



Cabinet Office

2016 National Risk Assessment

An assessment of risks and their common consequences

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looks at how risks and global trends might affect the UK and its interests over the next five and twenty years with a view to informing national security priorities and foreign and defence policy. Figure 2 (below) illustrates some examples of assessment products and the way in which they inform a different risk management activities.

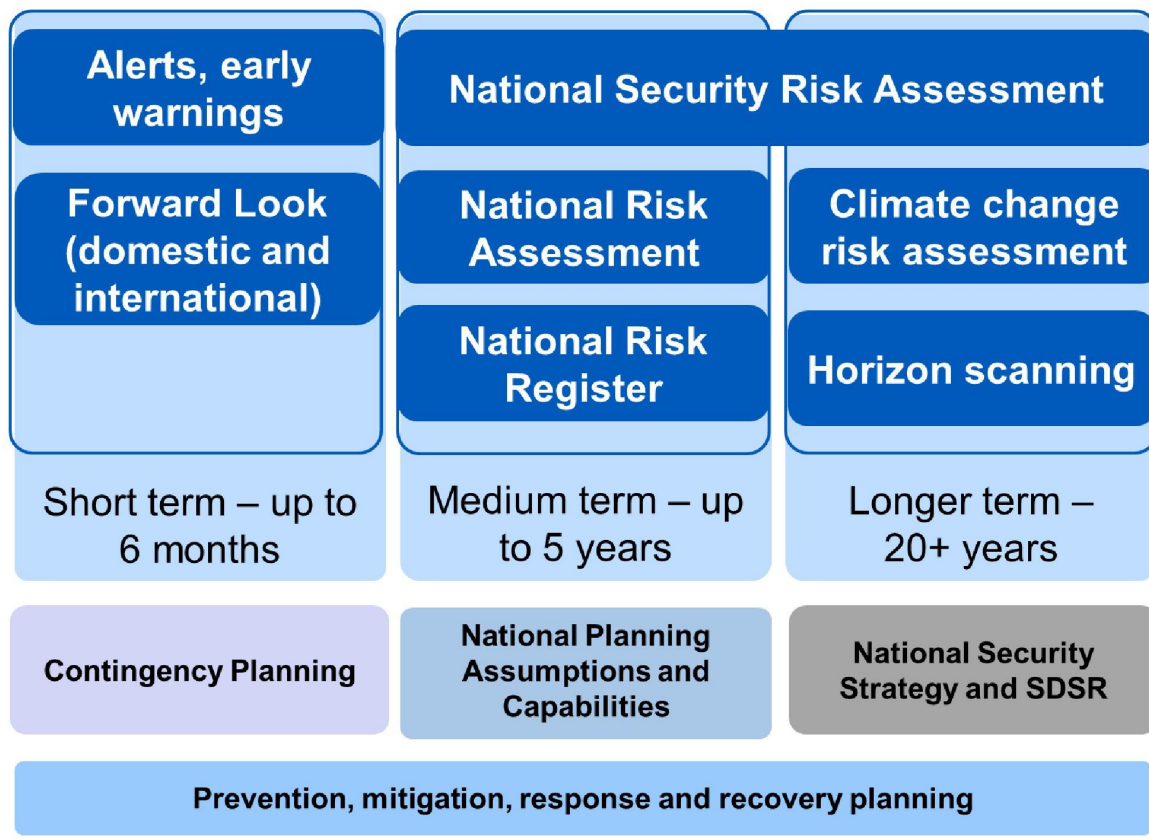


Figure 2: Horizon scanning and risk assessment

National Risk Assessment

The National Risk Assessment (NRA) is a strategic medium term planning tool. Risks captured within the NRA are examples of civil emergencies that could plausibly affect the UK within its territorial boundaries in the next five years. To properly understand risks and to make effective prioritisation decisions it is crucial that all risks are assessed using a consistent, evidence-based approach.

To facilitate this, each risk is considered on the basis of a 'Reasonable Worst Case Scenario' (RWCS). The RWCS is intended to provide an illustrative example of the worst plausible manifestation of the risk in question. This is calculated on the basis of two scores; impact (determining severity of the consequences) and likelihood/plausibility (determining the expected recurrence rate of the risk over the next five years).

Impact is determined on the basis of collating information about the severity of economic losses, fatalities, casualties, social disruption and psychological impacts.

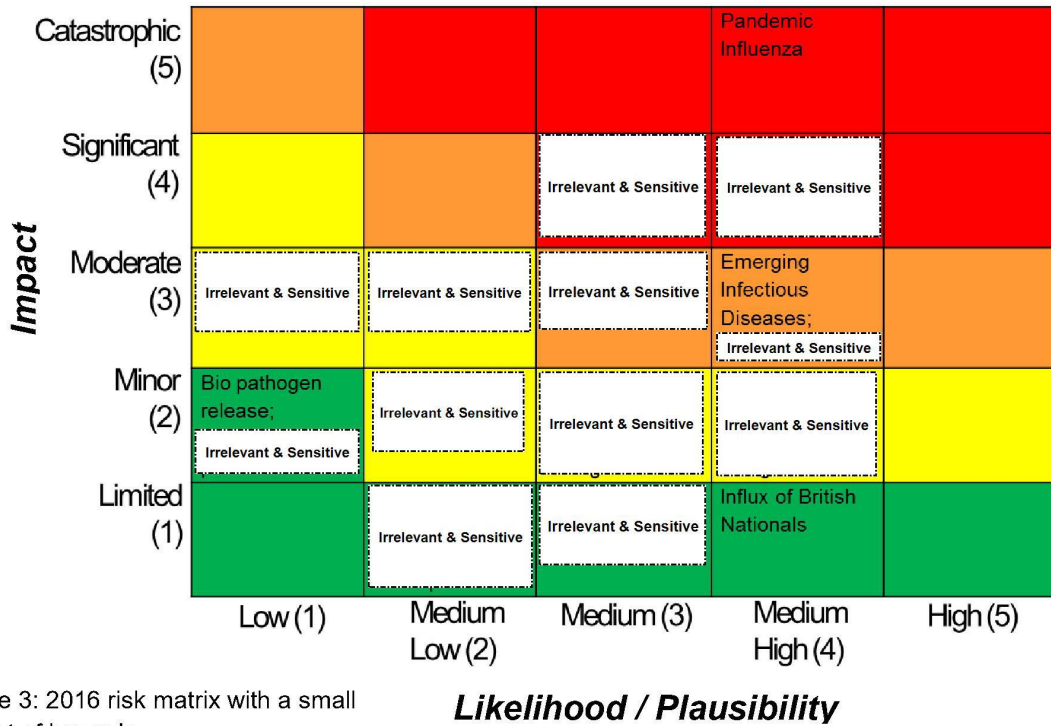


Figure 3: 2016 risk matrix with a small subset of hazards

In the majority of cases, it is expected that risks will be managed through the development of generic response capabilities and contingency plans that deal with common risk consequences (see Planning assumptions process below). However, the shading within the NRA risk matrix helps to highlight those risks where Government is expected to, or should strongly consider **developing specific bespoke capabilities** and/or contingency plans. This is illustrated below (see Figure 4).

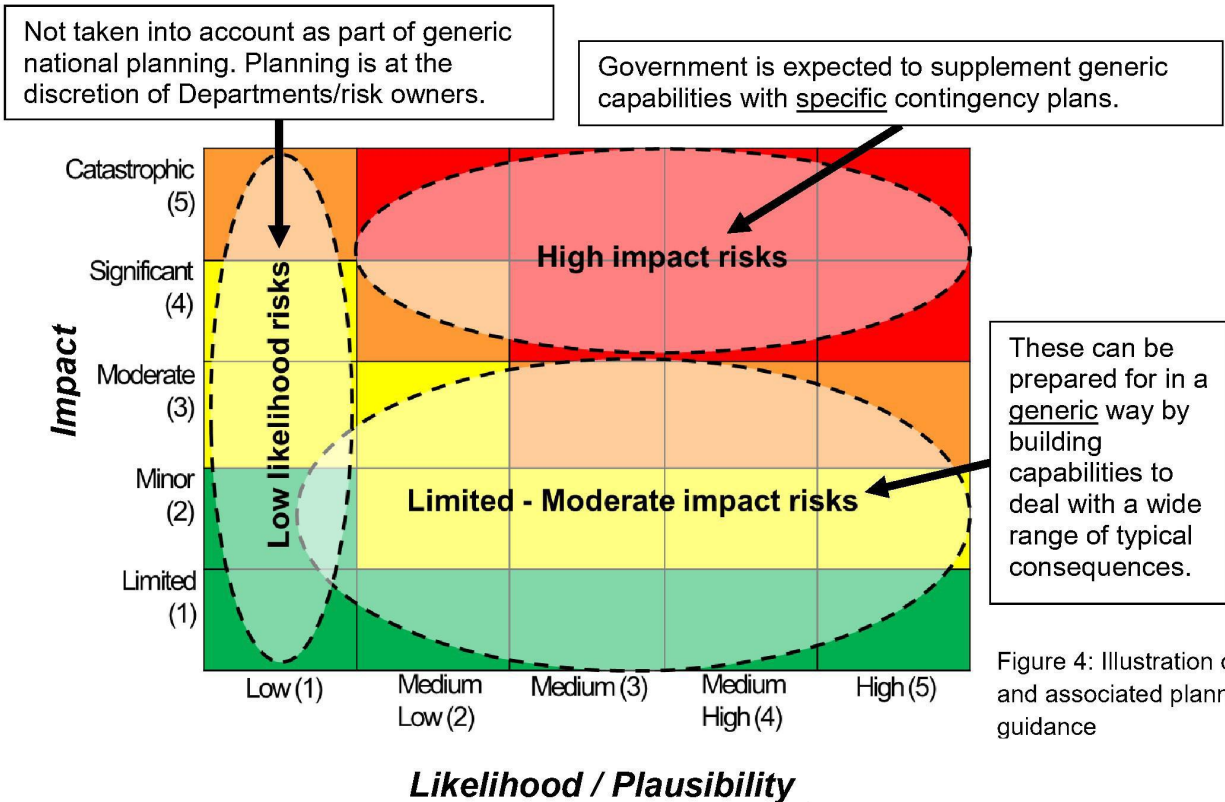


Figure 4: Illustration of risks and associated planning guidance

Planning assumptions process

Planning and preparing for risks and their consequences before they arise is essential if we are to continue to protect the public and our way of life. The Government's approach to planning for emergencies is to build and maintain capabilities against the common consequences of civil emergencies. This approach is proportionate, allowing the Government to focus on developing specific plans and capabilities for the most concerning risks and generic capabilities to deal with a range of other scenarios. Having flexible response arrangements based on common consequences also provides some degree of preparedness against risks that might be unforeseen and enables the UK to respond to a wide range of scenarios.

The planning assumptions (also referred to as National Resilience Planning Assumptions, NRPAs) distil information from the NRA on the common consequences of emergencies to inform national and local capability building and contingency planning decisions. Specifically they:

- a) **describe the common consequences of all NRA risks.** This includes, for example, mass fatalities and casualties, transport disruption and disruption to food and water supply;
- b) outline a set of assumptions on the **severity, duration and/or scale of each common consequence** that can be expected nationally based on the reasonable worst case scenarios contained in the NRA; and
- c) provide further detail to help guide local planners when interpreting the national planning assumptions for local planning purposes.

Each planning assumption is broadly based on the risk(s) likely to cause the most severe manifestation of that consequence (referred to as 'driver' risks). This is illustrated in Figure 5 below. Planning assumptions also include information about how a particular consequence may vary in severity, duration and scale on the basis of other risks in the NRA. This is particularly the case where, for example, a driver risk may only be relevant to a particular geographic area, or where different risks may cause a specific variation in that consequence (such as different types of physical trauma). Information is also included about the relative likelihood/plausibility of risks that may lead to that consequence.

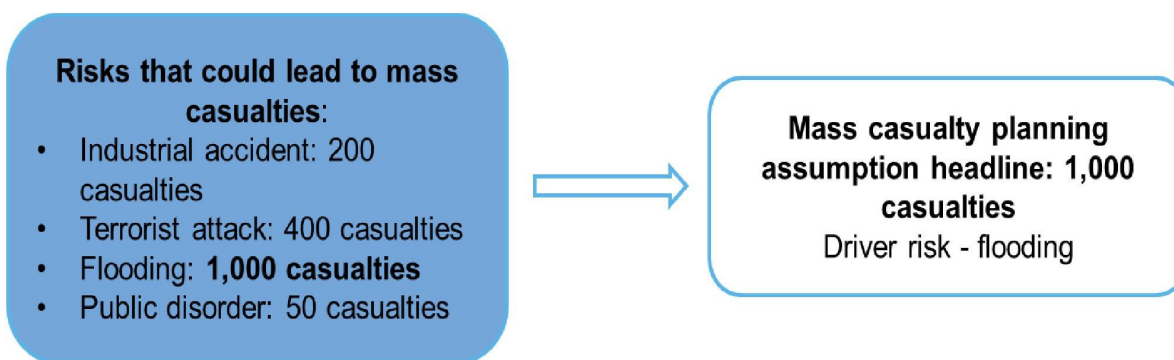


Figure 5: how driver risks are identified (example is **illustrative** only – figures given are not real figures)

Hazards

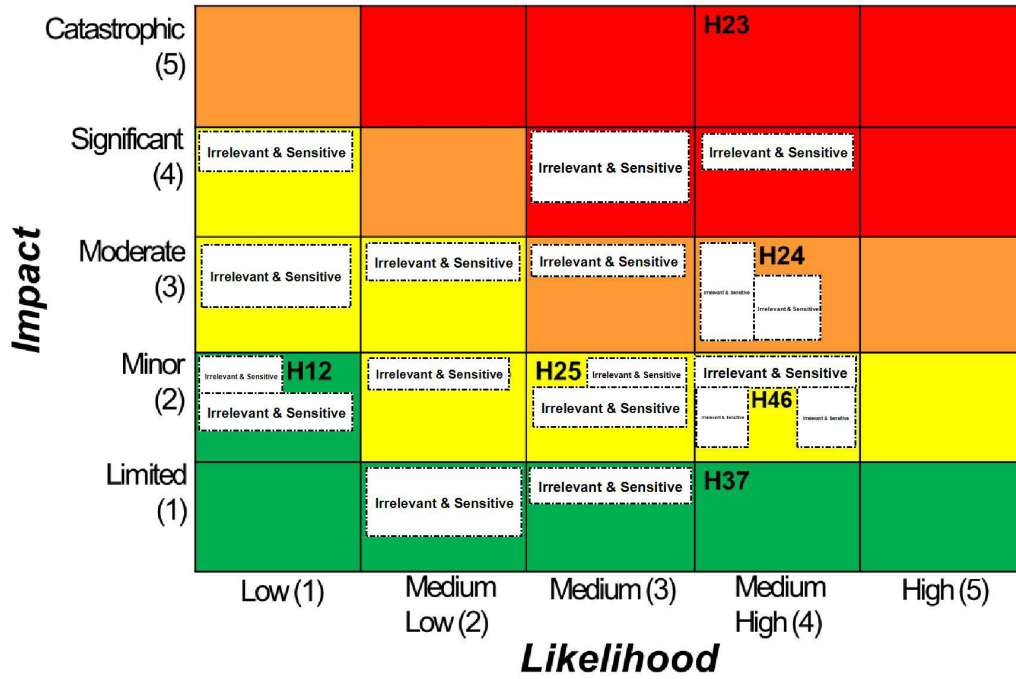


Figure 10: 2016 Risk Matrix (Hazards)

Threats

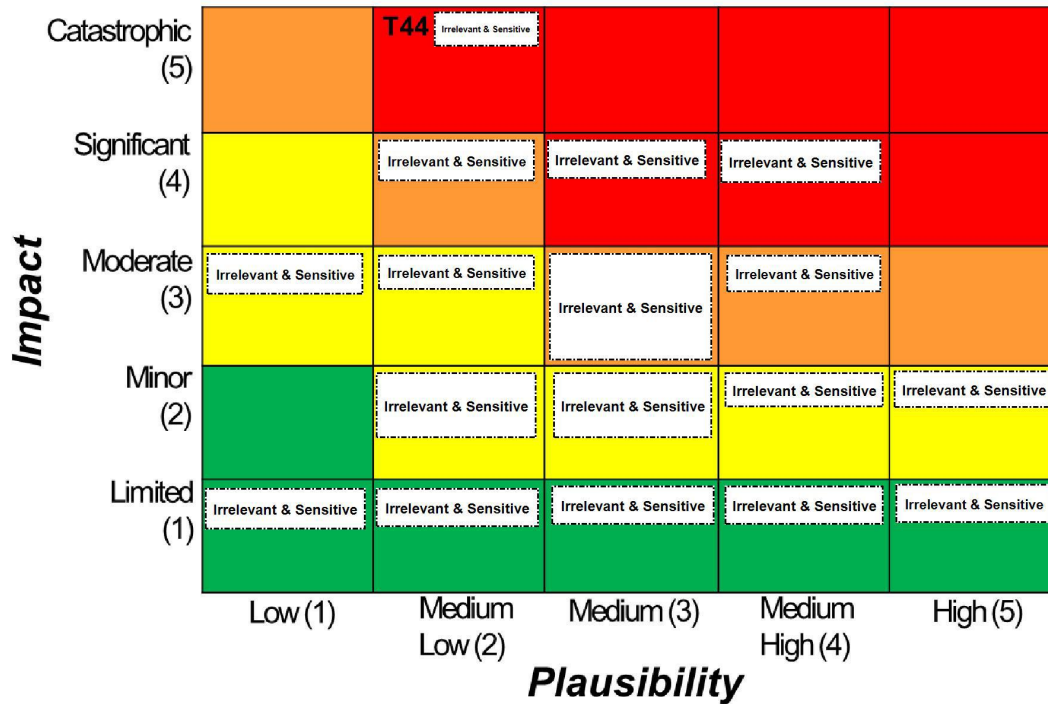

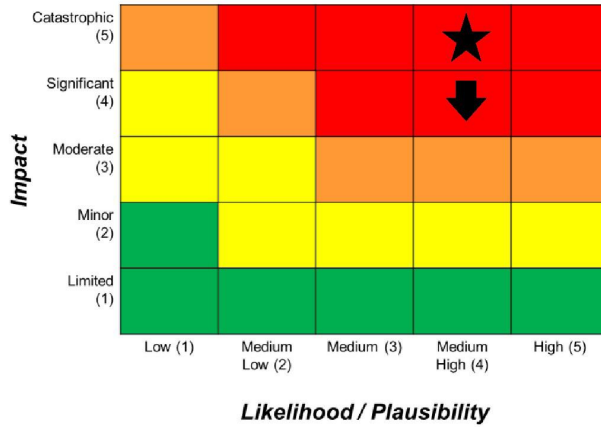


Figure 11: 2016 Risk Matrix (Threats)

Please note that the position of threat composite risks may be on the border between boxes. For the position of all threat risks, including those which comprise threat composites, please see *Detailed Risk Assessments, Part II*.



**Disease –
Pandemic Influenza**
H23 (DH)
Overall Assessment =
Very High



Key

- ★ Reasonable worst case scenario
- ↑ Upper range ↓ Lower range

Outcome Description

A worldwide outbreak of influenza occurs when a novel flu virus emerges with sustained human to human transmission. Up to 50% of the population may experience symptoms, which could lead to up to 750,000 fatalities in total in the UK. Absenteeism would be significant and could reach 20% for 2-3 weeks at the height of the pandemic, either because people are personally ill or caring for someone who is ill, causing significant impact on business continuity. Each pandemic is different and the nature of the virus and its impacts cannot be known in detail in advance. Based on understanding of previous pandemics, a pandemic is likely to occur in one or more waves, possibly weeks and months apart. Each wave may last between 12-15 weeks.

All ages may be affected, but we cannot know until the virus emerges which groups will be most at risk. There is no known evidence of association between the rate of transmissibility and severity of infection, meaning it is possible that a new influenza virus could be both highly transmissible and cause severe symptoms. Pandemics significantly more serious than the RWCS are therefore possible. The impact of the countermeasures in any given pandemic is difficult to predict as it will depend on the nature of the virus and the RWCS assumes countermeasures are not effective.

Whilst not explicitly stated in every case, H23 would likely compound the effects of the vast majority of risks in the NRA as all sectors would experience staffing pressures.

Confidence Levels

High confidence in the overall assessment based on a large body of knowledge of the issue and includes evidence of a high quality informed by consistent/relevant expert judgements.

Linked and Compound Risks


- H25 – Disease – Animals
- H18 – Natural hazard – Cold and snow
- H40 – Infrastructure/System failure – Telecommunications
- H41 – Infrastructure/system failure – national electricity transmission

Relevant Planning Assumptions

- A: Excess casualties and fatalities
 - G(i): UK nationals requiring assistance to return to the UK
 - K: Disruption to transport services
 - O: Disruption to health services
 - R: Disruption to food supply
- There would likely be additional disruption as a result of reduced staffing in all sectors.

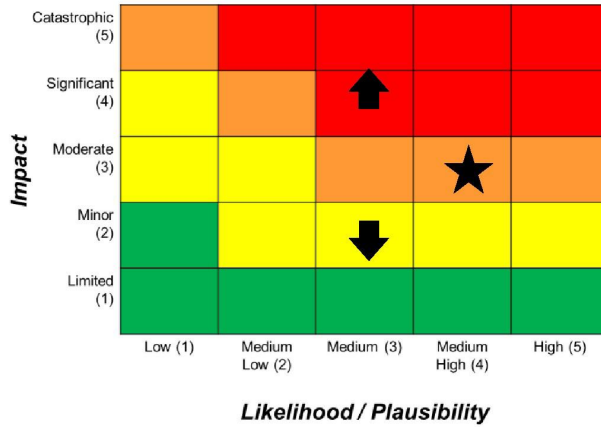
Impact scores

| | |
|----------------------|---|
| Fatalities | 5 |
| Casualties | 5 |
| Economic Impact | 5 |
| Transport | 5 |
| Food & water | 2 |
| Fuel | 2 |
| Gas | 0 |
| Electricity | 0 |
| Finance | 0 |
| Comms | 0 |
| Education | 5 |
| Health Care | 5 |
| Criminal Justice | 5 |
| Shelter | 0 |
| Evacuation | 0 |
| Environment | 0 |
| Psychological Impact | 4 |

 **Disease – Emerging Infectious Diseases**
 H24 (DH)
 Overall Assessment = **High**

Key

- ★ Reasonable worst case scenario
- ▲ Upper range ▼ Lower range



Outcome Description

Over the past 30 years, more than 30 new or newly recognised diseases have been identified. Most of these have been zoonoses, i.e. diseases that are naturally transmissible, directly or indirectly, from animals to humans. It is highly probable that such an infection will arise in another country and possible that it could arrive in the UK before it is identified, but it is also possible that one may arise in the UK.

Severe Acute Respiratory Syndrome (SARS), a newly emerging severe respiratory infection, spread to infect over 8,000 people worldwide within an eight month period before it was contained in early 2004. An emerging or re-emerging infection would not necessarily be spread by the respiratory route (as are influenza and SARS/MERS), but could instead be transmitted directly between people through the gastro-intestinal (e.g. E. coli) or blood routes (e.g. Ebola), or indirectly via vectors such as insects (Zika virus).

Based upon the experience of the outbreak of SARS and more recently, MERS and Ebola, the worst case likely impact of such an outbreak originating outside the UK would be cases occurring amongst returning travellers and their families and close contacts, with spread to health care workers within a hospital setting. However, it is unlikely to present a wider threat to the UK through sustained spread.

Confidence Levels

Low confidence in the overall assessment based on a relatively small body of knowledge of the issue and includes relevant evidence and somewhat consistent/relevant expert judgements.

Linked and Compound Risks

- Natural hazards**
H19, 21, 22 – Flooding
- Disease**
H25 – Animals

Relevant Planning Assumptions

- A: Excess casualties and fatalities
- G(i): UK nationals requiring assistance to return to the UK
- K: Disruption to transport services
- O: Disruption to health services

Impact scores

| | |
|----------------------|---|
| Fatalities | 4 |
| Casualties | 4 |
| Economic Impact | 4 |
| Transport | 3 |
| Food & water | 1 |
| Fuel | 0 |
| Gas | 0 |
| Electricity | 0 |
| Finance | 0 |
| Comms | 0 |
| Education | 2 |
| Health Care | 3 |
| Criminal Justice | 1 |
| Shelter | 0 |
| Evacuation | 0 |
| Environment | 0 |
| Psychological Impact | 3 |