding to. The group commented on performance of an amber warning for freezing rain in Northern England and agreed with the Met Office assessment about the lack of impacts. There was support for the process followed as responders prefer to stand up a response than deal with a situation arising from lack of warning.

Storm Otto (named by the Danish Meteorological Institute) on the 17<sup>th</sup> of February brought strong winds across Scotland and was covered by a medium impact yellow warning, but there was debate around the need for an amber and it was a difficult event to warn for. Impacts included widespread travel disruption, damage to buildings and school closures. The Scottish PWSCG representative felt that some responders were caught off-guard by the impacts. IC stated that the Met Office are discussing the communications around over-warning and yellow warnings with Transport for Scotland, the Met Office will also follow-up with Scottish Government on this issue.

**Action:** Met Office and Scottish Government to discuss treatment of warnings and escalation, particularly broad yellow events.

Other events reviewed included a snow event on 08<sup>th</sup> of March that saw members of the public trapped on the M62. Action taken by the public appeared low for this event, and there are likely to be multiple factors that fed into this. The group discussed the complexity of communicating when multiple warnings are out, particularly multiple yellow warnings with different likelihoods and impacts. The Met Office will undertake work during the next CSA to review the messaging.

#### **5. RAG Review of Theme 1 performance measures and milestones (JS)**

All Performance Measures were above target for Theme 1. Five public surveys were conducted on notable National Warnings (NSWWS), with results indicating high awareness and action taken by the public.

## **6. Review theme 1 milestones for signoff**

### **a. D1.1 - Strategy to increase engagement with Community Resilience Groups (WL)**

The Customer group was informed that this work was developed because there were gaps in the CCA service relating to different responder groups, and the Met Office wanted to improve coverage within existing resource and budgets. This milestone has resulted in improved training materials and working with hub organisations to disseminate information more widely, and the Met Office are seeking agreement to move this phase of work to BAU.

The Met Office are investigating how to supply data, for example radar data, to platforms such as Resilience Direct to support decision making and transparency, and they have mapped the responder community, which indicated that many community groups are already connected to the Local Resilience Forums. The approach of delivering training and pushing information out is aimed at reducing resource required to deliver this work, and consequently the proposed work can be delivered within the available resource.

**Decision:** The PWSCG agreed that D1.1 has been delivered and signed-off the deliverable. The PWSCG agreed that this work should continue as BAU.

### **b. D1.2 - Improve the context and advice in warnings (LM)**

This deliverable is aimed at driving greater action from warnings. Research has demonstrated that advice statements could drive greater action, and the Met Office will now begin to roll out advice statements, embedding them within the warnings service if the PWSCG agree.

The feedback that the Met Office have had from international partners is that the work is seen as pioneering across the industry. The Environment Agency has seen similar improvements in engagement from subtle language changes and would be happy to share the results of their work. The PWSCG reflected the positive work done by Magpie with the Met Office.

**Action:** The Met Office and Environment Agency to share results of work into action statements to increase shared knowledge and reduce duplication of effort in this area.

**Decision:** The PWSCG agreed that D1.2 has been delivered and signed-off the deliverable. This outcomes for this work will be embedded within warnings.

### **c. D1.4 – Review the need for Cold Weather Warning Service (WL)**

A review of the need for a cold weather warning service was requested following the introduction of the extreme heat warning. The main impacts identified were for health, but other impacts were identified across a range of areas. Research demonstrated that awareness of the impact of cold temperatures was low amongst the public. Based on this research, the Met Office recommendation is to continue building the evidence base for a warning service.

The group discussed the responsibility that the Met Office have on the National Risk Register for low temperatures and have a duty to help mitigate the risks of impacts of cold weather. They also agreed that clarity of any proposed Cold Weather Warning alongside other winter warnings (snow and ice) will be essential, as it may create a complex/confusing picture to present to the public. It was noted that the MARG have previously raised concerns about the communication of a Cold Weather Warning, and they need to be engaged in further discussions. Solutions other than via a warning were discussed and recognised as other routes of communicating, including the Weather-Ready Campaigns. Some members reflected that their resilience communities

would prefer alternative routes for cold weather messaging to keep the focus of warnings on more high-impact events, reducing risks to the impact of other warnings.

Health impacts from cold are delayed when compared to heat and this could cause difficulties in the duration of cold warnings, especially around warning fatigue which was a concern raised by multiple partners. The public could see a cold weather period as a normal variation of annual weather. UKHSA are aligning their health warnings with the Met Office ones to clarify communication across agencies, but social issues in the way cold is viewed may result in challenges when trying to encourage the public to act. Wind Chill may need to be assessed as part of the warning, and scenario planning could support the warning development and help stakeholders to assess the need. The Met Office also need to undertake work with wider industry groups and can bring views from that engagement to the Autumn 2023 PWSCG meeting.

**Action:** PR and KS to review how this is discussed with the MARG, including potential scenario-based workshops to develop a coordinated message and seek feedback.

**Action:** The Met Office will present an update of this work, update on the weather ready campaign, MARG feedback and industry feedback at the Autumn 2023 meeting for a final decision.

**Decision:** The Met Office should continue to work on this deliverable and return to the Autumn 2023 meeting to seek a final decision on whether to proceed with a cold warning service.

#### **d. D1.5 – Review the communication of short notice warnings (WL)**

The Met Office has developed the capability for short notice warnings of heavy rain and thunderstorms over the past few years, but the communication and delivery channels of these warnings is challenging. Research has shown that there is a need and appetite for short notice warning information.

The two primary communication solutions that have been identified are:

- a) Making this information available via Hazard Manager;
- b) Pushing information out via app and web notifications.

The resources for this work are limited and would require dedicated meteorologist support and IT development, the Met Office are asking for approval to continue the direction of this work but without a firm commitment on delivery and timing at this point. Discussions with other Government Departments is continuing prior to the next Spending Review. In future, emergency alerts could be used to communicate very high impact short-notice events.

The customer group agree that this work needs to continue, with a focus on the 'how'. These types of events could be very high impact, and the PWSCG recognise the importance of getting the communication right. Engagement across Government Departments is critical. The Met Office should also consider how to message high danger events which may occur prior to the delivery of this work.

**Decision:** For D1.5 the group agree that the deliverable has been met, and that the work should be continued to develop possible solutions for future implementation within the resource constraints.

#### **e. D1.6a – Improvements to the display & discoverability of beach safety forecasts (BT)**

Research was undertaken to improve understanding of dangers at the beach and to make the information accessible – including advice from partner organisations and links to the RNLI. Information and discoverability of beach forecasts has been improved, but there is future work to do on elements such as communicating water temperature, surf type and rip currents.

The Met Office confirmed that tide times come from the UK Hydrographic Office and that any beach location gaps will be identified and addressed. The PWSCG requested links to bathing water quality to be added in future iterations.

**Action:** DSIT and the Met Office to work to reformat paper requirements to include clear evidence within the papers on a) partnerships, b) duplication and c) budget stipulations.

**Action:** The Met Office to review how the Met Office integrate further information on water quality and the designated list of bathing waters to the forecasts.

**Decision:** The PWSCG agreed that D1.6a been delivered and further improvements should continue to be made.

## **7. PAG reports and other updates – comments and questions from PWSCG (EJ)**

PR confirmed that the meeting minutes from the previous meeting were adopted as the official record. Actions from the previous meeting were reviewed.

**Decision:** Minutes of the PWSCG from Autumn 2022 were accepted as the record.

EJ gave an update on the PAG 2, 3 and 4 meetings in March 2023 as per the meeting pack. No questions on the update from the PWSCG.

### **a. D2.2 – Investigate ways to pull through science & information relating to health (LM)**

The Met Office identified that there are a range of improvements that can be made to support development of pollen, UV and air quality forecasts. User feedback has highlighted that the public expect this to be presented alongside weather information – indicating an expectation that the Met Office should disseminate the information. Research has been completed and three options developed, of which upgrading the services and usefulness was recommended. The solution requires policy input and funding from multiple Government Departments and discussions are ongoing. Improvements could also be made to some forecasts and not others.

The PWSCG reflected that it is challenging to understand risk/benefit calculations on widespread benefits for the population. AS noted that for pollen there are two elements that need to be communicated: one is the long-term information for the public, and the second is the information for emergency services during high pollen phases or thunderstorm induced asthma.

The PWSCG agree that this information should be presented alongside the weather forecasts and that PWS funding should not be the sole route for this work and a cross-organisation approach is needed to find solutions – Interdepartmental Met Office Strategy Group (IMOSG) could be involved in the discussion. The Met Office could take a leadership role in developing a consensus approach in the first instance. The costs and added value for each partner needs to be better understood, and it could be of benefit to reframe the discussions as a more positive statement of what the cross-Whitehall benefits are of this service.

**Decision:** For D2.2 the PWSCG agreed to support continuing discussion with other Government agencies for this deliverable and with the Met Office Sponsorship team, with a focus on cost-benefit of these decisions.

**Action:** A discussion section will be added to the IMOSG meeting agenda for cross-Government feedback on health forecasts, particularly using evidence to demonstrate the potential impact of these developments.

## **8. PWSCG secretariat – review of ‘22/’23 deliverables and metrics, questions from PWSCG (JS)**

### **a. 2022-2023 Review**

Performance this year looks different to previous years, with more of a mixed picture than previous years which often contained a lot of green performance. The long-term view and trends are important as many of the performance measures below target were very close to the target. Actual, perceptual, and comparative accuracy are all elements that are linked together and performance across multiple areas reflects these links. The results are used as a tool to identify focus areas in the future, rather than as a firm disciplinary measure.

The PWSCG reflected that the Met Office app is not the most useable app compared to others on the market, and that those types of factors will really impact the ratings from the public. An app can present complex forecasts in a simple way, and the Met Office could do this better. IC reflected that the CES should push the Met Office to increase their reach to a greater extent of people via partnership working, and that once the CES is embedded and upcoming science improvements are live, the Met Office expect that many performance ratings should subsequently improve. The public may be viewing the Met Office as the provider for weather in extreme situations due to their warning service, but the lower ratings in Theme 3 may reflect that they do not use them as much or rate them as highly when the weather is benign.

For deliverables, one is now red (14-day forecasts), linked to supercomputer implementation.

### **b. Review and signoff of CSA**

Draft EOY report was included within the meeting pack. DP proposes that the CSA is signed off but that there are elements of the CSA which did not meet target and require further monitoring during 23/24 to understand the trends and possible drivers of the trends.

Decision: The group agreed to sign off the 2022-2023 CSA as delivered, with the context that some areas will need close monitoring of trends.

## **9. CSA 2022-2023 update (AW and JS)**

### **a. Citizens Engagement Strategy update**

The group was updated on the CES and how this had been mapped to the CSA to ensure that the CES is embedded within the CSA and the outcomes between two documents are linked, as per the meeting pack.

### **b. CSA refresh – comments and agreement**

The group heard about the approach to the new CSA as described within the meeting pack. Focal points included the Integration of the CES, and a move towards making the CSA a five-year rolling agreement. This ensures that it is dynamic and flexible, but this will be considered within the Spending Review periods to make sure it is deliverable within the PWS allocation.

The Met Office recommends that that the timelines for some deliverables are managed in an agile way, to ensure it efficiently utilises the resources available. The PWSCG agreed that this is a sensible approach, but noted a concern that the sequencing of work could be influenced by Met Office priorities without consideration of PWSCG priorities. The Met Office recognised that concern and reassured the group that the work would still aim to be delivered in year in line with PWS priorities.

**Action:** The DSIT and Met Office secretariat teams will work together to keep up to date on the delivery of phased work and any changing dates for deliverables.



The group endorsed the CSA, with the EA reflecting that UK alignment angle within the CSA could be strengthened around working across the 4 UK Nations.

**Action:** PWSCG to send comments on the CSA to DSIT Secretariat by the 28 April 2023.

A customer group review is ongoing to identify possible gaps within the group and add new members as needed.

## 10. Group discussion on Priorities

The group discussed the priorities of the PWS, the main PWSCG priorities were:

- Continually improve the accuracy and consistency of forecasts.
- Improving action taken by the public from warnings to mitigate the impacts of the weather.
- The Met Office to develop its 'Authoritative Voice' in owning the UK weather story, and how this can be enhanced using partnerships.
- Focussed and consistent communication of weather impacts, utilising partner organisations where appropriate.
- Collaborative working across Government Departments and stakeholders is maintained or increased to enhance PWS impact.
- Improved distribution of Met Office data and services in a manner accessible to users and decision makers, for example via API's, Hazard Manager, Web and App.
- Focussed and consistent communication of weather impacts, utilising partner organisations where appropriate.
- Improving action taken by the public from warnings to mitigate the impacts of the weather.

## 11. Evidencing Met Office Economic Value

The Met Office is undertaking a review of the Economic Value that it provides to the UK, with outcomes delivered in 2024. The Met Office requires authoritative evidence to understand spend and value to services. This should develop focus and enhancements for the outcomes for the PWS.

There are two high level outcomes: a) to prepare for future Spending Review rounds, b) to improve and embed evidence of impacts and outputs better in decision making and resource allocation.

The new research will deepen the understanding of Met Office value and it is intended that the study will be delivered in 2024. In addition, the Met Office is recruiting for an internal analysis team which will continue to develop the evidence base for the organisation.

The group noted the importance of this work and the assessment of the Met Office value. The EA are trying to undertake value-chain analysis and there may be some value in making connections.

**Action:** The EA and the Met Office to join up to discuss alignment in value assessment work once Met Office team is in place.

## 12. PWS impacts from Supercomputer Delays:

Published delays in the new Met Office Supercomputer have been reflected in some of the PWS deliverables. Addition of 14-day data on the Web and App is likely to be delayed until 2025. There are likely to be impacts on elements of the Accuracy Roadmap, which means that the uplifts in accuracy may not be seen as quickly as planned. The sequencing of work is being evaluated to try and minimise delivery risks where possible and bring forward other elements of work, and the year long delay does not result in a year long delay for all elements of the work. PWSCG will continue to be updated on any changes to delivery that impact PWS.