# Meta-analysis of Disaster Management Exercises Discussion Paper 2: 2016

An examination of post-exercise reports and reviews – how exercise design, conduct, evaluation and follow-up action contributes to lessons management and continuous improvement of disaster management in Queensland.



Inspector-General Emergency Management



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#### **Queensland Emergency Management Assurance Framework**

#### Leadership

Leadership at all levels is demonstrated through a commitment to a shared culture of disaster management excellence. Strategic planning, within the context of resources and risk, underpins clear decision making and planning to achieve outcomes.

#### **Public safety**

Queensland's disaster management arrangements are delivered through effective disaster management groups where policy, procedure and practice all focus on safety of the public, engaging stakeholders and sharing responsibility.

#### Partnership

Everyone has a role to ensure Queensland is the most disaster-resilient State. Strategic partnerships are well-governed, drive clear roles and responsibilities, and promote true collaboration.

#### Performance

Productivity and effectiveness are measured by a combination of quality, quantity, cost, time or human relationships. Performance is monitored and analysed against standards and good practice across the spectrum of prevent, prepare, respond and recover.



**Assurance Tiers** 

Assurance activities

The activities undertaken

to validate performance

Principles

**Tier One activities** e.g. Self-assessment

#### **Tier Two activities** e.g. Peer review, exercise evaluation

**Tier Three activities** 

e.g. IGEM-led review or post event analysis

#### **Assurance Activity Output Descriptors**

All papers and reports produced by the Office of the Inspector-General Emergency Management provide independent assurance and advice about the effectiveness of emergency management arrangements in Queensland. The Office of the Inspector-General Emergency Management bases all publications on the Emergency Management Assurance Framework and Standard for Disaster Management.

#### **Briefing paper**

A briefing paper provides the decision-maker with a summary of facts about an issue, or an overview of a situation or arrangements. The briefing paper may address opportunities for improvement or highlight exemplary practice. The briefing paper provides the decision-maker next steps for consideration, which may include advice to entities.

#### **Discussion paper**

A discussion paper provides greater analysis of an issue, situation or arrangements than a briefing paper, considering trends, other sector or jurisdiction approaches or current best practice research. The discussion paper may address opportunities for improvement or highlight exemplary practice. The Inspector-General Emergency Management may suggest improvements to entities through advice, or, more formally, through Professional Practice Considerations.

#### **Review report**

A review report provides a comprehensive analysis of the effectiveness of a particular disaster management issue, situation or set of arrangements. The review report is based on evidence, and may include discussion of underlying themes, contributing factors and root causes of issues. The review report includes findings, and bases recommendations for improvement on lessons, research and good practice.

#### **Research paper**

A research paper is produced as result of a review report, or initiated by the Inspector-General Emergency Management. A research paper explores an issue, generates discussion and seeks best practice solutions.

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# **Executive summary**

Exercises are a mechanism to review the effectiveness of disaster management plans, maintain readiness for events and improve practice. Entities have a range of responsibilities to review plans, and participate in exercise management.

We focused on the documented management of exercises – how their design, conduct, evaluation and follow-up contributes to lessons management and continuous improvement of disaster management in Queensland.

In response to our request for submissions, stakeholders provided documentation relating to 152 disaster management exercises conducted between 2010 and 2015. We examined this data against Queensland doctrine. We also considered how the doctrine of other jurisdictions could help to improve our practice.

Ideally we expected to see the need identified for each exercise, and clearly articulated aims and



objectives documented. These are important for driving evaluation and value for money exercises. Our examination highlights this is the major area for improvement. Exercises we saw were primarily response focussed.



#### Key Capabilities (Components) Exercised

We saw aspects of exercises that were done well. These include a graduated, program approach, training conducted prior to exercises, and single-entity exercises run in preparation for joint exercises. Crossjurisdictional involvement, performance measurement over successive exercises, the use of external evaluation and the impacts of everyday, specific community complexities being considered were also encouraging examples.

In our sample of exercise documents, a range of hazards and stakeholders were considered. Scope remains to include greater diversity in stakeholder types, including community groups, for future exercises.

#### **Exercising Styles**



- Functional Exercises (37%)
- Field Exercises (5%)
- Combinations (4%)



Number of exercises

We did not see that learnings were consistently documented with sufficient detail to be meaningful to, and actionable by, all stakeholders. In capturing, reviewing, analysing and sharing learnings, attention could be paid not only to areas for improvement, but also to what was done well and should be embedded or sustained. There was little indication that reviewing and sharing lessons was standard practice among the submissions

# Participation of stakeholders in each exercise



for this paper.

Greater value can be gained from exercises by more fully documenting them and sharing outcomes. By sharing between all entities, the sector has a higher chance of embedding learnings as well as benefitting from innovations and better ways of working.

There is potential for more detailed guidance to address some of the gaps identified by our analysis. We are encouraged by the development of an Exercise Management training program as a result of the 2015 review of the Queensland Disaster Management Training Framework (QDMTF)<sup>1</sup>. We also suggest the following will improve disaster management exercising in Queensland:

**Professional Practice Consideration 1** Exercise practitioners should consider the observations contained within this report to enhance exercise management. **Professional Practice Consideration 2** Exercise practitioners should work with Queensland Fire and Emergency Services to develop guidelines and training that address gaps in doctrine, and draw on the approaches of other jurisdictions and disciplines.

# 2010-2015 Exercise Meta-analysis Key observations

#### Stakeholder involvement

Consider a greater variety of stakeholders, including community groups in future exercises



#### Identifying the need

110

Needs based on risk, can be better used to develop both rationale and focus for exercises

#### Better documenting exercises

More value for the time, skill and effort required to exercise

# **Sharing learnings**

Greater detail, review and sharing across stakeholders is needed

#### Realism in exercise scenarios

Other issues or events added to the scenario



#### Improving over time Tracking exercise outcomes over a number

of years



#### After Action Review

Identify 'what we did well' AND 'what can we do better next time'





#### Exercising with the neighbours



Sharing practice, resources, understanding and value

#### Preparing for exercises



Small exercises as building blocks for larger ones

# Context

#### **Disaster management exercises in Queensland**

In Queensland, it is the statutory responsibility of district disaster management groups and local governments to '*review the effectiveness of their plans*' at least once a year (*Disaster Management Act 2003* s55(2), s59(2)). Queensland doctrine<sup>2</sup> (Local and District Disaster Management Guidelines) provides for the conduct of an exercise as a mechanism to meet this requirement, while the Standard for Disaster Management in Queensland (the Standard) emphasises the role of exercises in improving disaster management across all phases.

The Standard describes five Accountabilities that combine for effective disaster management. The "capability" Accountability is characterised as '*how the entity is using training and exercising to help embed the necessary culture change and improve performance to meet disaster management outcomes*'. It is assigned to 27 Indicators across the Shared Responsibilities of the Standard,<sup>3</sup> reflecting the importance of exercises in improving practice.

According to doctrine, exercises are to be included in plans<sup>4</sup>, and members of local and district disaster management groups are encouraged to participate in exercises in order to maintain a '*state of readiness for activations*'.<sup>5</sup> Joint exercises better reflect the real operating environments for partnering stakeholders. They may reduce the individual 'A key element of preparedness for disasters is the knowledge of stakeholders. If disaster arrangements, protocols, roles and responsibilities are not thoroughly understood before a disaster occurs, the potential benefits of the planning process may not be realised. This knowledge is collated and maintained within disaster planning documents with the robustness of these plans periodically tested through workshops and other simulation exercises.'

Source: Queensland Audit Office, 2004

cost burden of reviewing plan effectiveness and increase training and orientation opportunities for operators, especially for neighbouring regions, and regions or entities with similar risk profiles.

Exercise outcomes can provide assessments about planned arrangements such as:



Figure 1: Planned arrangements for assessments

A range of recommendations and commentary from formal inquiries and reviews have contributed to the Queensland policy environment (<u>Appendix One</u>).

# Purpose

The purpose of the Exercise Meta-Analysis (the Activity) is to learn from exercise-related after-action reviews and post-exercise reports. It will contribute towards the continuous improvement of emergency management in Queensland by identifying insights, trends, innovations, and gaps arising from after-action reviews and post-exercise reports in Queensland, against the Standard for Disaster Management in Queensland.

# Scope

In examining post-exercise documentation (after-action reviews and post-exercise reports) for each exercise against our scope, we expected to find evidence of:

- its exercise program<sup>6</sup>
- rationale for the identified need, aim, objectives and exercise style
- criteria used to evaluate the objectives
- the extent to which objectives were met
- sharing of learnings with, and involving, stakeholders.

We acknowledge that one of the great benefits of exercises is relationship building, which cannot easily be captured in exercise documentation, nor evaluated through our desktop analysis.

#### **Emergency Management Assurance Framework**

The scope of this evaluation was structured around "Component 3: Capability Integration", which is part of the "Shared Responsibility: Preparedness and Planning" of the Standard. Indicator 3g (see figure 2 below) of the Standard is the basis of this Activity; proper exercising should contribute to key outcome 3.3 of the Standard, *'Lessons management promotes continuous improvement across all levels of disaster management*'.

#### Shared Responsibility

Preparedness and Planning

#### **Component 3**

Capability Integration

#### **Indicator 3g**

• Learnings from exercise programs are captured, reviewed, analysed and shared with stakeholders to inform improvements in entity disaster management planning, as well as training and exercise delivery.

#### Accountability

• Performance – How the entity is monitoring and actively improving the performance of its service delivery to meet the disaster management outcomes e.g. continuous improvement, review, monitoring.

Figure 2: Scope from the Standard for Disaster Management

Indicator 3.g<sup>7</sup> is supported by the Act (s16A(c), s55(2), and s59(2)), and doctrine.<sup>8</sup> Key Outcome 3.3 is based on the continuous improvement process.<sup>9</sup>

#### **Evidence Collection Resources**

We reviewed data from the following resources:



Figure 3: Evidence collection resources

#### **Disaster Management Act 2003**

The following legislated functions of the Office of the IGEM have shaped our approach to the Activity:

Disaster Manage	ement Act 2003
s. 16C (a)	to regularly review and assess the effectiveness of disaster management by the State, including the State disaster management plan and its implementation
s. 16C (b)	to regularly review and assess the effectiveness of disaster management by district groups and local groups, including district and local disaster management plans
s. 16C (f)	to review, assess and report on performance by entities responsible for disaster management in the State against the disaster management standards
s. 16C (g)	to work with entities performing emergency services, departments and the community to identify and improve disaster management capabilities, including volunteer capabilities
s. 16C (i)	to identify opportunities for cooperative partnerships to improve disaster management outcomes

#### Out of scope

Out of scope	Rationale
Lessons arising from events	The emphasis of the Activity is to examine the pro-activeness of entities to improve disaster management for 'the next event'
Drill exercises	Exercises that are operational in nature and do not have a disaster focus (e.g. patient extraction)

#### Limitations and constraints

This Activity was primarily 'desk-top' in nature with informal discussions to clarify documentary evidence. No exercises were attended for the purpose of data collection. The discussion paper relies on collection sources that are publically available or provided on request.

# **Methodology**

On 4 November 2015, the Inspector-General Emergency Management (IGEM) asked local and district disaster management groups, as well as state agencies with key disaster management roles, to submit post-exercise reports and exercise-related after-action reviews.

We received submissions from the following stakeholders:

- Department of Transport and Main Roads
- Department of Communities, Child Safety and Disability Services
- Department of Education and Training
- Queensland Fire and Emergency Services (QFES)
- Queensland Ambulance Service, Queensland Health
- Queensland Police Service (QPS) on behalf of all District Disaster Management Groups
- Bundaberg Local Disaster Management Group
- Burdekin Local Disaster Management Group
- Cairns Local Disaster Management Group
- Cloncurry Local Disaster Management Group (event-related out of scope)
- Goondiwindi Local Disaster Management Group
- Livingstone Local Disaster Management Group
- Mackay Local Disaster Management Group
- Moreton Local Disaster Management Group
- Noosa Local Disaster Management Group
- Pormpuraaw Local Disaster Management Group
- Scenic Rim Local Disaster Management Group
- Southern Downs Local Disaster Management Group
- Tablelands Local Disaster Management Group

From these submissions, we received data relating to a total of 152 exercises conducted in Queensland from 2010 to 2015. Documentation included:

- post-event reports or after-action reviews (for 22% or 34 of all exercises)
- exercise debrief notes (for 11% or 17 of all exercises)
- briefing or pre-exercise documentation (for 5% or 8 of all exercises)
- lessons registers or other agency resources (for 59% or 89 of all exercises)
- stakeholders' correspondence and websites (for 3% or 4 of all exercises).

The number of exercises we received was fewer than expected, given the range of stakeholders who are active participants in the disaster management sector. Because we consider our sample to be a small representation of disaster management exercises in Queensland over this period, we were constrained in our ability to draw broadly applicable observations from the data.

We received documentation for two exercises that involved current Office of the IGEM staff. These staff members were not involved in our analysis.

Indicator 3.g of the Standard refers to learnings being captured, reviewed, analysed and shared with stakeholders to inform improvements in disaster management planning, as well as training and exercise delivery. For the purpose of this Activity, we consider this as the path from observation and insights to lessons being actioned. Therefore, we considered what are commonly referred to as "observations", "insights" and "lessons" all as learnings.

We reviewed Australian and international academic research, and grey literature<sup>10</sup> relating to disaster management exercises, as well as disaster management doctrine. We did so to understand whether, and how, exercises can be used in disaster management beyond our doctrine, lessons management, and common challenges. The literature is included in the <u>References</u> section.

# **Results**

# An exercise is a controlled, objective-driven activity used for testing, practising or evaluating processes or capabilities.

Source: AIDR Handbook 3 Managing Exercises 2012.

#### **Exercise programs**

#### What we expected to find

Local and district disaster management groups are to develop exercise programs to *'reinforce training and maintain the disaster management capacity and capabilities of the group'*.<sup>11</sup> Exercises should be viewed in light of their place in a program of exercises<sup>12</sup> (also known as the "Hierarchy of Exercises"<sup>13</sup>).

As part of a program or hierarchy, each exercise should build in complexity (from discussionbased exercises to field exercises). Complexity builds as levels of training and force capability increase (such as the ability of an entity or group of entities to complete a mission, like evacuation of a community). Exercise complexity increases should continue to the point that an exercise mirrors actual, planned operating conditions as much as is possible.<sup>14</sup> In this way, new operators, or those who do not work full-time in disaster management, have increased opportunities to build knowledge, relationships and confidence prior to activation.

The program approach can be cost- and time-efficient, for example when using small group and discussion exercises to prepare for larger exercises. The savings can arise as a result of identifying problems with fewer people devoted to the task than is the case with a functional or field exercise. Exercise styles are described in the Local and District Guidelines and the Australian Institute for Disaster Resilience Handbook 3: Managing Exercises, (2012) (the Handbook).

The 2015 State Disaster Management Plan states that exercises are a key mechanism for reviewing the effectiveness of Queensland's disaster management arrangements<sup>15</sup>. It

advocates that all agencies adopt a partnered approach with Queensland Disaster Management Committee member agencies.<sup>16</sup>

The former Emergency Management Queensland was tasked with providing an annual program of major exercises across the state. The purpose was to review the effectiveness of plans by working with district disaster management groups, as well as and regional staff, to facilitate large scale and more complex exercises.<sup>17</sup> Local disaster management groups could participate in these exercises.<sup>18</sup>

As a preparedness activity, hazard-specific exercises are the responsibility of functional lead agencies (health – pandemic, maritime safety – oil spill) in collaboration with key stakeholders, including local government.<sup>19</sup> We expected to see evidence that State functional and hazards-specific plans were reviewed through exercise by lead agencies.<sup>20</sup>

QFES is responsible for ensuring that persons performing disaster operations are appropriately trained (*Disaster Management Act 2003* section 16(a)(c)). The State Disaster Management Plan prescribes that for a consistent approach to building capability and capacity, the QFES will provide support and guidance to district and local groups. We expected to see evidence of the QFES supporting local and district groups in the training and conduct of exercises.

#### What we found

#### In practice

We were encouraged to find some evidence of a program approach to exercising. At least two exercises were conducted in order to prepare for a larger exercise. Other exercises referred to prior training conducted for the exercise.

We predominantly found a range of exercise styles used, but not a consistent reference to how they fit within an overarching exercise program. We note that Australian doctrine<sup>21</sup> has more emphasis on individual exercises, as opposed to exercise programs.

Of the material provided to us, 34% of exercises (22) evidenced a state-wide exercise approach led by the former Emergency Management Queensland and QFES.<sup>22</sup> This is an example of exercise design documentation being shared between stakeholders (i.e. between the QFES and local governments). Our view is that the sharing of templates and expertise represents value for money in the time, skill and effort required to design exercises.



These 22 functional exercises tested disaster coordination centre activations. It is likely

that these exercises stem largely from stakeholders' completion of disaster coordination





Individual Exercises (66%)

centre training where, according to the Public Safety Business Agency who develop the training packages, the conduct of such an exercise is required in order to be deemed proficient.

From stakeholder feedback of the draft report, the desire for more support from the QFES in the planning and conduct of exercises was identified (see <u>Appendix Three</u>). The previous findings from the Office of the IGEM's Review of State Agency Integration at a Local and District Level<sup>23</sup> and the Review of Local Governments' Emergency Warning Capability<sup>24</sup> also highlighted a need for greater support and guidance.

#### Identifying the need, aim and objectives

#### What we expected to find

An exercise plan will consider establishing an exercise aim and objectives, such as the impacts of specific hazard events, and the capabilities required to manage them.<sup>25</sup> Establishing rationale for aim and objectives will highlight the most appropriate approach or style of exercise to be used.

The Local and District Guidelines and the Handbook direct stakeholders to answer the following questions when planning each exercise:

- What is the need for exercising?
- What is the aim of the exercise?
- What are the objectives to be achieved as a result of the exercise?
- What style of exercise is most appropriate (discussion, functional or field)?
- What resources will be required to develop, coordinate and evaluate the exercise?<sup>26</sup>

We expected the answers would be evident in post-exercise documentation in order to provide the context for exercise outcomes.

The decision to run an exercise may be influenced by a number of triggers:

- past exercise evaluation outcomes
- operational observations and/or lessons
- review or change of arrangements, policy and/or plans
- new equipment, procedures or practices
- personnel requirements (i.e. training, practise and/or assessment)
- legislative or regulatory requirements. 27

The legislative link (The Act) for the requirement of plans to be reviewed highlight a strong tendency for plans to be exercised to meet this requirement. When planning to exercise for the purpose of reviewing a plan, consideration should be given to what components of a plan should be reviewed.

We note that exercises may also be used to test many areas of disaster management other than a plan including (not an exhaustive list):

- promote awareness
- develop or assess competence
- evaluate equipment, techniques and processes
- practise interoperability
- validate training
- identify gaps

- explore issues, test whether lessons have been learned
- develop or assess capability.

Capabilities should be addressed by exercise programs according to risk profiles. For the purpose of this Activity, we looked for "key capabilities"<sup>28</sup> (the 14 Components of the Standard), as well as "specific" and "ancillary" capabilities as shown in figure 4 below. We expected to see resource management<sup>29</sup> consistently addressed, given its emphasis in the Act (s18, 23, 30 and 80).



Figure 4: Types of capabilities

#### What we found

In our sample of 34 documents labelled as either postexercise reports or after-action reviews, 76% (26) included some form of rationale for the exercise, a statement of the aim and a list of objectives. In many cases, the rationale for the exercise was simply a reference to the legislated requirement to review or "test" plan effectiveness. It did not refer to a specific



identified need from disaster management plans, or refer to specific sections of plans (or sub-plans) to be reviewed – the questions listed in the Local and District Guidelines were generally not answered directly. This is consistent with our previous enquiries that highlighted gaps in the use of risk-analysis to drive planning.

We note that the Local and District Guidelines and the Handbook do not provide detailed guidance on identifying the need.

We were encouraged to find that staff from a number of agencies and from all levels of the arrangements have been trained in exercise management. This includes by the Australia-New Zealand Counter-Terrorism Committee (ANZCTC) and the Regional College of Disaster Management (RCDM) where 122 participants have attended this training over the last two years. The content and effectiveness of this training is outside the scope of this evaluation.



We note the QFES advised that the area of exercising is under review following the cyclones of 2015. The QFES are working with QPS to improve the methodology of disaster management exercises in Queensland via the ANZCTC Exercise Management program. This approach will reinforce the need for risks to be considered, and the exercise evaluated against identified objectives.

While there was variety in exercise styles, justification was not commonly provided for the choice. An influencing factor for the number of discussion-based exercises may be that these styles of exercises are the lowest cost to plan and conduct.

According to our assessment of the objectives against capability types set out in figure 4, we found evidence that:

- "key" capabilities (14 Components of the Standard) were a consideration in 45% of exercises (68)
- "specific" capabilities were considered in 56% of exercises (85)
- "ancillary" capabilities were documented in one exercise.

The spread across capabilities aligned to Shared Responsibilities of the Standard is as pictured in figure 6, and Components in figure 7.



Figure 6: Exercising the Shared Responsibilities for Disaster Management (as evidenced in 68 exercises, expressed as our interpretation of alignment to Components of the Standard for Disaster Management)

#### **Exercising Styles**



- Discussion Based Exercises (54%)
   Functional Exercises (37%)
- Field Exercises (5%)
- Combinations (4%)



Key Capabilities (Components) exercised

Figure 7: Exercising the Components of the Standard Disaster Management (as evidenced in 68 exercises, expressed as our interpretation of alignment to Components of the Standard for Disaster Management)

We saw some consistency in the areas of the Standard that were exercised, with those that the 2015 Disaster Management Plan Assessments showed highest confidence levels for. This may either reflect a tendency to exercise areas of strength, or that exercises are contributing to strength in these areas.

Given the prominence we noted earlier, the few times resource management was considered in exercises, was unexpected.

#### In practice

We were encouraged to find pre-existing issues identified within communities (in this case caused by drought) were considered by at least one exercise.

Although evidence of identifying needs was not common, we found evidence that a broad range of hazards, stakeholders and capabilities were included in exercises. We were not provided documentation for any exercises focusing on functional and hazards specific plans by lead agencies. Post-exercise documentation for 52% of exercises (79) included evidence of the hazard-focus. The spread of hazard-focus across these exercises is displayed below. Some exercises had more than one hazard included in their scenario, i.e. cyclonic wind and storm tide.



Figure 8: Spread of hazard focus (as evidenced in 52% of the sample)

We were unable to determine whether the Queensland Floods Commission of Inquiry's Interim Report Recommendation 3.11 (<u>Appendix One</u>), about training, resulted in a high number of flood-focused exercises before the 2011-2012 wet season. We saw only six exercises conducted in 2011 where the hazard scenario was documented.



#### **Evaluating objectives**

#### What we expected to find

Exercise evaluation should be driven by its objectives. It should include an analysis of the management of the exercise, as well as the participants' responses to the developing scenario. Evaluation outcomes should contribute to an organisation's learning and continuous improvement – relevant and actionable beyond the debrief room.<sup>30</sup>

For all exercises, we expected to see evidence of the use of an evaluation criteria, such as P<sup>2</sup>OST<sup>2</sup>E criteria for capability elements – people, process, organisation, support, technology, training and exercise (<u>Appendix Two</u>). <sup>31</sup> Originally from the military<sup>32</sup>, this criteria helps planners to understand capability by breaking it down into the elements that form it. These elements need to be purchased or developed, and maintained through testing and review. When they are exercised together, capabilities can be evaluated by examination of these elements throughout the exercise scenario.

After its introduction in 2014, we expected to see that the Standard was considered for developing exercise evaluation criteria. Like P<sup>2</sup>OST<sup>2</sup>E, the Standard employs criteria, described as 'accountabilities'<sup>33</sup>. These are: governance, doctrine, enablers, performance, and capabilities.

P <sup>2</sup> OST <sup>2</sup> E		People	Process	Organisation	Support	Technology	Training	Exercise Management
Accountabilities	Governance							
	Doctrine							
	Enablers							
	Performance							
	Capabilities							

Figure 9: Elements of P<sup>2</sup>OST<sup>2</sup>E aligned to the Standard for Disaster Management 'Accountabilities'

#### What we found

We did not see any reference to the Standard in any documents. Although P<sup>2</sup>OST<sup>2</sup>E was often mentioned, evaluation of exercise objectives based on this breakdown of capabilities, was not clearly documented this way. Different capabilities in exercises were evident though, across our entire sample. There is scope for planners of future exercises to concentrate more on the evaluation of exercise objectives through clearly stated criteria.

#### In practice

We were encouraged to find at least one exercise where participants debated how the time of day may impact the scenario. The addition of time-of-day information also adds an additional layer of reality to challenge participants (i.e. the extra capabilities that may be required to complete an evacuation at 2am as opposed to 2pm).

#### The extent to which objectives were met

#### What we expected to find

Time and effort should be devoted to properly evaluating and documenting exercises. Following exercises, local and district disaster management groups should complete after-action reviews.<sup>34</sup> Good records management, including comprehensive and clear



documentation, enables a return on investment of time and effort to undertake an exercise, by:

- showing how plans have been assessed
- providing meaningful follow-up actions
- providing learnings to be distributed to, and considered by, other stakeholders
- allowing review of design and outcomes in future planning cycles
- allowing exercises to be used more than once (by multiple stakeholders).

The extent to which objectives were met by an exercise should impact disaster management planning, as well as subsequent exercises. According to the Local and District Guidelines, 'any gaps or issues identified ... allows for the development of appropriate treatment options designed to address identified gaps and issues'.<sup>35</sup>

As a result of thorough exercise planning and documentation, robust evaluation of the extent to which objectives were met enables judgement on where to invest in improving disaster management, according to accepted risk (expectations of performance).<sup>36</sup>

Exercise outcomes should lead to improvements in planning across all identified hazard events and all phases of disaster management (prevention and mitigation, preparedness, response, recovery) (s4A of the Act, inserted in 2010).<sup>37</sup> Additionally, they should lead to improvements in training and exercise delivery.

#### What we found

Where we were able to examine post-exercise documentation for several exercises from a single stakeholder, we found that a systematic approach was applied to the capture, review and analysis of learnings. We did find that some form of analysis (debrief or other analysis) occurred in 75% of exercises (114), though only 15% (23) provided evidence of follow up action plans.

Documentation for just 12% of exercises (18) stated that objectives had been met. This may be evidence of deficiencies in:

- general understanding of the role of exercises in relation to planning
- availability of practitioners skilled in evaluation
- governance.

Our sample showed opportunities to capture learnings from a range of stakeholders. We were unable to tell to what extent stakeholders were involved in each exercise (i.e. concept, planning, conducting, evaluating). The documentation for numerous exercises stated that invitations had been made to entities who were subsequently unable to participate.



We received learnings for 73% of exercises (111). Many of these learnings lacked detail or context: *who, what, when, where, why* and *how*. This was also an issue where lessons registers were submitted as the primary evidence source – the context for recommended actions was missing, meaning they may not be correctly implemented. We caution against using lessons registers without reference to post-exercise documentation.

We also noted that learnings were more likely to be negative in nature, pointing out things that went wrong. Things that worked well, or practices that should be sustained, were not consistently documented. This may be due to the traditional focus in debriefing templates on "what can we do better next time", without additional consideration given to "what should we keep doing".<sup>38</sup>

The following themes were common to exercises across our sample:

- confusion regarding stakeholder roles and responsibilities
- issues of maintaining business continuity while conducting the exercise (staff availability to participate)
- issues of situational awareness, including the timings of situation reports (SITREPs).

# 'Loudhailer could be a useful resource.'

This comment does not answer the following:

#### WHAT

would they use it to say, and who to?

WHY would a loudhailer be useful?

WHERE and WHEN would they use it?

#### **WHO**

would use it? Who should do something about it?

HOW could it be useful?

Figure 10: Example of a learning with insufficient detail to be effectively actioned

#### In practice

We were encouraged to find one stakeholder tracked improvement over time, by comparing exercise participants' understanding of the roles and responsibilities (of the different cells within the Australasian Inter-service Incident Management System (AIIMS)), with their understanding in previous years.

Learnings about exercises generally addressed the conduct of exercises, not the design, planning or evaluation. In exercises featuring activations of disaster coordination centres, we saw common problems occurring across the period and entities, including issues regarding:

- fatigue management
- confusion regarding roles and responsibilities of staff
- templates, approvals, mapping and content of warnings and alerts
- templates and formats of media statements
- records management
- ICT issues
- logging jobs and requests for assistance

- room setup, availability of power points, computers, working printers<sup>39</sup>
- room noise levels and acoustics
- generator fuel and maintenance issues.

These types of issues are covered in Module 3: Establishment and Management of a Disaster Coordination Centre (of the Queensland Disaster Management Training Framework). This module is not currently mandatory.<sup>40</sup> The repetition of learnings relating to the set-up, layout or access to facilities suggest there may be value in more stakeholders completing this module. Generally, we suggest that entities using facilities for disaster management purposes walk through these facilities with their normal users in order to understand the unique features of each facility.

Many of the themes mentioned above resurfaced in exercises across the period of our sample (2010-2015), including those led by the same stakeholders. This may indicate that learnings are not reviewed and shared across stakeholders as part of standard practice. In addition to the Handbook, a range of resources to help stakeholders manage lessons, such as the *'Revelation'* Lessons Learnt DVD Series, which are likely to be still available through some of the QFES station libraries. As well, the QFES has previously recognised the need to enable sharing.<sup>41</sup>

Scenarios for 92% of exercises (140) focused on response, and learnings predominately had implications for preparedness (generally additional training for response), and response. Only 8% of exercises (12) had a recovery focus; the activation of recovery centres for example. It was unclear whether stakeholders consistently considered implications of exercise learnings across all disaster management phases.

#### In practice

We were encouraged to find there were several examples of external third parties evaluating exercises. We also noted two examples where representatives from neighbouring councils evaluated the exercise of disaster coordination centres. This is an example of maximising the value of an exercise with opportunities to share learnings more broadly, increasing the evaluation experience of practitioners within the sector, as well as building relationships and experience that could supplement local capacity in times of need.

#### Sharing learnings and involving stakeholders

#### What we expected to find

Stakeholders should work together throughout the exercise management model (see figure 5). We expected to see participation in "Identifying the Need", "Planning", "Conducting and Debriefing" and "Evaluation" of exercises as part of an exercise program.

When determining who should be involved consideration should be given to the following:

- have responsibilities or functions relating to the identified need
- hold or coordinate capabilities required to achieve the aim
- are impacted by the exercise (neighbouring jurisdictions, communities<sup>42</sup>)
- have relevant expertise or experience in the exercise delivery.



# Figure 5: Exercise Management Model within the Continuous Improvement Process, adapted from AIDR Handbook 3

We expected evidence of capturing, analysing, reviewing and sharing learnings to ensure broad value to the disaster management group or groups. Many provisions of the Act should trigger the sharing of these exercise outcomes amongst stakeholders.<sup>43</sup> We looked for evidence of decreases in similar learnings across our sample period to demonstrate sharing of learnings. Another indication that learnings would be shared is the involvement of private and non-government entities in an exercise, especially:

- · essential service providers such as electricity providers
- entities responsible for operating or maintaining our critical infrastructure network, for example dam owners and operators
- those with other disaster management functions or expertise, such as the Australian Red Cross and the RSPCA.<sup>44</sup>

Community members and groups, are the foundation layer in Queensland's disaster management arrangements. They can also add, and receive, value from participating.<sup>45</sup>

#### What we found

Generally, the majority (78% or 118) of the exercises in our sample involved the participation of more than one stakeholder. Some exercises considered the impacts of working with other agencies to deliver disaster management outcomes. We were provided evidence of distribution lists for sharing learnings with stakeholders for four exercises. From our sample, we were unable to find whether learnings were shared more broadly across the sector.

We found that local disaster management groups and district disaster management groups were mentioned in the documentation for 34% of exercises (52). Also, we found one instance of State Disaster Coordination Group participation. It was generally not clear whether *all* group members participated in these exercises. We suspect this may point to deficiencies in exercise



documentation rather than stakeholder involvement. Gaps in documentation may lead to lost opportunities for the adequate capturing, reviewing, analysing and sharing of learnings.

There were 40 instances of volunteer involvement in exercises. These included:

- State Emergency Service volunteers (17 exercises)
- Australian Red Cross (seven exercises)
- Local emergency coordination groups (three exercises)
- Rural Fire Service volunteers (two exercises)
- Queensland Surf Lifesaving (two exercises)
- Salvation Army volunteers (two exercises)
- Lions/Lionesses (two exercises)
- Rotary (one exercise)
- Faith-based volunteers (one exercise)
- Other local volunteers (one exercise).





While six exercises included activation of an evacuation centre, evidence showed that only four involved the Australian Red Cross. Two exercises involved the Salvation Army (who provided catering services) and one involved the RSPCA.

We noticed many instances where volunteer groups (that were not present) were discussed during debriefs, and assigned with responsibilities. However, they were not commonly referred to in evident post-exercise treatment options or action plans. The likely functional capabilities, capacities, fatigue

management and business continuity requirements of these entities should be considered when assigning responsibility.

#### In practice

We were encouraged to find at least one exercise that mentioned a community event (rodeo) that was occurring as part of the scenario. Major community events may impact stakeholders required, and their availability, in an emergency response.

Community members were mentioned as participating in two exercises, and a community association also participated in one exercise. We noticed that demographic aspects of community characteristics<sup>46</sup> (such as the location and support requirements for vulnerable people, or language or cultural considerations) were not commonly referred to in post-

exercise documentation. Again, they were also not commonly referred to in the post-exercise treatment options or action plans that we saw. Consideration of different groups within communities, their abilities, experience and knowledge, should be common practice, particularly in exercises focusing on evacuation and sheltering.

We found 11 instances of local government involvement and 210 instances of state agency involvement in joint exercises (where these 210 instances were separate to participation as member of state, local and district disaster management groups was unclear):

- QFES (83 exercises, including 20 where the former Emergency Management Queensland participated and 13 where the former Queensland Fire and Rescue Service participated)
- QPS (52 exercises)
- Department of Transport and Main Roads (18 exercises)
- Queensland Ambulance Service (17 exercises)
- Queensland Health (16 exercises)
- Department of Communities, Child Safety and Disability Services and former Department of Communities (eight exercises)
- Department of Education and Training (five exercises)
- Department of Housing and Public Works and the former Department of Public Works (four exercises)
- former Department of Environment and Resource Management (three exercises)
- Environment and Heritage Protection (two exercises)
- The former Department of Employment, Economic Development and Innovation (two exercises)
- Department of Natural Resources and Mines (one exercise)
- Department of Energy and Water Supply (one exercise)
- Department of Local Government (one exercise)

We found 47 instances of involvement of non-government entities and government-owned corporations, including owners and operators of essential services and critical infrastructure:

- Energy suppliers (seven exercises Energex (four), Origin (one) and Ergon (two))
- Telstra (four exercises)
- Dam owner/operators (four exercises)<sup>47</sup>
- QIT plus (creators of the Guardian incident management platform seven exercises)

#### In practice

We were encouraged to find at least one exercise aimed to '*enhance cross border understanding of disaster management arrangements*'. This exercise involved not only a number of Queensland local governments and state agencies, but also a NSW local government, the NSW State Emergency Service, NSW Police Service, and Emergency Management Australia.

# **Other jurisdictions**

We considered whether contemporary doctrine of other Australian and International jurisdictions could add value to Queensland's approach to disaster management exercises.



Exercises should be risk based; the National Emergency Risk Assessment Guideline<sup>48</sup> and Practice Guide<sup>49</sup> may be useful in the identification and prioritisation of risk.

Recognising the overlap between training and exercising, the guidance provided in Chapter One of the AIDR *Manual 41: Small Group Training Management*<sup>50</sup> could also be used by stakeholders for guidance in identifying the need for an exercise. Additionally, information on this topic is also available through the Australian Journal for Emergency Management's article, *'So, you want to run an exercise?*<sup>51</sup>

The HSEEP and the NZ Programme Director's Guideline for Civil Defence Emergency Management Groups [DGL 010/09]<sup>52</sup>, in particular, provide easy to use strategic and operational detail. In addition to the content provided in the Handbook<sup>53</sup> and the Manual 41: Small Group Training<sup>54</sup>, the NZ Programme includes clear steps to conduct an analysis of the need for an exercise.<sup>55</sup> Stakeholders developing exercise programs will also benefit from the second chapter of the HSEEP, which details how to increase the complexity of exercises in a program.<sup>56</sup>

The UK paper<sup>57</sup> and the Swedish Handbook<sup>58</sup> both state why it is important to clearly articulate the exercise aim – a gap in the Local and District Guidelines and the Handbook. From there, the HSEEP<sup>59</sup> and the NZ Programme<sup>60</sup> detail how to develop objectives using the SMART criteria, emphasising the importance of using agreed terminology in statements of aim and objectives. The NZ Programme offers excellent examples of aims, objectives, and performance indicators (metrics for evaluation).<sup>61</sup>

The NZ Programme includes two quick reference tables on what exercise style will match what exercise aim, and the requirements of each style (i.e. the resources, durations etc.)<sup>62</sup>. The UK paper expands on the descriptions of exercise styles (here 'types') included in the Local and District Guidelines and the Handbook, including hybrid styles. Of particular interest is guidance on common pitfalls of each exercise style and how to overcome them – this is not addressed in the Local and District Guidelines or Handbook.<sup>63</sup>

The NZ Programme introduces the use of "orientation exercises"<sup>64</sup>, known elsewhere as "staff rides"<sup>65</sup>, where participants walked through a place where they would work, or an area where a hazard event may occur.

Comprehensive evaluation guidance is provided in the Swedish Handbook, with its emphasis on evaluation as imperative to conducting an exercise. It looks at the influence of attitudes to lessons management and maturing toward an improvement culture ("feedback staircase").<sup>66</sup> It also provides the following guidance that is not detailed in the Local and District Guidelines or Handbook:

- who should undertake the evaluation an internal or external evaluators<sup>67</sup>
- data sources e.g. participant observations, logs, telephone reports, video recordings, observers' impressions, debrief, evaluation forms.<sup>68</sup>

We encourage stakeholders to refer to these resources.

# **Observations**

From our analysis we have the following observations:

- 1. Identifying needs, based on risk, can be used better to develop the rationale and focus for exercises. This is consistent with our previous findings about how risk can be better used to drive planning.
- 2. Documenting exercise planning and evaluation will assist entities to gain more value from resources allocated to exercises. Sharing templates and expertise represents value for money in the time, skill and effort required to design exercises.
- 3. We did not see evidence that learnings are reviewed and shared across stakeholders as part of standard practice.
- 4. Learnings mostly focused on "what we can do better next time". This may result in missed opportunities to identify and share "what we did well", such better ways of working that should be sustained and innovations.
- 5. Some learnings lack sufficient detail to be meaningful to, and actionable by, all stakeholders.
- 6. A range of stakeholders were considered across the sector, however, there may be scope to consider a greater variety of stakeholders and community groups in future exercises.

# **Next steps**

The Office of the IGEM has completed this Activity as part of our broader range of assurance activities evaluating the effectiveness of disaster management. These activities include our concurrent work to coordinate entities' self-assessment of plans, and we have made links with this work in this report.

In 2014-2015 two of our reviews recommended that an integrated, risk-based approach to disaster management planning for Queensland is developed. Our discussion paper on training and exercising arrangements in Queensland also commended the governance approach of Queensland's counter-terrorism training and exercise arrangements.

Our observations this year add an extra dimension to those earlier reports. It is too soon to see changes from these reports in this analysis of exercises from 2010-2015. The largest opportunity we saw from our data was for exercises to be improved with better identification of needs.

We note progress towards improved arrangements. The Disaster Management Unit of the QPS told us of procedural, document management and governance arrangements that are being developed. These cover the planning, recording and validation of exercises and will benefit disaster districts. We are encouraged by the work started by the QFES to work in partnership with the QPS to look for consistencies in the approach to disaster management exercises to that used by the Australia-New Zealand Counter Terrorism Committee where appropriate.

The doctrine of other jurisdictions provides greater detail for some aspects of exercise management. Additional guidance may help stakeholders address the gaps we identified in our discussion paper. We expect future Queensland guidance on running exercises will detail key information in an accessible and meaningful way for all stakeholders. New Zealand's CDEM Exercises: Director's Guideline for Civil Defence Emergency Management Groups is a good example.

We believe exercises are an important mechanism to increase confidence in the disaster management arrangements. This report contributes to enhancing exercise practices in Queensland through sharing knowledge and learning from across the sector. We will continue our contribution through future evaluations to support continuous improvement of exercise management.

#### **Professional Practice Considerations**

- 1. Exercise practitioners should consider the observations contained within this report to enhance exercise management.
- 2. Exercise practitioners should work with Queensland Fire and Emergency Services to develop guidelines and training that address gaps in doctrine, and draw on the approaches of other jurisdictions and disciplines.

<sup>&</sup>lt;sup>1</sup> Public Safety Business Agency, *Queensland Disaster Management Training Framework,* Queensland Government, 2016 <u>http://www.disaster.qld.gov.au/Disaster-Resources/Documents/QDMTF.pdf</u>

<sup>&</sup>lt;sup>2</sup> Emergency Management Queensland (Department of Community Safety), Queensland Local Disaster Management Guidelines, Queensland Government, 2012, pp. 26, 47, <u>http://www.disaster.qld.gov.au/Disaster-</u> <u>Resources/Documents/Queensland%20Local%20Disaster%20Management%20Guidelines.pdf,</u> accessed August 2015.

 <sup>&</sup>lt;sup>3</sup> Emergency Management Assurance Framework, Office of the Inspector-General Emergency Management, 2014.

<sup>&</sup>lt;sup>4</sup> Queensland Local Disaster Management Guidelines, op.cit., p.19.

<sup>&</sup>lt;sup>5</sup> Op.cit., pp.10,13.

<sup>&</sup>lt;sup>6</sup> Op,cit., pp.27,47.

<sup>&</sup>lt;sup>7</sup> Indicator 3.g is one of the most prevailing indicators of the Standard for Disaster Management in Queensland. It directly contributes to the key outcomes of eight of the Standard's 14 components.

<sup>&</sup>lt;sup>8</sup> Emergency Management Queensland (Department of Community Safety), Queensland Local Disaster Management Guidelines. State Disaster Management Group, Queensland Government, 2012, pp.28, 49, http://www.disaster.qld.gov.au/Disaster-Resources/Documents/Queensland%20Local%20Disaster%20Management%20Guidelines.pdf, accessed December 2015.

<sup>&</sup>lt;sup>9</sup> Queensland Local Disaster Management Guidelines, op.cit., pp.24,45.

<sup>&</sup>lt;sup>10</sup> 'grey literature' refers to a type of information or research output produced by organisations, outside of commercial or academic publishing and distribution channels. Common grey literature publication types include reports (annual, research, technical, project, etc.), working papers, government documents, and evaluations

<sup>&</sup>lt;sup>11</sup> ibid.

<sup>&</sup>lt;sup>12</sup> Queensland Local Disaster Management Guidelines, op.cit., pp.26,47.

<sup>&</sup>lt;sup>13</sup> Australian Institute for Disaster Resilience, Handbook 3: Managing Exercises Second Ed, Australian Institute for Disaster Resilience, 2012 (2002), p31, accessed 8 December 2015 at: <u>https://www.aidr.org.au/media/1483/handbook-3-managing-exercises.pdf</u>

 <sup>&</sup>lt;sup>14</sup> Op.cit., pp. 30-34.
 Note: this Australian approach draws on the Unites States' Homeland Security Exercise and Evaluation Program, which is based on military practice. For information and tools on this program, refer to: <a href="https://hseep.preptoolkit.org/">https://hseep.preptoolkit.org/</a>
 <sup>15</sup> 2015 State Dispater Management Dispater Management Committee 2015 exercise 30

<sup>&</sup>lt;sup>15</sup> 2015 State Disaster Management Plan, Queensland Disaster Management Committee, 2015, section 8.1.4 State departmente, public service, and statutory bedies are also responsible for establishing and

<sup>&</sup>lt;sup>16</sup> State departments, public service offices, and statutory bodies are also responsible for establishing and maintaining appropriate systems of internal control and risk management (*Financial Accountability Act* 

2009 s61(b)). These entities should have in place business continuity arrangements, including crisis management plans, which "should be tested periodically to ensure their effectiveness". Further, state departments, public service offices, statutory bodies and local government employees are responsible for managing all operations of the agency efficiently, effectively and economically (*Financial Accountability Act 2009* (s61(a)), *Public Sector Ethic Act 1994* (s7), *Local Government Act 2009* (s4 and s13)).

<sup>17</sup> Queensland District Disaster Management Guidelines, op.cit., p.47.

- <sup>19</sup> 2015 State Disaster Management Plan, op.cit., Section 2.2
- <sup>20</sup> Ibid.
- <sup>21</sup> Australian Institute for Disaster Resilience, *Handbook 3: Managing Exercises Second Ed*, op.cit., p.48.
- Emergency Management Queensland (Department of Community Safety), Queensland District Disaster Management Guidelines. State of Queensland, 2012, p.47, <u>http://www.disaster.gld.gov.au/Disaster-Resources/Documents/Queensland%20District%20Disaster%20Management%20Guidelines.pdf</u>, accessed August 2015.
- <sup>23</sup> The Office of Inspector General Emergency Management (Queensland Government), *Review of Queensland District Disaster Management Guidelines*. State of Queensland, 2015, <a href="https://www.igem.qld.gov.au/reports-and-publications/documents/State-Agency-Integration-Review-Report.pdf">https://www.igem.qld.gov.au/reports-and-publications/documents/State-Agency-Integration-Review-Report.pdf</a>
- <sup>24</sup> The Office of Inspector General Emergency Management (Queensland Government), *Review of Queensland District Disaster Management Guidelines*. State of Queensland, 2015, https://www.igem.qld.gov.au/reports-and-publications/documents/EWC-Review-Report.pdf
- <sup>25</sup> Notwithstanding completion of a needs analysis, we expected to see a high emphasis on flood scenarios in exercises conducted prior to the 2011-2012. Refer to Recommendation 3.11 of: Queensland Flood Commission of Inquiry, *Queensland Flood Commission of Inquiry: Interim Report*, 2011, <a href="http://www.floodcommission.qld.gov.au/">http://www.floodcommission.qld.gov.au/</a> data/assets/pdf\_file/0006/8781/QFCI-Interim-Report-August-2011.pdf, accessed December 2015.
- <sup>26</sup> For further reading on the importance of identifying need and having a clear purpose for exercises, refer to: Callan, T, So, you want to run an exercise? Australian Journal of Emergency Management, Vol. 24 No. 2, May 2009, accessed 24 February 2016 at: <u>https://ajem.infoservices.com.au/items/AJEM-24-02-10</u>
- <sup>27</sup> Australian Institute for Disaster Resilience, Handbook 3: Managing Exercises Second Ed, op.cit., p.23.
- <sup>28</sup> See the Standard for Emergency Management in Queensland, "...Components reflect the key capabilities of disaster management in Queensland within each Shared Responsibility. These capability areas form the basis for disaster management functions and activities.", p.12, <u>https://www.igem.qld.gov.au/assuranceframework/pdf/IGEM-EMAF.pdf</u>
- <sup>29</sup> Refer to *Component 12: Resource Management* of the Standard for Disaster Management in Queensland
- <sup>30</sup> Adapted from Australian Institute for Disaster Resilience, Handbook 3 Managing Exercises 2012.
- <sup>31</sup> Refer to: Australian Institute for Disaster Resilience, *Handbook 3: Managing Exercises Second Ed.*, op.cit., p.98.
- Australian Institute for Disaster Resilience, Handbook 8: Lessons Management. op.cit., pp.72-73.
   Refer to: <u>http://www.defence.gov.au/cdg/FundamentalInputs/</u>
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- <sup>34</sup> Queensland Local Disaster Management Guidelines, op.cit., pp.28,49.
- <sup>35</sup> Queensland Local Disaster Management Guidelines, op.cit., pp. 28, 49.
   <sup>36</sup> Queensland Disaster Management Arrangements Participant Guide 5.2, Public Safety Business Agency, 2015, p.48, <u>http://www.disaster.qld.gov.au/About\_Disaster\_Management/documents/QDMA-PG-V5.2-LR.pdf</u>, accessed on August 18, 2015.
- Queensland Local Disaster Management Guidelines, op.cit., pp. 26, 47.
- <sup>37</sup> Refer to the Disaster Management and Other Legislation Amendment Act 2010, available online at: <u>https://www.legislation.qld.gov.au/LEGISLTN/ACTS/2010/10AC040.pdf</u>
- <sup>38</sup> See template at: Australian Institute for Disaster Resilience, *Handbook 3: Managing Exercises Second Ed,* op.cit., p.7.
- Australian Institute for Disaster Resilience, Handbook 3: Managing Exercises Second Ed., op.cit., p.62.
- For guidance, refer to Module 3: *Queensland Disaster Coordination Centre Participant Guide version 3.1.* Refer to: http://www.disaster.gld.gov.au/Disaster-Resources/Documents/QDMTF.pdf
- <sup>41</sup> Office of the Inspector-General Emergency Management, *Discussion Paper 1: Evaluation of Emergency Management Training and Exercise Arrangements.* Queensland Government, 2014, <u>https://www.igem.qld.gov.au/reports-and-publications/documents/Discussion Paper 1-2014 15 WEB.pdf</u>, accessed December 2015.
- <sup>42</sup> For commitments to engage with communities, refer to: Queensland Police Service, Queensland Police Service Strategic Plan 2010–2014, Queensland Government, 2010, <u>https://www.police.qld.gov.au/corporatedocs/reportsPublications/strategicPlan/Documents/Strategic%20Plan\_2010-2014.pdf</u>, accessed March 2016; and Department of Community Safety, Department of Community



<sup>&</sup>lt;sup>18</sup> Op.cit., p.26.

Safety Strategic Plan 2010-2014, Queensland Government, 2010, <u>http://www.emergency.qld.gov.au/publications/pdf/DCS\_Strategic\_Plan\_2010-2014.pdf</u>, accessed March 2016.

- <sup>43</sup> Refer to: s18(e) and (i); s21C(b) and (d); s21E(b) and (d); s23(c),(e), (k), and (n); 26(c); s28D(c); s30(d),(g), (j) and (l); s34A(c); 36(b); s44(2); s46; s47; s48, s48A(2).
- <sup>44</sup> *Queensland State Disaster Management Plan,* op.cit., p19.
- <sup>45</sup> Ibid.
- <sup>46</sup> Queensland Local Disaster Management Guidelines, op.cit., p21.
- <sup>47</sup> Refer to Recommendation 2.7 of: Queensland Flood Commission of Inquiry, Queensland Flood Commission of Inquiry: Interim Report, 2011, <u>http://www.floodcommission.qld.gov.au/\_\_data/assets/pdf\_file/0006/8781/QFCI-Interim-Report-August-2011.pdf</u>, accessed December 2015.
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# Appendix One: Formal reviews and inquiries' findings and recommendations

The following are findings and recommendations regarding disaster management exercises from formal reviews and inquiries:

Natural Disasters in Australia: Reforming Mitigation, Relief and Recovery Arrangements<sup>1</sup>, 2002 (published 2004)

(Page 36) Eight principles of disaster recovery, adopted by Australia's disaster recovery coordinators, provide that disaster recovery is most effective when...recovery personnel are supported by training programmes and exercises.

(Page 65) The following priority strategies would enhance the national capability to manage catastrophic disasters: ...

(b) conducting scenario based national catastrophic disaster management exercises on a regular basis to test the national response

*Review of Australia's Ability to Respond to and Recover From Catastrophic Disasters*<sup>2</sup>, 2005

(Page 16) ... ensure that the events against which capability are measured are credible, although rare. It was not considered appropriate to simply assume that by transferring a catastrophic event from another part of the world to Australia and measuring capability against identical impacts that we would deliver a reliable picture of the country's true capability

Report on Review of Disaster Management Legislation and Policy in Queensland<sup>3</sup>, 2009

(Page v) Key stakeholders who need to be involved in planning processes and in exercises at Local, District and State levels were not always available for these purposes. This could compromise the quality of plans and the level of preparedness at all levels of the system.

(Page 49) The QPS does have depth of Commissioned Officers (over 200) who are all trained in Disaster Management locally and nationally. They are best placed to fulfil DDC roles on a 24/7 basis during disaster events and during non-disaster periods when time is to be devoted to planning, training, conduct of exercises and continuous improvement at District level.

(Page 78) Some Chairs of Local Disaster Management Groups were insufficiently conversant with the State's Disaster Management arrangements to lead the groups in their important stewardship role in respect to the adequacy of Local Disaster Management preparedness, plans, training and exercises.

(Page 80) 7.4.9 Under-estimation of Resource Requirements

The activation of a Coordination Centre requires many people with specified roles and responsibilities and a depth of backup. This means trained people who know their job well

http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan024728.pdf, accessed December 2015.

http://www.emergency.gld.gov.au/publications/pdf/consultants%20dm%20report%20final.pdf, accessed December 2015.

<sup>&</sup>lt;sup>1</sup> Council of Australian Governments (COAG) High Level Group on the Review of Natural Disaster Relief and Mitigation Arrangements, *Natural Disasters in Australia: Reforming Mitigation, Relief and Recovery Arrangements.* Australian Government, Department of Transport and Regional Services, 2004,

<sup>&</sup>lt;sup>2</sup> Catastrophic Disasters Emergency Management Capability Working Group, *Review of Australia's Ability to Respond to and Recover From Catastrophic Disasters*. Australian Emergency Management Committee, 2005,

https://www.ag.gov.au/RightsAndProtections/FOI/Documents/Review%20of%20Australias%20Ability%20to%20Respond%20to %20and%20Recover%20from%20Catastrophic%20Disasters%20-%20Report%20October%202005.pdf, accessed December 2015.

<sup>&</sup>lt;sup>3</sup> O'Sullivan, J. and the Consultancy Bureau Pty Ltd, *Report on Review of Disaster Management Legislation and Policy in Queensland*, Queensland Government, 2009,

enough to operate in a crisis situation sufficient to work a 24 hour shift rotation for days and possibly weeks. Desktop exercise may not sufficiently replicate the reality of operations, even for larger Regional Councils.

(Page 81) The review, from all of its consultation, concludes that planning at Local level has improved in recent years but now requires updating and testing through exercises with District and State levels to ensure robustness and to elevate it to a higher level. Once the response phase of a disaster is concluded, Council staff may be fatigued. However, recovery demands and the reality that normal business has been unattended during the disaster, results in their return immediately to another stressful situation. Business continuity planning is a necessary part of disaster planning and readiness including the means to deliver essential public services during and following a disaster event.

Individual Local Governments are satisfying their obligations to plan and rehearse Disaster Management within their own boundaries. They do not always have the capacity to arrange exercises with surrounding Councils and Disaster Districts. EMQ has the role of ensuring that adequate levels of preparedness are achieved through such exercises.

#### Victoria Bushfires Royal Commission, 2009

(Page 73) The Commission considers that if an IMT can train together as a unit before a major event, that IMT will be in a better position to develop effective teamwork skills for coping in the high-pressure situation of managing a level 3 fire. The fire agencies should provide as many opportunities as possible for joint level 3 IMTs to form, practise and train. Mr John Haynes, CFA Deputy Chief Fire Officer, described a 'strong history' of the CFA and DSE conducting joint training exercises and other activities. The CFA does not, however, prescribe the level of participation in joint training exercises required of members. In view of the vital importance of joint training, the CFA and DSE should prescribe the minimum number and the nature of joint training exercises in which personnel (including volunteers) must participate in order to maintain their accreditation to fulfil roles in a level 3 IMT. Compliance with the prescribed minimum should be monitored through annual audits of attendance

Recommendation 9: The Country Fire Authority and the Department of Sustainability and Environment prescribe and audit the minimum number and nature of level 3 joint training exercises in which incident management team staff (including volunteers) are required to participate.

Queensland Floods Commission of Inquiry Interim Report<sup>4</sup>, 2011

Recommendation 2.7: Seqwater should ensure all staff and engineers who may be involved in flood operations are involved in formal training exercises which address the full range of possible operating situations

Recommendation 3.11: *Emergency Management Queensland should endeavour to ensure that before the next wet season:* 

• training is provided to those involved in disaster management at the local and district levels to ensure that the respective roles of all agencies, and in particular local government and the Queensland police, during an event are clearly understood

• training is provided to all local disaster co-ordinators

training is provided to SES volunteers

• local disaster management groups are given practical training based on the event of largescale flooding across different local government regions (as in Exercise Orko).

Recommendation 5.56: Each council with a memorandum of understanding with the

<sup>&</sup>lt;sup>4</sup> Queensland Floods Commission of Inquiry, *Queensland Floods Commission of Inquiry Interim Report*, Queensland Government, 2011, <u>http://www.floodcommission.gld.gov.au/publications/interim-report/</u>, accessed March 2016.

Australian Red Cross should consider undertaking practice exercises with the Australian Red Cross to ensure both parties understand their respective roles and responsibilities.

Victorian Review of the 2010–11 Flood Warnings and Response Final Report<sup>5</sup>, 2011

Recommendation 49: The state ensure that sector wide familiarity and understanding of the various systems for incident management is developed and maintained. Primarily, this should be achieved through multi-agency emergency management training and exercising involving usage of the various agency incident management systems.

Recommendation 58: *The state:* 

- revise the Emergency Management Team Practice Note to include a template to ensure an appropriate and consistent approach to Emergency Management Team operations
- provide the revised Emergency Management Team Practice Note to all stakeholders to enable familiarisation; and
- ensure that there is regular exercising of Emergency Management Teams with an `all hazards' focus.

Recommendation 59: The state ensure... a regime of regular Municipal Emergency Coordination Centre exercising is introduced with oversight by an appropriate independent body. Such exercising should include testing of systems utilised for Incident Control Centre and Municipal Emergency Coordination Centre communications

Recommendation 64: The state... ensure an appropriate regime of regular emergency management training and exercising is introduced. This must be 'all hazards' and multi-agency focused and include all relevant stakeholders

Recommendation 66: The state undertake major reform of Victoria's emergency management arrangements to bring about an effective 'all hazards, all agencies' approach, incorporating ...regular joint training and exercising by all agencies

Sustaining the unsustainable: Police and Community Safety Review Final Report<sup>6</sup>, 2013

(Page 43) ... for successful State Disaster Coordination Centre operations, a unified approach is essential, with all parties responsible for contributing to the outcome being equally engaged. Failure to be able to assure that all necessary and appropriate resources for this capability have been identified, trained and exercised is a significant vulnerability which has the capacity to directly impact the Queensland community.

(Page 44) Of critical importance is the need for even greater interoperability between the current Queensland Fire and Rescue Service, Emergency Management Queensland and the Queensland Police Service along with other agencies of Government. This will require interoperable systems, training and exercises particularly on the part of the Queensland Police Service at the State, district and local levels.

(Page 132) March 2013 Emergency Management Queensland's post event analysis for Ex-Tropical Cyclone Oswald found the following in relation to disaster management training:

- "Currently there are no role descriptions or supporting training programs that are offered to Emergency Management Queensland staff who are deployed to provide assistance to local and district disaster management groups, and limited training to those supporting the State Disaster Coordination Centre."
- "Training and other capability development programs offered by Emergency Management Queensland under the Queensland disaster management arrangements framework in some locations are not to the expectation of local

<sup>&</sup>lt;sup>6</sup> Keelty M, Sustaining the unsustainable: Police and Community Safety Review Final Report, 2013, <u>http://statements.qld.gov.au/Content/MediaAttachments/2013/pdf/Police%20and%20Community%20Safety%20Review%20Re</u> port.pdf, accessed March 2016.



<sup>&</sup>lt;sup>5</sup> Comrie N, *Victorian Review of the 2010–11 Flood Warnings and Response interim report.* Victorian Government, 2011, <u>http://www.floodsreview.vic.gov.au/about-the-review/final-report.html</u>, accessed December 2015.

government, and they seek a more locally based, risk lead approach to capability development."

• "There is a lack of policy, procedure, training and support for the SES State Operations Centres..."

(Page 146) The Review team considers that good disaster management planning and exercising should mean that local governments are aware of the point at which assistance will be required, thus enabling disaster managers to make timely and considered requests for assistance.

(Page 154) The creation of the Inspector General Emergency Management is critical to identifying and overcoming deficiencies in planning and exercising

# Appendix Two: P<sup>2</sup>OST<sup>2</sup>E

Definitions of P <sup>2</sup> OST <sup>2</sup> E force capability elements			
People	roles, responsibilities and accountabilities, skills		
Process	plans, policies, procedures, processes		
<b>O</b> rganisation	structure and jurisdiction		
<b>S</b> upport	infrastructure, facilities, maintenance		
Technology	equipment, systems, standard, interoperability, security		
Training	capability qualifications, skill levels, courses		
<b>E</b> xercise Management	Exercise development, structure, management, conduct		

FEEDBA

# Appendix Three: Stakeholder feedback

The following are excerpts from stakeholder feedback reproduced with permission

Livingstone	'I suggest the addition under the dot point QFES to not only develop guidelines but also be more responsible via the Emergency Management Unit of QFES to design and plan these exercises.'
Burdekin Shire Council	'I believe if an exercise program was designed and managed by QFES or IGEM and rolled out each year during May to October there would be better commitment to participate in the exercise by Local Governments (core members) than arranging to run them in house ourselves. I know from experience organising an exercise can take quite a lot of time and effort. I believe they are necessary to keep our skills and awareness at the forefronts of our minds and to keep looking for best practices and improve community safety and awareness.'
CHARTERS TOWERS	'Council will continue to work with Queensland Fire and Emergency Services in respect to exercises and ensure that its reporting following the exercises is in accordance with the audit headings that Council's Disaster Management Plan is audited against.'
regional council	Council has reviewed your discussion paper, and we are agreeable'.
	"exercises are resource intensive - they take a lot of time to plan and deliver. The scale of the exercise will likely dictate what documentation / evidence is produced (e.g. I wouldn't expect the same level of documentation for a 30 minute discussion exercise as I would for a functional LDCC exercise) but there should be a minimum documented so aim of exercise, objectives, scenario, stakeholders / participants, evaluation strategy, lessons identified.

Queensland Government Department of Communities, Child Safety and Disability Services	'The Department Communities, Child Safety and Disability Services welcomes the focus on maturation of exercising across the disaster management domain and in particular exercising within and across the recovery pillars and the various interfaces with regards to escalation within the levels of the disaster management arrangements and with the interface between response and relief phase and the transition to early recovery. The 2015 review of community recovery operations similarly identified the need to develop and implement an annual program of exercises to improve practice and interoperability especially in respect to the nexus between the department, key stakeholders and partners in coordination within and across recovery pillars and in the provision of services to disaster impacted people. The first annual exercise program that includes key stakeholders that interact with the Human and Social recovery function will be developed and ready for implementation by June 2017.'
Queensland Government Department of Education and Training	<ul> <li>'The report identifies a range of issues that many agencies are grappling with including:</li> <li>The ongoing need for departments to increase their capability and capacity to undertake internal exercises and to integrate with other stakeholders for training but within the broader state framework;</li> <li>The benefits of maintaining of a Lessons Learnt Log;</li> <li>The importance of providing ongoing training for relevant Agency staff to ensure that during an emergency or natural disaster, everyone has a clear understanding of their roles and responsibilities; and</li> <li>The need to continue to develop greater understanding of the Disaster Management Act 2003 (Section 16) to ensure compliance.'</li> </ul>
Queensland Government Department of Transport and Main Roads	'TMR has no further comments relating to the report's observations however have identified some actions we will undertake to improve disaster preparedness exercises and post exercise learnings in the future.'
SEENSC PERSONNEL	<ol> <li>Exercise practitioners should consider the observations contained within this report to enhance exercise management.</li> <li>Exercise practitioners should work with Queensland Fire and Emergency Services to develop guidelines and training that address gaps in doctrine, and draw on the approaches of other jurisdictions and disciplines.</li> <li>We are working closely with Queensland Fire and Emergency Services to ensure exercise methodologies are consistent.</li> </ol>