

Multi-Agency Flood Plan Review

Final report

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1. Foreword – Major General (Retd) Tim Cross CBE

- 1.1 I was privileged to act as the independent external reviewer for this work, announced on 3 Nov 2017 by the Secretary of State (S of S) for the Department of the Environment, Food and Rural Affairs (Defra). It ran in parallel with other, wider government reviews – including Defra’s review of surface water flooding and the national security capability review.
- 1.2 The scale of the issues associated with resilience in England across the board is significant and growing, as reflected by events in Salisbury. Around 5.5 million properties i.e. 1 in 6 - are currently at risk of flooding from rivers, surface water, reservoirs or the sea, and it is clear that the underlying hazards will only increase over the coming decades as a result of climate change and an increasing population living in housing developments built in flood risk areas – and that their expectations are ever more complex and demanding. This review is therefore timely.
- 1.3 In addition to thanking the whole review team in Defra, the Environment Agency (EA) and the Ministry of Housing, Communities and Local Government (MHCLG) for their support, I want to particularly note at the outset two key people from Defra – Tom Coles and Michelle Rockley; Tom acted as my ‘Chief of Staff’ and Michelle as the ‘outer office’ organising the administration/meetings/travel. I could not possibly have completed the work so quickly without them and I am very grateful to them both!

2. My approach

- 2.1 The Terms of Reference are at Annex A. The key question posed by the S of S was, on the face of it, a relatively simple one: “Do Local Resilience Forums (LRFs) in England have robust plans in place to respond to flooding incidents in their respective areas?”
- 2.2 I decided to take a wide view of what was meant by ‘robust plans’ and ‘response’, not just looking at written plans but the whole process of how the LRFs understood flood risk, made plans and co-ordinated the roles of the many organisations involved. Also, how they trained, exercised, responded, learnt lessons and kept up to speed with evolving good practice – and looked across multi-agency and LRF boundaries to call upon regional and national resources to bolster local arrangements if needed, and indeed help others. I also decided to include at least some discussion on ‘recovery’ within the review, as it seemed to me that the capacity to undertake a protracted and complex recovery effort also required dedicated resources and posed related but separate challenges.

2.3 In order to answer the question we needed to look at the effectiveness and consistency of current flood plans in order to identify good practice, advise on how it can be spread and produce improved guidance; hence the three designated work-streams:

- An examination by the EA of current Multi-Agency Flood Plans (MAFPs) – around 30 strategic and 300 tactical-level plans – using current guidance as the template.
- A qualitative review to identify good practice, the key issues and obstacles and form views and recommendations on the way forward – the bulk of my work; and
- The production of revised Defra guidance on how to produce good MAFPs in the light of the review's findings – due out in the early summer of 2018.

2.4 LRFs are the foundation of England's emergency planning and response arrangements for a wide range of resilience issues, including flooding. They bring together a number of organisations, including the emergency services and local authorities, and the MAFPs they produce aim to coordinate all of those involved in responding to flooding.

2.5 Recognising that within them were many experts engaged in flood resilience and response planning, and that they were all more than well aware of the issues and good practice that the review sought to identify, I wrote to the Chairs of the LRFs and secretariats and arranged a series of workshops around the country in order to garner views. Ultimately any success in improving LRF planning and preparedness for flooding – and the spreading of good practice – will depend on LRFs acting on the outcome of the review and implementing the revised guidance, so I needed their positive engagement – and I encouraged them to talk frankly and openly!

2.6 I am delighted to say that there was strong buy-in. Each workshop had 15-25 attendees, with around 200 people in all attending nine workshops over three months. They included representatives from every one of the 38 LRFs, the emergency services, local authorities, utility companies, volunteer organisations – and even someone from the Royal Shakespeare Company! These free flowing discussions gave me a good overview of why we needed MAFPs and what they consisted of. Amongst a raft of issues discussed were:

- Who writes them and keeps them up to date;
- Who reads them – and is held accountable for them;
- How are they assured – what training and exercising goes on;
- How do they consider cross boundary flood risks;
- How are communities and volunteers involved – if at all;

- Where the intellectual capital is held – the doctrine – how is it taught and what formal qualifications are available.

And of course what funding and resources are available!

- 2.7 In the course of the review I visited the Army's Regional Command and the Standing Joint Commander (UK) Headquarters in Aldershot; the Met Office; the Flood Forecasting Centre and the EA's National Operations Incident Room. I also observed Strategic and Tactical Coordinating Groups (SCG/TCGs) engaging in a major LRF flood exercise in Hull organised by the Trent Catchment Group and Humber LRF; the scenario involved a major river flood inundating parts of many counties.
- 2.8 I looked at earlier reviews, including the Pitt Review of 2008 and the internal Defra study on flood response preparedness conducted for the then Minister by Brigadier (now Major General) Matt Holmes RM in 2016; I also met with Matt. I attended the LRF Chairs' conference in Manchester, and had a series of meetings with the Emergency Planning College (EPC), Resilience Direct (RD), the EA, MHCLG and the Civil Contingencies Secretariat (CCS) from the Cabinet Office – as well as a number of internal Defra sessions. Everyone concerned provided strong support, the principal organisations being represented at all of the workshops.
- 2.9 Finally, I also established an 'Advisory Group' of specialists in resilience and emergency flood response planning, representing the different regions of England and including the police, fire and rescue service (FRS), local authorities, the EA and the military. Their role was to feed in ideas and, crucially, to be a source of challenge, providing 'ground-truth' on the emerging conclusions and recommendations of the report. Further details on the role and membership of this group are at Annex B. We also gathered a 'consultation list' of those who wanted to be involved in contributing ideas for the revised guidance – and who would subsequently act as 'Champions' in the post-review phase to ensure that the momentum is maintained.

3. Overview

- 3.1 My findings are discussed in full later in report, but I want to make it clear at the outset that there are many good people engaged across the country in this work and the overall picture is reassuring. As a result of the major floods over the past decade much has been done and good practice has evolved and spread. I quickly concluded that my report should be about evolution, not revolution, reinforcing success and extending the reach of the many improvements brought about by the series of previous reviews/reports and by the various agencies involved. Those changes include:

- Improved national arrangements to support local-level flood response – increased ability to deploy temporary barriers, pumps and staff; increasing use of the military; and advanced flood-forecasting capability.
- Emerging good practice in LRFs working together, as in the Trent Catchment and East Coast Groups, which make it easier to share the cost of training and exercising and spread good practice.
- The emerging role of organised groups in the voluntary sector.

3.2 This said, and notwithstanding the apparently simple question posed by the S of S, the large number of Category 1 responders involved in this business, alongside an equally large number of Category 2 and other warning and response organisations, complicates matters somewhat – see Annex C; and the lack of any coherent boundaries linking these various agencies doesn't help. LRF and Police boundaries are at least the same, but the variety of Local Authorities involved – County, Unitary, District, Borough in an apparently completely random structure, along with the mass of Town and Parish Councils – added to the FRS, EA, Military and Utility Companies boundaries results in a pretty confusing picture. As a Station Commander in Oxfordshire back in the 1990's I had to deal with 8 different councils in my area for one reason or another – and I never really did sort out who did what! Floods are self-evidently no respecter of such boundaries, so the ability to work across those boundaries is central to flood resilience.

3.3 I was also struck by the considerable inconsistencies in the approaches to producing plans and the quality of planning, ways of working, engagement by senior leadership, and, in some cases, a lack of join-up with other LRFs. There have of course been substantial resource cuts in recent years to organisations – including local authorities, the police and the FRS – leading to serious reductions in dedicated staff and funds. The reductions in Emergency Planning Managers in some LRF areas have been particularly dramatic – in one case reportedly from 8 posts to a singleton half-post. This has all inevitably eroded the ability of some LRFs to plan, train, exercise and respond.

3.4 A lot clearly also depends on the personalities involved and the leadership provided. In response some LRFs have been innovative and significantly changed the way that they operate, reducing the impact of at least some of these cuts. Some are very much at the forefront of good practice; not surprisingly that applies particularly in areas that suffer regular flooding - like Cumbria, Lancashire, and Devon & Cornwall – and to where people have direct and recent experience of flood response and work well across LRF boundaries. Others may flood less often but they take their flood risk seriously - perhaps because they faced major flooding in the past – whilst others see flood risk as less of a priority, if not a low priority, and should clearly improve if they are not to get to a point where the system stands in danger of failing if serious flooding were to occur.

3.5 In sum, there is clear room for improvement in many aspects of flood response planning, but this largely involves reinforcing success, spreading existing good practice, extending national support measures, and increasing resources devoted to flood emergency preparedness, rather than more fundamental reform.

4. Doctrine

4.1 I want to stress that (perhaps inevitably) my views are rooted in British Army 'Doctrine', which argues that there are 3 components to its 'output' - Fighting Power. The first is the 'Physical' i.e. the 'stuff' that the army possesses – its equipment, vehicles, and the logistics to sustain them. The second is the 'Conceptual' component i.e. understanding how to use all this 'stuff' properly in order to get the best out of it. And the third component is the 'Moral' component; the ethos, culture, leadership and personal resilience – essentially the ability to get soldiers to fight. It was Napoleon who famously said that the 'Moral' is to the 'Physical' as three is to one, and it is certainly the case that the Moral component often brings overall victory against apparently impossible odds.

4.2 The ability to get things done, to achieve success in any operation or task is as much, if not more, a state of mind as any piece of equipment or an intellectual understanding of how best to deploy and employ that equipment. Professor Martin Van Crefeld commented that war is before anything else a matter of psychology – and that applies equally to responding to any resilience crisis. Equipment, technology and an understanding of how to use them are clearly very important, but people are the centre of gravity of success. It is pretty evident from the regional workshops that the Moral Component in this area (and probably other areas) of resilience is under pressure, with some cynicism about the lack of numbers now engaged in this work across the board.

4.3 'Mission Command' is the central pillar of military doctrine. In essence it relies on orders/instructions being given in such a way that the subordinates understand the commanders' intentions, and understand what their own part in delivering those intentions looks like – what their 'mission' is. In other words everyone knows the 'effect' they are to achieve and the reason why it needs to be achieved. Having then been allocated the 'appropriate resources' necessary to carry out their mission they must be given as much freedom as possible to deliver it – with the minimum of control measures imposed, and without the interference of 'long-handled screwdrivers'. Such an approach involves trust throughout the 'chain of command' – it encourages lateral thinking and allows for individuals to decide for themselves how they are going to achieve their mission rather than tying them down with fixed processes. And it allows for – indeed encourages – timely decisions to be made at the lowest possible level.

4.4 So, the overall intent should be to encourage the development of coherent and consistent 'Principles' and related 'Procedures' for local resilience – but to also encourage that the 'Practical Application' of these principles and procedures is left to those best placed on the ground to deliver them, recognising their local situation and experiences.

4.5 Crucially, this all relies on those 'appropriate resources' being in place. Much of this is clearly not solely flood related, applying to the wider resilience issues that the LRFs manage, and it is inevitable that some of my findings and the emerging recommendations therefore have applicability beyond flooding. I return to the issues of doctrine and resources below.

5. So – the answer to the question?

5.1 So, to the question of whether the LRFs in England have robust plans in place to respond to flooding incidents in their respective areas. This is a challenging question to answer comprehensively because each flood event is unique, and there is no way of knowing for sure how each LRF area will react to floods of different intensity, scale, suddenness and longevity. But, having distilled the judgement and experience of the 200+ at the workshops, along with the input from the Advisory Group and others, my assessment is as follows.

5.2 **For small-medium flood** incidents e.g. the flooding of a few tens or hundreds of properties:

- **'Yes'** - overall, most LRF areas are likely to be able to respond effectively.
- However, a rapid onset incident like sudden surface water flooding has the potential to overwhelm local response arrangements, particularly in areas not used to flooding or where response arrangements are disjointed or have not been exercised recently.
- Depending on the nature of the flooding, local arrangements for recovery are likely to be able to deal with the fallout, but most of the houses flooded will take months to fully recover.

5.3 **For large flood incidents** e.g. the flooding of thousands of properties with consecutive events happening in different areas, as seen in the winter of 2013/14 or December 2015:

- **'Yes'** – provided outside assistance is available, and the flooding is forecast well in advance so precautionary measures can be taken. In responding, single LRF areas are unlikely to be able to manage alone and will rely heavily on help/mutual aid from other LRFs and with national assistance providing surge capabilities;

- A rapid onset flood would be likely initially to overwhelm local capabilities, and recovery is likely to pose substantial challenges - lasting for months, if not years.

5.4 **For very large scale, widespread and enduring flood incidents** e.g. the flooding of tens of thousands of properties, as seen in summer 2007 in Gloucestershire and Worcestershire, combined with, for example, an East Coast surge:

- **'No'** – even with reasonable notice, and current regional and national resources being made available, there is a high probability that LRFs would struggle to deal with the problem, and
- Recovery will pose serious long-term challenges.

5.5 In all of these cases, as noted earlier, the capacity to undertake a protracted and complex recovery effort requires dedicated resources and poses a separate challenge. Whilst flood response is a challenge to resource, flood recovery (which must start early) is even more challenging, with all of the public agencies working in concert with the flooded communities, the business community and the third sector.

5.6 The 1953 East Coast surge killed 300; much better defences and warning systems are now in place, but if they were to fail the consequences are potentially much greater with increased housing developments, etc. So, it seems to me that the sensible question that follows these assessments is to consider what can be done in the immediate future to mitigate the potential effects of large and very large scale floods, and what is a 'reasonable worst case scenario' to plan on and resource in the longer term? The recommendations that follow attempt to answer the first of those questions, whilst the latter can only be answered by the various agencies involved presenting some scenarios to Ministers for consideration.

6. Detailed findings and recommendations

6.1 Notwithstanding the fact that the LRF system (put in place around 2005 to help bring local responders together to enable them to work in a more coordinated way) is not a legal entity in and of itself, there are many good people engaged who are obviously determined to ensure that it works well, with high levels of skill and experience across the board. Much has been achieved over the last 10 years or so, with lots of experience gained and best practice evolving as a result of real – and serious – flood events. Some LRFs are therefore at the forefront of good practice on flood preparedness, with the best characterised by the clear commitment of partner organisations, and committed individuals at secretariat and senior-leadership levels leading and driving.

- 6.2 But there are variances, with some weaker LRFs finding that the substantial reductions in staffing and funding over recent years in local government and elsewhere have eroded their capability to plan and respond. Some also display different, and less efficient, ways of working, not having adapted in ways that the more successful LRFs have done, where cuts to organisations have, to some extent, been offset by wider improvements. Notably, dedicated Civil Contingencies Units can bring resources together, and support across LRFs has been improved through the development of regional coordination between LRFs – such as in the Trent Catchment and East Coast Groups.
- 6.3 Whilst some LRFs may be getting to a point where the system stands in danger of failing if they are faced with a large-scale flood incident with broader regional impacts, over the last few years there have also been considerable advances in national mechanisms to support local-level flood response. The move to forecast-led response, the increased EA and FRS ability to deploy temporary barriers, pumps and people, along with increased use of the military have all made a significant difference and helped to ‘hold the line’.
- 6.4 There are a number of recommendations below, which will all need to be taken forward by Defra to ensure their implementation.

7. Written flood plans

- 7.1 There was clear support in all of our discussions that written MAFPs were needed. All LRFs serve communities that face significant flood risks, and responding to flooding is a truly multi-organisational issue – pre-planning is therefore crucial if all of these organisations are going to work coherently together. A well-written MAFP does not of course necessarily equate to having an effective response capability; that depends on such things as leadership, levels of staff training and the exercising of plans – and updating them in the light of experience.
- 7.2 Flooding often comes with advance warning, so there is often time to prepare; but a well thought through and clear plan provides the foundation of an effective response and reduces the potential impact of the floods substantially. Many of the effects are also predictable and, if the risks are properly understood in advance, responders can be clear what the likely impacts will look like over time and location, thus ensuring that they can act decisively to protect people and communities.
- 7.3 There were differing opinions on how detailed the written plans needed to be, and at what level they should be written and held - and considerable variance in their depth, quality and coverage. Some are very detailed, agreed by all multi-agency partners; some have a very short multi-agency ‘framework’ that rests on top of – or

acts as a 'signpost' to – several (single agency) more detailed tactical plans, arguing that they were more usable in an emergency – thus 8 LRFs didn't have strategic plans, their MAFPs being held at District level.

7.4 The value of a shorter, checklist-style plan, in addition to detailed plans, was widely recognised as a way of helping responders confirm that they were covering all the necessary bases during the fast-moving circumstances of an emergency response. And applying the principle of 'Mission Command' means that the detail of how these plans are actually pulled together can – and in my view should – be left to individual LRFs, as they know their 'turf' and their people. At the end of the day it is 'outcomes' that matter most, and of the three prepared contingency plans in place it is always the fourth that is actually put into action. But going through the process of developing clear and comprehensive – and assured/audited – plans ensures that risks, actions and cross-partner working have been properly thought through for the potentially different scales and types of incident. Failure to do this will leave responders unprepared and communities at increased risk – with potentially poor outcomes.

7.5 During the course of the review it was pretty much agreed at official level that the government should introduce a new 'standard' for flood response planning, as part of a series of such standards being introduced by the Cabinet Office. These standards are short documents that set out what LRFs 'must', 'should' and 'could' do in aspects of preparedness i.e. what they are legally required to do, what they should choose to do if they are to reach the standards expected – and what they could do in order to achieve best practice. The new 'guidance' being prepared as a part of this review will aim to expand on the standard; and it should form part of the structure for assurance. In essence each MAFP must show an understanding of:

- The 'enemy' – the types of flood risk in the LRF's area, with appropriate risk assessments – and mapping and information on the impact of historical flooding and the effect of flood defence schemes.
- 'Friendly Forces' – the roles and responsibilities of the various LRF agencies – including the voluntary organisations; how they are to work together and the mutual aid arrangements.
- Who/what might be impacted – and when they are likely to be impacted. Showing the flood risk zones and the areas that are liable to flood as water levels rise, with the numbers of people – especially the vulnerable – at risk.
- The key infrastructure, hazardous sites e.g. those sites regulated under Control of Major Accident Hazards (COMAH) legislation, nuclear power stations, etc.
- Response philosophy and potential actions. LRFs should think big and act early and have planned activation thresholds and triggers, with the

associated communications, evacuation and shelter plans – again particularly for the vulnerable.

- Methods of forecasting, warning and informing, mobilisation, rescue and assistance – including community resilience and possible public response.
- What local, regional and national assets are available and how to call upon them, along with what training and exercising is to happen, and any relationships to other resilience plans.
- How recovery will be handled – with a recovery group being established early on.
- Crucially, a Media plan that ensures speed, compassion, resilience – including how they will both monitor and use social media.

7.6 It is a testament to the quality of LRF partners that many of the plans are as effective as they are. Overall, however, there are improvements that can be delivered. The new guidance and planned resilience standard on flooding will help, as will the spreading of existing good practice by, for example, running regional seminars developed by those LRFs who have actually dealt with serious flooding and with broader peer-to-peer support. Extending national support measures, especially in the EA, also has the potential to deliver a step change in the quality of most of the less strong plans.

7.7 Overall, and notwithstanding the application of ‘Mission Command’ which allows each LRF to have the freedom to produce plans that reflect the realities/nuances of their areas, all plans should address and cover the same basic principles of flood emergency planning and comply with the new ‘standard’ for flood response planning – which should itself be included as a part of the series of such standards being introduced by the Cabinet Office and be used as a part of the assurance process.

7.8 The new Defra guidance now being developed should therefore not be too prescriptive – allowing for flexibility to reflect variation in different areas of the country; it must nonetheless set out clearly what the government expects LRF MAFPs to cover. This consistent ‘template’ will help with wide area incidents and cross-boundary collaboration, aid robustness and allow for easier peer review and assurance.

Recommendation

7.9 A new Cabinet Office ‘standard’, developed with Defra, should be introduced for flood response planning – and be used as a part of the (below) assurance process; and all MAFPs should address and cover the same basic principles of flood planning, as set out in the revised Defra guidance.

8. Assurance of flood plans

8.1 There is no consistent approach to assuring flood response planning, or for training and exercising; and the level of scrutiny, the seniority of sign-off and whether external parties are involved varies widely between LRFs. After discussions in the workshops and other meetings it is clear that:

- The 'regional' approach, as used by the Trent Catchment and East Coast Groups, bringing several LRFs together to share expertise and ideas has been very successful.
- Whilst in-house reviews of all plans by Management Groups/Boards is already the case in most LRFs, the need for some form of peer-to-peer assurance/review of plans every couple of years or so was widely acknowledged as being very helpful – using other LRFs and/or perhaps the EPC supported by the EA.
- Over and above this, the merit of an external 'body' – like Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS) – conducting a review every 3 to 5 years was also generally accepted as being necessary in order to raise the bar across the country.
- There is certainly scope for extending the EA's role. There is important input from most local EA staff, but there is no national co-ordination/consistency. A regional or national EA team acting as a cadre and advising and providing a consistent approach would add real value. EA regional directors might also play a role in assuring that plans cover flood risk adequately. See the section below on the EA for further details.
- There were various discussions on which other organisations could lead on the external assurance process e.g. MHCLG RED staff could be up-gunned to have a greater executive role; as resilience specialists they might prove to be more cost effective than setting up or expanding upon other inspectorates. But other options like Police and Crime Commissioners or HMICFRS were also considered to be viable options, although some questioned whether these latter bodies had sufficient expertise in flood planning – but that can be explored further.

8.2 Not surprisingly everyone agreed that any new system of assurance must avoid unnecessary 'red tape'. The aim is to raise standards without weakening LRFs with new administrative burdens or introducing 'threatening' inspection regimes.

8.3 Assurance should cover all aspects of planning, including the quality and coverage of written plans, training, exercising, leadership, roles and responsibilities and be designed to increase the quality and consistency of planning, highlighting where plans are in good shape or where they need improvement. This will increase transparency and make it easier for those not intimately involved in emergency

planning – including senior managers, councillors, MPs and the public – to understand and have confidence in the state of planning in their areas.

8.4 Whilst exactly how this assurance process is to be conducted needs further consultation, overall it should:

- Be consistent with the strengthened assurance processes being designed by the Cabinet Office for wider LRF plans as it would not be helpful to treat flood plans differently – a single assurance system that looks across the complete LRF picture is needed rather than a patchwork of systems.
- Distinguish between ‘internal’ assurance where individual LRF management boards gain confidence in their own plans before sign-off, and peer-to-peer and ‘external’ assurance giving confidence to those outside and beyond the LRF.
- Include the use of the new ‘standard’ proposed earlier in this review to assure both written plans and the mechanisms for training, exercising, learning lessons and updating – thus ensuring plans are continually ‘fit for purpose’.
- Ensure flood risks are adequately understood with plans for conveying emerging risks quickly and simply to response commanders in incidents so they know what to expect next and what action needs to be taken. This is an area where the EA could – and in my view should - play a strengthened role.
- Allow LRF Chairs to confirm how their funding is allocated / what their funding model is and whether there are any concerns in regards to this – and explain why they structure their LRFs the way they do.
- Be robust without being heavy handed. Whilst all plans should be of high quality and consistently apply the planning principles, individual LRFs are best placed to decide the details of how to apply the established principles – flood risk and local circumstances vary from place to place and there is no ‘one size fits all’ solution.

Recommendation

8.5 An agreed system of internal and external MAFP assurance needs to be established across the country.

9. The composition of LRFs – and the funding challenges

9.1 The clear advantage of LRFs is that they bring the right organisations round the table to plan for a wide range of resilience issues. They tend to structure themselves flexibly, using sub-groups as necessary to cater for the different levels of interest that individual Category 1 and 2 organisations have in different risks –

thus a sub-group in a pandemic flu situation will have different members from the equivalent group dealing with floods. That said, there are considerable differences in what 'cells' need to be established – and by when – covering such areas as operations, plans, logistics, data fusion, Category 2 responders, communications and dealing with the media, the use of volunteers, etc.

9.2 Inevitably I have tried to get a feel for LRF Command and Control (C2). In military parlance there is no designated system of C2 – most LRFs are chaired by senior Police Officers, who are clearly well placed to bring clarity and focus, and they often bring very effective and robust leadership, but more through coordination and cooperation rather than command – reflected in the naming of the SCG/TCGs as 'coordinating' bodies.

9.3 But, overall, when LRFs work well they can clearly work very well. This inevitably depends on the quality of leadership and the secretariat support, along with the commitment of partner organisations and the level of funding and resources contributed by those organisations. Amongst the many challenges they face, two are worth special mention.

9.4 First is that the organisations within them have many different geographical boundaries, so some might only have an interest in a part of an LRFs area whilst others may have an interest in more than one LRF area, or indeed all LRF areas. LRFs in England are based on the boundaries of 38 police force areas – however, there are:

- 45 FRS areas;
- 123 single tier authorities (e.g. unitary councils);
- 27 upper tier authorities (e.g. county councils in 2 tier areas); and
- 201 lower tier authorities (e.g. district and borough councils in 2 tier areas);
and
- 2 sui generis councils.

9.5 Other LRF members are national organisations, possibly split into regional divisions e.g. the EA and their 14 operational areas based on river catchments. Still others, including Category 2 responders like the large utility companies, span many LRF areas – some having 10 or more LRFs to support. As the utilities lead on protecting critical national infrastructure this is not unimportant!

9.6 Whilst some argued that this helps force the sharing of good practice the majority recognised the difficulties this brings. There can be no doubt that a consistency in the approaches to planning and the use of common standards/templates discussed earlier in the report would make managing operations and the provision of mutual aid across these confusing boundaries easier. Even then, and whilst the boundary issues are not easily resolved, the aim over time must surely be to make

them more coherent – particularly as more and more local authorities rationalise across the country in order to save money.

9.7 Secondly, the considerable inconsistency in the financial resources available and the associated LRF staffing levels. Resources in emergency planning and resilience across the piece vary widely – as do the resources available within the LRF itself.

9.8 The removal of ‘ring fencing’ from local authority budgets from 2010 gave local authorities more freedom of action with emergency planning budgets and – whilst some have increased their ‘land drainage’ and ‘lead local flood authority’ budgets – faced with overall budget cuts this has resulted in many moving funding away from flood preparedness and resilience – in some areas focussing only on meeting ‘statutory’ responsibilities.

9.9 Most of the organisations that form LRFs have therefore faced substantial reductions in available resources over the last few years, and the workshops confirmed that many have considerably fewer staff working on resilience than they had 10 years ago. There is a tremendous variety in established and funded posts, including how people are paid and what their roles are. Alongside this the workload in other areas of resilience has increased, sometimes leaving reduced time to work on flooding issues, although the situation obviously varies depending on the priority placed on flood response locally.

9.10 This said, some LRFs are relatively well staffed and budgeted, as in some cities and counties with CCUs funded by LRF partners, where dedicated staff are responsible for multi-agency resilience work. These CCUs have effectively drawn together staff into a central team, giving strong mutual support. Other LRFs are typically staffed by people that also have ‘day jobs’ in their individual organisations, with some run on a shoestring and having no permanent staff at all – which inevitably plays directly into the inconsistent level of MAFPs. But in all cases funding seems ad-hoc at best, with no long-term commitments – best summed up as an annual ‘crowd-funding’ approach.

9.11 It is worth noting that the CCU model has been explored in other areas yet has only been implemented in Staffordshire, Dorset and Manchester. This for a number of apparently valid reasons – including the complexities of local government structures, the lack of coterminous boundaries between LRF partners and the perceived increased costs – and, some argue, the greater ‘agility’ of other approaches which apply in their areas. Clearly any change should only be adopted where it can be shown to deliver real benefits – and that must be a ‘local’ decision – but it has to be said that the CCU model is a good way of mitigating the limited resource issue, and it is unclear to me at least why it can’t work elsewhere. But, even if it can’t, some LRFs could certainly work smarter by combining / coordinating city and county Emergency Planning teams or enabling closer

working between blue light and local authority Emergency Planning Officers – even if that is simply ensuring that they work together, preferably in the same location, on certain days of the week, if not full time.

- 9.12 This all said, there is a danger that the funds available to resource LRFs will continue to fall. There were therefore suggestions that the review should recommend certain minimum manning and financial levels standards for each LRF – with financial certainty guaranteed for a period of years. Whilst this should probably remain a local decision – again, there is no ‘one size fits all’ solution – I do think that the government should consider a national funding formula based on ‘core requirements’, the flood (and other) risks, and the population served by an LRF area to ensure more stable staffing levels and budgets; a 3-6 year funding policy would self-evidently enable better planning.
- 9.13 In the meantime, as noted above under assurance, LRF Chairs should confirm how their funding is allocated / what their funding model is and whether there are any concerns in regards to this – and explain why they structure their LRFs the way they do.
- 9.14 In 2009 the ‘East Coast Flood Group’ was formed as a forum to investigate and respond to the tidal surge risk between Northumberland and Kent. The group consists of flood planners, supporting agencies and national lead agencies sharing good practice and working together to improve the response to that tidal surge threat, and its value was proven after a minor surge event in 2013. Following the success of this group, a similar river ‘Catchment Group’ was formed in 2015 to bring together the 9 LRF areas sharing the River Trent and its tributaries. Both groups meet bi-annually and it is widely accepted that they have improved both preparation and cross-border co-operation for future flooding events. I for one was impressed!
- 9.15 The formation of multi-LRF ‘risk-based’ groupings, covering all LRFs in England, should therefore be encouraged. These groups should be risk-based – perhaps linked by a major river, a region or a stretch of coastline – as for the Rivers Severn, Ouse and Thames, for the North West, and additional coastal groups covering the West and South Coasts. The key to their success will be to find and support suitable ‘Chairs’ for each group, and ensure support by local/regional EA specialists.
- 9.16 The idea of appointing a dedicated flood planner to each LRF was widely discussed. The advantage a well-trained, full time specialist could bring – as opposed to someone working on flooding as part of a wider portfolio – is pretty self-evident. These dedicated flood ‘experts’ could attend additional training, perhaps alongside Fire/Flood Tactical Advisors, and work as a cadre, exchanging

information between themselves and taking time to visit national and other local exercises to develop skills and knowledge and share successful ‘structural’ models. They could also spend more time working with local specialists and others with an interest in flooding. The obvious candidate to find these dedicated planners is the EA, which I have discussed further under the section on the EA below.

Recommendations

- 9.17 Whilst the boundary issues are not easily resolved, the aim over time must surely be to make them more coherent. In the meantime, consideration should be given to implementing a national 3 to 6 year funding formula, based on ‘core requirements’, the flood (and other) risks and/or the population served by an LRF area.
- 9.18 The formation of flood-specific, multi-LRF ‘risk-based’ groupings, covering all LRFs in England, should be encouraged.

10. National funding and resources

- 10.1 Whilst local resilience budgets have reduced, central government spending on flood risk management has risen substantially over the last few years, largely in response to major flood events. The lion’s share of that funding has been put into building and maintaining capital funded, permanent flood defences such as walls, culverts and sea defences – the government investing £2.6bn from 2015-2021 on around 1,500 flood defence projects, in order to give increased protection to around 300,000 properties.
- 10.2 Spending on such flood defences is clearly very beneficial – but, apart from being very costly, it only protects certain communities from certain types of flooding and doesn’t, for example, largely help protect against the growing issue of surface water flooding.
- 10.3 A much smaller proportion of government flood money is spent on flood emergency planning and response, and most of that is via EA activities, with funding for Flood Incident Management covering forecasting, warning, planning and response. The balance between the funding of defences as opposed to that available to prepare for and respond to actual floods – including emergency pre-planning, training and exercising – is not easy, but in the light of the findings of this review I believe that there is a case for re-examining that balance, allowing flexibility in order to increase the amount of resource dedicated to LRF flood preparedness alongside an improved national ability to support them – bolstering preparedness to respond to large-scale flooding that could easily overwhelm local capability.

- 10.4 Even the transfer of a small percentage of current flood defence money would make a major difference to others at risk by improving local flood response capability – giving greater protection to many more communities than is reached by flood defence programmes alone. This is a particularly important issue to consider when thinking about future spending after the current 6-year funding period ends in 2021.
- 10.5 Local authorities may be more likely to commit to resilience following Grenfell – and indeed Salisbury – but sadly corporate memory often fades fast. It is therefore probably not sensible to put any new ‘soft’ flood money into non-ring-fenced, local authority budget pots as there is clearly a danger that it would end up being spent on something else – including wider resilience issues rather than flood resilience. But focussing some new funding through the EA to give more direct support and dedicated staff to local/regional LRFs would ensure the funds aren’t hijacked – and enable the EA to focus its flood response spend where it can make more difference to LRF/national capability.
- 10.6 It is noticeable that the EA does not generally contribute to LRF secretariat funds on the basis that they are a national organisation. A commitment from EA to fund a dedicated flood planner in each LRF would make a significant difference. It was also suggested that the EA could perhaps contribute to LRF budgets subject to matched funding from other responders!
- 10.7 Other funds could be used for community plan grants, flood training facilities, improvements to RD and other SCG/TCG facilities as targeted ways of improving flood resilience, generating significant positive effects.

Recommendation

- 10.8 The balance between the funding of defences as opposed to that available to prepare for and respond to actual floods should be critically examined to allow for greater flexibility and an increase in the amount of resource dedicated to LRF flood preparedness, bolstering preparedness to respond to large-scale flooding that could easily overwhelm local capability (see also the recommendation under the EA below).

11. Training and exercising – including the development of doctrine and the role of the Emergency Planning College

- 11.1 It is clearly very important that plans are not just pieces of paper that only the people who have written them understand; they need to be clear and make sense

to others too, and they need to be exercised regularly to prove their veracity. LRFs must therefore have a system of learning built into their operation, as well as training for and exercising their response – and then debriefing and delivering emerging lessons/improvements.

- 11.2 The EPC does run resilience courses, but most are generic – aligned to the national occupational standards for Emergency Planning and, somewhat ironically, there are no ‘flood’ specific courses. Much of their output is ‘internationally’ focused – and those generic training courses that are run for LRFs are proving too expensive for many local resilience budgets, although some LRFs have found a more economical solution by inviting EPC trainers to come to them and train multiple staff in one session i.e. adopting a ‘train the trainer’ approach.
- 11.3 Whilst at least one CCU is funded by its partners to invest in a suite of training aligned to National Occupational Standards and good practice to ensure local competence, there are no appropriate professional qualifications nor accredited training or associated CPD requirements for an appropriate curriculum. I was surprised at the relatively weak connections between the Emergency Planning Society (EPS) and the Institute for Civil Protection and Emergency Management (ICPEM) and the wider community of flood (and wider resilience) planners. These organisations do not currently maintain a significant profile in flood planning nor do they deliver a comprehensive training platform.
- 11.4 So, work is required to identify what good, affordable and accredited teaching and training packages – including online training and train the trainer packages – should be developed and rolled out to establish a minimum baseline standard, which should cover such areas as the use of RD, and be supported by an EA Cadre of trainers who can focus specifically on flood-related issues within the wider sphere of EPC doctrine, and help to deliver localised training.
- 11.5 Nor is there any specific ‘doctrine’ available. Doctrine is what is taught – ‘Principles and Procedures’ developed and then passed on to those who decide how to put these into ‘Practice’ and deliver the outcome. The Defence Concepts and Doctrine Centre (DCDC) at the Defence Academy does this for the military environment – producing a ‘family’ of publications covering British Defence Doctrine and the Design for Military Operations, along with specific Army Doctrine covering such issues as Command, Operations and Logistics, amongst others.
- 11.6 Owned by the Cabinet Office, it seems to me that the natural place for the equivalent in ‘Civil Resilience’ is the EPC, which should be monitoring and developing the latest thinking and capturing it in an equivalent series of ‘doctrinal’ documents – and then teaching and accrediting it; and, as discussed above, using it as a part of the assurance process. There are of course other providers in this space, such as the Fire Services College who deliver the MAGIC training, but the

EPC should become the intellectual home for flood response planning doctrine, and act as the centre for the development of Resilience Doctrine in the round, including floods, and the training of local responders, and it should re-focus back onto the needs of the LRFs.

- 11.7 This would include the development of coherent and consistent 'Principles' – like unity of effort, decentralisation, trust, mutual understanding, timely and effective decision making – alongside associated procedures like national 'protocols', Standard Operational Procedures (SOP's), national response 'templates' for mutual aid within and between LRF's, including how asset owners, like the FRS and utilities, deploy assets.
- 11.8 Teaching on the 'Practical Application' of those principles and procedures would then cover everything from what a 'good' MAFP looks like; how LRFs operate (including what cells to establish in operations rooms, by when), the use of RD and JESIP (which is widely well thought of but continues to need educating), how to deal with recovery as well as response, etc. The development of Risk Assessment Methodologies would also help LRFs to support business cases when competing for funds.
- 11.9 Exercise budgets have suffered in recent years, so on many occasions LRF exercises have been of limited scope and emerging actions may not always have been followed through as not all agencies are resourced to attend de-briefs or implement the required actions. The culture in both the LRF and individual agencies can also restrict an open and honest debate between organisations, and the construct of an LRF can make it difficult for individuals to 'enforce' change in the various agencies.
- 11.10 The FRS currently deliver Flood Tactical Adviser training on behalf of Defra, and many LRF-related organisations are conducting their own training in house – the single agency training for police commanders and FRS swift water rescue teams, along with appropriate training for military personnel on stand-by, being good examples. The funding does, however, appear ad hoc; conducting a training-needs analysis and formalising training and associated funding may well bring greater benefit.
- 11.11 Other examples of good practice include the recent Trent Catchment Group 3-day exercise, which pooled the resources of its 9 LRF areas to conduct a shared exercise at minimal cost. This gave better value for money, produced excellent results by engaging most, if not all, Category 1 and 2 responders, plus MHCLG officials and the military, and added far more realism on how a major flood develops with different impacts in different areas generating varying resource demands between LRFs. There is an aspiration to run similar exercises every 3 years using the Trent Catchment Group members as the planning group.

- 11.12 There has been no Tier 1 national flood exercise since Exercise Watermark back in March 2011; this obviously makes it harder for LRFs to train for very large scale, enduring floods – the worst case scenario. After the Trent exercise it was clear that a 3 yearly cycle of Catchment exercises was optimal, with table-top and county training carried out as a build up to the wider exercise. Allowing for at least a year to 18 months for other such Catchment Groups to form and bed in (and run their own ‘in-house’ exercises) – as recommended in this review – future Tier 1 exercises could perhaps be looked at differently – perhaps involving as many catchments as thought appropriate or realistic.
- 11.13 Overall, it seems to me that there should be a clearly laid out and publicised annual programme of flood exercises across England (indeed the UK) so that LRFs across the country can engage and send observers. The programme can be linked into the assurance process to test plans, particularly at weekends/stand downs, and include a mixture of individual LRF ‘table-top’ Command Post-Exercises and cross-LRF border exercises i.e. a series of locally run Catchment-based exercises, held separately or in tandem with other Catchments. Apart from anything else, this could well negate the need for expensive, consultant-provided, exercises. All such exercises should be programmed to include working with national agencies to better understand how to secure their resources.

Recommendations

- 11.14 The EPC should become the intellectual home for flood response planning doctrine, and act as the centre for the development of resilience doctrine in the round, including floods. It should re-focus back onto the needs of the LRFs, and develop affordable and accredited training programmes for local responders.
- 11.15 There should be a clearly laid out and publicised annual programme of flood exercises across England (indeed the UK) and a review of how national Tier 1 exercises are conducted once LRFs have had time to amend their MAFFPs in the light of the new guidance and new Catchment Groups have been established.
- 11.16 A training-needs analysis of the FRS delivered Flood Tactical Adviser training on behalf of Defra should be conducted in order to formalise funding.

12. National flood response capability

- 12.1 In addition to the role of central government departments such as Defra and MHCLG, the National Co-ordination Advisory Framework (NCAF) for national FRS response and coordination is the lead on coordinating national response and providing support to SCG/TCGs. This has been tried and tested over numerous national incidents – as in the Somerset floods.

12.2 The National Resilience Fire Control (NRFC) monitors and allocates national assets to national incidents and has a live register of National Resilience (NR) assets – such as High Volume Pumps, flood rescue and boat equipment, including non-FRS Defra assets. The NR team – including the National Strategic Advisory Teams (NSAT's) have a role across the country assisting in the coordination of major national deployments, including those for floods. In addition, an operations room is available as part of the NR response to assist with the national response of FRS and some non-FRS assets.

12.3 Overall, there has been a significant investment in national resources to help bolster local flood response capability over the last few years, including improvements in:

- Flood forecasting and warning capability – England has a state-of-the-art flood forecasting capability in the EA, the Met Office and the Flood Forecasting Centre. Flood guidance statements are sent daily to around 2,500 front line responders, giving 5-day warnings of river and coastal flood events and surface and ground water flooding and, along with it, the ability to warn and inform people and responders about potential flooding.
- Flood prevention measures, with fixed defences giving increased protection to 300,000 homes over the period 2015-21.
- The development of the National Flood Asset Register, run by the FRS on behalf of Defra, which oversees over 100 specialist flood rescue teams and equipment on standby to be deployed across the country.
- EA response capabilities – with 6,500 surge staff trained and ready to respond. And over 500,000 sandbags, 25 miles of temporary flood barriers and 250 mobile pumps now available at depots and ready to be moved to where they are needed; a total investment of £12.5 million.
- Technology – including national IT capabilities like RD – and developments in drones, etc.
- Military assistance – with three army battalions with a total of up to 1,200 soldiers on 24-hour standby, and assets such as helicopters/vehicles being made available.
- The FRS ability to put a large number of boots on the ground with tactical specialists; their National Asset Register and resilience capability – including the High Volume Pumps, Defra Boat assets, Command and Control capabilities, enhanced Logistic Support, etc referred to above – along with other national assets.

12.4 Given that we face an increasing and harder to predict flood risk, including potentially unprecedented rainfall and surface water flooding over the coming years, we clearly need to continue to invest in flood forecasting and warning capability. Holding key assets at the highest level and then deploying them to

where they are most needed as a focused surge capacity makes the best use of scarce national resources in unpredictable and fast moving flood situations – and that capability should be enhanced.

- 12.5 This said there is clearly some confusion on how these various resources can be called upon; establishing common ‘triggers’ that draw in X-boundary and national assets would help.

Recommendation

- 12.6 The government should continue to invest in flood forecasting and warning capabilities and in rapidly deployable national assets – including those held on the National Asset register established by the Fire and Rescue Services (FRS). LRFs need to have a better understanding on how to access these assets.

13. The Environment Agency

- 13.1 Whilst any national organisation will have a mixed reputation, there was almost universal support for the EA as the key flood-specialist organisation operating at the national and local levels, with many making very positive suggestions about its future development.
- 13.2 The EA best understands the overall flooding landscape, and it holds the intellectual firepower and expertise in modelling, forecasting and warning along with the Met Office. At national level, it oversees all flood risk in England and its staff attend COBR for major flood incidents. It oversees the government’s programme of ‘hard’ flood defence spending, co-staffs the Flood Forecasting Centre with the Met Office and maintains flood response assets such as the temporary flood barriers that can be deployed nationally. Overall it has around 10,000 staff – around 6,500 of them flood-trained and able to provide surge capacity, with many operating locally but capable of being seconded to bolster other regions during flooding.
- 13.3 The EA is a Category 1 responder under civil contingencies legislation; there are directors responsible for operations in each of their 14 areas and, at local level, EA staff are partners in every LRF. It therefore already plays a leading role in guiding LRF flood planning, although the level varies between LRFs and it is clear that there is a significant opportunity to reinforce success and extend their current ‘reach’ in order to help increase standards and consistency.
- 13.4 Flood risks need to be adequately understood, and plans should ensure that risks can be conveyed quickly and simply to response commanders in incidents so they know what to expect next and what action needs to be taken. The idea of

appointing a dedicated EA flood resilience advisor/planner to each LRF – or one per CCU, coastal or other Catchment Group was widely discussed. The advantage of a well-trained, full time specialist as opposed to someone working on flooding as part of a wider portfolio is pretty self-evident. These senior EA flood resilience advisors would need to be carefully selected and trained, and be permitted wide access to key staff in CCS and Defra, plus EPC and associated professional bodies. In consultation with regional directors they could appoint more junior EA staff to chair or act as subject matter expert to each county flood planning group, leaving them to work at a higher level across their area of responsibility to ensure that all LRFs (up to 9 per Catchment group) are well prepared, funded, equipped, trained and exercised – thinking beyond their organisational boundaries and developing better engagement with national agencies, and promoting RD.

13.5 A cadre of these dedicated flood accredited senior planning/incident flood experts could therefore:

- Work with local specialists and others with an interest in flooding, providing a single point of contact for the LRFs – helping to build capacity and capability.
- Provide advice to – if not lead on – policy and guidance for LRF multi-agency flood preparedness and planning for all types of flood risks in their areas – river, sea, surface, groundwater and reservoir.
- Develop close relations with LRF partners at operational, tactical and strategic levels, and support the audit/assurance mechanisms, and joint training and exercising. As noted earlier, EA regional directors could also potentially sign-off MAFPs.
- Help with the management of incidents, providing flood expertise/technical advice to the chairs of SCG and TCGs. A Scientific & Technical Advice Cell (STAC), focusing upon flooding – with one of the EA cadre potentially leading it instead of Public Health England – could also deliver a higher level of technical support to flood response.
- Recognising that the resilience standard for LRF Governance states that good practice is achieved by an LRF having ‘a clear, defined and formal process for appropriately training LRF secretariat staff’, provide support to that secretariat and/or any flood-planning group, perhaps acting as the deputy chair of the flood group when major floods hit.
- Attend additional training, perhaps alongside Fire/Flood Tactical Advisors,
- Champion the spreading of best practice nationally, and drive consistency and interoperability. Working as a cadre, exchanging information and taking time to visit national and other local exercises to develop skills and knowledge,
- Help deliver localised training and share successful LRF ‘structural’ models.

13.6 As noted earlier, compared to the funds put into ‘hard’ capital funded defences a relatively small proportion of government flood money is spent on flood emergency

planning and response. Most of that is via EA activities, whose baseline funding in the 2015 Spending Review for flood management, covering forecasting, warning, planning and response was £28m, reducing year on year during the Spending Review period to £23.8m in 2019/2020. Giving the EA some flexibility with the allocated 'hard' funds to allow them to give more direct support/dedicated staff to local/regional capability would focus its flood response spend on to where it can make most difference to LRF as well as national capability.

Recommendation

13.7 The current role of the EA should be expanded to give it greater reach and enable it to provide additional direct support to LRFs. It should also be allowed greater flexibility on balancing spending between flood defences and flood emergency planning and response.

14. Military

14.1 Recent events have shown that 'Homeland Resilience' is becoming an increasingly important aspect of Defence in the round. Rightly the military are not seen as a first responder, but there have been a number of important changes in MACA policy over the last few years, and the relationship between the military, the civil authorities and other responders is clearly strong – both upbeat and engaged.

14.2 The twice-yearly, one-and a half-day 'capability and planning' courses co-ordinated by the MOD but delivered by the HQ of the Standing Joint Commander (UK) (HQSJC(UK)) – which are free – are well attended, highly thought of and appreciated. The role of the HQ SJC (UK) in Aldershot as a Resilience – rather than a Defence – HQ, supported by the Army's regional point of command HQs and complemented by the short notice availability of three Resilience trained stand-by Battalions, each 400 strong is now better understood as a result of this ongoing programme of education. As a result, this has given SCG chairs and LRFs the confidence to ask for them to be deployed, and the MoD are comfortable about being asked to do so.

14.3 The network of JRLO's, complemented by RNRLOs and RAFRLOs, is much in evidence and widely appreciated. The longevity of the relationships between these LOs and LRFs enables them to help pull together and/or 'red team' plans, exercises, etc. On the face of it the mix of RN, Army and RAF LOs is a little ad-hoc and their terms and conditions of service are certainly very different. These are important posts and they need to be filled by those who are comfortable working in this environment.

Recommendation

14.4 The network of RN, Army and RAF Liaison Officers should be strongly supported and strengthened wherever possible.

15. Legislation, guidance and accountability

15.1 Civil contingencies legislation requires Category 1 responders to assess risks in their areas, and to maintain plans to prevent and respond to emergencies. They must ensure that staff are trained and that plans are exercised and kept up to date. It is left to the discretion of LRFs whether emergency plans are generic e.g. major incident plans or specific e.g. flood plans. Category 1 responders must also consider whether to collaborate with others to produce multi-agency plans. Whilst current Government guidance 'encourages' LRFs to have MAFPs, particularly where flooding is included as a high risk on community risk registers, it isn't clear to me whether they are actually 'accountable' for producing those plans under the civil contingencies act, or indeed if there is any legislative requirement for LRFs to have them at all.

15.2 I don't claim to understand the niceties of the distinctions between Statutory, Mandatory, Advisory, Guidance, etc but, notwithstanding the above, there doesn't seem to be any one organisation – or indeed individual – ultimately accountable for ensuring effective flood planning/response. Accountability equals authority plus responsibility – and the current division of authority and responsibility between local councils and authorities, the EA, water companies, highways authorities, etc, etc is complex to say the least. This is of course an issue that goes much wider than just flooding – it is fundamental to the whole civil contingencies approach. It might well be acting as a disincentive for organisations and their leadership to ensure adequate planning – and why some feel they can reduce the financial and other resources allocated to resilience and get away with it.

15.3 The role of the FRS in statutory duty of flood response has been set in the Devolved Administrations, but not England. Recommendation 39 of the Pitt Review stated that: "the Government should urgently put in place a fully funded national capability for flood rescue with Fire and Rescue Authorities playing a leading role, underpinned as necessary by a statutory duty".

15.4 The bottom line in all of this, it seems to me, is that in today's world any Board of Inquiry following on from a serious loss of life will inevitably want to know what the planning and response 'chain of command' looked like and who ultimately should be held accountable. That is currently far from clear.

15.5 This said there is a large body of current government legislation, guidance and reports on resilience, including specific guidance on MAFPs; I haven't listed it all here! It is human nature to believe that regulations/rules need to be tough, but targets and regulations can simply become a way of doing things at least cost; and providing a 'checklist' of all that is required stands in danger of producing unexpected behaviours and unintended consequences. Whilst Cabinet Office guidance should flow down through Defra, alongside their further guidance to the LRFs, imposing too many regulations all too often just makes things too complex and the purpose behind them becomes blurred.

15.6 Defra is reviewing the 2011 MAFP guidance as a part of this review, and the Flood Rescue CONOPs is also being looked at – but a wider review of documentation and, where possible, consolidation, would help reduce the load on LRFs and others considerably!

Recommendations

15.7 Greater clarity is required on the issues of who is ultimately accountable on resilience issues and outcomes.

15.8 Along with the updated MAFP guidance being produced as a part of this review, a wider review of documentation and guidance and, where possible, consolidation would help to reduce the load on LRFs.

16. ResilienceDirect (RD) and emerging technologies

16.1 Over the last few years there have been many advances in technology that have potential to help (and in some cases complicate) emergency planning and response. There was strong support from LRFs for RD, which was launched on 27 March 2014 and now serves over 32,000 people in the resilience sector. It is very unusual – but encouraging – to hear about a successful government IT system!

16.2 An internet-based platform 'owned' and operated by a small team from the Civil Contingencies Secretariat in the Cabinet Office to help resilience professionals share information locally, RD is an adaptable tool that can – and should – be enhanced as technology develops over the coming years. Many of the national and regional organisations, including government departments and agencies and large Category 2 responders, commented that it is not as useful for them as it could be, particularly in response. There was a widespread view that RD is still a bit 'clunky' and a 'work in progress' and that more can be done to ensure it reaches its full potential. The team running RD is well aware of most of the issues, which include:

- As an information-sharing platform, RD has real strengths for use at the local level but many commented that it is not intuitive to use and that they are not making best use of it.
- There is considerable misunderstanding over data protection and other security restrictions. Users must be at the heart of RD; in principle therefore, all information on it should be accessible to all registered partners and responders without restriction – unless there is a good security reason not to do so.
- The need to improve situational awareness at the multi-LRF/regional/national level, allowing adjacent LRFs, national responders and COBR to get a broader, regional and national overview, without having to add together data from multiple individual LRF areas, which is time consuming and repetitive.
- Investing in the mapping functionality to enable better visualisation of flood impacts across sectors and provide common situational awareness and operational picture – particularly flooded properties and vulnerable people at risk.
- Mandating the requirements for data and information for the response and recovery phases – laying out what reports are needed, and by when; including standardised Situation Reports, National Response templates, etc to support the Battle Rhythm and to support COBR. As I understand it, work has apparently still to be done to clarify how COBR and national response interlinks into the Concept of Operations for the National Flood Response Centre.
- Agreeing national ‘protocols’ and SOPs, some low level – like the consistent naming of files so everyone knows what they are, which will allow for greater cross LRF collaboration and mutual aid arrangements.
- The need for Government departments to devote more time in making sure their RD pages are up to date and are as helpful as possible – including Defra.
- Upgrading its ability to take large files, such as drone and helicopter video imagery.
- Establishing the flooded properties tool– which needs further development.
- Further investment to develop response, tasking and logging modules.
- RD becoming the ‘key holder’ of the audit trail.

16.3 Many emergency responders are not sufficiently trained in using RD. Trained and dedicated RD staff need to be assigned to every SCG/TCG during responses to floods – particularly large and very large scale – to ensure the proper management of RD systems. Constantly loading and updating data and information is time consuming, but is essential to ensure clarity rather than confusion. The Cabinet Office should therefore ‘encourage’ – if not enforce – sign up by all partners and each LRF should have a well-trained RD ‘expert’ dedicated to managing their site

as the local administrator, keeping data/information up to date before and during flood events, and tracking developments in neighbouring LRFs.

16.4 A representative from the RD team should obviously try to attend LRF exercises to ensure that they are kept fully aware of how the system is being used – and how it can be improved. But I understand that specific RD training will be charged from April 2018 – which seems to me to be self-defeating.

16.5 Other emerging technologies include:

- Communications tools – smart-phones and teleconference facilities make it easier to talk, with Social Media now forming an important method of communication and needing to be embraced.
- Drones are now an established way of viewing emergency situations, making it easier to view impacts etc.

16.6 This all said, the point was made in several workshops that in this age of Cyber warfare we need to be careful not to become overly reliant on technologies – old or new – that might fail during an incident. Reliance by emergency managers and workers on RD, Wi-Fi, broadband, wireless telephones, etc. is likely to continue to increase over coming years, but more thought needs to be given to back-up plans if access to some/all IT is lost. This already happens in exercises, and it happened for real at the Tadcaster Bridge flooding, and there is clearly the potential for it to happen in major incidents.

Recommendation

16.7 To become the backbone of national resilience – providing a single, coherent ‘golden thread’ picture running from local level (the ‘teeth’) up to COBR (the ‘tail’) – continuing investment in RD is needed. It should hold all the data and information that produces the intelligence and hence the knowledge that enables decisions to be taken at local, regional and national level – with appropriate backup capabilities.

17. Community resilience and the use of volunteers

17.1 When flooding hits there are various levels of response. Level 1 includes individuals and households in the local community, and the network of volunteers/voluntary organisations. Level 2 is the area LRF, supported by the wider, regional responders. And Level 3 provides the national resources and additional surge assets. Whilst a great deal of effort has gone into improving levels 2 and 3, I was surprised at the wide variance in level 1 engagement – who, in all large scale, wide areas incidents could well form a crucial part of the response resources available in all phases – acute, stabilisation and recovery.

- 17.2 The community response to previous flooding events across England, alongside events like Grenfell, Salisbury and many others here in the UK and elsewhere – as in the USA and the floods in New Orleans as a result of Katrina – are evidence of the power of communities. Whilst the will to organise community resilience must generally come ‘bottom-up’ from within the communities themselves – and the motivation to do so is obviously higher in communities that often flood and much lower in places where they think it won’t happen to them – it can be encouraged through committed LRF leadership. Making it clear that such engagement is welcomed from the ‘top-down’, and that LRFs both want and need it across the whole resilience ‘spectrum’, not just in times of flooding, is crucial.
- 17.3 As I understand it, Local Councils are best placed to lead on registering and coordinating voluntary organisations (although this doesn’t always seem to happen), but either way some LRFs and communities have clearly done a lot to take joint ownership of their flood – and indeed wider resilience – risk. This includes working with local government, councillors and MPs to create a reinforced multi-agency community approach, with flood wardens, organised groups, community help for vulnerable people, local property flood protection schemes, etc. But other communities and LRFs have seemingly done relatively little, and they could certainly learn from the front-runners and copy their approach.
- 17.4 I was impressed by a number of volunteer organisations that attended the regional discussions, but struck by the very different attitudes towards them! Some LRFs were very closely engaged and had established positive relationships. In some cases (like Bedford and Cumbria) there was a volunteer ‘chair’ appointed to act as a single point of contact for all volunteers, pulling together a ‘command and control’ structure to ensure that they were effectively ‘under command’ and that their skills were made best use of – effectively linking ‘communities to COBR. Hampshire has about 100 local plans in place, and some category 1 and 2 responders have contracts or MOUs with the voluntary sector.
- 17.5 On the other hand there was lots of discussion about the general suspicion and lack of trust between communities and their ‘officials’, and the associated difficulties of using volunteers, essentially ranging from seeing them as just too difficult to corral to genuine concerns about safety and the associated insurance and legal issues. The management of ‘spontaneous’ volunteers is clearly difficult, so relationships need to be established before an incident occurs – make friends before you need them!
- 17.6 Volunteers come in a variety of guises. There are the well-established nationally governed organisations like volunteer search and rescue groups - upon which the emergency services are increasingly dependent during flooding events – and the RNLI, Mountain Rescue, Red Cross, Salvation Army, etc, alongside others like Team Rubicon and the Wessex 4x4 Response volunteers. At the other end of the

spectrum are 'spontaneous' local individuals. Whilst the latter in particular can be ad-hoc, there is good work being done to bring about better collaboration across the volunteer/charity sector – both by the British Red Cross and the Charity Commission. They have recognised that scale, complexity and public expectations mean that the sector needs to adapt and maximise its capability and capacity in both response and recovery – including fund raising and distribution.

17.7 Community plans need clarity on what individual households and communities – including local businesses – can usefully help with. Bringing together local community resilience can clearly be difficult, with Urban 'Wards' usually harder to deal with than Rural Parish Councils, and LRFs do need to be careful not to deplete already stretched resources; but there are many potential support and nurture groups that can be used to broaden the volunteer base. The UK as a whole is blessed with a wide range of organisations that are a part of many communities – local church networks, Rotary, Lions and school-based groups, alongside other self-defining Parish Council and community groups and networks; and they need to be seen as friendly forces – not the enemy! If well understood and handled their engagement can save Category 1 responders time and resources – and there are various Defra and EA initiatives available to call upon, like the Defra-led PFR Roundtable which is working to enable people at risk of flooding to take action to reduce the consequences of flooding on their homes so that they get back in sooner.

17.8 Central government also needs to promote and encourage greater personal resilience – not just in relation to flooding but also wider civil emergencies. There should be a consistent national approach to building Level 1 community resilience – with protocols and clarity on such issue as health and safety and insurance. Community and voluntary capabilities should be built into all MAFPs, and be embedded into strategic, tactical and operational responses in all phases – including future prevention. All LRFs should therefore aspire to constructing a Level 1 plan, making use of well-established voluntary organisations as well as local capabilities – and incorporating the various Defra and EA initiatives. Regional Flood Committees should also be encouraged to direct funding/grants towards community initiatives to enable people and communities to help themselves and 'bounce back' quicker.

Recommendations

17.9 There should be a consistent national approach to building Level 1 personal and community resilience. Links with the voluntary and charitable sector need to be strengthened, with established national protocols and clarity on such issues as health and safety and insurance.

17.10 Regional Flood and Coastal Committees should be encouraged to direct funding/grants towards community initiatives to enable people and communities to become more resilient, and 'bounce back' quicker – with appropriate oversight and scrutiny of how funding/grants are distributed to avoid duplication of effort.

18. Surface water flooding

18.1 Responsibility for surface and ground water flooding was raised in quite a few of the workshops, with much confusion clearly in evidence. In 2010, the Flood and Water Management Act apparently changed the way that they are managed, with lead responsibility being allocated to Lead Local Flood Authorities (counties and unitaries) working in partnership with organisations that control drainage and organisations that control the decisions that directly affect surface water flood risk i.e. highways authorities, water and sewerage companies, district councils, the Environment Agency and internal drainage boards.

18.2 I can only assume that there was a good reason for this move, and I am aware that Defra is conducting separate work on non-emergency handling of surface water flood risk – due to report in May/June 2018. My work here has not addressed any 'non-emergency' issues, but concentrated on the emergency planning and response aspects of these risks and, in such circumstances, I can see no reason why surface and ground water should be treated any differently to other types of flood risk.

18.3 The 'new' system seems to have brought confusion as to where responsibility lies – particularly to the public and businesses, neither caring too much what the source of flooding is. It is also confusing because river and surface water flooding can happen together and the separation is stopping the normal tried-and-tested approaches for river and sea flooding from operating to their full effect. To ensure that communities are protected by the full range of flood response organisations and expertise – regardless of the type of flooding – there seems to be a need to clarify the responsibilities of local councils/authorities, the EA, water companies, highways authorities, etc.

18.4 I recognise that investing in surface water forecasting capability could well require considerable expense – funds that may be better invested in prevention, planning or supporting property level resilience measures. But, in the context of this review, perhaps the scale of surface water flooding could be the differentiator, with prevention of and dealing with smaller scale flooding being the responsibility of local authorities, but large-scale flooding, where the public is at significant risk, leading to the deployment of a full flood response. It has to be said that in such events all response organisations would presumably choose to respond anyway –

and the EA are of course a Category 1 responder– but it would be wise to establish greater clarity of legal / statutory responsibilities.

Recommendation

18.5 Responsibility for emergency planning/response for surface and groundwater flooding should be brought into line with main river and coastal flooding which is currently the responsibility of the EA.

Annex A – Terms of Reference

The terms of reference (ToRs) for the MAFP Review were drafted in consultation with Defra, EA, DCLG and CO. They were published on the GOV.UK website on Friday 3 November 2017 at: <https://www.gov.uk/government/news/multi-agency-flood-plan-mafp-review-terms-of-reference>

The MAFP Review is a Defra and Environment Agency review initiated by the Secretary of State for Environment, Food and Rural Affairs.

The review will be led and overseen by an independent external reviewer, Major General Tim Cross CBE (retired). General Cross will be supported by a steering group of external experts in resilience and emergency planning, including from LRFs.

The review will address the question, 'Do LRFs have robust plans in place to respond to flooding incidents in their respective areas?' It will have three work streams:

- Work stream 1: Assessment of current MAFPs. This will be taken forward by the EA. It will involve the assessment of around 30 strategic flood plans and over 600 tactical flood plans related to specific districts and communities.
- Work stream 2: A qualitative review led by the external reviewer, supported by Defra and the EA. This will involve visiting LRFs, identifying good practice, identifying issues and obstacles, and forming views and recommendations on the way forward including criteria for new guidance.
- Work stream 3: Revision of Defra guidance to LRFs on how to produce good MAFPs, taking into account lessons learnt and experience since 2011 when the guidance was last reviewed. This will be undertaken by Defra and the EA, overseen by the external reviewer.

The review is due to be completed by the end of May 2018, culminating in the publication of revised guidance and a report of findings.

The external reviewer will be supported throughout by Defra and Environment Agency staff. It is envisaged that the external reviewer's focus would be primarily on work streams 2 and 3.

Annex B – members of the Advisory Group

Members included senior figures from LRFs representing the Police, Fire and Rescue, local authorities, the military and regions of England.

- **DCC Paul Netherton:** Paul is Deputy Chief Constable for Devon and Cornwall Police. He is the National Police Chiefs Council (NPCC) lead on local resilience and severe weather (including LRFs and flooding). He also chairs the Devon, Cornwall and Isles of Scilly LRF.
- **Alan Bravey:** Alan works for East Riding of Yorkshire Unitary Authority. He chairs the National East Coast Group, a coalition of LRFs working on coastal flood risk planning. He is the Chief Emergency Planning Officer for Humberside LRF.
- **ACFO Rob Davis:** Rob is Assistant Chief Fire Officer for Avon. He is the National Fire Chief Council (NFCC) lead for flooding for England. He is also deputy chair of Avon and Somerset LRF.
- **Caroline Douglass:** Caroline is the Director of Incident Management at the Environment Agency
- **Neal Evans:** Neal is Suffolk County Council's Emergency Planning Manager. He is also a member of the National East Coast Group.
- **Lt Col Andy McCombe:** Andy is the MoD Joint Regional Liaison Officer for the East Midlands. He chairs the Trent Catchment Flood Group that brings together 9 LRFs to engage on flood planning.
- **Bethan Morgan:** Bethan is Director of Staffordshire Civil Contingencies Unit. She has advised the Local Government Association on emergency planning for over 10 years.
- **Tim Murrell:** Tim has 28 years' experience within Lancashire Fire & Rescue Service, with many years spent as the emergency planning lead. He has experience from many flood events. He is a member of the UK International Search & Rescue Team and an EU Civil Protection Expert, qualified to act as an expert for overseas disasters including floods.

Annex C – Organisations involved in flood response planning

LOCAL RESILIENCE FORUMS (LRFs)

LRFs bring together Category 1 and Category 2 responders to discuss and help plan different types of emergencies.

CATEGORY 1 RESPONDERS

Organisations with statutory duty to plan for and respond to emergencies: During incidents, these organisations form the core of strategic/tactical/recovery coordination groups (SCGs/TCGs/RCGs)

Police

Normally chair multi-agency SCGs/TCGs to coordinate in response phase

Local authorities

Normally chair multi-agency Recovery Co-ordination Groups in recovery phase

Fire and Rescue Service

Environment Agency

Flood forecasting, warning and response role + preparing and repairing flood defences

Ambulance

Other Category 1s

incl Public Health England, NHS England

Maritime and Coastguard Agency

CATEGORY 2 RESPONDERS

Organisations with a statutory duty to co-operate with Category 1 responders on emergency planning and response:

Utility

companies

Water/sewerage, electricity/gas, telecoms

Transport companies/organisations

Network Rail, train operating companies, TfL, Highways England, London Underground, airport operators, harbour authorities

Other Category 2s

Health and Safety Exec, Office for Nuclear Regulation, parts of NHS

OTHERS WHO MAY BE INVOLVED IN PLANNING AND RESPONSE

FORECASTING & WARNING

Met Office

Flood Forecasting Centre

Local radio & TV

Internet, social media

RESPONDING

Military

Government agencies

Major drain owners

e.g. water companies, internal drainage boards, highways authorities

Voluntary and community groups

e.g. RNLI, mountain rescue, red cross, local flood groups, 4x4 Response

Annex D – summary of recommendations

7. Written flood plans

7.9 A new Cabinet Office ‘standard’, developed with Defra, should be introduced for flood response planning – and be used as a part of the (below) assurance process; and all MAFPs should address and cover the same basic principles of flood planning, as set out in revised Defra guidance.

8. Assurance of flood plans

8.5 An agreed system of internal and external MAFP assurance needs to be established across the country.

9. The Composition of LRFs and the funding challenges

9.17 Whilst the boundary issues are not easily resolved, the aim over time must surely be to make them more coherent. In the meantime, consideration should be given to implementing a national 3 to 6 year funding formula, based on ‘core requirements’, the flood (and other) risks and/or the population served by an LRF area.

9.18 The formation of flood-specific, multi-LRF ‘risk-based’ groupings, covering all LRFs in England, should be encouraged.

10. National funding and resources

10.8 The balance between the funding of defences as opposed to that available to prepare for and respond to actual floods should be critically examined to allow for greater flexibility and an increase in the amount of resource dedicated to LRF flood preparedness, bolstering preparedness to respond to large-scale flooding that could easily overwhelm local capability (see also the recommendation under the EA below).

11. Training and exercising

11.14 The EPC should become the intellectual home for flood response planning doctrine, and act as the centre for the development of resilience doctrine in the round, including floods. It should re-focus back onto the needs of the LRFs, and develop affordable and accredited training programmes for local responders.

11.15 There should be a clearly laid out and publicised annual programme of flood exercises across England (indeed the UK) and a review of how national Tier 1 exercises are conducted once LRFs have had time to amend their MAFPs in the light of the new guidance and new Catchment Groups have been established.

11.16 A training-needs analysis of the Fire and Rescue Services (FRS) delivered Flood Tactical Adviser training on behalf of Defra should be conducted in order to formalise funding.

12. National flood response capability

12.6 The government should continue to invest in flood forecasting and warning capabilities and in rapidly deployable national assets – including those held on the National Asset register established by the Fire and Rescue Services (FRS). LRFs need to have a better understanding on how to access these assets.

13. The Environment Agency

13.7 The current role of the EA should be expanded to give it greater reach and enable it to provide additional direct support to LRFs. It should also be allowed greater flexibility on balancing spending between flood defences and flood emergency planning and response.

14. Military

14.4 The network of RN, Army and RAF Liaison Officers should be strongly supported and strengthened wherever possible.

15. Legislation, guidance and accountability

15.7 Greater clarity is required on the issues of who is ultimately accountable on resilience issues and outcomes.

15.8 Along with the updated MAFP guidance being produced as a part of this review, a wider review of documentation and guidance and, where possible, consolidation would help to reduce the load on LRFs.

16. ResilienceDirect and emerging technologies

16.7 To become the backbone of national resilience – providing a single, coherent ‘golden thread’ picture running from local level (the ‘teeth’) up to COBR (the ‘tail’) – continuing investment in RD is needed. It should hold all the data and information that produces the intelligence and hence the knowledge that enables decisions to be taken at local, regional and national level – with appropriate backup capabilities.

17. Community resilience and the use of volunteers

17.9 There should be a consistent national approach to building Level 1 personal and community resilience. Links with the voluntary and charitable sector need to be strengthened, with established national protocols and clarity on such issues as health and safety and insurance.

17.10 Regional Flood and Coastal Committees should be encouraged to direct funding/grants towards community initiatives to enable people and communities to become more resilient, and ‘bounce back’ quicker – with appropriate oversight and scrutiny of how funding/grants are distributed to avoid duplication of effort.

18. Surface water flooding

18.5 Responsibility for emergency planning/response for surface and groundwater flooding should be brought into line with main river and coastal flooding which is currently the responsibility of the EA.