



National Categorisation System for Invasive Species



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This document was produced by the Categorisation Working Groups of the Australian Weeds Committee and the Vertebrate Pests Committee. It was endorsed by the National Biosecurity Committee in July 2011.

Cover Images:

© The State of Victoria, Department of Primary Industries, 2012 Water hyacinth (top left), Rabbit (top right), Red-eared Slider Turtle (bottom left), Mexican Feather grass (bottom middle), Indian Myna (bottom right).

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Purpose

The Australian Weed Strategy (AWS) and the Australian Pest Animal Strategy (APAS) recognise that resources for invasive species management must be targeted at the highest priorities for action. This establishes a need to prioritise pest species or targets for control. To progress the implementation of the Strategies, this document outlines four agreed national categories for invasive species taxa, together with 'selection criteria' used to assign candidate taxa to these categories.

Assignment to categories is an ongoing and dynamic process and will therefore require regular review. Responsibility for assigning taxa to Categories 1, 2 and 4 lies with the Australian Weeds Committee (AWC) and the Vertebrate Pests Committee (VPC). Responsibility for nominating taxa to Category 3 lies with those same Committees, with formal assignment achieved by Ministerial endorsement of the nomination.

Scope

The aim of this categorisation process is to reduce the impacts of invasive species on the economy, environment and/or social amenity of Australia by guiding the priorities for invasive species management in a manner consistent with the terms of the AWS and APAS.

Outcomes

This categorisation process will:

- a) Guide the early detection of, and rapid response to, new incursions of invasive species by:
 - (i) Providing criteria for the development and maintenance of nationally agreed lists of high risk species for surveillance and national response.
 - (ii) Providing policy justification for the maintenance and improvement of the resources required for identifying potential invasive species.
- b) Assist to reduce the spread of invasive species to new areas within Australia by:
 - (i) Providing criteria for assessing the threat of 'sleepers' or other isolated populations and providing guidance on the need to eradicate or contain these according to assessments of feasibility, costs and benefits.
 - (ii) Providing guidance on reducing the spread of invasive species across jurisdictions, particularly where containment is possible and the risks to other parts of Australia can be minimised.
- c) Provide criteria for the identification of established invasive species of national significance.
- d) Provide guidance on the roles and responsibilities for the management of invasive species under Australia's obligations for honouring international treaties, and contribute to global environmental and trade initiatives (e.g. keeping, sale and trade of invasive species).

Glossary of Terms

a) Existing Definitions

Many of the terms used in this document are defined in the National Environmental Biosecurity Response Agreement (NEBRA), the Australian Weed Strategy (AWS) and the Australian Pest Animal Strategy (APAS).

b) Additional & Key Terms

AWC	The Australian Weeds Committee (AWC) is an Australian committee whose role is to provide an inter-Governmental mechanism for identification and resolution of weed issues at a national level on behalf of the Natural Resource Management Ministerial Council (NRMCC).
EPANS	Established Pest Animals of National Significance (EPANS) are invasive animals which have been identified as nationally agreed priority species for control and management. Investment in the management of established pests should be largely directed to those species deemed to be having major impacts at the national level which can be mitigated cost-effectively.
Establishment	The process of a species in a new habitat successfully reproducing at a level sufficient to ensure continued survival without infusion of genetic material from outside the system (Global Invasive Species Program).
Invasive Species	A non-indigenous species, the establishment and spread of which threatens ecosystems, habitats or other species with economic or environmental harm (Global Invasive Species Program).
NBC	The National Biosecurity Committee (NBC) is an advisory committee to the Primary Industries Standing Committee (PISC), Primary Industries Ministerial Council (PIMC), Natural Resource Management Standing Committee (NRMSC) and the Natural Resource Management Ministerial Council (NRMCC). NBC provides strategic leadership in managing national approaches to emerging and ongoing biosecurity policy issues across jurisdictions and sectors. NBC takes an overarching, cross-sectoral approach to national biosecurity policy, and works collaboratively to achieve national policy objectives for biosecurity in Australia. The AWC and VPC are sectoral committees of NBC.
Taxon	A taxonomic unit, whether named or not. A taxon encompasses all included taxa of lower rank and individual organisms (International Code of Zoological Nomenclature 2000).
VPC	The Vertebrate Pests Committee (VPC) is an Australasian committee whose role is to provide coordinated policy and planning solutions to pest animal issues.
WONS	Weeds of National Significance (WONS) are invasive plants which have been identified as nationally agreed priority species for control and management. Species are selected based on their high rankings for invasiveness, potential to spread, and impact on socioeconomic and environmental assets.

CATEGORY 1: NATIONAL SURVEILLANCE

Selection criteria used to assign a taxon to this category:

- A.1 The taxon is not known to be in Australia; **and**
- A.2 The taxon poses a potential “significant national threat” to the environment and ecosystems; **or** people, including human infrastructure and social amenity (see note 1); **or** business activity.

Minimum management actions for Category 1 taxa.

1. Uniform national ban on sale, supply and trade, to prevent naturalisation and to remove any commercial incentive to smuggle species into Australia.
2. Use of NEBRA as a guiding document for incursion planning together with generic incident plans endorsed by NBC.
3. Structured and general surveillance programs developed to achieve successful early detection (note: a taxon could be moved into Category 2 ‘National Eradication’ if an incursion is found in Australia that is still technically feasible to eradicate).
4. Only those species on the list of taxa taken to be suitable for import (e.g. under the *Environment Protection and Biodiversity Conservation Act 1999* or the *Quarantine Proclamation 1998*) are potentially able to be imported into Australia. If a taxon is not on such a list, an appropriate application needs to be made. Using the Precautionary Principle, all taxa meeting criteria A1 would be considered to be candidates for Category 1, unless the taxon is specifically identified on an appropriate list/s for importation via the appropriate processes.

Notes

1. The national significance criteria referred to in this paper are set out in Schedule 3 of draft V1 of NEBRA dated 3 June 2010 (Attachment B).
2. Where measures put in place to prevent the incursion of significant invasive species/ taxa into Australia directly or indirectly affect international trade, or have the potential to do so, those measures must be developed in accordance with Australia’s international rights and obligations, including those contained in any relevant international agreements, and must be consistent with the agreed Australian Import Risk Analysis processes.
3. Any specific nomination of a taxon as a national surveillance target to AWC or VPC must include a risk assessment of the possible pathways and impacts of the taxon in a form acceptable to all jurisdictions represented on AWC or VPC and consistent with Schedule 2 of the NEBRA (see Attachment A), to enable each jurisdiction to fulfil its own risk assessment and legislative processes.
4. Specific taxon nomination submission made to AWC or VPC must include an assessment of how the taxon’s potential impact meets the National Significance criteria set out in Schedule 3 of the NEBRA (see Attachment B).
5. It is the responsibility of the sectoral committees to populate indicative lists of species for this Category.

6. Presence of a species in Australia in a secure collection/s does not preclude its nomination as a Category 1 species for national surveillance.
7. It is assumed that taxa assigned to Category 1 will be subjected to assessment for National Eradication if the taxa is subsequently detected in Australia.

CATEGORY 2: NATIONAL ERADICATION

Selection criteria used to assign a taxon to this Category:

A.1 The taxon is currently a nationally-agreed, cost-shared eradication target

OR

B.1 The taxon has been considered through the NEBRA process and fulfils criteria under that agreement including:

- a) present in Australia; **and**
- b) eradication is considered technically feasible and cost beneficial; **and**
- c) the species poses an actual or potential “significant national threat” to:
 - i) the environment and ecosystems; **or**
 - ii) people, including human infrastructure and social amenity; **or**
 - iii) business activity.

Minimum management actions for Category 2 taxa.

1. Management actions will depend on the agreed national response process, as used by the National Biosecurity Management Group, and determined in a manner consistent with:
 - a) a sectoral committee process; or
 - b) the NEBRA process (see Table 1 below).
2. If a national response to an invasive species is agreed by the National Biosecurity Management Group then all jurisdictions will include the taxon under appropriate legislation to ensure that the minimum management actions are performed.

Notes

1. The national significance criteria referred to in this paper are set out in Schedule 3 of draft V1 of NEBRA dated 3 June 2010 (Attachment B).
2. Where measures put in place to eradicate serious invasive species/taxa in Australia directly or indirectly affect international trade, or have the potential to do so, those measures must be developed in accordance with Australia’s international rights and obligations, including those contained in any relevant international agreements, and must be consistent with the agreed Australian Import Risk Analysis processes.
3. An invasive species/taxon eradication nomination submission made either through the NEBRA or a sectoral committee process must include a risk assessment of the pathways and impacts of the taxon in a form acceptable to all jurisdictions represented on the relevant sectoral consultative committee and consistent with Schedule 2 of the NEBRA (see Attachment A), to enable each jurisdiction to fulfil their own risk assessment and legislative processes.

An invasive species/taxon eradication nomination submission made either through the NEBRA or to the relevant sectoral consultative committee must include a technical feasibility and cost: benefit assessment consistent with Schedule 4 of the NEBRA (see Attachment C).

An invasive species/taxon eradication nomination submission made either through the NEBRA or to the relevant sectoral consultative committee must include an assessment of how the taxon's potential impact meets the National Significance Criteria set out in Schedule 3 of the NEBRA (see Attachment B).

4. The relevant sectoral committee may still coordinate an eradication action in circumstances where the process of applying for a cost-sharing arrangement may not be cost-effective.
5. Presence of a species in Australia in a secure collection/s does not preclude its nomination as a Category 2 species for national eradication.

Table 1 Outline of the process for the national approach to responding to an incursion as set out in clause 6.3 of the NEBRA V1.0 (3 June 2010).

Outline of the process for a national approach to a response	
<p>The parties agree to comply with the process set out below in the event of an outbreak of a potentially nationally significant pest or disease. Further details on some of the steps are contained in the following clauses. A flow chart summarising the steps in clause 6.1 is at Schedule 1. The process is as follows.</p>	
Step 1	<p>If a party becomes aware of an outbreak, or has a reasonable suspicion of an incident of a potentially nationally significant pest or disease, it must use all reasonable endeavours to contain the pest or disease.</p>
Step 2	<p>The party must decide whether the confirmed or suspected outbreak can be managed through pre-existing cost-sharing arrangements.</p> <p>At the same time, it must, at the very least, start to verify the outbreak and undertake a risk assessment, as per Schedule 2, if one is not already available. Once completed, the verification and risk assessment will further support the decision as to whether the outbreak can be managed through pre-existing cost-sharing arrangements.</p> <p>If the party has concluded that the confirmed or suspected outbreak can be managed through pre-existing cost-sharing arrangements, the approach for dealing with the outbreak under those circumstances should be followed, in accordance with clause 6.2.</p>
Step 3	<p>If the party, or the relevant consultative committee (if managed under pre-existing cost-sharing arrangements in step 2), has concluded that the confirmed or suspected outbreak cannot be managed through pre-existing cost-sharing arrangements, that party—now referred to as the notifying party as defined in clause 6.3(a)—must formally notify the reporting point—as defined in clause 6.3(c)—about the outbreak in accordance with clause 6.3 as soon as it has a reasonable basis for doing so.</p> <p>This must be done within 24 hours of step 1, including where step 2 has started but has not yet been completed.</p>
Step 4	<p>Upon notification from the reporting point, the parties will establish a National Biosecurity Management Consultative Committee (NBMCC). The NBMCC confirms the outbreak and notifies all parties.</p>
Step 5	<p>A specific National Biosecurity Management Group (NBMG) will be convened on the request of any party or on the advice of the NBMCC.</p>
Step 6	<p>The NBMCC, with assistance from the notifying party, will provide advice, as early as possible, to the NBMG on the following:</p> <ul style="list-style-type: none"> (a) confirmation that the outbreak cannot be managed under pre-existing cost-sharing arrangements <ul style="list-style-type: none"> (i) if it is decided that the outbreak can be managed under pre-existing cost-sharing arrangements, the affected parties will need to determine the appropriate course of action; or (ii) if it is confirmed that the outbreak cannot be managed through pre-existing cost-sharing arrangements, continue with step 6 (b). (b) An assessment of whether the pest or disease is (i) of national significance (see Schedule 3) and (ii) whether it is likely to be eradicable, and <ul style="list-style-type: none"> (i) if it is not both, the affected parties will need to determine the appropriate course of action; or (ii) if it is both, request the notifying party to undertake further action, as outlined in step 7.
Step 7	<p>If, based on this advice, the NBMG considers that the pest or disease is of national significance and that it should be subject to this agreement and is likely to be eradicable the notifying party must:</p> <ul style="list-style-type: none"> (a) conduct a risk assessment, in accordance with Schedule 2, if it has not already done so (b) conduct a technical feasibility analysis, in accordance with Schedule 4

- (c) conduct a cost:benefit analysis, in accordance with Schedule 4
 - (d) prepare a draft national biosecurity incident response plan, in accordance with Schedule 4
- and submit each to the NBMCC for its consideration.

Each party must provide assistance to the notifying party in undertaking, in a timely manner, the tasks identified in step 7, including providing any relevant expertise and technical information.

Step 8 The NBMCC must prepare and submit advice on the assessment provided in accordance with step 7 to the NBMG.

The parties must assist the NBMCC in preparing its advice to the NBMG.

Step 9 The NBMG must determine whether or not to undertake a national biosecurity incident response and, in doing so, must consider advice provided by the NBMCC in accordance with steps 6 and 8 on:

- (a) the risk assessment (see Schedule 2)
- (b) whether the pest or disease is of national significance (see Schedule 3)
- (c) whether it is technically feasible and cost beneficial to mount a national biosecurity incident response (see Schedule 4)
- (d) whether a national biosecurity incident response is required in accordance with clause 6.7 and, if so, approve a national biosecurity incident response plan, including cost-sharing arrangements
- (e) whether any identified private beneficiary contributions will be sought, in accordance with clause 7.9.

Step 10 All NBMG members must agree to a national biosecurity incident response plan before the cost-sharing arrangements detailed therein can come into effect.

CATEGORY 3: ESTABLISHED INVASIVE SPECIES OF NATIONAL SIGNIFICANCE

Selection criteria used to assign a taxon to this category:

- A.1** The taxon is already recognised as an Established Invasive Species of National Significance (EISNS; e.g. an 'Established Pest Animal of National Significance' [EPANS] or a 'Weed of National Significance' [WONS])

Selection criteria for nomination of a taxon to this category:

- B.1** The taxon is present in the wild in Australia (naturalised and invasive in at least one State or Territory); **and**
- B.2** Eradication of the taxon is not feasible (national cost-sharing not assumed); **and**
- B.3** The potential range of the taxon involves more than one State or Territory; **and**
- B.4** The taxon is currently or potentially causing “nationally significant impacts” (assessed using the national significance criteria in Schedule 3 of the NEBRA – see Attachment B), **and**
- B.5** The taxon requires national coordination of effort to reduce/minimise its impacts.

A taxon that meets criteria B.1 to B.5 will be considered as eligible for nomination by the relevant sectoral committee for endorsement by the appropriate Ministerial Council as an Established Invasive Species of National Significance.

Minimum management actions for Category 3 taxa.

1. AWC/VPC to monitor progress of management programs for Category 3 taxa.
2. Each State and Territory to provide evidence to verify its status in relation to the presence of the taxon.
3. A plan for nationally coordinated action to be developed for each taxon in consultation with all key stakeholders and approved by the relevant sectoral committee.
4. Where taxa are subject to regulatory control in all States and Territories such that control is enforceable, sale/trade and movement may be prohibited in a manner consistent with that internationally recognised as establishing 'official control'.
5. Information will be provided by all jurisdictions in an agreed format suitable for national coordination of EISNS management.

Notes

1. The process of assignment of taxa to this Category requires an agreed prioritisation methodology for comparing nominated taxa.

2. Where the management actions include measures that will, directly or indirectly, affect international trade, or have the potential to do so, those measures must be developed in accordance with Australia's international rights and obligations and must be consistent with the agreed Australian Import Risk Analysis processes.
3. The term 'national coordination of effort' is taken to include activities such as preparation and endorsement of documents such as National Threat Abatement Plans or Codes of Practice, national registration of chemical or biological agents for management/control of the taxon, or joint Commonwealth/State/Territory support of cooperative/ collaborative research and development activities aimed at amelioration of the impact(s) of the taxon.

CATEGORY 4: NATIONAL RESTRICTION ON KEEPING, SALE AND TRADE

Note: A uniform national minimum standard of regulation on sale, trade or supply of a taxon is the required standard for this category. However, states and territories may impose higher levels of restriction (e.g. enforcement of control by landowners) for certain Category 4 taxa if they so choose. In addition to restrictions imposed on taxa in Categories 1, 2 and 3, biosecurity benefits may be achieved by agreeing to national restrictions on their keeping, sale and trade.

Selection criteria used to assign a taxon to this category:

- A.1 There is agreement at the national level to restrict sale, trade and supply of the taxon; **and**
- A.2 the taxon is not currently listed in Categories 1, 2 or 3.

Minimum management actions for Category 4 taxa.

1. Implementation of uniform minimum restrictions on movement, keeping and/or supply in every State and Territory.
2. Application of consistent restrictions at the national border, such that the taxon can be internationally recognised as being under official control.
3. All parties to NBC to provide adequate consideration to these restrictions when addressing movement, keeping and/or supply of the taxon.

Notes

1. Where the management actions include measures that when put in place will, directly or indirectly, affect international trade, or have the potential to do so, those measures must be developed in accordance with Australia's international rights and obligations and must be consistent with the agreed Australian Import Risk Analysis processes.
2. For any taxon to be removed from any "permitted list" it must be demonstrated that the taxon is under "official control" in one or more of the jurisdictions in which it could be expected to cause a negative impact.

To meet the official definition of "official control", several mandatory requirements need to be satisfied. The two major requirements are:

- (1) active enforcement of mandatory regulations (official rules such as State/Territory invasive species legislation), and
- (2) the application of mandatory procedures (officially prescribed method for implementing regulations), with the objective of taxon eradication or containment.

At a minimum, official control programs must demonstrate program evaluation and surveillance to determine the need for, and effect of, control of the taxon. The purpose of this activity is to justify any import measures or restrictions applied with the intention of preventing further instances of the taxon from entering the country.

Official control programs should also have a legal basis stipulating procedures including official action for non-compliance. As an example the International Plant Protection Convention (IPPC) adopted a supplement to an International Standard on Phytosanitary Measures (ISPM No. 5, Supplement No. 1) which describes guidelines on the interpretation and application of the concept of official control.

Attachment A. Schedule 2 - Risk Assessment. National Environmental Biosecurity Response Agreement (NEBRA) Draft V1 3 June 2010.

1. Introduction

- (a) Risk assessment is used to assess the likelihood of a pest or disease entering, establishing and spreading and the pest or disease's potential impact.
- (b) In assessing the potential impact of the pest or disease the following factors **may** be considered:
 - (i) the potential economic impacts, including those on the economy arising from negative consequences on human, animal or plant life, or health and relevant abiotic (non-living) aspects of primary production and/or business
 - (ii) the potential environmental impacts of the pest or disease, including negative changes to the environment or an ecosystem, whether natural or made by humans, including terrestrial, inland water and marine environments
 - (iii) the potential social amenity impacts of the pest or disease, including negative changes to human infrastructure and human health, including from zoonoses.
- (c) To avoid any doubt, where the impacts of the pest or disease are predominantly on public health and/or primary production, the incident will be dealt with under those pre-existing arrangements.

2. Risk assessments for emergency response activities

- (a) A risk assessment of the pest or disease must be undertaken under this agreement to help determine whether an emergency response should be mounted (see step 2 of clause 0).
- (b) The risk assessment will also be used to develop emergency actions to be undertaken as part of the national biosecurity incident response plan.
- (c) The response plan must be implemented in accordance with Australia's international rights and obligations. Where the national biosecurity incident response plan includes implementing measures that will, directly or indirectly, affect international trade, or have the potential to do so, these measures must be consistent with Australia's international rights and obligations.

Attachment B. Schedule 3 - National significance criteria. National Environmental Biosecurity Response Agreement (NEBRA) Draft V1 3 June 2010.

1. National significance

- (a) These criteria are only to be used to determine whether a particular pest or disease falls under the scope of this agreement.
- (b) These criteria can be used to assess whether a pest or disease is of national significance prior to an outbreak and/or when an outbreak has occurred.
- (c) A pest or disease is of national significance when at least one of the following national significance criteria are established in relation to the pest or disease, being criteria relating to:
 - (i) the environment
 - (ii) people, including human infrastructure and social amenity
 - (iii) business activity.
- (d) Impacts on public health may be used to support the full impact assessment of a pest or disease but do not form part of an assessment of its national significance.

2. National significance criterion: environment

2.1 General

- (a) The national significance criterion covers the projected impacts of a pest or disease outbreak on the environment if the pest or disease was to realise its full potential range in Australia.
- (b) A pest or disease will meet this national significance criterion if any of the following sub-criteria are established:
 - (i) impacts on nationally important species
 - (ii) impacts on ecologically valuable species
 - (iii) impacts on nationally important places
 - (iv) impacts on ecologically important places
 - (v) extensive impacts.

To avoid any doubt, 'impact' is defined in accordance with clause 2.2 of this agreement (that is, 'causing significant negative consequences').

2.2 Impacts on nationally important species

- (a) A 'nationally important species' is a native species that has a particular significance to the Australian community across the nation because it is:
 - (i) relevant to the national identity; or

- (ii) nationally listed; or
- (iii) the subject of an international obligation.

For example, kangaroo species, koala, whale species and painted snipe.

- (b) This sub-criterion is met if the pest or disease is likely to have a significant impact on the conservation status of a nationally important species.
- (c) The following guideline will help with determining whether item 2.2(b) of this schedule is established:
 - (i) An outbreak of a pest or disease will have a significant impact on the conservation status of nationally important species where it is likely that the outbreak will or would:
 - (A) substantially modify (including by fragmenting habitats, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate a significant proportion of the habitat for a nationally important species; or
 - (B) seriously disrupt the lifecycle (including reproduction, feeding/nutrient uptake, migration or resting behaviour) of an ecologically significant proportion of the population of a nationally important species.

2.3 Impacts on ecologically valuable species

- (a) An 'ecologically valuable species' is a native species that makes a significant contribution to national biodiversity due to factors such as:
 - (i) it being a keystone species, meaning a species that provides an essential role in the ecosystem in which it resides. An example of a keystone species is a species of gum tree that provides an over-storey to a bush ecosystem and hence support for many animals, birds, invertebrates, soil microbes etc; or
 - (ii) the phylogenetic distinctiveness of the species. For example, the cassowary, strangler fig, spinifex, Mitchell grass, the Australian salamanderfish and the Australian lung fish.
- (b) This sub-criterion is met if the pest or disease would likely have a significant impact on the conservation status of an ecologically valuable species.
- (c) The following guideline will help with determining whether item 2.3(b) of this schedule is established:
 - (i) An outbreak of a pest or disease will have a significant impact on the conservation status of an ecologically valuable species where it is likely that the outbreak will or could:
 - (A) substantially modify (including by fragmenting habitats, altering fire regimes, altering nutrient cycles or altering hydrological cycles), displace, destroy or isolate a significant proportion of the habitat of an ecologically valuable species; or
 - (B) seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of an ecologically valuable species.

2.4 Impacts on nationally important places

- (a) A 'nationally important place' is any place that has a particular significance to the Australian community or because it is relevant to the national identity. For example, nationally important places may include National Heritage Places included in the National Heritage List under the *Environment Protection and Biodiversity Conservation Act 1999* and Australian properties included on the World Heritage list.
- (b) This sub-criterion is met if the pest or disease would be likely to have a significant impact on the values that make a place nationally important.

2.5 Impacts on ecologically valuable places

- (a) An 'ecologically valuable place' is an area that:
 - (i) makes a significant contribution to Australia's natural environment; or
 - (ii) meets national heritage listing criteria, as set out in the *Environment Protection and Biodiversity Conservation Act 1999* and regulations; or
 - (iii) are nationally-listed, ecological communities and RAMSAR wetlands covered under the *Environment Protection and Biodiversity Conservation Act 1999*.
- (b) This sub-criterion is met if the pest or disease would be likely to have a significant impact on the national heritage values of an ecologically valuable place.

2.6 Extensive impacts

- (a) An 'extensive impact' means severely and/or extensively affecting one or more of the following:
 - (i) the physical environment
 - (ii) Australian biodiversity
 - (iii) the structure of ecological communities
 - (iv) ecosystem functions
 - (v) environmental amenity
 - (vi) ecosystem services.
- (b) This sub-criterion is met if the pest or disease would likely have an extensive impact, regardless of whether the pest or disease also meets one of the other sub-criteria with regard to nationally important or ecologically valuable species or places. For example, the following species may meet this sub-criterion: *Didymosphenia geminata* (rock snot) cool water aquatic plant, fanworms (species not yet present in Australia), new weeds that are scientifically assessed as having the potential to cause significant impacts and *Puccinia psidii* (Eucalyptus rust). The following species would **not** meet this sub-criterion: benign ants and macaw wasting disease (proventricular dilation disease).
- (c) It is acknowledged that a pest or disease meeting this sub-criterion may also meet other criteria or sub-criteria.

3. National significance criterion: people, including social amenity and human infrastructure

3.1 General

- (a) This national significance criterion is concerned with the impacts of pests and diseases on people, including:
 - (i) the inconvenience to people and society caused by the pest or disease
 - (ii) the impacts on human infrastructure.
- (b) A pest or disease will meet this criterion if one or more of the following sub-criteria are established:
 - (i) impacts on human infrastructure
 - (ii) impacts on social amenity
 - (iii) cultural impacts.

To avoid any doubt, 'impact' is defined in accordance with clause 2.2 of this agreement (that is, 'causing significant negative consequences').

- (c) In determining whether a pest or disease meets this national significance criterion the following matters should be considered:
 - (i) the severity of the impact
 - (ii) the extent of the impact
 - (iii) the significance of the resources/assets under threat.

For example, this may include either a catastrophic loss of a resource amenity for a relatively small proportion of the population, or a substantial loss of amenity for an extensive or diverse part of the population.

3.2 Impacts on human infrastructure

This sub-criterion is met if a pest or disease outbreak has resulted, or would likely result, in substantial damage to or deterioration of infrastructure used by a significant proportion of people over an extensive area.

3.3 Impacts on social amenity

This sub-criterion is met if an outbreak has substantially degraded, or is likely to substantially degrade, amenity of resources used by a significant proportion of people over an extensive area.

3.4 Cultural impacts

This sub-criterion is met if a pest or disease outbreak:

- (a) has substantially degraded, or is likely to substantially degrade, cultural assets valued by a significant segment of the community
- (b) has resulted or is likely to result in substantial change to the practices and customs of a significant segment of the community; or

- (c) has resulted or is likely to result in a persistent and substantial negative change in national or international perception of attributes relevant to the national image.

4. National significance criterion: business activity

- (a) This national significance criterion is concerned with the economic impacts of pests or diseases on business costs or profitability.

To avoid any doubt, 'impact' is defined in accordance with clause 2.2 of this agreement (that is, 'causing significant negative consequences').

- (b) Where the impacts of a pest or disease are predominantly on primary production, the incident would be dealt with under those pre-existing cost-sharing arrangements.
- (c) Where the impacts of a pest or disease are predominantly on human health, the incident would be dealt with under those pre-existing cost-sharing arrangements.
- (d) A pest or disease will meet this national significance criterion if an outbreak is likely to result in:
 - (i) substantial increases in business costs; or
 - (ii) a substantial loss of production or business opportunities for an extended period

and the pest or disease is not able to be managed under a pre-existing cost-sharing arrangement.

Attachment C. Schedule 4 - National biosecurity incident response plan – technical feasibility and cost: benefit. National Environmental Biosecurity Response Agreement (NEBRA) Draft V1 3 June 2010.

Sections 1 to 3 and 6 of Schedule 4 of the NEBRA refer to the process of preparation of a national biosecurity event response plan and are not included here.

4. Technical feasibility

4.1 The objective of the technical feasibility analysis

The objective of the technical feasibility analysis is to determine the technical feasibility of the proposed national biosecurity incident response in eradicating the pest or disease.

4.2 Technical feasibility criteria

In undertaking a technical feasibility analysis, **all** the following criteria must be considered and advice provided:

- (a) the capability to accurately diagnose or identify the pest or disease
- (b) the effectiveness of the control technique options, including a recommendation on the control technique likely to be the most cost-effective in eradicating the pest or disease
- (c) the level of confidence that all individual pest/disease organisms present (including at all life stages) can be removed/destroyed by the recommended control techniques
- (d) the level of confidence that it is possible to remove the organisms at a faster rate than they can propagate until the population is reduced to a non-viable density
- (e) confirmation that the recommended control techniques are publicly acceptable (taking into consideration cultural and social values, humaneness, public health impacts, non-target impacts and environmental impacts)
- (f) interim control measures that have been put in place by the notifying party
- (g) endemic pest or disease controls that may limit or prevent establishment
- (h) any legislative impediments to undertaking an emergency response
- (i) resources required to undertake an emergency response
- (j) the known area of infestation
- (k) the likely distribution of the pest or disease, in accordance with Attachment 5A, 5B, 5C, 5D and 5E to Schedule 5, in relation to a terrestrial pest/disease, an inland waters pest, an inland waters disease, a marine pest and a marine disease respectively

- (l) identification of the pathways for the entry into and spread within Australia of the pest or disease
- (m) the level of confidence that further introductions are sufficiently low
- (n) the dispersal ability of the organism (that is, whether the organism is capable of rapid spread over large distances)
- (o) the level of confidence that the organism is detectable at very low densities (to help determine if eradication has been achieved), and that all sites affected by the outbreak have or can be found
- (p) surveillance activities that are in place or could be put in place to confirm proof-of-freedom for sites possibly infested by the pest or disease
- (q) the community consultation activities undertaken.

5. Cost:benefit analysis

5.1 The objective of the cost:benefit analysis

- (a) The cost:benefit analysis is an important factor in determining:
 - (i) whether to implement a national biosecurity incident response, and
 - (ii) the form of that response.
- (b) The objective of the cost:benefit analysis is to determine whether the costs of a national biosecurity incident response would be outweighed by the benefits and, if so, to whom the benefits would accrue.
- (c) The parties agree to undertake cost:benefit analyses for the purposes of this agreement, in accordance with the National Framework for Biosecurity Benefit:Cost Analysis at Schedule 4, Attachment A).

5.2 Relevant matters

As outlined in Attachment A to this schedule, the cost:benefit analysis should compare all the expected costs of an impact (the benefits of responding) with all the expected costs of responding, including the following matters:

- (a) the direct and indirect costs arising from the impact of the pest or disease, such as
 - (i) increased expenses or reduced returns
 - (ii) impacts on the economic, environmental and social values of natural assets
 - (iii) impacts relating to the values affected under the relevant national significance criteria and the potential costs of mitigating those impacts in the absence of a national biosecurity incident response
 - (iv) costs identified through an assessment of the human health implications
- (b) identification of the industries, businesses or other sectors of society that would benefit from a national biosecurity incident response

- (c) the costs and impacts of the response plan's actions, including the opportunity cost of any alternative uses of the funds required to implement the response plan
- (d) the relative cost effectiveness of alternative approaches to limiting the risks.

5.3 Determining cost in the cost:benefit analysis

- (a) Determining the costs and/or benefits (in a dollar sense) of the impacts of a pest or disease outbreak on the natural environment, and otherwise, can be problematic.
- (b) If there are environmental or social costs and benefits, qualitative assessments should be used in the cost:benefit analysis, in accordance with Attachment A of this schedule.

Attachment D Flow chart of approach to national biosecurity incident response

