



Cabinet Office

UK Approach to Risk Assessment

Presentation on behalf of the UK Government Office for and
UK Cabinet Office

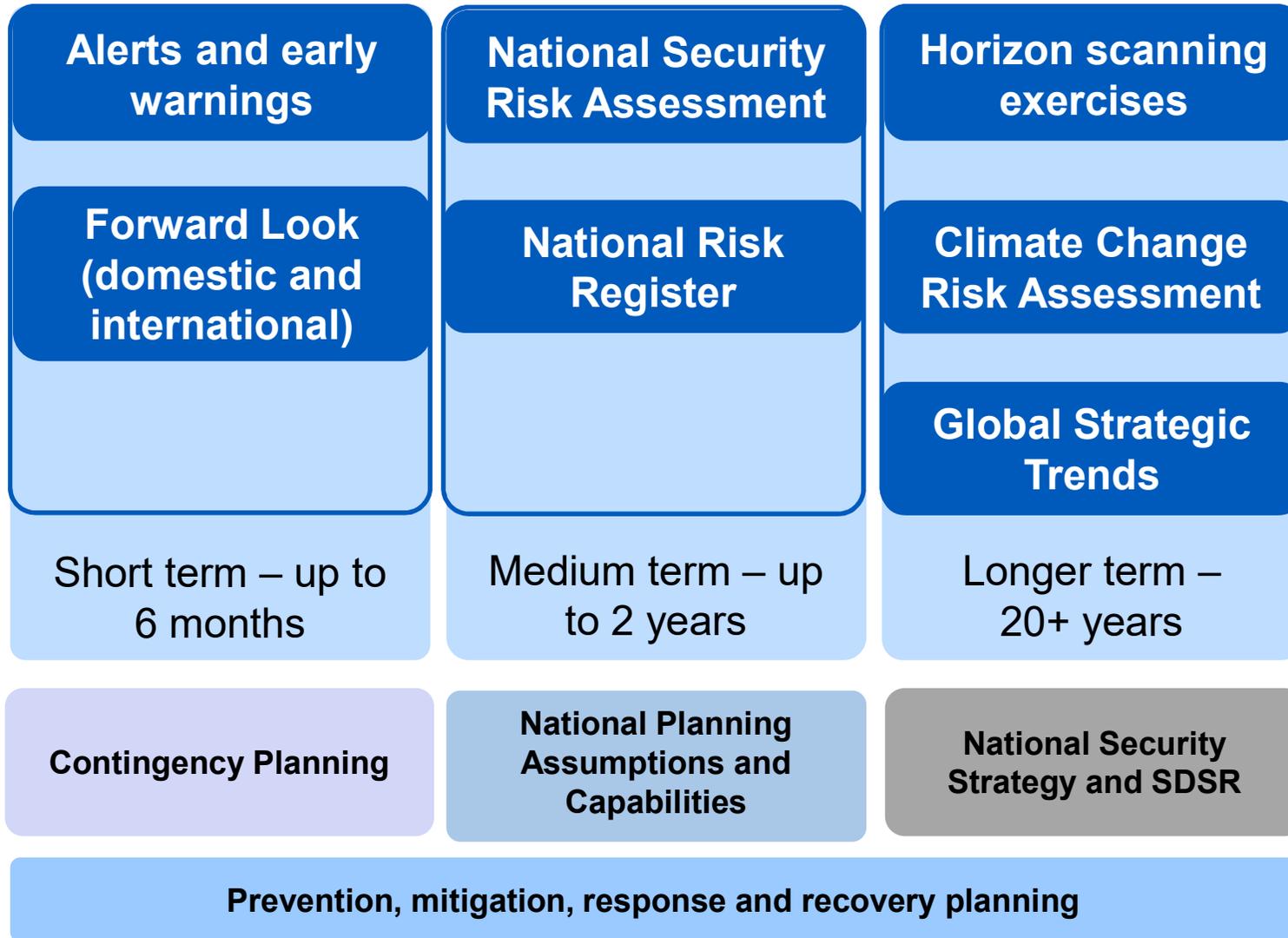
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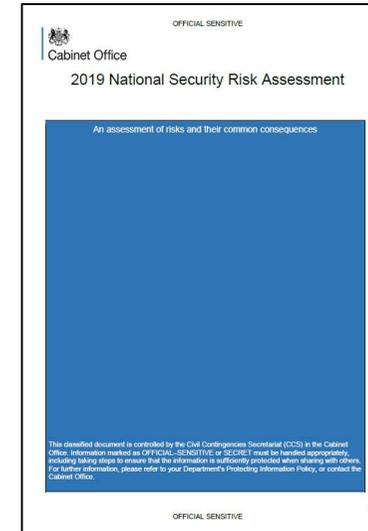
UK risk monitoring and assessment landscape





The National Security Risk Assessment (NSRA)

- The NSRA assesses the most significant malicious and non-malicious risks facing the UK and its interests overseas
- The NSRA aims to improve UK security and resilience to risks by providing local, national and internationally minded policy teams with information designed to inform risk management strategies.
- The NSRA illustrates common impacts across multiple risks that risk owners and the wider government resilience community should be thinking about.



End Users: Ministers and decision makers, LRFs and Local Government, Devolved Administrations, risk owners



Overview of the NSRA



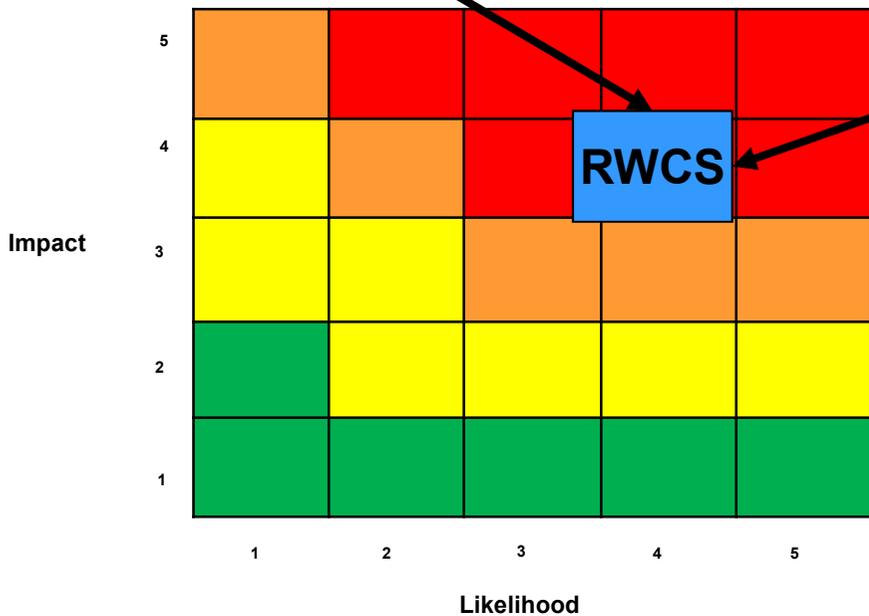
- Hazards – non-malicious
- Threats - malicious

- Non-malicious: 'Likelihood'**
- Historical Evidence
 - Statistical forecasts
 - Expert advice
- Malicious: 'Likelihood'**
- Intent, capability, vulnerability

- Impacts considered :**
- Human welfare
 - Fatalities and casualties
 - Evacuation and shelter
 - Behavioural impacts
 - Essential services disruption
 - Damage to international order
 - Damage to UK security
 - Economic impact
 - Damage to the environment

Likelihood

Impact

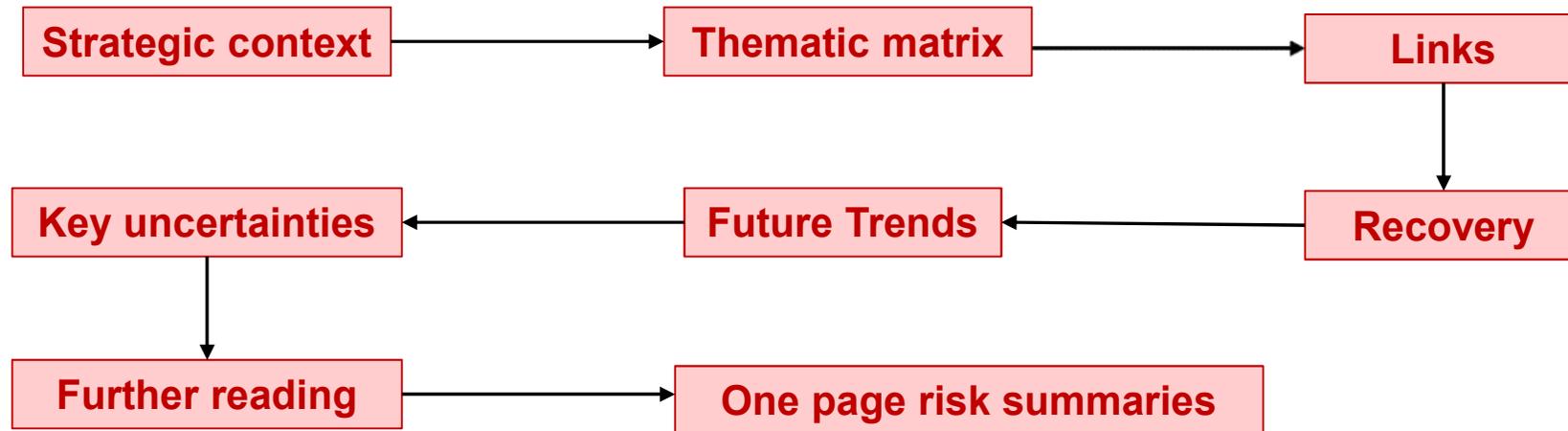


The risk assessment process involves:

- **Identifying** potential risks;
- Establishing the '**reasonable worst case scenario**' (RWCS) for each risk;
- Assessing the **likelihood** and potential **impacts** of the RWCS.



2019 NSRA structure and presentation



Part A of the document is thematic in nature, broken down into ten chapters bringing together strategic context and common causes of the risks.

The chapters contain 131 risks across the following areas:

Conventional Terrorism
Serious and Organised Crime
Geopolitical and Diplomatic Risks
Natural and Environmental Hazards
Societal

Cyber
Hostile State Activity
Accidents and System Failures
Human and Animal Disease
Conflict and Instability



National Resilience Planning Assumptions

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Title of Planning Assumption
Planning assumption reference
Description of expected impacts including scale and magnitude

Driver(s)
The risks in the National Security Risk Assessment that provide the scale of the impacts captured in the planning assumption heading

The bar graph above shows the main risks that inform the planning assumption, including likelihood and the relevant score(s). Driver risk indicated by ★

Duration and advance warning
This section provides additional details on the expected time period during which the consequences of the driver risk covered by this assumption can be reasonably expected to occur. Information on warning periods, leading times and cycles that may be expected is also covered in this section, where appropriate

Scalability and/or variations
This section gives added details on the scale of impacts that could be expected to arise from the other risks in the NSRA that have been used to inform the planning assumption. It includes information on how the magnitude of the impacts could be experienced over time but also the geographical scope of these impacts.

Uncertainty
This section links to the confidence level section in the risks that inform the planning assumption, concentrating on the inherent uncertainties relating to the scale of the impacts. It highlights, for example, known unknowns and capability considerations that planners may need to take into account.

Relevant specific planning
Relevant specific guidance/links to plans or response arrangements where available

Linked assumptions

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graph TD
    A[Linked planning assumption - cause (a different planning assumption will lead to this planning assumption)] --> B[Title and reference letter for planning assumption]
    B --> C[Linked planning assumption - effect (this planning assumption will lead to another)]
    D[Linked planning assumption - simultaneous (two consequences that might occur at the same time as a result of the same event)] --> B
  
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All planning assumptions are marked at "Official" with a "Sensitive" handling instruction

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The National Resilience Planning Assumptions (NRPAs) describe the expected scale, duration and severity for each of the common consequences of the various risks captured in the NSRA.

The NRPAs and risk colour code on the matrix provide overarching planning guidance for a range of scenarios.

Significant less likely risks: Evidence based judgement on a Generic or Specific approach	High impact risks Specific planning likely to be required to supplement generic planning			
	Limited - Moderate impact risks Generic planning for common consequences			

Red risks require specific planning (generally coordinated through central Government).

Amber/yellow/green risks generally only require generic planning based on the commonality of consequences



NSRA production process

Identify

1. Risk owners update existing risk templates with latest data, reconsider risks under review and suggest the inclusion of new risks where relevant.

2. Risk owners define their reasonable worst case scenarios, which are then challenged by thematic expert groups, the departmental science network & cross-government steering group.

Assess

3. Risk owners work with subject matter experts to score each impact dimension in light of the defined scenario. For environmental impact, scoring is supported by models (wherever possible); for essential services impacts cross government workshops are held; for psychological impacts, behavioural scientists provide challenge and; for economic impact, departmental economists score each risk.

4. The intelligence community assess the likelihood of malicious risks. Departmental risk owners (with the help of experts and modelling tools) score the likelihood of non-malicious risks.

Sign-off

5. Cross-government steering group provides policy lead clearance

6. Senior officials subcommittee of the National Security Council, plus the network of departmental chief scientific advisers, provide clearance

7. Cabinet sub-committee provides Ministerial clearance

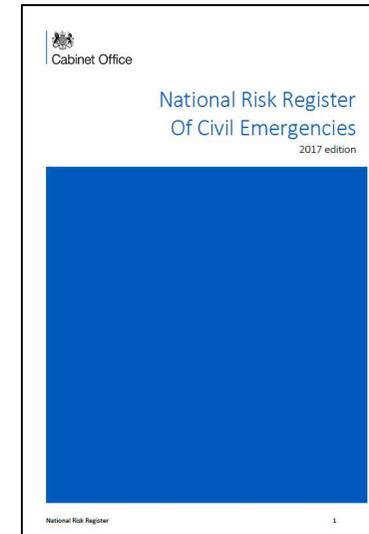
8. Document made available to end users via a secure portal.



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National Risks Register

- The UK's answer to public risk communication is the NRR, a document that provides a high level summary of a number of key risk areas, particularly those of a non-malicious nature.
- The data and recommendations are drawn directly from the NSRA, with the overall style and presentation of the document closely influenced by behavioural scientists, risk communication experts (e.g. from the Winton Centre, Cambridge University) and graphic designers.
- The NRR is made publicly available on gov.uk

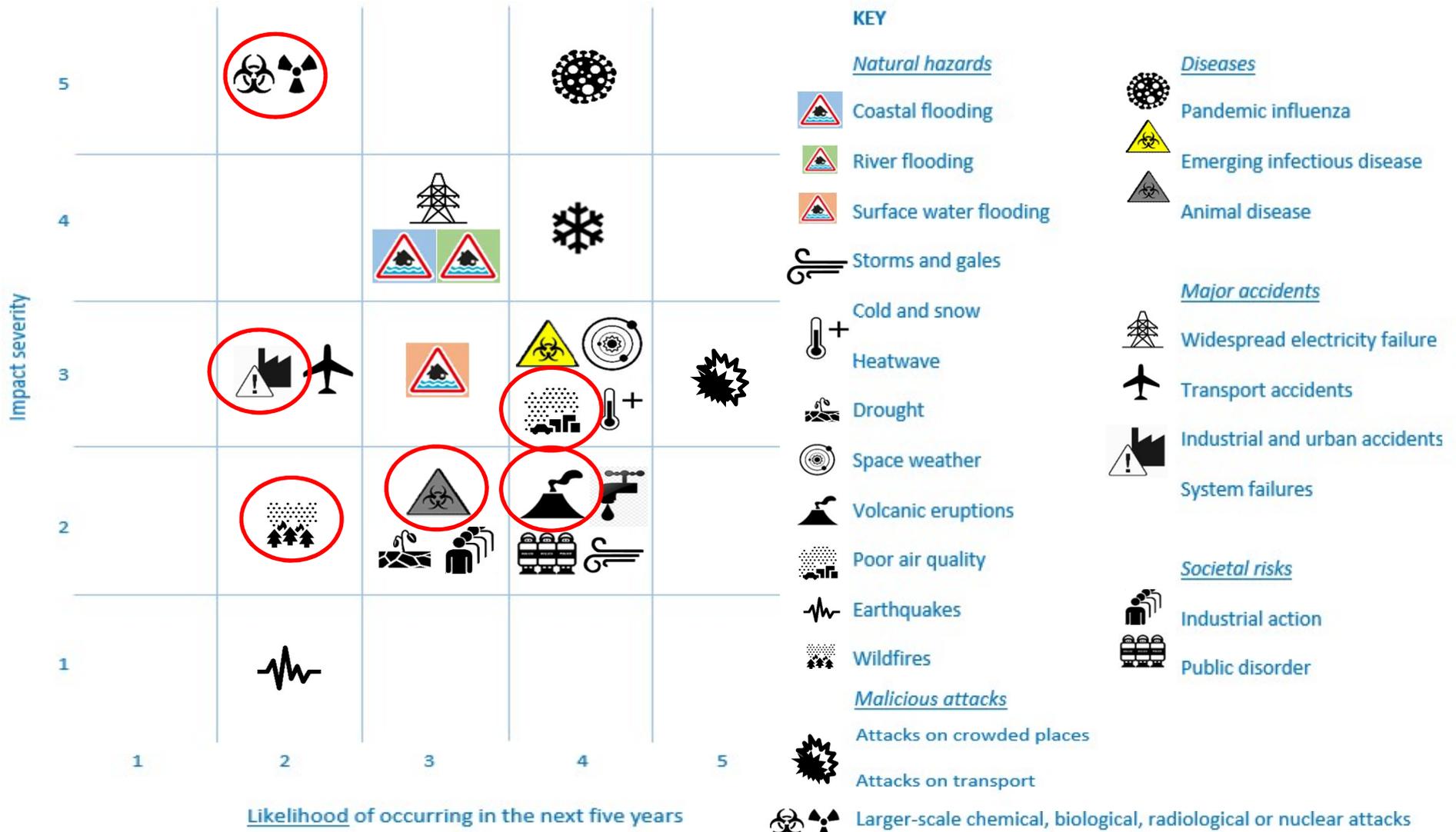


End Users: individuals, businesses, community services (e.g. schools)



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2017 NRR – Risk matrix





The role of science in UK risk assessment

- The Government Office for Science was consulted in the recent re-development of assessment methodology.
- The Chief Scientific Adviser network provides scientific direction; assures the validity and soundness of risk data and assessments, and; evangelises the document with senior officials and Ministers.
- Expert groups, often comprised of scientists and academics, provide challenge to the risks.
- Academics and statisticians have previously been embedded in the National Risks team.
- The Government Office for Science coordinates many of the cross-government horizon scanning networks, with scientific data underpinning much of evidence based used to assess future levels of risk (e.g. in the Climate Change Risk Assessment, future trends section of the NSRA).



Generating insight from risk assessment

- Embed risk data and awareness at the heart of decision making so that it supports policy prioritisation and investment strategies.
- Support resilience by joining up all levels of government (i.e. national to local) using consistent datasets that can then be contextualised to specific area requirements.
- Engage closely with scientific community to identify knowledge gaps – explore methods to address deficiencies.
- Work with horizon scanning community and academics/private sector to properly develop and constrain vision of how risks might change in future, and therefore what considerations need to be made in the short term to account for these.
- Canvass the government community to understand where advice on risk assessment and management is needed most.
- Work with international partners to understand cross-border issues, identify ways of assessing risk, work to address gaps in scientific knowledge and devise management solutions that can be shared.