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UK Resilience Lessons Digest

Learning to Read Risks

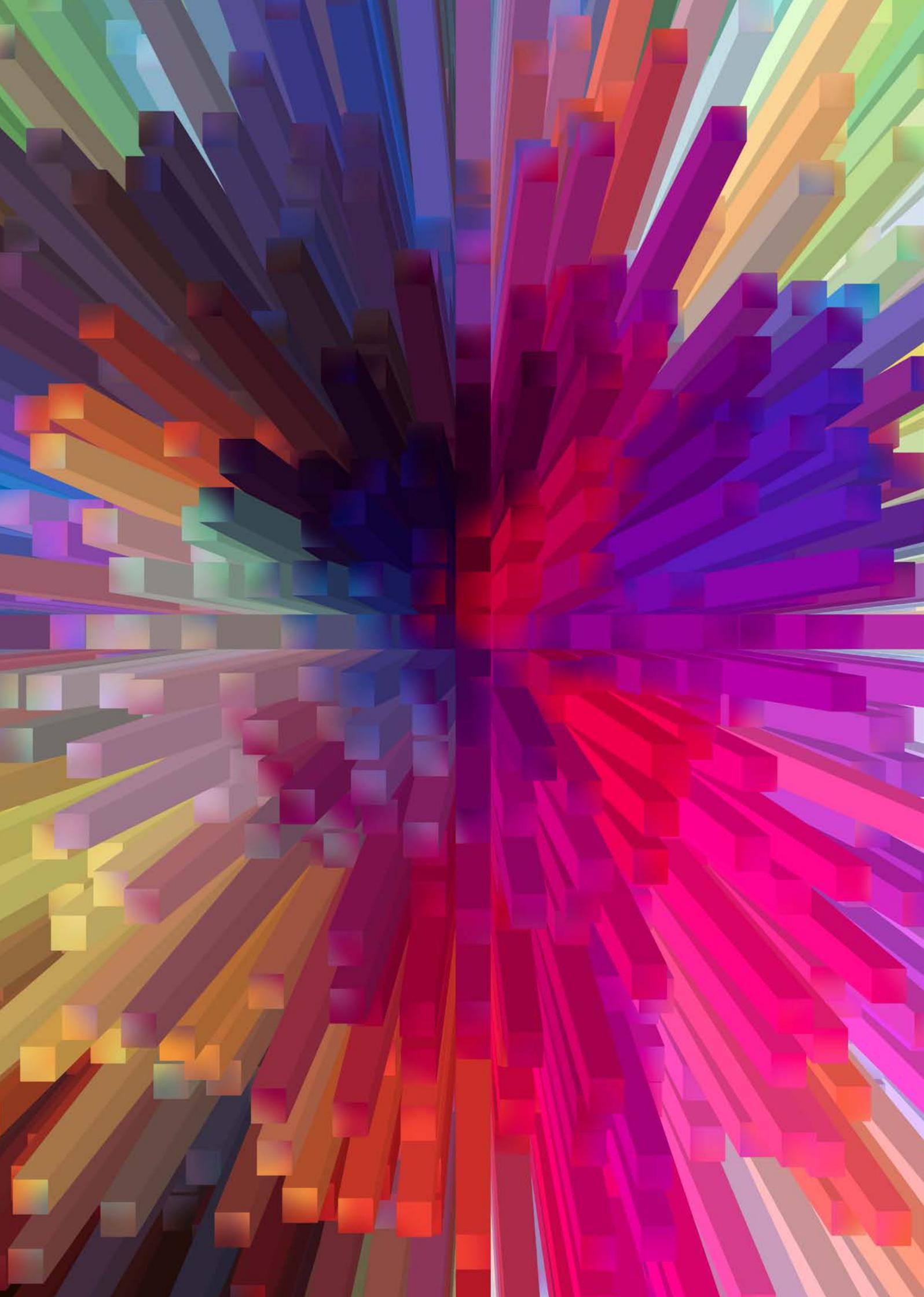
Issue 3 | August 2023

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Foreword

From Mary Jones, Head of Resilience, Resilience Directorate

Welcome to the third edition of UK Resilience Lessons Digest entitled 'Learning to Read Risks', which has been timed to follow the recent publication of the new National Risk Register (NRR) 2023 on 3 August.

When we published the Resilience Framework in December, we set out three principles: that a shared understanding of risk is fundamental; that we need a whole of society approach to resilience; and crucially that prevention is better than cure.

The publication of the new National Risk Register in August is an important milestone in the implementation of the Resilience Framework and a good example of how we are putting these principles into practice. The NRR sets 89 of the most serious risks that would have a significant impact on the UK's safety, security or critical systems at a national level. For the first time since the NRR was first published in 2008, this edition directly aligns with the structure and content of the classified internal National Security Risk Assessment (NSRA), including the reasonable worst case scenarios on which they are based. This means that the whole resilience community can operate from a shared understanding of the risks we face.

We know that a whole of society approach to resilience needs the government to share more information – equipping others to play their part. So we have declassified more risk information than ever before, adopting a transparent by default approach, enabling practitioners to see more clearly how the government identifies and assesses risks. Alongside the new publication, we have launched a digital tool to help people access the information more easily.

Together, I believe that this represents a step change in how the government communicates risk. In the coming months, we aim to build on this with further work to communicate risk to the general public.

Understanding risk is not an end in itself; it is the means by which we can build our resilience. We have focused this NRR on practitioners who have a professional need to use this risk information: for example in the voluntary and community sector, business, and academia. Our ultimate aim is that by sharing as much information as possible about the risks the country faces, so that they can use it to support their own planning, preparation and response – delivering our third principle, that prevention is better than cure.

This lessons digest is a great companion piece because it focuses on how risk information is understood, communicated and managed, within the context of lessons on risk from COVID-19. I would like to thank all of our guest contributors for sharing their latest learning and insights with the wider resilience community. We look forward to hearing your reflections both on the NRR and how we are seeking to learn lessons ourselves in generating risk information, and share useful lessons with you too.



Mary Jones

Head of Resilience, Resilience Directorate

Introduction

Welcome to this third edition of the UK Resilience Lessons Digest, 'Learning to Read Risks'.

With the opening of hearings at the COVID-19 Inquiry and recent publication of the National Risk Register (NRR) 2023 edition, Digest 3 has adopted a thematic focus on risk-related lessons from COVID-19. Its content includes a central analysis of high-level lessons identified on risk in the UK and beyond during the pandemic. This revealed five top learning themes that demonstrate how the far-reaching challenges of COVID-19 have informed an updated understanding of the risks we face. It also highlighted areas for improvement across the risk cycle. Whilst recommendations were predominantly directed toward central government, these lessons also offer meaningful, transferable learning points for working with risk across the resilience community.

To complement the analysis, this edition also provides an overview of the national risk assessment landscape. This details how lessons from the Royal Academy of Engineering's recent review of the national risk assessment methodology have informed the updated NRR (2023 edition) content and presentation. A selection of articles then goes on to provide insights on the way that risks are interpreted and understood (or 'read') beyond the assessment process. These include contributions from colleagues working at Emergency Management Victoria in Australia, who share

how real-time learning has been used to address and better understand risks in an emergency response, and a case study from Alder Hey Children's Hospital in Liverpool - detailing how a new, rapid engagement and debriefing tool was designed and deployed to understand and address risks to frontline NHS staff welfare and wellbeing during the pandemic.

As the Covid-19 Inquiry progresses, it is likely that lessons and learning on risk will be expanded, revisited, reviewed and updated. In the meantime, the lessons already in hand represent a significant opportunity for the collective and continual development of the shared understanding of risk that national resilience requires. Whilst challenging to accommodate, the ever-evolving, dynamic risk environment means it would be remiss not to review them.

As one academic noted, in today's risk-society there are really only three possible responses to the challenges we face: denial; apathy or transformation.¹ The Digest is dedicated to the latter, and it is in that spirit that 'Learning to Read Risks' is shared with you. As you will see, the golden good-news thread weaving its way through the reports is that wherever a lesson is identified, there is also a real-world opportunity for transformation and change.

1 Beck, Living in a World Risk Society, February 2006

As always, please continue to help us identify lessons relating to the Digest itself. A **1-minute feedback form** is available here, giving you the opportunity to tell us if you find the publication helpful, whether it is useful in practice and how we might improve it to remain relevant to the resilience community.² We look forward to hearing from you.

Digital Feedback: Learning to Read Risks



Lianna Roast
Head of Thought Leadership
Emergency Planning College



Deborah Higgins
Head of Emergency Planning College



Finally, we remain committed to working together and pressing forward with a shared ambition to strengthen

whole-society resilience. As part of this, we were delighted to see more than 500 people sign up to join us for the Digest 2 'Learning in Action' webinar back in June. It was a great event with an esteemed line up of guest speakers. For any who missed it, we are pleased that the recording and a copy of the slides are now available on the **EPC website**.³ Please join us for our third webinar on 'Learning to Read Risks' in September, with further details to follow via our social media channels.

² <https://forms.office.com/r/jMUrVUe9Z6>

³ <https://www.epcresilience.com/knowledge-hub/lessons-digest>

Issue 3: Executive Summary

Timely analysis. Transferable lessons.
Transformative insights

About the Digest

The publicly available UK Resilience Lessons Digest is part of the government's commitment to strengthening whole-society resilience. It sits at the heart of a programme of work at the Cabinet Office Emergency Planning College (EPC) to synthesise lessons learned of all major exercises and emergencies.⁴ These summary pages provide an overview of Issue 3 content, which is tailored to achieve the Digest's three key objectives:



To **Summarise** transferable lessons and themes from a wide range of relevant sources.



To **Share** lessons across responder organisations and wider resilience partners.



To **Coordinate** knowledge to drive continual improvements in doctrine, standards, good practice, training and exercising.

Each issue of Digest provides an analysis of lessons arising from public facing reports, generated after exercises and/or emergencies. This provides an evidence base for 'learning themes' (i.e. common areas or patterns of learning across reports) and 'transferable lessons' (i.e. lessons with 'all-hazards' applicability, or 'risk agnostic' characteristics) that can be applied in practice to build resilience across the risk cycle.

For a more in-depth overview of the work, including information on the Digest's vision framework, processes and principles, please see the 'About' section on page 8 in Issue 1: **Learning Together**.

Learning to Read Risks

The COVID-19 pandemic created a fundamental shift in the shared understanding of risk at international, national and local levels. Many lessons relating to the way we think, plan and act in relation to risks faced going forward have already been identified and published online. Given the learning in hand, and the recent release of the new 2023 edition of the National Risk Register (NRR), the Digest presents a focused, thematic review of lessons on risk identified during the pandemic. In addition to the analytical content, Learning to Read Risks is also pleased to present four guest articles from:

- The Royal Academy of Engineering
- NHS Alder Hey Children's Hospital in Liverpool
- PWC's Crisis and Continuity Management team
- Emergency Management Victoria in Australia

4 Emergency Planning College. UK Resilience Lessons Digest, 2023

A summary of content is provided below, in line with the Digests three core objectives: **Summarise, Share and Coordinate.**



Summarise:

Lessons on risk from COVID-19

The analytical focus in Learning to Read Risks brings international lessons on risk from the United Nations University and United Nations Office for Disaster Risk Reduction into a shared space with national level learning on risk from the UK. The authoring bodies all carry recognised authority, and in three out of the four cases, a direct role in holding the government to account.

The research synthesises 52 recommendations across four key reports containing lessons on risk from the COVID-19 pandemic. The reports were all published between September 2021 and May 2022. While the report quantity is small, their combined scope and collective evidence-base is comparatively vast. For this reason, an overview of each report is included in the analysis section. These summaries detail their respective methodologies and the evidence base for the recommendations made in each document.

Although lessons, conclusions and recommendations primarily address good practices and areas for improvement in government, their summary is in keeping with the aim of the Digest to synthesise all lessons from exercises and emergencies. The themes are shared as part of a whole society approach to learning. Transferable lessons, which can be used to inform thought and action across the risk cycle, are also provided within the analysis.

Across reports the top five thematic learning areas, in order of prevalence, were:

- **Theme 1: approach to risk**
Lessons under this theme signalled the increased importance of refreshed and updated whole-society, holistic and systems-based approach to risk (in thought and action) at international, national and local levels.
- **Theme 2: assessment of risks**
This theme highlighted the need to update and adapt risk assessment methodologies, in order to better accommodate chronic risk dynamics and the cascading, interconnected nature of impacts.

- **Theme 3: risk communication**
Lessons here highlighted the benefits of regular, consistent engagement with external stakeholders (including the voluntary sector and faith-based organisations) to ensure risk communication remains accurate, timely and meaningful in local contexts.
- **Theme 4: risk leadership and management**
Recommendations for new national-level leadership roles, senior accountability and mechanisms for scrutiny on matters of risk came through clearly under this theme. Challenges of variability in cross-departmental and inter-organisational risk management were also raised.

- **Theme 5: lessons and learning**
Recommendations dovetailed in the closing theme around lessons and learning – with particular regard to identifying, implementing and embedding lessons from emergency exercises. The evidence-base here could be used to argue the need for a shift in thinking on lessons work: replacing a ‘learning when there is time’ to a ‘learning while there is time’ mindset.

In conclusion, the analysis demonstrated that there is scope for responder organisations, resilience professionals and local communities to leverage these lessons, to ensure resilience activity hits the mark to simultaneously reduce risk and improve preparedness.





Share:

National and local Level Learning

National learning

Building resilience: lessons from the Royal Academy of Engineering's review of the National Security Risk Assessment methodology

In this article, Professor Joan Cordiner, FEng FRSE summarises the findings from the Royal Academy of Engineering's recent review of the methodology behind the 2019 National Security Risk Assessment. As chair of the review, she sets out the Academy's approach after Cabinet Office commissioned them to undertake the work. The article goes on to draw out some of the lessons that were identified in the process. These informed recommendations to the government and were subsequently developed into 7 Principles for Good Practice for the wider community. The lessons to be learned from the Academy's review of the UK National Security Risk Assessment are also set out in their recently published public report: *Building Resilience*.⁵

Learning in the local tier

Organisational learning for workforce wellbeing: developing and delivering the Ground TRUTH Tool at Alder Hey Children's Hospital

The acute risks associated with the COVID-19 pandemic had complex, cascading and enduring impacts across sectors, around the globe. In the UK healthcare sector, this meant that NHS staff suddenly and subsequently faced unprecedented risks to their welfare. In this article, Dr Sarah Robertson reviews those risks and the changes it induced in the operating environment, leading to rising burnout and the need to help support the mental health of frontline workers. It describes how real-time, organisational learning at Alder Hey Children's Hospital informed the development of a new Staff Advice and Liaison Service (SALS) in 2020. This led to a partnership between SALS and the University of Liverpool, inspiring a new, academically-informed digital Ground TRUTH Tool to support staff to function well and keep going together.⁶ Lessons for adaptive recovery, and the benefits of applying the Ground TRUTH tool are also shared.

5 Royal Academy of Engineering. *Building Resilience: lessons from the Academy's review of the National Security Risk Assessment methodology*, 2023

6 Alison, L., Alison, E., Robertson, S., and Humann, M. *The Ground TRUTH After-Action Review Tool*. Centre for Research and Evidence on Security Threats, 2021



Coordinate:

Applied academic insights and practical tools for lesson implementation

Academic insight

The art and science of reading risks

In this article, Lianna Roast leverages academic insights to explore some of the different ways that risk is understood and interpreted at individual, social and cultural levels. The content explores the way that risk is quantitatively calculated, qualitatively interpreted and practically navigated. It begins by emphasising the critical role that a scientific approach to risk assessment plays, before acknowledging the importance of individual and social processes in interpreting the information that assessment generates. The article suggests that ‘reading the risks’ is both an art and science, demonstrating that objective estimations, applied imagination and social interpretation all contribute to the shared understanding of risk that resilience requires. The article then concludes with six ‘lessons from literature’, highlighting just a few top-line insights from psychological research on individual and collective understandings of risk.

Registering the risks

An overview of the national risk assessment process

Following publication of the latest National Risk Register 2023,⁷ this article provides an overview of the approach taken by the government in assessing risks to national safety and security. It includes an introduction to the NSRA, National Risk Register and Community Risk Registers, as a helpful primer ahead of the research and analysis of risk-related lessons to follow on page 28. This includes a brief overview of updates to the new NRR’s underpinning methodology and presentation, in response to lessons identified during the COVID-19 pandemic. The article goes on to acknowledge the importance of risk narratives and terminology in reading, socialising and communicating risk register content. It then concludes with selection of risk-related terms and definitions, based on the UK Government Resilience Framework glossary and UK Civil Protection Lexicon, in support of shared risk dialogues and resilience narratives.

7 HM Government, *National Risk Register 2023 Edition*, August 2023



Coordinate:

Applied academic insights and practical tools for lesson implementation

Tools for implementation

Moving from lessons identified to lessons learned

In this article, Lisa Marie Jackson, Director of Operational Reform, and Ognjen Dosen, Senior Project Officer, from Emergency Management Victoria share how a sector-wide desire for learning and continual improvement spurred an innovative, local lessons management framework. Built on an evidence base of good practices in lessons management, the resulting EM-LEARN framework launched in 2015. It went on to inform the national-level Australian Institute for Disaster Resilience Lessons Management Handbook in 2019. The work of Emergency Management Victoria has since received international recognition, generating a surge of interest and activity in lessons work across Australia and New Zealand. The authors also provide a case study of how the EM-LEARN framework and real-time learning, and evaluation has been employed to reduce risks and build resilience to extreme weather events.⁸

Rethinking personal resilience

Navigating an age of perma- and poly-crisis

In this article, Dr. Claudia van den Heuvel, a Crisis Management Specialist and a manager of the Crisis and Continuity Management team at PwC UK, highlights the challenges of effectively navigating, leading and operating in a world increasingly defined by poly-crisis (the simultaneous occurrence of crisis events) and perma-crisis (an extended period of instability and insecurity, resulting from a series of crisis events). Through expert insights and evidence-based research, the content emphasises the benefits of rethinking and strengthening personal resilience in order to cope with these challenges. The link between individuals across the workforce strengthening their personal resilience and elevating organisational resilience is outlined. Practical tips for maximising personal routines and performance are also presented.

8 Emergency Management Victoria. EM-LEARN Framework, 2015



Sidelights

As in previous editions, the Digest continues to use Sidelights to provide helpful definitions, insights and related knowledge.



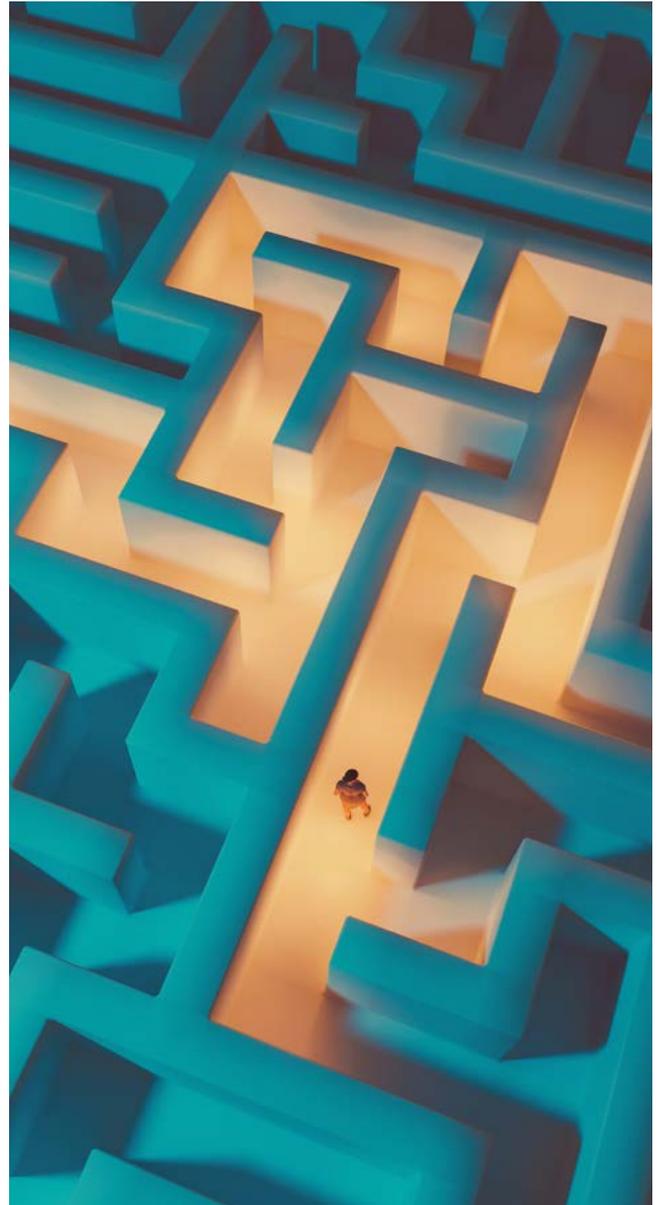
Make it active

A new addition for Digest 3 is the introduction of the Make it active icon. Wherever this icon appears there are suggestions for further reading, or questions that can be reflected on to support thought and action beyond this publication.



Resources

At the end of the Digest the resources section provides a summary of recommendations from the analysed reports, along with links for further reading.





Academic insight

The art and science of reading risks

In this article, Lianna Roast leverages academic insights to explore some of the different ways that risk is understood and interpreted. The content explores the way that risk is quantitatively calculated, qualitatively understood and practically navigated. It begins by emphasising the critical role that a scientific approach to risk assessment plays, before acknowledging the importance of individual and social processes in interpreting the information that assessment generates. The article suggests that ‘reading the risks’ is both an art and science, demonstrating that objective estimations, applied imagination and social interpretation all contribute to the shared understanding of risk that resilience requires. The article then concludes with six ‘lessons from literature’, highlighting just a few top-line insights from psychological research on individual and collective understandings of risk.

Introduction

People have always been exposed to risks. Over the years, the nature and dynamics of those risks have changed and evolved, tracking tangible changes in our environment, development and socio-technical advance.⁹ As the risks landscape has changed and our experiences of their materialisation in emergencies accumulated, our shared understanding of them has also been updated. But this does not mean that a ‘shared’ understanding of the risks we face is consistent or even common between individuals, within communities

and across a country. Given the primacy of a shared understanding of the risks we face as both a starting point for emergency preparedness activity and the development of societal resilience, it is helpful to consider why this is the case.

Calculating the risks

The primary and most popular way of understanding the risks we face involves processes proposed to identify, define, categorise and quantify them. This informs estimations and evaluations of risk, typically based on its understanding as a function of hazard and vulnerability scores (i.e. Risk (R) = Hazard (H) × Vulnerability (V)).¹⁰ To help bring order to those estimations and prioritise risk-reduction activity, the sum score might then be divided by ‘capacity’ (C) or ‘mitigations’ (M) for preventing or managing the consequence and impacts of its realisation. The equation then comes $R = H \times V/C$. There is a huge body of academic literature on this process and its variants. This clearly demonstrates the vital role of science in our ability to read risks. For example, we require:

- subject matter expertise to help identify hazards and threats
- an in-depth understanding of social, economic and geographic vulnerabilities to them
- the ability to design and test effective mitigation measures
- an objective review of capacity and capability to respond if these fail¹¹

9 Li, Y., Hills, T. and Hertwig, R. A brief history of risk. *Cognition*, 2020, 203: 104344

10 United Nations International Strategy for Disaster Reduction: Living with risk, 2004, page 36

11 Schneiderbauer, S. and Ehrlich, D., 2004. Risk, hazard and people’s vulnerability to natural hazards. A review of definitions, concepts and data. European Commission Joint Research Centre. EUR, 21410, page 40

Making sense of the risks

When it comes to risk, that quantitative scientific assessment sits hand in hand with our human ability to make sense of that information. The reason for this, it has been argued, stems from the fact that risk only really exists in virtuality.¹² In other words, while the hazard or threat that gives rise to risk may be physical, the probabilistic assessment of its likelihood and impact remains somewhat theoretical and intangible. It is only when the consequences

of the hazard's interaction with vulnerability becomes visible, and its impacts are realised in reality, that risk can become tragically, and sometimes traumatically, tangible.

On this basis, it could also be reasoned that there is an 'art' (i.e. an expression or application of human creative skill and imagination) to activity across the risk cycle. For example, in order to generate and make sense of the risks assessed, we are required to:

- activate the imagination at both implicit, individual and explicit, collective levels



¹² Beck, *Living in a World Risk Society*, February 2006

- direct the imagination to actively anticipate and articulate psychologically uncomfortable and unfavourable futures
- develop meaningful, contextualised risk dialogue and overarching narratives
- design effective, evidence-based risk communications
- pragmatically plan and execute a range of (potentially innovative) mitigations in response

Navigating the risks

Driven by an innate survival instinct, we have become increasingly skilled and experienced in imagining and projecting the impacts that manifest risks may generate, at controlling their antecedents and managing both people, policy and process to avoid them. However, it is unrealistic to assume that anyone (including resilience professionals) can navigate the risk landscape without any emotional response.¹³ These responses can help

motivate risk-based decisions and resilience activity in relation to risk. But the thought of potential risks and impacts, and salient experiences of realised risks on lives, livelihoods and the environment also spurs a personal and collective requirement to navigate, or ‘cope’ with them.¹⁴

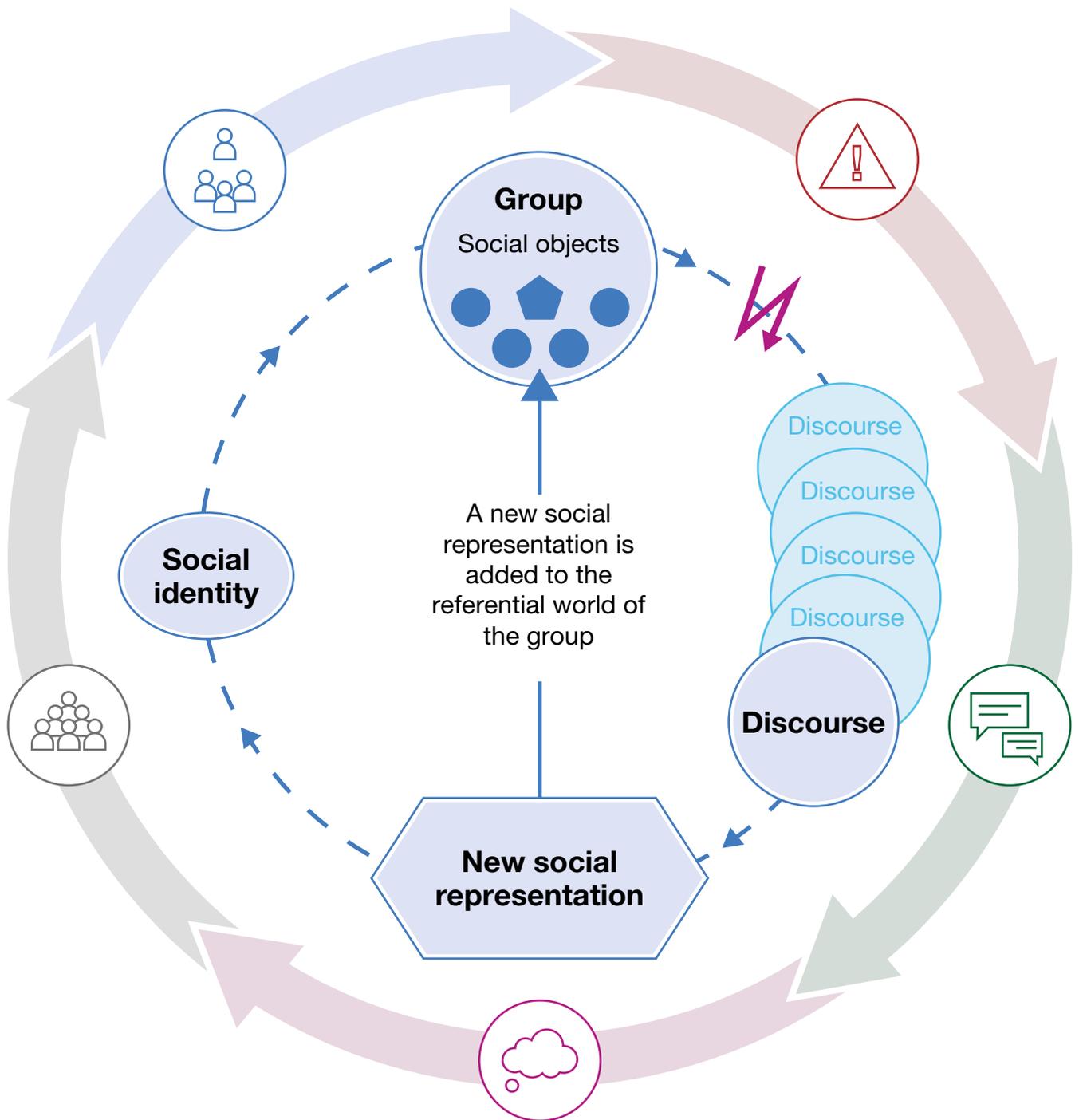
One of the primary ways that people cope with both the potentiality and experience of realised risks is to process it through written discourse and in discussion with others: in families, communities and workplaces. These dialogues and narratives view ‘risks’ as ‘social objects’, which people then give words to and anchor into experience in order to understand them.¹⁵ This process of socially representing risks generates a sort of localised, informal risk assessment process, and is widely recognised in academic literature as an important social coping process. This process, visualised in the diagram at **Figure 1**, plays an important role in developing the shared understanding of risks that resilience requires. It also helps to make meaning from adversity when it does come.

13 Breakwell, G.M, *The Psychology of Risk*, 2014

14 Wagner, W. and Kronberger, N., 2001. Killer tomatoes! Collective symbolic coping with biotechnology. *Representations of the social*, pages 147-164

15 Marková, I., 2003. *Dialogicality and social representations: The dynamics of mind*. Cambridge University Press

Figure 1: Schematic depiction of the sociogenesis of social representations¹⁶



16 Recreated from: Wagner et al., Theory and method of social representations. Asian journal of social psychology, 2(1), 1999. pages 95-125



Individuals and groups

Individuals and groups live in a world of hazards, threats and risks. These elements can be conceptually referred to as 'social objects', because people typically work to understand them in the contexts of the social groups they engage and identify with.



Risk, disaster and disruption

When people are confronted with emerging risks and the materialisation of disruptive emergency events, there is an individual and collective need to 'cope' with real or imagined impacts.



Discourse

The requirement to 'cope' with disruption generates debate, discussion and conversation on the risk or emergency event. Individuals, groups and organisations may use metaphors and images to help 'anchor' risks into existing knowledge, objectify it, and make sense of uncomfortable futures or disruptive events.



Social Representation

The way that risks are represented in discourse can shape beliefs, attitudes, ideas and practices relating to a particular hazard, threat or risk. When these are shared between members of a community, it can generate a 'social representation'. This is a commonly held view within a group, that may differ from an objective assessment.



Social identity

Social representations of risk that are shared within a culture, community or other social group can strengthen a sense of group identity. This in turn may shape group behaviours in relation to the represented risk.

Lessons from literature

Lessons from literature (i.e. research findings that have demonstrated credibility, validity and replicability across studies), provide some interesting insights on individual and collective understandings of risk, as well as behaviours in response to them. There is a very large and extensive body of literature on risk in concept and practice. The lessons from that literature presented on page 19 are far from extensive, but can be useful in supporting an understanding of some factors that influence how people think and act in relation to risk.



Make it active

Reflect on whether any of the lessons from literature can be seen to influence risk perceptions and resilience activity in your locality or setting.

How can your organisation or department use academic insights on risk to inform resilience activity across the risk cycle?



Lessons on risk from academic literature¹⁷

1	Beliefs about risk
	Beliefs about the hazards and threats that give rise to risk are shaped by the extent to which the hazard in question is dreaded (i.e. severe, uncontrollable, impacting) and the extent to which it is familiar or known.
2	Individual differences
	There are significant differences between individuals, groups and cultures in beliefs about (and perceptions of) risks faced.
3	Bias
	The interpretation of hazards, threats and estimations of risk can be influenced by cognitive biases (e.g. optimism and hindsight).
4	Risk perceptions
	Shared, group perceptions of risk have been found to significantly influence how people act, or fail to act, in relation to it. ¹⁸
5	Social processes
	Social processes and dialogues directly inform the development of risk perception, influencing judgements about the severity, seriousness, and acceptability of risks. ¹⁹
6	Risk behaviours
	High levels of risk perception do not consistently result in increased preparedness behaviours – even when these actions are known to reduce mortality rates and minimise disaster loss. ^{20, 21}

17 Breakwell, G.M, *The Psychology of Risk*, 2014

18 Wachinger, G., Keilholz, P. and O'Brian, C., 2018. The difficult path from perception to precautionary action – participatory modelling as a practical tool to overcome the risk perception paradox in flood preparedness. *International Journal of Disaster Risk Science*, 9(4), pages 472-485

19 Kahneman and Tversky, 1979. Kahneman, D. and Tversky, A., 1979. On the interpretation of intuitive probability: A reply to Jonathan Cohen. *Cognition*, 7(4), pages 409-411

20 Keefer, P., Neumayer, E. and Plümper, T., 2011. Earthquake propensity and the politics of mortality prevention. *World development*, 39(9), pages 1530-1541

21 World Bank and United Nations, 2010. **Natural hazards, unnatural disasters: the economics of effective prevention**

Registering the risks

An overview of the national risk
assessment process

Following publication of the latest National Risk Register 2023 edition, this article provides an overview of the approach taken by the UK government in assessing risks to national safety and security. The article opens with an at-a-glance glossary of risk-related terms, followed by an introduction to the National Security Risk Assessment (NSRA), National Risk Register (NRR) and Community Risk Registers (CRRs). A brief overview of updates to the NSRA's underpinning methodology since the NRR 2020 edition, in response to lessons identified during the COVID-19 pandemic, is also included.

National risk narratives

Trying to navigate the national risk landscape without being able to speak the language can challenge our ability to make sense of it, and meaning from it. This means that defining key terms used to create a shared language for talking about the risks we face is important. In support, this article opens with an 'at-a-glance' glossary.

The terms in the following glossary can be viewed as some of the building blocks used to inform the UK's national risk and resilience narratives.^{22, 23} In the resilience arena, they feature in everyday discourse, documentation and discussions. Many are well established and recognised. Others less so, reflecting the need to describe the new and emerging ways that risks are both manifesting and materialising.



22 HM Government, UK Government Resilience Framework, December 2022

23 HM Government, Lexicon of UK civil protection terminology. February 2013

Reading the risks: glossary of risk terms

Risk	An event, person or object which could cause loss of life or injury, damage to infrastructure, social and economic disruption or environment degradation. The severity of a risk is assessed as a combination of its potential impact and its likelihood. The government subdivides risks into: hazards and threats.
Hazard	Non-malicious risks such as extreme weather events, accidents or the natural outbreak of disease. Contrast with threat.
Threat	Malicious risks such as acts of terrorism, hostile state activity and cyber-crime. Contrast with hazard.
Acute risk	Time-bound, discrete events, for example a major fire or a terrorist attack. Contrast with chronic risks.
Chronic risk	Continuous challenges which gradually erode our economy, community, way of life and/or national security (e.g. money laundering, antimicrobial resistance). Contrast with acute risks.
Cascading risk	This term refers to the knock-on impacts of a risk that cause further physical, social or economic disruption. For example, severe weather could cause flooding, which then causes damage to electricity infrastructure, resulting in a power outage which then disrupts communications service providers (and so on).
Catastrophic risk	Those risks with the potential to cause extreme, widespread and/or prolonged impacts, including significant loss of life, and/or severe damage to the UK's economy, security, infrastructure systems, services and/or the environment. Risks of this scale would require coordination and support from the UK government.
Civil contingencies risks	Civil contingencies risks refer to any event that poses a serious threat to safety and security of livelihoods either locally or nationally. They include, among others, threats to lives, health, critical infrastructure, economy, and sovereignty.
Risk assessment	A structured and auditable process of identifying potentially significant events, assessing their likelihood and impacts, and then combining these to provide an overall assessment of risk, as a basis for further decisions and action.
Risk rating matrix	A table showing the likelihood and potential impact of events or situations, in order to ascertain and visualise risks.

Reading the risks: glossary of risk terms

Reasonable worst-case scenario (RWCS)	A RWCS is a generic representation of a challenging yet plausible manifestation of a risk. The RWCS is the worst case once the high-impact low-likelihood manifestations of a risk have been discounted. It is not a prediction of what will happen, rather an illustration of what we could reasonably expect to arise which is proportionate to use for preparation and planning purposes as a responsible government.
Risk-agnostic	Describes the ability of a capability, process or response to address 'common' impacts of risks (i.e. those impacts that occur across multiple scenarios). For example, major fires, terrorist incidents and flooding are all likely to produce mass casualties; developing capabilities to handle mass casualties is, therefore, a risk-agnostic approach.
Risk cycle	A conceptual model that breaks the management of a risk down into stages at which different preparatory actions can be taken. The UK government is using six stages: anticipation, assessment, prevention, preparation, response and recovery.
Risk treatment	Measures to reduce the likelihood of an emergency occurring from a given risk, and/or implement measures to mitigate the impacts of that emergency should arise.
Risk management	All activities and structures directed towards the effective assessment and management of risks and their potential adverse impacts.
Community Risk Register	A register communicating the assessment of risks within a local resilience area which is developed and published as a basis for informing local communities and directing civil protection workstreams.
National Risk Register	The NRR is the publicly available counterpart of the NSRA, aimed at providing detailed information for those with formal contingency planning responsibilities at a national and local level.
National Security Risk Assessment	The NSRA assesses, compares and prioritises the top national level risks facing the UK, focusing on both likelihood of the risk occurring and the impact it would have, were it to happen. It is the main tool for assessing the most serious civil contingencies risks facing the UK.

Registering the risks

The processes of anticipating, assessing and registering the risks faced in the UK are fundamental in developing a shared understanding of risk, and directing resilience activity. These processes and their products are embodied in the NSRA, but are also presented publicly through the NRR and outworked locally through Community Risk Registers. Details of each process and/or document are provided below.

1. The UK National Security Risk Assessment (NSRA)

Since 2005 the UK government has been assessing national security risks through production of evidence-based and expert-informed NSRA.²⁴ This classified document is the main tool for understanding the civil contingencies risks facing the UK. It assesses, compares and prioritises the top national level risks facing the UK, focusing on both likelihood of a hazard/threat occurring and the impact it would have, were it to happen. It is an invaluable tool for policy makers and operational leaders to use when forming contingency plans for a wide range of scenarios that might impact on a national or local level.²⁵ Importantly, the NSRA is also used to generate the National Risk Register, its public-facing counterpart document.

As part of the NSRA assessment, a range of disruptive hazards (e.g. flooding) and with both malicious and non-malicious threats (e.g. terrorist attacks and power cuts) are considered. Each of these is then used to calculate a) the probabilistic **likelihood** of these disruptive events happening within the 2 to 5 year assessment timeframe and b) explore the potential scale and duration of associated consequences, or **impacts**, that might happen in a Reasonable Worst-Case Scenario (RWCS). The calculations are then used to plot risks on a table known as a risk matrix, helping to visually identify risks and direct resilience activity in relation to them. Historically, the NSRA has been reviewed about every two years. However, in line with the UK Government Resilience Framework it has now become a continuous risk assessment process.

2. The National Risk Register



24 National Audit Office, *The government's preparedness for the COVID-19 pandemic: lessons for government on risk management*. November 2021

25 HM Government, *'UK Government Resilience Framework'*, December 2022, page 11

The NSRA has a public-facing counterpart document called the National Risk Register (NRR).²⁶ The aim of the NRR is to provide information in support of those with formal contingency planning responsibilities at a national and local level. The first edition of the NRR (then National Risk Register of Civil Emergencies) was released in 2008. Driven by the introduction of the Civil Contingencies Act 2004,²⁷ its publication fulfilled a commitment made earlier that year in the 2008 National Security Strategy. The NRR was subsequently reviewed and updated in 2010, 2012, 2013, 2015, 2017 and 2020.

Additional risk assessments in the devolved administrations, including the Scottish Risk Assessment and the Northern Ireland Civil Contingencies Risk Register are also produced to enable focus on the highest priority risks in each area.²⁸

The new NRR 2023 Edition

The NRR 2023 was published on 3 August 2023.²⁹ As per previous editions, it has been made available on GOV.UK to help inform and direct both thought and action throughout society and across all elements of the risk cycle:

- Anticipate
- Assess
- Prevent
- Prepare
- Respond
- Recover

26 HM Government, *Risk assessment: how the risk of emergencies in the UK is assessed*. February 2013

27 HM Government. *Civil Contingencies Act 2004: a short guide (revised)*. 2015

28 HM Government, *Emergency Preparedness Chapter 4: Local responder risk assessment duty (revised)*. March 2012, page 9

29 HM Government *National Risk Register*, August 2023

In a notable departure from both the NRR 2020 edition and earlier NRR publications, the new NRR exhibits both an updated risk assessment methodology and a refreshed format. Updates to the risk assessment methodology (i.e. the process of assessing the likelihood and impact of the risks faced by the UK) reflect work in response to lessons identified on risk during COVID-19. They are also an outworking of a central continual improvement process, fulfilling commitments made by government in the Integrated Review³⁰ and in response to reports from committees in the House of Commons³¹ and the House of Lords³² (as detailed in the lessons analysis), and set out in the UK Government Resilience Framework.³³



As part of these commitments, the Royal Academy of Engineering was invited to give formal, independent challenge in review of the NSRA’s risk assessment process, marking a new chapter of external involvement in the NSRA.³⁴ During this process, Cabinet Office also worked closely with the House of Lords special inquiry into risk assessment and risk planning, to ensure that both the NSRA and subsequent NRR incorporated the latest thinking from hundreds of practitioners, academics and industry partners. (Further details on the review can be found on page 50 of the analysis and in the article from the Academy on page 70).

Lessons identified during the review directly informed the following centrally agreed, national level changes in the methodology processes:³⁵

- The NSRA now includes clearer separate consideration of the interplay between **acute and chronic risks**, as they require different planning and responses and are not equally measured through an identical process.
- Rather than a single, reasonable worst-case scenario, the updated methodology now uses **multiple scenarios** in some

30 HM Government, *The Integrated Review*. March 2021; HM Government, *Integrated Review Refresh 2023: Responding to a more contested and volatile world*. March 2023

31 HM Treasury, *Treasury Minutes: Government Response to the Committee of Public Accounts on the Forty-Third to the Forty-Eighth report from Session 2021-22*. May 2022

32 House of Lords Select Committee on Risk Assessment and Risk Planning, *‘Preparing for extreme risks: Building a resilient society’*, December 2021

33 HM Government, *UK Government Resilience Framework*, December 2022

34 Royal Academy of Engineering, *Building resilience: lessons from the Academy’s review of the National Security Risk Assessment methodology*, April 2023

35 HM Government, *UK Government Resilience Framework*, December 2022, pages 11-12

cases, to support planning against a wider range of possible impacts where it would reduce uncertainty, and where a different set of impacts and response requirements would occur.

- Given the dynamic nature of risks, the new methodology **lengthens the timescale over which risks are measured**. Most risks are measured over a two-year period, but in some cases this has been extended to five years.
- Across all risks under the NSRA, the government has committed to improve how consideration of **impacts and vulnerabilities** is factored in, to produce more accurate overall judgements.
- The government has committed to moving to an increasingly **'live' assessment process**, where risks are updated on a continuous (rather than periodic) basis, depending on greatest need. This includes increased modernisation and use of data and wider information and insight.³⁶

The updated format also reflects the government's commitment to improve transparency in the way that risk is communicated. As such, the 2023 edition represents the most transparent risk register to date, aligning more closely in style and format to the NSRA than ever before.³⁷ This has been done in recognition that increasing accessibility of the assessment can increasingly support those with duties

to assess risk under the Civil Contingencies Act 2004, and those in wider resilience roles, in carrying out local risk assessments and producing community risk registers.

3. Community Risk Registers

The NRR was always designed to complement work on Community Risk Registers (CRRs). The production of CRRs pre-dated the first NRR in 2008, as duties to assess risk and plan for emergencies were on Category 1 Responders, under the Civil Contingencies Act 2004. These assessments consider the local environment and contextualised risks at the community level. They are conducted in the multi-agency contexts of Local Resilience Forums and publicly published by the local council. While aimed at those with formal contingency planning responsibilities (at national and local levels). CRRs are based on the NSRA but focus on the highest priority risks in each local area.^{38, 39}



Make it active

If you have not already done so, visit your local council's website to obtain a copy of the Community Risk Register, detailing risks and associated mitigations for your area.

36 HM Government, **UK Government Resilience Framework**, December 2022, page 16

37 HM Government, **National Risk Register 2023**, August 2023.

38 HM Government, **Guidance: Preparation and planning for emergencies: responsibilities of responder agencies and others**, 2013

39 HM Government, **Local risk assessment and Community Risk Registers**, February 2013

Analysis

Lessons on risk from COVID-19

Introduction

The COVID-19 pandemic created a fundamental shift in the shared understanding of risk at international, national and local levels. Many lessons relating to the way we think, plan and act in relation to risks faced going forward have already been identified and published online. While the lesson identification process and onward learning continues, most notably in the UK through the COVID-19 Inquiry, publication of the new NRR 2023 provides a timely opportunity for a focused, thematic review of high-level lessons on risk to date.⁴⁰

The analytical focus in Learning to Read Risks brings international lessons on risk from the United Nations University (UNU) and United Nations Office for Disaster Risk Reduction (UNDRR) into a shared space with national level learning on risk from the UK. The lessons are collated from four risk-focussed reports published during the pandemic. The lessons within them represent findings from varied research and inquiry methods, including case study reviews, calls for evidence from Parliamentary Committees and independent, national audit processes.

The research

This research synthesises 52 recommendations made in response to lessons identified on risk during the COVID-19 pandemic. The four selected reports were published in the seven-month period between September 2021 and May 2022. Although the report quantity is small, their combined scope and collective evidence-base is comparatively vast. The authoring bodies also carry internationally recognised authority, and in three out of the four cases, a direct role in holding the government to account.

While lessons and recommendations primarily address good practices and areas for improvement in government, their synthesis and thematic summary supports the wider Digest goal of synthesising all lessons from exercises and emergencies. It also shares lessons as part of a whole-of-society approach to learning.

The reports

The reports reviewed are detailed in **Table 1**. A summary of each document, including details on the methods applied to generate an evidence-base for the lessons and recommendations within them, can be found at the start of the analysis section.

40 The UK COVID19 Inquiry. What is the UK Covid-19 Inquiry? 2023

Table 1: Reports reviewed

Author	Title	Date
National Audit Office	Report 8 into the government’s preparedness for the COVID-19 pandemic: lessons for government on risk management ⁴¹	19 Nov 2021
House of Lords Select Committee on Risk Assessment and Risk Planning	Preparing for Extreme Risks: Building a Resilient Society. Report of Session 2021-22 (HL Paper 110) ⁴²	3 Dec 2021
House of Commons Committee of Public Accounts	Government preparedness for the COVID-19 pandemic: lessons for government on risk. Forty-Sixth Report of Session 2021–22 ⁴³	16 March 2022
United Nations University – Institute for Environment and Human Security (UNU-EHS) and the UNDRR	Rethinking risks in times of COVID-19 ⁴⁴	19 May 2022

Research aims

The aim of the research was to answer four key questions:

1. Can common learning themes of relevance to the wider resilience community be identified and evidenced across the selected reports?
2. Do lessons and subsequent recommendations demonstrate transferable features that could be used to inform activity and continual improvement across the risk cycle?
3. Do learning themes and transferable lessons relate to existing National Resilience Standards, doctrine and multi-agency guidance?
4. What practical actions do reports suggest that responder organisations and local resilience partners can take to support thought and action in the areas of risk assessment and risk management?

41 <https://www.nao.org.uk/reports/the-governments-preparedness-for-the-covid-19-pandemic/>

42 <https://publications.parliament.uk/pa/ld5802/ldselect/ldrisk/110/110.pdf#page=85>

43 <https://committees.parliament.uk/publications/9371/documents/160964/default/>

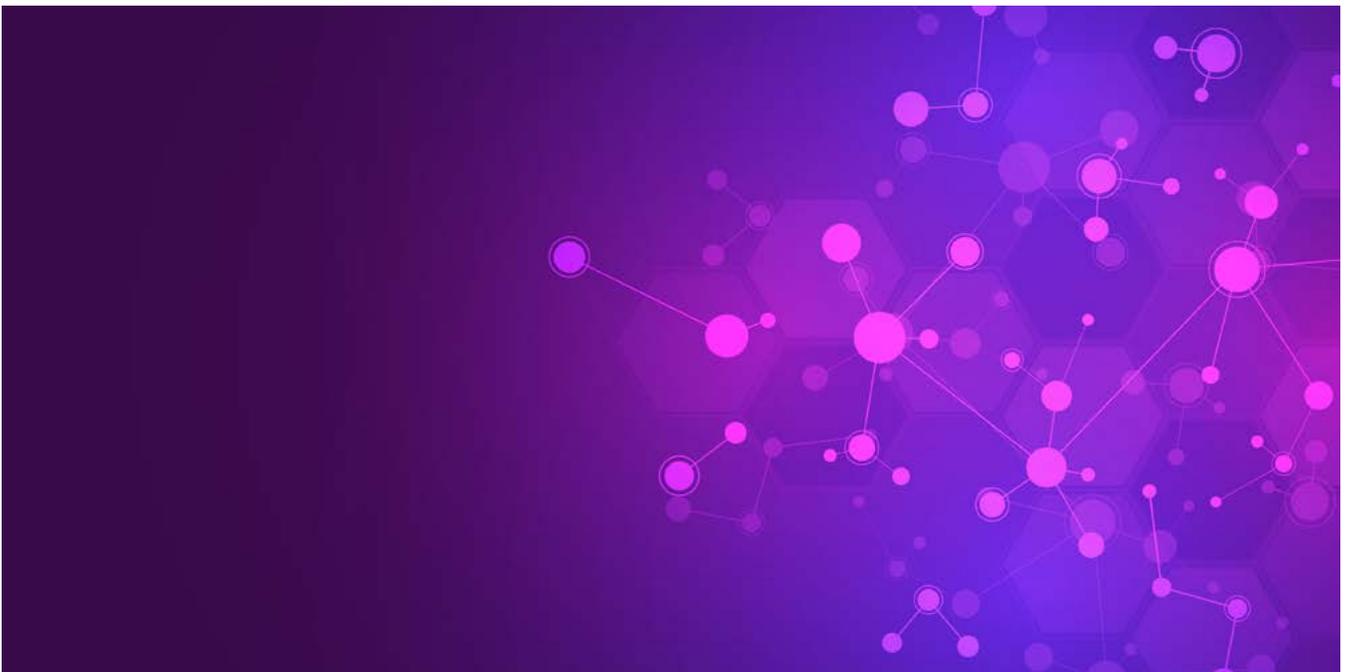
44 <https://www.undrr.org/rethinking-risk-times-covid-19>

Methodology

A qualitative, thematic analysis was the selected method for conducting the research. This brought the reports, including their conclusions, lessons and combined recommendations into a shared space to inform new insights from the whole. The analysis began with an initial review of learning themes, exploring patterns across reports. This was followed by a second review to further refine those themes. The emphasis was placed primarily on the descriptive (or manifest) content of the recommendations. Although recommendations are distinct from lessons by nature (being proposed solutions to support improvements, rather than explicit articulations of identified learning), they did provide a single common feature for analysis across reports, enabling a meaningful synthesis of themes, while keeping the research close to the original texts. Every recommendation was reviewed in the full context of the findings and conclusions that generated them.

A level of commonality and repetition in recommendations across the UK reports in particular was acknowledged and anticipated from the outset. This is because, for example, the House of Commons Committee of Public Accounts included the review of findings from the National Audit Office report, as part of its considered evidence base. It is therefore not surprising that some recommendations would demonstrate similarity. Despite this, each report did demonstrate its own unique features in terms of evidence base. These differences are set out in the report summaries below.

While it has not been possible to reproduce all recommendations from all reports within the analysis, a helpful summary of recommendations can be found under the **Resources** section. To review the reports in their full and original format, please visit the hyperlinks provided in **Table 1** above.



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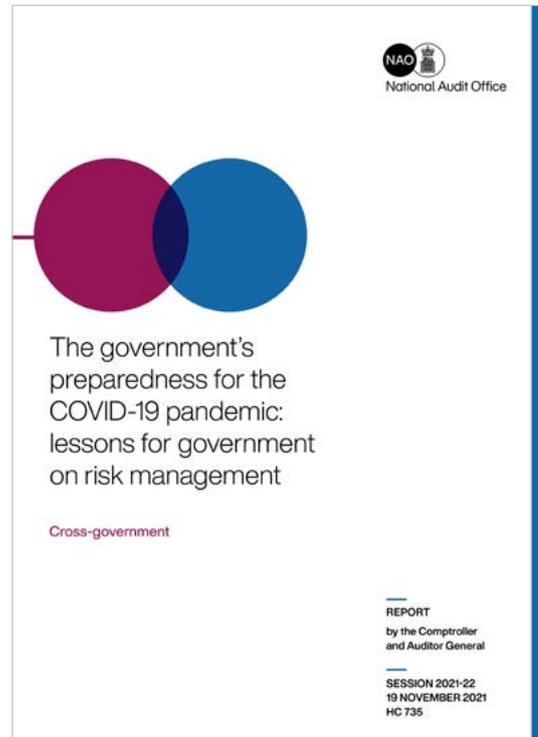
Report summaries

National Audit Office (NAO) Report 8 into the government's preparedness for the COVID-19 pandemic: lessons for government on risk management

Overview⁴⁵

The NAO is the UK's independent public spending watchdog. They support Parliament in holding government to account, helping to improve public services through high-quality audits. The scope of this report set out facts on four areas:

1. The government's approach to risk management and emergency planning.
2. The actions the government took to identify the risk of a pandemic like COVID-19.
3. The actions the government took to prepare for a pandemic like COVID-19.
4. The recent developments and actions taken by the government since 2019, to strengthen risk management and resilience.



Methodology and evidence-base

NAO fieldwork took place between July 2020 and August 2021. During this time, they interviewed key individuals across multiple government departments (including the Government Internal Audit Agency) and academics working in the area of emergency planning. NAO also reviewed:

- top-level risk registers of 17 central government departments
- risk registers of seven arm's length bodies (government public bodies) with responsibility for responding to emergencies
- business continuity or pandemic plans of 10 government departments and five arm's length bodies
- community risk registers of all 38 local resilience forums in England

45 National Audit Office, *The government's preparedness for the COVID-19 pandemic: lessons for government on risk management* (HC 735), 19 November 2021

- relevant documentation e.g. the 2019 National Security Risk Assessment
- risk identification and planning documents from international comparators

The NAO also held meetings with Audit Scotland, Audit Wales and the Northern Ireland Audit Office, to gain an insight into the preparedness of the devolved administrations for the COVID-19 pandemic.

Findings

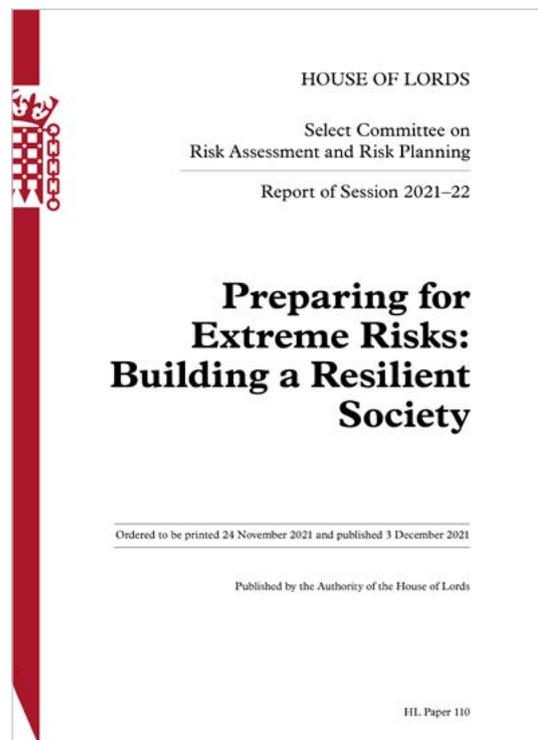
Factual findings and areas for improvement were set out across each of the four in-scope areas. This resulted in six recommendations to support the government’s learning from the pandemic on risk management and preparedness.

House of Lords Select Committee on Risk Assessment and Risk Planning HL Paper 110 Report of Session 2021-22 Preparing for Extreme Risks: Building a Resilient Society

Overview⁴⁶

On 15 October 2020, the House of Lords appointed the Select Committee on Risk Assessment and Risk Planning “to consider risk assessment and risk planning in the context of disruptive national hazards”.⁴⁷ It was chaired by Lord Arbuthnot of Edrom and re-appointed at the start of the 2021-22 parliamentary session. The committee’s lines of inquiry focused on four key questions:

1. Does the government currently have a reliable system in place to manage the risks facing the UK?
2. Can the UK risk management system adapt and evolve to combat unpredicted, unknown and extreme risk scenarios?



46 House of Lords Select Committee on Risk Assessment and Risk Planning. HL Paper 110, Report of Session 2021-22. **Preparing for extreme risks: building a resilient society**. December 2021

47 House of Lords Library. In Focus: **Preparing for extreme risks: Lords committee report**, December 2021

3. Has the UK government built a risk management structure that can deal with risk events that impact across multiple areas of our society?
4. How should all aspects of society be engaged within the risk assessment and risk planning system?

Methodology and evidence-base

To answer these questions, the committee issued an open call for evidence in December 2020, which generated 99 pieces of written evidence in response. They then took oral evidence from 85 witnesses during 29 sessions, held between 25 November 2020 and 23 June 2021. Both written and oral evidence came from a wide range of witnesses, drawing out expert knowledge and professional experiences from across the resilience arena.

Findings

The final report from the House of Lords Select Committee was published on 3 December 2021. It captured the extent of this combined evidence, drawing a range of conclusions across four report chapters. The chapter headings included:

- Resilience
- A whole-of-society approach
- Risk assessment
- Risk planning

These included recommendations regarding the national risk identification and assessment process, governmental risk ownership, planning for emergencies, emerging and unknown risks and international cooperation. Combined recommendations to government across the report totalled 30, with a selection of key recommendations relating to risk assessment summarised below.

Government response

The **Government response to Preparing for Extreme Risks: Building a Resilient Society**⁴⁸ which accepted (or accepted in principle) the majority of these recommendations was published in March 2022.

48 HM Government, **Government response to Preparing for Extreme Risks: Building a Resilient Society**, March 2022.

House of Commons Committee of Public Accounts Government preparedness for the COVID-19 pandemic: lessons for government on risk – Forty-Sixth Report of Session 2021-22

Overview⁴⁹

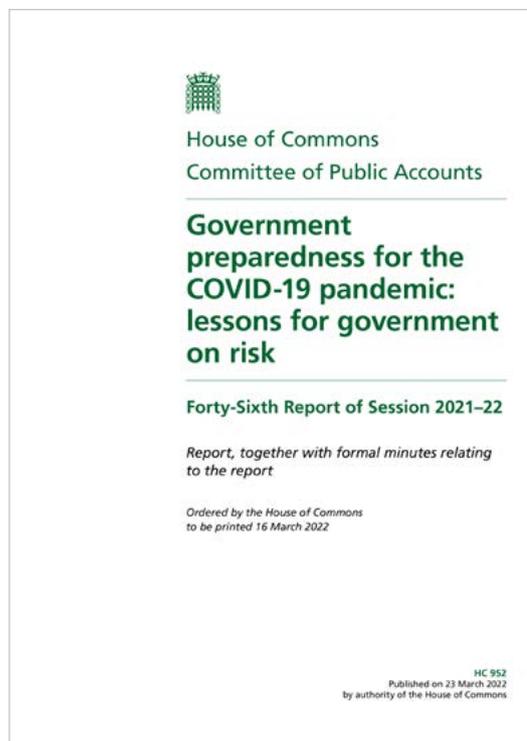
The Public Accounts Committee is a House of Commons Select Committee, appointed to examine the value for money of government projects, programmes and service delivery. Drawing on the work of the National Audit Office, the committee holds government officials to account for the economy, efficiency and effectiveness of public spending.

The committee undertakes various inquiries, which allows its members to consider oral and written evidence on a particular topic. This typically results in the publication of a report.

Of particular interest in relation to lessons on risk, is the Public Accounts Committee's programme of work holding Government to account for its use of taxpayers' money in response to the COVID-19 pandemic. This has resulted in a range of reports, including 'Lessons for Government on Risk'.

Methodology and evidence-base

This report presents findings from a follow-up inquiry by the committee, post-publication of the NAO's 'Lessons on risk management' report. The committee gathered additional written evidence and took oral evidence from senior government officials on the topic of risks.



Findings

Given the nature of the follow-up inquiry, the recommendations did reflect those made in NAO's Report 8. However, these were set out and expressed differently, integrating the additional evidence collected. Conclusions and recommendations were split under two headings: 'Lessons on risk management and communication', and 'Lessons on pandemic preparedness'. This generated six recommendations for government which are included in the analysis to follow.

49 House of Commons Committee of Public Accounts, Government preparedness for the COVID-19 pandemic: lessons for government on risk. Forty-Sixth Report of Session 2021-22, March 2022

Government response

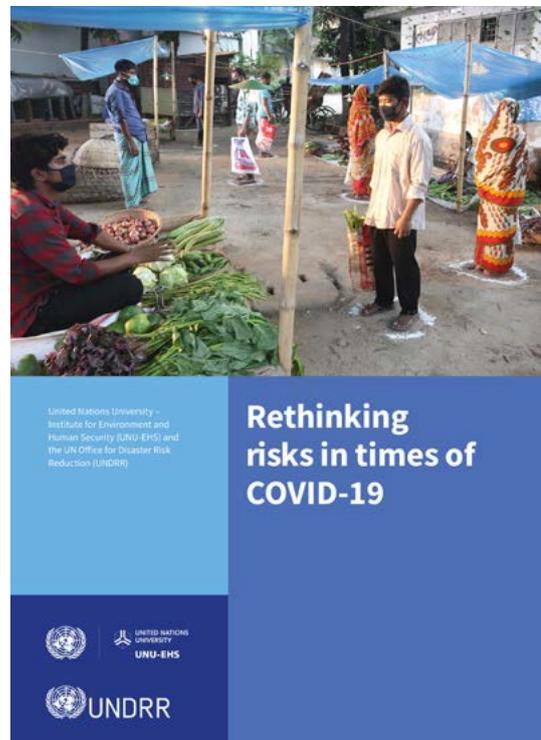
The Government Response to the Committee of Public Accounts on the Forty-Sixth Report of Session 2021-22 was set out in the HM Treasury minutes and published in May 2022.⁵⁰

United Nations University – Institute for Environment and Human Security (UNU-EHS) and the UN Office for Disaster Risk Reduction (UNDRR): ‘Rethinking risks in times of COVID-19’

Overview

In May 2022 the UNU-EHS and the UNDRR released a research-based report titled ‘Rethinking risks in times of COVID-19’.⁵¹

This report demonstrated the ways in which the pandemic has (and continues to) vividly expand our understanding of the risks we face. It also urged a new, ‘whole-of-society’ view and approach to reducing risk and building resilience in a world dynamically interconnected across sectors, borders and scales. It has a particular focus on high-level learning relating to ‘systemic risks’, which are ‘associated with cascading impacts that spread within and across systems and sectors via the movement of people, goods, capital and information within and across boundaries’.⁵²



50 HM Treasury, Treasury Minutes: Government Response to the Committee of Public Accounts on the Forty-Third to the Forty-Eighth report from Session 2021-22. May 2022.

51 United Nations University Institute for Environment and Human Security (UNU-EHS) and United Office for Disaster Risk Reduction (UNDRR). Rethinking risks in times of COVID-19. May 2022

52 United Nations, Publications: Rethinking risks in times of COVID-19. May 2022

Methodology and evidence-base

The evidence base for lessons in each of these areas comes from multimodal research, which included a desk-based literature review and the collection of case-study data from five geographically, economically and culturally diverse international locations.⁵³

Findings

Two of the report's key messages included the developed need for 'Understanding risk' and the need for developed views on 'Risk management'. These were articulated through six cross-cutting lessons on the nature of systemic risk, and 10 lessons for managing systemic risk. The 10 lessons for managing systemic risk, included in the analysis, covered the evidenced need for:

- joining the dots on interconnections
- mapping risk perceptions
- investing in monitoring and evaluation
- data collection and management
- identifying the trade-offs in risk management options and choices
- fostering collaboration
- implementing comprehensive risk management

- communicating in a way that translates into effective action
- tackling gender inequality in risk
- recognising systemic risk can provide opportunities for systemic recovery

The report concluded that: "COVID-19 has expanded the way we know and understand risks by highlighting that risks emerge, at times undetected, from both exogenous (external) and endogenous (internal) triggers, direct as well as indirect exposures, and multiple vulnerabilities of interconnected agents and systems that can reinforce each other".

Findings are summarised on the UNU website, and set out in full within the technical report.

53 United Nations University Institute for Environment and Human Security (UNU-EHS) and United Office for Disaster Risk Reduction (UNDRR) COVID-19 sparked new thinking on risks, UN report finds. May 2022

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Analysis and findings

Learning themes

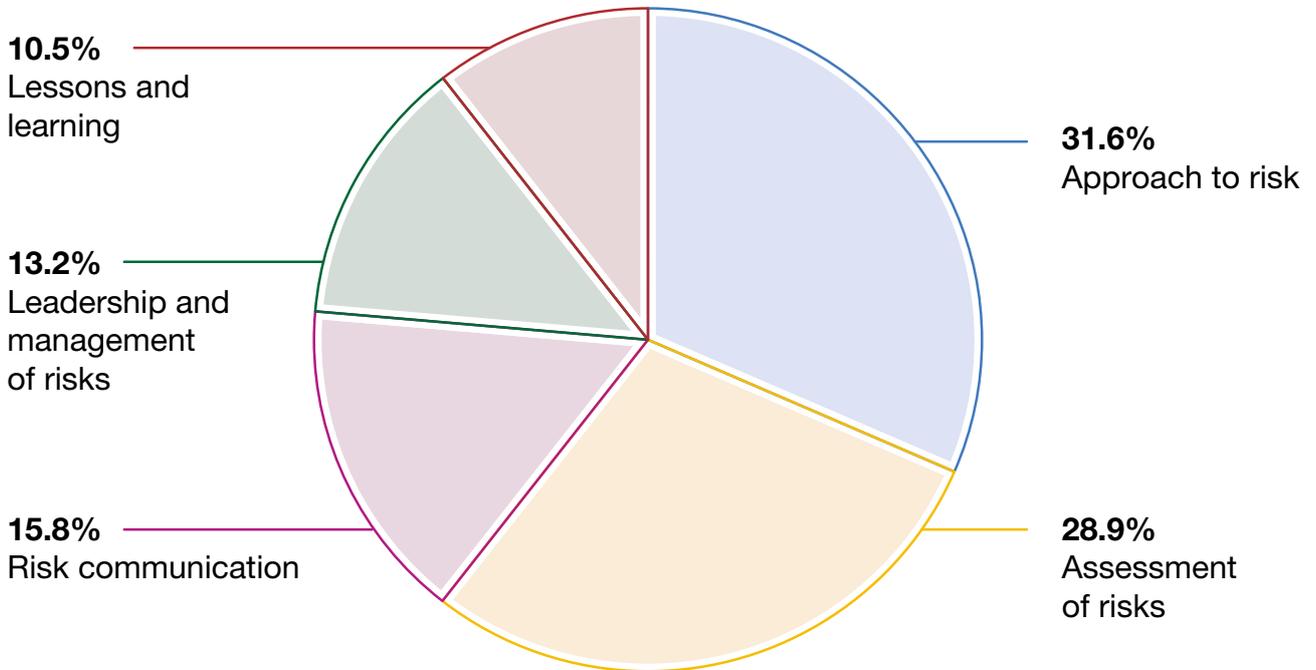
Of the 52 recommendations reviewed across the high-level reports, 38 fell into the top five learning theme categories. The top five learning themes are listed and visualised below, in order of prevalence, under the following headings:

- Approach to Risk
- Assessment of Risks

- Risk Communication
- Risk Leadership and Management
- Lessons and Learning

Within each of these learning themes, recommendations were further analysed and grouped into sub-themes. Prominent sub-themes are detailed in their respective sections to follow.

Figure 2: Lessons on risk – Top five learning themes across report recommendations



Approach to risk

The recommendations under this learning theme centred clearly on a need for a shared understanding of risk that is itself founded on a collective understanding of the world as an increasingly globalised, complex and interconnected environment.

While this understanding practically and conceptually pre-dated COVID-19, all reports provided examples of how it had been irrevocably impressed and proliferated by the pandemic. The resultant, top-line learning was that risks could no longer

be anticipated, assessed, mitigated or managed in discrete terms, in isolation from wider governance or critical systems, in disintegrated, single-discipline siloes or without increased focus on vulnerabilities.

Recommendations across reports regarding a pandemic-informed approach to risk highlighted:

- the importance of an **approach that ‘joins the dots’ on risk**, prioritising an understanding of their systemic drivers, the dynamic nature of vulnerabilities and the interconnected cascading (and/or compounding) potential of their impacts
- the need for increasingly **intentional and organised approach to collaboration with international** partners and institutions
- a call for greater consistency and assurance in delivering a **comprehensive, holistic and integrated approach to multi-risk management**, spanning policy planning, and practice

There were repeated references to the varied systems society operates within, the interactions between those system components, and the need for interdisciplinary approaches to managing both existing and emerging risks going forward.

The largest subgroup of recommendations in this learning theme could be broadly branded and expanded under the heading **‘resilience thinking’**.⁵⁴



Sidelight

Resilience thinking refers to a systems-based, solutions-focused approach that investigates how systems of people exist and interact with systems in nature. Its development was influenced by ecologists and social scientists who were looking to develop new multidisciplinary approaches to environmental problem-solving. Although described as a way of thinking, it also describes a pragmatic approach that has been adopted in natural resource management and beyond. It has three interrelated, central aspects: resilience (i.e. the capacity of a system to continually change and adapt whilst remaining within critical thresholds), adaptability (i.e. the capacity of actors in a system to influence resilience) and transformability (i.e. the capacity to cross thresholds into new areas in order to become a different kind of system). Ultimately, resilience thinking demonstrates an acceptance of complexity and uncertainty, centring on the notion that ‘things change - and to ignore or resist change is to increase our vulnerability and forgo emerging opportunities’.

54 Curtin, C.G. and Parker, J.P., 2014. Foundations of resilience thinking. *Conservation biology*, 28(4), pages 912-923



Transferable lessons

Evidence for this learning theme can be seen in the transferable lessons and recommendations texts below. The prominence and importance of our ‘approach’ to risk is seen both as an approach in terms of mindset and practical planning and preparedness. This impresses and reflects

the importance of both thought and action when working, starting with risk and moving towards resilience as a dynamic outcome. **Resilience thinking** is a thread that can be traced through the transferable lessons set out below.

Approaches to risk

UNU-EHU and UNDRR: Risk assessment

p.77 **Explore and map interconnections and critical system components**

The cascading effects originating from COVID-19 have allowed us to observe the interconnections that exist in systems by design or as an emergent quality. Mapping this interconnectivity and critical system components (i.e. those that, if affected, can lead to devastating cascading effects) can help in designing more effective risk management measures...interconnections and network structure deserve more attention in risk assessment.

Recommendation

To help join the dots on interconnections, thinking in systems is important. Working together with local experts and stakeholders can support the identification of hidden vulnerabilities and complex relationships rather than simple linear cause-effect chains. Governments, practitioners and communities should embrace a systems-thinking mindset to support systemic risk analysis and management.

p.78 **Comprehensive risk management**

The COVID-19 pandemic has underlined that managing systemic risks requires risk management approaches that transcend across disciplines, sectors and institutions at all levels. Further, compounding risks induced by the pandemic, climate-related extreme events and natural hazards that have become evident from this research call for increased coherence between pandemic risk management, disaster risk management and climate change adaptation

Recommendation

Cases [demonstrate]...the necessity of devising risk management practices that tackle multiple types of hazards and risks during prevention, response and preparation, as well as recovery.

NAO: Lessons for government on risk management

(c)

Recommendation

The Cabinet Office should work with government departments to ensure that their risk management, business continuity and emergency planning are more comprehensive, holistic and integrated.

House of Commons PAC: Lessons for government on risk

4

International Collaboration

The pandemic has highlighted the critical role of international collaboration for managing the risks that the UK faces. Given the increasingly interconnected nature of our world, several of the main risks facing the UK may originate abroad and, if they materialise, will require a coordinated international response

Recommendation

Government should set out how it intends to drive greater international collaboration on risks, including exchanging information on threats, promoting and integrating mutual learning and coordinating responses across borders

House of Lords Select Committee: Preparing for Extreme Risks

34

Recommendation

The NSRA must be produced with mitigation and response in mind. The methodology of the NSRA and the Lead Government Department principle favour the assessment of discrete risks. This is an ineffective strategy given the interconnected nature of many risks...risk planning should focus on the outcome rather than the specific risk, and the NSRA should facilitate this (paragraph 223).



Further reading and resources for local partners

This learning theme especially, but not exclusively, relates to National Resilience Standards for Local Resilience Forums (LRFs), which can be found at the links provided.⁵⁵

National Resilience Standards for LRFs

Standard	Title	Details/desired outcome
#2	Local Risk Assessment	The LRF has a robust and collectively understood assessment of the most significant risks to the local area, based on how likely they are to happen and what their impacts might be. This information should then be used to inform a range of risk management decisions, including the development of proportionate emergency plans and preparations. See also Standard #15: Pandemic Influenza Preparedness.
#13	Local Recovery Management	The LRF and partner organisations have robust, embedded and flexible recovery management arrangements in place that clearly link and complement emergency response arrangements, enable the smooth transition from response to recovery and support collective decision making to initiate, inform, resource, monitor and ultimately close down the recovery phase of emergencies.

UK Government Resilience Framework – Annex B: Summary of framework actions

Theme: risk	Action
In action	UK government is continuing to take international, bilateral and multilateral action and cooperation on risk and resilience. Continue to use the government's international action to identify and tackle risks before they manifest.
By 2025	Conduct an annual survey of public perceptions of risk, resilience and preparedness Develop a measurement of socio-economic resilience, including how risks impact across communities and vulnerable groups – to guide and inform decision making on risk and resilience
Theme: communities	Action
In action	Continuing to deepen and strengthen its relationships with the Voluntary and Community Sector in England

55 HM Government. Guidance: National Resilience Standards for Local Resilience Forums (LRFs). August 2020

Further resources to support a join up approach to risk

1. Policy paper: UK Biological Security Strategy.⁵⁶

Building on lessons from COVID-19, an updated Biological Security Strategy was published in June 2023



This sets out the government's renewed vision, mission, outcomes and plans to protect the UK and our interests from significant biological risks, no matter how these occur and no matter who or what they affect. It provides the overarching strategic framework for mitigating biological risks within which a number of threat and disease specific UK strategies critically contribute.

2. Local Government Association – Toolkit: Partnership working with the voluntary and community sector.⁵⁷

Building on research commissioned by the Local



Government Association (LGA) and conducted by locality into 'The state of strategic relationships between councils and their local voluntary and community sector', the LGA released a toolkit for working with the Voluntary and Community Sector (VCS). By using this toolkit councils can:

- deepen their understanding of the benefits of effective partnership working with the VCS
- assess the current state of their strategic relationships, where there are strengths and weaknesses
- agree concrete steps to further strengthen their relationships
- For further information and publications, visit the **LGA website**, www.local.gov.uk

⁵⁶ HM Government. Policy paper: UK Biological Security Strategy. June 2023

⁵⁷ Local Government Association. Toolkit: Partnership working with the voluntary and community sector. April 2023



Make it active

Consider using the self-assessment tool and action planning guidance in the LGA Toolkit to reflect on how/whether the pandemic built shared foundations between councils and VCS partners in your local partnership. It can also be used to assess onward, continuing opportunities for community collaboration during recovery.

Assessment of risks

Running very closely behind the leading theme on the collective approach to risk were a number of recommendations on how risks are assessed. These primarily focused on national level risk assessment, but also included recommendations for increased local-national engagement and collaboration as part of that assessment process. These links were considered especially important when seeking to understand both perceptions of risk and the dynamic complexities of geographic, social and economic vulnerabilities at the local level. Although this theme was evident at the international level, the House of Lords Risk Assessment and Risk Planning Committee's report 'Preparing for Extreme Risks: Building a Resilient Society', had a majority voice, in terms of quantity recommendations in this area.

Specific recommendations for updates and improvements in national-level assessment methodologies covered areas such as:

- **risk assessment scope**, proposing the need to review the timescales and impacts applied in the national risk assessment process, to better accommodate changing risks and increasingly account for high impact - low likelihood, or chronic risk events
- **risk assessment as a whole-society endeavour**, promoting increased engagement with a wider range of sectors, stakeholders and local communities to generate improved insights on population-level resilience
- **risk assessment format**, with a view to increasingly dynamic, data-driven and digitally presented information on national risks

As the owners of the confidential NSRA and the NRR, these recommendations were directed to central government. However, the conclusions will be of interest to wider resilience partners, given the fundamental role that national risk assessment processes play in generating a shared understanding of the risks we face, and the influence that national methodology has on local resilience activity. Lessons, conclusions and recommendations also demonstrate transferable features that can be used to inform contextualised and localised risk assessment work.



Transferable lessons

Assessment of risks

UNU-EHU and UNDRR: Risk intervention

p.78 **Collective responsibility (a whole-of-society approach)**

The sense-making process is critical in shaping individual risk perception and behaviour, which are influenced by the norms and values of individuals, groups, organisations and societies...The way one person sees risk may not be the same as how another sees it [and] the way we understand and perceive risks influences our ability to respond to them

Recommendation

To guide risk management, risk assessment has to pay attention to trust, risk perceptions and, in particular, to the perceived fairness of the distribution of benefits and losses.

House of Lords Select Committee: Preparing for Extreme Risks

38 **Chapter 5: Risk assessment**

The current format of the NSRA and NRR is too rigid...A shorter, more dynamic, web-based platform would facilitate access, make the underlying data more visible, and allow for the improved representation of interconnectedness (paragraph 224).

39	Recommendations*
	<ul style="list-style-type: none"> • The NSRA must focus more on the outcomes of emergencies. The document should be oriented around common consequences to allow for preparedness efforts which are not overly focused on discrete risks. • Risks should be assessed on an impact-vulnerability matrix, as well as an impact-likelihood matrix. • Where a risk may manifest in a number of ways, the NSRA should present several scenarios, not just the reasonable worst-case scenario. • The NSRA should include a number of cascading risk scenarios, whose development has been informed by interdependent infrastructure modelling. • The NSRA should move to a five-year timeline, with risks refreshed and reassessed annually...Chronic risks, chronologically unpredictable risks, low-likelihood risks and the most significant risks should also be accompanied by a long-term assessment of 15 years. • The data required for emergency response should be identified at the point that a risk is assessed, and all efforts should be made to ensure that data can be accessed from the outset of a crisis. • The NSRA and NRR should be presented in a more dynamic, data driven web portal which allows users to visualise the risk summary, access the underlying data and easily navigate to related risks
45	Chapter 5: Risk assessment <p>The government must recognise that informing the public about the risks they face is both morally justified and benefits societal resilience. Knowledge on how the public understands risk and the population’s level of resilience is crucial to the development of rigorous risk assessment and planning. Voluntary and community groups can provide key insights on these issues.</p>
47	Recommendation <p>When conducting the national risk assessment process, the government should engage with voluntary and community groups to ascertain information on risks and population level resilience (paragraph 249).</p>

* Transferable lessons and recommendations from the House of Lords Select Committee can be read with fuller context and expanded wording in the online report.



Further reading and resources for local partners

This learning theme relates to duties under the Civil Contingencies Act 2004, along with the National Resilience Standards for Local Resilience Forums, which can be found at the links provided.

Civil Contingencies Act 2004

- The Civil Contingencies Act (CCA) 2004 establishes the legislative framework for LRFs and the statutory duties applying to emergency responder organisations notably: cooperation and information sharing, **risk assessment**, contingency planning, business continuity management and the provision of advice and assistance to the public (National Resilience Standards page 34).
- The CCA and accompanying regulations place a statutory obligation on all Category 1 responders to **carry out risk assessments and to maintain a community risk register** which collates risk assessment information (see CCA 2004, Part 1 Section 2 and CCA 2004 Regulations 2005, Part 3).
- There is a duty on Category 1 responders to arrange for the **publication of all or part of the (risk) assessments** made and plans maintained insofar as publication is necessary or desirable for the purpose of: preventing an emergency; reducing, controlling or mitigating its effects; or enabling other action to be taken in connection with an emergency.
- There is a further duty to have regard to the importance of not unnecessarily alarming the public and safeguarding sensitive information (see CCA 2004 Regulations 2005, Part 5 and Part 8).

National Resilience Standards for LRFs

Standard	Title	Details/desired outcome
#2	Local Risk Assessment	The LRF has a robust and collectively understood assessment of the most significant risks to the local area, based on how likely they are to happen and what their impacts might be. This information should then be used to inform a range of risk management decisions, including the development of proportionate emergency plans and preparations.

Emergency planning and preparedness (guidance)

p.2	Chapter 4: Local responder risk assessment duty (Revised March 2012)	Risk assessment is the first step in the emergency planning and business continuity planning processes. It ensures that Category 1 responders make plans that are sound and proportionate to risks (paragraphs 4.1 to 4.5). The Act places a duty on all Category 1 responders to carry out risk assessment. Multi-agency cooperation in maintaining a Community Risk Register is also a statutory duty (paragraphs 4.9 and 4.10).
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UK Government Resilience Framework – Annex B: Summary of framework actions

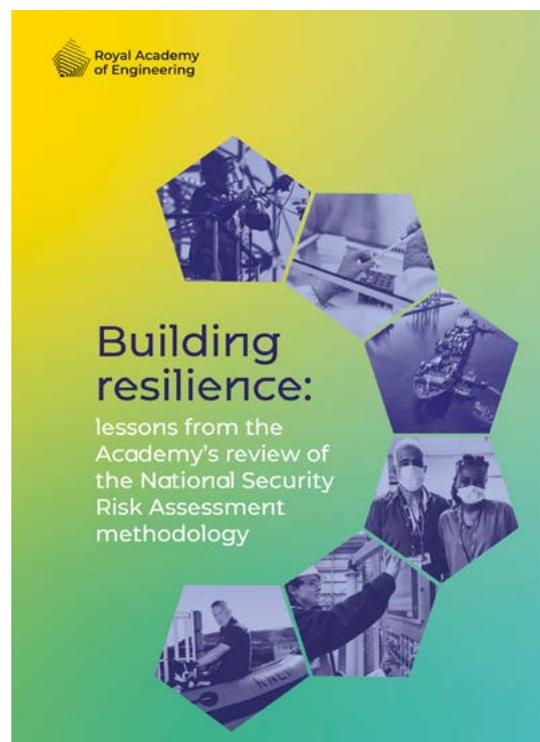
Theme: risk Related action

Complete	Refreshing the NSRA process, so it will look over a longer timescale, include multiple scenarios, look at chronic risks and interdependencies and use the widest possible range of relevant data and insight alongside external challenge. The NSRA was updated in 2022 based on the new methodology.
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Lessons from the Royal Academy of Engineering’s review of the National Security Risk Assessment methodology

There has been a significant amount of work already undertaken by central government to address some of the national level recommendations set out in the reports above (see page 57). This included commissioning an external review of the NSRA methodology in 2021. The review was completed by the Royal Academy of Engineering and involved contributions from several hundred stakeholders from across government departments and arm’s length bodies, chief scientific advisers, agencies, a range of academic groups, parliamentarians and Local Resilience Forums. A number of lessons for government were set out. These were also turned into ‘7 Principles for Good Practice’ for the wider community.

The full research report, **Building resilience: lessons from the Academy’s review of the National Security Risk Assessment methodology** can be read and downloaded in full on the Royal Academy of Engineering website, raeng.org.uk



For details on the 7 Principles for Good Practice in risk assessment and questions that can support their application in your setting, see the article from Professor Joan Cordiner FREng FRSE which follows this analysis on page 71.

Risk communication

Findings from the case study research by UNU-EHU and UNDRR revealed that risk communication and coordination during COVID-19 were significant challenges for authorities across the globe, at all levels. As one of the reports six cross-cutting lessons on the systemic nature of risk identified across case studies from varied regions, key top-line challenges in this area included:

- difficulties in communicating the highly uncertain and dynamic nature of the disease
- challenges in designing and delivering the communication required to coordinate a multi-level response

It also highlighted the vital importance of multi-stakeholder engagement, including at community and household level, in the development, delivery and monitoring of key health messaging. This was noted as having two-way benefits, helping to mitigate degraded communications and disinformation from central sources, while also strengthening connections to supporting the upward information and data flow from local to national levels.

In the UK particular emphasis was placed on recommendations that the government should:

- **increase transparency** amongst resilience professionals and awareness amongst the general public about the main risks facing the country
- **increase opportunities for democratic accountability and scrutiny** of risk assessment and associated work streams through UK Parliament
- **increase communication, coordination and messaging consistency** between central functions and the resilience community, including LRFs, to further a shared understanding of risk and a whole-society response to it





Transferable lessons

Risk communication

UNU-EHU and UNDRR: Risk intervention

p.79

Actionable communication

A lack of clear and timely communication can result in the spread of misinformation and distrust in risk reduction measures...Online communication tools and platforms deserve special attention in risk management as they can also add to polarisation.

Recommendation

[the] ...inclusion of community leaders from religious organisations in the communication process [can] raise the credibility and actionability of information...community risk-awareness and capacity-building campaigns could reach households excluded by other communication networks.

House of Commons Committee of Public Accounts

3

Communication of the main risks facing the UK

There would be significant benefits in improving the public's awareness of the main risks facing the country and what government is doing about them. The public and Parliament have limited awareness of the main risks facing the country and of what government is doing to address them. Although government has published a public-facing national risk register since 2008, this document is not widely known.

Recommendation

Cabinet Office should set out how it plans to increase public awareness of the main risks facing the UK. It should also report annually to Parliament: on what actions government has undertaken during the year to mitigate the risks covered by the catastrophic emergencies programme and provide an assessment of government's preparedness for each risk; what changes government in making as a result of its consultations on National resilience; and government preparedness for the COVID-19 pandemic: lessons for government on risk; what lessons government had learnt about how to effectively communicate during the pandemic.

House of Lords: Preparing for Extreme Risks

p.51

Chapter 4: A whole-of-society approach

Conclusion 20: Engagement of the devolved administrations by the UK government is superficial and ad-hoc and often an afterthought, particularly on reserved matters which may have implications for the resilience systems in the devolved administrations. Resilience is a devolved capability and as a consequence a more formalised engagement process is needed (paragraph 140).

Recommendation

Recommendation 21: The UK government needs to produce an agreed set of communications structures at all levels of seniority, including ministerial level, to facilitate effective resilience dialogue between central government and devolved administrations. This must be done in consultation with the devolved administrations. This should define the frequency and terms of engagement, at what stage the devolved administrations should be consulted and/or informed and identify key points of contact (paragraph 141).

p.62

Chapter 4: A whole-of-society approach

Conclusion 29: The UK population is not sufficiently encouraged to engage in emergency planning or build a level of personal preparedness. At present, the NRR is the primary tool for public education employed by the government. This approach falls short and does not empower the public to make informed decisions about personal safety. There is little evidence to suggest that providing information leads to panic. Providing individuals with knowledge about how to respond in a crisis and guidance to help build personal preparedness will improve societal resilience. It should be recognised that socio-economic disparities threaten to undermine civilian resilience capability. Moreover, misinformation poses a direct risk to civil cohesion and resilience. This risk has been exacerbated by the growing influence of social media platforms. Misinformation should be identified, pre-empted and countered as early as possible (paragraph 186).

Recommendation

Recommendation 30: The government should commit to a biennial publication of a brochure on risk preparedness. This brochure should educate the public on general resilience principles, outline how individuals could improve their preparedness, provide guidance on what to do in an emergency, and signpost further information on resilience. This should be modelled on the Swedish brochure 'If crisis or war comes' and supplement the NRR (paragraph 187).



Further reading and resources for local partners

This learning theme relates to Duties under the Civil Contingencies Act 2004 and the National Resilience Standards for Local Resilience Forums, with examples provided below. The Government Communication Service (GCS) also produces a range of public-facing materials for government communicators and organisations, which may be of interest to the wider resilience community.

Civil Contingencies Act 2004

The **Civil Contingencies Act** includes public awareness and warning and informing as two distinct legal duties for Category 1 responders: advising the public of risks before an emergency and maintaining arrangements to warn and keep them informed in the event of an emergency (GOV.UK).

National Resilience Standards for LRFs

Standard	Title	Details/desired outcome
#3	Communicating Risks to the Public	The LRF will have promoted a well-developed understanding of the risks specific to its local area and ways in which those risks can be managed, resulting in them being better prepared and better able to respond and recover in the event of an emergency.
		<p>How to achieve leading practice in this area</p> <p>Establishing a programme to validate and continually improve the effectiveness of risk communication to the public within the context of recognised good and leading practice, and act on lessons identified to drive continuous improvement in risk communication.</p>

Emergency preparedness (guidance)

	Chapter 7: Communicating with the Public	‘Category 1 responders’ duties to communicate with the public under the Act are based on the belief that a well-informed public is better able to respond to an emergency and to minimise the impact of the emergency on the community (paragraphs 7.6).’ A range of related Annexes are also available at the link opposite in support of work on communicating risks.
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GCS: COVID-19 Communications Advisory Panel

In 2020, **GCS published a report by the COVID-19 Communications Advisory Panel**. The report brought together contributions from leaders from across the UK communications industry to provide insights into the impact of the pandemic on communications professionals, and present some of the learnings. The report sets out findings based on two sets of evidence:

- a literature review of articles, case studies, opinion articles and research submitted to the project
- interviews with colleagues in senior communication roles about their personal and professional experiences

It concludes with **eight lessons on professional communication trends** and provides some of the skills needed by communications professionals in response to each.

The report can be accessed in full at the **GCS website**.⁵⁸

GCS: resources and toolkits

The GCS also has a range of other resources and toolkits to support public bodies in the effective, accurate, relevant and timely communication of information. Among others, this includes an **Emergency Planning Framework**, **RESIST 2 Counter Disinformation Toolkit** and the latest **Crisis Communication Operating Model** for government communicators, which was released earlier this year to clarify how the communication function will structure itself, and allocate roles and responsibilities to prepare, respond and recover from crisis situations.



UK Government Resilience Framework – Annex B: Summary of framework actions

Theme: risk	Related actions
By 2025	Introduce an Annual Statement to Parliament on civil contingencies risk and the UK government's performance on resilience.
By 2030	Develop proposals to make the UK government's communications on risk more relevant and easily accessible.

58 <https://gcs.civilservice.gov.uk/publications/covid-19-communications-advisory-panel-report/>



Make it active

In the context of the transferable lessons, the following questions could be considered:

- Who do you report to annually regarding the locally assessed risks in your organisation/locality?
- Have you identified lessons on communication following experiences of pandemic response and recovery to inform wider strategic, tactical, operational and/or community preparedness?
- Has the effectiveness of work to address lessons on communication following exercises and emergencies been evaluated and/or validated in subsequent scenarios?

Leadership and management of risk

The next evidenced learning theme across reports related to risk leadership and management. The two are grouped under one theme on the basis that one is not necessarily mutually exclusive from the other, depending on the organisational context. For example, some leaders are great managers, some managers are great leaders, and in all cases leadership will inevitably influence how people, policy and processes are managed. That said, the functional differences between leadership and management are of course recognised. To accommodate both similarities and differences, risk leadership and risk management were combined into one learning theme, but are expanded separately under two sub-headings below. Their connectedness across reports is then evidenced in the table of transferable lessons, conclusions and recommendations.

1. Risk leadership

Predominant patterns across lessons, conclusions and recommendations centred on calls for increased drive, influence and ownership of identified risks from accountable, senior leaders at the national level. This included proposals for:

- **increased scrutiny and senior oversight** of work across the risk cycle
- the creation of new **high-level roles with accountable, designated responsibilities** for areas of risk and national-level resilience
- new and existing leaders to **direct greater alignment, transparency, consistency and assurance of risk management** within and across stakeholders

Recommendations under this heading generally made a compelling case for high-level, point-person leadership at the national level. They also proposed wider development of the risk management profession, to be driven by leaders, within central government and across wider resilience contexts.



Sidelight

There are a number of areas across the reports where recent UK government activity can be evidenced in response to the recommendations made:

- The establishment of the **UK Resilience Forum** was launched in 2021, bringing national, regional and local government, private and voluntary sectors (and other interested parties) together to consider, challenge and collaborate on risk in order to strengthen UK resilience.
- A new **Head of Resilience** role was created and filled in 2022, to guide best practice, encourage adherence to standards, and set guidance in risk and resilience.
- The Cabinet Office has been refocused to create a dedicated function for resilience, the **Resilience Directorate**, that now focuses on the prevention and mitigation of both acute and chronic risks rather than only dealing with the consequences of crises.
- The **UK Government Framework** was published in 2022 to direct resilience activity between 2023 and 2030, This included a range of commitments, including the introduction of an Annual Statement to Parliament on civil contingencies risk and the UK Government's performance on resilience

2. Risk management

Content regarding the management of risks was equally evident under this learning theme. Challenges in this area largely centred around three topics:

- variation in risk management principles, practice and maturity
- the management of risks through effective monitoring and evaluation of:
a) identified/emergent risks and b) the progress of risk-related activity
- risk management as a whole society endeavour, extending into recovery

In terms of risk management principles, practice and maturity in the UK, closer alignment with the Orange Book was recommended for mitigating variability in risk management capacity, capability and maturity across government departments.⁵⁹

The Orange Book sets out guidance and principles around the concepts, development and implementation of risk management processes in government organisations. More information and a link to the document is provided in the Sidelight below.

In terms of the monitoring and evaluation of identified and emergent risks, a requirement for increased attention on key risk indicators before and during an emergency response was highlighted. This was owing to the importance of monitoring in signalling shifting risk dynamics, the knock-on effects of any interventions and onward cascading risks. For example, conclusions highlighted: the need for earlier, transparent selection of risk indicators to support open-access data sharing and monitoring in a response; the benefits of close to real-time data collection methods and facilitates; and the importance of both for informing evidence-based decision making.

59 HM Government. *The Orange Book*. May 2023



Transferable lessons

Leadership and management of risk

UNU-EHU and UNDRR: Risk intervention

p.78	<p>Collective responsibility (a whole-of-society approach)</p> <p>Managing systemic risks is a whole-of-society responsibility, meaning that all societal actors have a role, from government to private businesses to single individuals. This approach increases the chances of identifying and managing vulnerabilities across all sectors and groups. Lessons can be learned from disaster management on the expectations of the general public towards leadership in times of crisis.</p> <p>Recommendation</p> <p>Involve citizens in risk management practices...supporting and strengthening the ability to self-organise and self-control in managing systemic risks.</p>
p.78	<p>From systemic risk to systemic recovery</p> <p>The flip side of systemic risk is systemic recovery. The interconnected nature of societal systems presents an opportunity for positive turning points and for the propagation of the success of interventions. In our cases, we observed that positive impacts can serve as a point of (further) intervention, such as the job innovations following financial assistance, and concrete advances in digitalization. Furthermore, with the increase in compounding extreme events, society can be understood to be in a constant recovery mode, entering the stage of a 'risk society'.</p> <p>Recommendation</p> <p>Recovery management deserves more attention in risk management.</p>

NAO: Lessons for government on risk management

p.7

Risk management

Risk practices have improved over time across government and organisations are placing increased importance on the contributions of their risk functions. The review highlighted variability in senior leadership support and promotion of risk management, including at board and executive levels; capacity and engagement in relation to risk management; approaches and frequency in undertaking horizon scanning exercises; and alignment to the Orange Book, which sets out the government's mandatory requirements and guidance on risk management.

Recommendation

The Cabinet Office and HM Treasury should support departments to reduce variation in capacity, capability and maturity of risk management, emergency planning and business continuity across government departments. This should include providing advice on strengthening leadership of risk management, business continuity and disaster recovery; the basic level of capability needed in each department; and plans to address any gaps.

House of Commons PAC: Lessons for government on risk

p.3

Variability in risk management across departments

The Cabinet Office and HM Treasury should set out what they intend to do to ensure that there is sufficient uniformity in department's high-level interpretation of and alignment to the principles of the Orange Book. As part of this, the Cabinet Office should set out how it will ensure that departments have a shared understanding of the government's tolerance for the impacts of major risks, including what levels of impact are acceptable and what levels of impact require mitigation

House of Lords Select Committee: Preparing for Extreme Risks

48

Chapter 6: Risk planning

There is, overall, an absence of auditing of departmental risk planning at all levels. In particular, the committee recognises that Parliament has been too passive in its responsibility to scrutinise risk plans and should assist the audit of government preparedness (paragraph 265).

50

Recommendation

A yearly debate on the NSRA should be held by both Houses of Parliament. To ensure more in-depth scrutiny, the Office for Preparedness and Resilience should audit departmental preparedness and conduct deep dives into departmental risk management.



Further reading and resources for local partners

This learning theme relates, amongst others, to the National Resilience Standards for Local Resilience Forums Standard 1: Local Governance and Support Arrangements. Further details on HM Government's Orange Book, as referenced in the recommendations, are also referenced and may be of use or interest to the wider resilience community.

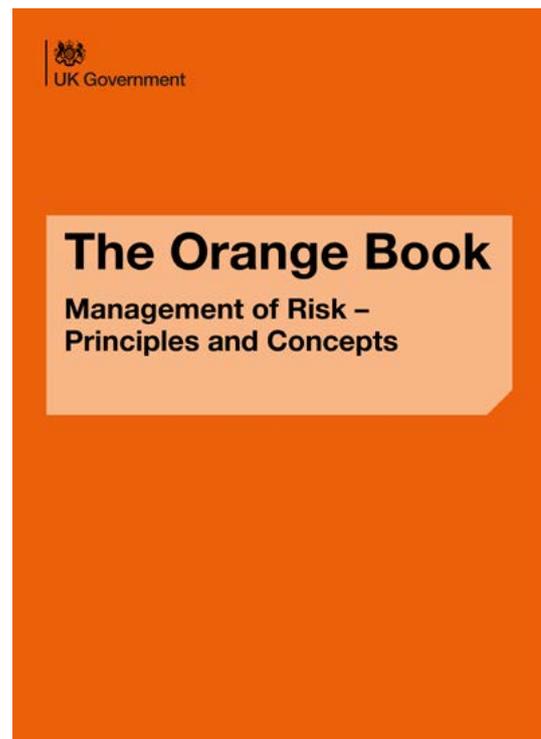
National Resilience Standards for LRFs

Standard	Title	Desired outcome
#1	Local Governance and Support Arrangements	An LRF that operates with effective strategic leadership, direction and efficient secretariat structures which enable individual responder organisations to meet their duties under the Civil Contingencies Act, and to achieve local resilience objectives.

HM Government Guidance: The Orange Book

What is 'The Orange Book'?

The Orange Book is a guidance document for government organisations that establishes a shared concept of risk management. It provides a basic introduction to risk concepts, along with principles and processes for development and implementation of risk management framework. It acknowledges the integral role that risk management plays in planning and decisionmaking, the benefits that it brings in helping to achieve organisational objectives, and the vital part it plays in strengthening agility when responding to challenges.



Orange Book risk management principles

The Orange Book presents five principles that underpin an effective risk management framework:

- E.** Risk management shall be an essential part of governance and leadership, and fundamental to how the organisation is directed, managed and controlled at all levels.
- F.** Risk management shall be an integral part of all organisational activities to support decision-making in achieving objectives.
- G.** Risk management shall be collaborative and informed by the best available information and expertise. Risk management processes shall be structured to include:
 - risk identification and assessment to determine and prioritise how the risks should be managed
 - the selection, design and implementation of risk treatment options that support achievement of intended outcomes and manage risks to an acceptable level
 - the design and operation of integrated, insightful and informative risk monitoring
 - timely, accurate and useful risk reporting to enhance the quality of decision-making and to support management and oversight bodies in meeting their responsibilities
- H.** Risk management shall be continually improved through learning and experience.

Further information on Principle E can be found under the theme ‘Lessons and learning’ on the page below. For more information on the Orange Book and the option to download and access additional documents such as the **Risk Appetite Guidance Note**, **Risk Management Skills and Capabilities Framework** and the **Good Practice Guide: Risk Reporting** visit [GOV.UK](https://www.gov.uk)

UK Government Resilience Framework – Annex B: Summary of framework actions

Theme: risk	Related actions
Complete	Creating a new Head of Resilience, to guide best practice, encourage adherence to standards, and set guidance.
By 2025	Clarify roles and responsibilities in the UK government for each NSRA risk, to drive activity across the risk cycle.
	Introduce an annual statement to Parliament on civil contingencies risk and the UK government’s performance on resilience.



Make it active

- Who leads and manages risk in your organisation/setting?
- Are the two roles distinct or combined?
- Is there any evidence of variability in the risk management process and maturity across departments or agencies in your setting?
- Where are things going well, and are there any identified areas for improvement of risk leadership and management in your setting?

Lessons and learning

The importance of addressing learning from both emergency exercises and lived experiences was specifically impressed across all reports. The report titles alone all speak to their shared purpose in understanding what can be learnt from the pandemic to better anticipate, assess, prevent, prepare, respond and recover from risks realised, whether at global or local levels going forward. For example, the UNU report 'Rethinking Risks' was dedicated to both the presentation of evidence-based lessons on the systemic nature of risk linked to the COVID-19 crisis and the exposition of lessons and recommendations from COVID-19 for understanding and managing risk. The House of Lords Select Committee investigated how the UK might better prepare for extreme risks, drawing out lessons from real-world case studies to supplement their recommendations. The House of Commons Public Accounts Committee presented 'Lessons on Risk', and the NAO carried out

a detailed audit of central risk processes to identify lessons that could inform improved risk management going forward. However, what the reports also demonstrated was that the connection between lessons and risk was not simply a function of their title, purpose or terms of reference.

The link between lessons and risk was in fact made more direct through the recommendation content. This was based on the underpinning premise that an area identified for improvement (via exercise or experience) arises from a realisation that there is a risk of an optimal (or effective) response and recovery being compromised. If that lesson is rightly identified, well understood, acted upon and embedded in response, the presumption is that this risk can be mitigated or controlled. In short, lesson identification helps to anticipate risks ahead of a response. They are useful in driving updates on the assessment of risk, and subsequent activity across the risk cycle.

This relationship between lessons, learning and risk was articulated through converging conclusions and recommendations in reports on the **vital importance of emergency exercising**. Here the link between 'applied learning' and improved preparedness was directly assumed and articulated. Several reports drew links between seemingly unaddressed lessons from prior pandemic exercise scenarios and encountered challenges when a real-time response was required. Overall, the need to effectively and assuredly capture and address lessons from exercises was recommended for the purposes of:

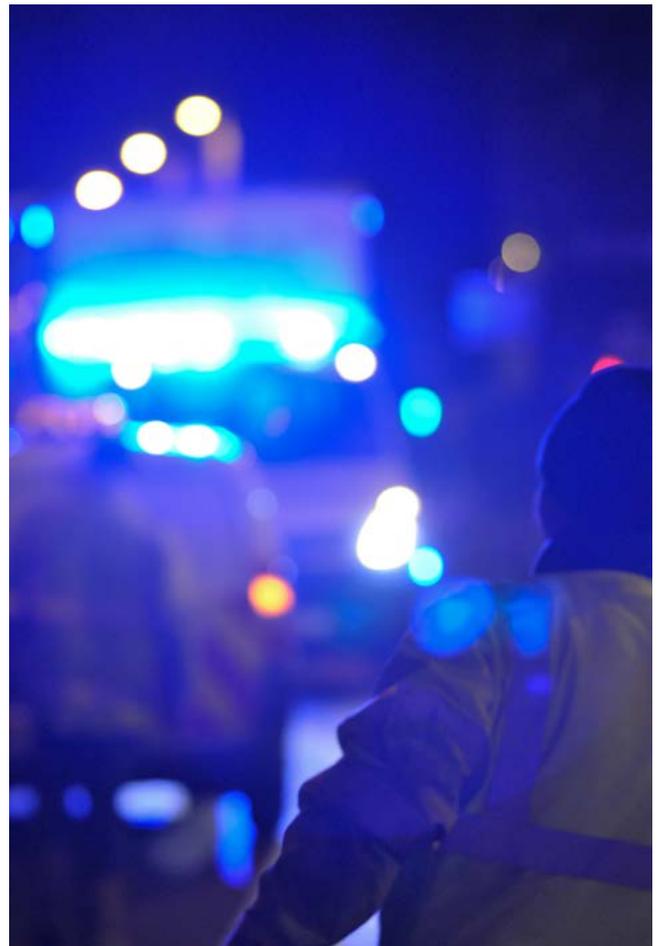
- informing an updated, shared understanding of where good practice, gaps and risks in a rehearsed response had been identified

- testing and developing individual, organisational and multi-sector skills, capabilities and capacities required for effective risk prevention, response and recovery
- driving resilience through improved preparedness of people, policy, plans and processes



Transferable lessons

Transferable lessons, conclusions and recommendations covered areas such as exercise methods and frequency. They also spoke to the scope and speed of subsequent lesson sharing, noting the importance of effective lesson communication, prompt dissemination and accountable implementation. While directed at central government, these aspects of exercising and lesson-learning can be considered across resilience contexts.



Lessons and Learning

NAO: Lessons for government on risk management

Key finding 9
(pages 7 and 18)

Lessons from incidents and simulation exercises

Government would have been better prepared for COVID-19 if it had applied learning from previous incidents and exercises... Prior to the pandemic, the government did not act upon some warnings about the UK's lack of preparedness from its past pandemic simulations.

Recommendation (e)	<p>Recommendation</p> <p>Government should ensure that lessons from simulation exercises are communicated and embedded across government. The Cabinet Office should set up a cross-government process to capture learning for emergency preparedness and resilience from exercises and actual incidents, including COVID-19, and to allocate clear accountabilities for applying learning. It should report annually on the implementation of each learning point.</p>
House of Lords Select Committee: Preparing for Extreme Risks	
52	<p>Chapter 6: Risk planning</p> <p>Exercising and wargaming should be at the heart of UK preparedness as they are crucial to ensure plans are tested and those responsible for executing them are well trained. Exercises must be regular, short and involve the most senior figures responsible for the plans, including ministers. To challenge group-think, exercises should include red-teaming where appropriate. They should test a wide range of scenarios, including compound or cascade risks, and should be followed up on with lessons learned, which in turn should feed into a loop which informs both risk assessment and planning (paragraph 276).</p>
53	<p>Recommendation</p> <p>Risk plans must specify how frequently they are to be subjected to exercising or wargaming...These exercises must be followed up with a thorough 'lessons learned' process, with these lessons learned published so they can be scrutinised. Scrutiny of lessons learned should be followed up on after one, two and five years (paragraph 277).</p>



Further reading and resources for local partners

This learning theme relates to good practice guidance in National Resilience Standard #2: Local Risk Assessment, and to Standard #8: Exercising. Relevant references in the UK Government Resilience Framework are also provided.

National Resilience Standards for LRFs

Standard	Title	How to achieve good practice in this area
#2	Local Risk Assessment	Processes in place to update risk assessments following any major event to take into account lessons learned about the impacts of that event. Arrangements proactively to share examples of good and leading practice in the area of risk assessment via Joint Organisational Learning online and with central government.
Standard	Title	Desired outcome
#8	Exercising	Members of the LRF and their wider partners develop and assure their resilience capabilities and arrangements through an exercise programme that is risk-based, inclusive of all relevant organisations and recognises the cyclical process of learning and continuous development.

UK Government Resilience Framework – Annex B Summary of framework Actions

Theme: skills	Action
By 2025	Reinvigorate the National Exercising Programme to test plans, structures and skills.

Case Study: Lessons Management in Australia

Read the case study article from Emergency Management Victoria on how they developed a robust and embedded Lessons Management framework and processes. In this article the authors also share how real-time learning and evaluation is helping to address high-priority risks in extreme weather events.



The Orange Book: Supporting principles for learning and continual improvement

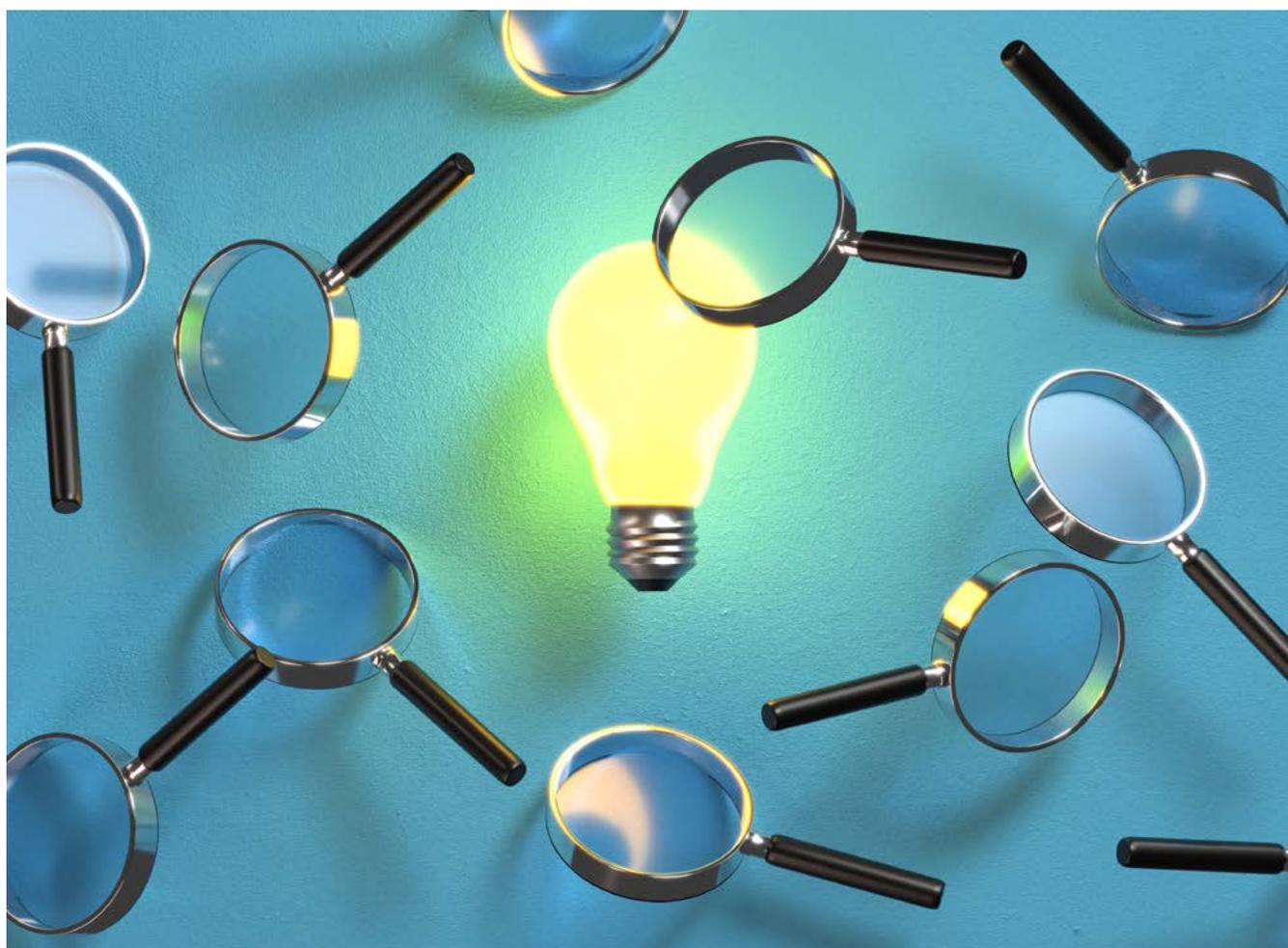
Principle E: Principle E states that ‘**risk management shall be continually improved through learning and experience**’. The guidance goes on to detail further **Supporting Principles (E1 to E4)** which directly acknowledge the role that learning from experience helps to avoid repeating the same mistakes, whilst also helping to spread improved practices that can benefit current and future outputs and outcomes (**page 27**).

- **E1** The organisation should **continually monitor and adapt the risk management framework to address external and internal changes**. The organisation should also continually improve the suitability, adequacy and effectiveness of the risk management framework. This should be supported by the consideration of lessons based on experience and, at least annually, review of the risk management framework and the performance outcomes achieved. Annex 3 contains questions that may assist in assessing the efficient and effective operation of the risk management framework.
- **E2** All strategies, policies, programmes and projects should be **subject to comprehensive but proportionate evaluation**, where practicable to do so. Learning from experience helps to avoid repeating the same mistakes and helps spread improved practices to benefit current and future work, outputs and outcomes. At the commencement, those involved and key stakeholders should identify and apply relevant lessons from previous experience when planning interventions and the design and implementation of services and activities. **Lessons should be continually captured, evaluated and action should be taken to manage delivery risk and facilitate continual improvement of the outputs and outcomes**. Organisation leaders and owners of standards, processes, methods, guidance, tools and training, should update their knowledge sources and communicate learning as appropriate.
- **E3 Process/capability maturity models or continuum may be used to support a structured assessment** of how well the behaviours, practices and processes of an organisation can reliably and sustainably produce required outcomes. These models may be used as a benchmark for comparison and to inform improvement opportunities and priorities.
- **E4** As relevant **gaps or improvement opportunities are identified, the organisation should develop plans and tasks and assign them** to those accountable for implementation.

In Annex 3 of the Orange Book there are helpful 'Questions to Ask' that can assist in assessing the application of risk management principles. Section E includes helpful supporting principles and questions on continual improvement in risk management. Consider using these self-directed questions to support learning and improvement across the risk cycle in your setting

**Supporting Principles:
Continual Improvement E
(questions 33-35, page 27):**

- How are policies, programmes and projects evaluated to inform learning from experience? How are lessons systematically learned from past events?
- How is risk management maturity periodically assessed to identify areas for improvement? Is the view consistent across differing parts or levels of the organisation?
- How are improvement opportunities identified, prioritised, implemented and monitored?



Concluding remarks

This review synthesised lessons, conclusions and recommendations across four high-level reports on risk-related lessons from COVID-19. The quantity of reports were few, but their combined evidence base was extensive, employing a variety of research methods to inform their respective reviews. The top learning themes highlighted:

- the increased importance of a generalised, holistic, whole-society, systems approach to risk
- the need to update and adapt our risk assessment methodologies
- the importance of appointment, scrutiny and accountability in risk leadership
- a need for consistency over variability in inter-departmental risk management and the benefits of engaging with external stakeholders to ensure risk communication remains accurate and timely

Finally, recommendations dovetailed fortuitously in the closing theme around lessons and learning – particularly from emergency exercises. Transferable lessons in this area could be used to inform a shift in mindset that replaces a ‘learning when there is time’ with a ‘learning while there is time’ narrative. The lessons suggest that allowing them to simmer below the

surface for too long can leave a legacy of latent risk that potentially undermines both resilience and response. That said, due diligence in designing, delivering and evaluating interventions that address areas for improvement understandably takes time, and this should be factored in – especially when working to address cross-cutting challenges.

Although more learning in this area will inevitably come, implementing actions and updates in response to the transferable lessons here need not wait. In cases where the sheer quantity of recommendations threatens to induce the kind of individual or organisational inertia that can mount a defence against intervention – something is generally better than nothing. If unsure where to begin, start with the ‘no-regret actions’ discussed in Digest 2 ‘Learning in Action’, or revisit Digest 1 ‘Learning Together’, and consider how a theory of change could be set out to help break tasks and activities down into manageable chunks. Ultimately, an area for improvement is not just a ‘lesson to be learned’, but a risk to be addressed. Rather than thorns in the side, lessons can be arrows in the bow of responder organisations and resilience professionals, helping to ensure that resilience activity hits the mark on reducing risk and improving preparedness. They are just not very effective when left in the quiver.

Building resilience:

Lessons from the Royal Academy of
Engineering's review of the National Security
Risk Assessment methodology

In this article Professor Joan Cordiner FREng FRSE summarises the findings from the Royal Academy of Engineering's recent review of the methodology behind the 2019 NSRA. As chair of the review, she sets out the Academy's approach following the commission Cabinet Office Civil Contingencies Secretariat to undertake the work. The article goes on to draw out some of the lessons that were identified in the process. These informed recommendations to government, and were subsequently developed into 7 Principles for Good Practice for the wider community. The lessons to be learned from the Academy's review of the UK National Security Risk Assessment are also set out in their recently published public report: Building Resilience.



Professor Joan Cordiner, chair of the review, said:

Introduction

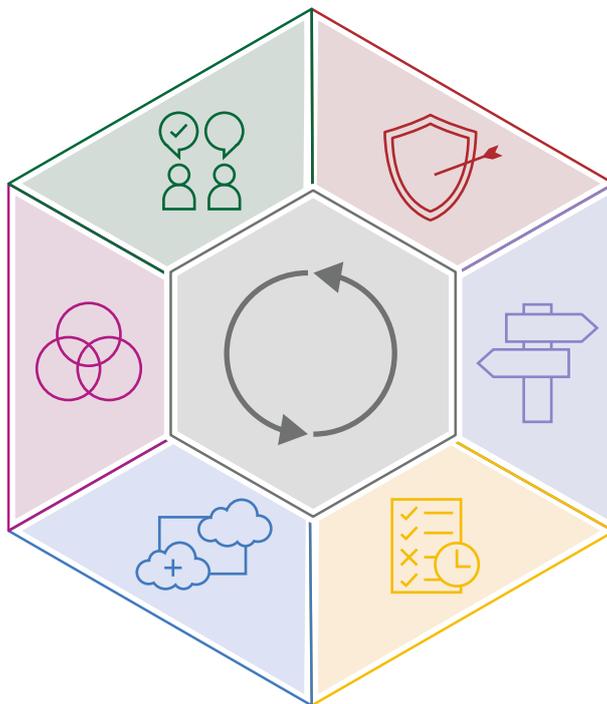
In 2021, the Royal Academy of Engineering was commissioned by the Cabinet Office Civil Contingencies Secretariat to undertake an external review of the methodology behind the 2019 National Security Risk Assessment in wake of the focus brought by the outbreak of COVID-19.

“As engineers, we look to understand the systems around us, and their components, and to consider what could possibly go wrong. The critical next step is to discuss how we can make it better: to identify the layers of protection and mitigations that can be put in place to reduce risk. By taking a systems approach to the review, and taking the time to really understand the different user perspectives, we have been able to exchange ideas and good practice through case studies from different domains and provide recommendations to strengthen our national risk assessment methodology.”

In our public report 'Building Resilience' we have developed these recommendations into 7 Principles for Good Practice for the wider community.⁶⁰ They include:

- 1. Ensure a joined-up approach** – Strong relationships and a shared understanding of activities across organisations and groups will deliver greater resilience than individual actions.
- 2. Encourage participation and communicate clearly** – A diversity of perspectives and meaningful challenge can help identify interdependencies, gaps and groups facing disproportionate impacts. Transparency is key for coordination and engagement.
- 3. Focus on impact** – Decision-making should be driven by impact and preparedness – linked to capability for prevention, mitigation, response, and recovery – rather than likelihood.
- 4. Explore the interdependencies** – Risk owners from across the system will together uncover interdependencies, contexts, or compound consequences that one person, team, or department alone might not anticipate.
- 5. Consider a range of scenarios** – Multiple scenarios can help identify the different response capabilities for different contexts and supports the exploration of cascading risks and uncertainties to help with robust planning.

Figure 3: 7 Principles for Good Practice



60 Royal Academy of Engineering. Building Resilience: lessons from the Academy's review of the National Security Risk Assessment methodology, 2023

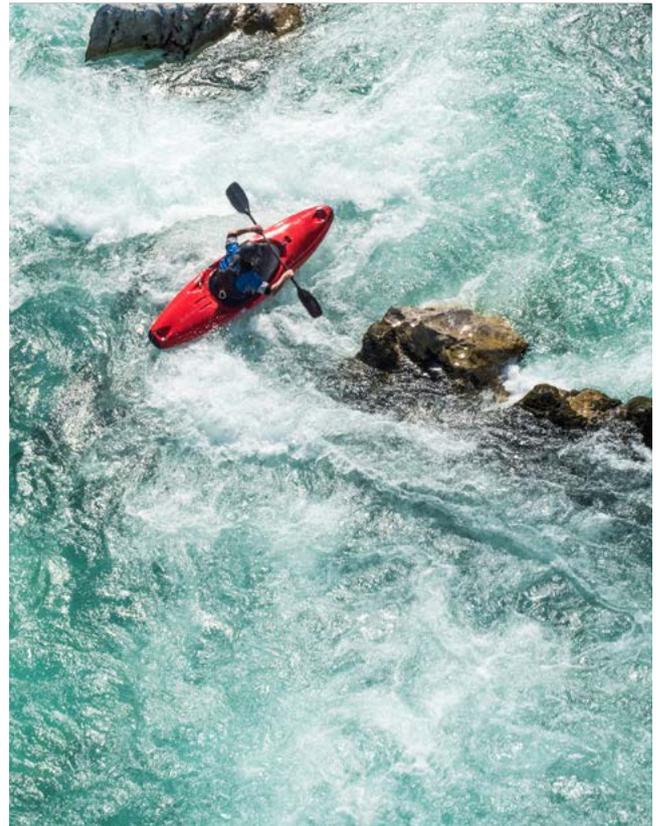
- 6. Embed new data and metrics** – Data is vital for warnings, monitoring and modelling, but confidence in and access to the data and models must be high.
- 7. Review based on need** – Risks are sensitive to technological, societal and contextual changes rather than on a standard time interval. Assessments should be responsive to any change in the provision of mitigations, and reviews should incentivise long-term planning.

Implementing these principles will not necessarily be easy, as resilience and organisational culture are closely intertwined. We offer a set of questions to ask as a starting point, such as:

- Is the role of the assessment broadly understood?
- Is the wider organisation aware of the risks identified in the assessment and any interdependencies that may sit within their responsibilities?
- Is information exchange effective in increasing awareness?
- Can greater cross-organisational collaboration be facilitated to better understand risks?
- Is the organisation better prepared for the risks included in the assessment as a result?
- Are the risks decreasing because of improvements in preparedness or reductions in impact? If not, is that acceptable, or is there a need to be better prepared?

About the Academy

The Academy works to support policymakers on issues of resilience, systems thinking and technology. Do get in touch at resiliencepolicy@raeng.org.uk



Make it active

Use the Academy's questions above to explore barriers and enablers to implementing the Good Practice Principles in your setting.

Tools for implementation:

Moving from lessons identified to lessons learned – Victoria's path towards effective lessons management

In this article, Lisa Marie Jackson, Director of Operational Reform, and Ognjen Dosen, Senior Project Officer, from Emergency Management Victoria share how a sector-wide desire for learning and continual improvement spurred an innovative, local lessons management framework. Built on an evidence base of good practices in lessons management, the resulting EM-LEARN framework launched in 2015. It went on to inform the national-level Australian Institute for Disaster Resilience Lessons Management Handbook in 2019. The work of Emergency Management Victoria (EMV) has since received international recognition, generating a surge of interest and activity in lessons work across Australia and New Zealand. The authors also provide a case study of how the EM-LEARN framework and real-time learning and evaluation has been employed to reduce risks and build resilience to extreme weather events.

Introduction

Understanding the influence of organisational culture on how it records, analyses and builds knowledge and lessons management can offer valuable explanations for why organisations often face difficulties in implementing effective

lessons management processes. Effective lessons management necessitates a holistic approach to ensure that lessons are captured and shared across emergency management agencies, government departments, businesses, industry, and the community.⁶¹

Learning to manage lessons

In 2014, EMV recognised a sector-wide desire for learning, performance improvement, and innovation in this field. However, agencies were pursuing these objectives individually, rather than collaboratively as a unified sector. As a result, Victoria's first sector-wide emergency management lessons management framework, EM-LEARN, was released in November 2015.⁶² The EM-LEARN framework established a model for lessons management, incorporating a life cycle that defined cultural characteristics and a comprehensive lessons management process. This model was developed through an extensive environmental scan of local, national and international lessons management good practices, along with research on successful lessons management approaches in emergency management.⁶³

61 Jackson, L. M. 2016. 'The influence of organisational culture on learning lessons: implementing a lessons management life cycle', Australian Journal of Emergency Management, Volume 31, Issue 1, <https://ajem.infoservices.com.au/items/AJEM-31-01-06>

62 Emergency Management Victoria, 2015. EM-LEARN Framework, https://files-em.em.vic.gov.au/public/EMV-web/EM-LEARN_Framework.pdf

63 Jackson, L. M., Shepherd, A. F. 2018. 'We learn as one: Victoria's journey to collaborative lessons management', Australian Journal of Emergency Management, April Edition, pages 23 to 26, <https://knowledge.aidr.org.au/resources/ajem-apr-2018-we-learn-as-one-victoria-s-journey-to-collaborative-lessons-management/>

Since 2015, EMV has collaborated with the emergency management sector to enhance governance, communication, doctrine, capability development and technology in order to facilitate the implementation of the EM-LEARN Framework. This concerted effort has yielded significant results, with lessons management implementation witnessing substantial growth across Australia and New Zealand. The release of the revised Australian Institute for Disaster Resilience (AIDR) Lessons Management Handbook in 2019 played a pivotal role in this surge. The handbook identifies “core principles and suggests frameworks and processes to support the successful implementation of lessons management”, which is integral to the continuous improvement of organisational capability, individual learning and our collective resilience.⁶⁴ Accordingly, there has been widespread adoption of lessons management resources, technology and governance by jurisdictions and agencies.



Lessons management has become deeply embedded within the emergency management landscape, supporting the effective utilisation of lessons to drive improvement and enhance overall preparedness and response capabilities within the sector.

Identifying a lesson

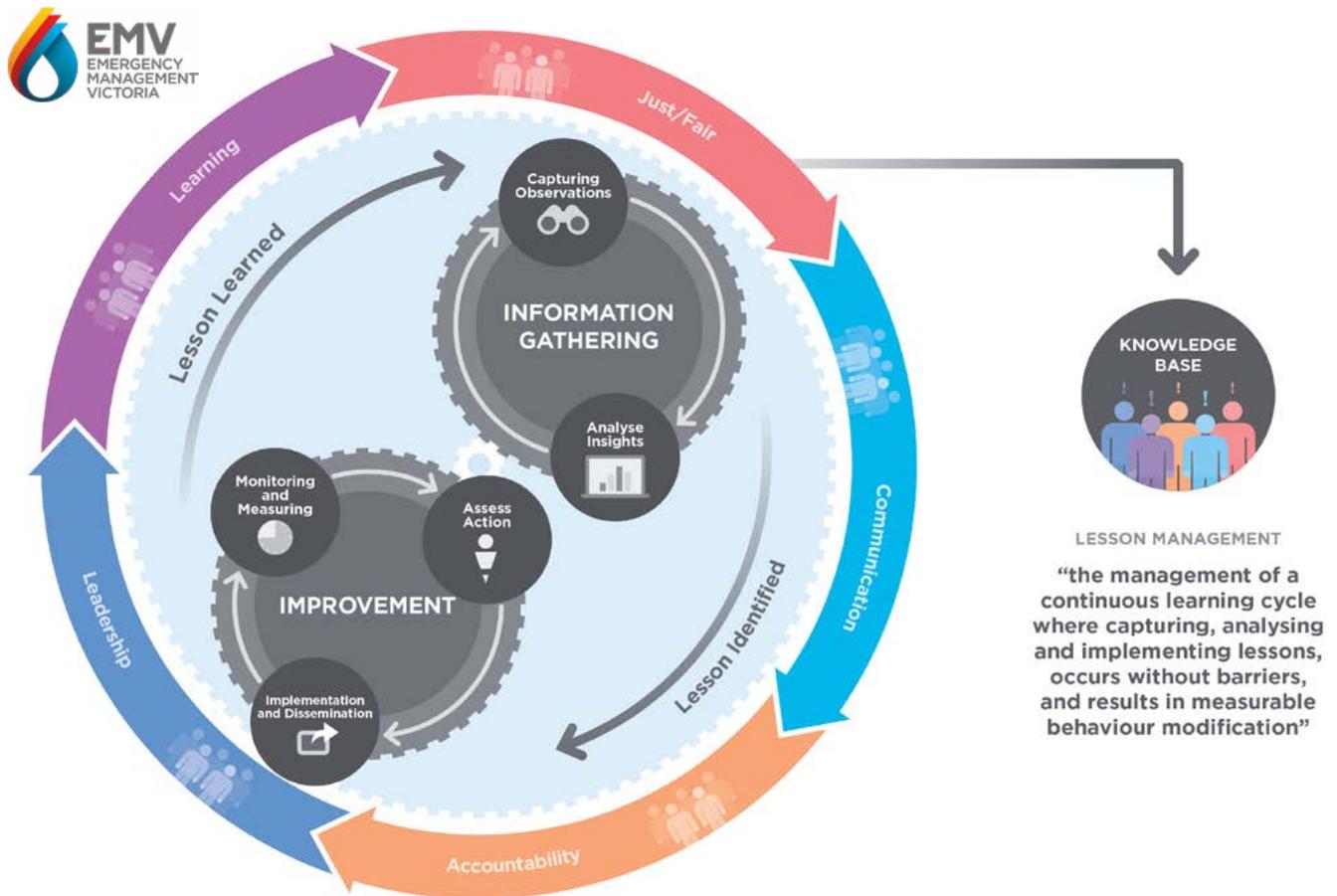
The lessons management methodology outlined in both the AIDR handbook and EM-LEARN Framework is centred on the observations, insights, lesson identified, and lesson learned, or OILL analysis process:

Once individual observations regarding an event or activity have been collected, they need to be analysed for insights and synthesised to identify what the lessons are for an organisation. Not only is it time and resource intensive to work on individual observations, but one observation may reflect a random occurrence or aberration, rather than a systemic gap in performance that needs to be addressed.⁶⁵

64 Australian Institute for Disaster Resilience. 2019. Lessons Management Handbook, page 2, www.aidr.org.au/media/1760/aidr_handbookcollection_lessonsmanagement_2019.pdf

65 Australian Institute for Disaster Resilience. 2019. Lessons Management Handbook, page 23, www.aidr.org.au/media/1760/aidr_handbookcollection_lessonsmanagement_2019.pdf

Figure 4: Lessons Management Life Cycle



Learning that reduces risks and builds resilience: extreme weather events

During the week commencing Monday 7 June 2021, Victoria experienced an extreme weather event, part of a low-pressure system, that moved across Southeast Australia. Between the 9-10 June, Victoria faced damaging to destructive winds and heavy rainfall that affected central and eastern parts of the state overnight. Victoria State

Emergency Service (VICSES) received close to 10,300 Requests for Assistance (RFAs) across the state relating to the flood and storm event.

Later that month, The June 2021 Extreme Weather Event Coordinated Learning Review (the Review) was established to ensure a coordinated and consistent approach for reviewing the event. It also ensured that lessons were identified, implemented and shared across the emergency management sector, and with impacted communities.⁶⁶

66 Emergency Management Victoria. June 2021 Extreme Weather Event Community Report. June 2022

The June 2021 extreme weather event serves as a notable example of effective lessons management in action. Emergency Management Victoria and the Victoria State Emergency Service conducted an extensive learning review into the state-wide management of the event due to the significant impacts and the prolonged and complex nature of the event. The event was characterised by strong winds, heavy rain, and subsequent consequences such as flooding, fallen trees, damaged infrastructure, power outages, telecommunication disruptions and major damage to road networks. Multiple communities across various geographic locations were significantly affected, leading to a significant and collaborative response and recovery effort involving many emergency management agencies, including government, business, industry and community groups.⁶⁷ Centred on the EM-LEARN Framework and OILL process, the learning review drew its foundation from these methodologies. This approach ensured that lessons of state-wide multi-agency significance, as well as aspects of particular interest to impacted communities (including areas of good practice and improvement opportunities) were identified, implemented, and shared across the emergency management sector and with impacted communities. This was accomplished through the publication and release of the

June 2021 Extreme Weather Event Learning Review – Community Report, playing a vital role in communicating the identified lessons to affected communities.⁶⁸ Moreover, these lessons have since been adopted by various agencies and departments, prompting the implementation of necessary change and improvements, and fostering a culture of continuous improvement in the emergency management sector.

Real-time learning for risk reduction

The October 2022 flooding event in Victoria, caused by a low-pressure system travelling east over Australia, serves as another compelling example of lessons management in practice. Heavy rainfall and storms quickly overwhelmed already high rivers, creeks, and sodden catchments that had limited capacity to absorb the additional rain, leading to one of the most devastating flooding events in Victoria's history.⁶⁹ Drawing from learnings from the 2021 learning review, the value of capturing learnings in real time became evident. Victoria has developed a mature **Real Time Monitoring and Evaluation (RTM&E)** capability over a number of years. This capability is a systematic and objective function that monitors operational performance of systems and processes, evaluating the effectiveness of emergency

67 Emergency Management Victoria, Update: Learning Review into June 2021 extreme weather event, 13 December 2021. www.emv.vic.gov.au/news/update-learning-review-into-june-2021-extreme-weather-event

68 Victoria State Emergency Service. 2022. Community Matters – Victorian Floods 2022, Edition 21, www.ses.vic.gov.au/documents/8655930/8656662/VICSES+Community+Matters+edition+21+Summer+2022.pdf/73ee0869-213d-d0f4-c64a-0955b93ecc12?t=1670976478201

69 Emergency Management Victoria, June 2021 Extreme Weather Event Learning Review – Community Report, <https://www.emv.vic.gov.au/how-we-help/reviews-and-lessons-management/operational-reviews/june-2021-extreme-weather-event-community-report>

management activities.⁷⁰ It is a state level, multi-agency program that operates during the readiness, response, relief and early recovery phases of an emergency, as opposed to traditional evaluations typically conducted post-event.⁷¹

During the 2022 flooding event, the RTM&E capability was deployed four times as the event progressed from response to recovery. By observing meetings, conducting debriefs with personnel, and reviewing documentation in real-time, the RTM&E team captured crucial details that could have been missed in a post-event evaluation. The approach fosters a

no-blame, just and fair culture, consistent with the lessons management lifecycle in the EM-LEARN framework. Immersed within operational centres, the team captured observations and analysed the unfolding events, developing insights which they fed back into operations. This iterative process contributes to the continuous improvement of the broader emergency management sector. Furthermore, during the flooding event, emergency management personnel received real-time feedback on their response to the crisis, allowing for immediate adjustments and the capture of valuable learnings for future events.⁷²



70 Emergency Management Victoria (2020), Joint Standard Operation Procedure, Real Time Monitoring and Evaluation, JSOP12.01, <https://files-em.em.vic.gov.au/public/JSOP/SOP-J12.01.pdf>

71 Emergency Management Victoria (2022), Learning from the Victorian floods in real time, 15 December 2022, <https://www.emv.vic.gov.au/news/learning-from-the-victorian-floods-in-real-time>

72 Emergency Management Victoria. Learning from the Victorian floods in real time, 15 December 2022, www.emv.vic.gov.au/news/learning-from-the-victorian-floods-in-real-time

Summary

Lessons management plays a crucial role in fostering a culture of continuous improvement and knowledge sharing. By providing people with the opportunity to share their experiences and learn from others, we can ensure that we evolve and enhance our emergency management practices. The long-term vision for lessons management in Victoria is to support the continuous improvement of emergency management and ensure safer and more resilient communities for all hazards, phases, agencies, and tiers. Over the past eight years, Victoria has undergone a significant transformation, shifting towards a learning culture that values evidence-based lessons over individual and reactive observations. The change reflects a shared responsibility for lessons management and a departure from traditional action tracking and a perceived 'we don't learn' attitude, towards proactive monitoring of change and improvement.⁷³ Through these efforts, we strive to create a future where continuous learning and improvement are the core of our emergency management practices.

About the authors



Lisa Marie Jackson has worked in emergency management for the past 14 years and has been working for Emergency Management Victoria since 2014 in the areas

of continuous improvement, intelligence, risk and analytics and is currently the Director of Operational Reform.



Ognjen (Ogi) Dosen has been involved in emergency management since 2021, having previously graduated with a Master of International Relations and working in the private sector. Working

at Emergency Management Victoria, Ogi has experience in lessons management, intelligence and operational reform.



Make it active

The Australian Institute of Disaster Resilience have made the **AIDR Lessons Management Handbook** and related resources publicly available to read and download from the AIDR website, www.aidr.org.au

⁷³ Emergency Management Victoria. 2015. EM-LEARN Framework, https://files-em.em.vic.gov.au/public/EMV-web/EM-LEARN_Framework.pdf



Organisational Learning for Workforce Wellbeing:

Developing and Delivering the Ground TRUTH
Tool at Alder Hey Children's Hospital

The acute risks associated with the COVID-19 pandemic had complex, cascading and enduring impacts across sectors, around the globe. In the UK healthcare sector, this meant that NHS staff suddenly and subsequently faced unprecedented risks to their welfare. In this article Dr Sarah Robertson reviews those risks and the changes it induced in the operating environment, leading to rising burnout and the need to support the mental health of frontline workers. It describes how real-time, organisational learning at Alder Hey Children's Hospital informed the development of a new Staff Advice and Liaison Service (SALS) in 2020. This led to a partnership between SALS and the University of Liverpool, inspiring a new, academically-informed digital Ground TRUTH Tool to support staff to function well and keep going together. Lessons for adaptive recovery, and the benefits of applying the Ground TRUTH tool are also shared.

Frontline staff faced threats of illness whilst enduring sustained stress, trauma exposure and moral injury which increased their risk of mental ill health.

Infection control measures and the move to hybrid working exacerbated these challenges. Staff worked in isolation with fragmented support from their colleagues, while leaders felt disconnected from their team's experience on the ground. Compromised staff welfare also posed risks for patient safety.⁷⁴

Providing ongoing support to staff whilst supporting the recovery of services remains crucial. Evidence suggests that investing in proactive systemic approaches with a focus on early intervention and prevention have the best chance of success. Isolated wellbeing and stress management initiatives have 'no effect' on mental health. However, sustained approaches closely linked with line managers are more beneficial.⁷⁵ Evidence suggests rapid access to psychological and psychosocial support that are integrated within an organisational context are most effective, and employers can save £5 for every £1 invested in supporting mental health.^{76, 77}

Background

During the COVID-19 pandemic, NHS Staff faced unprecedented risks to their welfare. Understanding how to rapidly adapt and respond to this volatile context was a public priority. Leaders were forced to make high stakes decisions amidst ongoing uncertainty.



Alder Hey Children's
NHS Foundation Trust

74 (Kings Fund, 2021). The Kings Fund. The road to renewal: five priorities for health and care. April 2021

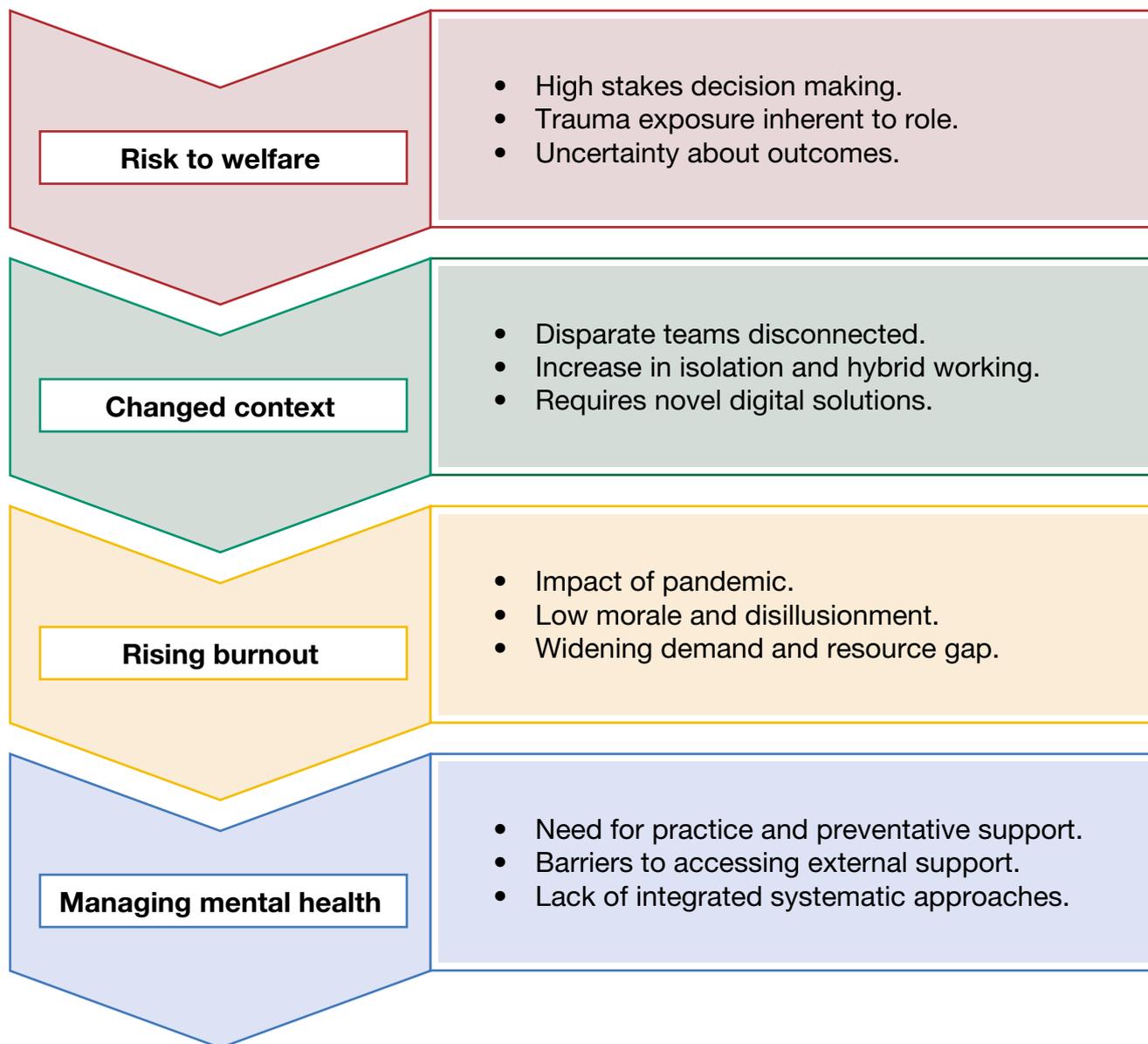
75 (Fleming, 2021). Fleming, W. Estimating effects of individual-level workplace mental wellbeing interventions: Cross-sectional evidence from the UK. Wellbeing Research Centre, Oxford. April 2023

76 (LSE, 2022). London School of Economics and Political Science (LSE). Mental health problems cost UK economy at least £118 billion a year – new research. March 2022.

77 McDaid et al. The Economic Case for Investing in the Prevention of Mental Health Conditions in the UK – University of Strathclyde. February 2022

NICE Guidelines on Mental Wellbeing at work (2022), advocate for the development of supportive work cultures through increased mental health literacy, peer support and good communication with employees.⁷⁸

Figure 5: NICE Guidelines on Mental Wellbeing



78 National Institute for Health and Care Excellence (NICE). Mental wellbeing at work: NICE guideline [NG212] March 2022



Sidelight

Moral injury refers to the 'psychological distress that results from actions, or the lack of them, which violate someone's moral or ethical code'. During the COVID-19 pandemic, examples of areas where moral dilemmas might lead to moral injury include:

- treatment decisions and end-of-life care
- unable to optimise end of life care
- unable to uphold and maintain core professional values and standards
- balancing duty to patients with family and friends
- providing care with constrained or inadequate resources: for example, insufficient or inadequate personal protective equipment; ventilators⁷⁹

Solution

In 2020, Alder Hey Children's Hospital developed SALS led by Dr Jo Potier which has won national awards in recognition of its value and impact within the NHS.^{80, 81} SALS provides an easy-to-access, responsive listening service to all staff and there have been 8,000 contacts since the pandemic began. SALS operates with a focus on systemic intervention, including team support following debriefs and training, while also contributing to the development of a culture which challenges the stigma associated with seeking help. In the intense operational environment of the pandemic, SALS partnered with the University of Liverpool and the Ground TRUTH team to implement a novel digital solution and extend its reach within the organisation.



UNIVERSITY OF
LIVERPOOL

79 Greenberg, N., Docherty, M., Gnanapragasam, S. and Wessely, S., 2020. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *bmj*, 368. Available from: <https://www.bmj.com/content/bmj/368/bmj.m1211.full.pdf>

80 Healthcare People Management Association. **Browne Jacobson award for excellence in employee engagement**. June 2022

81 HSJ. The HSJ Awards Staff Engagement Award. March 2021. <https://www.hsj.co.uk/the-hsj-awards/hsj-awards-2020-staff-engagement-award/7029673.article>

The tool was developed by Emily Alison, Martin Ferguson, and Prof. Laurence Alison, based on the best available evidence to support staff in adaptive recovery.⁸² The Ground TRUTH Tool sits on a digital platform supporting reflection and gathering live anonymous feedback. We deployed the tool through networks to support staff to **function well and keep going together**. Staff were able to access it via a web link or QR code, and reflect individually, in pairs, or in groups.

Based on deployment at Alder Hey Hospital and over 700 uses of the tool, 95% staff found Ground TRUTH helpful, and 47% reported feeling better or much better immediately after, with the other half reporting feeling the same and only 2% reporting feeling worse.⁸³

The tool is underpinned by an ethos that integrates the **dual responsibility of individuals and their employing organisations to actively monitor stressful situations** and proactively respond with solutions promoting resilience.

Learning on resilience

The Ground TRUTH tool supported adaptive recovery in three ways:

- Reflection enhances individual awareness and insight to support their own management of stress alongside prompts to boost coping.
- Creating feedback loops improves situational awareness, enabling effective action and building trust in leadership.
- Sharing learning within teams supports adaptive responses, team cohesion, and improved morale.

Lessons for adaptive recovery from application of the Ground TRUTH tool

1	<p>Reflective practice</p> <p>Reflection enhances individual awareness and insight to support their own management of stress alongside prompts to boost coping.</p>
2	<p>Creation of feedback loops</p> <p>Creating feedback loops improves situational awareness, enabling effective action and building trust in leadership.</p>
3	<p>Shared learning</p> <p>Sharing learning within teams supports adaptive responses, team cohesion, and improved morale.</p>

82 University of Liverpool. *Project Ares*. 2020

83 L. Alison, E. Alison, S. Robertson, M. Humann. *The Ground TRUTH After-Action Review Tool*. Centre for Research and Evidence on Security Threats. 2021

The Ground TRUTH Tool is useful in offering a trauma informed systemic solution to managing risk to staff welfare. Using the tool alongside a package of training can support leaders and managers to implement the Ground TRUTH Tool as a proactive and preventative approach to staff welfare.



Challenges in implementation can be overcome by building trust in the mechanism with timely and responsive action, for example, by changing structures and processes, acting on feedback and demonstrating change through 'you said, we did'. Senior leaders need to be engaged from the start, and existing networks used alongside support structures to resource people to cope with difficult emerging insights. Allocating resources to create time for the conversations is a requirement for its success. Alder Hey now trains networks of paid champions as part of a funded pilot as a national case study within the NHS.

Summary

In summary, developing a shared responsibility for staff welfare is fundamental to maximising trust and minimising distress. Key learning is summarised in Figure 6. A clear structure provides colleagues with the confidence and competence to approach challenging conversations. Avoiding identification of illness reduces fear in self-reporting strain and stress and supports psychological safety. Encouraging reflection, connection, and communication can support accountability and autonomy at an individual and organisational level.

Figure 6: Learning from practice

Benefits of the Ground TRUTH Tool

Anonymity in the tool supported a safe mechanism for feedback enabling leaders to better understand the 'reality'.

Targeting interventions at everybody without focusing 'mental illness' is proactive and prevention and can reduce associated stigma.

Normalising distress encourages early help seeking through an individual's and team's own resources, rather than external services.

Structured frameworks empower individuals and leaders to reflect and connect in a solution-focused way.

Promoting individual and organisational accountability in parallel is essential.

Active self monitoring through the 'Heal' section encourages individuals keep connected to themselves, building insight, awareness and accountability.

A digital platform can share information in a more dynamic and targeted way in connection to team experiences.

Data collected allows people to rapidly review the reality on the ground in changing contexts allowing leaders to address issues before the next deployment

Sharing this understanding and improving communication can build trust and improve morale by being responsive.

Regular conversations enable consultative leadership and supports leaders with an active approach to staff welfare.

About the lead author



Dr Sarah Robertson is a Highly Specialist Clinical Psychologist working at Alder Hey Children's Hospital in Organisational Development. Sarah is passionate about applying psychological

theory and evidence to support systems and staff. For further information please email sarah.robertson@alderhey.nhs.uk

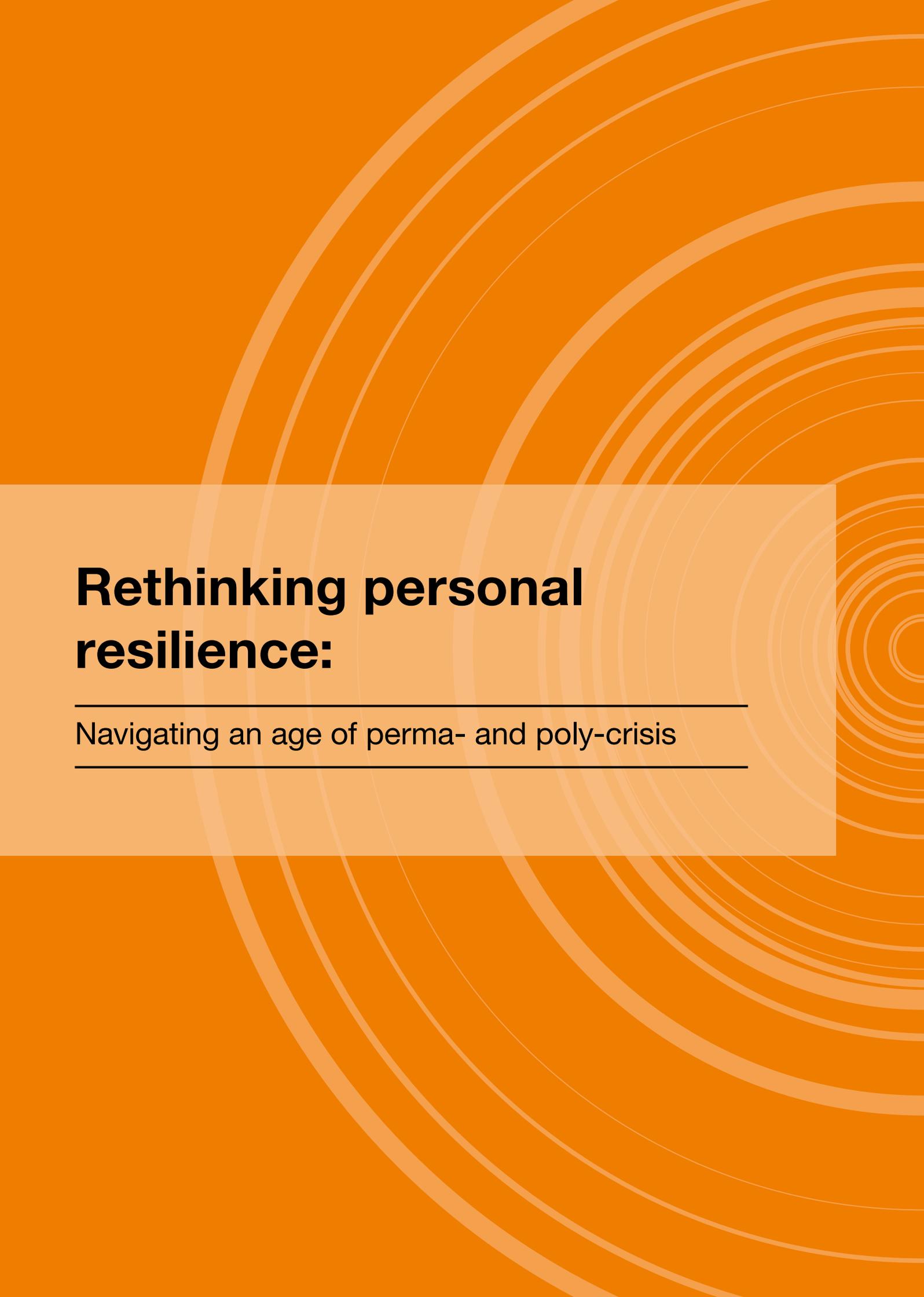
Co-authors

This article was co-authored by Dr Jo Potier – Alder Hey Children's Hospital; Dr Michael Humann – University of Liverpool; Martin Ferguson – Ministry of Defence; Emily Alison- University of Liverpool and Dr Laurence Alison – University of Liverpool.



Make it active

How might the lessons for adaptive recovery from application of the Ground TRUTH tool be applied to support wellbeing support in your setting?



Rethinking personal resilience:

Navigating an age of perma- and poly-crisis

In this article Dr Claudia van den Heuvel, a Crisis Management Specialist and a manager of the Crisis and Continuity Management team at PwC UK, highlights the challenges of effectively navigating, leading and operating in a world increasingly defined by poly-crisis (the simultaneous occurrence of crisis events) and perma-crisis (an extended period of instability and insecurity, resulting from a series of crisis events). Through expert insights and evidence-based research, the content emphasises the benefits of rethinking and strengthening personal resilience in order to cope with these challenges. The link between individuals across the workforce strengthening their personal resilience and elevating organisational resilience is outlined. Practical tips for maximising personal routines and performance are also presented.

Indeed, a recent global Crisis and Resilience survey, which collected data from just under 2,000 respondents worldwide, found that while in 2019, only 69% of organisations said they experienced disruption in the last five years, in 2023 this increased to 96% of organisations having experienced disruption in the past two years.⁸⁵ Although the world has previously faced greater or bigger crises in isolation, such as financial recessions (e.g. the Great Depression), viral infections (SARS), supply chain failures, and wars; never in history have these types of short-term crises co-occurred with deep rooted ‘mega-crises’ impacting society; such as the ageing population, workforce risk, and climate change.⁸⁶ Crises are feeding off each other, exacerbating the impact, and making it exponentially harder to manage them- a term defined as ‘poly-crisis’. Organisations, and their leaders in particular, are therefore having to learn to lead effectively through consistent disruption, caused by both perma- and poly-crises.

Introduction

The word of the year for 2022 was, according to the Collins dictionary: ‘perma-crisis’, defined as “an extended period of instability and insecurity”.⁸⁴ This is a clear reflection of the age of disruption we currently live in; within which both short- and long-term crises are co-occurring simultaneously in an unprecedented way.

Our workforces, especially those in leadership positions and on the front line of incident response, are under more continuous pressure than ever before. The impact is showing. In addition to historic levels of turnover, studies show that self-reported rates of burnout are between 42% and 53% (where prior standard reports indicated 3-8%).^{87, 88}

84 Collins Word of the year 2022 – A year of permacrisis <https://blog.collinsdictionary.com/language-lovers/a-year-of-permacrisis/>

85 PwC Global Crisis and Resilience Survey, 2023

86 Sheppard, B. Ten Years To Midnight: Four Urgent Global Crises and Their Strategic Solutions. August 2020. Berret-Koehler

87 Microsoft. September 2022, September. Work Trend Index Special Report – Hybrid work is just work. Are we doing it wrong? www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work-is-just-work

88 Forbes. April 2021. Indeed Study Shows That Worker Burnout Is At Frighteningly High Levels: Here Is What You Need To Do Now. <https://www.forbes.com/sites/jackkelly/2021/04/05/indeed-study-shows-that-worker-burnout-is-at-frighteningly-high-levels-here-is-what-you-need-to-do-now/?sh=ba6821f23bb1>

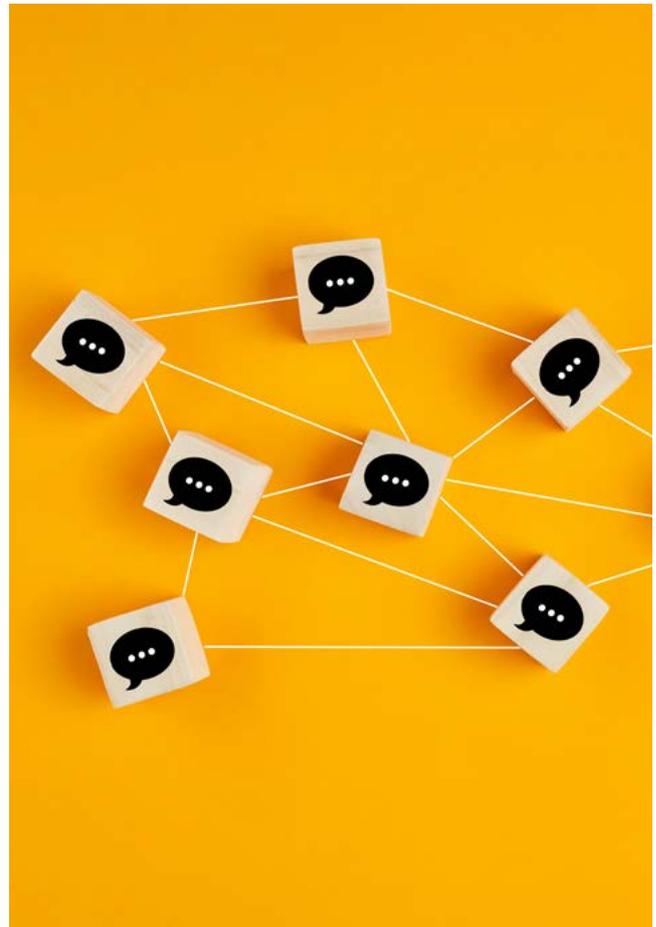
Leaders are at the heart of an organisation's ability to prepare for and respond to crises effectively. Yet, in a crisis, the day-to-day aspects of leadership become far more complex. Setting strategy, making decisions and managing a team are all the more challenging when a situation is rapidly unfolding, information is incomplete and internal and external pressures are mounting.

Lessons from prolonged crises such as the COVID-19 pandemic have illustrated that, in order for organisations to remain viable and drive a workforce that can manage through perma- and poly-crisis, they must equip their leaders with the mindsets and skills required to operate effectively in these conditions.

Fundamentally, elevating organisational resilience relies on all individuals across the workforce strengthening their personal resilience; to ensure all other preparations, such as crisis plans, structures and processes, don't fall away. This requires a stark rethink of what personal resilience is and how it contributes to our ability to think clearly and perform effectively; how we build it, maintain it during times of pressure, and how we encourage others around us to build it.

Historically, models of personal resilience focused on an individual's ability to "successfully adapt to difficult or challenging life experiences", describing how people "cope" with challenge, change, adversity, or uncertainty.⁸⁹ This mindset needs to shift to one where personal resilience is defined, and aimed, at how individuals set routines for high performance on a day-to-day basis

despite the turbulence faced. Crucially, it also requires all individual responders to define for themselves what their minimum viable product (MVP) routines will be to ensure continuous performance during times of extreme pressure, challenge, and uncertainty characterised by strategic crises. Everyone's MVP high performance routine will differ, as we all have different needs. Some will prioritise sleep, others a workout, others a warm up or cool down routine. However, by instilling these personal processes we can both elevate our personal performance and protect our wellbeing, in times of crisis.



⁸⁹ www.apa.org/topics/resilience

Elevating one's personal resilience is foundational, as it directly impacts their ability to think clearly under pressure. Leaders also need to be equipped with the wider skills, behaviours, and mindsets to deal with the challenges presented. This includes: effective horizon scanning to identify both risks and opportunities; sensemaking and creation of broad shared situational awareness; long-term strategy setting at the start of a crisis, amid great ambiguity; agile and progressive decision making, and learning from the outcomes in order to grow and transform. Resilience is no longer about 'bouncing back' from adversity – it is about using disruption and crisis for optimal change and growth.

Of course, no single individual can consistently do all of these things well. Leaders need to learn, therefore, how to surround themselves with the support and expertise they need. They also need to build dynamics and cultures within which their teams are able to thrive, despite the challenges and pressures faced; a culture of psychological safety, empathy and trust; and critically, of hope. Teams must clearly see the value to be had in taking the challenging and incremental steps to dealing with the issues faced, for a successful outcome in the future. Leaders need to communicate this vision, set the tone, and act as emotional barometers of their teams, to keep resilience levels high.



Sidelight

Minimum viable product

MVP is “a version of a product with just enough features to be usable”.⁹⁰ We need to set habits that mean we can still operate as effectively as possible despite, or in the face of, pressures faced at times of peak stress and crisis.

High performance routines

“Instead of forcing ourselves to keep up, we can instead learn (or re-learn) to operate within the natural rhythms of our own biology. Human beings perform better, feel better and enjoy themselves more when they work in this way. We call this operating in a high-performance routine. They include habits and processes for warming up for our day ahead, maintaining focus and performance, warm down and active recovery from stress.”⁹¹

90 Lenarduzzi, V. and Taibi, D., 2016, August. MVP explained: A systematic mapping study on the definitions of minimal viable product. In 2016 42th Euromicro Conference on Software Engineering and Advanced Applications (SEAA) (pp. 112-119). IEEE.

91 Dr. Rob Archer, Cognacity

Leaders are facing more demands and an increasingly tumultuous operating environment than ever before. Equipping them with the skills to navigate short term crises, while simultaneously protecting against and mitigating future impacts, will allow them to drive value on a forward-looking basis. Raising resilience levels within a state of perma-crisis now will equip leaders with the mindsets to address the deep-rooted causes of poly-crisis in future, all at the same time.



Sidelight

Agile and progressive decision making means being able to quickly and flexibly adapt to new information, opportunities, and challenges, while maintaining alignment and collaboration among stakeholders. This allows us to maintain progress and avoid decision inertia, despite uncertainty and pressures faced.

What's next? Top tips for elevating leaders' resilience

- | | |
|---|---|
| 1 | Organisations need to invest in leadership development to equip all current and future leaders to build the competencies and behaviours required for leading resiliently through crisis and disruption. |
| 2 | Individuals need to define personal routines for elevating and maintaining their personal resilience day-to-day to deal despite the pressures and stressors imposed by external crises; as well as identify how they will maintain effective performance at times of 'peak stress'. |
| 3 | Leaders in a crisis should cast their nets far and wide to seek input and support from a large pool; and focus on creating a culture of safety, trust, and hope. |
| 4 | Teams should use 'micro exercises' to rehearse their crisis response processes, thereby gaining insight into each other's' stress responses and behaviours, build muscle memory and develop resilient team dynamics. |



Make it active

Consider how the author's top tips for helping to elevate leaders' resilience could be applied in your setting.

About the author



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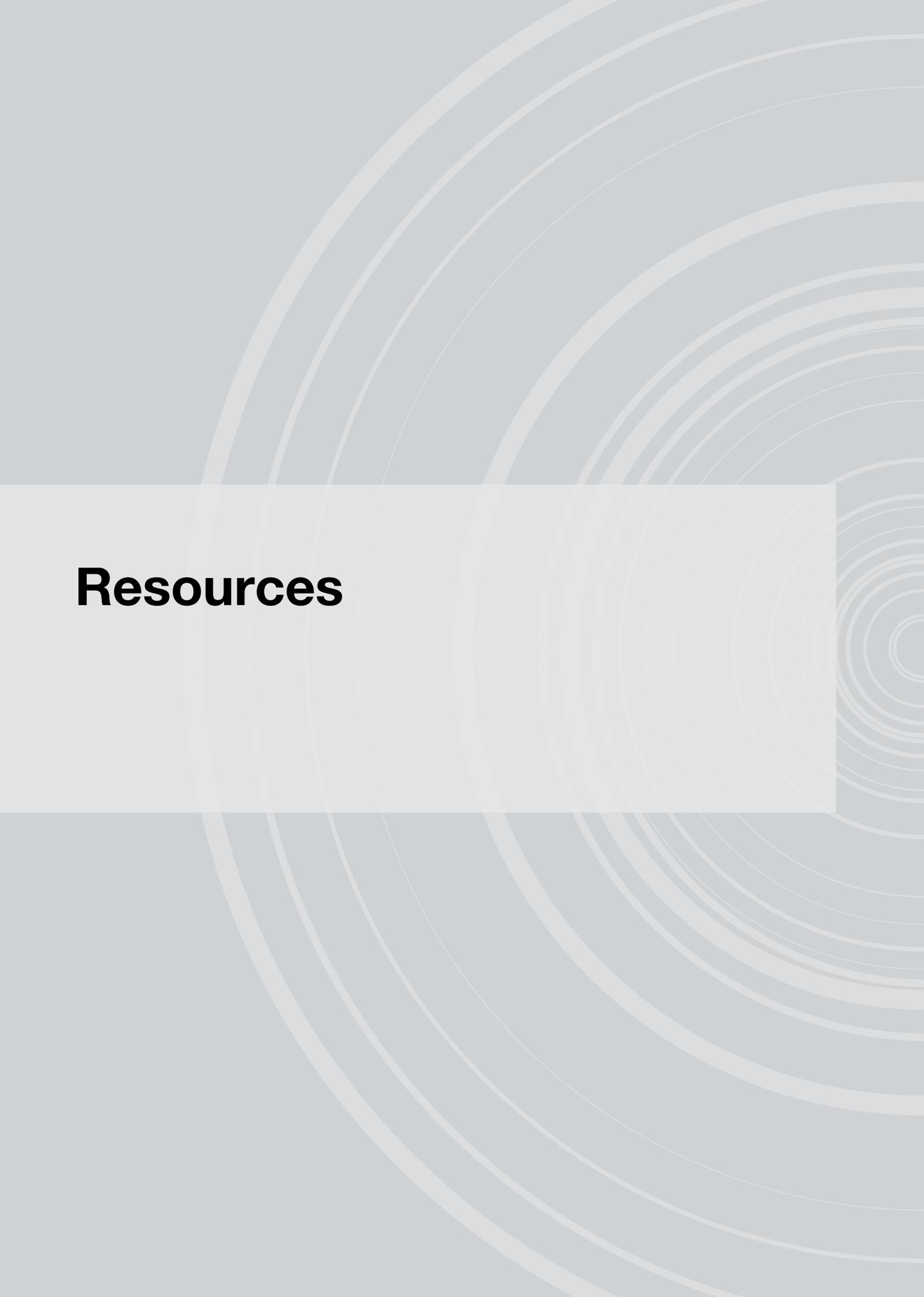
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Acknowledgements

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Resources

Further reading

Crisis Communications: A behavioural approach

This guide explores how to anticipate public behaviour in a crisis. The approach it sets out is relevant and applicable to all communicators working in a fast-paced environment.

Crisis Communications: Operating Model

The UK Central Government Response Concept of Operations (2013) recognises the importance of good communication during a crisis, identifying it as a fundamental characteristic of effective emergency response.

Counter-terrorism strategy (CONTEST) 2023

CONTEST is the UK's counter-terrorism strategy. The aim of CONTEST is to reduce the risk from terrorism to the UK, its citizens and interests overseas, so people can live freely and with confidence. It's based on four themes:

- prevent: to stop people becoming terrorists or supporting terrorism
- pursue: to stop terrorist attacks happening
- protect: to strengthen our protection against a terrorist attack
- prepare: to minimise the impact of a terrorist attack

Since the **2018 version of CONTEST** major updates have been made to the strategy, to deal with the changing threat from terrorism, which is now less predictable and harder to detect and investigate.

Fire Safety (England) Regulations 2022

The Fire Safety (England) Regulations 2022 implemented the majority of the recommendations made by the Grenfell Tower Inquiry in its Phase 1 report which required a change in the law. The regulations seek to improve the fire safety of blocks of flats in ways which are practical, cost effective for individual leaseholders and proportionate to the risk of fire. The regulations came into force on 23 January 2023 following publication of **guidance** which was published on 6 December 2022.⁹² A number of factsheets, with updates, have been released since on GOV.UK

New transparency over resilience and assurance for big business

Information at this link provides a factual overview of new draft regulations that will require very large companies to report more effectively on business resilience and assurance. The draft Companies (Strategic Report and Directors' Report) (Amendment) Regulations were laid in Parliament on 19 July 2023. They are subject to debate and approval by the House of Commons and the House of Lords. If approved, they will come into force from the start of 2025. The new measures respond to lessons learned from major and sudden corporate collapses in recent years, including that of Carillion.

Reservoir safety biennial report

Undertakers (owners and operators) of reservoirs must follow the requirements of the Reservoirs Act 1975 (the Act). The Environment Agency may take enforcement action if they do not. This latest edition of their biennial report sets out actions the Environment Agency has taken in its role as the reservoir regulator, which covers the period from January 2021 to December 2022.

92 <https://www.gov.uk/government/publications/check-your-fire-safety-responsibilities-under-the-fire-safety-england-regulations-2022>

Third National Adaptation Programme (NAP3)

The National Adaptation Programme sets the actions that the government and others will take to adapt to the impacts of climate change in the UK. The NAP3 sets out the key actions for 2023 to 2028. This report forms part of the five-yearly cycle of requirements laid down in the Climate Change Act 2008. The NAP3 includes the strategy for the fourth round of climate adaptation reporting under the Adaptation Reporting Power.

UK Biological Security Strategy

This strategy sets out our renewed vision, mission, outcomes and plans to protect the UK and our interests from significant biological risks, no matter how these occur and no matter who or what they affect. It provides the overarching strategic framework for mitigating biological risks within which a number of threat and disease specific UK strategies critically contribute.

Accident investigation branches

Air Accident Investigation Branch (AAIB) provides assistance and expertise to international air accident investigations and organisations. Their purpose is to improve aviation safety by determining the circumstances and causes of air accidents and serious incidents, and promoting action to prevent reoccurrence.

Latest learning: The AAIB Monthly Bulletin is published on the second Thursday of the month and it is a compilation of the most recently completed reports. See the **2023 Air accident monthly bulletins** publications page on GOV.UK

Marine Accident Investigation Branch (MAIB) investigates marine accidents involving UK vessels worldwide and all vessels in UK territorial waters. This is to help prevent further avoidable accidents from occurring, not to establish blame or liability.

Latest learning: The latest reports, including investigations and safety bulletins, can be found on the **Marine Accident Investigation Branch reports** publications page on GOV.UK

Rail Accident Investigation Branch (RAIB) independently investigates accidents to improve railway safety, and inform the industry and the public. RAIB works with the **Department for Transport**.

Latest learning: In May 2023 RAIB published their annual report, covering the period 1 January to 31 December 2022. The report summarises operational and investigative activity undertaken by the branch during the year.

The report also highlights six recurring safety themes which have run through the branch's work during 2022. These are: the safety of track workers, railway operations, the management of bad weather, the safety of people getting on and off trains, safety at level crossings, and the management of low adhesion. An accompanying index of recommendations, **RAIB summary of recommendation status 2022**, can be viewed on GOV.UK

Public inquiries

The Manchester Arena Inquiry

Following the end of Volume Two and Volume Three Monitored Recommendation hearings on week commencing 5 June 2023, the Manchester Arena Inquiry has concluded. The final remarks from the Chairman and Counsel to the Inquiry, Paul Greaney KC, on paragraphs 120 to 123 of the Wednesday 7 June can be read in the [transcript on the Inquiry's website](#). The Chairman of the Inquiry also published remarks in a document outlining outstanding matters and some general observations at the conclusion of the Inquiry. See the [General Observations on the Conclusion of the Inquiry on manchesterarenainquiry.org.uk](#)

The Grenfell Tower Inquiry

Drafting of the Phase 2 report examining the circumstances and causes of the disaster continues. Each chapter of the report is at a different stage of drafting, with some now nearing completion. The Inquiry Panel made a statement ahead of the sixth anniversary of the fire at Grenfell Tower on 14 June 2023. See the full [Sixth anniversary statement from the Panel on www.grenfelltowerinquiry.org.uk](#)

Monthly updates from the Inquiry can also be viewed on their website's [News](#) page.

COVID-19 Inquiry

The UK COVID-19 Inquiry has been set up to examine the UK's response to and impact of the COVID-19 pandemic, and learn lessons for the future. The Inquiry's work is guided by its Terms of Reference.

Four Modules have already begun:

Resilience and preparedness (Module 1), **Core UK decision-making and political governance (Module 2)**, **Impact of the Covid-19 pandemic on healthcare (Module 3)** and most recently **Vaccines and therapeutics (Module 4)** which started on 5 June 2023. Full details of the Inquiry, including timetables, information and links to live recordings can be found on covid19.public-inquiry.uk

COVID-19 Inquiry: Every Story Matters

A separate website, **Every Story Matters**, has been set up to help the UK COVID-19 Inquiry understand your experience of the pandemic. Every story shared with us will be used to shape the Inquiry's investigations and help us to learn lessons for the future. Stories will be collated, analysed and turned into themed reports, which will be submitted into each relevant investigation as evidence. The reports will be anonymised. Details on how you can share your story are available on www.everystorymatters.co.uk



A table of transferable lessons from Digest 3

Approaches to risk

UNU-EHU and UNDRR: Risk assessment

p.77 **Explore and map interconnections and critical system components**

The cascading effects originating from COVID-19 have allowed us to observe the interconnections that exist in systems by design or as an emergent quality. Mapping this interconnectivity and critical system components (i.e. those that, if affected, can lead to devastating cascading effects) can help in designing more effective risk management measures...Interconnections and network structure deserve more attention in risk assessment.

Recommendation

To help join the dots on interconnections, thinking in systems is important. Working together with local experts and stakeholders can support the identification of hidden vulnerabilities and complex relationships rather than simple linear cause-effect chains. Governments, practitioners and communities should embrace a systems-thinking mindset to support systemic risk analysis and management.

p.78 **Comprehensive risk management**

The COVID-19 pandemic has underlined that managing systemic risks requires risk management approaches that transcend across disciplines, sectors and institutions at all levels. Further, compounding risks induced by the pandemic, climate-related extreme events and natural hazards that have become evident from this research call for increased coherence between pandemic risk management, disaster risk management and climate change adaptation.

Recommendation

Cases [demonstrate]...the necessity of devising risk management practices that tackle multiple types of hazards and risks during prevention, response and preparation, as well as recovery.

NAO: Lessons for government on risk management

(c) **Recommendation**

The Cabinet Office should work with government departments to ensure that their risk management, business continuity and emergency planning are more comprehensive, holistic and integrated.

House of Commons PAC: Lessons for government on risk

4	International collaboration
	The pandemic has highlighted the critical role of international collaboration for managing the risks that the UK faces. Given the increasingly interconnected nature of our world, several of the main risks facing the UK may originate abroad and, if they materialise, will require a coordinated international response
	Recommendation
	Government should set out how it intends to drive greater international collaboration on risks, including exchanging information on threats, promoting and integrating mutual learning and coordinating responses across borders.

House of Lords Select Committee: Preparing for Extreme Risks

34	Recommendation
	The NSRA must be produced with mitigation and response in mind. The methodology of the NSRA and the Lead Government Department principle favour the assessment of discrete risks. This is an ineffective strategy given the interconnected nature of many risks...Risk planning should focus on the outcome rather than the specific risk, and the NSRA should facilitate this (paragraph 223).

Assessment of Risks

UNU-EHU and UNDRR: Risk intervention

p.78	Collective responsibility (a whole-of-society approach)
	The sense-making process is critical in shaping individual risk perception and behaviour, which are influenced by the norms and values of individuals, groups, organisations and societies...The way one person sees risk may not be the same as how another sees it [and] the way we understand and perceive risks influences our ability to respond to them.
	Recommendation
	To guide risk management, risk assessment has to pay attention to trust, risk perceptions and, in particular, to the perceived fairness of the distribution of benefits and losses.

House of Lords Select Committee: Preparing for Extreme Risks

38	<p>Chapter 5: Risk assessment</p> <p>The current format of the NSRA and NRR is too rigid...A shorter, more dynamic, web-based platform would facilitate access, make the underlying data more visible, and allow for the improved representation of interconnectedness (paragraph 224).</p>
39	<p>Recommendations*</p> <p>The NSRA must focus more on the outcomes of emergencies. The document should be oriented around common consequences to allow for preparedness efforts which are not overly focused on discrete risks.</p> <p>Risks should be assessed on an impact-vulnerability matrix, as well as an impact-likelihood matrix.</p> <p>Where a risk may manifest in a number of ways, the NSRA should present several scenarios, not just the reasonable worst-case scenario.</p> <p>The NSRA should include a number of cascading risk scenarios, whose development has been informed by interdependent infrastructure modelling.</p> <p>The NSRA should move to a five-year timeline, with risks refreshed and reassessed annually...Chronic risks, chronologically unpredictable risks, low-likelihood risks and the most significant risks should also be accompanied by a long-term assessment of 15 years.</p> <p>The data required for emergency response should be identified at the point that a risk is assessed, and all efforts should be made to ensure that data can be accessed from the outset of a crisis.</p> <p>The NSRA and NRR should be presented in a more dynamic, data driven web portal which allows users to visualise the risk summary, access the underlying data and easily navigate to related risks</p>
45	<p>Chapter 5: Risk assessment</p> <p>The government must recognise that informing the public about the risks they face is both morally justified and benefits societal resilience. Knowledge on how the public understands risk and the population's level of resilience is crucial to the development of rigorous risk assessment and planning. Voluntary and community groups can provide key insights on these issues.</p>
47	<p>Recommendation</p> <p>When conducting the national risk assessment process, the government should engage with voluntary and community groups to ascertain information on risks and population level resilience (paragraph 249).</p>

Risk communication

UNU-EHU and UNDRR: Risk intervention

79

Actionable communication

A lack of clear and timely communication can result in the spread of misinformation and distrust in risk reduction measures...Online communication tools and platforms deserve special attention in risk management as they can also add to polarisation.

Recommendation

[the]...inclusion of community leaders from religious organisations in the communication process [can] raise the credibility and actionability of information... community risk-awareness and capacity-building campaigns could reach households excluded by other communication networks.

House of Commons Committee of Public Accounts

3

Communication of the main risks facing the UK

There would be significant benefits in improving the public's awareness of the main risks facing the country and what government is doing about them. The public and Parliament have limited awareness of the main risks facing the country and of what government is doing to address them. Although government has published a public-facing national risk register since 2008, this document is not widely known

Recommendation

Cabinet Office should set out how it plans to increase public awareness of the main risks facing the UK. It should also report annually to Parliament: on what actions government has undertaken during the year to mitigate the risks covered by the catastrophic emergencies programme and provide an assessment of government's preparedness for each risk; what changes government in making as a result of its consultations on national resilience; and government preparedness for the COVID-19 pandemic: lessons for government on risk; what lessons government had learnt about how to effectively communicate during the pandemic.

House of Lords: Preparing for Extreme Risks**p.51 Chapter 4: A whole-of-society approach**

Conclusion 20: Engagement of the devolved administrations by the UK government is superficial and ad-hoc and often an afterthought, particularly on reserved matters which may have implications for the resilience systems in the devolved administrations. Resilience is a devolved capability and as a consequence a more formalised engagement process is needed (paragraph 140).

Recommendation

Recommendation 21: The UK government needs to produce an agreed set of communications structures at all levels of seniority, including ministerial level, to facilitate effective resilience dialogue between central government and devolved administrations. This must be done in consultation with the devolved administrations. This should define the frequency and terms of engagement, at what stage the devolved administrations should be consulted and/or informed and identify key points of contact (paragraph 141).

p.62 Chapter 4: A whole-of-society approach

Conclusion 29: The UK population is not sufficiently encouraged to engage in emergency planning or build a level of personal preparedness. At present, the NRR is the primary tool for public education employed by the government. This approach falls short and does not empower the public to make informed decisions about personal safety. There is little evidence to suggest that providing information leads to panic. Providing individuals with knowledge about how to respond in a crisis and guidance to help build personal preparedness will improve societal resilience. It should be recognised that socio-economic disparities threaten to undermine civilian resilience capability. Moreover, misinformation poses a direct risk to civil cohesion and resilience. This risk has been exacerbated by the growing influence of social media platforms. Misinformation should be identified, pre-empted and countered as early as possible (paragraph 186).

Recommendation

Recommendation 30: The government should commit to a biennial publication of a brochure on risk preparedness. This brochure should educate the public on general resilience principles, outline how individuals could improve their preparedness, provide guidance on what to do in an emergency, and signpost further information on resilience. This should be modelled on the Swedish brochure 'If crisis or war comes' and supplement the NRR (paragraph 187).

Leadership and management of risk

UNU-EHU and UNDRR: Risk intervention

p.78 **Collective responsibility (a whole-of-society approach)**

Managing systemic risks is a whole-of-society responsibility, meaning that all societal actors have a role, from government to private businesses to single individuals. This approach increases the chances of identifying and managing vulnerabilities across all sectors and groups. Lessons can be learned from disaster management on the expectations of the general public towards leadership in times of crisis.

Recommendation

Involve citizens in risk management practices...supporting and strengthening the ability to self-organise and self-control in managing systemic risks.

p.78 **From systemic risk to systemic recovery**

The flip side of systemic risk is systemic recovery. The interconnected nature of societal systems presents an opportunity for positive turning points and for the propagation of the success of interventions. In our cases, we observed that positive impacts can serve as a point of (further) intervention, such as the job innovations following financial assistance, and concrete advances in digitalization. Furthermore, with the increase in compounding extreme events, society can be understood to be in a constant recovery mode, entering the stage of a 'risk society'.

Recommendation

Recovery management deserves more attention in risk management.

NAO: Lessons for government on risk management

p.7

Risk management

Risk practices have improved over time across government and organisations are placing increased importance on the contributions of their risk functions. The review highlighted variability in senior leadership support and promotion of risk management, including at board and executive levels; capacity and engagement in relation to risk management; approaches and frequency in undertaking horizon scanning exercises; and alignment to the Orange Book, which sets out the government's mandatory requirements and guidance on risk management.

Recommendation

The Cabinet Office and HM Treasury should support departments to reduce variation in capacity, capability and maturity of risk management, emergency planning and business continuity across government departments. This should include providing advice on strengthening leadership of risk management, business continuity and disaster recovery; the basic level of capability needed in each department; and plans to address any gaps.

House of Commons PAC: Lessons for government on risk

p.3

Variability in risk management across departments

The Cabinet Office and HM Treasury should set out what they intend to do to ensure that there is sufficient uniformity in department's high-level interpretation of and alignment to the principles of the Orange Book. As part of this, the Cabinet Office should set out how it will ensure that departments have a shared understanding of the government's tolerance for the impacts of major risks, including what levels of impact are acceptable and what levels of impact require mitigation

House of Lords Select Committee: Preparing for Extreme Risks

48

Chapter 6: Risk planning

There is, overall, an absence of auditing of departmental risk planning at all levels. In particular, the committee recognises that Parliament has been too passive in its responsibility to scrutinise risk plans and should assist the audit of government preparedness (paragraph 265).

50

Recommendation

A yearly debate on the NSRA should be held by both Houses of Parliament. To ensure more in-depth scrutiny, the Office for Preparedness and Resilience should audit departmental preparedness and conduct deep dives into departmental risk management.

Lessons and learning

NAO: Lessons for government on risk management

Key finding 9
(pages 7, 18)

Lessons from incidents and simulation exercises

Government would have been better prepared for COVID-19 if it had applied learning from previous incidents and exercises... Prior to the pandemic, the government did not act upon some warnings about the UK's lack of preparedness from its past pandemic simulations.

Recommendation
(e)

Recommendation

Government should ensure that lessons from simulation exercises are communicated and embedded across government. The Cabinet Office should set up a cross-government process to capture learning for emergency preparedness and resilience from exercises and actual incidents, including COVID-19, and to allocate clear accountabilities for applying learning. It should report annually on the implementation of each learning point.

House of Lords Select Committee: Preparing for Extreme Risks

52

Chapter 6: Risk planning

Exercising and wargaming should be at the heart of UK preparedness as they are crucial to ensure plans are tested and those responsible for executing them are well-trained. Exercises must be regular, short and involve the most senior figures responsible for the plans, including ministers. To challenge group-think, exercises should include red-teaming where appropriate. They should test a wide range of scenarios, including compound or cascade risks, and should be followed up on with lessons learned, which in turn should feed into a loop which informs both risk assessment and planning (paragraph 276).

53

Recommendation

Risk plans must specify how frequently they are to be subjected to exercising or wargaming... These exercises must be followed up with a thorough 'lessons learned' process, with these lessons learned published so they can be scrutinised. Scrutiny of lessons learned should be followed up on after one, two and five years (paragraph 277).

