



House of Commons
Science and Technology
Committee

**Science in emergencies:
chemical, biological,
radiological or nuclear
incidents: Government
Response to the
Committee's Twelfth
Report of Session
2016–17**

**Fourth Special Report of Session
2017–19**

*Ordered by the House of Commons to be printed
7 November 2017*

HC 561
Published on 9 November 2017
by authority of the House of Commons

Science and Technology Committee

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Government Office for Science and associated public bodies.

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Publication

Committee reports are published on the Committee's website at www.parliament.uk/science and in print by Order of the House.

Evidence relating to this report is published on the relevant [inquiry page](#) of the Committee's website.

Committee staff

The current staff of the Committee are: Simon Fiander (Clerk); Dr Harry Beeson (Committee Specialist); Dr Elizabeth Rough (Committee Specialist); Martin Smith (Committee Specialist); Sonia Draper (Senior Committee Assistant); Julie Storey (Committee Assistant); and Sean Kinsey (Media Officer).

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Fourth Special Report

On 5 April 2017 our predecessor Committee published its Twelfth Report of Session 2016–17, [Science in emergencies: chemical, biological, radiological or nuclear incidents](#) [HC 163]. On 1 November 2017 we received the Government’s response to the Report, which is appended below.

The National CBRN Centre also wrote to the Committee on 27 July 2017:

“Thank you for your report that we have read with interest at the National CBRN Centre. As per the recommendations in the report, a review and recommendation for the definition of a CBRN incident (both malicious and non-malicious) has been sent to the Cabinet Office and the Office of Security and Counter Terrorism, Home Office”.

Appendix: Government response

I very much welcome the Science and Technology Committee’s report on science in ‘CBRN’ emergencies. I attach a response to the recommendations. Given the recent incidents in Manchester and London the work here in making sure the right mechanisms and access to relevant expertise are in place are increasingly important.

Work is already underway looking at how we take the recommendations forward. I will ensure my officials continue to use the insights in your report to inform their thinking.

I agree the delay in responding was unsatisfactory and assure you this was not intentional. In addition to the General Election and summer recess a lot of activity and efforts have been required post Manchester. This, unfortunately, meant the report did not receive the necessary timely focus it demanded. I have been assured by my officials that future response will not be subject to similar delays.

The Home Secretary and I are very sorry for the delay. We have taken steps to ensure that in future Committees in Parliament are answered in a timely fashion.

Rt Hon Ben Wallace MP, Minister of State for Security

Recommendation

A distinction between deliberate ‘CBRN’ incidents and accidental ‘Hazmat’ releases of the same materials may leave grey areas in between, which could lead to confusion or affect the mechanisms which planners can access. It is important that definitions do not stand in the way of organisations receiving science advice that is relevant to the emergency in question, however it is described. We recommend that the Government consult further with Local Resilience Forums regarding these definitions and explore how any ambiguities could be resolved—such as by referring simply to ‘malicious CBRN’ incidents and ‘non-malicious CBRN’ incidents where the distinction is of any significance. (Paragraph 10)

The Government agrees to further consultation with Local Resilience Forums (LRFs) and indeed we are doing so as part of a wider programme of engagement with them. CBRN

relates to counter terrorism incidents and the emergency responders and many LRFs are used to this nomenclature. Reflecting your concerns that the response options can be seen as overly complicated whereas there are many similarities between the response for hostile and non-hostile incidents, we plan as much as possible for a threat agnostic response. We will use whatever capabilities are required to maximise lifesaving and rely on and support LRF coordinated capabilities. We will look to see what common factors are required for any contamination event and we will work with the LRFs to develop the wider generic resilience capabilities that would support the response. We do not expect Local Resilience Forums to provide any additional capabilities with respect to CBRN events than they would to any other major incident for which they should be well prepared. The counter terrorism element of the response is a national capability.

Recommendation

ECOSA is a relatively new mechanism that has not yet had to react to an emergency. We recommend that future exercises and practice scenarios for CBRN and Hazmat incidents include ‘live’ unscheduled drills which test the speed and effectiveness of the provision of science advice at all levels and stages of the response, including ECOSA. Scenarios should also test how these mechanisms would function during emergencies that cross national borders within the UK. (Paragraph 21)

The Government agrees with this recommendation in principle. Exercising is expensive and involves a significant abstraction of responder personnel from their day jobs. This includes the scientific advice. There is a significant level of practice for many of the relevant capabilities to provide assurance that it can be delivered on the day. Unscheduled “live” drills would cause significant disruption. ECOSA is regularly tested during exercises, SAGE less so but a table top exercise of SAGE for a CBRN incident was successfully completed late in 2016. Mechanisms are being developed for better cross border scientific advice and this will be tested when opportunities arise.

Recommendation

It is important that local resilience forums are clear about what scientific support is available to them to support planning and response to CBRN and Hazmat incidents, including how that might be different for each type of emergency. The Government should investigate whether there is sufficient clarity amongst all LRFs and how this could be improved—such as by assembling all of the relevant information in the Resilience Direct secure website. In particular, the Government should clarify whether the ECOSA mechanism should only be used for scenarios with suspected malicious intent (and consequently what routes are available for securing advice in relation to Hazmat incidents), or whether the service can be used more generally. (Paragraph 27)

The government will examine this recommendation. ECOSA is specifically for malicious intent as it draws upon subject matter experts with a very specific set of knowledge which would not necessarily be applicable for wider Hazmat events. There are existing sources of scientific advice for these Hazmat events and they are regularly used by the Fire and Rescue Services in the day to day duties. We are asking LRFs to provide their usual resilience capabilities to support the incident. The CBRN specific response is provided through national capabilities rather than through the LRFs.

Recommendation

Effective science advice for a CBRN or Hazmat emergency relies on the ongoing availability of [scientific] expertise within the UK. The Government Office for Science should review its list of experts that can be called upon during an emergency to check where gaps are likely to emerge as individuals retire, and determine whether suitable experts will be available in these fields to replace them. It should also consider whether the available expertise includes sufficient specialists with CBRN-relevant engineering and industrial experience and ensure that the need for this expertise is considered when determining the membership of a SAGE. (Paragraph 47)

We agree with this recommendation.

In any type of emergency, a ‘Lead Government Department’ (LGD) will provide leadership to the government response, and it is the responsibility of the LGD to maintain a network of scientific and technical experts that SAGE can draw on. The SAGE Secretariat within Government Office for Science (GO-Science) therefore works closely with the LGD, often through the Departmental Chief Scientific Adviser, to identify and establish a suitable and wide-ranging group of experts to advise on the emergency. These might include:

- Government advisory and regulatory agencies;
- External experts (including academics, industry and international experts);
- Existing advisory groups (including departmental and Devolved Administration-led groups, cross Government Scientific Advisory Committees (SACs); and
- External advisory groups and networks

The SAGE model is designed to be flexible and scalable, adapting to the specific requirements of the emergency in order to advise COBR most effectively. The SAGE Secretariat maintains pre-defined expert lists that provide assurance that government can reach a core group of essential expertise in the first phases of an emergency response. As the emergency develops, SAGE membership can be adapted according to the specific circumstances of the incident and COBR’s requirements.

Expert lists are regularly reviewed in order to update details and identify potential gaps in which further expertise can be sourced. GO-Science will continue to ensure government has access to such expertise when reviewing its pre-defined expert lists, and supporting other government departments to develop scientific and technical advisory networks and groups.

Recommendation

We appreciate that this is an area of science in which providing ever more information to the public may not always be the best approach, because of the understandable desire to avoid unnecessary alarm. For the advice received during a CBRN or Hazmat emergency to be understood and interpreted by the public, however, it needs to build on a basic level of understanding of science topics such as radiation and its effects. There is more to be done to increase this level of understanding through public engagement. The Government should commission the Government Office for Science to produce clear

and simple guidance for the public for dealing with different types of CBRN or Hazmat emergency; not just in terms of the actions they need to take but also the science that underpins that advice. (Paragraph 53)

We agree with this recommendation in principle. We are examining how this can be best delivered. As the response to a CBRN event is designed to maximise lifesaving through clinical interventions, including decontamination we believe that the Department of Health are best placed to advise the response. Public Health England (PHE) has information on GOV.UK for CBRN and Hazmat incidents which is aimed at health professionals. We recognise that this is a complex area and that it would be helpful for information to be available for the public. In light of the Committee's recommendations PHE will consider how information can be developed which is specifically aimed at the public in consultation with NHS Choices who have the main responsibility for providing patient-focused information.

Since the publication of the Committee's findings there has been a rise in the number of assaults using corrosive and other noxious materials. This has led to PHE launching a programme of awareness raising of how to respond to such an attack and to the equipping of police response vehicles with materials to mitigate the effects of such an attack.

Recommendation

Communicating accurate science to the public in the event of a CBRN or Hazmat incident is an essential part of the response. There are concerns that media access to informed government scientists is not always possible, and that there is a 'cultural difference' between agencies as to whether their experts should speak to the media. *The Government should develop advice to its agencies to ensure that the media can be provided with informed science voices during an incident. The need to provide timely and accurate information to the public and the media could in itself be a prompt for setting up a SAGE.* (Paragraph 66)

We agree with this recommendation.

Government agrees that providing the public with timely and authoritative information during a CBRN or Hazmat incident is an essential part of the response. During emergencies, it is vital that government provides a coordinated response, in which advice to the public should be clear and consistent. Experts have a key role in communicating scientific and technical issues, and are publicly perceived as trusted sources of information.

Government does not limit the freedom of its scientists to speak to the media, but they should do so within the terms of the Civil Service Code. All SAGE members, whether external consultants or government scientists, are routinely informed that they should speak to the media during emergencies, however the specific content of SAGE discussions is to be treated as confidential. Striking this balance allows experts to provide the public with direct information and advice, whilst avoiding undermining any decision-making at COBR where scientific and technical information is considered alongside other forms of information about the incident.

Recommendation

The Government's existing SAGE guidelines include a provision for a press officer as a member of SAGE, but it appears that this has not been taken up when a SAGE has been activated. It is understandable that meeting the media's demand for expert spokespeople may not naturally be the first priority for a SAGE in providing science advice to the Government, but it is clear that the media also need to be able to access good science during an incident. We have concluded previously—in our Ebola inquiry—that it is helpful for the public to be provided with the evidence behind the advice that it receives during an emergency. *We endorse the recommendation made by the Science Media Centre that all future SAGEs should include a dedicated independent scientific press officer to ensure that the communication of science to the public is as good as it can be during an emergency. This member of SAGE could ensure, for instance, that other members engage with the media direct, and that information is quickly cascaded to other scientists to support their own engagement.* (Paragraph 67)

The government agrees with this recommendation.

Government communications professionals can attend both SAGE and COBR to advise on how best to convey science advice as part of government messaging. Consideration is given to whether additional communications experts should be included to help SAGE communicate potentially complex concepts and key messages. We are assured that this approach allows government to present sufficient scientific evidence when advising the public.