



House of Commons
Environmental Audit Committee

Heat resilience and sustainable cooling: Government Response to the Committee's Fifth Report

Seventh Special Report of Session
2023–24

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Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by His Majesty's Ministers; and to report thereon to the House.

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Seventh Special Report

The Environmental Audit Committee published its Fifth Report of Session 2023–24, [Heat resilience and sustainable cooling](#) (HC 279) on 31 January 2024. The Government response was received on 9 April 2024, and is appended below.

Appendix: Government Response

Introduction

The Government welcomes the Environmental Audit Committee's report Heat Resilience and Sustainable Cooling, published on 24 January 2024. We are grateful to the Committee for delivering such a comprehensive report at an opportune time.

The Committee's report and the policy matters associated with heat resilience and sustainable cooling are wide ranging and cover responsibilities that sit with several Government departments and arm's length bodies. Therefore material on the recommendations relevant to those departments or bodies has been provided by; the Department for Health and Social Care (DHSC), the Department for Levelling Up, Housing and Communities (DLUHC), the Department for Energy Security and Net Zero (DESNZ), the Department for Environment, Food and Rural Affairs (DEFRA), the Cabinet Office (CO) the UK Health Security Agency (UKHSA), the Building Safety Regulator (BSR) programme within the Health and Safety Executive (HSE) and the Met Office.

The structure of this paper corresponds to the conclusions and recommendations section of the Committee's report. Paragraphs with recommendations are quoted, with the recommendation itself in italics and the Government response underneath.

Recommendation 1

We have received compelling evidence that heat is having serious and widespread impacts on health, wellbeing and economic productivity. This is already costing the UK thousands of lives and billions of pounds annually, a situation which is set to get worse without concerted action. The social and economic case for accelerating heat adaptation measures in the UK is clear-cut. We recommend that the Met Office and UKHSA incorporate explicit messaging and/or metrics regarding the effects of humidity levels as well as temperature into weather forecasts and heat-health alerts.

The Weather-Health Alert system, introduced by United Kingdom Health Security Agency (UKHSA) in 2023 in close collaboration with the Met Office, includes consideration of a range of climatic, health and social care system factors, and other factors in the decision-making that underpins the alerting process. Alongside temperature, humidity is one of the climatic factors considered to assess potential health impact, determine alert level, and issue guidance in response to a period of hot weather.

In April 2023, as part of a wider suite of plans and guidance for health and social care organisations and the general public in England, the UKHSA published the Adverse Weather and Health Plan (AWHP) designed to protect health from weather related harm.

An integral part of the AWHP was the implementation of a new Weather-Health Alert (WHA) system designed as an early warning system for organisations, professionals and the general public about an impending heat event so appropriate action can be taken to protect health and reduce potential harms from adverse or extreme weather events. Early weather and health warning systems are among the single most cost-effective actions that can be taken to improve civil preparedness for adverse weather events, and have been strengthened based on evidence since first introduced in England for heatwaves since 2004.

The new Weather-Health Alert (WHA) system was launched on 1 June 2023. This system was developed as part of collaboration between the UKHSA and the Met Office. The WHA system represented a move from the previous system which was based on the probability of reaching specific threshold temperatures, to an impact-based alerting system. Impact based alerting provides users with information beyond just the hazard and gives an indication of the impacts likely to be observed as a result of the weather. Moreover, the new WHA system complements other established Met Office National Severe Weather Warning systems already in operation.

The WHA system is based on: (i) weather forecasts provided by the Met Office Environment Monitoring and Response Centre (EMARC) forecasts and data to UKHSA; and (ii) a joint dynamic risk assessment (JDRA) conducted by the UKHSA Extreme Events and Health Protection team, the Met Office, and, if of relevance, other governmental departments, as part of the common responsibilities under the Civil Contingencies Act (CCA) 2004.

The decision-making process underpinning the issuing of an alert incorporates a range of factors as outlined in the user guide.¹ Temperature thresholds are considered when determining whether to issue an alert only as an aid to the decision-making process and not the sole factor. Additional criteria are also considered which might influence the impact that a high temperature might have on health or the health service, such as the geographical extent of the adverse weather or other weather indicators of relevance – including humidity. For example, Met Office weather forecasts provided through the Public Weather Service and which contribute to the JDRA process, routinely include forecasts of temperature, “feels like” temperature, and humidity.

The current WHAs are a good example of government cooperation and use of collaborative dynamic risk assessments (not only considering risks such as temperature or humidity, but also a plethora of other risks described in the user guide).

International evidence on the impact of humidity on heat-related health outcomes is variable.² Although international lessons are important and inform our action and our advice on behaviours, further work is required to evaluate those recommendations in the UK's climate and cultural context and adapt them as required.

As was noted in testimony provided to the EAC and contributing to their report, UKHSA has previously reviewed the evidence on health impacts of humidity in relation to effects on mortality in England. At this time, humidity does not appear to be a strong predictor

1 <https://assets.publishing.service.gov.uk/media/65450c2b59b9f5001385a240/User-guide-impact-based-weather-and-health-alerting-system.pdf>

2 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10231239/>

of mortality. However, if we were to see periods of high temperatures and significantly high humidity, this would be considered when making the decision to issue an alert, as noted above.

UKHSA will continue to engage with academic partners to build a greater understanding of the role that humidity has on health when combined with significant heat events, as well as the improvement of its adverse heat messaging in accordance to best-available evidence.

Recommendation 2

Nature-based solutions to climate change, such as parks, trees, water bodies and green infrastructure, have significant cooling effects as well as multiple co-benefits (for example, for health, wellbeing, air quality, flood resilience and biodiversity). Increasing the amount of green space is one of the most important tools in tackling the impacts of heat, especially in urban areas. Natural England's Green Infrastructure Framework, incorporating the Urban Greening Factor, is therefore a significant and welcome step forward in setting out how green infrastructure can be best designed and implemented; however, the framework only applies to new developments, and evidence suggests that it is not yet being put into practice at scale by local authorities.

We recommend that the Government take action to expand urban green space, particularly in disadvantaged areas. At a minimum these actions ought to include: (i) introducing a statutory requirement on local authorities to protect green space; (ii) mandating local authorities in urban areas to use the Green Infrastructure Framework; and (iii) introducing measures to incentivise the installation of green roofs as new build or retrofit on appropriate residential or business premises.

The government recognises that well-designed and managed green infrastructure provides multiple benefits at a range of scales, as the Committee has outlined.

We welcome the Committee's acknowledgement of the utility of the Green Infrastructure Framework. As the Committee highlights, this will be most useful (and, indeed, was deliberately designed) for planning authorities and developers when they are bringing forward new proposals – either through the local plan or through individual planning applications. This should mean, over the years ahead, that further progress is made.

The Committee also recommends that the Government take action to expand urban green space. The primary responsibility for urban planning in individual areas sits with local authorities and it is for them to plan, design and execute new proposals for expanding specific green areas, respecting the devolution settlement that we have in place with local government. The Government has in the past offered taxpayer subsidy to support this including, in 2022, launching the £9M Levelling Up Parks Fund (LUPF) to improve access to green spaces in disadvantaged neighbourhoods across the UK. Grants have been given to, and administered by, 85 eligible local authorities, to deliver new or improved green spaces in over 100 of the neighbourhoods most deprived of green space across the UK. Data from Natural England and Office for National Statistics (ONS) has been used to determine the eligible places by identifying the neighbourhoods where high deprivation coincides with poor green infrastructure.

With regards to the Green Infrastructure Framework, the Government has not chosen to mandate this at this time – it is important that we allow local authorities the space to develop their own policies and, from a first principles perspective, Government should not mandate everything. We would expect local authorities to develop plans to improve green spaces in their area and, should they not, we would hope that voters would indicate their displeasure at the ballot box.

With regards to potential measures to incentivise green roofs, the Government keeps its use of taxpayer subsidy under constant review and will continue to do so.

Recommendation 3

We recommend that the Government evaluate the case for amending Part L of the Building Regulations to encourage the use of ceiling fans (for example, by including locally controlled air movement in the definition of comfort).

The Future Homes and Buildings Standards consultation was launched in Dec 2023 and closes in March 2024. This consultation puts forward proposed changes to Part L of the Building Regulations. Responses to the consultation will form part of our policy development for the upcoming changes to Part L and the associated guidance.

Recommendation 4

We support the extension of Part O of the Building Regulations not only to cover material changes of use to residential, but also for refurbishments of existing properties. We recommend that the Government clarify whether it is intended that Part O of the Building Regulations be expanded to refurbishments. If that is indeed the case, we recommend that Ministers, in their response to this report, set out when, and by what mechanism, this is to be achieved. If it is not the case, we recommend that Ministers explain how the UK is to achieve Commitment M5 of the Global Cooling Pledge.

The Global Cooling Pledge was developed to give flexibility and enable many countries to sign-up regardless of differences in jurisdiction and national circumstances around building codes. It specifically calls on countries to “Commit to establish national model building energy codes that incorporate market appropriate measures such as passive cooling and energy efficiency strategies at the latest by 2030 for new and refurbished buildings as appropriate for those countries with jurisdiction of national building codes, or for those countries that do not have such jurisdiction, support adoption of building energy codes at the sub-national level”.

In England, our Building Regulations do meet this commitment in new builds through the recently added Part O on Overheating.

As part of the Future Homes and Buildings Standards consultation, we are running a call for evidence on Part O. One of the questions posed in this call for evidence is whether Part O should apply when there is a material change of use (i.e., a conversion). We are using this call for evidence to better understand any omissions or issues with Part O. Responses will then be used to inform and prioritise reviews and updates to different elements of Part O.

Recommendation 5

We recommend that measures taken under Part O should be subject to post-occupancy evaluation within the first year of their installation.

As part of the Future Homes and Buildings Standards consultation, we are running a call for evidence on Part O. While there are no current plans to include post-occupancy evaluation for measures taken under Part O, we have asked a question about whether there is anything missing from the current scope of Part O.

As referenced in our response to the recommendation at paragraph 54, we would like to understand which elements of Part O should be prioritised for review and would benefit from research and analysis to better understand any omissions or issues. This will then be used to inform any update to Part O and the Approved Document O over the longer term.

Recommendation 6

We therefore recommend that the Government establish a comprehensive national retrofit programme to adapt the UK's housing stock for both net zero and thermal comfort. The programme should include the following elements to maximise its impact and minimise costs:

- *Local delivery via local authorities, underpinned by adequate long-term funding;*
- *Prioritisation of vulnerable households;*
- *A fabric-first approach focusing on insulation and ventilation;*
- *Adoption of a cooling hierarchy prioritising passive measures, and then fans, above active cooling mechanisms;*
- *Consideration of the benefits and drawbacks of installing reversible heat pumps, bearing in mind such factors as: (i) whether or not active cooling is likely to be required following installation of passive measures and (if appropriate) fans; (ii) the vulnerability of the building occupant(s); and (iii) progress on decarbonising the national grid at the time of installation*

There has been good progress improving the energy efficiency of households. Around half of homes (48%) in England have now reached the government's 2035 target of achieving EPC C levels, up from 14% in 2010. The Heat and Buildings strategy was published in Autumn 2021 and set out the actions Government will be taking to reduce emissions from buildings in the near term and provided a clear long-term framework to enable industry to invest and deliver the transition to low-carbon heating.

The Government welcomes the Committee's recognition that the extension of the Boiler Upgrade Scheme (BUS) and the additional £6 billion are an important part of a long-term programme to retrofit existing buildings. The £6 billion support package announced by the Secretary of State for Energy Security and Net Zero and the Chancellor in December 2023 includes £500 million allocated to a new local authority retrofit scheme, to support up to 60,000 low-income and poorly insulated homes, an additional £1.25 billion allocated to the Social Housing Decarbonisation Fund, to support up to 140,000 social homes and a new £400 million energy efficiency grant, launching in 2025.

Government recognises the value long term funding schemes can play in providing certainty to the sector and driving delivery. In March 2023, the Government announced that it will extend the BUS until 2028 and in October 2023 the available grant was increased by 50% to £7,500. The extended scheme will help contribute towards our commitment to deploy 600,000 heat pumps a year by 2028 and provide industry with the certainty needed to invest confidently in heat pumps. The Great British Insulation Scheme (GBIS) scheme will run until March 2026 at a value of £1 billion over the three years. This breaks down to £130m in the first year, followed by £435m in years two and three.

Government committed in the Heat and Building Strategy to ensure that policies developed to deliver Net Zero and retrofit existing buildings, will seek to minimise risks impacts of climate change including overheating. This commitment was reiterated in the 3rd National Adaptation Programme report.

Energy efficiency measures installed under current government schemes require installers to be Trustmark registered and measures must also be installed in accordance with the Publicly Available Specification (PAS) 2030 and PAS 2035 standards. This ensures installations are done to the highest quality, protecting the consumer against poor workmanship. PAS 2035/2030 requires a whole house approach to home retrofit projects and ensures that the risks of unintended consequences are avoided. To ensure the PAS 2035/2030 documents remain fit for purpose and reflect best industry practice, Government sponsors BSI to undertake regular revisions to the PAS 2035/2030 documents, the most recent update PAS 2035/2030:2023³ was published in September 2023. The 2023 update recognises the importance of climate change adaptation and has strengthened some of its guidance and requirements. When establishing intended outcomes, the resilience of dwellings for future risk of climate change, such as overheating, should be considered. Retrofit assessments must also include any information on climate induced environmental risks (overheating, flood) which could have an impact on a retrofit project.

As outlined in the NAP3 report DESNZ is carrying out a programme of research to support the development of policy levers to adapt the UK's building stock for net zero and thermal comfort. This will build on the existing research base, including the work highlighted by the Committee, which has provided a high-level understanding of the potential severity of climate impacts and extent of adaptation action required under different warming scenarios. More detailed and granular research will help us identify how to prioritise action, the appropriateness of different measures to address overheating risk for different segments of the housing stock, including any hierarchy of these measures, and the cost-effectiveness of policy interventions.

Recommendation 7

We urge the Government to respond as soon as possible to its consultation on improving home energy performance through lenders which closed in February 2021. Ministers must rapidly bring forward proposals to encourage access to low-cost finance for householders to invest in home improvements which can increase energy efficiency and heat resilience.

3 <https://knowledge.bsigroup.com/products/retrofitting-dwellings-for-improved-energy-efficiency-specification-and-guidance-2?version=standard>

Government plans to respond to the improving home energy performance through lenders consultation in 2024. Meanwhile, catalysing the market for low-cost green finance remains a priority to help support homeowners ineligible for full grant funding with the upfront costs of energy efficiency and low-carbon retrofit.

Our £20M Green Home Finance Accelerator programme, which launched in October 2022, is supporting the development and piloting of a range of novel green finance products and services which will allow UK homeowners to meet the upfront cost of decarbonising their homes and improving thermal comfort. The programme was also designed to help leverage private investment into the home retrofit sector, increasing UK-wide economic opportunities and developing the energy efficiency, low carbon heating, and climate resilience supply chains. Accelerator projects will pilot their products and services with customers until March 2025, and will generate exemplars and case-studies to inform policy thinking and galvanise the wider market.

Recommendation 8

We further recommend that the Government publishes any interim or draft recommendations made by the Energy Efficiency Taskforce before it was disbanded.

The Energy Efficiency Taskforce was established to support the Government with its target to reduce total UK energy demand by 15% from 2021 levels by 2030. The Secretary of State for Energy Security and Net Zero, after careful deliberation, concluded that the work could be streamlined into other Government activity. No finalised document was produced.

Recommendation 9

We urge the Government to set out, in its response to this report, the targets (if any) which Ministers have set for growth in the supply chain of competent retrofit installers, and the progress made against these targets to date. If no targets have yet been set, we recommend that Ministers seek to set ambitious targets for supply chain growth.

The Government recognises the need for a skilled, competent and robust supply chain to deliver the improvements to buildings necessary to meet our Net Zero targets. We understand that scale-up requires consistent, long term deployment streams, via government funding and regulation, so that the companies working in these markets can make the investments needed and individuals can choose to upskill.

The Government has set a target of 600,000 heat pumps to be installed per year by 2028, which provides a clear target for supply chain growth. On 2nd March 2023, Government announced a £5m Heat Training Grant to support trainees in England taking training relevant to heat pumps and heat networks. The grant launched to trainees in July 2023 and is on course to support 10,000 training opportunities up to 2025. The grant is being offered at over 70 locations across England with accessibility across all regions.

As part of the Energy Security Strategy, DESNZ launched a Heat Pump Investment Accelerator Competition worth up to £30m. This will aim to bring forward private investment in the heat pump supply chain in the UK of up to £200m, increasing the UK manufacturing capacity by 270,000 heat pumps or components and create or protect up to 1,000 low carbon jobs. The Heat Pump Investment Accelerator Competition will help

accelerate the transition from fossil fuels such as natural gas and oil to cleaner, greener heat pump based heating systems. It will also contribute to our aim of realising a 30-fold increase in the number of heat pumps made in the UK by 2028. Making more heat pumps and components in the UK will increase product availability, reduce costs and contribute to greater supply chain resilience.

There is no government target for wider retrofit supply chains. However, in 2021, the Construction Industry Training Board estimated that improving the fabric energy efficiency of every building in the country in need of retrofit will require 12,000 workers to be trained every year until 2025, where annual recruitment would need to increase to 30,000 per year in the subsequent five years.

To support capacity building in the supply chain, Government invested £15m in training between 2020 and 2023 to deliver around 16,000 free or subsidised training opportunities in England through the Home Decarbonisation Skills Training Competition. The competition funded those aiming to be trained or upskilled as heat pump installers, insulation installers or retrofit coordinators and assessors.

A further almost £14m has been committed through a new £8.85 Home Decarbonisation Skills Training Competition that launched in July 2023, which will deliver a further 8,000 insulation installation and retrofit professional qualifications, and a £5m Heat Training Grant which is expected to support 10,000 training opportunities relevant to heat pumps and heat networks up to 2025.

The Government is also investing up to £5.3m in Regional Skills Pilots through the Local Net Zero Hubs to identify and test solutions to local energy efficiency and retrofit supply chain challenges, building capacity across England.

The Government is also updating the existing apprenticeship frameworks to deliver the right skills to deliver Net Zero. A new Low Carbon Heating Technician apprenticeship launched in Autumn 2023 and work has started led by industry to develop the Occupational Standards for Retrofit and Insulation and Buildings Treatments, the first step to creating apprenticeships and T-levels for these important skills.

Overall, Government policies will help support up to 480,000 green jobs across the UK in 2030. To tackle emerging and future workforce demands across the economy, the Government's Green Jobs Delivery Group is focused on the creation of a Green Jobs Plan, for publication in the first half of 2024.

Recommendation 10

While sources of accurate, reliable and helpful guidance on dealing with extreme heat do exist, this information does not appear always to be reaching everyone who needs it, leading to avoidable health harms. We raised this issue in our 2018 Heatwaves report but little progress appears to have been made. We reiterate the recommendation from our predecessor committee's 2018 Heatwaves report that the Government should launch a Minister-led public information campaign on the developing threat of heatwaves and their significant impact on human health and activities. This could be based on the information on the UKHSA's Beat the Heat webpage. It should have a particular focus on vulnerable groups.

Significant progress has been made since the evidence on which this report is based was provided, including synthesis of the evidence, the publication of guidance, and messaging on heat risks to the public. Given the substantial evidence of differential health risk from heat between different sub-populations, campaigns targeting the general public may be less effective than targeting specific sub-populations who are particularly vulnerable to heat risks to health.

UKHSA currently works with a range of partners across national and local government to support communication of information on heat-related risks and appropriate prevention and protection measures for the general public. This has been a key focus of our work since the publication of the AWHP in April 2023, and beforehand and is a focus of all UKHSA national health protection work.

Written and oral evidence provided by parties to the EAC may not have taken into account the publication of the AWHP and all of its related guidance since most of the materials were published in May and June 2023.

Since the publication of the first edition of the AWHP in April 2023, UKHSA has updated most of its guidance and related materials on adverse heat, adverse cold and flooding – a total of 29 products (9 guidance documents, 5 action cards, 8 summary action cards, and 6 public advice materials). This includes a wholly new suite of guidance to help inform practitioners and the public on health risks linked to exposure to extreme heat, and appropriate measures to help reduce these risks. For the general public, this includes a wide range of materials such as a guidance document,⁴ a supporting checklist to help people keep cool at home,⁵ and a poster⁶ for display in public places that reinforces key public health messages.

In March 2024, UKHSA will publish translations of its guidance materials for the public. The materials have been translated into eleven languages. British Sign Language versions have also been produced to improve accessibility.

UKHSA has held regular webinars for AWHP partners and other stakeholders working at national, regional and local level, to promote awareness of health risks arising from adverse weather exposure, knowledge of guidance materials and understanding of key recommendations. The summer preparedness webinar in 2023, for example, was attended by over 650 stakeholders including strong representation from local authorities.

Guidance materials are supported by regular communications activity through UKSHA and stakeholder channels during periods of hot weather, including cascading a comprehensive stakeholder toolkit to national, regional and local actors including local authorities. This toolkit includes links to the guidance and resources, key public health messages on heat, example news stories and broadcast interview topline. It also includes a suite of social media assets with suggested messaging which have been informed by insight from the behavioural insights team and stakeholder feedback to ensure they resonate with those most affected by significant periods of heat. When a heat-health alert

4 <https://www.gov.uk/government/publications/beat-the-heat-hot-weather-advice/beat-the-heat-staying-safe-in-hot-weather>

5 <https://www.gov.uk/government/publications/beat-the-heat-hot-weather-advice/beat-the-heat-keep-cool-at-home-checklist>

6 https://assets.publishing.service.gov.uk/media/645b8a16479612000cc29343/Beat_the_Heat_2023.pdf

is issued, UKHSA publishes a news story which is updated in line with any changes to the alert and targets messages to those most vulnerable to high temperatures, their friends, neighbours and family members.

UKHSA also know that the extent to which people perceive heat as a risk to their health varies significantly between population groups. This has been documented in published academic research⁷ that UKHSA has led, and ongoing behavioural analysis work⁸ that we are conducting to better understand risk perception between populations. UKHSA is working to understand variations in risk perception, so that public health messaging can be better tailored to promote accurate appraisal of health risks from heat, and support mobilisation to action among those most at risk.

There is also extensive evidence to show that actual risks to health from heat exposure vary in important ways between population groups, as documented in the AWHP Supporting Evidence Document.⁹ UKHSA guidance for professionals therefore focuses on risk reduction for vulnerable groups¹⁰ during periods of hot weather.

Given these differences in risk, in perception of risk and in the likelihood of mobilisation to action across population groups, it is not clear that a public information campaign targeting the general public would be effective relative to a differentiated approach between those groups most at-risk from heat. In addition, the Met Office also provides general information to the public on heat preparedness as part of the cross-governmental WeatherReady¹¹ campaign.

Nevertheless, UKHSA reiterates that it works closely with its partners in the Met Office, Cabinet Office, DHSC, NHS England, DLUHC, media partners and the other delivery groups described in the AWHP and the WHA Cascade to coordinate key public health messages being issued which include messages for staff – and the wider community – to look out for those who might be especially at risk from the effects of significant periods of heat on health and wellbeing.

Recommendation 11

The naming of heatwaves could assist in helping the public to recognise such extreme weather events as a threat to health and wellbeing in the same way as named storms. We recommend that the Met Office trial the naming of heatwaves for 2024 with a view to making this permanent if the trial is deemed successful.

The Met Office recognises there may, in some circumstances, be benefits from the naming of certain types of weather event, as demonstrated by the naming of storms. International coordination is vital to the successful naming of weather events and the Met Office has been closely involved in work under the auspices of the World Meteorological Organization to consider the advantages and disadvantages of naming heatwaves. At the current time

7 <https://pubmed.ncbi.nlm.nih.gov/36438241/>

8 <https://www.gov.uk/government/publications/hot-weather-and-health-exploring-extreme-heat-in-adult-social-care#:~:text=Research%20and%20analysis-,Hot%20weather%20and%20health%3A%20exploring%20extreme%20heat%20in%20adult%20social,those%20who%20care%20for%20them.>

9 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1155636/AWHP_Evidence.pdf

10 <https://www.gov.uk/government/publications/hot-weather-and-health-supporting-vulnerable-people>

11 <https://www.metoffice.gov.uk/weather/warnings-and-advice/weatherready>

there is insufficient evidence that naming of heatwaves is effective and there are no plans to introduce heatwave naming. The Met Office will keep this under review as research in this area develops.

Recommendation 12

While there is potential for cooling centres to be an important part of future resilience measures for those most vulnerable to heat impacts, evidence of their effectiveness is not clear cut at present. We recommend that UKHSA evaluate the potential use of cooling centre initiatives as a policy response to excessive heat, with a view to developing and publishing advice to central government and local authorities on a suite of practical initiatives which can be taken to support populations which are particularly vulnerable to extreme heat.

There is strong evidence for the health benefits of generalised adverse weather planning to respond to heat risks but evidence on the efficacy of cooling centres specifically remains limited, constraining development of policy advice.

As noted in UKHSA's original submission to the Committee, cooling centres are often implemented internationally in high income settings as part of wider heat response plans. However, the role and impact of cooling centres in protecting people's health during hot weather is difficult to evaluate.

In 2023, UKHSA conducted an internal systematic review of international evidence on the health impacts of cooling spaces and identified just two studies that met the criteria, both from the USA. The studies reported data on service use and user experience. No published data relating to heat-related health impacts from cooling centre use, and no data from the UK more specifically, was identified through the review.

In the absence of robust evidence for or against the use of cooling centres in hot weather to improve health outcomes, UKHSA currently provides no specific recommendation on their use as part of our suite of guidance for heat. We have, however, identified priorities for research on effective interventions to protect health in the context of climate change including adaptation measures to heat. UKHSA will work with research partners to address these gaps.

To help support evaluation of warm spaces during periods of cold weather (for which evidence is similarly fragmented), UKHSA recently published a toolkit for local, regional and national actors¹² to help build the evidence base on impact in England. This toolkit provides a framework of principles to assist organisations in the local delivery and evaluation of warm spaces in England which may be of assistance to local authorities developing similar responses for hot weather. The toolkit includes a request for local actors leading evaluation work for these spaces to share results with UKHSA and with colleagues and other organisations across the country, to support best practice.

UKHSA will continue to review and synthesise literature evidence on cool space effectiveness through periodic updates to the Supporting Evidence Document for the AWHP, and collation of evaluation evidence from those involved in service delivery..

12 <https://www.gov.uk/government/publications/warm-spaces-in-england-an-evidence-review-and-toolkit/warm-spaces-in-england-an-evidence-review-and-toolkit-for-local-organisations>

Recommendation 13

We recommend that the Future System Operator make specific provision for the likely future demand for electricity for cooling purposes in all its future scenario planning.

DESNZ will continue to engage with the Electricity System Operator (ESO) and Ofgem on modelling developments – including through exploring appropriate updates to electricity demand forecasting to ensure that they remain fit for purpose through the UK's net zero transition.

Recommendation 14

We recommend that in its response to this report the Government set out what progress it has made on establishing Minimum Energy Performance Standards in relation to cooling equipment since COP26; what the future trajectory for establishing such standards is; and how the Government plans to meet the 2030 deadline specified in the Global Cooling Pledge.

The UK has ecodesign regulations in place for several cooling products - including air conditioners, domestic refrigeration, professional refrigeration and commercial refrigeration. These regulations introduce minimum energy performance standards (MEPS) that ensure the lowest energy performing products are removed from the UK market. In terms of updating these standards, DESNZ is currently undertaking research into commercial refrigeration to update MEPS, and will do the same for other products in due course.

The Global Cooling Pledge commits the UK to establish MEPS by at the latest 2030 and regularly review aim to routinely raise ambition and progress with a view to achieve net-zero emissions by 2050 and noting best available technology and available model regulation guidelines.

Recommendation 15

We recommend that the Government evaluate the merits of introducing a takeback scheme in England to improve disposal practices regarding cooling equipment, thereby helping to minimise F-gas leakage, with a view to introducing a pilot takeback scheme in England and promoting its merits to the administrations in Scotland, Wales and Northern Ireland.

The Defra assessment report of December 2022 that looked at the impact of the current F-gas Regulation acknowledges that further action may be needed to improve F-gas recovery rates.

Defra is reviewing the Regulation with a view to making changes that will deliver greater emissions savings in support of meeting the UK's net zero target. Any proposals for change will be consulted upon in due course.

Recommendation 16

Effective joint working is not just desirable but essential if the impacts of heat are to be tackled in a coordinated, holistic and cost-effective way. This does not seem to be happening to a sufficient degree at present in the UK. The establishment of a Climate Resilience Board, under the auspices of the Cabinet Office and DEFRA, is potentially an important development as long as it includes representation from all relevant Government departments, agencies

and other organisations, and meets sufficiently frequently. The Government should set out, in its response to this report, details of the membership of the Climate Resilience Board; how often it has met since being established; and its expected meeting schedule in 2024.

To help drive further Government action to increase UK resilience to climate change, the Cabinet Office and Defra, working with HM Treasury, established a senior officials Climate Resilience Steering Board to oversee strategic, cross-cutting climate adaptation and resilience issues. The Board is convened at Director level with membership from all climate risk-owning departments, as well as No.10. A list of departments who have standing membership is below. Additional attendees may be invited as necessary.

- Cabinet Office
- Defra
- No10
- HMT
- DBT
- DESNZ
- FCDO
- DfT
- DSIT
- DLUHC
- MoD
- DHSC
- MoJ
- DfE
- DCMS

Additional departments, agencies and organisations may be invited as necessary with reference to the agenda. For example, we will include an item from the National Infrastructure Commission in an upcoming meeting. Agenda items to date include embedding climate adaptation into policy and decision-making; NAP3 programme updates; and items on climate security from the National Security Secretariat. The board has met twice since NAP3 publication, in October 2023 and January 2024, with the next meeting scheduled for April 2024. The Terms of Reference stipulate that the Board meets at least quarterly.

Recommendation 17

We recommend that the Government appoint a lead Minister for Heat Resilience to act as a focal point and drive forward coordinated action across government departments, local government, community sector stakeholders and the private sector in this area.

The third National Adaptation Programme (NAP3) sets out how the Government is responding to the 61 climate risks and opportunities identified by the Climate Change Risk Assessment (CCRA). The NAP3 frames risks, including extreme heat risks, within thematic chapters: Infrastructure; Natural Environment; Health, Communities and Built Environment; Business and Industry; and International Dimensions. High temperature risks are set out across these thematic areas, and in line with the well-established Lead Government Department (LGD) model, responsibilities are led by those departments best placed to discharge them - as such, LGDs are responsible for leading work to identify serious risks and ensuring that the right planning, response and recovery arrangements are in place.

In terms of overarching oversight, Defra's Minister for Nature, who holds the climate adaptation portfolio, leads the overall coordination and management of the NAP3, working with the LGDs. Further, cross-government governance structures on resilience are in place.

Recommendation 18

We commend the UK Government on being among the first signatories of the Global Cooling Pledge, which represents a significant step forward in terms of heat resilience and sustainable cooling, and is a welcome demonstration of international leadership in this area. In particular we note the commitment under the GCP to produce a national cooling action plan. We hope our inquiry and the findings set out in this report assist in shaping what this looks like and we remain keen to continue to work constructively with all relevant Departments on this topic. In response to this report, we expect the Government to set out a clear and achievable timetable for the introduction of a UK national cooling action plan as required by the Global Cooling Pledge.

Government welcome the Committee's report collating the findings of the inquiry. As noted the Global Cooling Pledge includes a commitment to "publishing a national cooling action plan, considering cooling when publishing a national action plan, or publishing a regulation or equivalent by 2026 and to reflect relevant efforts in designing nationally determined contributions under the Paris Agreement and HFC phase-down plans".

Our approach to meet this will involve developing an equivalent document appropriate for the UK in the form of a cooling outlook document. This cooling outlook document will provide a consolidated view of cooling across sectors in the UK, and will serve as a framework for bringing together existing relevant policies, data on emissions and refrigeration, and evidence on the cooling market in the UK. The findings collated in the Committee's report will be a valuable resource for this.

As well as fulfilling the Cooling Pledge commitments, the cooling outlook document will provide a central repository for UK cooling policies and initiatives, highlighting Government's efforts, fostering collaboration and partnerships, and will provide a mechanism for identifying priorities, gaps, and opportunities for sustainable cooling.

As committed to in the Global Cooling Pledge we are working to publish this cooling outlook document in advance of the target date of 2026. We anticipate this will be published in the early part of the next parliament. We are currently engaged in the early stages of development to design the scope of the cooling outlook document. Given this is a cross-cutting issue we will be working across Government and with other stakeholders in its development. We welcome the opportunity to share the progress with the Committee as the document develops.