

POSITION STATEMENT ON THE GIANT INVASIVE IGUANA IN FIJI

PURPOSE

The purpose of this paper is:

1. to highlight the urgent need for an effective response to the Giant Invasive Iguana¹ (GII);
2. to warn that it poses not just a Fijian problem but a future Pacific island-wide problem;
3. to reiterate the danger in delaying coherent action; and,
4. to emphasise the need for the provision of support to the Biosecurity Authority of Fiji (BAF) with appropriately qualified leadership and technical resources to enable it to effect its mandate.

BACKGROUND

In 2010, Government set up the American Iguana Eradication Task Force which appointed an international iguana specialist and a local herpetologist counterpart to review the situation and advise. Later in the year, they submitted a Review and Preliminary Eradication Plan to the Task Force. This was followed in mid-2011 by NatureFiji-MareqetiViti (NFMV) together with BAF completing a more detailed report outlining the grave consequences posed by the establishment of an introduced population of the GII on the islands of Qamea and Matagi, with recommended eradication methodology. Both reports stressed the imperative requirement for prompt action for any hope of eradication being successful.

In 2010, NFMV (as local partner of BirdLife International) with BAF has been implementing an EU-funded invasive alien species project which includes a component on the GII. Following the submission of the 2011 report to Government, its American Iguana Eradication Task Force stopped meeting and responsibility was assumed by BAF given a promise of significant funding. However, concern mounted steadily in the absence of coherent action on the ground. In consequence, two years later in October 2013, NFMV prepared a Status Report and draft American Iguana Eradication Plan to assist in funding efforts. BAF reacted negatively to this initiative but without an alternative.

In 2014 NFMV's wider circle of iguana and invasive species specialists and associates then prevailed on the United States of America to provide funding for a response and this was led by the IUCN who were acceptable to BAF. Two important reports resulted - An Eradication Feasibility Plan and a 3 year Capacity Raising Plan for BAF which were submitted to BAF in August 2014. However, since that time, there has been no evident coherent action on the ground to address the urgency of the eradication requirement.

Recently, over 100 troops from the Fiji Military Forces were deployed 'to clean up several islands' of the GII. This is not a recommendation of either the Eradication Plan or the Capacity Raising Plan. When a similar deployment was suggested to the American Iguana Eradication Task Force in 2011, its Government-appointed international herpetologist discussed the issue with the Permanent Secretary of Agriculture, and, after consideration, the deployment did not proceed. Concern at the proposed troop deployment was raised by the senior IUCN consultant who prepared the 2014 reports which had been endorsed by BAF. Knowledgeable iguana and invasive species management specialists believe this type of response to be ill-considered which is very unlikely to result in a significant reduction in the iguana population. It is to be expected that while some iguanas will be destroyed, many more will be injured, while others will elude capture and will be much harder to detect or kill next time. There is also a risk that disturbing iguanas in their mangrove habitats will lead to their wider dispersal to other islands, making them even harder to eradicate in the future².

In these circumstances, NatureFiji-MareqetiViti, as Fiji's leading domestic conservation organisation, feels it is necessary to put forward its Position Statement on the Giant Invasive Iguana.

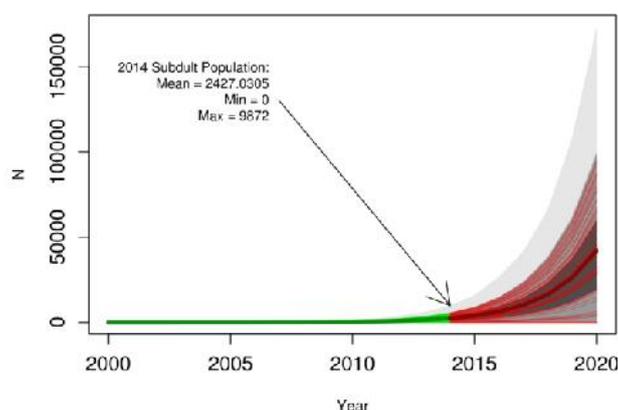
¹ Internationally known as the Green Iguana *Iguana iguana*, but known widely in Fiji as the American Iguana to distinguish it readily from Fiji's three species of endemic and threatened iguanas, all of which are basically green. Now termed the Giant Invasive Iguana.

² The deployment went ahead. The troops, who were territorials and not regulars, left the island after two weeks, and reports from communities indicate that 45 iguanas and 9 dogs were destroyed.

This Position Statement contains a set of contextual statements that underpin the statement setting it in the context of economic considerations, biodiversity conservation, the safety of landowning communities and the threat posed to the wider Pacific islands beyond Fiji.

CONTEXT STATEMENTS

- A. Currently, there are ‘invasive’ populations of introduced green iguana in some 30 locations outside its native range, primarily in the Caribbean where this iguana has proven a very successful colonist through both human-assisted and natural means. The invasive Fijian population is the bridgehead and the gateway to widespread colonisation of not just the Fiji islands, but the island Pacific. The issue is therefore far greater than just Fiji alone.
- B. Currently, the GII is still too uncommon in Fiji to appreciate its potential economic or its environmental impact. At this stage one can only evaluate its likely impact by comparing similar island countries and locations where the iguana has become established, for instance Florida, the Cayman Islands and Puerto Rico, [both Caribbean] and note that 30 to 40 years elapsed before national governments fully realised the problem and began to take action, by which time it was too late to effect eradication.
- C. In Florida and islands of the Caribbean such as Puerto Rico, Grand Cayman where the iguana has been established for 30 or more years, its negative impacts are well known and inform us of what to expect in Fiji. These include:
- **Agriculture:** with increasing population numbers the iguana is becoming a significant pest in a wide variety of agricultural, ornamental, park and horticultural settings. The same will happen in Fiji. Subsistence gardens must be regarded as highly vulnerable to serious damage from iguanas. This will result in added burden to rural, especially subsistence dwellers, and as such will reduce food security and increase rural poverty.
 - **Tourism:** green iguanas in Florida and the Cayman Islands are regarded as a public nuisance and health risk, where they are known to scare and steal food from guest/customers and defecate on tables, chairs, decks, swimming pools and their surrounds. There is no reason to believe that this will be anything other than a very serious issue in Fiji and other Pacific islands.
 - **Infrastructure:** in Puerto Rico and Grand Cayman, power outages have been caused by iguanas short-circuiting power lines. In Puerto Rico, the growing iguana population is increasingly disrupting airfield operation at the international airport, currently reducing the hazard is costing US\$98,000 annually. Also in Puerto Rico, iguanas have become a serious hazard to road users, particularly in the breeding season when iguanas may use roads for display purposes, while road embankments may be suitable for nesting burrows and road collapses require expensive repair. In Florida, iguana burrows are implicated in flood levee collapse and are causing erosion that damages sidewalks, foundations, canals, seawalls and other infrastructure.
 - **Biodiversity:** In the Caribbean, alien iguanas have been shown to pose a threat to a variety of native animals [such as our own iguanas and endemic bird species] through direct competition, predation and the introduction and spread of disease. They must be treated as a serious potential competitor to Fiji’s three endemic iguanas which are all much smaller than the GII. Also, a real possibility is the transmission of diseases to Fiji’s endemic iguanas and other native species such as fruit pigeons and parrots.
 - **Ecotourism:** Taveuni, Fiji’s conservation stronghold (because of the absence of the invasive mongoose and its significant native forest resources) neighbours Qamea, and its potential for ecotourism and the ‘Taveuni National Park’ are now being slowly realised would be seriously jeopardised by the establishment of the iguana there. Once established on Taveuni it will never be eradicated.
- D. GII iguana population models indicate that the current population is near the end of the establishment phase and that a rapid increase in numbers can be anticipated soon. This suggests that any eradication operation should be initiated as soon as possible in order to prevent anticipated major increases in numbers and range - at which point eradication from Fiji, or even from some islands, may no longer be possible.
- E. BAF is facing significant challenges with a variety of national issues. Eradication of a species for



which there is no successful precedent is an additional challenge. BAF has no example in other affected countries to learn from and needs to commence an effective well coordinated program immediately if it is to be successful. Because of the expected multi-sectoral negative impact of the situation and the lack of successful eradication experience anywhere, BAF will require sound technical assistance from knowledgeable iguana and invasive species management specialists who are willing to assist it..

F. Fiji recently indicated more than US\$3.5 million dollars of GEF-6 funds have been provisionally allocated to biosecurity, including the GII eradication.

RECOMMENDATIONS

NatureFiji-MareqetiViti urges the Government:

1. to recognise the extremely serious consequences in Fiji and the wider Pacific islands, if the invasive GII becomes established;
2. to understand that with each passing breeding season, the GII is likely expanding its population at a close to exponential rate, and the ability to eradicate it will be commensurately more difficult each year. Four breeding seasons have passed since this was made clear to the authorities, and only the most superficial action on the ground has been attempted;
3. to acknowledge that Fiji needs a national approach backed by a more inclusive and collaborative national effort towards managing this emergency
4. to ensure that BAF is provided with the appropriately experienced and qualified leadership and technical expertise to manage this emergency;
5. to reconvene urgently the American Iguana Eradication Task Force to oversee BAF's implementation of the 'Eradication Feasibility Study Report' and the 'BAF Capacity Building Plan', and to be responsible for the appropriate use of the US\$ 3.5 million GEF-6 funds allocated for this purpose.

Trustees,
NatureFiji-MareqetiViti
Suva
May 2015

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In Puerto Rico it has taken 40 years for the potential consequences of the iguana's naturalisation to be realised and public calls for management and control. However, the window of opportunity for eradication has been lost - *"prevention would be the best option to deal with these reptiles"* (Falcon *et al.* 2012).

The following pictures of the effects of invasive green iguanas in Grand Cayman, Caribbean have been supplied by Rick Van Veen the author of the 2nd Eradication Plan prepared for NFMV-BAF in 2010 and a contributor to the two current BAF endorsed Plans. Rick is currently managing an EU funded cull of the iguana in Grand Cayman.



High-powered Air Gun (or small bore rifle) have been found to be most effective for iguanas



Over 60 iguanas were counted in this *Delonix regia* tree, a common urban landscaping species. Georgetown, Grand Cayman.

Bougainvillea bush defoliated by juvenile iguanas (note one exposed on top) in Georgetown, Grand Cayman



Children's park in Georgetown, Grand Cayman



Ornamental Fig trees defoliated by iguanas - car park of prestigious club, Georgetown, Grand Cayman



Cull from 100m of trees on fence line in less than 1 hr. More than 30 left snagged in trees.



Power outages have been caused by iguanas short-circuiting power lines. Georgetown, Grand Cayman