Developing Biosecurity Legislation

with specific reference to the UK Overseas Territories

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What this presentation covers

- This presentation has three parts:
  1. Introduction and general principles. This is taken largely from *A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species* (IUCN, 2000). A summary of the main points is given here and the reader is referred to the *Guide* for further details.
  2. Overview of the relevant international instruments.
  3. Development of new biosecurity legislation. The specific example is given of model biosecurity legislation produced under the UK-government funded project *Tackling invasive non-native species in the UK Overseas Territories.*
- Note that it is targeted at the needs and context of the UK Overseas Territories (OTs).
- Full references are given at the end of this presentation.

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1. Introduction and general principles

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Why is biosecurity legislation required?

- The UK Overseas Territories (OTs) account for 94% of the UKs unique endemic biodiversity.
- Being predominantly islands, they are very vulnerable to the introduction of potentially harmful invasive non-native species, recognised as one of the main threats to biodiversity, food security and sustainable development.
- Biosecurity is acknowledged as the most cost-effective means of addressing invasive species threats for small islands, defined as measures to reduce the risk of introducing or spreading invasive non-native species (and other harmful organisms such as diseases) in the wild.

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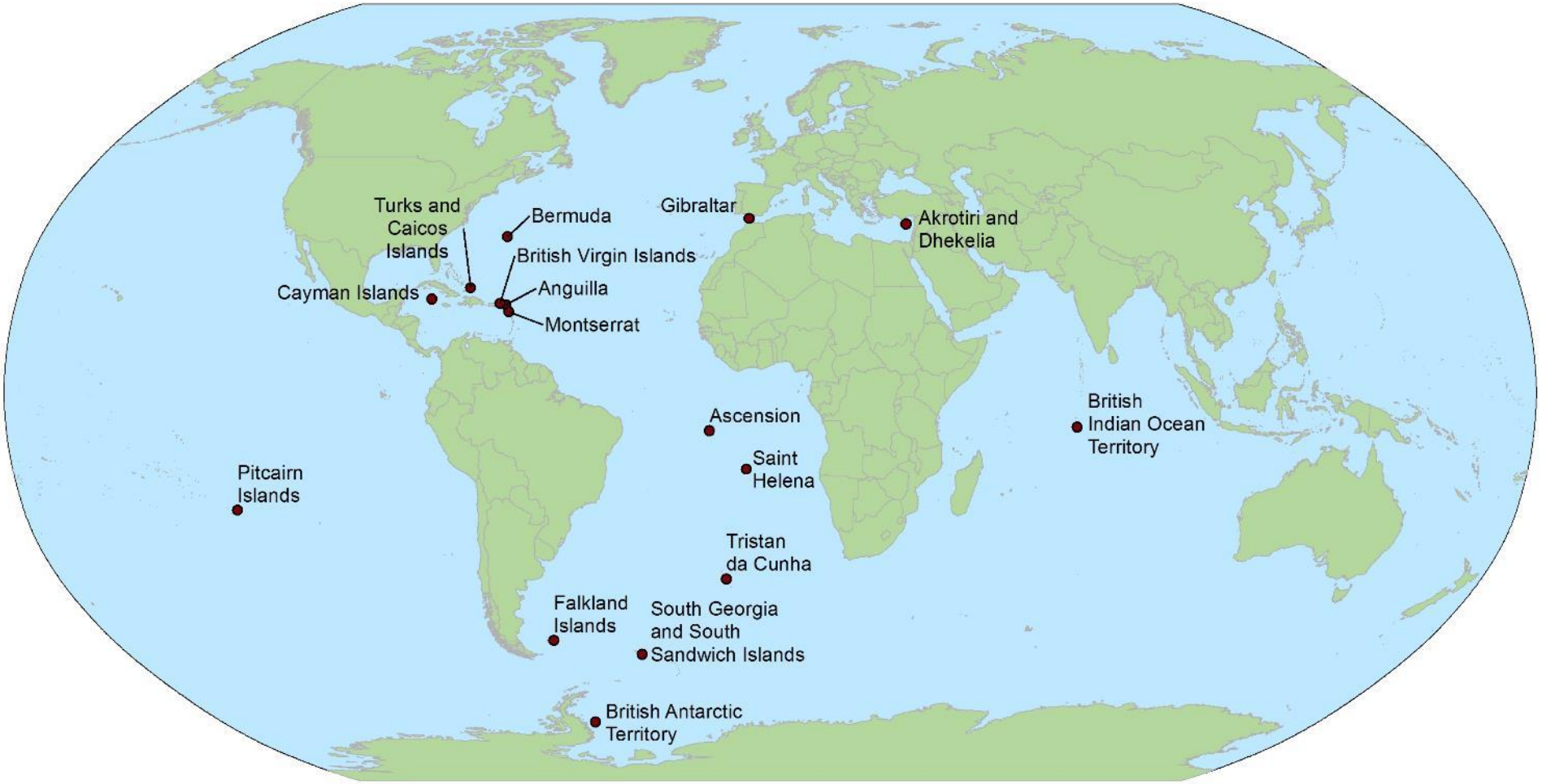
The 16 OK Overseas Territories



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What's wrong with existing legislation?

- Traditional biosecurity legislation tends to be production-based and designed to protect agriculture from pests. It typically focuses on "pests and weeds" as problems for agriculture.
- There is consensus that owing to globalization and the 'four Ts' (trade, travel, transportation and tourism) biosecurity problems are worsening.
- Modern biosecurity legislation involves the specific extension of legislation to non-native invasive species of broader environmental concern as well as of plant health and animal health.

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The one-health approach

- Emerging infectious diseases, for example Covid-19, are now recognised as one of the top priorities amongst other invasive species risks. Many recent outbreaks of infectious diseases arise in wildlife, create disease in livestock, and subsequently go on to cause infection in humans.
- A more resilient biosecurity system is required which includes implementing measures to prevent the spread of infectious diseases.
- The one-health approach recognizes that the health of humans, animals and ecosystems are interconnected. It involves applying a coordinated, collaborative, multidisciplinary and cross-sectoral approach to address potential or existing risks that originate at the animal-human-ecosystems interface.

What does biosecurity legislation provide for?

- Biosecurity legislation provides controls for the introduction into a territory of plants and animals and their products in order to prevent the establishment and spread of invasive species that can harm the environment, human health and the economy.
- It involves the control of agricultural and food imports and exports, the establishment of a quarantine regime for animals and plants and the control of the movement of animals and plants within the territory.

Pathways of introduction

- Non-native species get introduced by pathways, defined as "*the routes and mechanisms of the introduction and spread of species*" (Regulations (EU) no. 1143/2014, Art. 3).
- Pathways are categorised as:
  - Intentional introductions:
    - Release into nature (eg biocontrol, hunting, etc)
    - Escape from confinement (eg zoos, aquaria, horticulture, etc)
  - Unintentional introductions:
    - Transport contaminant (eg nursery material, parasites, in seed etc)
    - Transport stowaway (eg shipping containers, cargo, vehicles, etc)
  - Natural pathways (eg ocean and wind currents etc)

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The unpredictability of non-native invasive species

- It is difficult to predict which non-native species may become invasive in a new habitat. A very small number of individuals can be enough to generate massive harm, and species won't necessarily stay within the spatial or political unit into which they were introduced.
- Therefore every non-native species needs to be treated as potentially invasive and a threat to the entire territory, unless and until there is reasonable indication that this is not so.
- The precautionary principle, based on scientific evidence, should underpin all preventive legal frameworks.

The precautionary principle

- "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (1992 Rio Declaration on Environment and Development)
- This means that when an activity causes some threat or harm to the public or the environment, general precautionary measures should be taken. When a scientific investigation proves that there is a possible risk in doing some activity, then this principle should be applied.

Tools to include in regulatory frameworks

Two tools should be included in biosecurity legislation.

1. Risk assessment
   - The process seeks to identify the relevant risks associated with a proposed introduction and to assess each of those risks.
   - Risk analysis needs to be done for:
     - Proposed introductions
     - Pathways for unintentional introductions
     - Eradication/control strategies.
2. Environment impact assessment (EIA)
   - EIA seeks to ensure that adequate and early information is available on the likely environmental consequences of an action, including:
     - The cumulative long-term effects of non-native species introductions
     - Alternative actions, such as prohibiting an introduction
     - Measures taken to mitigate the impact of an introduction

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2. International instruments

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Delivering the international framework

- International instruments tend to be general in character and require national legislation to make them operational.
- National legislation implements and enforces international agreements and obligations.
- Summaries follow of the main international instruments relevant to biosecurity and invasive species. Note that this is not a full list of relevant instruments, just the main ones.

World Trade Organisation SPS Agreement, 1995

- Agreement on the Application of Sanitary and Phytosanitary Measures (SPS).
- Lays out rights and obligations for member countries to protect the health of plants from the introduction and spread of pests and diseases.
- Requires measures (based on international standards) to prevent the entry of pests and diseases while ensuring that such measures are not used as unjustified barriers to trade.
- SPS measures that are not based on international standards must be technically justified and based on scientific evidence (usually through a risk assessment)
- https://www.wto.org/english/tratop_e/sps_e/spsund_e.htm

Multilateral Environmental Agreements - MEAs

- The main ones of relevance:
  - International Plant Protection Convention (IPPC)
  - Convention on Biological Diversity (CBD)
  - Convention on International Trade in Endangered Species (CITES)
  - World Organisation for Animal Health (OIE)
  - International Health Regulations
  - International Convention for the Prevention of Pollution from Ships (the Marpol convention)
  - International Convention for the Control and Management of Ships Ballast Water & Sediments (BWM convention)

International Plant Protection Convention (IPPC)

- The main convention for plant health.
- The IPPC applies to nations involved with international trade in any commodity that could introduce a new plant pest into a new area; it is applicable to all trans-boundary movements of plants and plant products.
- Covers protection of both cultivated plants and native flora from weeds, invasive species, plant pests and plant diseases.
- All regulations must be technically justified
- Develops international standards in international trade to prevent the introduction and dissemination of plant pests – the International Standards for Phytosanitary Measures (ISPM)
- https://www.ippc.int

The UK is looking to extend the IPPC to the UKOTs

- Obligatory information required:
  - A contact point for all IPPC matters
  - A description of the National Plant Protection Organisation
  - A list of points of entry under official control
  - A list of regulated pests
  - Changes in pest status
  - A list of phytosanitary measures, regulations, and other relevant information

Convention on Biological Diversity (CBD)

- The main convention for biodiversity and the environment.
- Article 8 (h) states parties are required “to prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species”
- Aichi Target 9 states: invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.
- https://www.cbd.int/

Convention on International Trade in Endangered Species (CITES)

- Ensures that international trade in specimens of wild animals and plants does not threaten their survival.
- Includes items such as shells, feathers, skins and ivory.
- Species are listed in 3 appendices:
  - Appendix I: species threatened with extinction
  - Appendix II: species that are not necessarily now threatened with extinction but that may become so unless trade is closely controlled
  - Appendix III: species included at the request of a Party that already regulates trade in the species and that needs the cooperation of other countries to prevent unsustainable or illegal exploitation
- https://www.cites.org/

World Organisation for Animal Health (OIE)

- Not an MEA but is the intergovernmental organisation responsible for improving animal health worldwide
- Establish standards for animal health
- Animal health (zoosanitary) procedures are based on their standards
- https://www.oie.int/

International Health Regulations (2005)

- Designed to ensure maximum security against the international spread of infectious diseases to humans
- Provide an overarching legal framework that defines countries' rights and obligations in handling public health events and emergencies that have the potential to cross borders
- https://www.who.int/health-topics/international-health-regulations#tab=tab_1

International Convention for the Prevention of Pollution from Ships (the Marpol convention)

- The main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes
- Obligations include:
  - Provision of reception facilities for garbage from visiting ships
  - Disposal at sea of food waste at least 3 miles for ground food waste and at least 12 miles for unground food waste
- http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx

International Convention for the Control and Management of Ships Ballast Water & Sediments (BWM convention)

- Aims to prevent the spread of harmful aquatic organisms from one region to another
- All ships in international traffic are required to manage their ballast water and sediments to a certain standard, according to a ship-specific ballast water management plan.
- http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Control-and-Management-of-Ships'-Ballast-Water-and-Sediments-(BWM).aspx

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3. Developing new legislation

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What kinds of laws do you need?

There are three options and that chosen will depend on the OTs priorities and level of existing provisions:

1. Review and consolidate existing measures into a single legislative framework.
   - Ambitious and complex
2. Enact core legislation to determine common essential elements.
   - Establish a coordinating body as lead authority
3. Harmonise relevant sectoral laws and regulations to ensure the absence of conflicting provisions.
   - Minimalist but probably realistic
   - Establish a coordinating body as lead authority

Where to apply measures?

For legal and practical purposes, there are two main types of introduction:

1. Intentional introductions (including those for situations of captivity or containment):
   - There is an identifiable party proposing the introduction + an identified invasive species under consideration. The activity concerned should generally be made subject to approval, possibly subject to conditions.
2. Activities presenting risks of unintentional introductions:
   - The legal process has to attach to parties who conduct activities that provide pathways for introduction and to projects presenting such risks. Regulation is applied to pathways of introduction.

Whatever the category of introduction, legal frameworks need to make proper provision for monitoring and early warning systems

Prevention

- The duty to take preventive measures is laid down by all international instruments that concern non-native species.
- It may take the form of:

Intentional introductions	Unintentional introductions
Prohibition	Identifying and controlling common pathways eg quarantine systems, inspections and treatments, ballast water regulations, etc.
Partial prohibition, usually under a permit system with conditions attached	

More on where to apply measures

- Risks should be managed off-shore as much as possible: put procedures in place at the point of origin, pre-border.
- Border control and quarantine measures are necessary to subject intentional introductions to prior authorisation and to minimise unintentional introductions and unauthorised (illegal) introductions.
- Post-border controls are required for:
  - Internal movement of species and/or goods, to help contain the spread of an invasive species established in one part of the country.
  - Monitoring and rapid response systems to detect and eradicate new invasions.
  - Special controls for protected areas.

Compliance

- An indicative checklist of offences should include:
  - permit-related violations (failure to obtain, breach of permit conditions, etc.);
  - operational violations (non-compliance with operating rules for breeding/cultivation facilities, breach of transport regulations etc.);
  - unlawful international and domestic trade in specimens of invasive species;
  - unlawful subsequent releases;
  - breach of monitoring and notification requirements;
  - failure to take mandatory control and eradication measures;
  - breach of contractual undertakings for eradication and control.
- Lawmakers need to give careful attention to the standard of conduct required to find liability.

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Model biosecurity legislation

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The OT Biosecurity Project

- Model biosecurity legislation was drafted by consultant John Wilson under the UK-government funded project *Tackling invasive non-native species in the UK Overseas Territories.*
- Two versions of model text have been produced:
  - Complete version
  - Simplified version for the smaller OTs
- They can be found at http://www.nonnativespecies.org/index.cfm?pageid=639

Text and guidance available

- For each version the following documents are available:
  - Biosecurity Bill explanatory notes
  - Generic Biosecurity Bill annotated text
  - Generic Subsidiary Legislation
  - Guidance on drafting
- In addition, there is also a checklist providing a comprehensive list of 58 elements which together comprise effective biosecurity legislation. This can be used to analyse existing provisions, and are cross-referenced to the relevant sections in the Model text.
- Text describing the Bill (below) has been taken from the *Biosecurity Bill explanatory notes*.

The process of developing biosecurity legislation

- The following elements are recommended:
  - Strategic framework to establish the context, and give due consideration to any long-standing and legitimate interests of stakeholder groups;
  - Biosecurity policy;
  - Identification of key stakeholders and consultation throughout the drafting process;
  - Estimate of the cost implications of the enacted legislation;
  - Knowledge base of existing invasive species, pathways of entry for introductions, and new potential threats on the horizon.

The Model Biosecurity Bill

- The model legislation provides the full complement of regulations required for effective biosecurity, including components for phytosanitary and zoosanitary risks, border actions, post-border surveillance and emergency response, compliance, enforcement and sanctions.
- It can be adopted, with necessary modifications, by any OT. It is intended to achieve harmonisation of laws to control harmful invasive species, pests and diseases which might come from animals and plants and their products.

What the Bill is not

- The Bill does not include environmental issues generally.
- It doesn't deal with CITES, Biosafety, Pesticides, Biodiversity or Environmental Management as such.
- It doesn't include Genetically Modified Organisms (GMOs).
- It does not deal with human health issues, which are governed internationally by the International Health Regulations of the WHO.
- It is not a trade promotion Bill.

The international instruments

- The Bill aims to implement international rules in respect of biosecurity in relation to trade by making biosecurity risk the key test for decision-making, and by referring to the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement).
- It also refers to the standards set by the International Plant Protection Convention (IPPC) and the World Organisation for Animal Health (OIE).

Subsidiary instruments

- As most of the OTs are small with limited resources in personnel and finances, the Bill aims to create a system that does not require a lot of subsidiary instruments.
- It creates a quasi-legislative instrument called a ‘specification’ which can be made easily by the Director (or equivalent). In effect it puts the existing quarantine operations manual or similar on a statutory footing, by enabling the Director to make specifications about treatment etc. of incoming and outgoing articles.
- Revisions can be made relatively easily without having to change the primary legislation as the Bill leaves a number of matters to be dealt with by administrative action (eg facilities at biosecurity holding areas, compliance agreements, agreements with landowners, and biosecurity approved premises).

Policy decisions

- There will need to be local policy decisions as to:
  - Who will exercise the powers in the Bill i.e. a statutory body or a Director?
  - How lists of prohibited and restricted invasive and pests will be made and published.
  - How much public involvement to have in decision-making.
  - What appeal process to have.
  - How much internal control of movement is wanted between islands or areas.
  - Whether to have a Fixed Penalty system (not a civil penalty system).
- OTs will also need to consider some other substantive topics such as the use of import permits or licences, the level of fines and the repeal and consequential amendments clauses.

Emergency response

- The Bill contemplates the existence of a National Disaster Committee/Advisory Committee to deal with natural disasters generally. If there is no such body, a body to deal with biosecurity emergencies might need to be established.
- The Bill also contemplates the existence of an Emergency Response Plan, which can respond to biosecurity emergencies.

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In summary, the Bill will:

- ✓ Set out the biosecurity functions of the respective OT Government and impose obligations on it in relation to compliance with international obligations, reciprocity, mutual assistance etc.
- ✓ Create a regime of import and export licences or permits, based on specifications for treatment of various species;
- ✓ Control the arrival and departure of ships, aircraft and people;
- ✓ Impose obligations on the masters of vessels respect of disposal of garbage, ships' stores and bilge water, with equivalent obligations on the captains of aircraft;
- ✓ Enable designation of entry ports, holding areas etc. separate from the customs regime;
- ✓ Provide powers to control internal outbreaks of invasive species and of regulated pests and diseases within the OT;
- ✓ Set standards for determining the rules based on the precautionary principle;
- ✓ Provide for its administration by a Director of Biosecurity (or similar) and biosecurity officers;
- ✓ Provide for emergency powers and enforcement procedures.

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Conclusions

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- OTs need modern and comprehensive biosecurity legislation to address the issue of non-native invasive species.
- The one-health approach recognizes that the health of humans, animals and ecosystems are interconnected.
- National legislation implements and enforces international agreements and obligations.
- Risks should be managed off-shore as much as possible.
- Legal frameworks also need to make provision for monitoring, early warning systems and emergency response to incursions.
- Model biosecurity legislation is available.

References

- Clare Shine, Nattley Williams and Lothar Gündling (2000), A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species. IUCN, Gland, Switzerland Cambridge and Bonn. xvi + 138 pp.
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