

working together for a better flood response

Exercise Triton 04

Overview report of lessons identified



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The Environment Agency. Out there, making your environment a better place.

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Working together for an integrated response

In June and July 2004 the Environment Agency and our partners faced a flood on a scale that has never been seen before. You won't have read in the newspapers about the thousands of homes that were flooded, or seen on TV the disruption to our roads, railways or power supplies. That's because this flood was not real but a national flood exercise – Exercise Triton 04. Individuals from over 60 organisations were presented with a scenario that depicted massive storms and widespread flooding of the coasts of England and Wales, which brought home the potential impacts of climate change.



Climate change is described as the world's greatest environmental challenge. The nation will need to prepare for rising sea levels, more extreme weather events and more frequent and widespread flooding – exactly the scenario presented in Exercise Triton 04.

As a nation we have to reassess the way we live and cope with the ever-present threat of floods. The Environment Agency can construct defences to reduce the likelihood of flooding but floods cannot be prevented and we must be better prepared to deal with them.

The Environment Agency and our partners work together during floods to prevent loss of life and reduce the impact on people, property and the environment. Exercise Triton 04 provided a valuable opportunity to practise our joint response and the lessons identified will help us to provide a seamless and integrated response to real floods in the future.

Barbara Young
Chief Executive, Environment Agency

This report has been written by the Environment Agency on behalf of its partners. It is a compilation overview report containing information abstracted directly from approved partner annex reports.

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involving over 60 org

Including: Environment Agency, Police, Fire service, Ambulance service, Central Government Departments, Local Authorities, Military,

Executive summary

Exercise Triton 04, the first national flood event exercise of its kind and size, took place in June and July 2004. The scenario covered an extreme (up to one in 1,000 year occurrence) and extensive flood affecting nearly half of England and Wales.

The exercise tested the nation's ability to respond to the Government's call for organisations to work together better to deal with extensive flooding. The scenario deliberately tested systems that would not normally be planned for and identified valuable lessons for the Environment Agency and partners in improving :

- how we work together
- the plans and procedures that we use
- how we communicate
- the resources at our disposal

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Organisations

Health Authorities, Coastguard, Utilities - power, water, gas and communications, Government News Network

And in understanding:

- how the forthcoming Civil Contingencies Act will change the way we work.

Exercise Triton 04 depicted a scenario with an East Coast tidal flood from south of the Humber to Southampton Water and a West Coast tidal flood affecting the coasts of north and south Wales.

The combination of high spring tides, storm surge, winds and wave action caused many flood defences to be overtopped and/or breached. The result was devastating. Many people

were killed or injured and thousands of homes and several coastal towns and city centres were flooded. There was widespread disruption and damage to transport, power, water and communications networks, along with major damage to industry and commerce and drowned livestock.

Over 60 organisations and agencies took part nationally, regionally and locally. Strategic management teams from many organisations, based at 35 locations, were presented with this emergency scenario and asked to respond as they would if the event were real. Each team had to make

decisions that included how to evacuate hundreds of thousands of people; inform and warn the public via the media; what resource they needed and what their priorities were; if they needed Military aid; how to communicate up and down the chain of command and whether they needed emergency powers.

Day one focused on handling the emergency. Day two was about developing recovery plans. These plans looked at what was needed to get local communities, regions and the nation back to normal within a year of the flood.

For many of the people who took part one of the most successful parts of the exercise was how willing and enthusiastic everyone was to work together in responding to the crisis.

Overall, everyone that took part felt that the exercise was successful. Valuable lessons were learned during preparation for the exercise that have already strengthened the nation's ability to respond to a national scale flood emergency.

The following recommendations will reduce the impact on people, property and the environment caused by real floods in the future.

Summary of recommendations

The lessons identified from Exercise Triton 04 can be used in responding better to other national emergency situations.

The following summary lists the main lessons identified and how improvements to responses may be made in the future.

Multi-agency working

With a number of organisations working together, roles and responsibilities were not always clear. In future exercises, sponsored by the Department for Food and Rural Affairs (Defra) and the Welsh Assembly Government (WAG), key skills needed and suggestions of appropriate training should form part of the scenario.

The Environment Agency needs to be able to forecast more accurately the timing, extent and impact of tidal flooding on people, property and the community, particularly as a result of failure or overtopping of defences.

Defra's Strategic Co-ordination Committee should contain more members including a representative from the Environment Agency.

A strategic review of systems is needed to support operations, encourage people to work together better and help keep people informed at all times. The review should also include the development of a 'Decision Support' programme (or secure web site) that could be made available on the internet to help organisations gather information quickly and efficiently.

The effectiveness of plans and procedures

Local and national emergency plans were appropriate and only needed minor changes.

There should be separate plans for the incident itself and the recovery phase. Department plans should be reviewed and changed if needed. Guidance should also be provided to recognise differences between incident and recovery phases. The Cabinet Office should consider providing secretariat support to any cross-departmental group during recovery. Any changes should be included in the lead government guidance document.

Exercise Triton 04 showed people needed more training to better understand emergency plans. All organisations involved in such an emergency situation should include this as a target in their business plans to ensure better effective working in an emergency.

The Environment Agency needs to improve its ability to advise on evacuation i.e. when and where people might need to evacuate and in what scale of event.

Communications

The timing, speed and method of communication was critical to managing the incident effectively. Standard report formats are recommended as well as a review of who to communicate with and when.

Incident control rooms need to review communication equipment they have in place to make sure they can respond quickly and efficiently.

Everyone involved in the emergency needs to look again at how they deal with the media to make sure that information is relayed sensitively and appropriately. Partners should also agree a joint media strategy for use during flood incidents to avoid delays in releasing important information to the public.

Resources

The exercise clearly showed that priorities need to be identified at a national level. The process and responsibility for allocating resources requires clarifying. For example, the Ministry of Defence (MoD) should produce guidance on how and what Military aid is available.

There should be a national review to see if there is enough dedicated emergency support equipment such as pumps, generators and mobile radios. Organisations from different sectors could look at how they might work together to share resources.

There is a need for Gold control room facilities to be compatible with the equipment needs of all users.

Using new communications methods, such as tele/video-conferencing, could mean fewer people are needed to staff control centres.

The forthcoming Civil Contingencies Act

Working to the provisions of the forthcoming Civil Contingencies Act Exercise Triton 04 identified lessons that assisted in the preparation of guidance in respect of the Act. For example terms of reference for Government Offices in the Regions during civil emergencies and revision of plans and procedures of all organisations to accommodate the new guidance at national, regional and local levels. It should now be noted that the Civil Contingencies Bill gained Royal Assent on 18 November 2004 and henceforth should be known as the Civil Contingencies Act 2004.

The nature and variety of requests for emergency powers demonstrated the need for national guidance to develop a better understanding.

Conclusion

Exercise Triton 04 has tested the nation's ability to work together to effectively deal with a major flooding incident.

People welcomed the improvements made following the extensive floods of Easter 1998 and Autumn 2000. Even more valuable lessons have been identified from this exercise that will be carried forward to further strengthen the nation's capability to deal with a major incident of this kind.

Key partners have endorsed the recommendations in this report. It is now proposed that the partners take the implementation of these lessons forward, monitored by Defra and WAG in partnership with other departments.

the first UK national flood event exercise

1.1 Report scope

1.1 Report scope

1.1.1 Exercise Triton 04, the first national flood event exercise of its type and magnitude, was conducted in June/July 2004. Players were presented with an extreme tidal flooding scenario affecting the coasts of Southern and Eastern England, the Thames Estuary, North Wales and the County of Gwent. The scenario tested the UK's resilience to – and preparedness for – such an incident.

1.1.2 Triton was a combined 'control post' and 'table top' exercise and did not include any operational elements; neither were the Environment Agency's flood forecasting, warning service or public liaison procedures tested.

1.1.3 The exercise, conducted over a total of three days, involved approximately 1,000 players and directing staff at 35 separate sites (control posts). More than 60 different organisations participated, including the Department of the Environment Food and Rural Affairs (Defra), other central government departments, the Welsh Assembly Government (WAG), four Government Offices in the Regions (GORs), the emergency services, local authorities, the Military, the Environment Agency, the Maritime and Coastguard Agency (MCA) and utility companies.

1.1.4 At the end of each day of the exercise, players were debriefed to record lessons identified. Each participating organisation submitted or contributed to its own Lessons Identified Report, based upon the debrief and other feedback sources. This report provides an overview of the lessons identified from that process. The individual Lessons Identified Reports are not reproduced here, but are held separately by the author organisations. They may, however, be viewed on the Environment Agency's website.

1.1.5 The aim of this report is to enable the Environment Agency, its professional partners and the Government to identify, prioritise and, where appropriate, act upon areas of potential improvement, as a platform from which to strengthen the response to a major flooding emergency on a national scale.

1.1.6 The report includes:

- Exercise aims and success criteria
- Lessons identified by participating organisations.
- Recommendations

1.1.7 The report is also intended to inform future debate and contribute to the development of stronger relationships between the Environment Agency, its professional partners, government and the general public.

1.1.8 Given the number of participating organisations and the various tiers of management involved (local, regional and central), Triton has been described as one of the most complex flood event exercises ever planned and executed in the UK. A number of lessons were identified associated with the planning and delivery of the exercise itself. These are being shared with emergency planners via a separate Environment Agency report, entitled:

['Report on the Methods and Tools Used in the Planning and Delivery of Exercise Triton 04.'](#)

The executive summary of the above report is provided in Appendix A.

Section 2

Exercise aims and success criteria

aiming for an integrated response

- 2.1 Background
- 2.2 Aims
- 2.3 Success criteria and accomplishment

2.1 Background

2.1.1 The Easter Floods of 1998 highlighted weaknesses in the preparedness of the UK in responding to a national scale flood emergency.

2.1.2 The subsequent independent report ('Bye' report) recommended that:

“Greater emphasis should be given in the future to testing response activity, interfacing and co-operation, with extreme event scenarios.”

2.1.3 This led to the minister calling for:

“A seamless and integrated response to flood forecasting, flood warning and emergency response.”

2.1.4 In November 1999 Defra (then Ministry of Agriculture Fisheries and Food) and WAG (then National Assembly for Wales) published their High Level Targets for Flood and Coastal Defence to make sure these improvements were delivered.

2.1.5 High Level Target 3 requires the Environment Agency to:

Arrange, in conjunction with local authorities, emergency services and other partners...

...A national exercise, and an exercise in each Environment Agency region and local area should be conducted by 31 December...

...and at not more than three-yearly intervals thereafter.

Report to Defra/National Assembly Secretary on:

...the results of emergency exercises in the previous year, including lessons learned.

2.1.6 Consequently, each Region of the Environment Agency has progressively implemented a programme of local and regional exercises and reported the findings and lessons learned to Defra and WAG.

2.1.7 A national flood exercise was however, postponed in recognition of the combined impacts on the Environment Agency and/or its professional partners of: prolonged and widespread flooding in autumn 2000, the foot and mouth disease outbreak in early 2001, the events of 11 September 2001, the fire strike and the Iraq war in 2003.

2.1.8 This first national flood exercise was conducted on the 16 and 17 June 2004. A third day was held on 16 July 2004. The exercise was named Exercise Triton 04 and was organised by the Environment Agency on behalf of the Cabinet Office, Defra, WAG and our professional partners (emergency services, local authorities, utilities etc), and was funded by Defra.

2.2 Aims

2.2.1 To make Triton a success it was recognised that full partner engagement would be necessary. From the outset a multi-agency Project Board provided direction to the Exercise Planning Team and agreed the following exercise aims and success criteria.

Exercise Triton 04 aims

Help ensure:

‘a seamless and integrated response to flood forecasting, flood warning and emergency response’.

By placing:

Greater emphasis to testing response activity, interfacing and co-operation, with extreme event scenarios. ('Bye' report, r1.5.9, Sep. 1998)

To achieve this we will:

Deliver a national exercise in accordance with Defra's and WAG's High Level Target 3.

2.3 Success criteria and accomplishment

In order to determine whether the exercise aims were met, specific success criteria were defined. The Environment Agency specified the following for the exercise:

The capability of the Environment Agency in association with its professional partners, in responding to a national scale flood emergency.

For each partner at and between each tier of control, the exercise will test:

- The effective actions and interactions of the control posts
- The effectiveness of plans
- The robustness and integration of information and communication process

The adequacy of resources and the effectiveness of resource deployment, prioritisation and sharing.

Specific success criteria submitted by national partners is shown in Appendix B.

2.3.1 All participants were asked to comment on the accomplishment of these success criteria and the following is a summary of their responses:

2.3.2 The capability of the Environment Agency, in association with its professional partners, in responding to a national scale flood emergency will be tested.

This objective was fully achieved. Exercise Triton 04 was a national event, involving four Environment Agency Regions, ten Police Force Areas, four GORs, Cabinet Office, Defra, WAG and several other Government Departments.

2.3.3 The national Lead Department Plan will be exercised.

Both the Defra and WAG Lead Department Plans were exercised thoroughly. The exercise start state briefing was designed around the procedures in both plans, and in particular the links with the Environment Agency. Scrutiny of the plans during the exercise-planning phase resulted in revisions before the exercise. The exercise itself identified further lessons.

2.3.4 The new regional tier will be exercised, in at least two Government Offices in the Regions.

The Government Offices of South East, Eastern England, East Midlands and London participated in the exercise. The roles and responsibilities contained in the forthcoming Civil Contingencies Act at that time were assumed.

2.3.5 All major partners will engage positively and benefit.

All major partners engaged positively in the exercise. There have been significant benefits for all in terms of multi-agency awareness, understanding and development of partnership working.

2.3.6 For each partner, at and between each tier of control, the exercise will test:

- **The effective actions and interactions of the control posts.**

A major aspect of the first day of the exercise was the interaction of control posts at and between local, regional and national levels using 'live' communication links.

- **The effectiveness of plans.**

In addition to the Defra and WAG Lead Department Plans, the exercise was an effective test of the plans of the Environment Agency, the GORs and all organisations working from local strategic (Gold) control posts (see section 3.4.6 for definition) during the exercise.

- **The robustness and integration of information and communication processes.**

Participants used 'live' communication links to share information with colleagues and other control posts in accordance with their plans and procedures. The Environment Agency's national situation reporting procedure was implemented as well as reporting procedures from Gold Controls, GORs, Defra, WAG and central government.

2.3.7 The adequacy of resources and the effectiveness of resource deployment, prioritisation and sharing.

In addition to the identification and provision of officers to fulfil strategic management roles during the exercise, the adequacy of resources and the effectiveness of resource deployment, prioritisation and sharing were tested through the activation of:

- Mutual aid procedures.
- The Environment Agency's Inter-Regional Aid procedures.
- Requests for Military Aid to the Civil Community (MACA)

2.3.8 Valuable lessons and information will be yielded that can then be used to strengthen the nation's ability in responding to a national scale flood emergency.

Valuable lessons were learned during the preparation for the exercise that have already strengthened the nation's ability to respond to a national scale flood emergency. In addition, the Environment Agency and its partners will yield further benefits by implementing the recommendations in this Report.

2.3.9 Partners' Specific Success Criteria.

In addition to the exercise success criteria, partners also defined success criteria pertinent to their own organisation. The Partners' own success criteria and their accomplishment are given in the individual Lessons Identified Reports, which may be viewed on the Environment Agency's website.

up to a one in 1,000 year tidal flood event

- 3.1 Type
- 3.2 Geography
- 3.3 Scenario
- 3.4 Control post structure
- 3.5 Exercise planning and implementation
- 3.6 Exercise value



Day one: Control post exercise



Day two: Table-top exercise



Day three: A national facilitated discussion

3.1 Type

3.1.1 Exercise Triton 04 was a combined ‘control post’ and ‘table top’ exercise held over three days.

Day one format (16 June 2004)

3.1.2 On the first day over 1,000 exercise players and directing staff were faced with a realistic scenario of extensive flooding happening during that day. This was achieved by a ‘control post’ exercise simulating the real time response over six hours on the first day of the flood (fictional date of 14 September). Thirty-five control posts were established and operating at the start of the exercise.

Day two format (17 June 2004)

3.1.3 This was a ‘table-top’ exercise looking mainly at the strategic aspects of the recovery from the major flood scenario depicted on the first day of the exercise. Strategic Multi-Agency teams at 33 locations were asked to produce strategic recovery plans for the communities affected and the services that they provide, with particular consideration to their plans, capacities and resources. There was limited live communication and interaction between the teams.

3.1.4 The day was split into two sessions, as follows:

Morning session:

3.1.5 Working recovery group meeting one day after the flood (fictional date of 15 September) to develop short-term recovery plans for the first month after the flood. Completed Reports were distributed to other relevant recovery teams.

Afternoon session:

3.1.6 Working recovery group meeting one month after the flood (fictional date of 15 October) to develop long-term recovery plans from the first month to the first year after the flood and with reference to short-term recovery plans provided by other relevant recovery teams.

Day three format (16 July 2004).

3.1.7 A national facilitated discussion was held on 16 July 2004 for central government departments and WAG. The objective of the day three was to identify key priorities and areas that need to be addressed at regional and national levels in providing an integrated strategic recovery from a national flooding incident.

3.2 Geography

3.2.1 The national scenario for Exercise Triton 04 was a combination of an East Coast tidal event, affecting the Thames estuary and the coastline from south of the Humber to Southampton Water and a West Coast tidal event affecting the coasts of north and south Wales. Local participation in the exercise was at Regional and County level.

3.3 Scenario

3.3.1 The national scenario was up to a one in 1,000 year tidal flood event, caused by an east coast surge travelling from north to south with a second surge travelling from the south-west and affecting the south coast and Wales.

3.3.2 The resulting combination of high spring tides, storm surge, winds and wave action resulted in many flood defences being overtopped and/or breached.

3.3.3 The timing of the surge and resulting flooding was based on typical tide cycle and surge data for such an event. However it was necessary to advance some of the timings to enable exercise play to be condensed into six hours on the first day.

3.4 Control post structure

Numbers and locations

3.4.1 Thirty-five control posts participated in the first day of the exercise representing GORs, Gold controls, central government departments, WAG and the Environment Agency. The names and locations of the control posts are shown in Figure 1.

Regional co-ordination

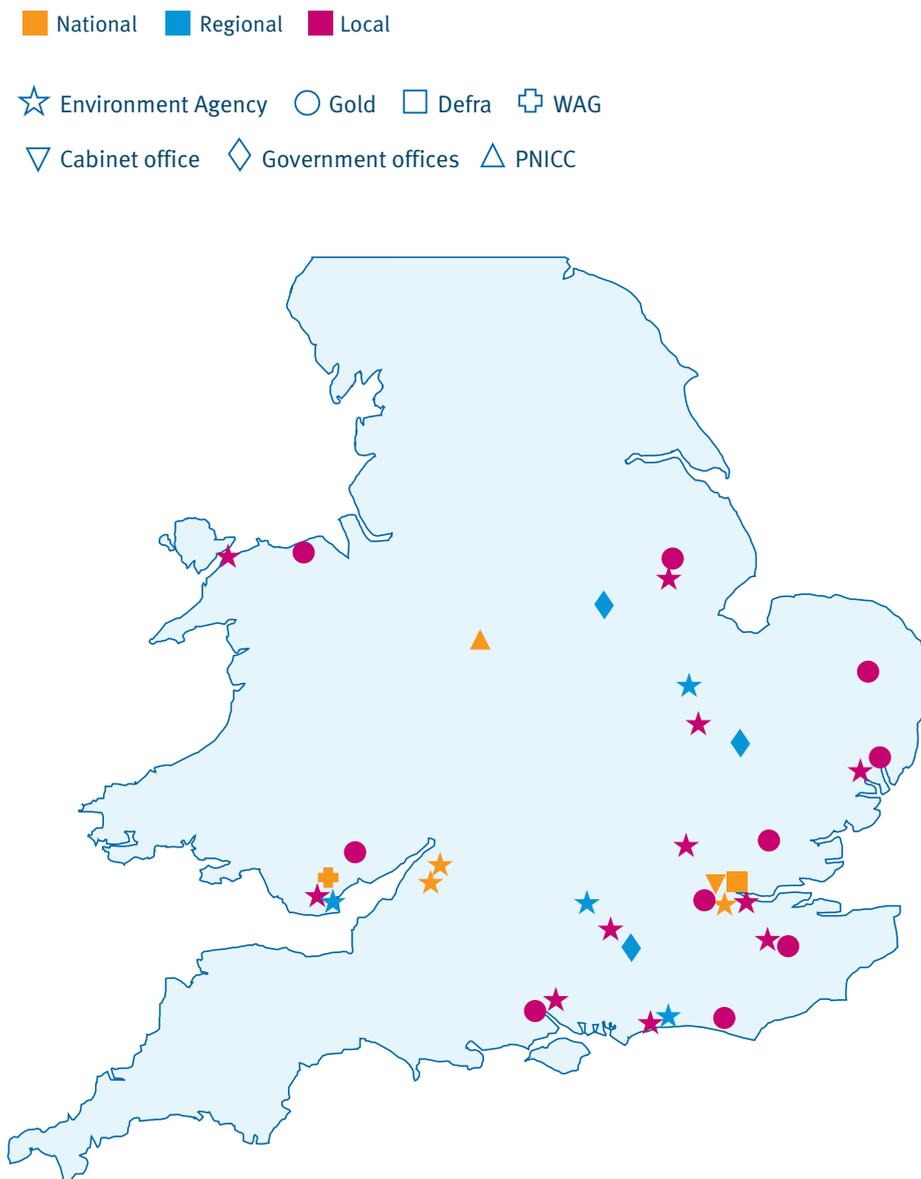
3.4.2 The exercise assumed that the roles and responsibilities proposed in the forthcoming Civil Contingencies Act were in force.

3.4.3 A Director or deputy of each GOR took the role of the Regional Nominated Co-ordinator (RNC). The role of the RNC is to co-ordinate the regional response through the Gold controls and to report to central government on priorities and resource needs.

3.4.4 The RNC chaired, and was supported by, a multi-agency Regional Civil Contingencies Committee (RCCC).

3.4.5 A Government Liaison Officer from each GOR attended Gold control posts within their Region.

Figure 1: Control post locations and types



Strategic (Gold) controls

3.4.6 Gold control posts were based on County boundaries in England and Police Force boundaries in Wales and were attended by senior representatives of local organisations. Representatives from the Government News Network (GNN) were also in attendance to provide media and public relationships assistance and advice.

3.4.7 The role of Gold controls is to co-ordinate the local information and emergency response. Tactical (Silver) control posts were not set up in the exercise due to the magnitude of resources required; however ‘simulated Silvers’ were manned by members of the local scenario planning groups.

3.4.8 On day two, working recovery groups were formed and were generally chaired by local authority representatives.

Environment Agency

3.4.9 The Environment Agency opened control posts at Area, Region and National offices. Environment Agency Wales (EA Wales), Anglian, Southern and Thames Regions all participated in the exercise.

3.4.10 Area Incident Rooms provided flood updates and managed the operational response but did not issue flood warnings, which were assumed to be in force at the start of the exercise.

3.4.11 Regional Incident Rooms co-ordinated the Regional response and situation reporting. Forecast water level information was provided during the exercise and the Regions were requested to provide predictions of flood extent, timing and depth.

3.4.12 The Environment Agency National Incident Room co-ordinated requests for inter-regional aid and produced the National Situation Report and Outlook Statement. A strategic crisis management team was established to provide strategic direction and communicate national Environment Agency actions, particularly to Defra.

Defra

3.4.13 Defra's role is to provide other Government Departments and Ministers with advice about the likelihood of flooding and an assessment of scale, location, timing and extent; the Flood Management Division Operations Room was activated during the exercise. In addition, Defra activated the Strategic Steering Committee to co-ordinate the overall Defra response and provided representation to a simulation of the official level Civil Contingencies Committee (CCC(O)), which co-ordinated the central government response.

WAG

3.4.14 The WAG Emergency Co-ordination Centre was activated during the exercise to enable the WAG to co-ordinate the response in Wales through the Gold controls and to report to central government on priorities and resource needs.

Police National Information and Co-ordination Centre (PNICC)

3.4.15 PNICC is opened during major incidents to co-ordinate the provision of mutual aid between police forces and provide central government and police forces with information from a national perspective.

3.4.16 PNICC operated from its fallback centre in Staffordshire during Exercise Triton 04.

Cabinet Office

3.4.17 The Cabinet Office Civil Contingencies Secretariat (CCS) may be called upon to facilitate cross government co-ordination during an event of this magnitude. In order to fulfil this important responsibility the Cabinet Office provides secretariat to meetings of the Civil Contingency Committee (CCC), which meets in order to determine national priorities and actions.

3.4.18 During the exercise CCS gathered and collated information from across government in order to present accurate and up to date briefings to simulated meetings of the official level CCC (CCC(O)).

3.4.19 The News Co-ordination Centre (NCC) provides briefings to Ministers and co-ordinates the Government's response to the media.

Participating Organisations

3.4.20 The following organisations were represented in Exercise Triton 04:

- Environment Agency
- Police
- Fire Service
- Ambulance Service
- Central Government Departments
- Local Authorities
- Health Authorities
- Military
- Coastguard
- Utilities (power, water, gas, communications)
- Government News Network
- English Nature
- Internal Drainage Boards

3.5 Exercise planning and implementation

3.5.1 The exercise was planned over one year with a project structure consisting of a National Project Board, a National Partnership Team, a National Project Team, National Scenario Planning Team and local Scenario Planning Sub-Groups.

National Project Board

3.5.2 The National Project Board consisted of representatives from the Environment Agency (Chair), Defra, WAG, Cabinet Office, Local Government Association, Welsh Local Government Association, Regional Co-ordination Unit and the Association of Chief Police Officers (representing the Emergency Services).

3.5.3 The Project Board approved the Project Scope in August 2003, which set out the national aims and success criteria for the exercise and provided a framework to allow the detailed planning to commence.

National Partnership Team

3.5.4 The National Partnership Team consisted of senior representatives from the partners who identified their organisations' national objectives and success criteria.

The National Project Team

3.5.5 The National Project Team was responsible for the day to day management of the project and consisted of Environment Agency staff, consultants and the Cabinet Office Emergency Planning College.

Scenario Planning Teams

3.5.6 The scenario planning teams engaged at national and local levels to ensure that the exercise scenario was ‘real’ in every detail and enabled effective exercising.

3.5.7 The Scenario Planning Sub-Groups (one in each Gold control area) typically consisted of representatives from the Police, Fire Service, Ambulance Service, Environment Agency, Local Authorities, Ministry of Defence, Maritime and Coastguard Agency and utility companies.

Exercise scope

Forthcoming Civil Contingencies Act

3.5.8 During April 2004, it was recognised by the Project Board that Exercise Triton 04 provided a good opportunity to exercise elements of the forthcoming Civil Contingencies Act. The exercise was run as if the proposed roles identified in the forthcoming Act were in place, including the RNC. Use of appropriate emergency powers associated with a national scale-flooding event were also included as if in place.

It should now be noted that the Civil Contingencies Bill gained Royal Assent on 18 November 2004 and henceforth should be known as the Civil Contingencies Act 2004.

Media

3.5.9 The aim of the media play during the exercise was to test the handling and co-ordination of media messages but without live media simulation (i.e. no media interviews, press conferences etc.).

Aspects not included

3.5.10 As a control post and table top exercise only, the following elements of emergency response were not tested during the exercise:

- Met Office Storm Tide Forecasting and Severe Weather Warning Service.
- Environment Agency’s flood forecasting and warning service.
- Public liaison and response.
- On-site operations including field communications and health and safety.

3.6 Exercise value

3.6.1 The achievement of the exercise’s success criteria has delivered many benefits. Overall the exercise has:

- a) Improved national resilience as a result of partner organisations preparing and participating in the three days.
- b) Prompted partner organisations to think more strategically about their role; accordingly they are already making operational changes or reinforcing their systems.
- c) Provided a catalyst for further integration/changes across organisations through the implementation of the recommendations in this report.

3.6.2 Specific benefits from the exercise include:

- a) Reassurance that improvements to emergency planning over recent years have strengthened our capability to respond and increased the overall resilience of the UK to a national flood event incident.
- b) Delivery of the Defra and WAG High Level Target Number 3, in conducting a national flooding exercise.
- c) Update of procedures. In particular, the Defra Lead Department Plan has already been revised and a new Lead Department Plan for Wales has been drafted.
- d) Exercising aspects of the forthcoming Civil Contingencies Act.
- e) Testing of communication arrangements and procedures in the 35 control posts in the exercise.
- f) Development of local and national flooding scenarios that can be reused for future training and exercises.
- g) Development of various tools and in particular web technology in the planning and controlling of exercise, which can be used in the future.
- h) Identification of lessons at all levels which will improve contingency planning and response.
- i) Important development opportunity for staff involved so they will be able to deal better with a real event.
- j) Large-scale test of Regional Resilience structures for the first time.

how those taking part saw the exercise

- 4.1 Feedback overview
- 4.2 Feedback sources
- 4.3 Statistical overview

4.1 Feedback overview

4.1.1 In preparing for and participating in the exercise, the Environment Agency and partners produced a large amount of information and reports necessary to manage such an exercise. This information is typical of that required in the 'real' situation to provide effective and integrated flood event management. This information together with specific reporting forms comprises the exercise feedback.

4.1.2 Figure 2 (on page 19) shows the feedback sources, data collection and reporting processes adopted to identify the lessons from the exercise and produce this overview report.

4.2 Feedback sources

4.2.1 Feedback from the exercise was collected from three main sources; Structured Debriefing, Short Debrief Forms and Participant Feedback Forms. In addition notes from Exercise Directors, Recorders and Observers were also considered.

Structured Debriefing

4.2.2 Structured Debriefs were undertaken at most control posts at the end of both day one and day two of the exercise. The Centre for Structured Debriefing managed the debriefing and all Debriefers were trained and accredited in Structured Debriefing. With the time available, a maximum of 20 'key' players from each control post were able to attend a Structured Debrief; the remainder completed Short Debrief Forms and Participant Feedback Forms.

Short Debrief Forms and Participant Feedback Forms

4.2.3 In the control posts where formalised structured debriefing was not undertaken, each participant was asked to complete a Short Debrief Form and Participant Feedback Form. The Feedback Form was accessible via the website for ten days following the exercise to allow reflective thoughts to be recorded.

Data collection and sharing

4.2.4 Data from all the feedback sources was transferred to a spreadsheet and a database, including other submissions from partners and Strategic Recovery Plans compiled during the recovery phase of the exercise. The data was then made available to all report authors.

Partner reports

4.2.5 The partner reports serve two purposes:

1. To identify lessons from the Environment Agency's and partner's perspective to improve multi-agency working by contributing to the Lessons Identified Overview Report.
2. To identify specific Environment Agency and partner lessons from which improvements could be achieved within organisations. Many of these lessons were of an operational or tactical nature, having tested operational procedures during the exercise.

4.2.6 The partner reports in full can be viewed on the Environment Agency's website and have a common structure which includes:

- Success Criteria and their accomplishment
- Multi-agency/organisation and Partnership Working
- Effectiveness of Plans and Procedures

- Communications
- Resources
- Lessons Learned and Recommendations for Improvements.

4.3 Statistical overview

4.3.1 The responses from the debriefs and participant feedback forms have been categorised under the headings derived from the exercise success criteria.

4.3.2 It is important to recognise that this statistical breakdown does not necessarily reflect the relative importance of the successes or difficulties recorded, just the frequency with which they were noted. For example, comments regarding incident room equipment and facilities attracted many comments within the resource category but may be strategically less important than the smaller number of comments recorded regarding the forthcoming Civil Contingencies Act.

4.3.3 The variation in feedback from all sources is shown in Figure 3 (on page 18).

4.3.4 The most successful aspects of the response are shown in Figure 4 (on page 18) split between local (Gold controls and Environment Agency Areas), regional (GORs and Environment Agency Regions) and national (Central Government Departments, WAG and National Environment Agency) responses.

4.3.5 The main difficulties experienced in the response are shown in Figure 5 (on page 18), again split between the local, regional and national responses.

Section 4 Participant feedback

Figure 3 Feedback from all sources

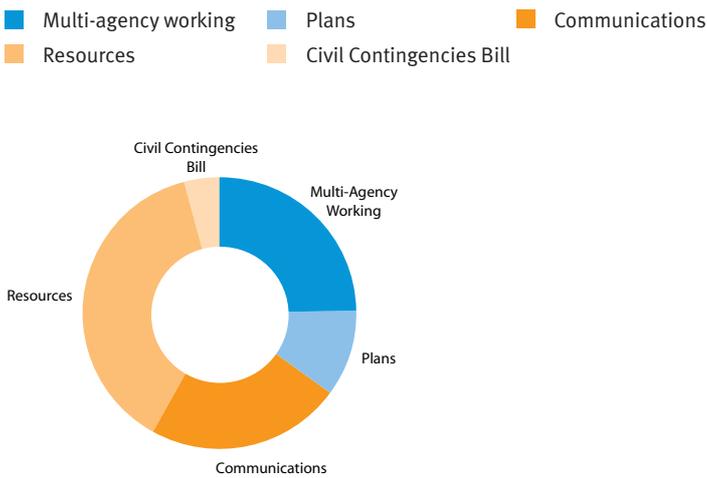


Figure 4 Most successful aspects

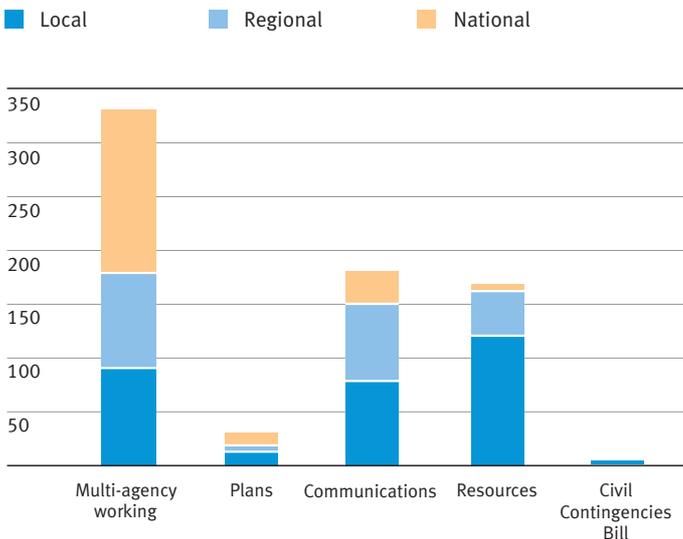
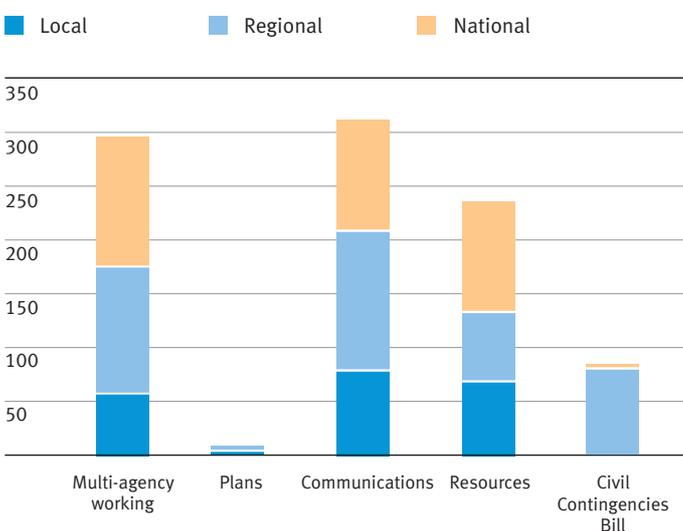


Figure 5 Main difficulties experienced



4.3.6 Multi-agency working received the most responses and, although significant difficulties were experienced, there were clearly also very many successful aspects at all levels. Issues identified within the category include understanding of roles and responsibilities, training and exercises, information sharing and feedback between organisations, and Environment Agency flood forecasts.

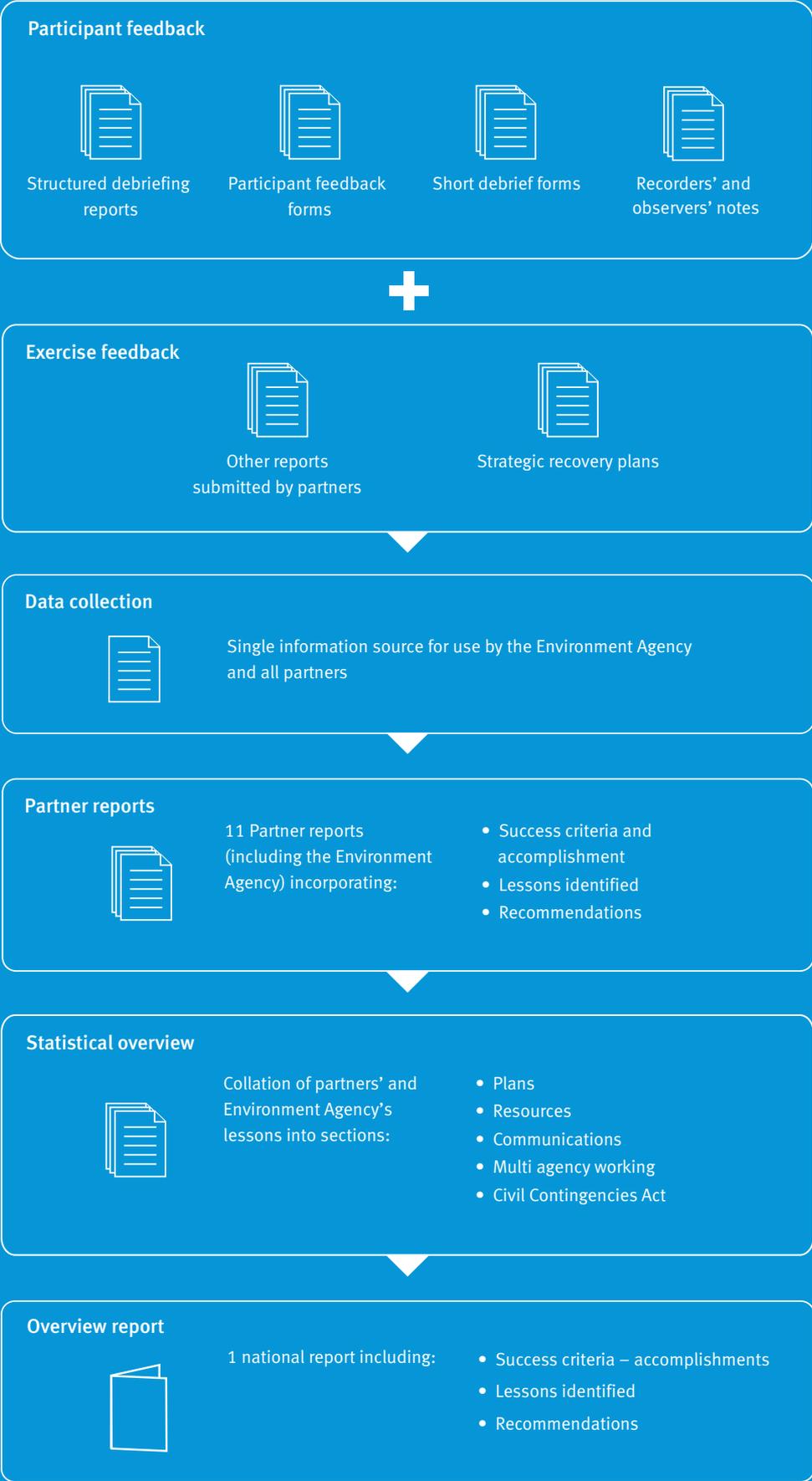
4.3.7 Communications received approximately 20 per cent of all responses, with a significant proportion highlighting it as a successful aspect. Nevertheless, communications was the main difficulty identified, particularly amongst regional and national participants. Lessons are identified regarding reporting formats and timings, communication equipment and media co-ordination.

4.3.8 Resources attracted around a third of all responses and were the most successful aspect identified at the local level. Many, however, recognised resources as a difficulty, particularly at national level. A great many of the responses related to incident room resources and equipment but there are also lessons identified regarding mutual aid procedures and priorities, as well the availability of specialist equipment.

4.3.9 Plans attracted relatively few responses, which probably reflects that the procedures generally worked well at all levels. Lessons were however still identified with respect to participants' knowledge of plans, the need for recovery planning and revision of existing plans to take account of the forthcoming Civil Contingencies Act.

The exercise highlighted some strategic concerns regarding the forthcoming Civil Contingencies Act, particularly at the regional level. These relate to the role of the GORs and the use of emergency powers.

Figure 2 Participant feedback and analysis – flow diagram



learning from the exercise

- 5.1 Introduction
- 5.2 Multi-agency working
- 5.3 Effectiveness of emergency plans and procedures
- 5.4 Communications
- 5.5 Resources
- 5.6 Civil Contingencies Act

5.1 Introduction

5.1.1 The lessons identified have been categorised under the following headings derived from the exercise success criteria:

- Multi-agency working
- Effectiveness of plans and procedures
- Communications
- Resources
- Forthcoming Civil Contingencies Act

5.1.2 The lessons identified are shown in bold type followed by associated recommendation(s) in blue.

5.2 Multi-agency working

Roles and responsibilities

5.2.1 For many of the participants one of the most successful aspects of the exercise was the willingness and enthusiasm of partners to work together in responding to the scenario.

5.2.2 There have been significant benefits for all in terms of multi-agency understanding and development of partnership working as a result of the exercise.

5.2.3 The event provided the opportunity for participating organisations to test the operational effectiveness of existing plans and the competency of incident managers.

5.2.4 Many highlighted the need for both individual and multi-agency training in dealing with events of this scale, this applied particularly to individual and organisational roles, responsibilities and relationships within and between control posts.

5.2.5 It was also recognised that emergency response centres need to be operated on a regular basis to make sure staff remain familiar with them and to encourage continuous improvement of all aspects of their operation.

5.2.6 Similar exercises and further training would strengthen national incident management arrangements and ensure that there is a competent pool of resources capable of undertaking key roles.

Recommendations

5.2.7 Those skills and competencies critical to the successful operation of the centres should be identified and training/development programmes arranged to ensure that appropriate skills and competencies (e.g. incident managers) are available when required.

5.2.8 In light of the above, a reassessment should be undertaken of Defra's and WAG's future programme of flood emergency exercises alongside the Environment Agency's own programme.

Flood extent forecasting

5.2.9 The exercise demonstrated that all are reliant on the ability of the Environment Agency to provide accurate and timely forecasts of the likely flood extent in order to plan the response, such as the need for evacuation or deployment of resources.

5.2.10 The partners require knowledge of the likely flood extent, its timing and what is at risk in order to provide an effective response.

5.2.11 Current Environment Agency forecasting techniques did successfully predict the general locations and severity of the flood during the exercise i.e. whether the damage will be minor, moderate or severe.

5.2.12 When a breach occurred as part of the exercise scenario however, the Environment Agency was unable to accurately and quickly forecast the extent to which floodwaters would pass into the area.

5.2.13 The Environment Agency needs to be able to produce timely extent and impact forecasts for tidal flooding, and particularly the impact of failure or overtopping of a defence or tidal asset.

Recommendation

5.2.14 The Environment Agency should review how it applies its existing forecasting technology, to ensure the most is made of what is already available. Future flood forecasting programmes should look at the provision of flood timing, extent and impact data, including forecasts due to the failure or potential overtopping of a defence or tidal asset, perhaps through scenario planning.

Information sharing

5.2.15 An important aspect of multi-agency working is the ability of all organisations to share information in order that each partner has the facts necessary to manage its own response.

5.2.16 The links between Defra, WAG and the Environment Agency are particularly important during a flood incident and were considered to have generally worked well during the exercise.

5.2.17 However, these links could be strengthened and the requirement to share information and briefing responses more closely with other Divisions of Defra and the Environment Agency was identified. Options to achieve this through a joint briefing group, inclusion of an Environment Agency representative in the Defra Operations Room or a Joint Operations Room in London need to be explored jointly. The presence of Defra and/or Environment Agency representatives in the Joint Assessment Cell will also be pursued.

Recommendation

5.2.18 Establish membership of a Defra-wide Strategic Co-ordinating Committee, with all relevant directorates represented and including representation from the Environment Agency. Defra and the Environment Agency should consider if attendance of Liaison Officers in the Defra Operations Room and the Cabinet Office is the best option to strengthen information sharing and briefing. This would also mirror successful arrangements in place at Gold controls, WAG and the RCCCs.

5.2.19 If agreed, revise plans and procedures accordingly and investigate holding joint training events.

5.2.20 One of the most effective methods of communication between all organisations within control posts was considered to be the use of verbal team briefings.

5.2.21 The success of such briefing lies largely in the competencies of those managing and delivering the process and improvements could be achieved by developing general communication competencies.

Recommendation

5.2.22 Provide appropriate training/guidance in the competencies required to deliver effective control centre briefings.

5.2.23 If strategic groups such as CCC(O) are to make timely and effective decisions, information and data management processes must be streamlined.

5.2.24 On the first day of the exercise however, the Environment Agency National Situation Report used to inform the Cabinet Office at 1230hrs and subsequent CCC(O) meeting at 1330hrs, was based on Environment Agency Area Situation Reports produced at 0900hrs, some four to five hours earlier. The conditions depicted in the scenario had deteriorated considerably over the intervening period.

5.2.25 The ability of all organisations to assimilate information quickly enough to inform the necessary decisions is questionable.

5.2.26 The use of the Internet, both in the exercise planning and delivery of exercise injects, proved the potential of the medium for fast and effective communications between multiple agencies.

Recommendation

5.2.27 A strategic review of systems is required to support operational activities and promote partnership working and efficient delivery of latest information. The review should include the potential of the Environment Agency's proposed 'Event Management System'.

5.2.28 Explore the potential of an Internet based 'Decision Support' programme (or secure web site) to strengthen the individual and joint

ability of organisations to eliminate delays and assimilate information. Including, for example:

- Greater use of visual displays.
- Message boards
- Electronic mapping systems.
- Global email systems
- Video links between centres

Conservation interests

5.2.29 Engagement by professional partners in the exercise was good, however there would appear to be no process in place to engage with national nature and conservation bodies, such as English Nature, English Heritage and the Countryside Council for Wales.

5.2.30 Engagement with English Nature, English Heritage and the Countryside Council for Wales is essential to ensure that environmental and conservation interests are fully considered.

5.2.31 For example, questions were raised during day two of the exercise regarding what relative priority should be assigned to the 'repair' of damaged habitats and/or heritage sites of national or even international importance, compared to the repair of other infrastructure.

Recommendation:

5.2.32 The Environment Agency, Defra and WAG should seek to establish what, if any, procedural engagement with English Nature, English Heritage and the Countryside Council for Wales is necessary during crises of this nature, and what priorities should be applied during and after the event.

5.3 Effectiveness of emergency plans and procedures

Emergency plans

5.3.1 In a national flood emergency there are two key plans that form the basis for central government's and the Welsh Assembly's response to the event. They are; in England, the Defra Lead Department Plan; and in Wales, the Assembly's Environment Division Lead Department Plan.

5.3.2 These Lead Department Plans set out; communications links between the centre and local responders via the GORs in England and the Gold controls in Wales; and Defra's and WAG's responsibilities both before and during an event.

5.3.3 Both the Defra and WAG Lead Department Plans were put into practice throughout the exercise and were found to be appropriate with only minor improvements recommended.

5.3.4 The exercise start state briefing was based on the assumption that the control arrangements contained in the Defra and WAG Lead Department Plans would have been established in a timely and effective way. If this assumption were wrong, the subsequent response to the exercise scenario would have been considerably different.

5.3.5 The control arrangements in the Lead Department Plans should be subject to further testing and confirmation, perhaps in future flood exercises.

Recommendation

5.3.6 Use future exercises to test the assumption that the 'control arrangements' in the WAG and Defra

Lead Department Plans would have been established in a timely and effective way.

5.3.7 There needs to be clarity amongst potential participants of the role of the WAG's Emergency Co-ordination Centre and the Wales Resilience Forum, as well as recognition of their own contribution to the information and advice that supports decision making at the centre.

Recommendation

5.3.8 Consideration should be given to the development of a more detailed plan for the operation of the WAG Emergency Co-ordination Centre, which clarifies its role in the command and control structure and the role of its participants within the centre.

5.3.9 The local response organisations all have their own specific emergency plans and procedures. These have been developed over several years and revised and updated with experience of real incidents and other exercises to continually improve and strengthen responses to flooding incidents.

5.3.10 The local plans of organisations involved in Exercise Triton 04 worked well with few amendments recommended.

5.3.11 However, some typical issues identified relate to:

- Clarity of roles.
- Post event impacts of flooding.
- Availability of resources.
- Partnership working between organisations and in particular, the need for greater involvement of the operators of lowland internal drainage systems (such as Internal Drainage Boards) at all levels of incident control.

5.3.12 It was noted that in organisations where good plans and procedures exist some personnel had limited knowledge of the plans and procedures or were unsure of their location.

Recommendation

5.3.13 The emergency plans of all organisations in respect to flooding should be reviewed, refined and developed in light of the lessons identified in Exercise Triton 04.

5.3.14 Organisations need to make personnel aware of their current plans and procedures with specific time allocated for this purpose.

5.3.15 At present many plans do not reflect the role of the GORs in England and there is not a full understanding of the role played by the Government Liaison Officer.

Recommendation

5.3.16 The role of the GORs should be consistent with plans at all levels and within all organisations.

5.3.17 The exercise covered a number of areas where the response to an event of that scale could be better prepared in advance.

5.3.18 In particular, the exercise exposed the need for the Environment Agency to consider its advice on evacuation – when and where it might be appropriate and in what scale of event.

5.3.19 Improvements to risk information over the next few years will help target the needs required to reduce the risk to life in such an extreme event and will assist local authorities and the police to identify evacuation routes and temporary accommodation etc. in local contingency plans.

5.3.20 Another issue considered during the exercise was whether existing systems are adequate for the large-scale disposal of carcasses of drowned livestock.

Recommendation

5.3.21 Under the Capabilities Programme led by the Cabinet Office:

- Explore the need for the Environment Agency to strengthen its advice on evacuation i.e. when and where it might be appropriate and in what scale of event.
- Determine whether existing systems are adequate for the large-scale disposal of carcasses of drowned livestock and explore further with other departments and agencies.

5.3.22 The widespread flooding and associated power losses depicted in the Triton scenario would have had a profound impact on offices and depots of many of the response organisations.

5.3.23 This is particularly relevant in view of the forthcoming Civil Contingencies Act and the requirement for Category one responders to have robust business continuity plans with respect to their duties during an emergency.

Recommendation

5.3.24 The business continuity plans of Category one responders should recognise potential flood risks and associated impacts.

Recovery plans

5.3.25 Days two and three of the exercise looked at the recovery from the flooding and revealed inadequate recovery planning at all levels for such an incident.

5.3.26 In particular it was noted that the responsibility for the lead role was a matter of some debate at all levels.

5.3.27 The exercise highlighted that during the recovery phase there would be many issues that cut across different Government Department responsibilities and this would require on-going ministerial lead.

5.3.28 Throughout the exercise, including the recovery phase, the Cabinet Office co-ordinated the central government response. The issue arose however, as to whether Defra/Flood Management Division was best placed to be the Lead Department for recovery phase issues as these were outside Defra's area of responsibility, for example, reinstatement of infrastructure (roads, power supplies, housing) and health care etc. The same could be said for the Environment Division of WAG.

5.3.29 Similar leadership debates also occurred at Gold and Regional controls during day two of the exercise, emphasising the need for central guidance.

Recommendation

5.3.30 Further consideration should be given regarding the Lead Government Department responsible for the recovery phase of a major flooding incident, as well as the provision of secretariat support to any cross departmental group. Any revision of guidance should be reflected in future updates to the Cabinet Offices Lead Government Department guidance document.

5.3.31 Whilst many operational issues can only be addressed in light of the prevailing circumstances, it was considered necessary to identify in advance which services were essential to the successful operation of others during the recovery stage e.g. electricity supplies. This would serve to give a strategic framework to the operational direction of the recovery at central, regional and local levels. In addition, private companies in both the insurance and utilities industries would be significantly involved in the aftermath of such an event with widespread damage to property and infrastructure to manage.

5.3.32 A need was identified to manage the prioritisation of remedial work after a flood event.

5.3.33 One particular issue, for example, identified in this context was that of mental health psychosocial issues arising from mass fatality incidents. Another was definition of the role of the Government Decontamination and Recovery Service.

Recommendation

5.3.34 Consideration should be given to the provision of further guidance on flooding issues to appropriate departments and agencies. This should include awareness of appropriate prevention and/or mitigation strategies for the economic recovery issues arising from a major flood event, as well as visibility of the prioritisation of resources necessary during the recovery phase.

5.4 Communications

Partner links

5.4.1 Communication is critical to effective partnership working. An efficient and effective communication system, coupled with an appropriate information management system, is therefore key to delivering a timely and appropriate emergency response.

5.4.2 Partner links are maintained during an incident via several different methods, from the production and distribution of formal situation reports at defined intervals to ad-hoc briefing of teams and individuals within a single control post.

5.4.3 Situation reports between the different control posts are the most formal means of communication and information sharing. For example, the Environment Agency submits a twice daily National situation report to Defra/WAG, and the GORs submit a Regional Situation Report to Defra and the CCS.

5.4.4 The process for collation and dissemination of national and regional reports was generally found to be effective.

5.4.5 The GORs act as a collation point for information from all sources and share the overall view of the incident with all parties. To be effective the GORs work with partners around the region, with other regions and with central government.

5.4.6 A key issue relates to how GOR reports were prepared and distributed and how the RCCC is briefed. The existing arrangements were broadly correct, but further work is required to make the process more effective and ensure that it is adequately resourced.

5.4.7 Links between Defra and the GORs were on the whole satisfactory, although reports from GORs varied in quality and quantity of information provided. The same can be said of the links between the WAG Emergency Co-ordination Centre and the Welsh Gold controls.

5.4.8 A need was identified for the Defra and WAG Lead Department Plans to provide a format for the GOR and Welsh Gold reports.

5.4.9 The exercise demonstrated the significant lag time between local production of information and national receipt through the communications chain. This time lag should be minimised to ensure effective national decisions.

5.4.10 A need was also identified to co-ordinate the timing of reports to Defra from the GORs and the Environment Agency. The need for flexibility in the reporting schedule may be required however, as timing will to some extent depend on the demands of Ministers' and CCC(O) meetings as well as providing a framework in which local responders can prepare their reports.

Recommendation

5.4.11 The Defra and WAG Lead Department Plans should include a standard report format for the GORs/Welsh Golds and specify a provisional reporting schedule dependant upon the predicted severity of the event.

5.4.12 Information flows to the national level via the GORs need to be re-examined in terms of timing of reports, speed and method of communication. The role of the Regional Co-ordination Unit/Office of the Deputy Prime Minister in a crisis

could be expanded to provide consistency of requests and screen out inappropriate requests to the Centre. The Regional Co-ordination Unit could discharge this role within the CCS situation cell.

5.4.13 Generic arrangements for communicating in an emergency between local responders, regional structures, Lead Government Departments and the central response machinery would benefit from further clarification.

5.4.14 Defra's roles and responsibilities cover a range of issues, for example water supply, animal welfare, assistance to farmers etc. In advance of events, Defra and WAG have to consider the issues that are likely to arise for briefings to Ministers and for media responses.

5.4.15 Defra and WAG identified a need for templates to be used for core briefings to Ministers and media responses. Administrative support would be required for efficient additions to the templates, based on assembling information from various sources.

Recommendation

5.4.16 Defra and WAG should design templates and produce briefs, for example on responsibilities, in advance of events, for briefing Ministers and for media responses. Appropriate administrative support required in the Defra operations room also needs to be identified. The Defra and WAG Lead Department Plans should be revised accordingly.

5.4.17 The Environment Agency's National Situation Report is used to inform decisions by a number of strategic national teams both within the Environment Agency and at

central government. In addition, the Environment Agency also issues a National Outlook Statement to Defra and WAG.

5.4.18 Production of the National Situation Report was made difficult due to late submission and variability of format and quality of Regional Situation Reports. Those producing and receiving situation reports need to understand the type of information required to see the ‘big picture’, for example identification of hot spots, trends and changing situations.

5.4.19 It was considered essential for the content of the National Outlook Statement to be relevant, concise and accurate.

Recommendation

5.4.20 Review Environment Agency National Situation Reporting arrangements to identify good practice, and revise procedures.

5.4.21 Review the content of the National Outlook Statement with Defra and WAG.

5.4.22 Provide refresher training for Environment Agency staff producing situation reports and the National Outlook Statement.

Communications equipment

5.4.23 A key feature of the Triton scenario was widespread loss and disruption of power supplies as a result of flooded power generation and supply infrastructure. In Lincolnshire for example, the local electricity supply company estimated that it would take six to nine months to fully restore the high voltage power supply network. As all communication systems especially mobile telephones rely on electric power, communications to tactical and

operational units would have been extremely difficult and communications between strategic control posts may also have been disrupted.

5.4.24 There was heavy reliance on mobile phones during the exercise and it is foreseeable that in an event of this magnitude mobile communications would be either lost or the system so overloaded that delays would seriously compromise incident management. Furthermore, many Gold controls are established in locations where mobile phone signals are at best spasmodic.

5.4.25 While communications were sufficient to allow specific tasks to be undertaken, feedback suggested that a more effective response would have been possible had there been better communications links.

5.4.26 The communications between some of the control posts did not work well for a variety of reasons:

- Some locations were unsuitable for mobile phones.
- Insufficient landlines to accommodate voice, fax and data requirements.
- Incompatible computer links.
- Considerable delays in the delivery of emails caused by firewall protection systems.
- Handheld personal computers (Blackberrys) did not work.

5.4.27 The introduction of ‘Airwave’ has made liaison between the Armed Forces and the Police extremely resilient and its use could be extended to achieve communications compatibility across all the emergency services.

Recommendation

5.4.28 Control Room managers should review the provision of communication equipment and infrastructure to ensure that there is adequate voice, fax and data capability.

5.4.29 Control Room managers should review the need for and extent of screening to enable unfettered use of mobile phones.

5.4.30 Given the delays to email communications that occurred between organisations, all partners should seek to improve the performance of these systems.

5.4.31 Urgent consideration should be given to communications resilience at the National level, with specific reference to flooding events.

Media management and co-ordination

5.4.32 Replicating the intense media activity that would be associated with a flood event of the scale depicted in Triton is a massive undertaking. It was recognised that because of exercise limitations, the media arrangements were not fully tested, and were not as effective as they could be at some control posts. Nevertheless, the media play did serve to test the degree of co-operation and co-ordination within and between control posts.

5.4.33 The management of media is a key activity during a major flood event. Significant co-operation and co-ordination is required between all the organisations involved in order to deliver a consistent and unambiguous message that builds public confidence and aids the response effort.

5.4.34 The News Co-ordination Centre provides centralised media handling for all Government departments during national incidents.

5.4.35 Defra's links with NCC on briefings for ministers and media issues worked well during the exercise.

5.4.36 In Wales, the media response is co-ordinated by convening the Media Emergency Forum at the WAG Emergency Co-ordination Centre.

5.4.37 Given the time constraints there was little opportunity to arrange the Media Emergency Forum during the exercise and on reflection it was unlikely that communications officers from the primary responders would have been able to attend.

Recommendation

5.4.38 If the WAG Media Emergency Forum is to be a useful facility in any type of emergency then it must be established well in advance to allow time for communications officers to attend.

5.4.39 The response by WAG, Gwent and North Wales Golds to the media injects was considered a model of good practice. Their responses were completed on time, well co-ordinated and the messages consistent.

5.4.40 The same could not however, be said of many other Gold control posts which had the same information and opportunity to make it work.

5.4.41 During a multi-agency response of this scale and nature, co-ordination of the media response should involve liaison with all parties. This will ensure messages are consistent and dovetail.

5.4.42 For example, the press team in Kent worked well together with the GNN representative nominated as the co-ordinator of media activity, with the Police, Fire and Council press officers assisting and advising.

5.4.43 There was some confusion as to the make up of the media cells at Gold controls with Category one and two responders often omitted from the Police media rooms.

5.4.44 The Environment Agency has a critical role to inform the public during flood incidents. It was felt however that waiting for media communications to go through Gold media cells creates an unacceptable delay in getting essential information out in the public domain which could have a serious negative impact on the response and the Environment Agency's reputation.

5.4.45 One of the roles of the media cells at Gold controls is to check and co-ordinate media releases during the response to the incident. Media cells may not however, have involved other media organisations' expertise to best advantage. In some cases, messages to the general public were not produced, or not quickly enough.

5.4.46 There is a lack of guidance on the protocol for consulting Gold media cells before releasing perishable information regarding the flooding situation.

5.4.47 GORs were uncertain of their role in managing the media response, whether it was one of support to the Gold controls and central government or one of active involvement and delivery. National guidance from the Cabinet Office would be welcome in this regard.

5.4.48 Some players were unaware of the roles of the GORs and consequently did not adequately consult with them, or the national offices of both the Environment Agency and Defra.

5.4.49 Although there was a perceived lack of information or guidance from the centre about media plans or messages it is accepted that this was the result of exercise artificiality.

5.4.50 Representatives of GNN were present at GOR and Gold controls to assist with the media response.

5.4.51 It was clear however, that GNN's role and the potential benefits of their involvement were not clearly understood.

Recommendation

5.4.52 There is a need to review media arrangements at national, regional and local level to ensure co-operation and co-ordination of the multi-agency response to the media and develop understanding of the requirements and roles of both the GORs and Category one and two responders.

5.4.53 It could be helpful to partnership working and speeding up of press releases in emergencies if partners agreed a joint media strategy long before a major incident arises. A generic document of this nature could be fine-tuned on the day to take into account local circumstances.

5.4.54 The role of GNN during an emergency needs to be clarified and promoted at regional and local level.

Media facilities

5.4.55 Adequate communications equipment and facilities are critical to the successful management of the media response. At Lincolnshire Gold for example, there is a specific media room set aside for media handling which included an ISDN line, dedicated phone line and desks.

5.4.56 At many locations media operations were hampered by inadequate facilities, communications and the lack of a central information management system.

Recommendation

5.4.57 Control Room managers should review the provision of communication equipment, infrastructure and accommodation available for media management to ensure that there is adequate room for effective multi-agency co-operation and sufficient voice, fax and data capability.

5.5 Resources

5.5.1 The scale of the exercise tested the availability of human resources and equipment, plant and materials that would be required in a multi-agency response to a national emergency.

5.5.2 Whilst there was no actual deployment of resources in the field, the adequacy of resources available and the effectiveness of resource deployment, prioritisation and sharing procedures were a constant consideration for the participants planning the response.

Resource availability and deployment

5.5.3 Given the scale of the scenario presented, it became evident that additional resources would have to be brought into the affected areas either through the mutual aid of neighbouring counties and regions and/or Military aid (MACA). **All parties showed a genuine commitment to co-operate and willingness to share resources with each other. The inadequacy of detailed information regarding the availability of resources, particularly at the Regional level, prevented effective sharing.**

Recommendation

5.5.4 Ensure information regarding resource availability is readily available in control posts during a flood emergency. This should include contact numbers, maps and plant availability (on a local, regional and national basis).

5.5.5 Consider the feasibility of providing and maintaining a central database of strategic resources for a flood emergency, perhaps on a dedicated web site or on a CD.

5.5.6 The flood scenario affected millions of hectares of lowland England and Wales, including areas of heavy industry, residential development, high quality agricultural land and sites of designated environmental interest, most within Internal Drainage Board (IDB) Districts.

5.5.7 The IDBs questioned the adequacy and availability of dedicated emergency support equipment such as pumps, generators and mobile radios, which would be needed in a national flood emergency of this magnitude.

5.5.8 The Military confirmed that they do not hold stocks of such equipment and this is also true of many local authorities.

Recommendation

5.5.9 A national review of adequacy and availability of dedicated emergency support equipment such as pumps, generators and mobile radios should be undertaken.

5.5.10 Consider the reinstatement of a strategic reserve of equipment.

5.5.11 The potential for the use of Military aid was quickly realised as the scenario unfolded, both during the initial response and recovery stages of the incident.

5.5.12 All control posts requested and utilised Military aid to a greater or lesser extent.

5.5.13 The Military's ability to provide expertise, manpower and equipment was seen as critical to the success of the joint response, both during the emergency and recovery stages of the exercise.

5.5.14 The exercise also highlighted the need for Other Government Departments to ask the right question of the Ministry of Defence when requesting MACA i.e. to pose the problem to the Military in terms of what they want to achieve, where and when, leaving the Military to identify the best assets for the task. It was not always clear however, at what level Military aid should be requested, co-ordinated or approved.

Recommendation

5.5.15 Issue guidance for MACA requests to specify the desired outcome, not a specific resource or capability.

Mutual aid

5.5.16 With multiple Golds operating and several GORs involved, (as was the case in the Triton scenario), national and regional priorities will need to be co-ordinated if ‘first come first served’ problems are to be avoided.

5.5.17 The resource priority applies to all types of mutual aid, for example;

- The relationship between Police National Information and Co-ordination Centre (PNICC) and the GORs regarding the control of Police resources.
- Inter-regional priority for power and energy re-supply and therefore the provision of resources to undertake that work.

5.5.18 The availability and responsibility for priority allocation of resources needs to be clarified, particularly at Regional and National levels.

5.5.19 It was recognised by central government participants that where the issue of mutual aid between local authorities arose it would be preferable for this to be arranged via co-operation at the Local and Regional level, rather than resorting to National level for direction. This would probably result in the swifter deployment of resources.

5.5.20 One exception may be however, where there is significant damage or threat to major COMAH (Control Of Major Accident Hazards) sites, and/or civil nuclear installations. In such cases there might be a requirement for central co-ordination of resources necessary to mitigate the lasting results of such damage. The Cabinet Office in conjunction with DTI could facilitate such co-ordination.

Recommendation

5.5.21 Need for clarification of the responsibility and process for priority allocation of resources at national and regional level.

Incident rooms

5.5.22 In the majority of cases, the exercise was run from the incident rooms that are used to manage real incidents of this magnitude and hence it was an effective test of those facilities and the equipment available in them.

5.5.23 Gold control centres are generally long established with well-tested facilities hosted by the Police. In contrast, the Defra operations room, WAG Emergency Co-ordination Centre and GORs are relatively new and untested; in fact, Triton was the first time that some of the GOR and National incident rooms have been tested.

5.5.24 A major function of the incident rooms used during Triton is to support the information gathering, communication and dissemination process.

5.5.25 Over two days of intense exercise activity and with larger than expected numbers of exercise players (more than 50 in some cases), the incident room facilities and equipment were generally found to be satisfactory but local lessons were identified with respect to house keeping and preparedness, typically;

- Line availability for telephone, fax and email/internet data.
- Space is at a premium, with some agencies seeking to bring large support teams for their Senior Liaison Officer.
- Lack of briefing room facilities and/or quiet rooms for report writing.

- Availability of supporting resources and information, such as maps, printers, computers and visual aids (e.g. electronic mapping systems).
- Variability of facilities provided in Gold controls limits the equipment that outside players can bring and use.

Recommendation

5.5.26 Incident Room managers should review the incident room facilities and equipment needs identified during Exercise Triton 04 and implement appropriate improvements.

5.5.27 Seek to make Gold control room facilities compatible with the equipment needs of all users.

Management resources

5.5.28 Exercise Triton 04 involved less than six hours of real time play at the peak of the flood. It was acknowledged that, although this was sufficient to achieve the exercise aims and success criteria, an incident of this scale would last several days with a recovery period of several months, if not years.

5.5.29 Feedback emphasised the importance of deploying appropriate staff as and when required. Determining what is appropriate requires clarity on roles and responsibilities ahead of the event. The right balance needs to be achieved between workload and resource, taking account of the potential event length, the limited resource available and the need for relief staff.

5.5.30 It is clear that 24/7 manning of a large-scale and protracted emergency will place considerable demands on the availability of appropriately trained personnel to manage the incident.

5.5.31 Whilst this is a universal concern, it is particularly true of potential members of the WAG Emergency Co-ordination Centre and RCCCs, who could also be required at Gold controls as well as in their own organisations.

5.5.32 At the WAG Emergency Co-ordination Centre a video conference with exercise players at UK national level was held and found to be effective.

5.5.33 The increased use of telephone/video conferencing, particularly for some RCCC and Gold group members, could help to manage the resource demands of the command and control structure.

Recommendation

5.5.34 Key incident responders should determine and maintain a competent pool of managers capable of undertaking strategic roles at local and regional levels during a protracted national emergency.

5.5.35 Consider the appropriate use of telephone/video conferencing for some strategic group members.

5.5.36 Many of those being asked to respond to the crisis also live in areas of potential risk, especially IDB personnel. During events of this nature their personal priorities would be tested.

5.5.37 It was recognised that some people would be expected to perform under severe stress, that health issues would need to be carefully monitored and managed.

5.5.38 The initial response and extended recovery period after the event would necessitate robust mutual support arrangements to be in place, particularly between the IDBs and the Environment Agency.

Recommendation

5.5.39 Consider the introduction of mutual support arrangements between IDBs and with the Environment Agency.

5.5.40 Ensure recovery plans consider the health issues of the people being asked to respond.

5.6 Civil Contingencies Act

5.6.1 The arrangements for national and local partnership working are well established through the Operational, Tactical and Strategic (Bronze, Silver, Gold) command and control structure. Exercise Triton 04 provided a valuable and timely rehearsal of the regional role and its liaison with central government as proposed in the Civil Contingencies Act. It enabled several multi-agency responders to take part in a RCCC and/or Gold at first hand and identified lessons regarding the role of the GORs and WAG, and the consideration, in extremis, of emergency powers.

5.6.2 Lessons Identified as a result of Exercise Triton 04 will serve to inform the preparation of guidance in respect of the Act, including the process for the formal request of emergency powers.

5.6.3 It should now be noted that the Civil Contingencies Bill gained Royal Assent on 18 November 2004 and henceforth should be known as the Civil Contingencies Act 2004.

5.6.4 Key Learning Points and recommendations included:

- The requirement for terms of reference for Government Offices in the Regions during civil emergencies.
- The need for clear guidance in relation to the appointment and role of Regional Nominated Co-ordinators, including exit strategies.
- The importance of clarifying appropriate procedures for requesting emergency powers, in accordance with the constraints within the Act.
- The need for the revision of plans and procedures across the board in order to take account of new guidance.

Section 6

Summary of lessons and recommendations

what improvements can be made

- 6.1 Introduction
- 6.2 Implementation of recommendations

6.1 Introduction

The following tables summarise the lessons identified and repeat the associated recommendations for improvement.

The majority of lessons are ‘strategic’ in nature; the need for inter-agency integration has emerged as a recurring theme.

6.2 Implementation of recommendations

Each organisation is responsible for the implementation of recommendations within their own individual Lessons Identified Reports that are relevant to them alone and/or ‘tactical’ in nature. The recommendations in this Report are both strategic and overarching in

nature and will require considerable cross Government co-operation to implement. Key partners have endorsed the recommendations contained in this report. It is now proposed that the implementation of these lessons will be taken forward by the partners and monitored by Defra and WAG, in partnership with other Departments, as appropriate.

Multi-agency working

Ref.	Summary lesson	Recommendation	Ref.
1. Roles and responsibilities			
5.2.2 5.2.4 5.2.5 5.2.20 5.2.21 5.2.30	a. Need to improve knowledge of roles, responsibilities and relationships, both within and between control posts.	i. Those skills and competencies critical to the successful operation of the centres should be identified and training/development programmes arranged to ensure that appropriate skills and competencies (e.g. incident managers) are available when required.	5.2.7
		ii. In light of the above, reassess Defra’s and WAG’s future programme of flood emergency exercises alongside the Environment Agency’s own programme.	5.2.8
		iii. Provide appropriate training/guidance in the competencies required to deliver effective control centre briefings.	5.2.22
		iv. The Environment Agency, Defra and WAG should establish what procedural engagement with English Nature, English Heritage and the Countryside Council for Wales is necessary during crises of this nature, and what priorities should be applied during and after the event.	5.2.32
2. Flood Extent Forecasting			
5.2.10 5.2.11 5.2.13	a. Need to improve forecasting of the timing, extent and impact of tidal flooding.	i. The Environment Agency should review how it applies its existing forecasting technology, to make the most of what is already available. Future flood forecasting programmes should look at the provision of flood timing, extent and impact data, including forecasts due to the failure or potential overtopping of a defence or tidal asset, perhaps through scenario planning.	5.2.14
3. Information Sharing			
5.2.16 5.2.17	a. Links between divisions of Defra and also the Environment Agency need to be strengthened.	i. Establish membership of a Defra- wide Strategic Co-ordinating Committee, with all relevant directorates represented and including representation from the Environment Agency. Defra and the Environment Agency should consider whether Liaison Officers should attend the Defra Operations room and the Cabinet Office to strengthen information sharing and briefing. This would also mirror successful arrangements in place at Gold controls, WAG and the RCCCs.	5.2.18

Multi-agency working – continued

Ref.	Summary lesson	Recommendation	Ref.
		ii. If agreed, revise plans and procedures accordingly and investigate holding joint training events.	5.2.19
5.2.25	b. Need to improve the ability of all organisations to assimilate information quickly enough to inform the necessary decisions.	i. A strategic review of systems is required to support operational activities and promote partnership working and efficient delivery of latest information. The review should include the potential of the Environment Agency’s proposed ‘Event Management System’.	5.2.27
5.2.26	c. The use of the Internet, both in the exercise planning and delivery of exercise injects, proved the potential of the medium for fast and effective communications between multiple agencies.	i. Explore the potential of an Internet based ‘Decision Support’ programme (or secure web site) to strengthen the individual and joint ability of organisations to eliminate delays and assimilate information. This would include for example: <ul style="list-style-type: none"> • Greater use of visual displays. • Message boards. • Electronic Mapping systems. • Global email systems. • Video links between centres. 	5.2.28

Plans and procedures

1. Emergency plans			
5.3.3 5.3.5 5.3.7 5.3.10 5.3.15 5.3.22	a. Local and national emergency plans were found to be appropriate with only minor improvements recommended.	i. Use future exercises to test the assumption that the ‘control arrangements’ in the WAG and Defra Lead Department Plans would have been established in a timely and effective way.	5.3.6
		ii. Consideration should be given to the development of a more detailed plan for the operation of the WAG Emergency Co-ordination Centre, which clarifies its role in the command and control structure and the role of its participants within the centre.	5.3.8
		iii. The role of the GORs should be consistent with plans at all levels and within all organisations.	5.3.16
		iv. The business continuity plans of Category one responders should recognise potential flood risks and associated impacts.	5.3.24
5.3.18 5.3.20	b. Need to plan for evacuation of people from areas that would be inundated by flooding.	i. Under the Capabilities Programme led by the Cabinet Office: <ul style="list-style-type: none"> • Explore the need for the Environment Agency to strengthen its advice on evacuation i.e. when and where it might be appropriate and in what scale of event. • Determine whether existing systems are adequate for the large-scale disposal of carcasses of drowned livestock and explore further with other departments and agencies. 	5.3.21
5.3.12	c. Personal knowledge of existing emergency plans insufficient in many cases to operate effectively.	i. The emergency plans of all organisations in respect to flooding should be reviewed, refined and developed in light of the lessons identified in Exercise Triton 04.	5.3.13
		ii. Organisations need to make personnel aware of their current plans and procedures with specific time allocated for this purpose.	5.3.14

Plans and procedures – *continued*

Ref.	Summary lesson	Recommendation	Ref.
2. Recovery Plans			
5.3.25 5.3.26 5.3.27 5.3.28	a. The Lead Government Department for the incident may not be the most appropriate one for the recovery phase.	i. Further consideration should be given regarding the Lead Government Department responsible for the recovery phase of a major flooding incident, as well as the provision of secretariat support to any cross departmental group. Any revision of guidance should be reflected in future updates to the Cabinet Office’s Lead Government Department guidance document.	5.3.30
5.3.32	b. Need to prioritise recovery work following a major flood incident.	i. Consideration should be given to the provision of further guidance on flooding issues to appropriate departments and agencies. This should include awareness of appropriate prevention and/or mitigation strategies for the economic recovery issues arising from a major flood event as well as visibility of the prioritisation of resources necessary during the recovery phase.	5.3.34

Communications

1. Partner Links			
5.4.4 5.4.6 5.4.8 5.4.9 5.4.10 5.4.15 5.4.18 5.4.19	a. Timing, speed and method of communication of reports are critical to effective incident management.	i. The Defra and WAG Lead Department Plans should include a standard report format for the GORs/Welsh Golds and specify a provisional reporting schedule dependant on the predicted severity of the event.	5.4.11
		ii. Information flows to the national level via the GORs need to be re-examined in terms of timing of reports, speed and method of communication. The role of the Regional Co-ordination Unit/Office of the Deputy Prime Minister in a crisis could be expanded to provide consistency of requests and screen out inappropriate requests to the Centre. The Regional Co-ordination Unit could discharge this role within the CCS situation cell.	5.4.12
		iii. Generic arrangements for communicating in an emergency between local responders, regional structures, Lead Government Departments and the central response machinery would benefit from further clarification.	5.4.13
		iv. Defra and WAG should design templates and produce briefs, for example on responsibilities in advance of events for briefing Ministers and for media responses. Appropriate administrative support required in the Defra operations room also needs to be identified. The Defra and WAG Lead Department Plans should be revised accordingly.	5.4.16
		v. Review Environment Agency National Situation Reporting arrangements to identify good practice and revise procedures.	5.4.20
		vi. Review the content of the National Outlook Statement with Defra and WAG.	5.4.21
		vii. Provide refresher training for Environment Agency staff producing situation reports and the National Outlook Statement.	5.4.22

Communications – *continued*

Ref.	Summary lesson	Recommendation	Ref.
2. Communications Equipment			
5.4.26 5.4.27 5.4.56	a. More robust communication links between control centres would have ensured an effective response.	<p>i. Control Room managers should review the provision of communication equipment and infrastructure to ensure that there is adequate voice, fax and data capability.</p> <p>ii. Control room managers should review the need for and extent of screening to enable unfettered use of mobile phones.</p> <p>iii. Given the delays to emails communications that occurred between organisations, all partners should seek to improve the performance of these systems.</p> <p>iv. Urgent consideration should be given to communications resilience at the National level, with specific reference to flooding events.</p> <p>v. Control Room managers should review the provision of communication equipment, infrastructure and accommodation available for media management to ensure that there is adequate room for effective multi-agency co-operation and sufficient voice, fax and data capability.</p>	5.4.28 5.4.29 5.4.30 5.4.31 5.4.57
3. Media Management and Co-ordination			
5.4.35 5.4.37 5.4.39 5.4.42 5.4.43 5.4.47 5.4.48 5.4.49 5.4.51	a. Confusion as to the make up of media cells and lack of understanding of roles.	<p>i. If the WAG Media Emergency Forum is to be a useful facility in any type of emergency then it must be established well in advance to allow time for communications officers to attend.</p> <p>ii. There is a need to review media arrangements at national, regional and local level to ensure co-operation and co-ordination of the multi-agency response to the media and develop understanding of the requirements and roles of both the GORs and Category one and two responders.</p> <p>iii. The role of GNN during an emergency needs to be clarified and promoted at regional and local level.</p>	5.4.38 5.4.52 5.4.54
5.4.45 5.4.46	b. Delays in releasing perishable information due to need to consult Gold media cells.	i. It could be helpful to partnership working and the speeding up of press releases in emergencies if partners agreed a joint media strategy long before a major incident arises. A generic document of this nature could be fine-tuned on the day to take into account local circumstances.	5.4.53

Resources

Ref.	Summary lesson	Recommendation	Ref.
1. Resource Availability and Deployment			
5.5.3	a. Lack of information on resources to enable sharing.	i. Ensure information regarding resource availability is readily available in control posts during a flood emergency. This should include contact numbers, maps and plant availability (on a local, regional and national basis).	5.5.4
		ii. Consider the feasibility of providing and maintaining a central database of strategic resources for a flood emergency, perhaps on a dedicated web site or on a CD.	5.5.5
5.5.7	b. Need for pumps, generators and mobile equipment.	i. A national review of adequacy and availability of dedicated emergency support equipment such as pumps; generators and mobile radios should be undertaken.	5.5.9
		ii. Consider the reinstatement of a strategic reserve of equipment.	5.5.10
5.5.13 5.5.14	c. Military aid is a critical part of event management.	i. Issue guidance for MACA requests to specify the desired outcome, not a specific resource or capability.	5.5.15
2. Mutual Aid			
5.5.18	a. Need to identify priorities on a national scale.	i. Clarify the responsibility and process for priority allocation of resources at national and regional level.	5.5.21
3. Incident Rooms			
5.5.25	a. Incident room equipment needs to be compatible locally and nationally.	i. Incident Room managers should review the incident room facilities and equipment needs identified during Exercise Triton 04 and implement appropriate improvements.	5.5.26
		ii. Seek to make Gold control room facilities compatible with the equipment needs of all users.	5.5.27
4. Management Resources			
5.5.30 5.5.33 5.5.37	a. It is clear that 24/7 manning of a large-scale and protracted emergency will place considerable demands on the availability of appropriately trained personnel to manage the incident.	i. Key incident responders should determine and maintain a competent pool of managers capable of undertaking strategic roles at local and Regional levels during a protracted national emergency.	5.5.34
		ii. Consider the appropriate use of telephone/video conferencing for some strategic group members.	5.5.35
		iii. Consider the introduction of mutual support arrangements between IDBs and with the Environment Agency.	5.5.39
		iv. Ensure recovery plans consider the health issues of the people being asked to respond.	5.5.40

Civil Contingencies Act

Ref.	Summary lesson	Recommendation	Ref.
5.6.2	a. Lessons Identified as a result of Exercise Triton 04 will serve to inform the preparation of guidance in respect of the Act, including the process for the formal request of emergency powers.	i. Key Learning Points and recommendations included: <ul style="list-style-type: none"> • The requirement for terms of reference for Government Offices in the Regions during civil emergencies. • The need for clear guidance in relation to the appointment and role of Regional Nominated Co-ordinators, including exit strategies. • The importance of clarifying appropriate procedures for requesting emergency powers, in accordance with the constraints within the Act. • The need for the revision of plans and procedures across the board in order to take account of new guidance. 	5.6.4

the way forward

7.1.1 The scenario for Exercise Triton 04 was both an extreme event (up to one in 1,000 year occurrence) and an extensive one (affecting nearly half of England and Wales). This scenario deliberately tested systems beyond normal plans procedures and highlighted improvements needed in a number of areas.

7.1.2 Overall, the exercise was considered a success by all participants when judged against the criteria established at the start of the project. The exercise was thorough and valuable but the ownership and implementation of recommendations by all partners will be necessary to achieve the improvement needed to integrated working. In addition the exercise also tested the provisions contained in the forthcoming Civil Contingencies Act at the time.

7.1.3 The national governance of extreme, high impact, large scale events should be reviewed such that:

- a) The Government Lead Department Plans can work effectively across Departments and recognise the differing demands of incident management and strategic recovery management.
- b) Strategic Recovery Plans are established for such large-scale events to prioritise of resources on a national scale.

7.1.4 The extreme conditions witnessed in the exercise also highlighted other issues that are not significant on a smaller scale. Examples include the disposal of animal carcasses on a large scale and the ability for the various utility companies to restore services in a planned, co-ordinated and effective manner.

7.1.5 A major lesson identified was the need to plan for evacuation of people from large areas which would be inundated by (in this scenario) coastal flooding, but which equally applies to river flooding. Climate change is increasing the likelihood of evacuation due to flooding and organisations expect the Environment Agency to provide more information on flood severity and extent to enable timely and effective evacuation from areas that will be inundated (see section 5.3.21).

7.1.6 The lessons identified in this exercise are relevant to other national incidents. The incorporation of lessons and recommendations for improvement will strengthen integrated plans to improve national resilience to such types of incident.

7.1.7 Exercise Triton 04 tested the response to the Government's call for more integrated working across agencies to manage extensive flooding situations. Positive feedback from the exercise acknowledges the improvements that have been put in place since the extensive flooding experienced at Easter 1998 and during autumn 2000.

Appendix A

Report on the methods and tools used in the planning and delivery of Exercise Triton 04

Executive summary

Introduction

Exercise (Ex) Triton 04 was the name given to the UK's first national scale flooding exercise, which the Environment Agency (the Agency) organised on behalf of the Cabinet Office, Department for Environment Food and Rural Affairs (Defra), the Welsh Assembly Government (WAG) and our Professional Partners (emergency services, local authorities, utilities, etc.). It was conducted on the 16 and 17 June 2004 where just short of 1,000 Players and Directing Staff were involved. A third day was held on 16 July 2004.

Ex Triton 04 delivered many benefits, both to flood management and to wider UK resilience.

Aim

The aim of this report is to capture the methods and tools developed in the planning and delivery of the first national flooding exercise for England and Wales, in order to provide a record of issues of note, good practices and recommendations to assist the design and conduct of future flooding or other types of national exercises.

Overview

Ex Triton 04 was the first national flooding exercise held in the UK and has been described as one of the most complex emergency planning exercises ever designed and run.

The direct costs of designing, implementing and reporting of Triton were £1.5m which included exercise scenario production, exercise documentation, a web site for

information sharing, the production of planning and overview reports and a film of the exercise. It did however deliver many benefits, to both the flood management and the wider UK resilience.

New lessons and techniques were identified in the planning and conducting of a national flooding exercise which would beneficially be incorporated into the existing guidance on exercise planning, in particular the development and successful use of the two Triton web sites.

The lessons and techniques have been captured under the headings:

- a. Good Practices Identified to acknowledge the good features of the existing systems, and
- b. Recommendations where existing systems/practices could be improved.

Good practices identified Exercise development

The Project Broad responded to requests from the local partners' groups for changes to the original proposed exercise format and to the dates of the exercise.

To make Triton a success it was recognised that there was a requirement for full partner engagement and for the exercise to be designed from the local level up, within an overall national scenario framework.

The exercise aims, objectives, and success criteria were defined at the outset, providing focus for the designers.

Scenario development

The collation of the Local Planning Sub-Groups into regional groupings, each led by a single National Scenario Planning Team member, meant that the exercise was split down into manageable sizes and enabled the local focus to be maintained.

The use of the Triton Web Tool greatly assisted the sharing of the ideas between the Local Planning Sub-Group Members when developing their scenarios.

Media

The role played by the media in communicating with and informing the public and others is a vital component of incident response and the exercising of this role formed an integral and necessary part of the overall exercise.

Newsreel video footage and newspaper front pages provided additional realism.

Placing of the media directing team in a central location, situated in EXCON, allowed them to oversee and co-ordinate the insertion of all media injects – ensuring all playing organisations were giving the same messages.

Although not wholly realistic, the feeding of media injects into the different playing organisations, departments and agencies tested out the lines of communication between them and ensured all press officers were fully engaged.

Exercise data

Very comprehensive guidance documents for the roles and responsibilities for Directing Staff were produced, which should be incorporated into the exercise planning guidance documents.

The Control Post Data Packs were considered to be very comprehensive and essential to ensuring that Ex Triton 04 was a success.

The flood extent maps (Jflow model outputs) were invaluable in obtaining the sign-up of the partner engagement in the development of the local scenarios, as they clearly identified the scope and impact of the flooding.

Standard formats of the individual Start State Briefing document and Briefing Presentation allowed for sharing between Local Planning Groups and ensured consistency.

Controlling planning information and data

Setting up a Contacts Database (name, address, phone, fax and email) of all the planners was vital, although this was difficult to maintain.

There was a need to set up and maintain good version control and controlled document procedures, and the National Scenario Planning Manger undertook the role of 'Document Controller' for the issue of all documents. Initially the distribution was via standard cascade email distribution lists that were set up. This was supplemented in January 2004 after the launch of the Triton web site, to which all documents were also published.

Project Gantt Charts and Action Plans were used by the Project Team and Scenario Planning Team and were very useful and successful, although difficult to maintain up to date.

Exercise value

The format of Ex Triton 04 was developed up to meet the requirement given by the Project Sponsors and detailed in the PID which was approved in August 2003.

Ex Triton 04 delivered many benefits, both to flood management and to wider UK resilience.

Appendix B

Table of success criteria submitted by national partners specific to their organisation

National partners success criteria

CCS	<ul style="list-style-type: none">• To test the Lead Government Department responsibilities of DEFRA• To test the Devolved Administration responsibilities of the WAG• To test the co-ordination between Defra and WAG• To test the role and relationship and co-ordination between the regions and Defra and WAG• To test the co-ordination of the central response• To ensure that the communications strategy is in place with GICS being used accordingly
DEFRA	<ul style="list-style-type: none">• To test EA's preparedness for a major national flood event in line with High Level Targets• To test Defra's Lead Department Plan and its links with EA, Regional Tiers, CCS, WAG and OGDs etc• To test central Government communications (media) handling strategy
WAG	<ul style="list-style-type: none">• To test the Lead Government Department responsibilities of the Welsh Assembly Government• To test the co-ordination between the Welsh Assembly Government and Defra• To test the role, relationship and co-ordination between the Welsh Assembly Government and the emergency response bodies
ACPO/ PNICC	<ul style="list-style-type: none">• Effectively testing communications strategy, staffing procedures and fallback facility
LGA/ WLGA	<ul style="list-style-type: none">• To enable local authorities to engage with response in a multi-agency strategic control operation• To test communication links and information sharing systems with strategic partners• To evaluate strategic response procedures with respect to wide area flooding emergencies
FOA	<ul style="list-style-type: none">• To test effectiveness of procedures in response to incident areas• To test the effectiveness of command and control both within and outwith the Fire and Rescue Service• To test the effectiveness of communications and interface internally and with stakeholders• To test Fire and Rescue Services arrangements for identifying 'lessons learned' from exercises and taking remedial action as appropriate• To evaluate the effectiveness of systems enabling co-operation and assistance between regions
NCC/ GNN	<ul style="list-style-type: none">• Clarification of the communications role between the Environment Agency, Defra and NCC• Integration/co-ordination GNN into the work of the regional CCCs• Clarification of the communications role of GNN/NCC in communication with other control posts
GOEE/ GOSE	<ul style="list-style-type: none">• Exercise the formation and operation of a Regional Civil Contingencies Committee, lead by a Regional Nominated Co-ordinator• Open a Regional Operations Centre to facilitate the exchange of information between Central and Local Government• Facilitate cross region liaison
GOL	<ul style="list-style-type: none">• To test the effectiveness of inter region liaison, primarily at RCCC/SCC level• To verify and further test the role of the GLT, in particular with its relationship between LGD and other regions• To test the emergency services procedures for a cross regional civil emergency occurrence

-
- MOD**
- Validation of MoD commander control arrangements
 - Practise the transition of the Military from Military Aid to Civil Community (MACC) to Military Aid to Civil Powers (MACP)
 - Practise the Military involvement with Regional Resilience Foras
 - Educate other Government Departments on the threshold of Military involvement in Military Aid to Civil Authorities (MACA) Operations

-
- ADA**
- Confirm, develop and test existing arrangements between all Operating Authorities
 - Ensure communication, liaison and co-operation procedures are functioning correctly
 - Ensure a speedy, adequate and integrated response service can be provided

-
- ASA**
- To effectively engage with our multi-agency partners in testing the response, command and decision making within a local strategic group
 - To test the communication links with strategic partners between Gold, the Regions and Government
 - Measure the effectiveness of the information sharing process

Appendix C

Glossary of acronyms

ACPO	Association of Chief Police Officers	PID	Project Initiation Document
ADA	Association of Drainage Authorities	PNICC	Police National Information Co-ordination Centre
ASA	Ambulance Service Association	RCCC	Regional Civil Contingencies Committee
CCC(O)	Civil Contingencies Committee (Official)	RNC	Regional Nominated Co-ordinator
CCS	Civil Contingencies Secretariat	SCC	Strategic Co-ordination Centre
COMAH	Control of Major Accident Hazards	WAG	Welsh Assembly Government
Defra	Department for the Environment Food and Rural Affairs	WLGA	Welsh Local Government Association
DTI	Department of Trade and Industry		
EA	Environment Agency		
EXCON	Exercise Control		
FOA	Fire Officers Association		
GICS	Government Information and Communication Services		
GLT	Government Liaison Team		
GNN	Government News Network		
GOEE	Government Office East of England		
GOL	Government Office London		
GORs	Government Offices in the Regions		
GOSE	Government Office South East		
IDB	Internal Drainage Board		
ISDN	Integrated Services Digital Network		
LDG	Local Government Departments		
LGA	Local Government Association		
MACP	Military Aid to the Civil Powers		
MCA	Military Aid to the Civil Community		
MoD	Military of Defence		
NCC	News Co-ordination Centre		
OGD	Other Government Departments		

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