

# Biosecurity – Freshwater pest fish incursion response and recovery

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## Scope:

The *Biosecurity Act 2015* (the Act) promotes biosecurity as a shared responsibility between government, industry and communities. This procedure is a State Priority for NSW and should be read in conjunction with the policies [IND-O-219 Aquatic biosecurity pests and diseases](#), [IND-O-229 Emergency Powers](#) and [INT20/71412 Management of animal biosecurity in NSW](#). The procedure applies to the NSW DPI and Local Land Services (LLS) in their role as authorised officers under the Act.

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## Management of the biosecurity risk

NSW Department of Primary Industries (NSW DPI), an office within the Department of Regional NSW (DRNSW) is committed to following a consistent response to new incursions of freshwater pest fish such as Tilapia (*Oreochromis mossambicus*, or *Tilapia spp.*). Established pest fish populations are extremely difficult, if not impossible to eradicate, and therefore a timely well-planned response is required to ensure the best chance of eradicating or controlling a new incursion.

This procedure outlines management actions and legal provisions that may be used in response to new suspected or confirmed freshwater pest fish incursions in NSW waterways.

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## Biosecurity legislation summary

The *Biosecurity Act 2015* provides for a flexible, outcome focused approach to managing biosecurity risk and impacts. This means that community members can achieve the outcomes of preventing, eliminating or minimising the biosecurity risks and impacts posed, or likely to be posed by pests and diseases of animals through a range of best practice management methods.

## Reporting

1. The *Biosecurity Act 2015* (the Act) and *Biosecurity Regulation 2017* (the Regulation) provide a framework for the prevention, elimination and minimisation of biosecurity risks. Pest fish species, such as Tilapia, are listed as prohibited matter under [Schedule 2, Part 1 of the Act](#) (e.g. *Tilapia spp.*) or as notifiable aquatic pests under [Schedule 1, Part 2 of the Regulation](#) (e.g. *Oreochromis mossambicus*). Introduced fish species that are not listed may still be considered

- biosecurity matter if they are deemed to present a biosecurity risk to NSW and may be subject to a pest fish incursion response.
2. Reports of suspected freshwater pest fish in a new location are subject to a pest fish investigation.
    - a. NSW DPI Biosecurity and Food Safety (BFS) will coordinate an investigation into the presence/absence of the pest fish at the reported location.
    - b. A request will be made for support from available technical expertise from within NSW DPI including BFS, NSW DPI Fisheries and Local Land Services (LLS), and external stakeholders such as the Australian Museum.
    - c. The NSW Chief Veterinary Officer (CVO) may decide to activate an emergency/incident response in the event of an outbreak, or reasonable suspicion of an incident, of a potentially nationally significant pest fish species. The NSW CVO may also decide to activate a response if an incursion is detected that may present a biosecurity risk to NSW aquatic environment, community or industries.
  3. Reports of a suspected freshwater pest fish incursion in a catchment where the species is already known to occur or be widely established, or species already known to be widespread throughout parts of NSW, will not be subject to a pest fish investigation unless the NSW CVO directs otherwise. These reports will be recorded in the Aquatic Biosecurity Pest and Disease reporting database (INT17/96769).

### **General biosecurity duty**

People who own or manage animals have a general biosecurity duty for management of the biosecurity risks and impacts associated with endemic animal pests and diseases. The general biosecurity duty is outlined in Part 3 of the Biosecurity Act. The biosecurity duty applies to a person who deals with biosecurity matter (including pest animals) or a carrier, and who knows, or ought reasonably to know the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing. Such a person has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised. Section 24 provides an offence of failing to comply with a biosecurity duty.

### **Disclosure of information**

The collection, use and disclosure of information in accordance with this procedure, including any internal or external discussion or distribution of information, must be in compliance with the Privacy and Personal Information Protection Act 1998 or be exempted by the operation of Section 387 of the Act.

Section 387 (2) of the Act provides authority for the disclosure of information about a person, without the consent of the person: to a public sector agency, or to any other person, but only if the disclosure is reasonably necessary for the purpose of exercising a biosecurity risk function. The NSW DPI procedure on Collection, Use and Disclosure of Information should be consulted for further information.

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### **Work health and safety**

The Work Health and Safety Act 2011 places an obligation on the agency (NSW DPI and LLS) as a person conducting a business or undertaking and workers to provide a safe and healthy workplace. Safe Work Method Statements that support activities included in this procedure must be used in identifying, assessing and controlling risks.

NSW DPI and LLS will work together to create a safe and supportive work environment when undertaking any activities for this procedure.

### **Safety considerations**

- Any injury must be reported immediately in accordance with the procedure - 'First aid in an EOC and the field'.
- Adequate WHS provisions e.g. sun protection, first aid kit, water, PPE must be taken on field events relating to pest fish.
- The presence of some pest fish (e.g. Tilapia) may have a negative effect on water quality, such as blue-green algae bloom.
- Field safety risk assessments and safe work method statements include:
  - Maintaining biosecurity entering and exiting properties (could use Come clean and Go clean)
  - Property visits
  - Manual handling
  - Animal destruction and disposal activities in emergencies
  - Animal handling in emergencies
  - Boating operations
  - Driving vehicles
  - Working on or around water (including water quality considerations)
  - Working around plant and equipment

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# Freshwater fish incursion response procedure

## 1. Responsibilities

- DRNSW Secretary: has power under Part 5 of the Act to declare a biosecurity emergency and establish measures to respond to a pest fish incursion. This power has been delegated to the NSW CVO.
- Director General, DPI (DG DPI): Accountability for the effective management of emergencies under the *SERM Act 1989*. Manages communications to the NSW Secretary of Regional NSW and the Minister for Agriculture and Western New South Wales for emergency response and recovery. Chairs the Executive Emergency Management Committee (EEMC). Ensures sufficient DPI staff are available in accordance with Schedule 5 - Emergency Management of the DPI/LLS Memorandum of Understanding (MOU). Appoints Primary Industries Recovery Coordinator/s.
- Deputy Director General, Biosecurity & Food Safety (DDG BFS): Branch executive responsibility for the effective management of biosecurity responses and recovery. Responsible for expenditure, recuperation and reporting of costs for cost-shared, non-cost shared and partially cost-shared responses and recovery activities.
- NSW Chief Veterinary Officer (CVO): The owner of the hazard; accountable for the response and initial recovery operations for animal (including aquatic) disease and pest emergencies, unless a 'state of emergency' is declared.
- DPI Biosecurity and Food Safety (BFS) Aquatic Biosecurity: Implement and lead according to NSW State Emergency Management Plan (EMPLAN) and Biosecurity (Animal and Plant) Emergency Sub Plan, and coordinate investigation and response, including: conduct initial investigation into report of pest fish incursion, coordinate species identification, provide recommendations for required legal provisions, assist with field operations and coordinate pest fish response activities and management.
- DPI Fisheries: provide technical expertise to assist with identification of pest fish species, assist with field activities including delimiting the population, assessing control and eradication options, implementation of control and eradication options, and installation of signage; assist with implementation of complimentary legislative provisions described in the *Fisheries Management Act 1994 (FMA)*; lead fish restocking programs and habitat rehabilitation activities.
- Local Land Services (LLS): provides resources (personnel and physical resources) for biosecurity responses, contributes to prevention and preparedness for biosecurity, and works with impacted land managers to delivery on-ground recovery/resilience projects. .
- National Parks and Wildlife Services (NPWS)/DPIE Environment, Energy and Science (EES) Group: Support agency following EEMPLAN
- Local Government: To work with NSW DPI to identify and prioritise risk mitigation options, including communication with local stakeholders and access to relevant sites
- Other stakeholders/community: Participate in communication activities

## 2. Procedure

Decisions about the pest fish incursion response, including emergency measures, will be made on a case-by-case basis by the Secretary (or delegate) after thorough consideration of all available information.

### 2.1 Phase 1 – Risk reported

Upon report of a suspected pest fish incursion BFS Aquatic Biosecurity will:

- d. Request photographic evidence and/or samples of suspected pest fish if available, which will be sent to appropriate expertise in DPI Fisheries and/or the Australian Museum for preliminary assessment and identification.
- e. Contact NSW DPI staff (e.g. Deputy Director General [DDG] Fisheries, Director Fisheries Research or Research Leader Freshwater Ecosystems) or other stakeholders in the area of the incursion (e.g. local government), to organise a site visit to determine if any evidence of a pest fish incursion can be observed (e.g. specimens or characteristic nesting activity), and if pest fish samples can be collected.
- f. If points 1a. and 1b. do not confirm evidence of a pest fish incursion local stakeholders will be asked to continue observations in the area, and education materials will be distributed to the local community.

## 2.2 Phase 2 – investigation and alert

If a suspect pest fish incursion is confirmed, the DDGs for BFS and Fisheries will be informed, and a team of technical specialists will attend the site to assess the incursion. This will include collection of samples for taxonomic and/or molecular identification at the Australian Museum and NSW DPI EMAI Biotechnology laboratory respectively. The team will also implement a surveillance plan, designed in consultation with Aquatic Biosecurity, to delimit the population using survey techniques (including traditional field techniques and novel survey methods such as eDNA) and assess the feasibility, safety and risks of eradication or control options that may include:

- a. The use of bund/screen or other method to restrict movement of pest fish during control activities
- b. Use of rotenone to destroy the fish (see permit [PER13011](#))
- c. Removal of the fish through netting, electrofishing and angling techniques
- d. Other novel pest fish eradication options that may be used in the specific circumstances
- e. Collaboration with other States for shared rivers and waterways
- f. Current environmental conditions (flood, drought etc)

This investigation will inform the feasibility of eradication or control. Decision about the biosecurity response will be made on a case-by-case basis by the NSW CVO after thorough consideration of all available information including but not limited to:

- the biological and ecological impacts of the incursion
- feasibility of potential eradication or control techniques
- impacts of potential eradication or control techniques on other species and the local ecosystem
- waterbody size, type and flow
- current environmental conditions such as flood and drought
- pathways for further spread of the pest species.

A State Coordinator may be appointed to manage the subsequent response and develop a response plan (including budget and cost-benefit analysis). The Chief Environmental Biosecurity Officer, and the national Freshwater Vertebrate and Invertebrate Working Group should be notified of the pest fish incursion and proposed operational activities.

The State Coordinator will then initiate the required response structure and roles (if the incursion is detected within the Murray-Darling Basin a forward command post may be required), notify BFS Systems Unit to initiate systems for the response, identify personnel to fill key roles from the available personnel in WebEOC. These personnel should then be notified of the potential emergency response by email, including the likely timeframe and location.

## 2.3 Phase 3 – Operational

If the pest fish population is deemed eradicable, the national Freshwater Vertebrate Invertebrate Working Group and key high level stakeholders (e.g. NSW Minister for Agriculture, DDG Fisheries, Game Licencing and Forestry, Murray Darling Basin Authority) should be updated, and a request for cost sharing arrangements (if available under the National Environmental Biosecurity Response Agreement [NEBRA]) should be made to the Chief Environmental Biosecurity Officer.

The State Coordinator will establish and manage the State Coordination Centre (SCC), activate a coordination management team, implement the response plan and establish a forward command post (FCP) if required. Significant incursions may require a Local Control Centre and possibly one or more FCPs.

The Secretary (or delegate) may, by order in writing, declare a biosecurity emergency under an emergency order according to Part 5, Division 1 of the Act. This may include:

- a. An emergency zone (Part 5 Division 2 of the Act) to define the specified area encompassing the pest fish population, emergency measures, class of persons the order applies to and the duration of the order.
- b. Emergency measures to isolate the pest fish population and eradicate if practicable, for example those identified in Section 2 of this procedure.
- c. Emergency measures that have been identified to reduce the risk of spread of the pest fish population, such as the installation of signage, prohibition of specific activities (this may include access to the waterway for recreational purposes).

There are also provisions within the Fisheries Management Act 1994 (FMA) that could be used to assist a pest fish incursion response.

- a. Section 8 of the FMA allows for a fishing closure to prohibit, absolutely or conditionally, the taking of fish, or of a specified class of fish from any waters or from specified waters.
- b. Section 37 of the FMA allows for a permit to be issued for taking and possession of fish for any purpose approved by the Minister that is consistent with the objects of the Act. This would be required in the case that euthanasia of fish species was undertaken as part of the response operations (e.g. rotenone treatment of a waterway).

The application of any legislative provisions to respond to a pest fish incursion response must be delivered in conjunction with a communications plan, to ensure the community are aware of the operation, the objectives and any safety issues.

## 2.4 Phase 4 – Stand down

The NSW CVO will declare the response over in consultation with the State Coordinator if:

- a. The investigation/alert phase confirms the hazard is not present
- b. The response outcomes have been met (e.g. eradication)
- c. The response outcomes are no longer feasible or cost effective

## 2.5 Phase 5 - Recovery

When the response has been stood down, a recovery coordinator will be appointed, and a recovery plan can be developed and implemented. This recovery plan will include community engagement and education, as well as other site-specific recovery options identified through the response operations such as control measures, stocking of fish, habitat rehabilitation and other ongoing management options.



### 3. Definitions and acronyms

**the Act:** the Biosecurity Act 2015

**Authorised officer:** A person who is appointed as an authorised officer under the Biosecurity Act and authorised by that appointment to exercise the function in relation to which the expression is used.

**BFS:** Biosecurity and Food Safety

**DDG:** Deputy Director General

**DRNSW:** Department of Regional NSW

**EMAI:** Elizabeth Macarthur Agriculture Institute

**EMPLAN:** the State Emergency Management Plan

**EOC:** Emergency operations centre

**ESS:** Environment, Energy and Science Group within Department of Planning, Industry and Environment

**FMA:** Fisheries Management Act 1994

**LLS:** Local Land Services

**LHMS:** Livestock Health and Management System

**NEBRA:** National Environmental Biosecurity Response Agreement

**NPWS:** National Parks and Wildlife Services

**NSW:** New South Wales

**NSW DPI:** New South Wales Department of Primary Industries

**PPE:** Personal Protective Equipment

**SCC:** State Coordination Centre

**WebEOC:** a web-based emergency operations centre for information management

### 4. Legislation

- Biosecurity Act 2015
- Biosecurity Regulation 2017
- Fisheries Management Act 1994
- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2017

### 5. Related policies and procedures

- IND-O-219 Aquatic biosecurity pests and diseases
- IND-O-229 Emergency Powers
- INT20/71412 Management of animal biosecurity in NSW
- INT08/75558 Water safety management system (Fisheries Compliance Operations)

### 6. Other related documents

- Primefact 1290 – Make ‘clean’ part of your routine
- IND17/26050 Aquatic fieldwork hygiene



- Emergency procedures for EOCs and field sites
- Biosecurity (Animal and Plant) Emergency Sub Plan

## 7. Records

Documents related to regional, state and national pest and disease programs must be saved in HPE Content Manager.

## 8. Revision History

Version	Date issued	Notes	By
1.0	15/04/2021	n/a	Aquatic Biosecurity Policy & Programs

## 9. Contact

Aquatic Biosecurity Policy and Programs

Port Stephens Fisheries Institute Switchboard – (02) 4982 1232

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