Australian Government
Department of Agriculture, Fisheries and Forestry

Plant commodity/country risk analysis process

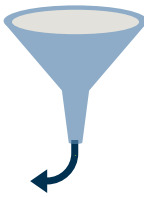
Plant import risk analyses assess the biosecurity risk associated with the importation of plants and plant products and identify appropriate ways to manage risk to an acceptable level.

1 Pest categorisation

A filtering process that aims to identify quarantine pests on a plant import pathway.

As a World Trade Organisation member, Australia bases this process on standards set by the International Plant Protection Convention.

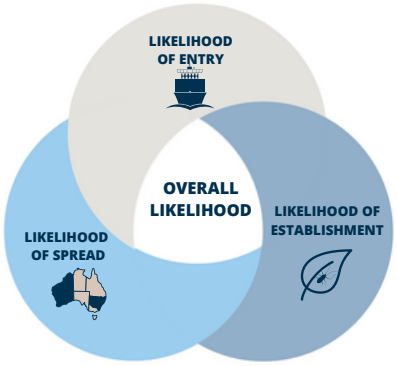
ALL PESTS with potential to be imported on the commodity



QUARANTINE PESTS

2 Assessment of overall likelihood

An assessment of the likelihood that a quarantine pest will enter, establish and spread in Australia.



3 Assessment of overall consequence rating

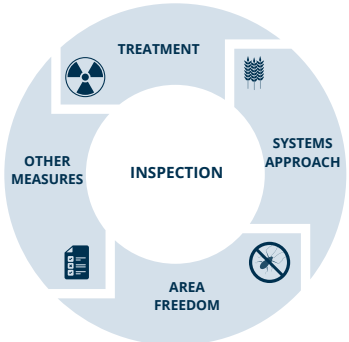
An assessment of the consequence (economic and environmental impacts) should a quarantine pest enter, establish and spread in Australia.

4 Estimation of unrestricted risk

The likelihood and consequence ratings are combined to determine the biosecurity risk posed by a quarantine pest for Australia. An unrestricted risk estimate is established for each quarantine pest.

5 Pest risk management

Pest risk management measures are required if the unrestricted risk estimate for a quarantine pest does not achieve the appropriate level of protection (ALOP) for Australia. The ALOP for Australia is very low, but not zero.

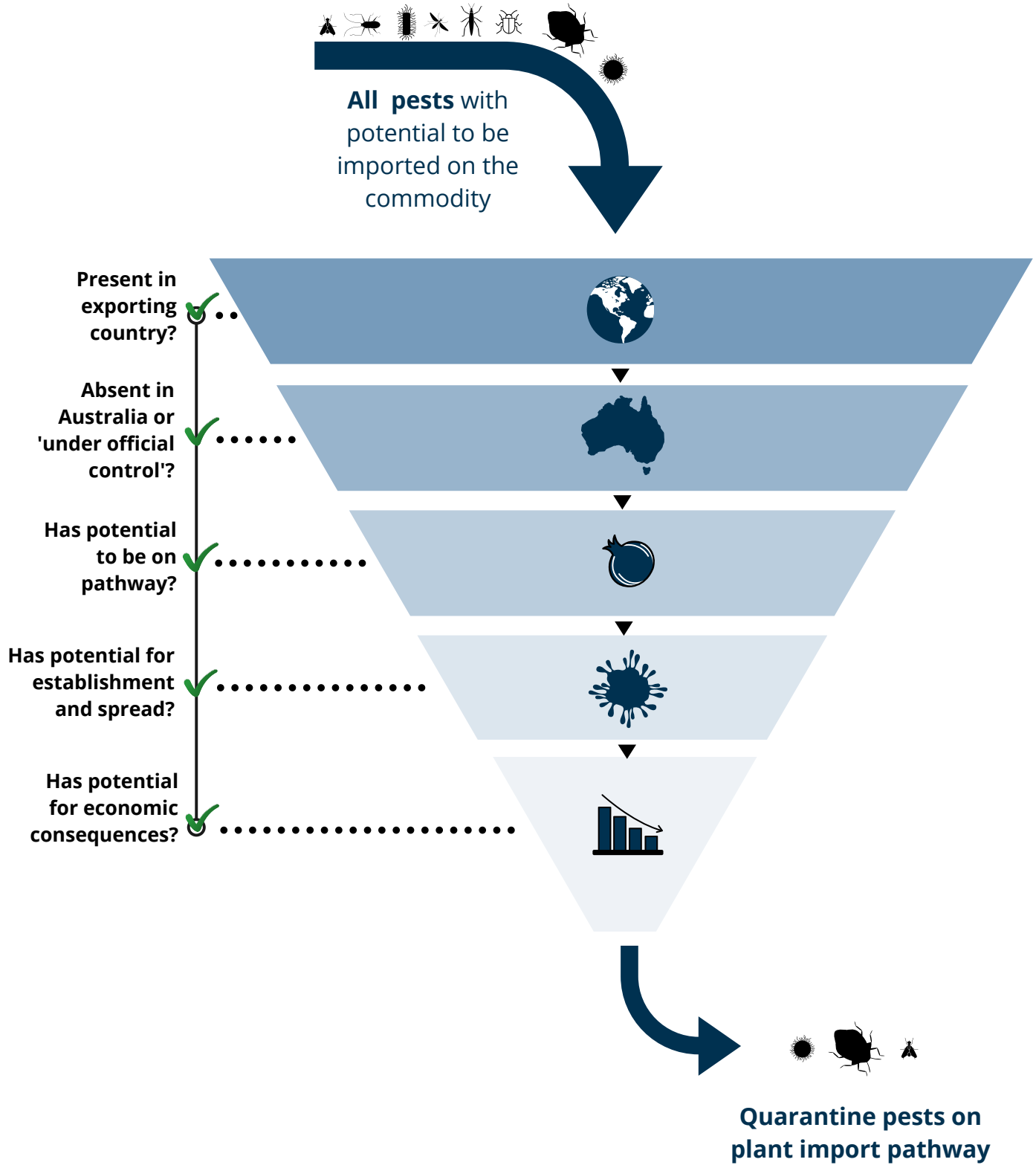


Australian Government
Department of Agriculture, Fisheries and Forestry

Plant commodity/country risk analysis process

1 Pest categorisation

A filtering process that aims to identify quarantine pests on a plant import pathway.



Australian Government
Department of Agriculture, Fisheries and Forestry

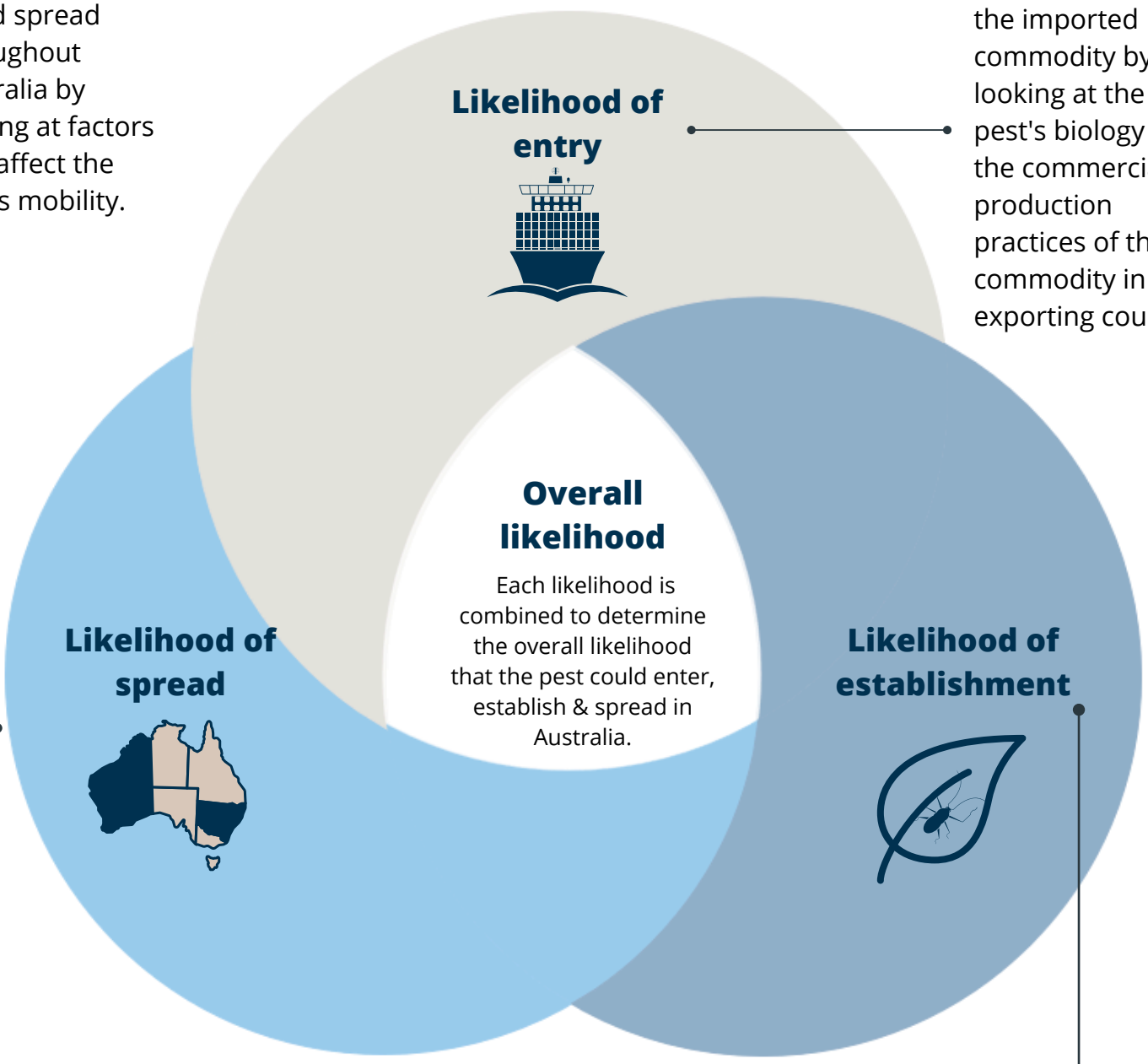
PLANT COMMODITY/COUNTRY RISK ANALYSIS PROCESS

2 Assessment of overall likelihood

An assessment of the likelihood that a quarantine pest will enter, establish and spread in Australia.

We assess how likely the pest could spread throughout Australia by looking at factors that affect the pest's mobility.

We assess how likely the pest is to enter Australia on the imported commodity by looking at the pest's biology and the commercial production practices of the commodity in the exporting country.



We assess how likely the pest could establish in Australia by looking at the pest's biology and the suitability of the Australian environment that could encourage the pest to establish and survive.

Australian Government
Department of Agriculture, Fisheries and Forestry

PLANT COMMODITY/COUNTRY RISK ANALYSIS PROCESS

2 Assessment of overall likelihood: Combining likelihoods

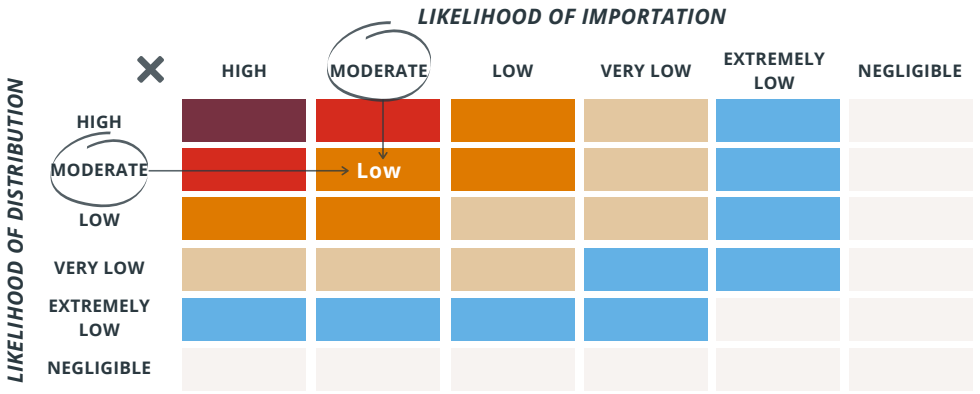
The overall likelihood of a pest being able to enter, establish and spread in Australia is determined by assessing and combining each likelihood. These three steps are outlined in the tables below using Pest-X as an example. These assessment tables use a set of rules for combining qualitative likelihoods that are based on indicative probability ranges. For example, these rules mean that combining two 'moderate' likelihoods results in a 'low' likelihood outcome.

Assessment table key

COMBINED RESULT	High	Moderate	Low	Very Low	Extremely Low	Negligible
DEFINITION	Very likely to occur	Likely to occur	Unlikely to occur	Very unlikely to occur	Extremely unlikely to occur	Almost certainly won't occur

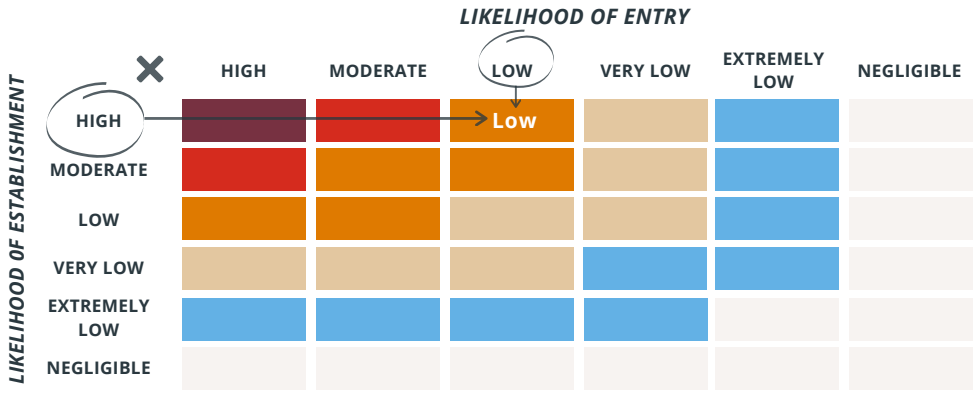
Entry

- The likelihood of entry is made up of two parts: importation and distribution.
- For Pest-X, the likelihood of it being imported on the commodity is Moderate and the likelihood it will be distributed is also Moderate.
- Therefore, the likelihood of Pest-X **entering** Australia is LOW.



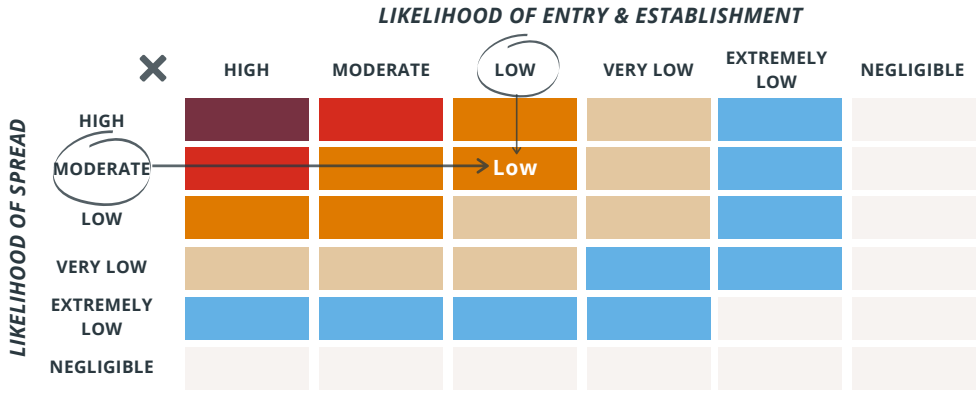
Entry & Establishment

- Pest-X has a Low likelihood of entering Australia.
- The likelihood of Pest-X establishing in Australia is High.
- Therefore, the likelihood of Pest-X **entering and establishing** in Australia is LOW.



Entry Establishment & Spread

- Pest-X has a Low likelihood of entering and establishing in Australia.
- The likelihood of Pest-X spreading in Australia is Moderate.
- Therefore, the overall likelihood of Pest-X **entering, establishing and spreading** in Australia is LOW.



Overall likelihood

By combining each likelihood estimate, the overall likelihood of Pest-X entering, establishing and spreading in Australia is LOW.

Australian Government
Department of Agriculture, Fisheries and Forestry

PLANT COMMODITY/COUNTRY RISK ANALYSIS PROCESS

3 Assessment of overall consequence rating

An assessment of the consequence (economic and environmental impact) should a quarantine pest enter, establish and spread in Australia.

The economic and environmental consequence (impact) should a quarantine pest enter, establish and spread in Australia is assessed for each geographic level:

A rating is given to a geographic level at which the quarantine pest is likely to have an impact:

Australian Government
Department of Agriculture, Fisheries and Forestry

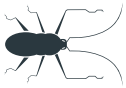
PLANT COMMODITY/COUNTRY RISK ANALYSIS PROCESS

3 Assessment of overall consequence rating: Combining impacts

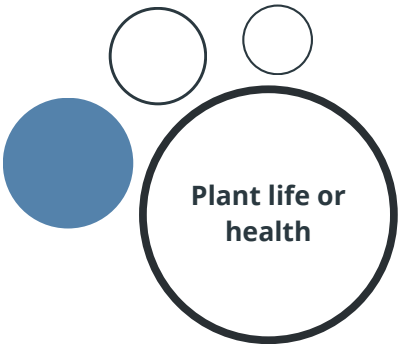
The overall consequence rating for a quarantine pest is determined by combining the impacts the pest is likely to have if it was to enter, establish and spread in Australia. This process is outlined below using Pest-X as an example.

Assign impact scores

Once the impact of all likely consequences associated with a quarantine pest has been estimated at the geographic level, an impact score is assigned. The impact score ranges on a scale from A to G.



Let's take a look at how an impact score is assigned for the consequence 'Plant life or health'. If Pest-X enters, establishes and spreads in Australia, it is likely to impact plant life or health at the regional level. Also, the impact is likely to be significant for the region. Using the table, we find that the impact score for the plant life or health consequence is E.



Assessment table

IMPACT \ GEOGRAPHIC SCALE	LOCAL	DISTRICT	REGIONAL	NATIONAL
INDISCERNIBLE	A	A	A	A
MINOR SIGNIFICANCE	B	C	D	E
SIGNIFICANT	C	D	E	F
MAJOR SIGNIFICANCE	D	E	F	G

This step is repeated for the other five consequences. Now it's time to combine them.

Combine impact scores

The overall consequence rating is determined by assessing the impact scores against a series of rules. Starting at Rule 1, we go through each criterion to determine which Rule our impact scores satisfy.

Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
• Any **G** scores, OR • More than one **F** score, OR • One **F** score & all remaining have **E** scores	• One **F** score OR • All **E** scores	• One or more **E** scores, OR • All **D** scores	• One or more **D** scores OR • All **C** scores	• One or more **C** scores, OR • All **B** scores	• One or more but not all have **B** scores, AND • All remaining have **A** scores
The overall consequence rating is:	The overall consequence rating is:	The overall consequence rating is:	The overall consequence rating is:	The overall consequence rating is:	The overall consequence rating is:
EXTREME	HIGH	MODERATE	LOW	VERY LOW	NEGLIGIBLE

With one **E** impact score, Pest-X has been assessed as having an overall consequence rating of **MODERATE**.

PLANT COMMODITY/COUNTRY RISK ANALYSIS PROCESS

4 Estimation of unrestricted risk

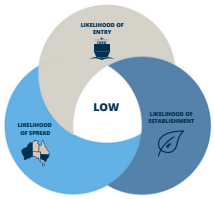
The unrestricted risk estimate (biosecurity risk) of a quarantine pest is determined by combining the overall likelihood and overall consequence ratings. This process is outlined below using Pest-X as an example.

In steps 2 and 3, we found that for Pest-X:

The overall likelihood of entry, establishment and spread is **LOW**

&

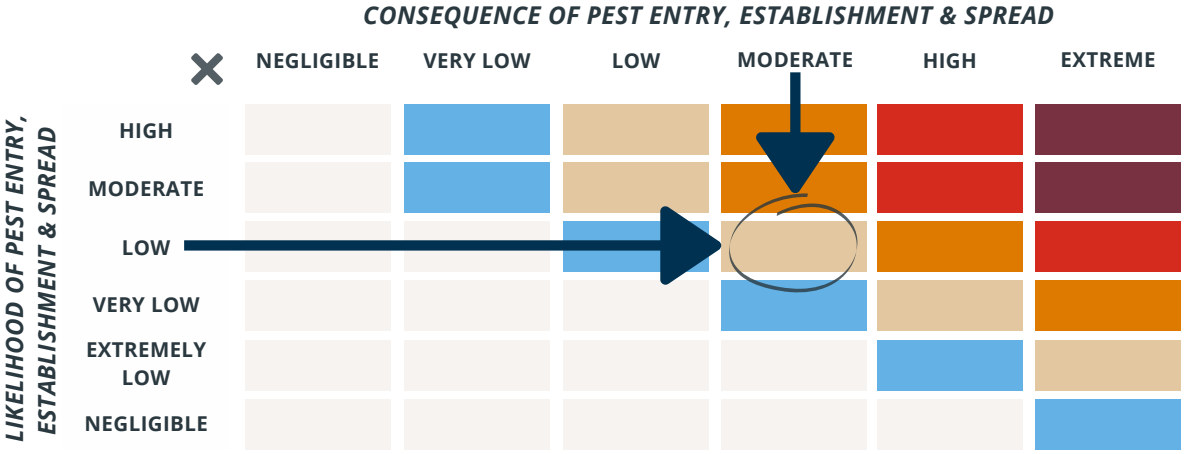
The overall consequence rating is **MODERATE**



Using the matrix below we combine the overall likelihood and overall consequence ratings. The consequence rating is plotted along the top, and likelihood is shown along the side.

Although the ratings for each axis are similar the matrix is not symmetrical, reflecting the different range of ratings for overall likelihood and consequence. As a result, different risk estimates are obtained by combining a 'low' likelihood with a 'high' consequence and a 'high' likelihood with 'low' consequence.

RISK KEY	Negligible	Very Low	Low	Moderate	High	Extreme



By combining the overall likelihood and overall consequence ratings, Pest-X has an unrestricted risk estimate of **LOW**.

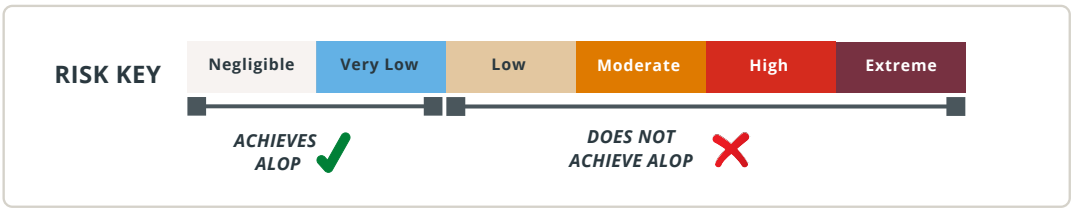
Australia's Appropriate Level of Protection (ALOP) is defined as providing a high level of protection for human, animal and plant life that reduces risk to a very low level, but not to zero. As the unrestricted risk estimate for Pest-X does not achieve ALOP (it is Low not Very Low), the risk is unacceptable. Accordingly, risk management measures are required to reduce the risk of Pest-X to an acceptable level (Very Low).

PLANT COMMODITY/COUNTRY RISK ANALYSIS PROCESS

5 Pest risk management

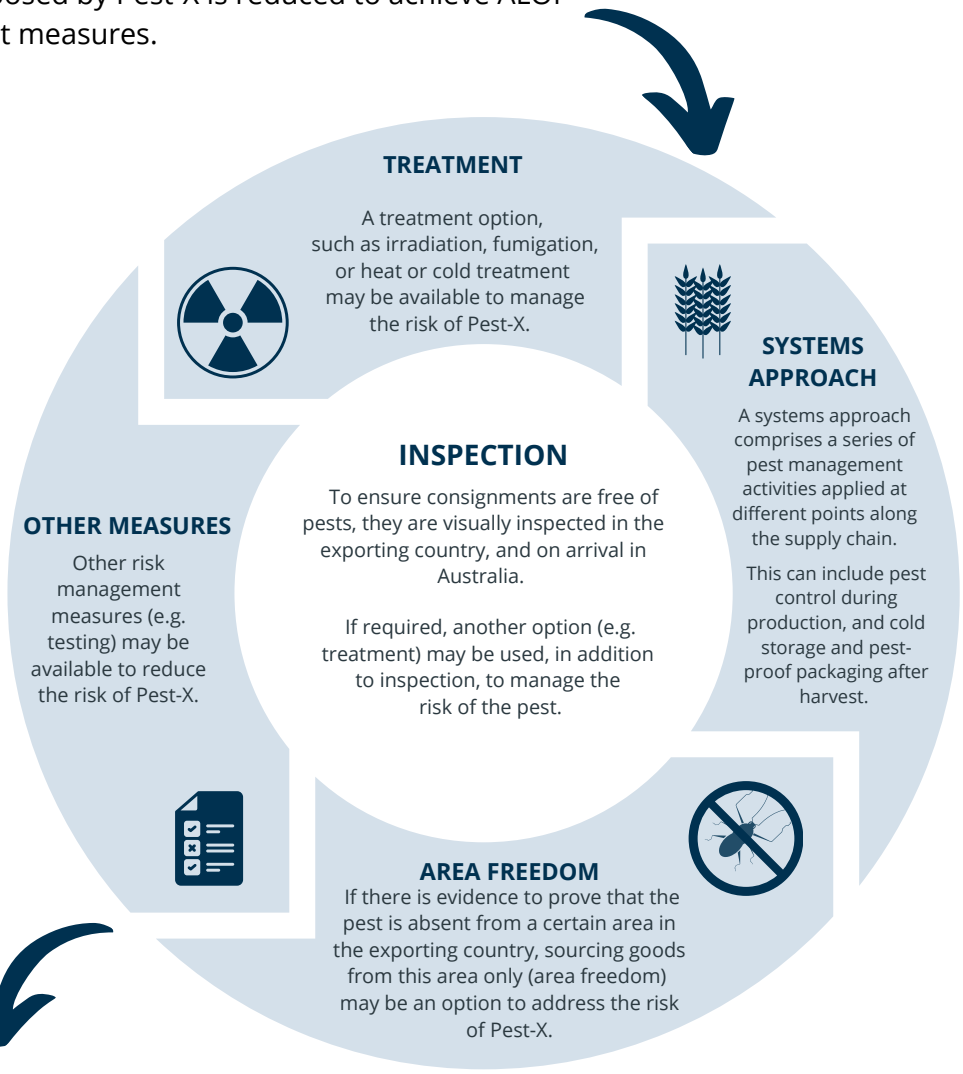
Pest risk management measures are required if the unrestricted risk estimate of a quarantine pest does not achieve the appropriate level of protection (ALOP) for Australia. The ALOP for Australia is very low, but not zero. Let's now take a look at the measures needed for Pest-X.

There are a number of risk management options that can be used to manage the biosecurity risk of a quarantine pest. The biosecurity risk of most pests can be managed by one or more of the management options presented.



UNRESTRICTED RISK

Pest-X has an unrestricted risk estimate of Low, which does not achieve Australia's ALOP. Risk management measures are required to reduce the risk to achieve ALOP. The commodity cannot be imported unless the biosecurity risk posed by Pest-X is reduced to achieve ALOP using pest risk management measures.



RESTRICTED RISK

When risk management measures are applied, the risk posed by Pest-X is reduced to VERY LOW. This means Australia's ALOP is achieved and importation of the commodity may be permitted.