

## Assessment of legislation supporting biosecurity in the Caribbean UK Overseas Territories & Bermuda

The people of the Overseas Territories rely heavily on their spectacular natural environments. In common with many islands, invasive species are one of the primary threats to their species and ecosystems. Modern biosecurity measures remain the best and most economical way of preventing this threat. This report presents the findings of an assessment of the legislative frameworks in place to deliver biosecurity against invasive alien species. It forms part of a broader RSPB project exploring environmental governance frameworks across the Overseas Territories.

### Summary

Laws enabling biosecurity measures in the Caribbean UK Overseas Territories and Bermuda are disjointed, not comprehensive and scattered through a number of pieces of legislation pertaining to the environment, agriculture and customs. The primary focus of these measures is to prevent the introduction and spread of pests and diseases in domestic animals and crop plants from agricultural imports. Measures to prevent the introduction of invasive alien species are not specifically considered in legislation, despite invasive species being one of the greatest threats to native wildlife in the Territories. Policy frameworks and associated targets contain a much greater acknowledgement of this threat, and management plans for threatened sites and species allow for control of invasive alien species and feral animals. Internal inter-island biosecurity is not considered. The development of comprehensive biosecurity legislation to include measures to address invasive alien species is desirable in all the Territories investigated. However, improving biosecurity measuring against invasive alien species through cross-departmental collaboration under existing legislative mechanisms may improve the situation quickly; prior to enacting any new legislation.

### Strength of instruments supporting biosecurity and invasive alien species management

Legislative Instruments	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
International agreements	Moderate	Moderate	Strong	Strong	Moderate	Moderate
National Policy Frameworks	Moderate	Strong	Moderate	Weak	Moderate	Weak
Pre-border and at point of entry	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Internal and Inter Island Security	Weak	Weak	Weak	Weak	Weak	Weak
Early detection and rapid response	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Invasive species management	Weak	Moderate	Moderate	Strong	Strong	Weak
Horizontal measures	Weak	Moderate	Weak	Weak	Weak	Moderate

## Introduction

Biosecurity is (originally) defined as set of preventive measures designed to reduce the risk of transmission of infectious diseases in crops and livestock, quarantined pests, invasive alien species, and living modified organisms (Koblentz, 2010<sup>1</sup>).

An historical lack of biosecurity measures in the UK Overseas Territories, has allowed diseases, pests and invasive species to colonise these islands, often with devastating consequences on the native flora and fauna, as well as crops and domestic animals. There is often a short timescale between the arrival of an invasive species and its impacts. As small islands are so incredibly diverse and contain a disproportionately high percentage of global biodiversity compared to their size, the damage to that biodiversity is significant.

Legislation and policies from across the Caribbean Overseas Territories and Bermuda were reviewed, and the elements within them related to biosecurity measures were identified and categorised in one of six areas that ideally should be addressed within a comprehensive biosecurity programme. These areas were:

- International Multilateral environmental agreements
- Policy framework for biosecurity
- Biosecurity measures pre-border and at point of entry
- Internal and Inter Island Security
- Early detection and rapid response
- Control and Management of Invasive Alien Species
- Horizontal measures that affect biosecurity

## Findings

The table in Annex 1 summarises specific measures within all existing laws and policies that relate to biosecurity within the Caribbean Overseas Territories and Bermuda. In all cases the biosecurity-relevant measures that do exist are scattered through a number of policies and laws. No Territory assessed has a single current document that brings together biosecurity (and or invasive alien species) legislation, and the words biosecurity or invasive alien species are not used in any key piece of existing legislation.

Policy frameworks are stronger on acknowledging invasive alien species than legislation is, especially in Bermuda; they indicate recognition of the threat of invasive species and need for planned action to allow for their management. They do not as a rule focus on biosecurity measures for invasive species.

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<sup>1</sup> Koblentz, Gregory D. (2010). "Biosecurity Reconsidered: Calibrating Biological Threats and Responses". *International Security*. **34** (4): 96–132. doi:10.1162/isec.2010.34.4.96

Biosecurity related laws and regulations that do exist in the Caribbean Overseas Territories and Bermuda are strongly agriculturally based. They are associated with domestic animal and crop plant biosecurity and focus on minimising the spread of plant and animal diseases and pests associated with known imports of live material. Existing laws do not refer to invasive species that may also or only affect the native flora and fauna (i.e. those that are stowaways, not deliberately imported, or escaped domestic pets). In all assessed Territories new laws (or amendments of existing laws) to improve biosecurity measures for invasive species are desirable.

Crucially many of the powers of inspection, quarantine and destruction given to the officers undertaking disease and pest control at ports are exactly those needed to execute biosecurity for invasive species. These officers are often empowered under agriculture or customs laws and regulations. In the short term training the relevant officers to understand the risks from invasive species, the possible pathways that these species use to invade Territories and the need to search for these species as well as pests and diseases will hugely improve the biosecurity response, prior to any new legislation being introduced.

Reference to internal inter-island security is found only within the Plants and Animals Law (pest and diseases) in the Cayman Islands. This is critical to ensure invasive alien species established on one island within a Territory do not reach another that it currently invasive species free.

On protected sites or critical habitats and in the protection of threatened species, the legislative requirement for management plans to protect native fauna and flora allow for the management of invasive alien species. In some territories there are legislative measures that cover the management of feral animals and also stray dogs. In Cayman and Montserrat management of invasive species outside of protected areas is possible within the law. The usefulness of any planning laws in aiding biosecurity rests on the strength of any Environmental Impact Assessments - and their subsequent enforcement.

The following legal instruments and policy frameworks are the 'best' within the Caribbean Overseas Territories and Bermuda in terms of their coverage of biosecurity issues in relation to wildlife, but none are comprehensive and critically some are not yet enacted. On the whole they focus on enabling invasive alien species management rather than incursion prevention.

- The National Conservation Law in Cayman covers many elements of invasive alien species management, but not biosecurity requirements.
- A comprehensive invasive alien species section can be found within the draft Wildlife and Biodiversity Bill in the Turks and Caicos Islands *but this law is not yet enacted.*
- The Conservation and Environmental Management Act (2014) in Montserrat.

In terms of policy frameworks:

- A *draft* Invasive Alien Species Strategy exists for Anguilla – it was written in 2008 but is not yet finalised.
- The National Biodiversity Action Plan for Bermuda contains 30 actions for invasive species.

## **Conclusion**

The legislative building blocks for good biosecurity measures are partly in place, but because of their disjointed nature – embedded within numerous polices and pieces of legislation that cross cut a number of government departments – the overall impression is one of very disjointed governance on biosecurity in the Caribbean Overseas Territories. This disjunction appears to extend to the enforcement level (where it is exacerbated by lack of resources) as borne out by discussions at a recent workshop on Invasive Alien Species in the Caribbean (October 2016). At this workshop thirty seven participants from fourteen Overseas Territories and Island States addressed specific challenges associated with invasive alien species management in the region including biosecurity. The participants – who represented Government Departments, the Police Force, Customs Agencies, Attorneys General offices, National Trusts and non government organisations – developed seven recommendations that would improve the effectiveness and the operating environment for invasive alien species management (see Annex 2).

Whilst the development of new biosecurity legislation including invasive alien species is highly desirable, it is important to acknowledge that several pieces of environmental legislation are stuck in legislative process in Caribbean Territories – and have been for some time. In the short to medium term focusing on joining up various government departments in the implementation of biosecurity measures may yield positive results for biodiversity far more quickly.

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**Annex 1: Policies and legislation supporting biosecurity and invasive alien species (IAS) management measures in the Caribbean UK Overseas Territories and Bermuda**

(more detailed analysis available at [www.rspb.org.uk/overseasterritories](http://www.rspb.org.uk/overseasterritories))

Colour key:
Strong
Moderate
Weak

**Abbreviations:** CBD Convention on Biological Diversity  
 CITES Convention on the International Trade in Endangered Species  
 IAS Invasive Alien Species  
 NBAP National Biodiversity Action Plan  
 Res. Resolution

Instrument	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
<b>Inter - national</b>	<ul style="list-style-type: none"> <li>• <b>Ramsar</b> ratified Res VII.14 re. Invasives species in wetlands</li> <li>• <b>CITES</b> ratified conf.13.10 (Rev. CoP 14) re. trade in alien invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ramsar</b> ratified Res VII.14 re. Invasives species in wetlands</li> <li>• <b>CITES</b> ratified conf.13.10 (Rev. CoP 14) re. trade in alien invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• <b>CBD</b> ratified – it has a cross cutting programme on IAS.</li> <li>• <b>Ramsar</b> ratified Res VII.14 re Invasives species in wetlands</li> <li>• <b>CITES</b> ratified conf.13.10 (Rev. CoP 14) re. trade in alien invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• <b>CBD</b> ratified – it has a cross cutting programme on IAS.</li> <li>• <b>Ramsar</b> ratified Res VII.14 re Invasives species in wetlands</li> <li>• <b>CITES</b> ratified conf.13.10 (Rev. CoP 14) re. trade in alien invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ramsar</b> ratified Res VII.14 re Invasives species in wetlands</li> <li>• <b>CITES</b> ratified conf.13.10 (Rev. CoP 14) re. trade in alien invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ramsar</b> ratified Res VII.14 re Invasives species in wetlands</li> <li>• <b>CITES</b> ratified conf.13.10 (Rev. CoP 14) re. trade in alien invasive species</li> </ul>
<b>Policy Framework</b>	<ul style="list-style-type: none"> <li>• Native Plant and Animal Habitat Policy 2001 gives power to control intentional or</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainable development plans and fisheries plan include actions against</li> </ul>	<ul style="list-style-type: none"> <li>• Constitution recognises importance of environmental protection</li> </ul>	<ul style="list-style-type: none"> <li>• National Environment framework policy does not mention IAS</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation , Environmental Management and Heritage Act allow for IAS</li> </ul>	<ul style="list-style-type: none"> <li>• The draft Wildlife and Biodiversity Bill has a comprehensive</li> </ul>

Instrument	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
	<p>accidental introduction of IAS</p> <ul style="list-style-type: none"> <li>National Environmental Management Strategy and Action Plan (NEMS) No. 40 is for IAS</li> <li>Anguilla Invasive Species Strategy (2208) DRAFT outlines management framework and IAS incursion response, no implementation monitoring or finance specified</li> <li>Environmental Charter has an IAS principle within it</li> </ul>	<p>invasive species</p> <ul style="list-style-type: none"> <li>National biodiversity action plan has 30 activities to combat invasive species threat including mainstreaming action</li> <li>A draft national invasive species strategy</li> <li>Environmental Charter has an IAS principle within it</li> </ul>	<ul style="list-style-type: none"> <li>National Environmental Action Plan (NEAP) 2004 has objectives to address IAS under principle 13</li> <li>Environmental Charter has an IAS principle within it</li> </ul>	<ul style="list-style-type: none"> <li>NBAPS for species include target for IAS control</li> <li>Environmental Charter has an IAS principle within it</li> </ul>	<p>management</p> <ul style="list-style-type: none"> <li>The Centre Hills Management plan requires the development and implementation of a protocol for management of invasive species</li> <li>Environmental Charter has an IAS principle within it</li> </ul>	<p>section on Invasive Species but not yet enacted.</p> <ul style="list-style-type: none"> <li>Environmental Charter has an IAS principle within it</li> </ul>
<b>Biosecurity Measures pre-border and at point of entry</b>	<ul style="list-style-type: none"> <li>Powers exist in relation to preventing the spread of diseases for animals and plants (powers</li> </ul>	<ul style="list-style-type: none"> <li>Powers exist in relation to preventing the spread of diseases for animals and plants (powers of inspection, entry,</li> </ul>	<ul style="list-style-type: none"> <li>Powers exist in relation to preventing the spread of diseases for plants (powers of inspection,</li> </ul>	<ul style="list-style-type: none"> <li>Powers exist in relation to preventing the spread of diseases for animals and plants (powers of inspection, entry,</li> </ul>	<ul style="list-style-type: none"> <li>Powers exist in relation to preventing the spread of diseases for animals and plants (powers</li> </ul>	<ul style="list-style-type: none"> <li>Powers exist in relation to preventing the spread of diseases for animals and plants (powers</li> </ul>

Instrument	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
	<p>of inspection, entry, search, restriction of movement, seizure and destruction)</p> <ul style="list-style-type: none"> <li>• <b>IAS not mentioned explicitly.</b></li> <li>• No release of flora and fauna into marine parks.</li> <li>• No monkeys allowed.</li> </ul>	<p>search, restriction of movement, seizure and destruction)</p> <ul style="list-style-type: none"> <li>• <b>IAS not mentioned explicitly.</b></li> <li>• No animal products from South America</li> <li>• No sand, soil or earth on stock. No sand or gravel without permit.</li> <li>• No live or unfrozen and uncooked fish into waters of Bermuda unless license given</li> </ul>	<p>entry, search, restriction of movement, seizure and destruction)</p> <ul style="list-style-type: none"> <li>• Stated on import and phytosanitary certificates</li> <li>• Law and regulations (stop, search , seizure and arrest) to minimise intentional or accidental introduction of IAS to marine environment</li> <li>• No soil from Foreign Territory is permitted</li> </ul>	<p>search, restriction of movement, seizure and destruction)</p> <ul style="list-style-type: none"> <li>• <b>IAS not mentioned explicitly</b></li> <li>• Permits needed for knowingly importing live (plant and animal) specimens.</li> <li>• Animals from Asia, Africa, C and S America banned</li> <li>• Otherwise Penalties exist for contravention and release of pest/disease carriers.</li> <li>• Must import plants and animals through specified port.</li> </ul>	<p>of inspection, entry, search, restriction of movement, seizure and destruction)</p> <ul style="list-style-type: none"> <li>• <b>IAS not mentioned explicitly.</b></li> <li>• Permits required for live animal import and animals from some origin countries banned.</li> <li>• All imported plants must be fumigated</li> <li>• Must import plants through specified ports or places of entry</li> <li>• Designated ports for handling importation of animals</li> </ul>	<p>of inspection, entry, search, restriction of movement, seizure and destruction)</p> <ul style="list-style-type: none"> <li>• Not yet enacted legislation (in draft): Permits required to import any invasive species, risk assessments required, no release permitted, confiscated IAS will be destroyed</li> <li>• De-ratting requirements for vessels in regulations.</li> <li>• Vessels must come into a recognised port.</li> </ul>
<b>Internal and Inter Island Security</b>	<ul style="list-style-type: none"> <li>• Offshore islands not explicitly mentioned in legislation</li> </ul>	<ul style="list-style-type: none"> <li>• Offshore islands not explicitly mentioned in legislation-</li> </ul>	<ul style="list-style-type: none"> <li>• Offshore islands not explicitly mentioned in legislation</li> </ul>	<ul style="list-style-type: none"> <li>• As above - legislation specifically refers to Sister Islands,</li> </ul>	<ul style="list-style-type: none"> <li>• n/a</li> </ul>	<ul style="list-style-type: none"> <li>• As above legislation specifically refers to all islands</li> </ul>

Instrument	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
		biosecurity rules in place for island nature reserves.		though Little Cayman only has a specified port of entry in legislation		
<b>Early detection and rapid response</b>	<ul style="list-style-type: none"> <li>Diseased imported plant and animals can be seized. No specific IAS mentioned</li> </ul>	<ul style="list-style-type: none"> <li>Diseased imported plant and animals can be seized. No specific IAS mentioned</li> </ul>	<ul style="list-style-type: none"> <li>Any Customs Officers have powers of seizure of animal, plant or article if deemed to be unlawful importation or exportation. If no satisfactory proof item can be forfeited</li> <li>Animals inappropriately imported can be kept in a facility, deported or euthanised.</li> <li>No specific IAS mentioned</li> </ul>	<ul style="list-style-type: none"> <li>Diseased imported plant and animals can be destroyed. No specific IAS mentioned</li> </ul>	<ul style="list-style-type: none"> <li>Diseased imported plants can be destroyed. No specific IAS mentioned</li> </ul>	<ul style="list-style-type: none"> <li>Not yet enacted legislation (in draft) : DECR would have powers to enter, survey, assess extent of IAS and remove, contain, destroy if serious threat. Not enacted</li> <li>Provision for early detection system for animals and plant disease to be designed.</li> </ul>
<b>Control and management of IAS</b>	<ul style="list-style-type: none"> <li>DRAFT IAS management framework, DRAFT IAS incursion response, DRAFT voluntary codes of conduct.</li> </ul>	<ul style="list-style-type: none"> <li>Management plans allow for IAS control on <b>protected sites, critical habitats</b> and also if protected species are threatened.</li> </ul>	<ul style="list-style-type: none"> <li>Livestock can be impounded or be 'otherwise dealt with' in any protected area, forestry area or water area also on</li> </ul>	<ul style="list-style-type: none"> <li>Management plans allow for IAS control on protected sites and elsewhere if threaten wildlife populations.</li> </ul>	<ul style="list-style-type: none"> <li>Any unprotected species on Crown, Public or private land can be impounded, hunted or harvested</li> </ul>	<ul style="list-style-type: none"> <li>Law allows ethical control and eradication of IAS, development of plans requires full public consultation and</li> </ul>

Instrument	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
	<ul style="list-style-type: none"> <li>Ministers can name species as alien invasives</li> <li>Policy allows government agencies to manage IAS</li> <li>NEMS suggests there are ongoing monitoring and control programmes for pests, diseases and invasive species run by Dept. of Agriculture.</li> <li>Measures to deal with stray animals</li> </ul>	<ul style="list-style-type: none"> <li>Pest birds can be controlled.</li> <li>Action plans for 3 bird species and Lionfish. Red-eared slider plan in draft.</li> <li>Rats and mosquitoes can be controlled anywhere.</li> </ul>	<ul style="list-style-type: none"> <li>public land/ crown lands</li> <li>Some movement of live endangered animals restricted. IAS awareness and impact is within parks and protected areas systems plans</li> </ul>	<ul style="list-style-type: none"> <li>Encouragement to fish for Lionfish</li> <li>Feral livestock and dogs can be controlled</li> <li>Poison can be used to protect wild animals as well as health and safety</li> </ul>	<ul style="list-style-type: none"> <li>DoE and DoA able and obliged to manage feral livestock and manage identified invasive flora</li> <li>Livestock grazing illegal without permission of forestry board</li> <li>Animals found abandoned in the forest can be culled and sold for public auction or slaughtered/shot and meat sold</li> <li>Wild cattle can be shot if trespassing</li> <li>Dogs harming livestock can be destroyed</li> </ul>	<ul style="list-style-type: none"> <li>mitigation actions by Government on private land with owners having responsibility to report IAS and minimise harm working with DoE</li> <li>Fines for non-cooperation</li> <li><b>Law not enacted</b></li> <li>Culling/ destruction possible to prevent plant and animal disease spreading</li> </ul>
<b>Horizontal measures</b>	<ul style="list-style-type: none"> <li>EIA required under the Physical Planning Act 2001</li> </ul>	<ul style="list-style-type: none"> <li>DENR can request removal of invasive plant species from proposed planting schemes for new developments.</li> </ul>	<ul style="list-style-type: none"> <li>Development plans can include environmental protection areas and require EIA for development to keep livestock</li> </ul>	<ul style="list-style-type: none"> <li>Environmental Impact Assessment can be used to highlight effects on non control <b>but this part of the</b></li> </ul>	<ul style="list-style-type: none"> <li>Physical Planning Act 2002 requires EIA for proposed developments in general</li> <li>The fourth</li> </ul>	<ul style="list-style-type: none"> <li>Planning Law requires development to take account of environment. Limited Environment</li> </ul>

Instrument	ANGUILLA	BERMUDA	BRITISH VIRGIN Is	CAYMAN ISLANDS	MONTSERRAT	TURKS & CAICOS Is
		<ul style="list-style-type: none"> <li>Promotion of native and endemic species as a replacement for invasive species is actively ongoing</li> </ul>	<ul style="list-style-type: none"> <li>The National Integrated Development Plan (1999-2003) identified the need to engage natural resource management agencies in the planning process</li> </ul>	<p><b>Nature Conservation law is not yet in force.</b></p> <ul style="list-style-type: none"> <li>Developing and Planning law has no mention of IAS</li> <li>Technical capacity exists to map GIS</li> </ul>	<p>Schedule under the Physical Planning Act details all aspects that an EIA is expected to cover including impacts on fauna and flora and physical environment</p>	<p>Impact in place for Conservation Areas</p>

**Annex 2: Recommendations from the international workshop ‘Advancing Invasive Alien Species Management’ in the Caribbean October 2016. Funded by the EU BEST programme.**

The thirty seven participants of the international workshop entitled Advancing the Invasive Alien Species Management in the Caribbean UKOTs held in Montserrat from 17<sup>th</sup> – 20<sup>th</sup> October 2016, representing 14 government departments 6 National Trusts and 6 Non-Government Organisations from 14 island states and Territories in the Caribbean developed seven recommendations:

1. **National Invasive Alien Species Plans** should be developed and implemented in all UK Overseas Territories, led by an appropriate government department, with particular attention given to biosecurity.
2. **National biosecurity plans** should address the prevention of invasive species (e.g. public awareness, policy and legislation) early detection and rapid response (e.g. border security, regional cooperation), long term enforcement, compliance, and surveillance.
3. **Investment is made in biosecurity capacity training** across the UKOTs – to include a regional biosecurity alert network with a biosecurity champion in each Territory
4. The Government, Police, Attorney General’s Office and Customs Officials should consider the application of **exemptions for conservation purposes, to those elements of Territory firearms legislation** that are inhibiting effective control of invasive species.
5. **Police and conservation practitioners should work closely together** to develop short term solutions that will allow invasive alien species control to take place.
6. **Long term, well targeted, inclusive public consultation** and awareness programmes, supported at Ministerial level, should be an essential component of all eradication and control initiatives.
7. **A Caribbean UK Overseas Territories Invasive Alien Species strategic framework is developed** to foster institutional, technical and professional collaboration across territories on the management of IAS.

**These recommendations are directed to the UK and UK Overseas Territory Governments whose commitment and leadership is essential for their realisation.** However, participants fully acknowledge that commitment and cooperation from each of the organisations represented at the workshop and their respective island states is also required for their successful implementation.