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Cane toad strategy for Western Australia 2014 – 2019



May 2014



Department of
Parks and Wildlife





Foreword

Cane toads, introduced to Queensland in 1935, are major environmental pests in Western Australia, having arrived here in February 2009.

The Liberal National Government released a 10-year *Cane Toad Strategy for Western Australia* in 2009. Over the first five years of the strategy, much has been achieved and the government has invested more than \$7.8 million in on-ground activities and research to help control the spread of cane toads.

With a range of stakeholders, including community groups, universities, the Australian Government, local shires, Indigenous groups and others, the State Government has implemented many new cane toad management programs including a field-based cane toad surveillance and response team, strengthened quarantine measures, a free-call hotline to report cane toad sightings and cane toad drop off points.

Major biological survey work on Kimberley islands, which are arks for our wildlife, has provided benchmark information on important island wildlife populations that need priority protection from the cane toad. At the same time, scientists have been researching the feasibility of biological control, taste aversion testing and other methods that provide hope for the survival of native wildlife species in the short and medium terms and management of cane toads in the longer term.

Much has been achieved in educating the community about cane toads, and as a result a number of 'hitchhiker' cane toads have been located and removed from areas south of the Kimberley, preventing new populations from establishing in Perth and elsewhere. A new detector dog specially trained to sniff out 'hitchhiker' cane toads is a proactive quarantine measure being used to stem the spread of this noxious pest. The recent discovery of a cane toad in East Perth was an important reminder of why a Statewide cane toad strategy is required, even though cane toads are currently confined to the east Kimberley.

The original 10-year strategy was action oriented and produced as a 'living' document that could be updated readily as new information came to hand. It is now timely to review and update the strategy to reflect progress in implementation, the current status of cane toads in WA and results of ongoing research, and to refocus its aims and objectives.

Cost effective activities and an integrated approach with other initiatives across WA, such as the \$81.5 million Kimberley Science and Conservation Strategy, are required.

The revised *Cane Toad Strategy for Western Australia 2014 – 2019* will ensure that the best available information is used to inform WA's continued management of cane toads.

A handwritten signature in white ink, which appears to read "Albert Jacob". The signature is stylized and fluid.

Albert Jacob MLA
Minister for Environment

Background

Cane toads (*Rhinella marina*) were deliberately introduced into Australia in 1935 in an attempt to control sugar cane pests in Queensland. Cane toads have since spread, both naturally and with human assistance, throughout much of Queensland, northern New South Wales and northern parts of the Northern Territory, impacting on native wildlife, agricultural, social and cultural values along the way. The movement of the invading cane toad front has increased in pace over time, with the front now moving at an average rate of approximately 50 kilometres a year. The first cane toads crossed the border of the Northern Territory (NT) and Western Australia (WA) in February 2009.

The cane toad is listed by the World Conservation Union as one of the world's worst 100 invasive alien species. They can impact on native species via:

- poisoning through ingestion;
- predation; and
- competition for habitat and food.

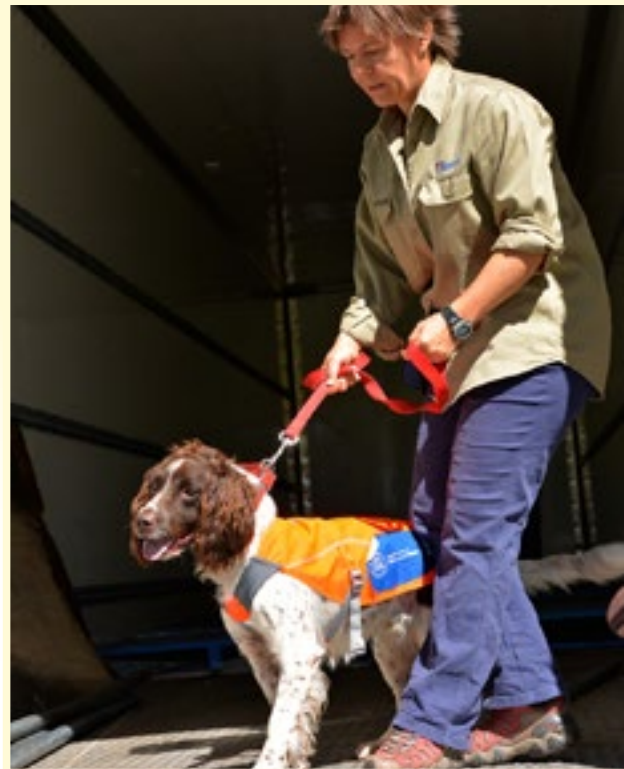
The community response to the threat posed by cane toads in WA was unprecedented, with well-organised and committed community groups such as Kimberley Toad Busters and Stop the Toad Foundation working since 2005 to try to prevent the entry of toads into the State.

The State Government has invested more than \$7.8 million in the fight against cane toads in cooperation with a range of stakeholders, including community groups, universities, the Australian Government, local shires, Indigenous groups and others. This has included a range of programs including a field-based cane toad surveillance and response team, major biological surveys, strengthened quarantine measures, public awareness and education campaigns such as a free cane toad phone app, a free-call cane toad hotline, cane toad drop off points and funding research programs to investigate opportunities for long-term control of cane toads and ways to minimise impacts on native species.

Despite this massive effort, cane toads continue to move westward across the Kimberley and it is now clear that this movement cannot be stopped using any of the methods currently available.

Research will continue in the hope of discovering long-term effective cane toad management solutions, while ensuring satellite populations of toads do not establish elsewhere in the State and that we do our utmost to minimise the impacts of cane toads on Kimberley wildlife.

Since the Cane Toad Strategy was launched in 2009, the Western Australian Government has begun implementing the \$81.5 million Kimberley Science and Conservation Strategy. Integrating the efforts to mitigate the impacts of cane toads with land management and Aboriginal ranger programs being implemented through the Kimberley Science and Conservation Strategy will allow more effective action to be taken across the landscape.



Reggie the cane toad detector dog.



Native mammals like this planigale have an aversion to eating toads.

Scope, goals and principles

The original operational plan that guided State government agency efforts between 2005 and 2009 was focused on attempting to at least slow cane toads reaching WA. When the cane toad front arrived at the NT/WA border in February 2009, a new strategy was devised to guide efforts against cane toads within this State.

The *Cane Toad Strategy for Western Australia 2009-2019* focused on building and benefiting from partnerships between government and community-based organisations to fight cane toads within the State. The next five years will focus on preventing cane toads from establishing new satellite populations and managing the impact of cane toads on native wildlife.





Mulga snake. Photo – Kimberley Reptiles.

The strategy's goals are to:

1. Maximise understanding of cane toads, their impacts and management options.
2. Minimise the impact of cane toads.
3. Implement long-term cane toad management.

From 2014 to 2019, the implementation of this strategy is guided by the following principles:

- a. **Research, monitoring and evaluation** of cane toad and native fauna distributions, and innovative management approaches are necessary to facilitate improvements in management over time within an active adaptive framework.
- b. **Taking effective action** by using scientific information and best practice techniques to protect native wildlife and environments from cane toads.
- c. **Collaborative partnerships** are vital, particularly with Traditional owners, to ensure a continued shared commitment to effective cane toad management.
- d. **Integration of cane toad management** with other land management activities such as the Kimberley Science and Conservation Strategy and the *Commonwealth's Cane Toad Threat Abatement Plan (2011)*.
- e. **Public awareness and knowledge** of cane toads and their impacts must be continually improved to assist efforts to manage the impact of toads on the natural environment.

Top picture: Traditional owners have a key role to play in cane toad management.

Community involvement

The development of the *Draft Cane Toad Strategy for Western Australia 2009 – 2019* included substantial stakeholder and community input, including a six-week public comment period. That community involvement has greatly contributed to the implementation of the strategy since 2009, and will continue to be part of this revised *Cane Toad Strategy for WA 2014–2019*.

Evaluation

It is important that the strategy is regularly reviewed and progress checked against the actions listed. The Department of Parks and Wildlife has prepared a five year achievements report available at www.dpaw.wa.gov.au/canetoads and will continue to report to the Minister for Environment on the strategy's progress, to determine the appropriateness and effectiveness of the range of strategies employed, and whether the accompanying actions remain relevant, or need to be modified. This strategy document will be updated as new information comes to hand and new techniques that can be used against cane toads are discovered.

The new Plan of Action has been developed following evaluation of the *Cane Toad Strategy for Western Australia: 2009-2019*. Some actions in the original strategy are working well and have been retained, some have been successfully completed, while others have been modified in response to better information. Some proposals in the original Cane Toad Strategy—such as the use of parasitic lungworms to slow or reduce cane toad populations, fencing to exclude cane toads from critical habitat and creating additional checkpoints to minimise satellite populations—were thoroughly investigated but found not to be useful long-term management options. The new Plan of Action recognises where resources can be best focused.





Plan of action

The Cane Toad Strategy continues to be an action oriented and 'living' document.

The following pages set out actions for the three goals of this strategy, along with a priority and time frame. The Department of Parks and Wildlife is primarily responsible for implementing these actions, but will actively seek to develop collaborative partnerships to successfully implement the strategy.

Goal 1:

Maximise understanding of cane toads, their impacts and management options

Principle	Actions	Priority
Research, evaluation and monitoring	Encourage research that focuses on species at risk, measuring changes in populations before and after the arrival of cane toads, and investigates options for reducing this impact.	High/ongoing
	Undertake research and biological surveys to identify high value biodiversity assets under threat from cane toads and potential locations for targeted conservation programs.	High/ongoing
	Foster continuing research that investigates options for mitigating the impact of cane toads on native predators.	High/ongoing
	Undertake frontline survey and mapping to ensure up to date information on cane toad movements.	High/ongoing
	Assess the effectiveness of current research to ensure future priorities are focused on the most important areas and develop recommendations for management.	Medium/ongoing
	Support research projects that align with this strategy, particularly where they will inform or lead to practical, cost effective management options.	Medium/Mid-2015
	Publish monitoring results and outcomes of research projects, including peer reviewed publications.	Medium/2014 to 2015/ongoing as research findings became available

Top picture: The yellow-spotted monitor is at risk from cane toads.



Principle	Actions	Priority
Collaborative partnerships	Ensure that relevant government agencies and community groups are aware of management and research progress and recommended actions, and the community is able to contribute, share and access information as required.	High/ongoing
	Support community groups to align activities with this strategy.	Medium/ongoing
	Promote awareness, collaboration and synergies between various research programs conducted across Australia.	Medium/ongoing
Integration	Facilitate and support research into long-term methods for mitigation of cane toad impacts.	High/ongoing
Public awareness	Maintain, update and provide information on cane toad management and awareness through a range of forums including but not limited to media, school based education, community activities and newsletters.	High/ongoing
	Promote tools such as the cane toad app and education programs that encourage the accurate identification of cane toads and native frogs.	High/ongoing

Goal 2:

Minimise the impact of cane toads

Principle	Actions	Priority
Taking effective action	Eradicate any individual or small groups of cane toads discovered more than 50km ahead of the main front, where feasible.	High
	Promote current information on acceptable methods of euthanasing and disposing of cane toads.	High/ongoing
	Regularly review and continue to implement effective quarantine procedures.	High/ongoing
	Deploy the Parks and Wildlife cane toad detector dog to inspect trucks and other high priority freight in the Kimberley for 'hitchhiker' cane toads.	High/ongoing
Collaborative partnerships	Partner with Aboriginal ranger groups to detect and eradicate individual or small numbers of toads discovered more than 50km ahead of the main front, where feasible.	High
	Contribute to implementing the <i>Commonwealth Cane Toad Threat Abatement Plan (2011)</i> .	Medium/ongoing
Integration	Support cane toad management as part of broader Indigenous land management programs and disseminate the most current information on cane toad management via ranger training programs.	Medium/ongoing
	Expand the fauna monitoring program being conducted under the Kimberley Science and Conservation Strategy's Landscape Conservation Initiative to include Kimberley islands and cane toads, to detect any incursions of cane toads onto the islands and ensure that the island biodiversity is protected.	Medium/ongoing
Public awareness	Regularly review and produce information (appropriate for the transportation and tourism industries) aimed at minimising the accidental movement of cane toads.	High/ongoing
	Maintain and establish new drop-off disposal points as cane toads advance west.	High/ongoing



Goal 3:

Implement long term cane toad management

Principle	Actions	Priority
Research, evaluation and monitoring	Investigate the feasibility of using remote monitoring techniques on islands to detect the arrival of cane toads.	High/ongoing
	Identify areas in the Pilbara where cane toads could potentially become established and investigate management options.	Medium
Taking effective action	Maintain an awareness of developments in control options and investigate the application of results in the field.	High/ongoing
	Develop and implement an effective approach to biosecurity management with a focus on maintaining the environmental integrity of Kimberley islands.	High/ongoing
Collaborative partnerships	Partner with Traditional owners to share knowledge and develop long-term collaborative cane toad mitigation programs.	Medium/ongoing
Integration	Connect and collaborate with other States and Territories and the Commonwealth Government to maintain awareness and facilitate knowledge transfer to keep abreast of advances in research and to identify better methods of control.	Medium/ongoing
Public awareness	Manage and maintain information on the distribution of cane toads to sustain public awareness.	High/ongoing



Top picture: Frog-eating reptiles such as the greater black whipsnake will be affected by cane toads.

Above: Cane toads can swim, putting coastal areas and islands at risk.

Above right: Cane toad.

Below right: Northern quoll populations are affected by advancing cane toads. Photo – David Bettini





Photo – Colin Ingram.



For more information see
www.dpaw.wa.gov.au/canetoads
or contact the State Cane Toad Coordinator
Department of Parks and Wildlife
Kununurra Regional Office
Lot 248 Ivanhoe Road (PO Box 942)
Kununurra WA 6743
Phone: (08) 9168 4200



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