











ADVANCING INVASIVE ALIEN SPECIES MANAGEMENT IN THE CARIBBEAN UKOTs

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WORKSHOP REPORT

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1. SUMMARY

Thirty seven participants from fourteen Territories and Island States addressed specific challenges associated with Invasive Alien Species Management in the Caribbean Islands. They represented Government Departments (Environments and Agriculture), the Police Force, Custom Agencies, Attorney General's office, National Trusts and non government organisations. Experience was shared in four areas: biosecurity, use of firearms for invasive species management, awareness techniques for enabling control of species valued by the public and the development of National Invasive Species Strategies. Following discussion to address the challenges faced within these areas, protocols, guidelines and templates were developed using the collective experience of the workshop, for participants to use in their work.

Seven recommendations were developed to address key challenges with Invasive Alien Species Management in the UK Overseas Territories, beyond the sole control of those at the workshop. If these are implemented the effectiveness and the operating environment for all who work on Invasive Alien Species management will improve significantly. Full commitment and cooperation from each organisation represented will be required alongside leadership by the UK Overseas Territory and UK Governments.

2. RECOMMENDATIONS

The thirty seven participants of the international workshop entitled Advancing the Invasive Alien Species Management in the Caribbean UKOTs held in Montserrat from 17th – 20th October 2016, representing 14 government departments 6 National Trusts and 6 Non Government Organisations from 14 island states and Territories in the Caribbean have developed seven recommendations as result of discussions at the workshop.

- 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, Legislative Assembly, 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 (Governments and NGOs) 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 prevention, 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.

The participants are willing to cooperate with each other, to share experiences and expertise, both within and between Territories and States in order that these recommendations might be realised. They call on their Governments to support these collaborative efforts to improve the management of Invasive Alien Species within the Caribbean region.

3. INTRODUCTION

The workshop Advancing Invasive Alien Species (IAS) management in the Caribbean UK Overseas Territories (UKOTs) was designed to address four invasive alien species management issues that arose during the EU BEST project that ran between 2013 and 2015 in the Caribbean UKOTs:

Biosecurity - developing approaches, systems and implementation at Territory level
Firearms usage in invasive species control and management
Public awareness and outreach when managing sensitive invasive species
National invasive alien species strategy development

The intention was to share experience and agree practical ways forward to overcome the challenges associated with these four topics, using the combined experience and skills of key IAS management stakeholders from Government departments and NGOs from across the UKOTs and beyond. A full participants list can be found in Annex I). The need for more cross sector/cross departmental and cross territory implementation of IAS management was recognised during the EU BEST 1 project as essential if IAS management was to be sustained in the UKOTs, hence the inclusion of important stakeholders who are not usually traditionally central to conservation discussions – such as the Police Force and Customs Officers.

A number of speakers presented on each topic to provide experience and food for thought. Follow up discussions addressed specific questions developed by the core group involved with the current EU BEST project, Securing Pockets of Paradise in the Caribbean UKOTs. The full workshops programme can be found in Annex II. All presentations are available from the RSPB on request and copies have been distributed to all participants.

Outputs

The intended outputs were practical ways forward (protocols, recommendations, increased stakeholder understanding and involvement) that will help all concerned provide a more robust response to IAS management in the Caribbean UKOTs. IAS management requires such cross sector management to be successful and participants will be encouraged to take any protocols and recommendations from the meeting back for discussion in appropriate national IAS fora – in Montserrat and BVI these national fora will be convened as part of the project.

4. SESSION A: BIOSECURITY

4.1 Scene setting

Biosecurity is a major issue for Caribbean UKOTs from the local scale to ensure eradication and incursion responses are sustainable in the long term to national /regional scale to prevent new arrivals of invasive species. In the 2013 – 2015 EU BEST project biosecurity was identified as a major element of IAS management that could be improved through better internal and external cooperation, following tasks completed by Anguilla and Cayman relating to biosecurity.

This session progressed from the development and implementation of practical biosecurity protocols on offshore islands through to developing national biosecurity processes and regional approaches to biosecurity in the Insular Caribbean.

Aim:

To agree the key elements and main active stakeholders in national biosecurity protocols, taking experience from individual offshore islands, to groups of islands to building a national – whole territory approach.

4.2 Presentations

- 4.2.1 Developing a biosecurity protocol a small, inhabited offshore island: Case Study Little Cayman Karen Ford, National Trust for the Cayman Islands' Covered the IAS issues on Little Cayman where invasive Green Iguana are present and there is now evidence they can hybridise with native Rock Iguana. The model biosecurity plan that was developed for the island was presented including setting up an Invasive species response unit both on the Sister Islands and on Grand Cayman.
- 4.2.2 Implementing biosecurity protocols and plans for in Antigua through partnerships and volunteers personnel, resources, sustainability. Natalya Lawrence, Environmental Group of Antigua (EAG). Following eradication of rats from several offshore islands, volunteers and partnerships maintain biosecurity efforts in Antigua.
- 4.2.3 Biosecurity video from St Helena produced by the St Helena Government and RSPB A three minute video for visitors, shown on the boat, explains biosecurity issues in St Helena and shows what people can do to help reduce the risk of an invasive species arriving on the island. https://www.youtube.com/watch?v=1PZvRAr67Cg
- 4.2.4 The work of the Great Britain Invasive Non Native Species Secretariat (INNS) and how it can support IAS/biosecurity work in the UK Overseas Territories Niall Moore,

Chief Non Native Species Officer (England). The INNS secretariat is central IAS management work in Britain and has a comprehensive biosecurity programme that focuses on Prevention, Early detection and rapid response and control in that order of priority. It also has funds to help biosecurity effort in the UKOTS in future.

4.2.5 Developing national and regional approaches to biosecurity in the Insular Caribbean: Ulrike Krauss, Palm Integrated Services and Solutions (PISS) Ltd., Saint Lucia Examples of national approaches covering Sites, Risk Species, Pathways, Prevention, Surveillance and Incursion responses. Tools for regional planning biosecurity planning: Identification Tools, Networks, Multilateral Environmental Agreements (MEAs) and Strategies and Action Plans.

4.3 Discussion

The following questions were addressed during the discussion

- What are the key elements that a territory wide biosecurity protocol needs?
- Who are the essential stakeholders in territory for developing and implementing protocols along these lines? (National and regional)
- How do we improve action within (and between) UKOTs on biosecurity?

4.3.1 Key elements of Biosecurity plans

Initially groups of participants discussed the immediate priority biosecurity actions in each territory. The top three priorities from each group were selected, shared and discussed with the whole group, before being grouped into categories (see table 1 on page 9). The categories developed could form the sections within any national biosecurity plan, and themselves be grouped under **Prevention**, **Early Detection and Rapid Response and Surveillance measures**. No UK Overseas Territory has a dedicated biosecurity policy or plan in place in 2016, though various measures are scattered through several pieces of legislation (such as animal and plant health, customs and wildlife laws). Of those islands represented at the meeting, only St Lucia, Bahamas and the UK have national biosecurity polices and/or plans.

It was underlined by participants that increased **public awareness** and **capacity building** are required in all categories of biosecurity measures (prevention, early detection and rapid response and long term surveillance measures), in the UKOTs and elsewhere in the region, and it is helpful if these biosecurity plans sit within a National Invasive Species Strategy framework – see section 4.

The need for cooperation on biosecurity within the region was also highlighted, particularly in relation to developing an early warning and rapid response system, but also for sharing skills and experience. In many territories the plant and animals health networks are more interconnected than the forestry and wildlife services where there are *ad hoc* informal networks that could be better supported

Examples of existing biosecurity plans and policies which the Caribbean UKOTs could use as models for adaptation can be found in Annex 3.

4.3.2 Biosecurity Stakeholders

The participants identified a group of core stakeholders for biosecurity, who should always be involved in the development of any biosecurity plan, and are the main entities <u>responsible</u> for implementation (in bold below). It is essential these organisations are involved, cooperate, and give (and share) human and financial resources to deliver effective biosecurity. However they identified a much larger group of stakeholders who must be involved in the development and implementation of biosecurity policies and plans to ensure success. These stakeholders will vary from island to island. Tailoring consultations and communications to target these audiences will be important.

Departures of Environments/Conservation
Departments of Agriculture
National Trusts and NGOs (protected area managers)

Customs, Port Authorities and Border Authorities
Ministers and Members of Parliament/House of Assembly
Attorney General Office (for understanding, amending and drafting the laws that are needed)

Hunters

Police Force

Landscape Architects/Gardeners/Landscaping Companies Farmers/Agriculturalists/Extensionists

Horticulturalists Fisher-folk

Pet traders

Shipping and Air Freight companies

Boating sector (yachting, cruising, inter-island ferries/ferry companies)

Hoteliers/Resort Managers/Tour operators

Construction sectors

Teachers

One aim of a biosecurity policy should be to increase the awareness of those in 'the public at large' who are not included in the above categories. So everyone knows of the importance of implementing island biosecurity.

4.4 Recommendations from the Biosecurity Session

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.

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. **Investment is made in biosecurity capacity training** across the UKOTs – to include a regional biosecurity alert network with a biosecurity champion in each Territory

Table 1. Priority biosecurity actions for the Territories & States present at the workshop: grouped into areas that could form the basis of biosecurity plans.

NATIONAL FRAMEWORK	PREVENTION	VENTION EARLY DETECTION AND RAPID RESPONSE LONG TERM SURVEILLANCE		ANCE	CROSS CUTTING				
Invasive Alien species Strategies and Plans	Public awareness and education	Policy and Legislation	Border security	Regional Cooperation	Enforcement	Implementation of and compliance with biosecurity	Capacity building		
Examples of priority actions									
Develop IAS Strategy that Involves all agencies and stakeholders Covers: legislation responsibilities action stakeholders	Audience segmentation Target and personalise common messages Make sustainable education and outreach part of ongoing programmes Link with tangible issues of economics health and culture	(Better) Legislation and regulation to back all biosecurity action Increased visible Commitment from government and private Continuous high level commitment	Increase air and sea port biosecurity: Signs videos pamphlets Protocols for staff and customs of what can and can't be imported List top 10 IAS threats at points of entry Identify main pathways for IAS Develop early intervention I & contingency plans	Establish better regional /transboundary cooperation network – to act as early warning system between islands Share information across the on IAS region in general	Carrot and stick approach: Consider incentives for voluntary compliance e.g. duty free Establish regulations. Improve enforcement Strong deterrents and fines	Adequate human and financial resources to undertake surveillance /removal/eradication Dedicated task force to fight invasives species on the ground in territory (more a IAS management measure) Restrict access to ecosensitive species /sites Economic incentives to decrease import of plants	Technical capacity required in many territories in all areas: Customs Dept. of Environment Dept. of Agriculture Political Ministers Consider national level course e.g. better identification, knowledge of process Increased hard ware eg Tools incinerators and quarantine		

5. SESSION B: FIREARMS

5.1 Scene Setting

Use of firearms to deal with invasive species /feral animals is a difficult issue that many Territories face when managing IAS. In the previous BEST project it was interesting to note the very different ways in which different territories approach this issue. The attitudes of the Police Force, Customs, Government and the Public varied considerably to firearms use, as did the flexibility of legislation and policy to allow IAS control and eradication using firearms.

This session was designed for to allow different agencies present to share their experiences of using firearms in IAS management, and explore the extent of inter agency cooperation required to allow firearms use to take place. We felt it was important to capture the lessons learnt from projects to date. We hoped to come up with a set of recommendations, developed and endorsed by this workshop for providing clarity on this issue and helping to make progress where progress is needed - drawing on all the experience in the room.

Aims

- To understand need for use of firearms in invasive species control and the challenges that has presented in different territories
- To discuss potential solutions to challenges and recommend how they might be addressed in the Caribbean territories

5.2 Presentations

- 5.2.1 Challenges using firearms for iguana control in the Cayman Islands Department of Environment Cayman and the National Trust for the Cayman Islands, Fred Burton. The enormity of the Green Iguana problem on Cayman, the measures needed to control the species and the limitations on actions due to firearms legislation and resources.
- 5.2.2 Cooperation between the UK agencies, the Police, the Department of Environment and hunters to mainstream the control feral livestock in Montserrat Department of Environment Montserrat, Stephen Mendes. The issues with and impacts of invasive species in Montserrat and the cooperation between agencies to control feral livestock using firearms and other methods.
- 5.2.3 Overcoming obstacles to firearms use for feral livestock in BVI recommendations for good procedure. National Parks Trust BVI Nancy Pascoe, Deputy Director Highlighting the key questions anyone wishing to use firearms should find the answers to before embarking on a firearms project in the BVI and

the implications these can have on the ability to implement the project as designed.

5.3 Discussion

The discussion addressed the following key questions:

- What key issues should any protocol for firearms use in invasive species management address?
- ➤ What if any policies and processes need to change within each Territory to make firearms use more effective in IAS management?

The following truths identified by the participants framed the discussion:

SAFETY FIRST: Where firearms are used for conservation purposes it must be lawful and strictly controlled, public safety is of paramount importance.

NO ACTION IS NOT AN OPTION: The problems with some invasive alien vertebrates/feral animals is immense, and their potential to devastate native ecosystems and subsequently damage the economy is so great, that use of firearms is the only way to affect any form of control on these species. The green iguana on the Cayman Islands and feral cattle in Montserrat are two examples. Other methods are inadequate to deal with the scale of the problem.

FIREARMS LEGISLATION IS NOT UNIVERSALLY FIT FOR CONSERVATION PURPOSES:

Firearms legislation within the UKOTs is one of the major obstacles limiting the ability to effectively control Invasive Alien Vertebrates on those islands

5.3.1 Considerations for firearms use

The following steps are essential for any conservation practitioner wishing to embark on a project that involves using firearms to control or eradicate IAS. <u>Prior to starting the project</u> the project leader must be prepared to do considerable research and pre-project planning.

- Begin by explaining at length to Ministers, governments, police forces and customs –
 the need for the project (and the use of firearms) and <u>bring them all into the core</u>
 <u>project team to help with planning and implementation.</u> (Be prepared to explain and
 re-explain the need for your project at regular intervals before and during the
 process).
- Understand the current firearms legislation and regulations and the implications it
 has for your project before you start. How flexible is your legislation? Pay particular
 attention to the regulations for:
 - Handling firearms
 - Storage and transportation of firearms

- Ask yourself do we have enough firearms-qualified personnel to do an effective job?
 If not what training will you need to fund? Where will the trainers come from?
 Experience shows that recreation hunting is entirely different from shooting for conservation purposes different skills are needed
- Ask yourself exactly what firearms and ammunition do we need to do an effective job and how easy are they to obtain?

5.3.2 Changes needed to allow more effective conservation through firearms use The participants acknowledged that changes to firearms legislation will be extremely difficult to achieve, despite the need to do so in some cases, due to the extent of the problem we face, so in the first instance as conservation practitioners we must:

- Begin to anticipate legislation change that affects firearms and get involved NOW!
- Lobby for the inclusion of exemptions or special rules for conservation personnel which will increase flexibility in the law without decreasing public safety
- Gather evidence from across the world (US, Europe) to help influence the debates in our Territories, whilst acknowledging that the Caribbean context is different
- Consider using Memoranda of Understanding with the Police Force to get the job done

With these points in mind we commit to undertaking a simple comparison of firearms legislation across the Territories and States involved in this workshop, to begin the process of identifying good practice (see Table 2 for proposed areas of comparison).

5.4 Recommendations

The Government, Legislative Assembly, 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.

Police and conservation practitioners (Governments and NGOs) should work closely together to develop short term solutions that will allow invasive alien species control to take place.

Table 2: The following table will form the basis of the comparison of legislation as we follow up the outputs of this workshop

	AXA	BVI	KCY	MNI	TCI	UK	Martinique	Antigua &	Dutch	Bahamas
								Barbuba	Territories	
Name and			Firearms	Firearms	Police				2010,	
year of			Law 2008	act - 2008	Force				http://wetten.ove	
relevant			http://ww		Ordinance				rheid.nl/BWBR002	
legislation			w.gov.ky/		2014				8756/2010-10-	
			portal/pls/						10/0/informatie,	
			portal/doc						http://wetten.ove	
			s/1/11525						rheid.nl/BWBR002	
			709.PDF						8251/2010-10-10	
Who can			Licensed	Only	Police				Farmers, people	
hold			owners	licensed					with permits,	
weapons?				persons					police	
Licensing			Fee,	Very strict					Background	
requiremen			specified						check, medical-,	
ts			location						eye exam, petition	
			for use						with lieutenant	
									governor	
Types of			Not						BB were,	
weapons			specified?						legislation on this	
permitted									is in the make,	
									before permitting	
									you have to	
									indicate what	
									weapon you	
									intend to bring in	
Import and			Firearms	Only					Within legislation	
transportati			Import	allowed						

on rules	Permit;	for				
on rules	General	persons				
	restriction	with a				
	on use in a	license				
		licerise				
	public					
	without a					
	License					
	calling for					
	use					
Storage	Not	Storage in			Within legislation	
and	specified	the police				
handling		armoury				
rules						
Where can	On				Within legislation	
licensed	premises					
weapons	owned by					
be used	the					
	licensee					
Who	Royal	Police			Police	
enforces	Cayman	departme				
firearms	Islands	nt				
law?	Police					
	Service					
Other		License				
relevant		usually				
questions?		not				
		granted to				
		hobby				
		hunters				

6. SESSION C: PUBLIC AWARENESS FOR DIFFICULT SPECIES

6.1 Scene Setting

The quality of public consultation for, involvement in and awareness of IAS control and eradication initiatives is known to be a critical influence on their success. In most cases, once the issues and problems are understood the public are very supportive, however sometimes when 'useful' or pet species, such as feral livestock or feral cats, are the target of control efforts, skilled long term communication is required. This session explored some of the issues partners have come across when controlling / eradicating so called 'sensitive' species and the tools and methods that can be used to overcome them.

Aim: to explore best practice for consultation and community engagement when controlling and/or eradicating sensitive species such as cats and feral animals

6.2 Presentations

- 6.2.1 Community involvement invasive species management in the Bahamas; Scott Johnson, Bahamas National Trust. How the Bahamas National Trust engages with volunteer to control invasive plants on reserves.
- 6.2.2 IAS Stakeholder engagement and management tools and their use in the Americas; Wesley Jolley, Island Conservation. The methods used with stakeholders on Robinson Crusoe Island to gain acceptance of cat control through developing a responsible pet ownership programme. Island Conservation learnt to "own the process not the outcome" and undertook detailed stakeholder analysis, conflict mapping, applied the theory of change models. The resulting broad scope project had principles that all parts of the community could agree on, the municipality made the programme official, more people were involved and got the outcomes they wanted. The programme provided a platform and space for feral animal control even though it was not totally about that.
- 6.2.3 Public reaction and engagement around removal feral livestock from Great Tobago Island; Susan Zaluski, Jos Van Dyke Preservation Society. The highs and lows of undertaking public engagement around feral animal removal. The importance of acknowledging and understanding the many outside influences and agendas that affect the core work, being aware of who is the best messenger, building a critical mass of support and involving youth, are all important in the engagement process. Sometimes it is a hard road that takes a long time.

6.3 Discussion

Three groups focusing on feral cats, feral livestock and invasive plants discussed the following questions:

- What are the principles of community involvement that the UKOT projects wish to invoke when undertaking this type of work?
- ➤ How can we apply these principles to the current projects in BVI and Montserrat with goats and feral livestock, TCI with cats, and Montserrat and Cayman with plants

Table 3 Principles for public awareness and examples of how they might be used for supporting control of feral cats and feral livestock control/eradication

Principles	Using these principles for FERAL CATS	Using these principles for FERAL LIVESTOCK
Plan long term public awareness.	Education programmes with multiagency partnerships sharing/highlighting of animal cruelty	Social science PEO with churches and environment Public safety info
Provide alternative actions – things that people can do to help Target behaviour changes	Spay and neuter programmes	Best practice livestock management information made available
Understand the situation what are ALL views in the community Interact with community groups	Engage using questionnaires Explore the cultural practice with unwanted cats	Canari consensus building methods Comparing the laws with the social norms Engage church communities
Build support from authorities especially for legislation and its enforcement		Collate information on the social and economic arguments for action
Tailor messages Clear catchy messages , cartoons and videos	"If you feed a cat you own it " Video on boat to Anegada (BVI)	Feral livestock or loose livestock?
Use multi-media tools - Use of social media print, tv radio		
Choose messengers carefully		Consider social scientists/community leaders
Share lessons	Share information from Bahama's cat and parrot project and Robinson Crusoe Island project.	

6.4 Recommendations

Long term, well targeted, inclusive public consultation and awareness programmes, supported at Ministerial level, should be an essential component of all prevention, eradication and control initiatives.

7. Session D. BUILDING NATIONAL AND REGIONAL INVASIVE SPECIES STRATEGIES

7.1 Scene Setting

Within the first BEST Invasive Alien Species project the lack of coordination within territories on invasive alien species issues became apparent and the need for strategic discussion and planning on IAS would help effectiveness of management being undertaken. This final session aimed to explore experiences of IAS strategy development, learning from experiences from around the French and Dutch overseas territories and national and regional initiatives in the wider Caribbean.

Aim: To explore what it takes to make national invasive species strategies and improve coordination of Invasive Alien Species management and the next steps in developing strategies in the UKOTs

7. 2 Presentations

- 7.2.1. The experiences of the Martinique in IAS management and networking Thomas Alexandrine, Direction de la Protection et de l'Aménagement du Territoire) IAS management strategies employed in Martinique to conserve its biodiversity, explaining the rat control measures employed and the results on the Caravelle Peninsula.
- 7.2.2 National IAS strategy building experience: St Lucia Lyndon John RSPB Saint Lucia's National Invasive Species Strategy developed under the multi-country regional GEF funded project entitled "Mitigating the Threats of Invasive Alien Species in the Insular Caribbean" (2009-2013). Actions under (i) Prevention (ii) Early Detection and Rapid Response (EDRR), (iii) Eradication, (iv) Mitigation and Containment, (v) Restoration. Increased in participation in regional and international efforts for invasive species prevention and management followed this initiative. Implementation score 6/10 (a change in government resulted in least political buy-in/ administrative support for the NISS and related legislation.
- 7.2.3. Lessons learnt from IAS Strategy development in the Dutch Caribbean and what is needed for implementation Sabine Engel, Dutch Caribbean Nature Alliance Recommendations in the Dutch Strategy focussed on elements of prevention, early detection and eradication, public awareness, IAS management activities, policy and legal measures. The process lacked sufficient local engagement throughout the development the strategy; local 'ownership' follow up by the Dutch Government; funding support; and (access to) expertise. Of the 44 people interviewed for the Strategy over 30% have left the Dutch Territories.

7.2.4 Regional IAS Strategy building initiatives **Naitram (Bob)** Ramnanan, CABI — **Trinidad**. An overview of IAS issues across the region and a summary of the results of the project "Mitigating the Threats of Invasive Alien Species in the Insular Caribbean" (2009-2013). The project set out to accomplish the Development of National IAS Strategies in Bahamas (revising), Dominican Republic, Jamaica, St. Lucia and Trinidad and Tobago; the establishment of a Caribbean-wide Cooperation and Regional Strategy; knowledge generation, management and dissemination; and to deliver an increase in the capacity to strengthen prevention of new IAS introductions across all ecosystems.

7.3 Discussion

7.3.1 General discussion

In the general discussions following the presentations it was acknowledged that there are several separate and uncoordinated measures that are underway nationally and regionally that aim to address IAS management. Various regional organisations and agencies have separate meetings about different plans, the region lacks a holistic, common approach and communication is poor. Sometimes countries hesitate to notify authorities about pest reporting due to possible economic implications. Much of the national and regional action on invasive alien species is based on animal and plant quarantine as a response to protection of the agricultural sector, (e.g. Caribbean Plant Directors Meeting, Anguilla GIS mapping of invasive/agriculture crops). However, forestry and wildlife sectors are not represented in these discussions and networks. Ballast Water Convention to be implemented in 2017 and is of relevance to the UKOTs. Anti-fouling is also a subject of concern. A regional website would be useful; the CIAS website was good but is now not maintained. The Caribbean invasive species list-server is up and running and all participants will receive an invitation after the meeting.

- 7.3.2 Group Exercise on developing National Invasive Species Strategies
 The aim of the exercise was for participants to think through the various aspects of
 developing of a National Invasive Species Strategy. Full results of the exercise are included in
 annex IV. The following questions were considered:
 - What type of national and regional cooperation do we need to improve IAS management in the UKOTs?
 - ➤ What are the benefits, costs and challenges with developing national invasive species strategies?
 - Who are the essential stakeholders in strategy development and implementation?

"National Cooperation Needs"

"National Stakeholders" identified included government departments and legal authorities, and were similar to those identified in the session on biosecurity. They should approach other partners for example various public stakeholders such as Animal Welfare Assoc., Landscapers, construction materials importers, Farmers, government agencies. Participants were asked to identify "Objectives" to be achieved by involving additional partners. This is essential to ensure that all nationally important elements of IAS are covered in Strategy development and each partner had a clear reason to be involved. For example the Dept. of Agric is crucial for knowledge of agricultural pests and diseases and feral animal control. Customs official for biosecurity at ports of entry and permits – checking incoming cargo containing agriculture products

"Regional Cooperation Needs"

"Regional Partner" partners identified included international- governmental bodies (e.g. the European Union, the Caribbean Community -CARICOM, Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region UNEP-SPAW/RAC and international non-governmental organisations (e.g. IUCN, CABI, RSPB, The National Conservancy), as well as donor/funding agencies (e.g. Darwin)

"National Partners to those regional bodies to liaise with" included various government agencies and non government organisations and again clear "Objectives" should be assigned with each stakeholder group involved e.g. legal frameworks, donor funding, capacity building or provision of standards.

Finally participants were asked to consider the various activities/ next steps that should be taken in the development of any National Invasive Species Strategy; who would undertake it, the risks and challenges, the time frame, required resources and estimated budgets. The last three items columns proved difficult to complete in the time available. The exercise demonstrated the necessity of breaking down the development of the Strategy into component parts needed and identifying the appropriate stakeholders to take those tasks forward. If Strategies are to be developed these type of exercises will need to be carried out in Territory to ensure they are comprehensive.

7.4 Recommendations

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.

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