



Reference Document: Biosecurity

- Biosecurity is a national issue relating to the minimising the risks of transferring unwanted plants, animals or diseases into unaffected areas of Australia.
- Movement of oil and gas industry vehicles and ships carries the risk of introducing unwanted pests to the environment.
- The petroleum industry uses a risk-based and system-wide approach to enhance biosecurity.
- Every oil or gas project must specifically address biosecurity in its environmental plans.

1. Introduction

As a petroleum project develops, there is an inevitable increase in vehicle traffic for onshore activities, and ship movements for offshore activities. With each movement, there is a risk of carrying an unwanted pest such as weeds or other biological threats. This is no different to any other industry that moves equipment and people from place to place. The petroleum industry is particularly mindful of these risks and the threat they represent to local communities, regional businesses – especially agriculture – and the environment.

2. Australia's Biosecurity

2.1 What is biosecurity?

Biosecurity involves protecting people, animals, the environment and the agricultural industry from infectious diseases, pests and other biological threats¹.

Australia also has an obligation to protect its trading partners from importing Australian flora and fauna.

It is estimated that pests and weeds cost Australia at least \$7 billion a year. Globally, the costs of invasive alien species (IAS) are about \$350 billion.²



¹ Australian Biosecurity Cooperative Research Centre, <http://www.abrc.org.au/pages/about.aspx>

² CSIRO - <http://www.csiro.au/Outcomes/Safeguarding-Australia/Biosecurity-Invasive-Species.aspx>



2.2 Who is responsible for biosecurity?

The Intergovernmental Agreement on Biosecurity signed by the Council of Australian Governments (COAG) in 2011 recognises that biosecurity is a shared responsibility between Commonwealth, State and Territory governments as well as industry and the community at large.³

Commonwealth government departments, including the Department of Agriculture, Fisheries & Forestry (DAFF) and the Australian Quarantine Inspection Services (AQIS), are responsible for border protection and minimising the risk of importing unwanted species.

State governments are responsible for ensuring that the measures imposed on the control and movement of declared pest species are scientifically justified, are the lowest cost to the community, and represents an Appropriate Level of Protection (ALOP).

At an industry and community level, biosecurity relies on individuals taking measures to ensure they have minimised their risk of spreading pests into unaffected areas. The community and industry are the frontline for identifying declared pests through on-the-ground observation, reporting and notification, as well as assisting in eradicating pest species.

2.3 Biosecurity Principles:

An integrated, 'system-wide', approach⁴ is essential for successful biosecurity measures (Fig. 1). It must balance:

Risk Identification: Companies complete environmental and marine surveys before starting construction of infrastructure (i.e. well sites, pipelines and marine facilities). This establishes the risk of transferring invasive species into unaffected areas and determines the appropriate controls to minimise or eliminate this risk.

Prevention: Companies address pest management by:

- Preparing environmental management plans and specific weed management procedures.
- Educating employees, site managers and contractors on the importance of the procedures and preventing the spread of the pest species.
- Working with authorities to ensure that legislative standards are met.

Surveillance: Following construction, companies employ marine and environmental scientists to monitor areas and identify whether any invasive species may have entered. Companies also work closely with landholders, community groups and port authorities on long-term surveillance.

Response: If pest species are identified in areas where companies have been operating, the companies are required swiftly roll-out corrective control measures. This can include removing plants and animals or using biological or chemical control methods.

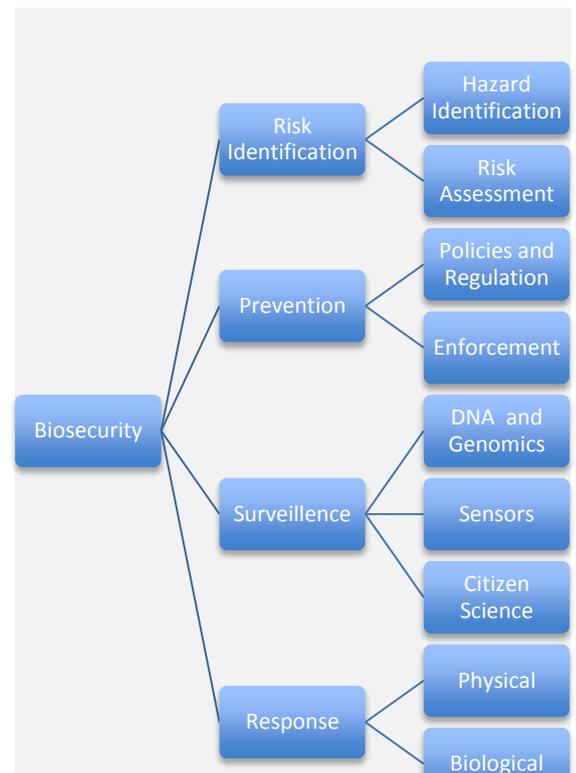


Fig. 1: Integrated Biosecurity System

Source: CSIRO⁴

³ www.coag.gov.au Intergovernmental Agreement on Biosecurity

⁴ CSIRO (2013), Marine Biosecurity Workshop 2013, Workshop Summary, p.7 (<http://www.csiro.au/Organisation-Structure/Flagships/Biosecurity-Flagship/Marine-Workshop.aspx>)



3. Onshore protection

Onshore biosecurity is focused on ensuring that the spread of pest animal species, harmful weeds, soil and plant disease is prevented, minimised and/or controlled.

The spread of weeds has the potential to harm human health, as well as significant environmental and economic impacts by displacing native grasses and by reducing the quality of agricultural products.

Throughout Australia's agricultural history, the movement of machinery has been the primary cause of weed spread across the environment.

One such example is the wide scale spread of the Parthenium Weed through the Surat and Bowen Basins during the 1950s Brigalow Clearing Scheme.⁵

Parthenium and other invasive weeds cause up to \$600 million in economic loss to the Queensland agricultural industry each year.⁶

In Queensland, where the highest amount of onshore petroleum exploration and production is currently being undertaken, companies have employed specialists to ensure their operations minimise the risks of the spread of unwanted plant and animal species.

The highest risk of weed spread occurs where there is earthmoving and construction activities.

Companies must, therefore, be strict in ensuring that vehicles moving into unaffected areas have completed wash-down processes (Fig 2).



Fig. 2: Biosecurity Wash-down Facility

Source: Chevron

⁵ Commonwealth of Australia National Weeds Strategy 2001. <http://www.daff.qld.gov.au>

⁶ QGC, Surat Basin Acreage – Pest and Weed Management Plan, June 2014



4. Marine protection

Australia has more than 250 introduced marine species. Most have little impact, but some – including various crabs, mussels, seastars and seaweeds – have become aggressive pests in some locations.⁷

As a key stakeholder in maritime activities in Australia, and as an importer and exporter, the petroleum industry works hard to ensure that Australian waters and the nation's fishing and aquaculture industries are protected from foreign pests and disease to the greatest extent possible.

From an export perspective, our biosecurity measures give Australia's international trading partners security that our exports are safe and will not transfer unwanted biological material. Australia will soon be the world's largest LNG exporter, with ships trading between Australia and numerous international ports.

Imported marine pests have the potential to significantly impact our marine industries, such as fishing and aquaculture, and environment. Ballast water exchange is internationally recognised as a major pathway for the spread of marine pests. It is estimated that up to 30 per cent of the invasive marine species in Australia have arrived via ballast water.⁸

Ballast water is water carried inside a ship's hull to improve its stability. When ships take on ballast water, plants and animals that live in the ocean are also picked up. Discharging this ballast water releases these organisms into new areas where they can become marine pests.⁹

Australia's standards for marine biosecurity are consistent with the standards of the International Maritime Organization (IMO). The DAFF is responsible for ensuring that all ships' foreign ballast water is discharged or exchanged at least 12 nautical miles from the Australian coastline.

All LNG vessels arriving in Australia from international waters must submit a Quarantine Pre-Arrival Report to the department between 12 and 96 hours prior to entering Australian waters. The department conducts ballast water verification inspections onboard vessels to ensure compliance with Australia's ballast water management requirements.¹⁰

⁷ <http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/marine-pests>

⁸ <http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/marine-pests>

⁹ <http://www.epa.vic.gov.au/your-environment/water/ballast-water>

¹⁰ <http://www.daff.gov.au/biosecurity/avm/vessels/quarantine-concerns/ballast/australian-ballast-water-management-requirements>