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Established Pests and Diseases Discussion Paper  
National Biosecurity Committee Secretariat  
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**Submission on 'Modernising Australia's approach to managing established pests and diseases of national significance'**

The Wet Tropics Management Authority thanks the National Biosecurity Committee for an opportunity to make a submission on managing established pests and diseases of national significance in Australia. The Authority's submission covers the following major points:

- The Wet Tropics Management Authority generally supports the new approach to managing established pests and diseases – the most effective outcomes are those where governments work with landholders and the local community to manage the spread and impacts of invasive species.
- The Authority's current project to eradicate yellow crazy ants in and around the Wet Tropics World Heritage Area demonstrates effective, coordinated partnerships between governments, the agricultural industry, landholders and local communities.
- Maximising returns from biosecurity investments may include prevention and eradication of an established pest or disease from a particularly valuable area such as a World Heritage Area.
- The national significance of a pest or disease should explicitly include consideration of its impacts on Matters of National Environmental Significance such as World Heritage Areas.
- The Authority supports the inclusion of roles and responsibilities for risk creators. For example, invasive environmental weeds in the Wet Tropics have often been the result of the introduction of plants for pasture grasses, horticulture, gardens, aquaria and nurseries.
- The Authority supports the role of government where there is market failure. Market failure is often apparent where the environmental impacts of pests and diseases are not adequately factored into cost-benefit analysis and risk assessment of invasive species.

A detailed submission is attached below. If you have any queries, please contact Campbell Clarke on [campbell.clarke@wtma.qld.gov.au](mailto:campbell.clarke@wtma.qld.gov.au) or 07 4241 0531.

Yours sincerely



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*conserving...sharing...enriching*

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# **The Wet Tropics Management Authority's submission on 'Modernising Australia's approach to managing established pests and diseases of national significance'**

## **INTRODUCTION**

### **The Wet Tropics Management Authority**

The Wet Tropics Management Authority is responsible for managing the Wet Tropics World Heritage Area. This includes administering legislation specific to the Area and coordinating management of the Area with a wide range of partners, including a range of government agencies, Rainforest Aboriginal people, landholders, the tourism industry, infrastructure providers, researchers, community conservation groups, volunteers and the broader community. These partnerships offer a vast diversity of skills, knowledge and capacity to manage the many facets of the World Heritage Area and its role in the community.

### **A hotspot for invasive species**

The Authority contends that the threat of invasive species to areas of environmental significance such as the Wet Tropics should be a particular focus for biosecurity in Australia. The Wet Tropics is a hotspot for invasive species and its unique and specialised flora and fauna are particularly susceptible to the impacts of pests and diseases. The Wet Tropics has a very favourable growing season most of the year and a range of favourable habitats. Tropical cyclones have also contributed to the spread of weeds in recent years and made control efforts difficult.

There are already over 500 weeds which are naturalised within the Wet Tropics region and the numbers of new weed species have increased more rapidly in recent times. Many of the species on the Northern Australia Quarantine Strategy (NAQS) target list have now arrived in the Wet Tropics and are becoming established in the region. Diseases that have the potential to threaten Wet Tropics ecosystems include the phytophthora root fungus, frog chytrid fungus (believed to have caused some upland frog extinctions) and the recently arrived myrtle rust. Many feral animals in the Wet Tropics are in common with those found throughout Queensland and northern Australia including feral pigs, dogs, deer, cane toads and cats. However, the yellow crazy ant, electric ant and Asian honey bee have been discovered in the Wet Tropics since 2000 and can pose a major threat to the environment, agriculture and people's quality of life. Tilapia have spread rapidly since their introduction in 1989 and, unfortunately, are still being deliberately spread into additional Wet Tropics waterways.

### **A focus for pest and disease control**

The Authority argues below that such special areas as the Wet Tropics World Heritage Area are of national significance and should be a focus for preventing the spread of established pests and diseases. The Wet Tropics offers some prime examples of cooperative management of established pests and diseases to protect the Outstanding Universal value of the World Heritage Area (see the yellow crazy ant case study detailed below).

## SUBMISSION

The Wet Tropics Management Authority offers the following as a response to the Discussion Paper - 'Modernising Australia's approach to managing established pests and diseases of national significance'

### Proposed policy principles

- The Wet Tropics Management Authority generally supports the new approach to managing established pests and diseases. The policy principles are appropriate and practical.
- In particular, the Authority recognises that the most effective outcomes are those where governments work with landholders and the local community to manage the spread and impacts of invasive species.
- The Authority acknowledges that enforcement alone is insufficient and ineffective way to manage established pests and diseases. However, the Authority stresses that government regulation and enforcement is necessary for asset-based protection activities for established pests and diseases and as a means of preventing or eradicating further outbreaks or spread of established pests and diseases.
- Despite our general support, the Authority believes that the proposed policy principles are not sufficient. The first principle states that management of established pests and diseases should focus on asset based protection. However, the principles should also acknowledge that, in some cases, it will be desirable to use eradication or containment of an established pest where there are new outbreaks or particularly valuable resources to protect.
- The principles should incorporate some of those principles expressed in 'Maximising returns from biosecurity investments'. These are important principles to help decide where efforts and funding are most needed. The following examples of principles, derived from that section, underlie much of what the discussion paper is trying to achieve and should be included:
  - 'Governments must seek to maximise the return on investments of public funds' underlies much of what the discussion paper is trying to achieve.
  - 'Actions to protect public assets such as public health, social amenity and environmentally sensitive ecosystems have a higher public benefit than privately owned assets' (similar to the second point outlined under asset-based protection activities on page 4).
  - 'Public benefit from protecting private assets is generally lower, particularly compared with other activities where government can play a role such as prevention or early detection of incursions' (a sentence taken from 'Maximising returns from biosecurity investments').
- It should also be emphasised that maximising returns from biosecurity investments may include a range of prevention, eradication, containment and asset-based protection, depending on local circumstances. For instance, prevention or eradication of an outbreak of an established pest or disease from a particularly valuable area such as a World Heritage

Area may be feasible and cost-effective. It is also in the national interest and has significant public benefit.

### **Proposed national significance and national interest test**

- The Authority would like the definitions of a pest or disease of national significance to more explicitly incorporate impacts on Matters of National Environmental Significance. For instance, these may include impacts on a World Heritage Area, Ramsar wetland, or a listed threatened species or migratory species. Environmental impacts on these Australian Government responsibilities under the *Environment Protection and Biodiversity Act 1999* are considered to be of national significance. At present, the definition of far-reaching and/or national impacts may not always be deemed to include Matters of National Environmental Significance.
- A commitment to protecting World Heritage properties as 'of national significance' is consistent with the statement (p9) that government roles and responsibility should be to 'ensure national approaches to established pests or diseases of national significance management meet international obligations'.
- Management of environmental pests and diseases in the national interest should also allow for a regional focus on protection of areas of high biodiversity and threatened species. Decisions based solely on national or statewide criteria may not take into account the prevention or control of impacts on particularly special areas such as World Heritage Areas. For example, when eradication of yellow crazy ants was no longer considered possible in Queensland due to numerous new outbreaks across the state, resources for control in the Wet Tropics were diminished without consideration for the special values of the World Heritage Area.

### **Listing of established pest and disease species**

- While species lists should not be the sole means for identifying and preventing biosecurity risks, they remain a most valuable tool for identifying particular species (or suites of species) of concern. The Authority supports the findings of the Senate report 'Turning back the tide – the invasive species challenge'<sup>1</sup> which recommended that several national invasive species control classes be developed, with official lists under each, and agreed by the Australian and all state and territory governments. These lists include the:
  - National Quarantine List of high-risk invasive species that may or may not have already invaded Australia, and whose early detection will enable cost-effective eradication.
  - National Alert List of high-impact invasive species that are naturalised, have a restricted range and whose eradication is feasible and cost-effective.
  - National Control List of high-impact invasive species that are naturalised and generally widespread, and whose containment or control will help protect the values of areas of national environmental significance.

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<sup>1</sup> The Senate Environment, Communications, Information technology and the Arts reference Committee (2002), *Turning back the tide – the invasive species challenge: Report on the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002*

- Such lists would assist in the early identification and detection of invasive species which threaten the environment and agriculture. They would also promote more effective prevention and management strategies and promote community awareness.
- The Authority emphasises the need to harmonise invasive species lists and classes across the country. There remain considerable discrepancies between lists of the Australian, State and Territory governments. Lists of species harmonised across jurisdictions will have many benefits, including limiting human assisted dispersal between jurisdictions, awareness raising and determining common courses of action.
- The Authority supports open-ended listing of established pests and diseases of national significance. For instance, for some Weeds of National Significance, control of established infestations may be considered to be impractical or overly expensive. However, listing can still prioritise the prevention of further spread, eradication of new outbreaks in sensitive environmental areas and research into new and more effective control methods.
- Review of listing of environmental pests and diseases should entail an holistic risk assessment based on the best science available and cost-benefit analysis. The Authority advocates risk assessment of potentially harmful invasive species which are already naturalised in Australia as well as plant species which have been bred to improve hardiness or fertility or behave differently than the original stock.
- Reviews of currently listed species could be undertaken every five years. However, there should be a mechanism to allow rapid listing of any newly 'established' species once it has been decided that eradication is no longer feasible. This is a dangerous stage in management of a pest where the resources put into eradication can suddenly diminish and the resources for management of the now established pest may be minimal.
- Local governments are the agencies which undertake much on-ground pest management. Evidence of pest invasiveness at a local government level should be seen as an important warning that an established pest is likely to be a problem elsewhere in Australia. Practical experience may often be a better indicator of potential for listing than solely using assessment criteria for listing.
- Listing of invasive pests and diseases also requires flexibility ability to respond to new circumstances, particularly for environmental pests where their impacts are often more difficult to predict than impacts on a single agricultural species or on human health.

### **Proposed roles and responsibilities of government and other stakeholders**

- The Authority generally supports the designation of roles and responsibilities for government, industry and community groups, landholders and risk creators. They are clear, appropriate and practical. However, it should be stressed that these responsibilities rely heavily on the coordinated approach described in the next section.
- There seems to be an unnecessary emphasis on limiting the role of government within the roles and responsibilities.
- There are areas where government should be proactive in its roles and responsibilities. For instance, only government can undertake enforcement actions to limit the further spread

of an established pest or disease. This enforcement should be part of a coordinated response and a public education campaign.

- The Authority has concerns that a minimal approach to addressing environmental pests and diseases may sometimes allow for the responsibility and costs of pest and disease management to be shifted down the chain to individual landholders or the local community. The varied jurisdictions and responsibilities for biosecurity prevention (pre-border) and management (post-border) can create a lack of effective coordination of biosecurity management and there is less motivation to succeed at each step if failure means passing on costs and responsibilities.
- The proposed roles should be clear about which agencies are responsible for on-ground actions and funding any response. There should also be improved mechanisms for reporting to environmental land managers and other stakeholders on new and potential pest incursions which can have an impact on the environment.
- The Authority supports the role of government where there is market failure. Market failure is often apparent where the environmental impacts of pests and diseases are not adequately factored into cost-benefit analysis and risk assessment of invasive species. It should be noted that pests or diseases characterised as environmental also have the potential for significant socioeconomic impacts as they become more established.
- The Authority supports the role of government in research into improved control or management of established pests and diseases. These are often the only cost-effective and practical actions available once a nationally significant pest or threatening process has become widely established. A number of submissions to the Beale Review<sup>2</sup> in 2008 stated that 'Australia has a relatively poor knowledge of the biosecurity threats to its natural environment. This is largely a function of the absence of commercial incentives to research and monitor environmental pests and diseases. As a result, the principal responsibility for biosecurity research as it relates to the natural environment lies with governments and the community. These activities have not received a high priority for funding. Unlike incursions that impact on primary production, where active engagement by business is motivated by self-protection, the effort required to respond to an incursion affecting the environment must be provided primarily by governments.'
- Research requires long term investment in knowledge and skills. Funding cuts to university departments and biosecurity agencies have meant a decreasing emphasis on environmental research into invasive species and a significant loss of corporate capacity and knowledge.
- The Authority supports the role of governments to meet their responsibilities as a manager of public lands and to ensure that national approaches meet international obligations such as protection of the Outstanding Universal Value of World Heritage Areas.
- The Authority supports the inclusion of roles and responsibilities for risk creators. For example, invasive environmental weeds have often been the result of the introduction of plants for pasture grasses, horticulture, gardens, aquaria and nurseries. The increase in plant imports for biofuels could lead to similar risks. Both yellow crazy ants and weeds in

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<sup>2</sup> Beale et al (2008), One Biosecurity, A Working Partnership: The independent review of Australia's quarantine and biosecurity arrangements report to the Australian Government

the Wet Tropics have been spread by earth moving machinery which was not washed down after working within an infestation area. An effective, coordinated approach to pest control must seek to engage the sources and dispersers of many of our established pests and diseases. As the background on current arrangements states: 'The system relies on cooperation between those who create biosecurity risks and those who benefit from the management of these risks, either before or after their realisation'. Risk management should be built into normal business practices.

### **The benefits of a coordinated approach**

- The Authority supports a coordinated approach between all levels of government, industry and the community. The proposed approach allows improved sharing of information and collective effort to deal with established pests and diseases at a local level.
- A national coordinated approach is required to manage the many potentially invasive species which are already established here in Australia. For instance, there needs to be greater recognition of the large number of potential new weeds that are already in the country, many of which are available for sale but have not had their risk assessed. The Hawke review<sup>3</sup> in 2009 stated that: 'Currently, several thousand plant species persist as ornamentals or as naturalised populations in urban settings. They represent a vast reservoir of potential future problems'. It is interesting to note that Morin et al (2013)<sup>4</sup>, when predicting which plant taxa are most likely to become future weeds in Australia, used a dataset containing 6690 plant taxa, of which 1599 were absent from Australia and 5091 taxa were present in Australia (14.2% were Australian natives which could become weedy outside their natural range). Movement of these plant species within Australia is effectively unconstrained and response to the issues they raise varies substantially between the States and Territories. By remaining in commercial trade, some garden plants may present a major threat as they enjoy a level of dispersal well beyond that of natural means. Even plants that have already naturalised are given the opportunity to spread further, wider and faster while they remain in trade.
- It cannot be overemphasised that community education and participation are vital to the success of any identification and eradication program for environmental pests. The role of landholders, the pest control industry and the community identifying, eradicating and controlling weed spread on their properties should not be underestimated.
- The Authority's current project to eradicate yellow crazy ants in and around the Wet Tropics World Heritage Area demonstrates effective, coordinated partnership between governments, the agricultural industry, landholders and local communities.
- The Authority is keen to participate in range of projects to ensure that the World Heritage Area is protected from key threatening processes and pests and diseases of national significance. The Authority offers staff time and resources, scientific knowledge, ongoing community, industry and government partnerships, and administrative and financial expertise and stability.

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<sup>3</sup> Hawke (2009), The Australian Environment Act, Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999.

<sup>4</sup> Morin L, Paini DR, Randall RP (2013) Can Global Weed Assemblages Be Used to Predict Future Weeds? PLoS ONE 8(2): e55547. doi:10.1371/journal.pone.0055547

## **A case study - eradication of yellow crazy ants within and next to the Wet Tropics**

Yellow crazy ants (*Anoplolepis gracilipes*) are a tramp ant pest now established on Christmas Island, and in Queensland and the Northern Territory. An infestation was eradicated from New South Wales. The yellow crazy ant has been included among 100 examples of the world's worst invasive species by the International Union for Conservation of Nature. It is a declared class one pest species in Queensland.

Yellow crazy ants devastate the local ecology and kill nearly all other vertebrate and invertebrate species within the infested area. They affect people's quality of life and their ability to enjoy their property and surrounds with family, friends and pets. Yellow crazy ant infestations will lower land values and deter new business and social investment in infested areas. Tourism is also likely to be affected if the crazy ants infest local visitor sites. Yellow crazy ants are also likely to affect some agricultural yields due to the ants' tendency to protect various scale insects.

### *A brief history of the Cairns infestations*

The yellow crazy ant infestation at Edmonton was first detected in 2001 and traced to their arrival at the Cairns Port. The original infestation at Cairns Port was eradicated, but the Edmonton infestation has become established over about 600ha in the Bentley Park, Edmonton and Mount Peter areas south of Cairns. Yellow crazy ants were detected within the World Heritage Area and Little Mulgrave National Park in 2012 and now cover up to 50ha within these protected areas. In 2013 an infestation of yellow crazy ants was found in the Russett Park area near Kuranda and has become established over about 27ha. It is thought that this infestation was brought from Edmonton with earth moving machinery.

In 2012 the Queensland Government decided that statewide eradication was no longer feasible due to increases in the extent of the Cairns infestations and the establishment of several new infestations within Queensland. This 'transition to management' resulted in diminished state government resources to control yellow crazy ants within and around the Wet Tropics World Heritage Area. While Queensland Government staff still offer advice and technical assistance where they can about this declared species, in effect dedicated staff and resources have been largely withdrawn from any control program. To date no formal transition to management program has been introduced.

### *An eradication program in and next to the World Heritage Area*

The Wet Tropics Management Authority is currently conducting a program to eradicate yellow crazy ants from the Edmonton and Kuranda areas around Cairns over five years with the aid of \$2M from Caring for Our Country 2013-2014 funding.

The project demonstrates a strong collaboration between a wide range of partners. These include the Australian Government, Biosecurity Queensland and Queensland government departments, Cairns Regional Council, Conservation Volunteers and Green Army teams, CSIRO, James Cook University, rural and suburban landholders, Traditional Owners, pest controllers, a range of local media and local industry such as earth-movers and land developers.



*How is the yellow crazy ant project consistent with the proposed approach?*

- The project recognises that the impacts of yellow crazy ants on national assets are environmental, socioeconomic and agricultural.
- Responsibilities and contributions are shared between a wide range of government and non-government stakeholders.
- Government is facilitating and providing support for community action from local farmers, residential communities, Traditional Owners and local government.
- Government is supporting research and innovation for more effective pest management through established research organisations such as CSIRO and JCU.
- Government regulations offer support for community based education and prevention of further spread.
- Landholders are championing the eradication and containment with different community groups.
- Landholders and local governments are participating in efforts to monitor yellow crazy ants to educate the community to prevent further spread.
- Risk creators such as earth-movers and other machinery operators are building risk mitigation into their normal business practices.

*Contributions of some key players*

The table below details in-kind contributions of participants in the yellow crazy ant eradication program over five years. These add up to over \$3,300,000 – more than the funding provided by the Caring for Country grant. It should be noted that some of the in-kind contributions come from other sources funded through the Australian Government such as those provided by the Wet Tropics Management Authority and the Green Army teams. Landholders contributions have been grouped into general areas and land uses under the names of several local champions of the eradication program who have volunteered large amounts of their time and resources to community engagement, media and lobbying.

Partner	In-kind contribution	Activities
<i>Government</i>		
Wet Tropics Management Authority	\$964,000	Project management and implementation, mapping, communications, financial administration, permits, Indigenous partnerships, FNQROC Taskforce, Steering Committee, Reference Group.
Biosecurity Queensland	\$200,000	Technical advice, call outs, hotline support, YCA identification, assistance with permits, Steering Committee.
Queensland Parks and Wildlife Service	\$20,000	FNQROC Taskforce, Reference Group.
Department of Environment and Heritage Protection	\$5,000	Assistance with permits, technical advice, biodiversity assessments, vocational industry placements, Reference Group.
Green Army Program	\$1,039,680	Residential baiting, monitoring, delimitation, weed removal, training and supervision.

<i>Local government</i>		
Cairns Regional Council	\$200,000	Fleet support, shed and operations base, residential database support, FNQROC Taskforce, community education, Reference Group.
Far North Queensland Regional Organisation of Councils	\$40,500	FNQROC Taskforce to map delimitation of extent of yellow crazy ants.
<i>Non-government organisations</i>		
Conservation Volunteers programs	\$60,000	Residential baiting, monitoring, training, Reference Group.
Kuranda EnviroCare	\$15,000	FNQROC Taskforce.
<i>Researchers</i>		
James Cook University	\$200,000	Scientific training, monitoring, expert advice on eradication techniques, Steering Committee.
CSIRO	\$20,000	Technical advice.
<i>Industry</i>		
McDermott Aviation	\$68,553	Helicopter treatment operations (free services and discounts).
Animal Control Technologies	\$98,460	Reduced rate for Antoff Fipronil, free bait transport.
Sumitomo Pty Ltd	\$90,000	Reduced rate for methoprene baits.
Sugar Industry	\$20,000	Landholder education, Reference Group
<i>Landholders and community</i>		
Frank Teodo and other rural landholders	\$388,020	Operations base, storage facility, community liaison, landholder permissions, doorknocking, awareness raising, media, political awareness, community monitoring, bait trials, FNQROC Taskforce, mapping, sugar industry awareness, Reference Group.
Tracy Black and other residential landholders	\$46,040	Community liaison, landholder permissions, property information forms, doorknocking, awareness raising, media, political awareness, community monitoring, bait trials, mapping, Reference Group.
Mikhaila Jacoby and other Kuranda landholders	\$138,540	Community liaison, landholder permissions, property information forms, doorknocking, awareness raising, media, political awareness, community monitoring, bait trials, mapping, Reference Group.
<b>Total in-kind contributions</b>	<b>\$3,313,793</b>	

#### *Other contributions*

The yellow crazy ant eradication program has also benefited from contributions from a range of media organisations which have recognised its importance as a local issue and undertaken regular media articles and interviews to help educate the community. The tourism industry is also educating its operators and guides about the potential impacts of yellow crazy ants.

Partner	Activities
<i>Media</i>	
The Cairns Post	Numerous articles as part of a community education campaign.
ABC Radio	Numerous interviews as part of a community education campaign.
4CA	Numerous interviews as part of a community education campaign.
Kuranda Newspaper	Numerous interviews as part of a community education campaign.
Channels 7 & 9	Numerous interviews and news coverage as part of a community education campaign.
Tourism Tropical North Queensland	Tourism industry liaison and education

### *Future resources*

Eradication of yellow crazy ants is still considered feasible. Preliminary estimates are that eradication will likely require a long term investment. The Authority is preparing an investment plan for the project that it will use to seek funding from three tiers of government and other sources. The support of local, state and Australian governments will be important if such funding is to be secured.