CDEM Exercises

Director's Guideline for Civil Defence Emergency Management Groups [DGL 010/09]

Resilient New Zealand
Aotearoa Manahau

CDEM Exercises

Director's Guidelines for Civil Defence Emergency Management (CDEM) Groups [DGL 10/09]

Authority

This guideline has been issued by the Director of Civil Defence Emergency Management
pursuant to s9(3) of the Civil Defence Emergency Management (CDEM) Act 2002. It provides assistance
to CDEM Groups in the development of exercises.

The Ministry of Civil Defence & Emergency Management (MCDEM) consulted with CDEM Groups in producing
this guideline.

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Contents

Foreword

The National Civil Defence Emergency Management Strategy states the vision for Civil Defence Emergency Management (CDEM) as building: "Resilient New Zealand – communities understanding and managing their hazards"

The Strategy acknowledges that not all risks can be reduced to zero but it emphasises managing the consequences.

The Strategy requires central government agencies, local government, the emergency services, lifeline utilities and businesses work together to ensure mechanisms are in place for communities to manage their hazards, generate readiness, to provide local response and recovery, and to support continued functioning of communities during an emergency.

Exercising is a core part of readiness and assists in identifying gaps and issues. The lessons identified are integrated into updated plans and procedures that improve the ability to respond to and recover from an emergency.

While this guideline is aimed at CDEM sector personnel, other emergency management practitioners in New Zealand who develop and manage exercises may find this guideline useful.

This guideline has been informed by the practices and experiences of a national working group representative of Emergency Management personnel from National and CDEM Group levels.

John Hamilton

Director of Civil Defence Emergency Management

Executive summary

This guideline is for use by personnel tasked with developing and managing Civil Defence Emergency Management exercises to assist them in meeting the requirements of the National CDEM Plan 2005 and the Guide to the National CDEM Plan. It may also be of use to those performing similar roles and functions within other agencies.

This guideline provides a range of practical advice and templates for exercise developers to:

- analyse the need for an exercise
- design an exercise
- conduct an exercise, and
- evaluate an exercise.

The purpose of the guideline is to provide general advice when designing either large, multi agency or small single agency exercises. Because this document provides general advice only, it must be read in conjunction with CDEM Group and local authority plans, policies and procedures.

Introduction

Purpose of this guideline

Exercises are an integral part of training and preparing agencies to carry out their functions in real emergencies. The purpose of this guideline is to support personnel tasked with developing and managing Civil Defence Emergency Management exercises.

The guideline outlines a practical framework that can be applied to simple or complex exercises in a variety of settings by either a single agency or by a group of agencies. Exercise developers are provided with a series of processes and templates that can be modified to suit local needs.

Whilst this guideline has a CDEM focus the principles of exercise development and management are generic and may be used in other areas.

How to use this guideline

This guideline is written so that whenever possible information is not duplicated. In order to achieve this, other documents have been referenced throughout.

This guideline provides a range of practical advice and templates, along with references for further reading.

Quick reference icons are used throughout the document and are explained below:

This icon represents **advice** that could be useful when developing an exercise.

This icon represents a **template** that can be found as an Annex.

This icon represents **further reading** and points the reader to another document for more information.

Definitions and abbreviations used in this guideline

Act The Civil Defence Emergency Management Act 2002 (CDEM Act)

Agencies Means:
- government agencies, including public service departments, non-public service departments, Crown entities, and Offices of Parliament; and
- non-governmental organisations; and
- lifeline utilities

AS/NZ4360 Australia/New Zealand risk management standard

Capability An organisation is able to undertake functions, such as provide a service or fulfil a task. This implies that it has the required staff, equipment, funding, systems and resources to do this. Organisations are likely to have a number of capabilities

Capacity The adequacy of resources in terms of quantity, and suitability of personnel, equipment, facilities and finances

CDEM Civil Defence Emergency Management

CDEM Group A Civil Defence Emergency Management Group is a group established under section 12 of the CDEM Act

Cold debrief A briefing held to review the exercise four to six weeks following the exercise. All exercise players should be invited to attend

Control documents Exercise tools that create an artificial environment and framework for an incident

Coordinating Instruction A high level document that outlines the aim, objectives, scenario overview, date and times of the exercise, and sets the scene for how the exercise will play out

Discussion A conversation involving several players

Decision Occurs when an individual or group arrives at a conclusion or makes a specific determination

Directive A specific order or direction given to one or more players

EOC Emergency Operations Centre, also referred to as Group EOC or Emergency Coordination Centre (ECC) in the CDEM context

Exercise An activity that stimulates a situation in order to test procedures and practice participants in defined roles

Exercise aim A broad statement of intent

Exercise control staff A group or person responsible for the overall conduct of an exercise

Exercise Coordinator A person responsible for the exercise throughout its entire development process, including management of administration and logistical matters

Exercise Director A person responsible for supervising the speed and flow of an exercise and addressing any issues during the exercise

Exercise governance group A group of senior officials from the agencies taking part in the exercise. This group is responsible for signing off the exercise purpose statement and commits resources to the exercise (this role may be fulfilled by an exercise sponsor in a small exercise)

Exercise planning team A group of people responsible for the successful execution of all aspects of the exercise, including exercise planning, conduct and evaluation

Exercise programme A series of 'linked' exercises

Definitions and abbreviations used in this guideline

Exercise sponsor A senior person responsible for signing off the exercise purpose statement and commits resources to the exercise. (This role may be fulfilled by an exercise governance group in a large exercise)

Evaluator A person assigned to observe and evaluate selected objectives during an exercise

General Instruction A detailed document that outlines the administrative arrangements for an exercise specific to a particular agency

Hot debrief A briefing held immediately after an exercise

Inject Information: (including directives, instructions, and decisions) provided by exercise control staff to exercise players in order to drive exercise play towards the achievement of objectives

Key performance indicators (KPI) Tools used to help an agency define and measure progress toward objectives

Master schedule of events A detailed list of events that are scheduled to occur during the exercise

MCDEM Ministry of Civil Defence & Emergency Management

Movement Occurs when an individual, group, or piece of equipment relocates

Needs assessment A process used to quantify an agency's development needs

No duff A term used to describe a real event that occurs simultaneously to an exercise

Objectives A set of measurable actions or outcomes to be realised by conducting an exercise

Observers Internal or external agency personnel invited to view the exercise but do not participate. External observers report lessons identified and outcomes back to their agency

Participants A term that refers to all control staff, players and observers

Players Participants who have to perform for real by receiving and responding to incoming messages or injects supplied by simulators

Project management The planning, organising and management of resources to successfully complete specific project goals and objectives

Purpose statement A statement that describes the intent of the exercise and how it will be managed

RAPID® RAPID Response & Preparedness in Disasters®

Risk A combination of the likelihood and the consequence of a hazard

Scenario A narrative that describes an event that exercise participants need to resolve

Scope The limitations applied to an exercise

SOPs Standard operating procedures – these detail the procedures and other activities used to perform various tasks

Task Achieved when an individual or group performs a specific, clearly definable action or function, such as checking patient status or performing a radio check

The Guide The Guide to the National CDEM Plan

The Plan The National CDEM Plan Order 2005

Umpire A person who monitors the flow of an exercise

VIP Very important person

Section 1: Introduction to exercising

Overview

Introduction

Exercises are defined as activities that consider or simulate a real life situation so that an agency is able to review or test procedures and practice participants in defined roles.

Why exercise?

Agencies use exercises to evaluate their capability to execute one or more components of their response or recovery capability.

Local authorities, emergency services, local utility providers, government agencies and other local partner agencies work, plan, train, exercise and respond together. Research shows that people generally respond to an emergency the way that they have trained. As real life events do not occur that often, exercising is a good way to measure the effectiveness of plans and allow staff an opportunity to practice their skills against a scenario or in a simulated emergency environment.

Exercises can vary in size and complexity and provide an opportunity to:

- improve operational readiness
- identify planning weaknesses
- identify resource gaps
- improve interagency coordination and communications
- provide training
- clarify roles and responsibilities
- evaluate plans, policies and procedures
- test equipment
- improve individual performance
- demonstrate capability
- develop the knowledge, skills and enthusiasm to participate in emergencies
- gain public recognition of emergency programmes and promote public awareness.

It is important that an agency determine what its needs are and whether an exercise will satisfy those needs, or whether objectives can be met through alternative activities.

Exercise development cycle

Introduction

Multi-year planning, agency engagement, and resource management are essential ongoing processes that provide the basis for the planning, conduct and evaluation of exercises. The success of individual exercises relies on the execution of four distinct stages, which are collectively known as the exercise development cycle: analyse the need, design the exercise, conduct the exercise and evaluate the exercise.

Exercise development cycle

The exercise development cycle applies to all types and levels of exercise regardless of an agency's size or budget.

The process is designed to be flexible enough to meet the unique needs of the agency using it. Therefore, each milestone should be designed, tailored and applied in a manner that suits the agency's specific objectives and capabilities.

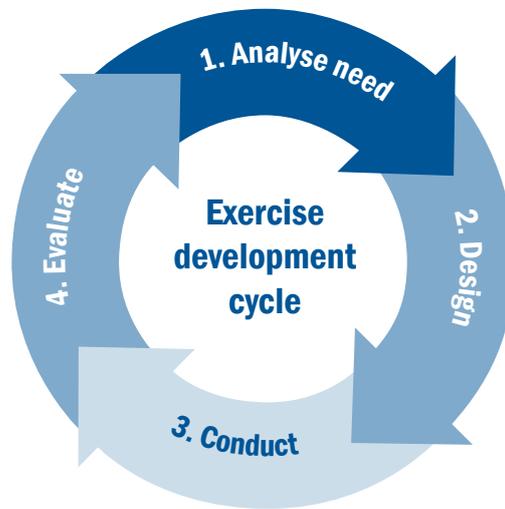Each stage of the exercise development cycle is discussed in detail in this guideline.

Figure 1: Exercise development cycle

CDEM exercising in New Zealand

The delivery of CDEM in New Zealand is based on a devolved accountability approach with CDEM responsibilities at all levels of government, including central and local government, the emergency services and lifeline utilities. The expectation on government agencies, local authorities and others in response to emergencies is contained in the CDEM Act 2002 and the Guide to the National CDEM Plan.

Refer to clause 58 of the National CDEM Plan Order 2005

Clause 58 of the National CDEM Plan Order 2005 mandates the establishment of a National Exercise Programme.

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58 Exercise programmes

(1) *A national civil defence emergency management exercise programme is a means by which the operational capability of agencies, and CDEM Groups and their partners, such as lifeline utilities, may be tested in relation to civil defence emergency management (details of the programme are set out in The Guide).*

(2) *The national exercise programme—*

　(a)　*is supplemented by regular agency and local exercises; and*
　(b)　*seeks to exercise the operational arrangements within this plan, CDEM Group plans, and departmental emergency management plans so as to—*
　　(i)　*improve response at group and national levels; and*
　　(ii)　*assess the readiness of participants.*

Section 17 of the Guide to the National CDEM Plan sets out the details of the programme.

National exercise programme

The Ministry of Civil Defence & Emergency Management (MCDEM) is the overall National Exercise Programme sponsor. The programme is owned collectively by the 16 CDEM Groups and managed through a representative governance group.

The programme recognises that exercising needs to occur at all levels of the CDEM structure. A four-tier approach to exercising has been adopted. Each tier is expected to be based on and informed by a consistent regime of planning, observation, evaluation, feedback and continuous improvement.

Tier	Description
1	Local exercise (individual organisation)
2	Group exercise (with CDEM Group)
3	Inter-Group exercise (across CDEM Groups, may include MCDEM)
4	National exercise (New Zealand or part thereof, including central government)

Figure 2: National Exercise Programme tier structure

Exercise programmes

A series of linked exercises can be run simultaneously. These are best managed as individual activities within an exercise programme.

The goal in exercise design is to establish a comprehensive exercise programme where each exercise builds on the previous one to meet specific operational goals.

Exercise programmes are established to provide opportunities for individuals to practice their roles and responsibilities and gain experience in the exercise environment, and

to continually improve an agency's systems for managing emergencies. Each exercise should be evaluated and recommendations acted upon for continuous improvement.

Developing and maintaining an exercise programme is a way of managing a variety of exercises scheduled over time and includes project management, multi-year planning, budgeting, funding allocation and expenditure tracking.

Effective exercise programmes

A well designed exercise programme focuses on continuous improvement and uses different types of exercise to meet agency objectives and exercise programme goals.

Multi-year plans build capabilities by using a step-by-step approach where planning and training are linked to exercise activities that get more complex over time.

Multi-year plans should be reviewed once a year to reconfirm the exercise schedule and to share lessons identified and recommendations for improvement. Representatives from all agencies involved are expected to provide resources and personnel toward the activities scheduled.

For an exercise programme to be effective it needs to be agreed by all agencies involved and these agencies must buy into the programme. This includes financial contributions being determined early in the programme development.

Exercise schedule or calendar

An exercise schedule or calendar illustrates what exercises are planned for an agency or group of agencies over a given period. It should include the following:

- exercise date
- exercise type
- exercise name
- agencies involved
- exercise purpose statement.

MCDEM collates and displays exercises that form part of the National Exercise Programme. The National Exercise Programme calendar can be found on the MCDEM website (www.civildefence.govt.nz): Home → For the CDEM Sector → CDEM Exercises

Analyse the need

All exercises emerge from an identified need. A needs assessment should be conducted to identify whether an exercise activity is required.

A needs assessment is carried out to:

- understand an agency's requirements
- identify issues
- establish the reasons to do an exercise
- identify the functions to be exercised.

Analysing the need helps to define the aim and objectives and will help to choose the appropriate development activity, which may include an exercise.

How to conduct a needs assessment

Follow these steps to conduct a needs assessment.

Step	Action
1	**Review your agency's emergency management plans, addressing:** • What hazards and risks is the agency most likely to face, and what are the priority levels of these? • What area(s) are most vulnerable? • What functions or components in the plan need some practice? • What are the agency's current priorities?
2	**Consider past exercises** • When were particular functions or aspects last exercised and what type of exercise was conducted? • Who (staff/agencies) participated in the previous exercise(s) and who did not? • To what extent were previous exercise objectives achieved? • What lessons were identified? • What problems were identified, and what was needed to resolve them? • What improvements were made following the past exercise(s), and have they been tested?
3	**Identify available resources** • Is there a budget to deliver the exercise? • Does the agency have the resourcing to design the exercise, and what staff and time commitment will be required to do this? • What are the agency's liabilities? (e.g. lack of trained staff) • What limitations could the agency face in developing or delivering the exercise?
4	**Review the findings** - the needs assessment should reveal the following issues if they exist: • primary and secondary hazards that the agency faces • issues that need to be resolved • issues that recur • skills that need to be practiced • functions that are weak or uncertain • improvements made that need to be tested • new facilities, personnel, or equipment that have not been included in an exercise before • weaknesses (such as gaps, conflicting policies, or vague procedures) in the emergency plan or the standard operating procedures • the need to clarify exercise coordination and working with other agencies • the need for a certain type of exercise • budgetary and resourcing issues • risks.

Types of exercise

Introduction

Exercises vary from simple to very complex. Five types of exercise are described in this section. The type of exercise adopted will depend on what an agency's requirements are as identified often through the needs assessment process.

Orientation exercise

An orientation exercise may also be referred to as a 'walk through'. It puts people in a place where they would work during an event, or uses them as participants in a demonstration of an activity. This type of exercise is used to familiarise the players with the activity.

Example:
Setting up a mock welfare centre, and walking staff through how it is organised.

Drill exercise

In a drill exercise staff physically handle specific equipment or perform a specific procedure. The exercise usually has a time frame element and is used to test the procedures.

Example:
Activating an emergency operations centre or using alternative communications (such as radios).

Tabletop exercise

A tabletop exercise may also be referred to as a 'discussion exercise', or 'DISCEX'.

Participants are presented with a situation or problem that they are required to discuss and formulate the appropriate response or solution. Normally, the exercise requires no simulation other than a scenario and/or prewritten exercise injects. This type of exercise is used to practice problem solving and coordination of services with or without time pressures. There is no deployment or actual use of equipment or resources.

Example:
Participants discuss their response to a tsunami threat to a particular area, where the only injects are Tsunami Bulletins, Watches or Warnings from the Pacific Tsunami Warning Centre in Hawaii, describing the nature of the threat.

Functional exercise

A functional exercise may also be referred to as an 'operational' or a 'tactical' exercise. It takes place in an operational environment and requires participants to actually perform the functions of their roles.

A normally complex response activity is simulated, which lacks only the people "on the ground" to create a full-scale exercise.

Participants interact within a simulated environment through an exercise control group who provide prewritten injects and respond to questions and tasks developing out of the exercise.

Functional exercises normally involve multi-agency participation (real or simulated) and it can focus on one or many geographical areas.

This type of exercise is used to practice multiple emergency functions e.g. direction and control, resource management and communications.

Example:
A multi-agency response to extensive flooding, where evacuation of a settlement is required. Messages and injects are provided by exercise control and are handled by the participants in the way described in appropriate plans and procedures. Outcomes are generated that would be expected in a real situation.

Types of exercise

Full scale exercise

A full scale exercise may also be referred to as a 'practical' or 'field' exercise. These include the movement or deployment of people and resources to include physical response 'on the ground' to a simulated situation.

They can be 'ground' focused only or may include the higher level response structures, and they can be simple (single agency) or complex (multi agency).

These exercises are typically used to test all aspects of a component of emergency management.

Example of a simple full scale exercise:
Deployment of a small team to a simulated car crash or industrial rescue by a single agency, using real rescue equipment.

Example of a complex full scale exercise:
An airport incident with volunteers portraying 'victims' and the emergency services using real rescue equipment at the scene. Coordinated, multi agency response to the event is exercised.

Purpose and characteristics of exercise types

Exercise purpose   The following table gives an overview of the purpose of the different exercise types.

Exercise type	Purpose
Orientation	No previous exercise No recent operations New plan New procedures New staff or leadership New facility New risk Personnel training
Drill	Assess equipment capabilities Test response time Personnel training Assess interagency cooperation Verify resource and staffing capabilities
Tabletop exercise	Practice group problem solving Promote familiarity with plans Assess plan coverage for a specific case study Assess plan coverage for a specific risk area Examine staffing contingencies Test group message interpretation Assess interagency or interdepartmental coordination Observe information sharing Personnel training (usually of staff with equal status or functions)
Functional exercise	Evaluate a function Evaluate or test physical facilities use Reinforce or test established policies and procedures Assess preparedness Test seldom-used resources Measure resource adequacy Assess and strengthen inter-jurisdictional or interagency relations Support policy formulation
Full scale exercise	Assess and improve an operational activity Assess and improve interagency cooperation Strengthen interagency relations Assess negotiation procedures Test resource and personnel allocation Manage the public and media Assess personnel and equipment locations Test equipment capabilities

Table 1: Purpose of exercise types

Purpose and characteristics of exercise types

Exercise characteristics   Table 2 provides an overview of the characteristics of each exercise type.

	Exercise type				
	Orientation	**Drill**	**Tabletop**	**Functional**	**Full Scale**
Format	Informal discussion in group setting. Various presentation methods.	Actual field or facility response of a specific element or function. Actual equipment is used or a physical action performed.	Group discussion of a scenario or problem. Presented narrative scenario. Players note or present their solutions or outcomes.	Players respond to a scenario in real or condensed time and in a realistic environment. Narrative scenario facilitated by exercise control. Players are evaluated. Interactive and complex.	Players respond to a simulated enactment in real time. Visual narrative, players exercise at impact site(s). Actions at scene serve as input to EOC simulation. Interactive and simple or complex
Leaders	Manager, supervisor, department head, or exercise coordinator	Manager, supervisor, department head, or exercise coordinator	Facilitator	Exercise Coordinator	Exercise Coordinator
Players	Single agency/ department, or cross-functional staff	Functional staff	Normally staff of the same level with a response role for the type of situation	All staff with response roles for that function	All or specific staff with response roles
Facilities	Conference room	Facility, field, or EOC	Conference room or syndicate rooms	EOC or other operating centre (multiple rooms)	Realistic 'on the ground' setting, EOC or other operating centre
Time (typical)	1–2 hours	1–4 hours	2–4 hours or longer, up to 3 days	4 hours up to 1 or more days	2 hours up to 1 or more days
Preparation	Simple preparation, 1 week. No participant preparation.	Simple preparation, 1–2 weeks. Participants need orientation.	Complex but inexpensive preparation, 1–3 months. Preceded by orientation and potentially 1 or more drills.	Complex and expensive, 6–18 months preparation. Preceded by simpler exercises. Significant allocation of resources.	Expensive due to extensive time, effort, and resources. 6–18 months preparation. Preceded by preparatory drills, tabletops, functional exercises.

Table 2: Characteristics of exercises

Select an exercise name

Introduction

Ideally an exercise should have a name. When naming an exercise consider whether there is a name that reflects the meaning or theme of the exercise.

Select an exercise name

Exercise names may be derived from myths or legends. For example, 'Exercise Ruaumoko' was based on a scenario of a volcanic eruption located within the Auckland Volcanic field in the wider Auckland metropolitan area. According to Māori legend 'Ruaumoko' is the guardian of earthquakes and volcanoes.

Exercise names may also be derived from scenario details. For example, 'Exercise Paradise' was based on an earthquake scenario at the Paradise Valley west of Lake Wakatipu.

Agencies may have various exercise naming conventions. Whatever the selection process, the exercise name should reflect or compliment the exercise theme.

Exercise logo

Large, complex exercises in particular may have a logo developed which may be used on all exercise documentation.

Exercise purpose statement

Introduction

Senior agency officials should be briefed in advance of exercises, particularly large complex ones, to gain their support and to ensure that they understand how the exercise will meet their objectives.

An exercise governance group is made up of senior officials from the agencies taking part in an exercise. An exercise sponsor is a senior official from a single agency conducting an exercise. These senior officials or executives often have the ability to encourage participation from potential exercise players and planning team members.

Exercise purpose statement

Often formal sign off is required from the exercise governance group or sponsor and participating agencies taking part. An exercise purpose statement can be used as a briefing document because it describes the intent of the exercise and how it will be managed. It provides the focus and direction for the exercise, identifies who will participate and why the exercise is being held.

Once the governance group or sponsor signs off on the concept outlined in the purpose statement, they will make available the required personnel and other resources required to effectively develop and deliver the exercise.

How to write an exercise purpose statement

Follow the steps below to write an exercise purpose statement:

Step	Action
1	**Outline the intent of the exercise**. This should include a summary of the: • aim and scenario • dates and location(s) • exercise type • lead agency and participating agencies • budget commitment(s) towards the exercise
2	**Outline the governance structure** (applicable to the type and complexity of the exercise) including: • **Exercise governance group or sponsor** (the appropriate position(s) to commit budget and resources in the agency leading the exercise) • **Exercise Director** (the person that will have overall responsibility for the exercise) • **Exercise Coordinator** (appointed by the Exercise Director and responsible for the overall management of the exercise, including the planning, conduct, evaluation and post exercise reporting) • **Exercise planning team**[1] (a representative of each participant agency appointed to the planning team) • **Other key appointments**[2], depending on the type and complexity of the exercise. **Note**: In simpler exercises the governance structure and resource appointments may be limited to the exercise governance group or sponsor, Exercise Director and Exercise Coordinator. In larger, complex exercises the Exercise Coordinator, the exercise planning team and other key appointments may form an exercise steering committee, chaired by the Exercise Coordinator and reporting to the Exercise Director.
3	**Exercise purpose statement sign-off** The exercise governance group or sponsor, along with the heads of all the participating agencies should sign the purpose statement. This will ensure they commit themselves and their agency to the exercise and create an environment within which the exercise can be designed and conducted.

1. Depending on the type and complexity of the exercise, the exercise planning team may consist of: writing coordinator, scenario coordinator, logistics coordinator, exercise control coordinator and exercise evaluation coordinator.
2. Depending on the complexity of the exercise, other key appointments may be: safety officer, risk and damage control officer, welfare and role player coordinator, communications officer, observer coordinator and finance officer

Section 2: Design the exercise

Determine the scope

Introduction

A key to designing and conducting a successful exercise is to understand from the outset what the purpose and scope of the exercise is.

Determining the scope of an exercise means putting realistic limits on:

- the issues identified in the needs assessment
- the resources available (including finance and personnel) to be used and the functions or agencies that are expected to participate in the exercise.

The type of exercise selected will also have an influence on the scope.

The scope must be broad enough so that the objectives can be achieved and measured, and narrow enough to exclude any unnecessary activities or participation.

The scope outlines the parameters and will focus the design of the exercise to meet the needs of the exercise programme.

Determining the scope of the exercise involves analysing seven conditions relating to an agency's emergency management programme.

How to determine the scope

Follow the steps below to determine the scope of the exercise.

Step	Action
1	**Operations** Determine the type of behaviour(s) planned for the players. Will the exercise test notification, communication, resource allocation or plan user competency?
2	**Agencies involved** Determine which agencies will be involved.
3	**Personnel** Determine which personnel should participate.
4	**Hazard and risk** Select a relevant priority problem.
5	**Geographical area** Select a logical place where the hazard could occur.
6	**Degree of realism** Decide how realistic the exercise will be early in the design phase (such as the amount of stress, complexity and time pressures the exercise will generate. Exercises vary in the amount of realism they provide from none to very realistic).
7	**Date and time** Select a date and time for the exercise. Allow as much lead time as possible for scheduling and design purposes.

Determine the scope

Factors to consider

Many factors influence which areas will be included in an exercise and which will not. Sometimes one decision will influence another, for example, the functions selected will determine who participates in the exercise.

Factors to consider when defining the scope of an exercise include:

Factor	Description
Timings	How much planning time is needed or available? How long should the exercise run for? Will the exercise be held during the day or at night?
Size	How complex does the exercise need to be? How many people should be involved to develop and manage it? Which agencies need to be involved?
Location or venue	Where is the exercise being held? What size space is required? Who owns or operates the location or venue? What approvals or permissions are required? How much staging or preparation is required?
Personnel	Are there people with appropriate skills and experience to develop and manage the exercise? Are the relevant personnel available to develop and manage the exercise? Who should participate in the exercise? What are the performance standards and experience of participants?
Equipment	What equipment is required? Are there any limitations on equipment? What is the availability of equipment?
Logistics	Consider catering, transport, shelter, accommodation, storage and consumables
Costs	What costs are associated with the exercise? Who pays for what? Consider personnel costs, equipment, catering, accommodation, travel, hire, fuels and other consumables
Administration	Consider the need for electronic or paper based records, administrative staff support, identification and access control, notification of nearby residents, correspondence management and insurance issues
Statutory	Are there any legal considerations?
Cultural	Are there any cultural considerations?
Weather	Especially important in functional and full scale exercises – consider planning for contingencies in the event of adverse weather conditions

Establish a planning team

Introduction

There are significant benefits in establishing an exercise planning team.

Depending on the type of exercise, some exercises involve long planning and development periods. A team approach shares the workload across a number of staff. By selecting a planning team with a variety of skill sets it lessens the impact illness or staff departures can have on an exercise.

Establishing a foundation for successful exercising involves:

• selecting participants for the exercise planning team
• developing an exercise planning timeline with milestones
• scheduling planning meetings.

All exercises are a unique undertaking and depending on the type and size can be a disruption to an agency's normal service deliveries, particularly on the day(s) the exercise is conducted. Therefore, an exercise must be managed like any other significant project.

Project management skills (such as planning, organising and managing resources) are essential during the exercise planning process.

The exercise planning team

The exercise planning team is responsible for the successful execution of all aspects of the exercise, including exercise planning, conduct, and evaluation.

The planning team determines exercise objectives, tailors the scenario and develops documents used in the simulation, control and evaluation of the exercise.

The exercise planning team must have representatives from each major participating agency but should be kept to a manageable size. Membership of the team should be modified to suit the type and scope of the exercise.

Generally, planning team members are not exercise players. However, due to the planning team's high level involvement, members are ideal for roles such as umpire, Exercise Director and/or evaluator positions during the exercise.

Planning team structure

An exercise planning team must adhere to an organised structure. The structure can be scaled up or down according to the size of the exercise.

It is important that the planning team has clearly defined roles and responsibilities and that subject matter experts be involved during the planning process where necessary.

In large exercises, there may be a team of people carrying out various roles. In small exercises it may only be one person performing several roles.

Figure 3 on the following page outlines a sample planning team structure.

Establish a planning team
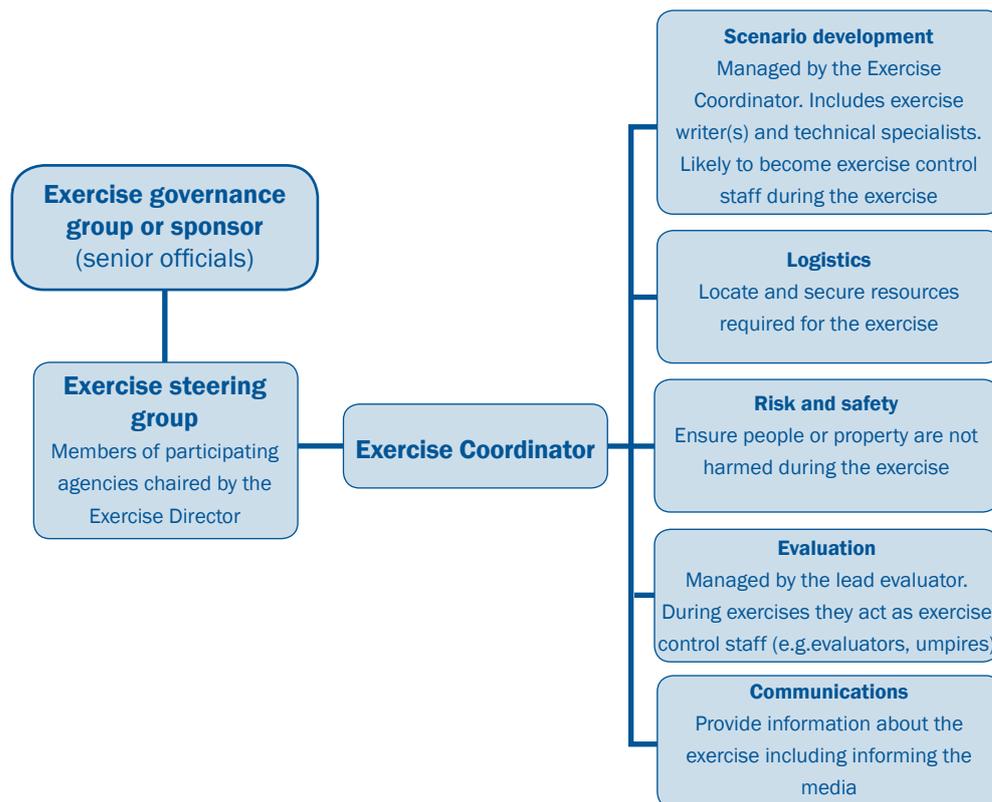
Figure 3: Sample planning team structure

Exercise governance group	An exercise governance group is used in multi-agency exercises and is made up of senior officials from the agencies taking part in the exercise. In small, single agency exercises an exercise sponsor is a senior official from the agency conducting the exercise.
	The governance group or sponsor often signs off on the exercise purpose statement and provides personnel and other resources required to develop and deliver the exercise.
Steering group	The steering group is made up of members of the agencies that will participate in the exercise.
	These members must have the authority to make decisions and commit resources to the exercise on behalf of their agency.
	The chair of the steering group should also be the Exercise Director. The steering group is responsible for determining the aim and objectives of the exercise and ensuring the exercise is developed.
Exercise Coordinator	The Exercise Coordinator is responsible for the exercise throughout its entire development process, including management of administration and logistical matters.
	In large, complex exercises involving multiple agencies the Exercise Coordinator will require assistance from an exercise planning team.
	The Exercise Coordinator should be experienced in exercise management and project management, and be capable and able to dedicate a considerable amount of time to the exercise planning cycle.

Establish a planning team

Scenario development team

The scenario development team is managed by the Exercise Coordinator and is responsible for putting the exercise together and then managing it as the exercise is played out.

In the exercise development phase the main responsibility of the scenario development team is to develop the exercise narrative, master schedule of events list, messages and injects, and a list of expected actions.

The team should include people who know how the exercise should play out. Technical specialists and subject matter experts will also be involved to help provide realistic information to the scenario and messages and injects.

Logistics team

The logistics team locates and secures any resources (including people) required to run the exercise.

They should meet regularly with the scenario development team to ensure the scenario is realistic.

During the exercise the logistics team manages everything from venues, site simulation, stationery and meals.

Risk and safety team

The risk and safety team is used predominantly in larger, more complex exercises to manage the risk of unacceptable harm or damage to people or property.

The team needs to be aware of all aspects of the scenario so that a risk assessment can be carried out and suggestions made to the scenario development team on how the risks can be mitigated.

Evaluation team

The evaluation team uses the exercise aim and objectives to determine the evaluation criteria and evaluation tools for the exercise.

The team should use a scenario development overview to check that the exercise can realistically meet the aim and objectives and that the evaluation tool is suitable for the exercise.

Communications team

Some exercises may need to be promoted or the public may need to be made aware it is happening. A communications team will be required in this instance. The communications team is responsible for:

- developing appropriate promotion and media strategies prior to the exercise
- establishing and maintaining a list of media contacts
- coordinating real-time media activities both prior to and during the exercise
- liaising with media agencies to ensure effective reporting of the exercise by media spokespeople
- monitoring and reporting media coverage of the exercise
- responding to requests for media information from exercise participants through either prepared control documents or the creation of new control documents
- meeting the media at exercise sites, and
- facilitating interviews with the media.

Establish a planning team

Establish terms of reference

Once the exercise planning team is established a terms of reference should be drafted. This forms the basis of how the exercise planning team will operate. It includes:

- an outline of the planning team's purpose and accountability
- principles and functions
- membership
- meeting cycle (frequency, who will chair the meetings, standard meeting etiquette etc).

General exercise roles

Introduction

The exercise planning team takes on additional roles and responsibilities during an exercise and these roles are collectively known as exercise control staff. This is the group responsible for ensuring that all exercise aims and objectives are achievable during exercise play.

Exercise control staff roles

Exercise control staff roles may include:

- Exercise Director
- Evaluator(s)
- Umpire(s)
- Agency representatives
- Simulators or role players
- Safety officers.

Exercise control staff responsibilities

Exercise control staff are responsible for:

- managing the exercise
- facilitating the progress of the exercise scenario through the controlled flow of information in the control documents
- representing all agencies external to the exercise including non-participating and supporting agencies notionally exercising their arrangements
- controlling and coordinating the actions of role players
- providing corrective advice to agencies to facilitate the flow of events
- ensuring appropriate risk management strategies are undertaken during the exercise
- monitoring the master schedule of events, and
- releasing control documents (when requested by exercise participants and in accordance with the master schedule of events).

Exercise Director

The Exercise Director supervises the speed and flow of the exercise and addresses any issues during the exercise. The Exercise Director does this by monitoring the master schedule of events to ensure the exercise is proceeding according to plan.

Where the exercise has unanticipated actions or resource requirements the Exercise Director determines how to maintain the exercise flow or bring it back in line. The Exercise Director is also responsible for maintaining order and professionalism during the conduct of the exercise and for any observers attending the exercise. Observers could include VIPs, invited guests and new or inexperienced staff.

On completion of the exercise the Exercise Director will be involved in the production of the end of exercise report and may have responsibilities to implement recommendations made in the report.

Evaluation team

Exercise evaluators are assigned to observe and evaluate selected objectives during an exercise. Evaluators should be subject matter experts in the field they are evaluating.

The exercise evaluators are responsible for:

- evaluating against allocated objectives and/or key performance indicators (KPIs)
- observing and assessing processes, procedures and techniques
- evaluating and reporting on achievement of outcomes and the extent to which the overall exercise objectives have been met

- evaluating the effectiveness of exercise facilitation and management, and
- providing input into the exercise debrief.

Note: An evaluator does not mentor, coach or act as exercise control.

Umpires

Umpires work on behalf of exercise control, and monitor the flow of the exercise scenario. Umpires are responsible for:

- providing corrective advice to facilitate the flow of the events
- attend briefings, and
- through observation, providing a written report outlining how identified objectives are met, what agency or procedural issues arise and consequently identifying training needs.

External agencies

External agency representatives act on behalf of their agency during both the design and delivery phases of the exercise.

Responsibilities include:

- being the main point of contact for their agency
- providing expert advice and input from the department or agency they represent
- having input into the scenario and providing control documents as required
- ensuring their agency input is consistent with that of other agencies, and the aims and objectives of the exercise, and
- responding to requests from exercise participants through either prepared control documents or the creation of new control documents.

During the delivery of the exercise agency representatives may become simulators or role players where they will respond to requests from exercise participants through either prepared control documents or the creation of new control documents.

Simulators and role players

Simulators assist exercise control staff to simulate events during an exercise. Simulators carry out the following roles:

- input the pre-scripted exercise injects and messages at specific times in a specific sequence
- simulate actions taken by groups or individuals such as agencies, members of the public, the media, higher or lower control levels.

Role players are often used in full scale exercises to represent media, personnel, patients, hostages or other characters that are physically introduced to the exercise.

It is important that both simulators and role players are well briefed and trained before the exercise commences. They need to know how much they can respond creatively to unanticipated actions by players but also the importance of not introducing free play to the exercise.

Good indexing and layout of reference materials is especially important in functional or full scale exercises.

General exercise roles

Safety officers

A safety officer must be appointed for functional or full scale exercises. The safety officer is responsible for:

- reviewing the potential for risks and hazards
- conducting site and facility inspections prior to the exercise
- controlling identified hazards and risks
- checking first aid services are available if required
- having authority to stop the exercise for safety reasons, and
- documenting all health and issues and events.

The safety officer needs to make sure that all people involved in the exercise can identify when a real emergency occurs during exercise play. This is normally identified by using the phrase 'No duff' during conversations about the emergency.

Exercise timeline

Introduction

An exercise timeline outlines the timeframes for reaching significant milestones. This is particularly important when planning major exercises. The Exercise Coordinator uses a project management approach to ensure all the steps happen in the right order.

A checklist can be useful when designing and managing an exercise. The detail contained in the checklist will differ depending on the type and size of the exercise.

A basic checklist to assist with exercise development is provided at Annex A.

Exercise timelines

Timelines will vary depending on the size and scope of the exercise and may also depend on the agency's experience in conducting exercises, available resources and exercise planning team size. Timelines can be developed and managed using a variety of tools, most commonly in Microsoft Word or Microsoft Project.

An exercise timeline:

- provides an indication of timings of significant events
- identifies conflicts in timings of activities
- allows for activities from a range of agencies to be merged into one timeline, and
- serves as the basis for the master schedule of events.

Simple exercises may be put together in a short time. However, larger, complex exercises will require much more preparation time.

The following table provides a guide for how long it should take to develop an exercise depending on the exercise type.

	Type of exercise				
	Orientation	**Drill**	**Tabletop**	**Functional**	**Full Scale**
Duration (typical)	1–2 hours	1–4 hours	2–4 hours or longer, up to 3 days	4 hours up to 1 or more days	2 hours up to 1 or more days
Preparation time	Simple preparation, 1 week. No participant preparation.	Simple preparation, 1 – 2 weeks. Participants need orientation.	Complex but inexpensive preparation, 1 - 3 months. Preceded by orientation and potentially 1 or more drills	Complex and expensive, 6–18 months preparation. Preceded by simpler exercises. Significant allocation of resources	Expensive due to extensive time, effort, resources. 6-18 months preparation. Preceded by preparatory drills, tabletops, functional exercises

Table 3: Estimated planning time required for different exercise types

Compressed or real time

It is also important to consider whether the exercise will run in real time or whether events will be compressed.

For example, a functional exercise requiring participants to apply practical skills may need to run in real time to achieve the agency's objectives. A discussion exercise may require a period of 24 hours to be compressed into 6 hours to achieve its objectives.

Exercise planning meetings

For larger exercises planning meetings become very important to discuss the development of an exercise. Each meeting should have an agenda to ensure relevant issues are raised and resolved satisfactorily.

The following table outlines what might typically be discussed in each planning meeting while working through the development of an exercise. The number of planning meetings may vary depending on the size and scope of the exercise.

Exercise planning meetings

Planning meetings	Description	Exercise type	Timing prior to exercise
Concept and objectives meeting	• Identifies the type, scope, objectives and purpose of the exercise, and may include discussion on resources, location, date, duration, planning team and participants, assumptions etc. • Typically attended by the lead agency, lead exercise planner or Exercise Coordinator and senior officials • Outcomes should include agreement on exercise type, scenario, capabilities, tasks and objectives	Functional, full scale or a series of exercises	Prior to, or concurrent with initial planning meeting

Initial planning meeting	• Lays the foundation for exercise development
	• Gathers input from exercise planning team on the scope, design, objectives, scenario, exercise location, schedule, duration, and other details required to develop exercise documentation
	• Assigns responsibility to planning team members
	• Outcomes should include:
	  ◦ planning schedule
	  ◦ clearly defined, obtainable, measurable capabilities, tasks and objectives
	  ◦ identified exercise scenario variables (e.g. threat, scenario, scope of hazard, venue, conditions)
	  ◦ participant list
	  ◦ outline communications plan for how planning team will communicate
	  ◦ availability of source documents needed to draft the exercise
	  ◦ list of established dates for completion of corrective actions and responsibilities
	  ◦ list of critical activities for next planning meeting
	  ◦ agreed date, time and location for next planning meeting and actual exercise
		All	Discussion based exercises: 3 months
			
			Operations based: 6 months

Mid-term planning meeting	• Resolves logistical and organisational issues that arise during planning such as staffing, scenario and timeline development, scheduling, logistics, administrative requirements, and draft documentation review
	• May be held separately or in conjunction with a master schedule of events list meeting
	• Outcomes should include:
	  ◦ agreement on final exercise details
	  ◦ fully reviewed exercise scenario timeline (master schedule of events)
	  ◦ fully reviewed exercise documentation
	  ◦ well developed scenario injects
	  ◦ agreed date, time and location of final planning meeting
		Operations based	3 months

Final planning meeting	• Uses a forum to review the process and procedures for exercise conduct final drafts of exercise material, and logistical requirements
	• Ensures there are no major changes made to the design or scope of the exercise or to any supporting documents.
	• Outcomes should be:
	  ◦ attendees have clear understanding of, and give final approval for exercise processes and procedures
	  ◦ exercise documentation approved
	  ◦ last minute issues are resolved
	  ◦ logistical elements are confirmed
		All	Discussion based: 6 weeks
			
			Operations based: 6 weeks

Table 4: Exercise planning meeting requirements[3]

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3. This table is sourced from Volume 1: Homeland Security (HSEEP) Overview and Exercise Program Management (revised February 2007).

Establish the exercise aim

Introduction

The exercise aim is a broad statement of intent. It provides the direction for what is to be achieved by the exercise. The aim should be derived from the needs assessment and is established by the exercise planning team.

Writing an exercise aim

The aim should begin with a verb and should be positive, clear, concise and achievable. It must be broad rather than specific. There should be only one aim for an exercise.

Exercise aim examples include:

- To participate in the international tsunami warning exercise.
- To practice emergency operations centre staff in standard operating procedures.
- To build networks in the local emergency management community.

Define exercise objectives

Introduction

An objective is a statement of what is to be done and should be stated in terms of results. In other words, an objective should state who should do what, under what conditions, according to what standards.

The objectives are sourced from the needs assessment, scope and purpose statement and define the measurable aspects of the exercise. Objectives go hand in hand with the aim but are more specific and performance based. Objectives can also be developed by breaking down the aim into its logical components.

Objectives must be expressed in a way that informs participants what they will be working towards, evaluating or observing. They form the basis of the exercise design process and the eventual exercise delivery. Writing the objectives is also the starting point for the evaluation process. During the exercise, the evaluators assess whether the exercise is meeting the objectives.

How many objectives?

There can be as few as two or three objectives in a small exercise, or they can number into the hundreds in a large complex exercise that includes multiple agencies. For a standard exercise, no more than ten objectives per agency are recommended.

In multi agency exercises, each participating agency must be responsible for developing its own specific objectives to serve their specific functions.

Each agency's objectives can then be incorporated into one exercise package by the exercise planning team, or evaluated by each agency on its own.

Good objectives example:
Objectives must be clear, concise, and focused on participant performance. They should contain:

- an action or behaviour stated in observable terms
- the conditions under which the action will be performed (including any tools or assistance to be provided), and
- standards (or levels) of performance.

Define exercise objectives

SMART objectives

Objectives can also be tested against the 'SMART' guidelines described below:

Guideline	Description
Specific	Objectives should specify what they want to achieve – i.e. what results is the agency looking for?
Measurable	How will the objective be measured? The objective should set the level of performance, so that results are observable, and you can identify when the objective has been achieved. Depending on the objective, it can set a quantifiable standard or it can simply be stated in a way so that people can agree on whether they succeeded.
Achievable	The objective should not be too difficult to achieve. For example, achieving it should be within the resources that the agency would reasonably be expected to commit to in a in a real event.
Realistic	The objective should present a realistic expectation for the situation. Even though an objective might be achievable, it might not be realistic for the exercise.
Task oriented or time driven	The objective should focus on a behaviour or procedure. With respect to exercise design, each objective should focus on an individual function. Objectives should also be time driven stating when something should be completed by.

Table 5: SMART guidelines for writing objectives

Wording your objectives

Objectives are concerned with knowledge, comprehension, application, analysis or synthesis and evaluation. The table below provides examples of some useful verbs for writing objectives.

Knowledge	Verbs applicable
Recalling specifics and universals, methods, patterns, etc	Define, state, list, name, write, recall, recognise, label, underline, select, reproduce, measure
Comprehension	**Verbs applicable**
Knowing what is communicated by making use of the idea	Identify, justify, select, indicate, illustrate, represent, name, formulate, explain, judge, contrast, classify
Application	**Verbs applicable**
Using abstractions in particular and concrete situations	Predict, select, indicate, choose, name, formulate, construct, contrast, classify
Analysis – synthesis	**Verbs applicable**
Analysis – breaking down communication into its parts so that the relations among them are made explicit. Synthesis – putting together elements and parts so as to form a whole.	Analyse, identify, conclude, differentiate, combine, restate, summarise, precise, select, separate, compare, contrast, argue, discuss, organise, derive, justify, resolve, breakdown, critique, select, relate, generalise, conclude
Evaluation	**Verbs applicable**
Judge the value of material and methods for given purposes. Judge the value of the knowledge in realising specific objectives.	Judge, evaluate, determine, recognise, support, defend, attach, critique, identify, avoid, select, choose.

Table 6: Suggested verbs to use when writing objectives[4]

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4.   Bloom B.S. et al Cognitive Domains. Taxonomy of Educational Objectives Handbook 1

Define exercise objectives

Objective examples

- Prepare and disseminate two situation reports (SitReps) in an accurate and timely manner, in accordance with standard operating procedures.
- Activate the emergency operations centre within 30 minutes of the decision to activate in accordance with standard operating procedures.

Define key performance indicators

Introduction   Key performance indicators, also known as KPIs, are tools used to help an agency define and measure progress towards exercise objectives.

A KPI may further define an objective, and is helpful when formulating the evaluation tool or measures.

KPI examples

- Demonstrate effective utilisation of telecommunications to convey CDEM information (such as phone, mobile, email and internet) including participation in teleconferences.
- Develop a staff management plan to meet emergency operating centre staffing requirements (include medium to long-term requirements).

Develop the scenario

Introduction

The scenario is a narrative that describes an event that has occurred that the exercise participants will need to resolve. It provides a brief description of the events that have occurred up to the minute the exercise begins. The scenario has two important functions.

- It sets the mood for the exercise, captures the participants attention and motivates them to continue (it is important participants are motivated to participate in the exercise).
- It also sets the stage for later action by providing information that the participants will need during the exercise.

There are two types of scenario:

- **Outline scenario**: a high level scenario that sells the idea of the exercise and facilitates information gathering
- **Detailed scenario**: (see page 40) developed after the outline scenario providing greater detail. (The detailed scenario is usually developed once the exercise has been announced).

Outline scenario

The outline scenario gives the time, date and magnitude of the simulated event and provides a general summary of the damage and disruption to people, property and services that have resulted.

An outline scenario should always contain:

- outline timings
- events leading to, or causing the problem
- major incidents, and
- initial issues.

Outline scenario purpose

The outline scenario has three purposes:

1. **Selling** Agencies being asked to participate can be shown that the exercise is based on a situation they need to consider.
2. **Information gathering** Specialist advice on disaster impacts and consequences may be needed to prepare the exercise. E.g. technical staff may need to be shown the context of the question.
3. **Narrative** Participants can be given this information at the start of the exercise to 'get them into the picture'.

Announce the exercise – Coordinating Instruction

Introduction

Once the outline scenario has been developed (and if required, approved) an exercise Coordinating Instruction should be produced.

The Coordinating Instruction is usually the first major exercise document produced and is used to inform all people and agencies involved about the basic details of the exercise.

The amount of documentation and detail required will vary depending on the size and complexity of the exercise.

Depending on the nature and scope of the exercise the Coordinating Instruction can be used to:

- provide general information about the exercise for everyone concerned, including an exercise overview, outline scenario, parameters, timelines and participants
- be a guide for developers and participants
- assist participants in preparation for exercise play
- promote the exercise.

While the Coordinating Instruction is used to announce the exercise, it can be updated and have more added to it leading up to the actual exercise.

Version control should be used so new and modified material is easily identifiable.

Exercise Coordinating Instruction

The Coordinating Instruction is a high level document sent to all participants well in advance of the exercise activity.

The Coordinating Instruction is designed with two audiences in mind:

- managers of participating agencies who have to allocate staff time and other resources to the proposed activity, and
- the exercise planning team who need clear parameters with which to work.

See also Annex B: Exercise Coordinating Instruction

As a minimum, the Coordinating Instruction should include:

- the purpose and type of the exercise
- the outline scenario
- participating agencies
- scope of the exercise
- date, time and location of the exercise
- who the exercise planning team is and what their responsibilities are.

It may also contain the following:

- references
- assumptions, artificialities, and simulations
- safety and security
- administration and logistics.

Note:
- A brief memo is sufficient if the exercise is only a short, simple activity.
- If the exercise involves a single agency only, a Coordinating Instruction can be combined with a General Instruction so there is only one document produced.

Announce the exercise – Coordinating Instruction

General exercise briefings

General exercise briefings form an important part of pre-exercise preparations. It is important to hold briefings with appropriate government officials, agency representatives, exercise participants and community groups (if appropriate) before an exercise. The Coordinating Instruction can form the basis of these exercise briefings.

General exercise briefings are held well in advance of the exercise to outline what is intended to be achieved and promote participation in the exercise.

Detailed scenario

Introduction

A detailed scenario contains additional information and is much more comprehensive than an outline scenario. It has a series of parts that describe the event's impact on specific services or sections of the community, and may contain information on effects beyond the immediate impact area, along with a timeline for restoration of key lifeline utilities. It should include a clear definition of the number of dead, injured or displaced persons and the extent of property damage.

The detailed scenario is not normally made available to exercise participants. Instead, it is used by the exercise planning team to write the exercise. The detailed scenario will also help in the writing of the master schedule of events.

Characteristics of the scenario

A good detailed scenario is typically:

- one to five paragraphs long
- very specific
- phrased in the present tense
- written in short sentences
- chronological (such as an event with warning time)
- emphasises the emergency environment.

Where an emergency has some warning time such as a cyclone or volcanic eruption, the scenario often outlines the developing situation chronologically. For an unexpected event (e.g. an earthquake or flash floods), the scenario may be shorter. Or, it may devote more detail to the environment of the emergency.

Writing a detailed scenario

When writing an detailed scenario provide short responses (one or two words) to the following questions:

- What type of event is it?
- How fast, strong, deep, and dangerous?
- How did you find out?
- What response has been made?
- What damage has been reported?
- What is the sequence of events?
- What time did it occur?
- Was there advance warning?
- Where does it take place?
- What are the relevant weather conditions?
- What other factors would influence emergency procedures?
- What is predicted for the future?

Turn each response into a brief sentence.

Confirm agency participation

Introduction

Most exercises require the participation of a number of groups and agencies to succeed.

If an agency's participation is essential:

- discuss dates with them at the earliest opportunity
- alter timings to suit
- explore likely levels of support
- invite a representative to planning meetings.

Note: If the exercise takes place outside of normal business hours, some agencies may have to adjust shifts or schedule overtime for those involved.

A covering letter may accompany a Coordinating Instruction outlining expected commitment and to request confirmation of participation.

Levels of participation

It is important when planning an exercise to ascertain the level of commitment an agency will give to an exercise.

The following table defines the levels of participation in exercise planning and exercise play.

Category	Description
Full	Agency commits to all parts of exercise including: • contributing to exercise development and • staff within the agency will participate in response coordination.
Partial	Agency participates in a specific part of the exercise. **Note**: the agency may contribute to exercise development.
Facilitation	Agency not actively involved in exercise development but personnel made available to facilitate exercise injects or enquiries (i.e. a control function). **Note**: Contact person nominated to be contactable for exercise related matters or enquiries.
Not engaged	Agency not involved in exercise development or exercise play. Agency inputs and outputs will be notional if required (i.e. exercise writers will make up that agency's input if required). Exercise planning team will advise agency that the exercise is taking place but no invitation to participate is required. **Note**: No communication or contact during exercise.

Table 7: Assigning levels of participation

Risk management

Introduction

In the exercise context, a risk is the chance of something happening that will have an impact on the exercise objectives.

A risk is the combination of the likelihood and the consequences of something occurring and the consequences that may flow from it. A risk may have a positive or negative impact on the exercise.

Understanding risk

Understanding risk is important for two reasons:

- knowing how risk comes about helps identify ways of reducing it; and
- being able to calculate a value for risk helps with setting priorities for reducing risk.

Reducing risk

Reducing risk requires either reducing the likelihood of the event or reducing its potential consequences, or both.

Risk assessment

Conducting a risk assessment is particularly important in large, complex exercises where there is considerable financial investment and where participants are deployed in tactical or field operations.

Once the risk assessment is conducted an assessment and risk management plan should be produced.

The risk review should be performed by the health and safety team with assistance from the exercise control staff. The review should incorporate a visit to the exercise site(s) and surrounding areas, including out of bound areas.

Risk management process

Figure 4 identifies the key steps in the process of managing risk.
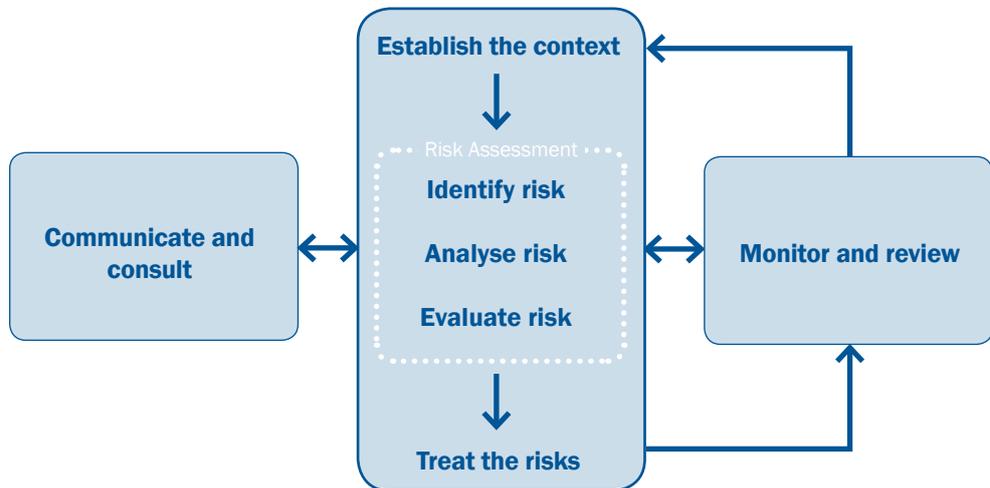
Figure 4: Risk management process - overview

Further detailed information on risk analysis can be found in the Australian/ New Zealand Handbook Risk Management Guidelines Companion to AS/NZS 4360:2004.

Exercise documentation

The amount of exercise documentation and the level of detail required will vary considerably depending on the size and complexity of the exercise.

Documentation may include (but is not limited to):

- Exercise purpose statement
- Exercise project plan (including timeline)
- Coordinating Instruction
- General Instruction
- Communications and media management plan
- Umpire and exercise control instructions
- Master schedule of events
- Detailed messages and injects
- Exercise evaluation guidelines / evaluation forms
- Exercise organisation chart
- Communications diagrams
- Planning meeting agendas and minutes
- Briefing notes and presentations
- Media releases
- Staff memos
- Simulation and role play cards
- Observer invitations
- Identification badges
- Financial records
- Progress reports
- Collated feedback from hot and cold debriefs
- Corrective action plan
- End of exercise report.

General Instruction A General Instruction follows a similar structure to the Coordinating Instruction but is a more detailed document that outlines essential information including administrative arrangements specific to each participating agency, such as roster details, communications plans, and meal break times and how the exercise will be controlled. It is distributed to all exercise participants shortly before the exercise.

See also Annex D: Exercise General Instruction

A General Instruction is usually issued after a Coordinating Instruction and should include:

- exercise purpose
- exercise aim
- exercise objectives and key performance indicators
- exercise scope
- exercise appointments
- methods of communication

- public information strategies (media arrangements etc)
- evaluation strategy (including umpire appointments if appropriate)
- observer programme arrangements
- budget and expenditure.

Communications and media management plan

A communications and media management plan is produced to inform all players of what methods of communication will be used in the exercise. For a small exercise this may be included in the General Instruction. However, for large, complex exercises a separate, detailed document should be produced.

A communications and media management plan may include:

- background to the exercise
- communications strategy
- communications objectives and key performance indicators
- participating stakeholders
- target audience
- spokespeople
- roles and responsibilities
- key messages
- tools and tactics.

See also Annex C: Communications and media management plan

Control staff instruction or package

Exercise control staff should be issued an instruction and/or package containing everything they will require for the exercise. The information should explain the procedures, responsibilities, assignments and support arrangements for exercise control roles, along with any communications, logistics and administrative arrangements. The package or folder should contain:

- Coordinating Instruction
- General Instruction
- Master schedule of events
- Detailed messages or injects
- Umpire instructions
- Communications, logistics, staffing, administration and other support arrangements
- Exercise control and evaluator rules of play
- Evaluation forms.

See also Annex F: Exercise control and evaluator rules of play

Developing major and detailed events

Introduction

Once developed, the scenario should be extended from the events leading up to the exercise start point to the finish point.

The exercise planning team writes a series of large or small occurrences (called major and detailed events) into the exercise to take place as a result of the emergency described in the scenario. Major and detailed events are problems that require a realistic action to meet exercise objectives.

When developing events, the goal is to provide a structure that will link the simulated event to the actions that people should take and provide control to the exercise.

As the major and detailed events are written they should be put into a time line to indicate when they should occur. This helps later on when drawing everything together to form the master schedule of events.

Developing major events

Major events are designed to be big problems resulting from the emergency. They should be likely events, based on case studies or operational plans, which call for realistic action. Follow these steps to identify a list of major events:

Step	Action
1	Identify several major occurrences, the high points in a sequence that might follow the storyline events.
2	Decide which of these events might generate situations that would test the objectives.
3	Concentrate on those events that best support the objectives.

As a guide there should be three to four major events for a table top exercise and eight to ten events for every two hours of play for a functional or full scale exercise.

Each major event will have some detailed events written for it that focus the exercise participants on the problem to be solved.

Developing detailed events

Detailed events are specific problem situations to which exercise participants must respond.

Expected actions are a breakdown of objectives that state the actions to be taken by an agency or an individual to meet the objective.

As a general rule, each detailed event will result in one or more expected actions from various agencies.

There are four types of actions that the participants may carry out:

1. **Verification** Gather or verify information
2. **Consideration** Consider information, discuss among players, negotiate, consult plan
3. **Deferral** Defer action to later, put action on priority list
4. **Decision** Deploy or deny resources

Note: In a small exercise, it may not be necessary to distinguish between major and detailed events.

Developing major and detailed events

There are several ways of writing detailed events:

- plan the detailed events and expected actions at the same time
- work backwards, first identifying an action that players will perform, then listing a problem (a detailed event related to a major event) that would motivate the action
- make a list of specific problems that are likely to occur in connection with each major event, and then identify actions that would be expected as a result.

Whatever method is used, the result should be a list of specific events that are closely linked with actions that the participants are to perform.

As a guide there should be six to eight detailed events for each major event.

Exercise control documents

Introduction

Control documents are exercise tools used to:

- create an artificial environment
- provide a framework to the event
- mimic real life incidents and responses
- test objectives during the exercise.

Control documents can be a:

- **Message or inject**: a document that causes participants to respond in a manner pursuant to their role and function.
- **Response**: a document that provides answers to questions posed by participants.

Note: A response can also be an inject. By receiving a response, another inject is revealed that causes further questions (avenues for investigation) for participants.

Document management

Documents should be versioned and distributed to participants during the exercise in an accurate and timely manner.

Exercise messages and injects

Messages and other injects are used to communicate detailed incidents or developments to exercise participants. One message may represent an event, or several messages may be needed to collectively represent the event.

Messages and injects serve one purpose: to generate a response, (i.e. to cause exercise participants to make decisions and take actions that meet the exercise objectives).

It is important in functional and full scale exercises to be aware that not all injects are necessarily a message. They may be an instruction given to an exercise simulator or 'casualty' on how to act when approached by exercise players.

Once written, these messages and injects become control documents.

Transmitting messages and injects

Messages can be transmitted in various ways, including:

- Landline, cellular or satellite telephone
- Radio
- In person
- Written note
- Fax
- Email

When transmitting messages in functional or full-scale exercises, try to use the method of transmission that would be most likely in a real emergency.

Message and inject format

Exercise planning teams often use a standard form when creating messages and injects. A standard form should include a space for a message number, the time that the message is to be delivered, and the information that will prompt the action to be taken.

See also Annex E: Standard message/inject template

Exercise control documents

Follow these steps to write a message or inject:

Step	Action
1	Identify an expected action (as described in 'Developing detailed events' on page 45).
2	Consider who could send a message and what that person could say to motivate the expected action.
3	Consider the four message variables: • **Message source** (*Who* would realistically send the message?) • **Transmission method** (*How* will the message be transmitted?) • **Message content** (*What* – does the message provide all of the information needed to make a decision?) • **Recipient** (*Who* will receive the message? If not the decision maker, where would the message best be redirected?)
4	Keep it realistic.
5	Practice with the messages. Read them through with someone who is familiar with the agency involved. Does the message motivate the expected action? If it does, then the message is likely to be more successful.
6	Ensure the messages are numbered and have time of release on them. This may need to be done as the master schedule of events is put together.

Spontaneous messages

The majority of exercise messages in a functional exercise will be pre-established. When designing a functional exercise, it is a good idea to try to anticipate things that might go wrong and to provide the Exercise Director and role players with ideas about ways to handle those situations.

In an actual exercise activity the participants do not always respond as expected. When this happens, the Exercise Director and role players will need to improvise. Typically, the Exercise Director will decide on an appropriate response.

If the Exercise Director and role players are familiar with the scenario and objectives, their spontaneous messages can still fulfill the purposes of the exercise.

When improvising inputs or details these are made up within the confines of understood capabilities and capacities. Anything that does not fit the confines of understood capabilities and capacities should be noted by evaluators as 'knowledge gaps' to be addressed after the exercise.

Evaluation

Finalise evaluation plan

The evaluation plan is finalised once exercise requirements have been defined and evaluation planning to meet those requirements has been completed.

In simple discussion-based exercises, the plan can be communicated verbally among evaluators prior to an exercise. For more complex exercises, the evaluation plan should be documented in writing and sent to evaluators. Whether formally documented or not, evaluation plans should contain the following:

- **Exercise-specific information** Exercise scenario, schedule of events, and evaluation schedule
- **Evaluator team agency, assignments, and location** A list of evaluator locations, a map of the exercise site(s), and an evaluation team organisational chart
- **Evaluator instructions** Step-by-step instructions for evaluators regarding what to do before they arrive (e.g. review exercise materials, wear appropriate clothing for assignment), as well as how to proceed upon arrival, during the exercise, and following its conclusion
- **Evaluation tools** Exercise-specific exercise evaluation guidelines and analysis forms, the master schedule of events, blank paper or timeline forms.

For standard exercises an exercise evaluation plan may be combined with exercise control staff instructions.

See also Annex F: Evaluation and exercise control rules of play

Evaluation tools

Evaluation tools will vary according to the size and scope of the exercise.

An evaluation guideline or analysis form will prompt the evaluator(s) to look for certain actions in the exercise and will allow them to determine whether or not objectives and key performance indicators are met.

See also Annex H: Evaluation tool

Master schedule of events

Introduction

The master schedule of events is a detailed sequence of events used by exercise control staff to ensure that the exercise runs smoothly. It is also known as a running sheet, programme, script or main event list.

Note: A master schedule of events should only be circulated to exercise control staff, not general exercise participants.

Preparing a master schedule

A master schedule of events is prepared by the exercise planning team. Contributions will be required from all participating agency exercise management representatives.

A master schedule of events is usually a spreadsheet that contains the following items:

Contents	
Serial number	
Day/date	
Time	
Activity of event	
Location	
Desired outcome	
Control documents	
Comments/remarks	
Initiator (who puts the message in)	
Recipient (who receives the message)	Optional
Resources	Optional
Role players	Optional
Monitoring and follow up arrangements	Optional
Critical completion times	Optional
Cross referencing	Optional
Links with the objective	Optional
Expected actions	Optional

See also Annex G: Master schedule of events

Links to control documents

A master schedule of events identifies the events linked to control documents. Exercise control staff use the schedule to introduce information at appropriate times and help to control the pace of activities.

Master schedule of events

Timing of events

When determining the timing of events consider the following:

- events should be positioned to keep the exercise at a fairly steady pace, as one problem is resolved, another should appear
- problems closer to the scene will appear before those experienced further away
- communications problems may initially create a lack of information from worst hit areas
- recovery and repair efforts will take considerable time to arrange.

Anticipating responses

Considering likely reactions to messages and injects helps exercise design by:

- identifying likely questions so the required answer can be made available
- providing time estimates for repair, restoration and regeneration (which can be written into master schedule of events).

Control of detail

In large functional or full scale exercises, control of detail is essential. This is achieved by cross referencing, ensuring facts and figures are accurate (using graphs and tables may help), and checking the frequency and distribution of exercise items.

All documents in large, complex exercises need to be broken into clearly labeled components and given a serial number to assist in tracking and tracing. Unfamiliar abbreviations used in a master schedule of events or other documents should be provided on a reference card.

Ideally messages and injects should be entered into a database (e.g. Excel) to allow sorting by time, location, subject etc. Key problems may be mapped to provide a quick visual summary for exercise writers or simulation staff (e.g. road closures, service break locations).

Using a database for messages and injects can assist when determining the frequency and distribution of messages (who is getting them – will they get sufficient work out of the exercise or be overloaded etc).

Exercise setup

Introduction

The logistics and administration team will be responsible for the preparation and setup of the exercise. The team is responsible for the coordination of:

Item	Description
Exercise venue(s)	Venues should be organised well in advance with consideration given to: • site or location selection and suitability • approval to use site or location • pre-planning site inspection • site access • site control and security • site realism and detailed staging to suit the scenario • damage control requirements • site safety requirements and arrangements • staging areas • car parking • power/gas • on site amenities
Site simulation	Role players and moulage (make-up)
Communications and information technology	• Telephone, cellular and satellite phone • Broadband access • Fax machines • Computers and printers • Photocopiers • Radio communications • Exercise log • Display boards
Accommodation	Visiting staff and observers
Travel and transport	Flights and transfers
Catering	Meals and refreshments
Visitors and observers	Formal and informal
Maps	• Topographical • Cadastral • Street enlargements
Stationery	Forms, pens and paper, trays and clipboards marker pens etc
Documentation	Plans and procedures
Finance	Authorities and accounts
General administration	• Cleaning • Security • Toilets • Liabilities and insurance
Public relations	Before, during and after the exercise
Identification	• Provide appropriate identification • Restrict access of non-exercise personnel to all exercise sites.

Exercise setup

Physical facilities and room setup

It is important to conduct the exercise in the location(s) where normal operations would take place and to set it up as it would be for a real event in order to simulate reality.

The type of setup will vary depending on the size and complexity of the exercise. When using control staff or simulators a separate exercise control room or facility must be set up where exercise control staff can send, receive and track messages and other communications with players.

The control room will need to be equipped with the necessary communications equipment e.g. radios, fax, computers and phones as well as display and map boards or other means to keep a track of exercise progress. Provide control staff and simulators with large printouts of the master schedule of events.

Simulators

Simulators typically role-play representatives from different agencies. As a guide, a simulator should not play more than three different roles. Ensure the simulators are well trained and briefed on how to perform their role.

Casualty simulation

Simulated casualties add an important element of realism to any field exercise. When preparing an exercise establish the need for casualties (i.e. will casualty simulation support or enhance the overall exercise aim and objectives?).

Casualty simulation staff must work with the exercise planning team to determine the:

- number of casualties required
- type of injuries
- history of injuries from mechanism of injury
- props required (torn clothing, burnt hair etc)
- materials to be used (makeup, blood, pre-made wounds etc).

Casualties must be well briefed, made up and rehearsed. After the exercise they will need to debrief and de-role (time to step out of the character). It is helpful if casualty simulators have a good understanding of anatomy and physiology so that they know what illnesses and injuries look like.

Evaluator training

Evaluator training must take place before the exercise and address all aspects of the exercise, including:

- the exercise goals and objectives
- the scenario
- participants roles
- evaluator roles, responsibilities, and assignments.

Before or during the training, provide evaluators with copies of the following materials to review before the exercise starts:

- exercise documents, such as the Coordinating Instruction, and General Instruction
- evaluation materials such as:
- exercise evaluation guidelines
- master schedule of events and
- evaluator assignments
- relevant plans, policies, procedures, and agreements of the exercising agency.

Exercise setup

Evaluator training should also include guidance on observing the exercise discussion or operations, what to look for, what to record, and how to use the exercise evaluation guidelines. To promote effective observation, evaluators must be instructed to do the following:

- be at the designated position when players arrive
- observe player actions (or player discussion) but avoid getting in the way or becoming involved
- focus on observing the activities and tasks in relevant exercise evaluation guidelines to ensure exercise objectives are accomplished
- take legible, detailed notes, including times and sequence of events
- remain at the assigned post at key times
- allow players to act and answer questions without prompting.

Evaluator interaction

Evaluators should not interfere with exercise play. However, it may be necessary for an evaluator to interact with players during the exercise if he or she has a question about something observed.

Note: Evaluators should wait until there is a break in activity to ask questions. These questions must not prompt or lead players in any way, and conversation should remain brief and focused.

Observer programme

Many exercises generate interest within the wider sector or local community. Especially in larger, more complex exercises, visitors from other agencies (whether local or international) may be invited to observe various exercise activities.

An observer programme is a structured agenda that provides visitors with an overview of the exercise activities. All visitors should be provided with appropriate identification and site access. The programme will identify a point of contact at each site, and often include a tour of the exercise area and a chance to observe exercise play.

For those visitors who do not live locally, accommodation and transport may be part of the programme.

An observer coordinator must be appointed to manage the exercise observer programme.

Section 3: Conduct the exercise

Exercise briefings

Introduction

The exercise type and its scope will dictate the level of exercise briefings that are required. For example, a small agency tabletop or discussion exercise will require a significantly different extent of briefings than a multi-agency, full scale exercise.

Exercise briefings

An initial exercise briefing is provided to exercise participants, exercise control staff, umpires, evaluators and role players before the exercise begins. It is used to orientate all people involved with the exercise.

The key points to raise at the initial briefing regardless of the group receiving it are:

- **Scenario outline** What has happened to date, what initial response has been undertaken.
- **Timings** Timings and duration of participation required.
- **Exercise boundaries** What can and cannot occur in terms of role playing and also operational response. The physical boundaries of the exercise
- **Locations** Locations of key venues or activities where relevant
- **Expected outcomes** What is expected as a result of the exercise?
- **Safety briefing** What the emergency procedures for the exercise are
- **Exercise logistics briefing** What the logistical and administration arrangements for the exercise are

Exercise control staff briefings

While exercise control staff may attend the initial exercise briefing a second briefing must be given to them to expand on the initial briefing and to state the range and limitations of their activities. Control staff briefings should include:

- roles and responsibilities
- exercise documents
- methods to be used
- departures from scripts
- responding to participant actions
- keeping notes for later debrief.

This second briefing is not done in the presence of exercise participants and should be reasonably short in duration as the control staff should already have received training on how to perform their responsibilities. At the end of this briefing the exercise will start. Regular briefings are also required during the exercise to ensure the scenario is on track.

Evaluator briefings

Before the exercise begins, the lead evaluator should meet with the Exercise Director and/or evaluators to verify roles, responsibilities, and assignments and to provide any significant updates (changes to the scenario or new assignments).

This briefing is the time for evaluators to ask questions and to ensure complete understanding of their roles and responsibilities.

For operations-based exercises, the briefing often includes a tour of the exercise site so that evaluators are familiar with the venue and know where they should position themselves to observe exercise play.

Exercise briefings

Because many events may occur at once, evaluators may not be able to record all of the action. Knowing which events are important allows for manageable action recording, eliminates unnecessary information, and provides the most useful data for exercise evaluation.

Terminology evaluators should be familiar with

Evaluators should also be familiar with the following terms as outlined in 'Definitions and abbreviations' on pages 5 and 6:

Inject Information: (including directives, instructions, and decisions) provided by exercise control staff to exercise players in order to drive exercise play towards the achievement of objectives.

Discussion A conversation involving several players.

Decision Occurs when an individual or group arrives at a conclusion or makes a specific determination.

Directive A specific order or direction given to one or more players.

Movement Occurs when an individual, group, or piece of equipment relocates.

Task Achieved when an individual or group performs a specific, clearly definable action or function, such as checking patient status or performing a radio check.

Evaluator observations should include comments on the following:

• initiation and unfolding of scenario events
• deviations from plans or procedures
• timeliness and other performance measures relevant to task evaluation
• effectiveness of, or shortcomings in, command and control
• creative player problem-solving activities
• equipment issues that affect player efforts.

Control the exercise

Introduction

The exercise control staff are responsible for controlling the exercise. This includes starting and stopping the exercise and introducing messages and injects into exercise play.

Start the exercise

Most exercises will be started immediately following the last participant briefing. The Exercise Director ensures that all exercise control staff are in place and role players are ready to begin.

In discussion based exercises the subject is normally introduced to players by a facilitator. Functional exercises may be started with an incoming message or by written scripts detailing the first inject. Field exercises may be initiated through a phone call, pager message or other call-out method.

Control staff

The Exercise Director uses the master schedule of events to control the exercise. He/she ensures that any problems are rectified to keep the exercise flowing. The Exercise Director can modify the flow of the exercise to make sure objectives are met.

Exercise control staff have a range of responsibilities to keep the exercise running. They need to stay in contact with the Exercise Director throughout the exercise activity.

An important exercise control role is that of umpire. Umpires observe, record and evaluate the actions of those being exercised and the circumstances in which action occurs. They assist the Exercise Director by monitoring and reporting progress during the exercise.

Introducing problems

Once the exercise has started and participants are in place the problems identified in the master schedule of events can be introduced into exercise play by means of individual or series of messages and injects. As these problems are introduced it is a worthwhile activity to create a log of the time the problem was introduced and to record, if possible, what the reaction or solution to the problem was. Creating this log can be very useful as part of the evaluation of the exercise. This log is also useful to help evaluate and decide on the speed that subsequent messages or injects are introduced.

In functional exercises or the functional part of a full scale exercise, the problems are pre-set and additional messages or injects are not always required.

Encouraging spontaneity

Players should be able to decide among a full range of responses normally available to them during an emergency.

To allow for participant spontaneity exercise control staff and simulators must be well trained and prepared to handle the unexpected.

Sustaining and controlling exercise activity

Sustaining exercise activity is achieved by the continuous injection of exercise information to the participants. This needs to be closely monitored to ensure that the information is released at an appropriate time. Depending on how well participants react to the injects, the rate of injects may need to be increased or slowed down. It may be necessary to add or remove problems to suit the pace of the exercise.

It is also important to control exercise activity. Participants may react in a different way to what was anticipated. If this happens then a check needs to be made to see if the reaction will have an ongoing affect on the exercise. Free play also needs to be controlled to prevent it from de-railing the exercise. If there is a danger that free-play or a reaction will have a negative effect on the exercise the addition of a spontaneous problem or solution inject may correct the problem. The Exercise Director may need to step in and put the exercise back on track.

Control the exercise

Where pre-written information forms a large part of the exercise, control staff must mark off on the master schedule of events when injects are sent. Pre written messages should quote an exercise inject serial number (e.g. #89) while additional injects should add a check letter (e.g. #89A) to distinguish them.

In some cases where participants start to get frustrated, injects start to back up, or conflict occurs between players then the Exercise Director may need to step in temporarily and pause the exercise. Once the problems have been resolved the Exercise Director can start the exercise again. It is important that the Exercise Director ensures the exercise is a positive experience for the participants.

The Exercise Director can control the pace of the exercise by adjusting the inject flow, slowing things down when the pace is too frantic or speeding it up when the exercise drags. It can also even out the pace among participants.

Ideas to slow the pace:

- Reschedule events to allow more reaction time. Have control staff wait before sending injects.
- Discarding injects that are relatively unimportant or do not impact on decisions.

Ideas to increase pace and fill gaps:

- Speed up delivery pace (varying from planned schedule)
- Determine what is causing gaps and be ready to add or alter injects spontaneously when needed.
- Keep supply of optional injects on hand that can be added when needed
- Adding side events and routine actions that have to continue throughout the emergency
- Adding secondary events that develop out of the main flow of exercise events
- Adding special planning requirements that would cause an inactive group to engage in activity
- Adding misdirected injects, (messages given to the wrong agency or function). Such injects can be used to gauge the agency or function's clarity of role definition and test whether they forward the message properly.

Ideas to relieve overload on particular agencies:

- Reassign: verify that all injects are assigned to the correct agency or function. Then reassign any specific injects that could be used by another agency.
- Thinning: divide the overloaded injects into two piles, 'essential to flow of exercise' and 'nice to have' and remove some of the latter.

End the exercise

Finishing the exercise is a controlled activity. The Exercise Director stops the exercise at a pre-planned time.

An immediate hot debrief should be provided for all players and staff to capture information and feedback while it is still fresh in their minds.

For health and safety purposes in functional exercises, ensure that all of the participants and staff are accounted for before releasing people from the exercise.

In large full scale exercises, a damage inspection may be required.

Section 4: Evaluate the exercise

Introduction

All exercises should have a learning focus. Learning is maximised when there is a continuous process of review to draw out the lessons identified. Review is the process of evaluating and validating the exercise.

The primary method to evaluate an exercise is through debriefing while validation relies on a range of processes that investigate an exercise's impact on an agency's workplace.

There are two principle reasons for evaluating and validating exercise performance:

- identify improvements needed in an agency, process or function
- establish whether the exercise achieved its objectives.

Evaluation through debrief

A post exercise debrief is a critical review of the entire exercise and it identifies those areas that were handled well, those areas where issues were experienced and identifies recommendations for improvement.

A debrief is run by an experienced facilitator to:

- determine what went right, what went wrong and why without trying to lay blame
- note specific questions which arise from achievement or non achievement of objectives
- acknowledge good performance
- seek constructive information from those being debriefed
- focus on improving procedures and training
- record relevant information to enable reports to be compiled
- summarise key points and suggest followup action.

Depending on the size of the exercise and the number of participants, there may need to be a series of debriefs building on one another.

There are usually two debriefs conducted after an exercise: *Hot* debrief, *Cold* debrief.

Hot debrief

Held immediately after an exercise, a hot debrief is an opportunity for all participants to provide feedback while the exercise is still fresh in their minds.

A suggested format for this is:

- have a short break of about 10 minutes after the end of the exercise
- the Exercise Director gives his or her initial feedback
- obtain participant round-table feedback
- evaluators provide their feedback
- provide appropriate acknowledgements.

Cold debrief

A cold debrief is a more formal debrief held within four to six weeks following the exercise. The debrief process should include:

- what happened during the exercise?
- what went well?
- what needs improvement?
- what plans, procedures or training programmes need amendments?

- what follow up is required, including identifying any capability gaps for future capacity building?
- was the exercise realistic?
- how could the exercise have been improved?

The debriefing process should remain focused on evaluating the exercise's effectiveness - on issues, successes and problems.

Note: Personal criticism of individual participants at the meeting must be disallowed. However, these issues may need to be addressed in separately facilitated 'defuse sessions'.

For more information refer to MCDEM Organisational Debriefing Information for the CDEM Sector [IS6/05].

Planning team, control team and evaluators debrief

A debrief with the exercise planning team, facilitators, umpires, control staff and evaluators should be held as soon as possible following the exercise. This debrief allows evaluators to collect observations and thoughts about the conduct of the exercise and leads to the development of preliminary analyses of exercise observations. This debrief is conducted by an experienced facilitator.

When writing preliminary analyses, evaluators should consider the following questions:

- Were the objectives of the exercise met?
- Did discussion suggest that all personnel would be able to successfully complete the tasks necessary to execute each activity? If not, why?
- What are the key decisions associated with each activity?
- Did discussion suggest that all personnel are adequately trained to complete the activities or tasks needed to demonstrate a capability?
- Did discussion identify any resource shortcomings that could inhibit the ability to execute an activity?
- Do the current plans, policies, and procedures support performance of activities? Are players familiar with these documents?
- Do personnel from multiple agencies need to work together to perform a task, activity, or capability? If so, are the agreements or relationships in place to support the coordination required?
- What should be learned from this exercise?
- What strengths were identified for each activity?
- What areas for improvement are recommended for each activity?

Evaluation through validation

After an exercise the evaluation forms must be completed and collated, and a validation of the exercise conducted.

The validation must be presented in the form of an exercise report.

Validation

The final stage of the exercise process is to determine whether or not the exercise has met the objectives identified in the needs assessment. Validation compares the performance of agencies and participants during the exercise against performance

expected on the job. It is a way of measuring the value of the exercise and deals with more strategic issues than debriefing.

Validation answers the following questions:

- Did the exercise address the identified need?
- Did the exercise provide an opportunity for agencies and participants to perform in a manner closely resembling that expected in the real world?
- Did the exercise lead to improvements in agency policies, plans and procedures, or individual performance?

Validation can be carried out by:

- observation on the job
- evaluation forms
- debrief notes
- interviews with participants and their supervisors
- post exercise questionnaires.

After validation, agencies may change or develop plans, procedures, and training programmes. Exercise outcomes may be retested in future exercises, or new exercises written to meet newly identified needs.

End of exercise report

The final exercise report provides:

- a description of what happened
- describes best practices or strengths
- identifies areas for improvement
- provides recommendations for improvement in the form of a corrective action plan.

Improvements must be assigned to a responsible person or agency via a corrective action plan.

All improvements should be tracked to check on progress.

See also Annex I: End of exercise report

Evaluate the exercise

Exercise follow-up

The recommendations of the final exercise report must be followed up.

The corrective action plan included in the exercise report must be considered by the governance group or sponsor and agreed upon. Coordination and oversight of the implementation of the corrective action plan must be assigned to a specific agency or person, who must develop a work programme towards implementation of the action points.

The Exercise Coordinator should:

- **assign responsibility**: clearly assign tasks and schedules, and designate responsibility for each recommended action point.
- **monitor**: establish a monitoring plan to track the progress of implementing recommended improvements.
- **report**: provide regular reports to senior officials on the progress of implementing recommended improvements.

Other follow-up actions may include:

- return of equipment
- payment of exercise related accounts, and
- letters of appreciation.

Section 5: Annexes

Annex A: Exercise development checklist

Ref	Event	✓
Analyse the need		
1	Check multi-year training and exercise programme	
2	Conduct a needs assessment	
3	Determine the type of exercise	
4	Select an exercise name	
5	Develop exercise purpose statement and obtain high level signoff	
Design the exercise		
6	Determine the scope of the exercise	
7	**Establish a planning team** • Appoint an Exercise Coordinator • Appoint an exercise planning team • Establish a terms of reference for the planning team • Appoint exercise control roles • Establish exercise timeline (include exercise planning meetings)	
8	Establish the exercise aim	
9	Define the exercise objectives	
10	Define the key performance indicators (KPIs)	
11	Develop the outline scenario	
12	Announce the exercise (Coordinating Instruction)	
13	Develop the detailed scenario	
14	Confirm agency participation	
15	Determine the risks	
16	**Develop and issue exercise documentation** • General Instruction • Communications plan • Control staff instruction (and resources if required)	
17	Develop major and detailed events	
18	Develop control documents (messages and injects)	
19	Develop evaluation and exercise control rules of play	
20	Develop evaluation forms and checklists	
21	Develop master schedule of events	
22	**Exercise set-up** • Logistics and administration • Physical room / field setup • Simulators • Casualty simulation • Evaluator training • Observer programme	
Conduct the exercise		
23	Conduct briefings to staff, exercise control and evaluators, other agency personnel and media	
24	Start the exercise; Introduce problems; Sustain and control exercise activity; End the exercise	
Evaluate the exercise		
25	Conduct hot debrief(s)	
26	Conduct control staff and evaluator briefing	
27	Conduct cold debrief	
28	Compile umpire, evaluator reports and participant feedback forms	
29	Compile end of exercise report	
30	Exercise followup	

Annex B: Exercise Coordinating Instruction

Title page	
Contents	
Amendment schedule	
Introduction or background	Introduce how the exercise came about including a brief introduction on when the exercise will occur and what level of exercise it is (according to the National Exercise Programme tiers). State whether the exercise is a multi agency or individual agency exercise.
Aim	State the overall exercise aim (in large exercises there will be an overall aim, however, individual agencies may have their own aims and objectives which will be outlined in each agency's General Instruction and other documentation).
Objectives and KPIs	State the overall exercise objectives (in large exercises there will be overall objectives, however, individual agencies may have their own aims and objectives which will be outlined in each agency's General Instruction and other documentation).
Scenario	Include the outline scenario
Exercise concept	**Assumptions**: List any assumptions **Scope and type**: What type of exercise is it (e.g. tabletop, full scale etc), and what size is it – is it an all of government exercise, multi-agency or individual agency exercise? **Themes**: In large, complex exercises there may be themes **Functions**: In large, complex exercises there may need to be several functions under each theme exercised to allow participants to exercise specific parts of a complex scenario. **Timelines**: List exercise timelines and key dates **Participation**: Outline which agencies are taking part. **Documentation**: What key documentation will be issued as part of the exercise? **General Instruction**: When will this be issued (and if multiple agencies are involved when these need to be completed by?) **Evaluation and reporting**: Outline who has overall responsibility for this. Do agencies need to appoint their own evaluators or will these be provided? When will debriefs be held? Who will collect debrief reports and when do they need to be completed by? Who will write the overall evaluation report and end of exercise report?
Exercise delivery	**Exercise format**: Are there exercise phases? (for exercises with lead-in e.g. volcanic or weather events) **Exercise hours**: What days and times will the exercise be held? **Injects**: Are there different types of injects? Some may only be seen by certain agencies. How will injects be inputted into exercise play? **Communication**: Will normal communications be available in the exercise or will there be periods during the exercise when telecommunications blackouts are imposed by exercise control, and hence phones and on-line communications will be deemed not available?
Responsibilities and administration	**Governance**: Who is leading the exercise or has mandated it? **Exercise management**: What is the exercise management structure? **Exercise coordination and control arrangements**: How will the exercise be coordinated and what are the responsibilities of the exercise planning team? **Organisational responsibilities**: Provide a brief outline of what agencies are responsible for in the lead up to, during and after the exercise. **Finance**: Will agencies fund their own costs? **Contact details**: List contact details for exercise coordinator(s).

Annex C: Communications and media management plan

Title page	
Background	Introduce how the exercise came about including a brief introduction on when the exercise will occur and explain at what level (agency, local, regional or national) the exercise will be conducted. State whether the exercise is a multi agency or individual agency exercise.
Communications strategy	Will there be real media 'out of exercise' and playing media 'in exercise' requirements?
Objectives and KPIs	List any communications objectives and KPIs
Participating stakeholders	Who is involved? How many agencies? What is the extent of their involvement or level of participation?
Target audiences	Who is/are the target audience?
Spokespeople	Who is/are the spokesperson(s)?
Key messages	Are there any key messages that should be used in exercise promotion?
Tools and tactics	Are there any tools or tactics to be used such as briefings, documents, groups, articles, media releases etc?
Playing media	What will and won't be distributed to the media as part of the exercise? Will requests for broadcasts be exercised etc?
Communications between participating agencies	What sort of communications process will be followed for agencies participating in the exercise? How will media releases be distributed? What process will be followed to ensure messages are consistent if it is a large exercise with many different agencies participating?
Real media (out of exercise)	How will the real media be handled and by whom? Will there be any media briefings prior to and during the exercise?
Public information processes	What are the media release protocols or processes?
Roles and responsibilities	What are the roles and responsibilities of people fulfilling media liaison or public information roles?

Annex D: Exercise General Instruction

Title page	
Contents	
Glossary of terms	
Introduction	Introduce how the exercise came about; including a brief introduction on when the exercise will occur and what level of exercise it is (according to the National Exercise Programme tiers). State whether the exercise is a multi agency or individual agency exercise.
Aim	State the overall exercise aim (in large exercises there will be an overall aim, however, individual agencies may have their own aims and objectives which will be outlined in each agency's General Instruction and other documentation).
Objectives and KPIs	State the overall exercise objectives (in large exercises there will be overall objectives, however, individual agencies may have their own aims and objectives which will be outlined in each agency's General Instruction and other documentation).
Scenario	Include the outline scenario
Participants	Who is involved? How many agencies? What is the extent of their involvement or level of participation?
Exercise concept	What type of exercise is it (e.g. tabletop, full scale etc)? Is it conducted in real time or compressed time frames and what weather conditions/forecasts will there be on the day(s)? **Locations and infrastructure**: Where will the exercise take place? **Timings**: What are the exercise date(s) and when will the exercise start and finish? **Staff notification**: How will staff know the when the exercise starts? Will they be notified in some way? **Transport**: Are any transport provisions required to get to the exercise site? **Meals**: Will catering be provided to exercise participants? If yes, what times, what location(s)? **Communications**: • All telephone communication should be prefaced with the words: *"This is an Exercise [insert name] message"* • All written correspondence must be prefaced with the words: *"Exercise [insert name] only"*. This includes faxes, emails, SitReps and briefing papers. **Media**: • Is there any external (out-of-exercise) media activity planned? If yes, what is this? • Is there any internal (within the exercise) activity planned? If yes, what will this be? **Observers**: Will there be observers or visitors to the exercise? If yes, is there an observer programme and who is responsible for coordinating it? What are the details? If it is a large programme this may be covered in a different document. **Dress**: What standard of dress is required?
Control and evaluation	**Outline roles and responsibilities**: There are usually different exercise control roles such as evaluators and exercise control staff, umpires etc. How will these people be identified (e.g. coloured name tag etc)? Include a section on the roles and responsibilities of the exercise evaluators, exercise control staff etc. How will these people communicate with each other and how will exercise players communicate with them? How many evaluators are there and where will they be located? **Debriefs**: Hot and cold debrief details
Exercise cancellation	Reference should be made to what happens if a real event occurs, or for whatever reason the exercise is to be stopped. The Exercise Coordinator will advise exercise participants agencies. Such a message will be preceded with the phrase; "No duff".
Role allocations (roster)	Include a roster so that readers can identify when they are required to participate in the exercise.
Evaluations forms	Add evaluation forms if appropriate.

Annex E: Standard message/inject template

[Exercise name] – EXERCISE ONLY – [Exercise name] – EXERCISE ONLY

[Insert date]
Time hrs
INJECT ID: [Insert number-insert time E.g.01-0635]

TO | ALL EXERCISE PARTICIPANTS

FROM | EXERCISE CONTROL
Playing [insert agency name]

SUBJECT | [Insert subject]

MESSAGE STARTS

[Insert message]

MESSAGE ENDS

NOTES

* ANY ENQUIRIES ABOUT THIS INJECT SHOULD BE DIRECTED TO EXCON: [Insert name of EXCON member of staff and/or contact details]

[Exercise name] – EXERCISE ONLY – [Exercise name] – EXERCISE ONLY

Annex F: Exercise control and evaluator rules of play

Document purpose	Outline the document purpose.
Overview of exercise participation	**Timing of agency participation**: What is the date of the exercise and what are the core exercise hours? **Location of exercise participation venues**: Provide information (including maps if appropriate) on the location of participating venues. **Range of agencies participating**: Outline the range of agencies taking part in the exercise.
Exercise control team	**Who is the exercise control team made up of?** **What are their roles and responsibilities?** (e.g. exercise control staff - providing injects, tracking progress/outputs of injects or adjusting timeline progress, risk management. Exercise evaluators – observing and assessing processes, procedures and techniques).
Exercise control team communications	**How will the exercise control team communicate?** Will there be any teleconferences?
Exercise rules	• All telephone communication should be prefaced with the words: *"This is an Exercise [insert name] message"* • All written correspondence must be prefaced with the words: *"Exercise [insert name] only"*. This includes faxes, emails, sitreps and briefing papers. • Exercise control members should draw any non-compliance to the attention of participants.
Operational communications	**Communication**: Will normal communications be available in the exercise or will there be periods during the exercise when telecommunications blackouts are imposed by exercise control, and hence phones and on-line communications will be deemed not available?
Media communications	Who will deal with the media?
Real events	Reference should be made to what happens if a real event occurs, or for whatever reason the exercise is to be stopped. The Exercise Coordinator will advise exercise participants agencies. Such a message will be preceded with the phrase; "No duff".
Weather conditions and forecasts	Note any special information about weather conditions and forecasts.

Annex G: Sample master schedule of events

Introduction   A master schedule of events will differ from exercise to exercise depending on the size and complexity of the project. This is a sample taken from a medium sized exercise.

Exercise in confidence – For limited distribution to exercise planning team and control staff only

Exercise [insert name] master schedule of events

Last updated: [insert date]

Serial	Date	Time	Agency	Source	Event	Control documents	Resources	Role players	Comments
01	26.05.09	0655	All		Major earthquake occurs on alpine fault				
02	26.05.09	0715	All	GNS Science	Preliminary earthquake report	CD01 - Fax notification			
03	26.05.09	0730	All	MCDEM	National Advisory – Earthquake	CD02 – Fax, email and SMS notification	National Warning System		
04	26.05.09	0735	All	MCDEM	National media release	CD03 – Email	National Warning System		

Annex H: Sample evaluation tool

Introduction   Evaluation tools differ from exercise to exercise depending on the size and complexity of the project. This is a sample taken from a medium sized exercise.

Objective [insert number]	[insert objective wording] Please comment on any aspects of the objective you observed.		
KPI description	**Evaluation criteria**	**Yes/No** Circle or N/A for not observed	**Comment:**
[Insert KPI description]	[Insert Criteria]	**Yes / No**	
	[Insert Criteria]	**Yes / No**	
	[Insert Criteria]	**Yes / No**	
	[Insert Criteria]	**Yes / No**	

Annex I: End of exercise report

Title page	
Administrative handling instructions	
Table of contents	
Executive summary	
Introduction	Introduce how the exercise came about including a brief introduction on when the exercise will occur and what level of exercise it is (according to the National Exercise Programme tiers). State whether the exercise is a multi agency or individual agency exercise.
Exercise overview	Include information such as the exercise name, date, duration etc.
Exercise design summary	Include the overarching exercise purpose; objectives, capabilities, activities, and tasks identified for validation; a summary of designed initiating event(s) / key scenario events; and exercise design issues.
Analysis of capabilities	Describe how the exercise met the aim and objectives, including overall performance of the agency(ies) participating.
Observations, conclusions, and recommendations	
Corrective action plan	Include the corrective action plan.
Lessons learned	(optional)
Participant feedback summary	(optional)
Exercise events summary table	(optional)
Performance ratings	(optional)
Definitions and abbreviations	
Attachments	A collection of relevant documents that provide extra detail, arranged in a logical order.

Bibliography and references

Introduction

This guideline has relied heavily on material obtained from a variety of sources and acknowledgment must be made in particular to the following resources:

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