PRA template 3 (accidental introduction of potentially invasive species)

**Pest Risk Analysis (PRA) for**

**Name of organism: *Scientific name* (English name)**

**Territory: e.g. Montserrat Assessment Number: 001/year**

**Date: dd/mm/yyyy Version: 1**

**PRA type: accidental introduction**

**All sections should be completed. If not applicable indicate it**

**Part 1: Initiation**

**1.1 Summary of assessment results (max. 500 words)**

Give a brief summary of the risks of introduction, establishment, spread, impact and overall risk. Fill this part in at the end of the PRA process, only after you have completed the rest of the PRA template below.

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**1.2 Assessor details**

Institution/Department:

Name and Job Title:

Address:

Phone (office and/or mobile): Email:

**Part 2: Background**

**2.1 Aim of assessment**

This section is intended to put the new organism(s) in perspective of the wider activities having led to conducting this PRA (e.g. previous horizon scanning, recent alerts or interceptions); all technical/scientific words must be explained).

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**2.2 Identity**

Identify the organism as fully as possible

**Scientific name (incl. taxonomic authority, date):**

**What is it? (max. 2 sentence description)**

**English name(s):**

**Family:**

**Synonyms:**

**Other taxonomic remarks:**

**2.3 Images of the species if available**

If available, please provide pictures of different stages and habitats

*Figure 1:*

*Figure 2:*

**2.4 Existence of PRAs for this species**

Please indicate if PRAs for this species already exist and which target areas and climatic conditions these cover (for suggestions of websites to check see guidance notes (e.g. [DoA Australia](http://www.agriculture.gov.au/biosecurity/risk-analysis)))

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**2.5 Biology/Ecology**

Please provide background information relevant to your application covering the bullet points in the box below whenever applicable; see also guidance notes

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| * Growth form and size:
* Habitat:
* Lifecycle (e.g. reproduction and dispersal):
* Hosts:
* Host specificity:
* Associated pathogens, pests or parasites:
* Other:
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**2.6 What is the current distribution of the species**

**Consider:** native range, history of introduction and invasion outside native range

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**Part 3: Risk of accidental introduction, establishment and spread**

**3.1 Probability of entry/introduction**

3.1.1 Has the species been introduced into other countries and/or have multiple introductions been reported?

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3.1.2 Has the species been intercepted in the territory in the past? Please, check existing interception data in the territory

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3.1.3 What are the likely pathways for the accidental introduction of the species?

Consider whether the species or some of its life-stages can easily be overlooked?

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3.1.4 What is the probability of the pest being associated with the pathway(s) at origin?

Please give any information available about: prevalence of pest in the source area; occurrence of life stage able to associate with consignment; volume and frequency of movement along the pathway; seasonal timing; pest management procedures applied at place of origin; for definition of probability see guidance notes 3.1.

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3.1.5 What is the probability of the pest surviving during transport?

**Consider:** speed and conditions of transport; duration and vulnerability of life cycle; previous interceptions of the pest; prevalence of pest; commercial procedures during transport (e.g. refrigeration)

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3.1.6 What is the probability of the pest evading existing biosecurity procedures? **Consider:** inspection methods and quality control; certification schemes; chemical treatment

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3.1.7 What is the probability of transfer from entry point to a suitable host or habitat?

**Consider:** dispersal mechanisms, including vectors; number of destinations; proximity to suitable hosts; seasonality

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**Summary probability of accidental introduction**

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| --- | --- | --- | --- | --- | --- |
| **Probability of introduction in next 10 years** | Very unlikely [ ]  | Unlikely [ ]  | Moderately likely [ ]  | Likely[ ]   | Very likely [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**3.2 Probability of establishment**

3.2.1 Does the territory provide suitable climatic and habitat conditions for the species to **survive** and **reproduce** under natural conditions unassisted or without human interference (e.g. cultivation, gardens)? **Consider:** climate similarity between the species global range and the PRA area, availability of the habitat conditions required by the species based on its behaviour elsewhere; identify/name specifically the climate/habitat it might survive? Which land-cover? Justify why and provide landmarks as examples; for definition of human interference see guidance notes 3.2.1

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| * Survival:
* Reproduction (self-sustaining population):
 |

3.2.2 How likely can the species survive and reproduce indoors or similar habitats (e.g. polytunnels, gardens, urban area)? **Consider:** availability of the habitat conditions required by the species based on its behaviour elsewhere; identify/name specifically the conditions it might survive?

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| * Survival:
* Reproduction (self-sustaining population):
 |

3.2.3 (**only for pests and diseases**) If hosts or vectors are required, are these available in the PRA area? **Consider:** abundance of hosts and alternate hosts or vectors and how these are distributed in the PRA area; geographic proximity of hosts to pathway destinations; presence of other suitable species that could be new hosts; compare the known distribution of the pest with ecoclimatic zones in the PRA area; soil factors for soilborne pests; survival strategies; survival in protected cultivation

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**Summary probability of establishment**

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| **Probability of establishment in the wild** | Very unlikely [ ]  | Unlikely [ ]  | Moderately likely [ ]  | Likely [ ]  | Very likely [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**3.3 Probability of spread**

3.3.1 What is the potential spread in the territory? **Consider:** rate and distance of spread elsewhere; natural barriers in PRA area, the occurrence of a dispersal vector or commodity; see also guidance notes 3.3.1

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| * Self-dispersal:
* Direct transport by humans:
* Transport via vehicles (e.g. boat, cars, including tyres):
* Wind drift or via driftwood:
* Water:
* Transport via animals (e.g. berries digested by birds, seeds stuck to wool, etc.):
* Transport with vectors:
* Other:
* How rapidly would the organism spread by natural means?:
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**Summary probability of spread**

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| **How quickly can the species spread (excluding deliberately assisted by humans)** | Less than 10 m/year. Can’t occupy suitable habitats within next 100 yearsVery slowly [ ]  | Between 10 and 100 m per year. Suitable habitats are likely to be occupied between 50 and 100 yearsSlowly [ ]  | Between 100 and 500 m per year. Suitable habitats are likely to be occupied between 50 and 100 yearsModerate pace [ ]  | > 500 m per year Can occupy suitable habits throughout the territory within 5 to 20 yearsQuickly [ ]  | Can occupy suitable habits throughout the territory within 5 yearsVery quickly [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**Part 4: Economic and environmental risks**

It is important to look at the potential magnitude of the consequences, and to look at distribution effects (who bears risks). Consider potential maximum impact.

Please, **complete this section referencing supporting material**. Please, cite the material in the text and provide a description of where the information in the application has been sourced in the list of references (e.g. from in-house research, independent research, technical literature, community or other consultation, and provide that information with this application). If the information available is scarce, include information about related species (e.g. same genus or family) clearly indicating that it does not correspond to the organism being assessed.

**4.1 Risks recorded from outside the territory, which are applicable to the territory**

4.1.1 Is the species listed in the following Plant Protection organizations and Invasive lists and if so, what is its status?

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| **America**[COSAVE](https://www.ippc.int/en/partners/regional-plant-protection-organizations/cosave/): yes/no[NAPPO](http://www.pestalert.org/main.cfm): yes/no[OIRSA](http://ns1.oirsa.org.sv): yes/no**Europe**[EPPO](http://www.eppo.int): yes/noEC Plant Health Directive (Council Directive 2000/29/EC): yes/no**Africa**[ARC](http://www.arc.agric.za/arc-ppri/weeds/Pages/Management-of-invasive-alien-plants-.aspx): yes/no**Others:** [CABI CPC](https://www.cabi.org/cpc/) [CABI ISC](https://www.cabi.org/isc/) [GISD](http://www.iucngisd.org/gisd/) **Other organizations relevant for the territory (e.g. regional, national…)** |

4.1.2 Is there any negative impact of the species on the economy, environment or public health recorded from any parts of its current distribution? Please provide a summary of the available information

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**4.2 Economic and socioeconomic effects**

4.2.1 Could the species have any negative effect on economic activities in the territory? Please include any information about specific assessments from areas outside the PRA area including experiences with closely related species with relevance for the area of interest (**consider:** reduction in crop yield or quality; reduction in prices or demand, including export markets; increase in production costs (including costs of control); vectoring of other pests of economic importance; extent of phytosanitary regulations imposed by importing countries)

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| * Agriculture:
* Livestock:
* Fisheries:
* Aquaculture:
* Forestry:
* Tourism:
* Recreational potential:
* Infrastructure:
* Employment rates:
* Other:
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4.2.2 Are there any risks of impacts on cultural valuable species, habitats, landscapes, practices or other values? Please include any information about specific assessments from areas outside the PRA area including experiences with closely related species with relevance for the area of interest

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| * Competition with or impact on cultural valuable species:
* Impact on historically valuable practices:
* Change of landscape:
* Value of landscape for recreation:
* Other:
 |

**Summary economic and socioeconomic impacts**

Make sure the summary score is well linked with the information reported above so the scoring is fully justified (for more information risk levels see guidance notes)

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| --- | --- | --- | --- | --- | --- |
| **Risk of socioeconomic impact**  | Very small [ ]  | Small [ ]  | Medium [ ]  | Large [ ]  | Very large [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**4.3 Impact on public health**

4.3.1 Could there be any impact on public health? **Consider:** Can the species be disease-causing or be a parasite, or be a vector or reservoir for human diseases?

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**Summary public health impact**

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| --- | --- | --- | --- | --- | --- |
| **Risk of impact on public health** | Very small [ ]  | Small [ ]  | Medium [ ]  | Large [ ]  | Very large [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**4.4 Impact on animal health**

Could there be any impact on animal health? **Consider:** Can the species be disease-causing or be a parasite, or be a vector or reservoir for animals?

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**Summary animal health impact**

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| --- | --- | --- | --- | --- | --- |
| **Risk of impact on animal health** | Very small [ ]  | Small [ ]  | Medium [ ]  | Large [ ]  | Very large [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**4.5. Environmental and ecosystem effects**

4.5.1 Are there any threats to native or endemic species? Indicate direct effects on native species; note any aspects related to pollination of native species should be covered in the following question (**consider**: threat to endangered species; impact on keystone species; changed community structure; hybridization with native species)

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4.5.2 What is the level of potential negative impact on ecosystem services in the PRA area? (**consider**: provisioning services (freshwater, wood and fibre, fuel); regulating services (soil formation, natural hazards, water and air quality); cultural services (aesthetic, educational, recreational, spiritual); supporting services (nutrient cycling, habitat stability; pollination) see also guidance notes 4.5.2

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**Summary environmental impact**

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| --- | --- | --- | --- | --- | --- |
| **Risk of environmental impact**  | Very small [ ]  | Small [ ]  | Medium [ ]  | Large [ ]  | Very large [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**Part 5: Pest risk management**

**5.1 Prevention**

5.1.1 Which measures **already** in place are suitable to minimise the risk of introduction and establishment? **Consider**: inspection of commodities; trapping, disrupting specific pathways, etc.

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| * **Pre-border:**
* **At the border:**
* **Post-border:**
 |

5.1.2 Which measures **not yet** in place are suitable to minimise the risk of introduction and establishment **Consider**: inspection of commodities; trapping, disrupting specific pathways, etc.

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| * **Pre-border:**
* **At the border:**
* **Post-border:**
 |

**Summary efficacy of current prevention measures from 5.1.1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Probability of prevention measures being effective** | Very unlikely [ ]  | Unlikely [ ]  | Moderately likely [ ]  | Likely [ ]  | Very likely [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**Summary efficacy of proposed prevention measures from 5.1.2**

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| --- | --- | --- | --- | --- | --- |
| **Probability of suitable future prevention measures being effective** | Very unlikely [ ]  | Unlikely [ ]  | Moderately likely [ ]  | Likely [ ]  | Very likely [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**5.2 Control**

5.2.1 What existing control measures available in the territory for the control of other pests can provide adequate control to mitigate the risks described above? **Consider:** cultural practices e.g. irrigation, planting, harvesting methods etc.; pest control programmes; natural enemies; please link to effectiveness, practicality, costs, negative consequences and acceptability

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| --- |
| * Eradication:
* Containment to prevent further spread:
* Mechanical/chemical control:
* Biological control:
* Other (provide additional information):
 |

5.2.2 What additional control measures currently not available in the territory can provide adequate control to mitigate the risks described above? **Consider:** cultural practices e.g. irrigation, planting, harvesting methods etc.; pest control programmes; natural enemies; please link to effectiveness, practicality, costs, negative consequences and acceptability

|  |
| --- |
| * Eradication:
* Containment to prevent further spread:
* Mechanical/chemical control:
* biological control:
* Other (provide additional information):
 |

**Summary efficacy of current control measures from 5.2.1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Probability of control measures being effective** | Very unlikely [ ]  | Unlikely [ ]  | Moderately likely [ ]  | Likely [ ]  | Very likely [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**Summary efficacy of proposed control measures from 5.2.2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Probability of suitable future control measures being effective** | Very unlikely [ ]  | Unlikely [ ]  | Moderately likely [ ]  | Likely [ ]  | Very likely [ ]  |
| **Confidence** | High confidence [ ]  | Medium confidence [ ]  | Low confidence [ ]  |  |  |

**Other information**

Add here any further information you wish to include in this application, including if there are any ethical considerations that you are aware of in relation to your application

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**Is there a need for a more detailed PRA or for more detailed analysis of particular sections of the PRA?** (For completion by the Biosecurity team only)

No [ ]  Yes [ ]

If yes, please forward to FERA or NNSS or other suitable organisations

**References and information sources consulted**

Occurrences from Gbif.org

www.Palmpedia.net

Florida University

**Appendices and referenced material (if any) and glossary (if required)**

In case this is an application made for the deliberate introduction of a species/commodity it is recommended that you contact a member of the Biosecurity team as early in the application process as possible. Biosecurity can assist you with any questions you have during the preparation of your application including providing advice on any consultation requirements.

Unless otherwise indicated, all sections of this form must be completed for the application to be formally received and assessed. If a section is not relevant to your application, please provide a comprehensive explanation why this does not apply.

Commercially sensitive information must be included in an appendix to this form and be identified as confidential. If you consider any information to be commercially sensitive, please show this in the relevant section of this form and cross reference to where that information is located in the confidential appendix.

Any information you supply to Biosecurity prior to formal lodgement of your application will not be publicly released. Following formal lodgement of your application any information in the body of this application form and any non-confidential appendices will become publicly available.