



Australian Government

SFIAQUA413A Develop emergency procedures for an aquaculture enterprise

Release 1

SFIAQUA413A Develop emergency procedures for an aquaculture enterprise

Modification History

Release	TP Version	Comment
1	SFI11v2	Initial release. Supersedes and is equivalent to <i>SFIAQUA412A Develop emergency procedures for on-land operations</i>

Unit Descriptor

This unit of competency involves developing emergency procedures, contingency plans and loss minimisation strategies to overcome identified on-land threats or hazards to enterprise products, personnel and assets, natural resources and environment.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

This unit has application to on-land, inland water, estuarine and sea-based aquaculture and ornamental production and holding facilities. It does not apply to vessel emergency procedures.

All enterprise or workplace procedures and activities are carried out according to **relevant government regulations, licensing and other compliance requirements**, including **occupational health and safety (OHS) guidelines** and **ecologically sustainable development (ESD) principles**.

Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. Appropriate **personal protective equipment (PPE)** is selected, checked, used and maintained.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
---	--

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hazards and implement general readiness actions	1.1.All emergencies and hazards to enterprise products, personnel and assets, natural resources and environment are identified 1.2.Input of managers and stakeholders is sought in identifying potential emergencies and developing a risk register 1.3.Appropriate authorities and emergency agencies are identified and liaised with to identify potential risks 1.4.On-facility and external monitoring and warning systems provide sufficient time to allow risk management contingency plan or loss minimisation strategy to be implemented or accessed 1.5.Labour, materials, equipment and liaison procedures with emergency agencies sufficient to implement the contingency plan are determined and acquired 1.6.Rosters or shifts and contact telephone numbers of staff and emergency agencies are maintained and periodically updated with version control 1.7.Equipment and resources needed to minimise, remove or deal with threats and emergencies are marked and kept operational 1.8.External specialists are briefed on management policies and priorities
2. Develop contingency plans and emergency procedures	2.1.Contingency plans are developed that address risks in consultation with experts, if required 2.2.Emergency procedures are developed to address a range of possible emergency situations in consultation with experts, if required 2.3.Actions to be taken during incidents and emergencies are prioritised and documented, checks made and all legal requirements are met 2.4.Practical drills are undertaken to test contingency plans and emergency procedures 2.5.Costs and benefits of contingency plans or emergency procedures are evaluated and refined, if necessary
3. Implement risk management contingency plans and emergency	3.1.Copies of specific contingency plans and emergency procedures are lodged with relevant authorities and emergency agencies 3.2.Specific risks and severity of incidents are identified

ELEMENT	PERFORMANCE CRITERIA
procedures	and appropriate risk management contingency plans selected 3.3. Staff and resources are mobilised and areas of responsibility confirmed 3.4. Professional or external assistance is obtained, appropriate to the complexity of the emergencies and financial risk 3.5. Emergency procedures are undertaken and liaison with emergency agencies maintained 3.6. Loss minimisation is maintained until risk has passed 3.7. Emergency debrief is undertaken 3.8. Personnel and resources required for <i>post-incident activities</i> are identified and supported
4. Improve the contingency plans	4.1. Responses to threats and emergencies are monitored in consultation with appropriate authorities and emergency agencies 4.2. Overall performance of the contingency plan is regularly analysed for currency and functionality to ensure business stability and profitability 4.3. Results of regular analysis are documented promptly and appropriately reported to managers and key personnel 4.4. Information on alternative risk management strategies is assessed to determine relevance and possible application in existing or potential situations 4.5. Innovations are tested on-site to determine their suitability and adaptability to individual circumstances 4.6. Innovation benefits and costs are assessed and decisions made on adoption 4.7. Management is briefed on outcomes and recommendations made for improvements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- applying documented emergency procedures in own organisational environment
- communicating effectively with emergency services personnel
- communicating effectively with workplace personnel at all levels
- issuing instructions in an authoritative manner during unusual circumstances
- gathering information from different sources to identify possible threats and emergencies and any deficiencies in response
- participating in basic training in emergency procedures, such as induction training
- relating to people from a range of social, cultural and ethnic background and physical and mental abilities
- literacy skills to:
 - reading technical and legislative material
 - writing reports and emergency procedures
- numeracy skills to
 - analysing statistical data in determining risk
 - assessing and comparing cost of risk management strategies

Required knowledge

Required knowledge includes:

- awareness of media impacts to the enterprise, industry and stakeholders
- emergency alerting systems, signals and instructions typically used within industry workplaces
- government regulations and requirements of authorities/agencies
- hazards and precautions during an emergency or evacuation, including checking and accounting procedures
- information needs of emergency response agencies at time of reporting
- OHS legislative requirements as they relate to risk management
- own workplace:
 - characteristics and composition of the workforce as they impact on emergency/threat response, such as language, literacy, numeracy, communication skills, cultural background, gender, workers with special needs, labour market changes, part-time, casual or contract workers, shift work and geographical
 - essential actions of self and other key personnel in the workplace
 - location of emergency procedures, equipment and evacuation assembly areas

REQUIRED SKILLS AND KNOWLEDGE

- organisational emergency procedures, including various roles of the workplace emergency personnel
- workforce needs and entitlements post-emergency, incident and accident
- principles of effective liaison with emergency service personnel, including ensuring that there is no interference or hindrance to their action
- principles and priorities for evacuation, including checking and accounting procedures
- principles of trauma and recovery
- priorities and limitations of workplace response to threats and emergencies
- risk factors involved in operating an aquaculture enterprise
- role, responsibility and authority of emergency response personnel and principles of effective liaison to ensure that there is no interference or hindrance to their action
- situations when evacuating is required and when evacuation is inappropriate, including circumstances where evacuation processes may need to be modified

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment evidence required to demonstrate competence in this unit

Assessment must confirm the ability to:

- develop and maintain contingency plans and emergency procedures in response to potential emergency situations

Assessment must confirm knowledge of:

- risk factors likely to impact on enterprise products, personnel and assets, natural resources and environment
- risk management process

Context of and specific resources for assessment

Assessment is to be conducted at the workplace or in a simulated work environment. Competence should be across both preparedness and actual or simulated threat or emergency response.

Resources may include:

- access to suitable venue for simulated situations
- access to workplace documentation
- case study for simulation exercise
- cooperation of third parties and others
- operational aquaculture facility

Method of assessment

The following assessment methods are suggested:

- actual preparation for, and management of, threats and emergencies
- case studies
- role-plays
- scenarios
- simulation
- work-based project

Guidance information for assessment

This unit may be assessed holistically with other units within a qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant government regulations, licensing and other compliance requirements may include:

- ESD principles, environmental hazard identification, risk assessment and control
- fisheries or aquaculture regulations, permits, licences, quotas, catch restrictions and other compliance requirements, including:
 - Australian Exclusive Economic Zone
 - international treaties and agreements
- imports quarantine and inspection, and importing approved arrangements for Australian Quarantine Inspection Service (AQIS), Australian Customs Service (ACS) and Biosecurity Australia (BA)
- Indigenous native title, land claims and cultural activities, including fishing by traditional methods
- land, buildings and vehicles:
 - buildings and structures design and appearance, constructions and additions
 - poaching, trespass and theft
 - road laws for use of motor vehicles, bikes, trucks and other transport equipment
 - soil and water management
 - use of chemicals and biological agents
 - use of firearms and powerheads
 - use of utilities, including water, natural gas, electricity and sewage
 - water or land lease, tenure or ownership and use
- OHS hazard identification, risk assessment and control
- product quality assurance:

RANGE STATEMENT	
	• correct naming and labelling (e.g. country of origin, Australian Fish Names Standard and eco-labelling) • correct quantities, sizes and other customer requirements • third-party certification (e.g. Australian Grown and ISO 14001:2004 Environmental management systems)
<i>OHS guidelines</i> may include:	• appropriate workplace provision of first aid kits and fire extinguishers • clean, uncluttered, hygienic workplace • codes of practice, regulations and/or guidance notes which may apply in a jurisdiction or industry sector • enterprise-specific OHS procedures, policies or standards • hazard and risk assessment of workplace, maintenance activities and control measures • induction or training of staff, contractors and visitors in relevant OHS procedures and/or requirements to allow them to carry out their duties in a safe manner • OHS training register • safe lifting, carrying and handling techniques, including manual handling, and the handling and storage of hazardous substances • safe systems and procedures for outdoor work, including protection from solar radiation, fall protection, confined space entry and the protection of people in the workplace • systems and procedures for the safe maintenance of property, machinery and equipment, including hydraulics and exposed moving parts • the appropriate use, maintenance and storage of PPE
<i>ESD principles</i> may include:	• controlling use and recycling of water, and managing water quality and quantity • increasing use of renewable, recyclable and recoverable resources • managing environmental hazard identification, risk assessment and control • managing imported products quarantine and

RANGE STATEMENT

	inspection, facility biosecurity, translocation of livestock and genetic material, and health certification - managing stock health and welfare, especially for handling, holding, transport and slaughter - managing sustainable fisheries or broodstock/seedstock collection requirements, such as size limits, quotas, season restrictions, population dynamics, fishing impacts, reducing by-catch, fisheries management strategies and maintaining biodiversity - managing, controlling and treating effluents, chemical residues, contaminants, wastes and pollution - minimising noise, dust, light or odour emissions - planning environmental and resource efficiency improvements - preventing genetically modified and live cultured or held organisms from escaping into environment - protecting native and protected flora and fauna, marine or land parks or areas, adhering to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Ramsar Convention, World Heritage and other international treaties for which Australia is a signatory - reducing emissions of greenhouse gases - reducing use of non-renewable resources - reducing disturbances to soils, erosion and surface water flows from machinery use and other activities - reducing energy use and introducing alternative energy sources
PPE may include:	- buoyancy vest or personal floatation device (PFD) - gloves, mitts or gauntlets, and protective hand and arm covering - hard hat or protective head covering - hearing protection (e.g. ear plugs and ear muffs) - insulated protective clothing for freezers or

RANGE STATEMENT

	chillers and refrigeration units • non-slip and waterproof boots (gumboots) or other safety footwear • personal locator beacon or Emergency Position Indicating Radio Beacon (EPIRB) • protective eyewear, glasses and face mask • protective hair, beard and boot covers • protective outdoor clothing for tropical conditions • respirator or face mask • safety harness • sun protection (e.g. sun hat, sunscreen and sunglasses) • uniforms, overalls or protective clothing (e.g. mesh and waterproof aprons) • waterproof clothing (e.g. wet weather gear and waders)
<i>Emergencies and hazards</i> may include:	• biological (e.g. pests, predators, diseases and toxic algal blooms) • climatic (e.g. flood, storm, drought and wave action) • earthquakes, landslide and other natural disasters • emergencies requiring evacuation • environmental damage or losses • external emergencies (e.g. industrial disputation, traffic accidents resulting in non-supply of key resources and political events) • falls from heights, drowning, electrocution and other serious injury events • fires and explosions • food safety and hygiene/Hazard Analysis Critical Control Points (HACCP) • hazardous substance and chemical spills, pollution or contamination • human (e.g. poaching, vandalism and malicious damage, theft, unintentional mishaps, loss of key staff and professional incompetence) • internal emergencies (e.g. loss of power, gas or water supply and structural failure/collapse)

RANGE STATEMENT	
	• machinery malfunction or breakdowns • monetary, financial and economic loss/failure • OHS for staff, contractors, visitors and bystanders • property, infrastructure, plant and equipment failure • quality product failure, contamination or loss • security emergencies (e.g. criminal or terrorist activities, disturbed person and bomb scares) • stock, catch, product or asset loss • stock escapees and stock attacks to humans and other animals • vehicle accident
Risk register may be an internal or external document customised for the workplace and includes:	• list of hazard and emergencies, their location or work zone, associated task, activity or work process, people and equipment risk • list of possible control measures or corrective actions, proposed dates for implementation, and responsible person or authority • list of the risks identifying: • an indication of the likelihood of that consequence occurring • possible consequences or outcomes in terms of injury or damage • scenarios or circumstances under which injury or damage may occur • the results of risk assessment
Appropriate authorities and emergency agencies may include:	• AQIS • ambulance • coast guard • DISPLAN • Environmental Protection Authority (EPA) • fire brigade, country fire authority • fisheries inspectors • HAZMAT and chemical use inspectors • Landcare, Waterwatch, Coastcare and catchment management groups • local government • Marine Board • Neighbourhood/Rural Watch • OHS authorities

RANGE STATEMENT	
	• other government departments • Parks and Wildlife Services • police/marine police • rescue helicopter • State Emergency Services (SES)
<i>Monitoring and warning systems</i> may include:	• alarms • communications equipment • EPIRB • electronic surveillance equipment • personal locator beacons • staff and external observations • water quality monitoring equipment • weather gauges and reports
<i>Risk management contingency plans or loss minimisation strategies</i> may include:	• buildings and structures designed to withstand flood/storm • computer analysis and modelling tools • disaster or emergency management tools • disease, pest or predator treatments or controls • emergency or backup equipment • emergency drills • enterprise-specific OHS procedures, policies or standards: • first aid procedures or emergency evacuation • hazardous substance and dangerous goods handling, transport, storage and use • facility design: • building design and materials • clearings, fences and levees • fire doors and sprinkler systems • monitoring alarms • lights (e.g. security and warning) • fire fighting operations • insurance • move or harvest stock and culture or holding structures • minimise escapees • site location
<i>Post-incident activities</i> may	• clean up of damaged structures, assets and equipment

RANGE STATEMENT

include:

- containment of personnel and bystanders in evacuation or safe area
- first aid
- media
- support and counselling for personnel involved or affected
- viability of continuing business or sections of business

Unit Sector(s)

Aquaculture operations