

International Biosecurity Preparedness at Tourist Ports of Entry: An Assessment of Ireland



Overview of presentation

- Overview of tourist vectoring biosecurity threats
- International biosecurity breaches
- Methodology
- Results and Discussion
- Conclusions and Implications



Biosecurity
Do not
enter

What does biosecurity have to do with tourism?



Invasive alien species (IAS) are animals, plants or other organisms that are introduced into places outside their natural range, negatively impacting native biodiversity, ecosystem services or human well-being.



- Over 70000 records currently across the UK
- Wiped a total of £20 billion off house prices in the UK



- Tourists can inadvertently transmit zoonotic and communicable diseases from one person to another through contact with blood and bodily fluids; or by breathing in an airborne virus
- International tourism constitutes an efficient transport system for pathogens and vectors of biosecurity threats



Country	Year	Biosecurity breach	Death toll
Hong Kong	2003	SARS-CoV	774
Worldwide	2009	Swine Flu (H1N1 Influenza)	18,449
Worldwide	2012-2020	MERS-CoV	862
Sub-Saharan Africa	2013-2016	Ebola	11,371
Brazil	2017–2018	Yellow Fever	483
Worldwide	2019-present	COVID-19	3,233,845



SARS in 2003: the global perspective:



International Health Regulations: Core capacity requirements for designated airports, ports and ground crossings

Capacities at all times

To provide access to (i) an appropriate medical service including **diagnostic facilities** located so as to allow the prompt assessment and care of ill travellers, and (ii) adequate staff, equipment and premises;

To provide access to equipment and personnel for the transport of ill travellers to an appropriate medical facility

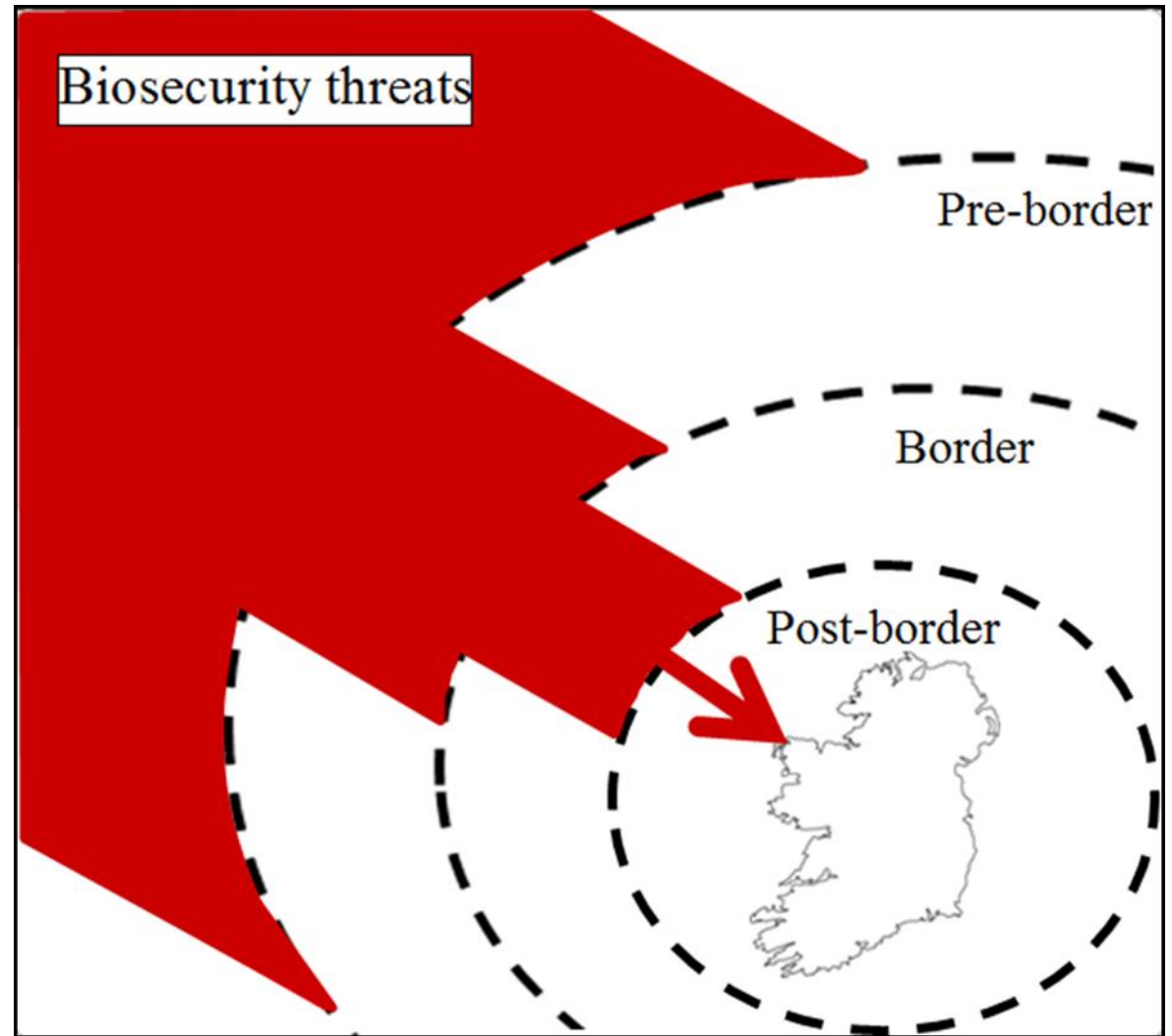
To provide **trained personnel** for the inspection of conveyances

To ensure a safe environment for travellers using **point of entry facilities**, including potable water supplies, eating establishments, flight catering facilities, public washrooms, appropriate solid and liquid waste disposal services and other potential risk areas, by conducting **inspection programmes**, as appropriate

To provide as far as practicable a programme and **trained personnel for the control of vectors** and reservoirs in and near ports of entry.




- Addressing biosecurity concerns from the source can be the most effective method of mitigating risk
- Pathways can be referred to as a suite of processes or human activities that result in the intentional or unintentional movement of biosecurity threats from the source into a new destination




- **Pre-border stage** biosecurity protocols ensures detection as early as possible from the destination of origin


GALAPAGOS BIOSECURITY PROTOCOLS



Before starting the trip to the Galapagos province, the national or foreign tourist must have:


- Identity document (identity card or passport)
- Round trip air ticket to the Galapagos province.
- Negative result of an RT-PCR test performed up to 96 hours before admission to the Province. The tests carried out in Ecuador must come from a laboratory recognized by the Agency for Quality Assurance of Health Services and one Prepaid Medicine (ACESS). The tests will not be compulsory for minors.
- Safe-conduct issued by the tour operator or the Galapagos tourist accommodation establishment that will provide services in that province. The tourist services must be hired in establishments that have a tourism registry and the established bio-safety protocols.
- Traffic control card issued by the Governing Council of the Special Regime of Galapagos






NZ Arrivals


Ministry for Primary Industries Travel & Local

 PEGI 3


 This app is compatible with all of your devices.

Outdoor activity items


These must be declared, as they could transfer soil and plant material from other countries into NZ that could carry pests, diseases and seeds - which could pose a threat to our environment and wildlife.




Camping




Footwear




Golf



Hiking



Hunting






Sports equipment

Hiking

Hiking equipment can transfer soil and plant material from other countries into NZ that could carry pests, diseases and seeds - which could pose a threat to our environment and primary industries. Please check and clean all items.

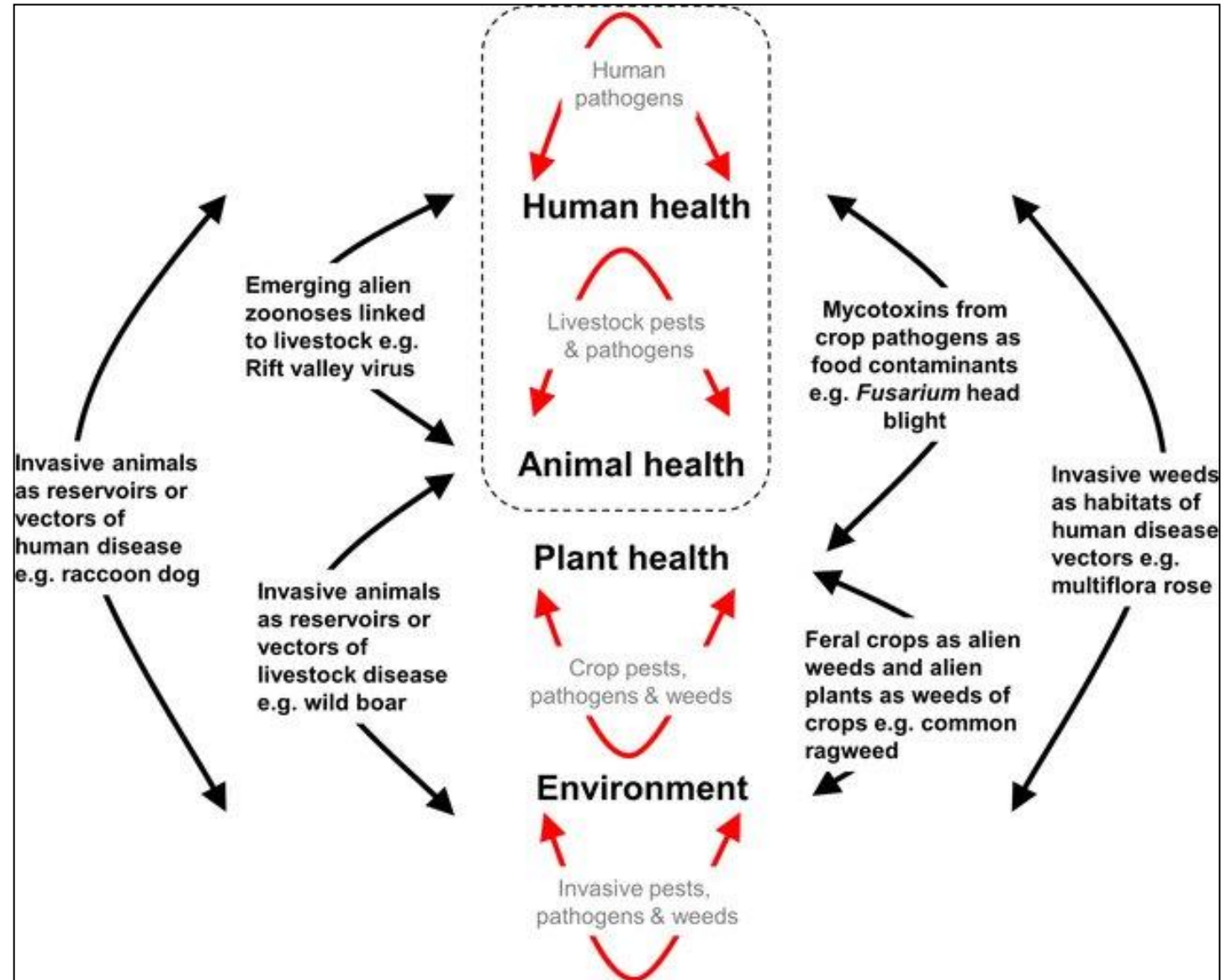
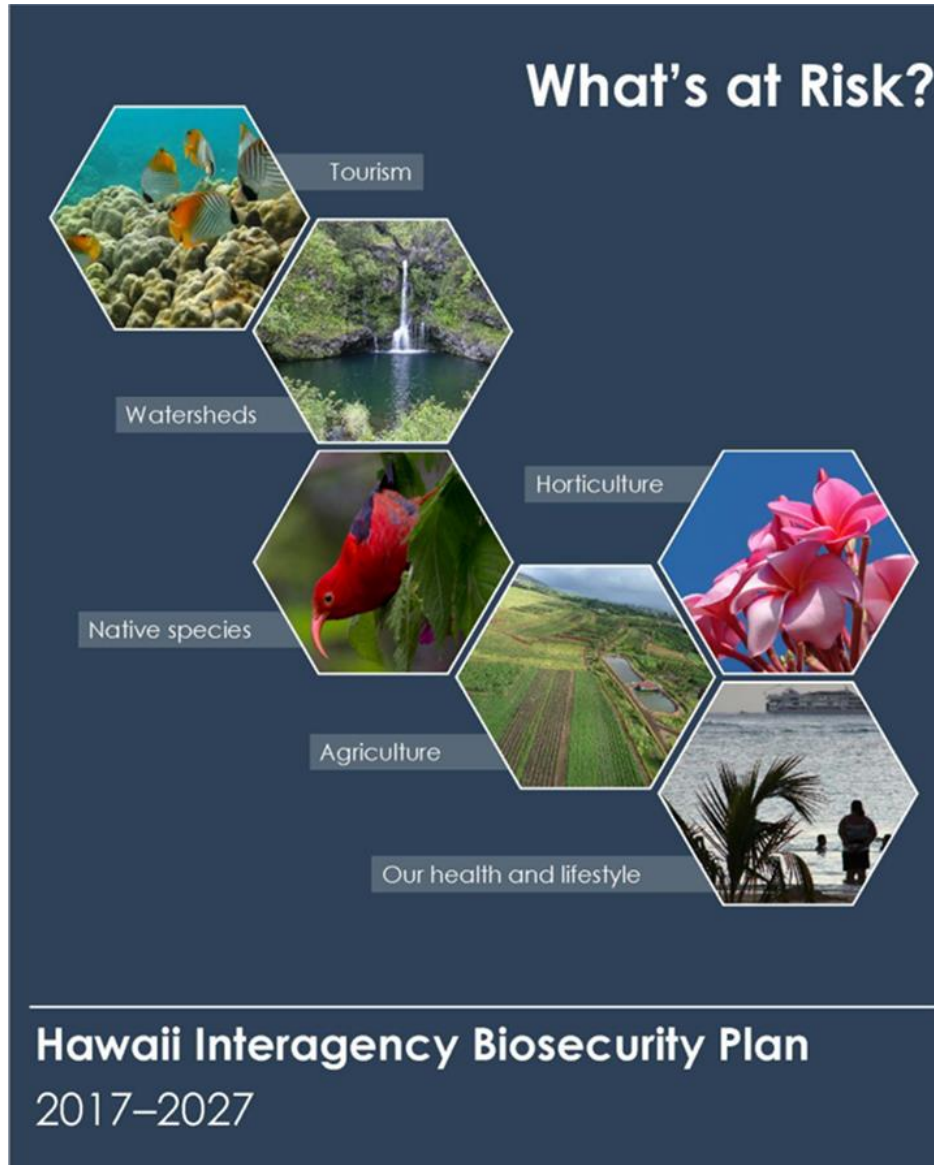
What to check for

-  Soil/mud/grass on the outside/inside of equipment
-  Uneaten food in your rucksack
-  Plant material such as leaves, seeds, or bark

- Organisations at the **border stage** are in a key position to implement capacities contained in the IHR and indeed crucial border biosecurity protocols such as inspection, tourist communication, and quarantine.



- **Post-border stage** biosecurity protocols can engage all stakeholders to support a biosecurity emergency response task force to participate in coordinated surveillance and response for the control and mitigation of biosecurity breaches



Pathway
category

Three Border stage tourism biosecurity risk reduction

Pre-border

Pre-booking tourism promotional material integrating biosecurity

Pre-booking search engine biosecurity marketing

Pre-border biosecurity surveillance in traveller origin

Pre-Border tourist communication campaigns

Pre-travel enforcement messages (fines, prosecution)

Border

Border tourist communication (signage, translated signage, public announcements)

Border biosecurity electronic traveller arrival and locator form

Border biosecurity inspections, health and equipment screening

Border quarantine operations for potential detections, hotel accommodation, storage facilities

Border biosecurity personnel with international capability:

Post-border

Post-border specific communication (signage, T.V, Radio, social media, smart mobile technology)

Post-border visitor awareness campaign (check, clean, dry/best practice/guidelines)

Post-border surveillance (data collection, inspections, citizen science)

Post-border early detection/rapid response for biosecurity threats

Tourists

Risk

Risk

Risk

Risk

Methodology

- The development of a theoretical framework used to identify twenty-one biosecurity criteria and five specific tourism biosecurity criteria for analysis
- Non-probability purposive sampling identified twenty-three international biosecurity preparedness documents from international standard-setting organisations and Irish tourist ports of entry for assessment.
- Content analysis using assessment criteria used to identify appropriate biosecurity preparedness for tourism within international standard-setting organisations and Irish tourist ports of entry.
- Specifically designed surveys utilised for Irish tourist ports of entry to fully determine the existence of criteria to comply with international biosecurity preparedness.

Results and discussion



International Biosecurity Preparedness	Tourism Criteria										Criteria Assessed																	
	Biosecurity Vector mitigation measures for Tourists	Biosecurity Communication for Tourists	Biosecurity Tourist Alerts	Biosecurity Plan Integrates Tourism	Biosecurity Planning for Potential Risk from Tourists Vectoring	Biosecurity Planning	Biosecurity Plan in Place	Biosecurity Planning for the Potential Impacts of a Biosecurity Breach	Biosecurity Policy	Biosecurity Strategy	Biosecurity Strategy with Timeframe for Implementation	Biosecurity Legislation or Regulations	Biosecurity Budget	Biosecurity Communication	Biosecurity Communication through Smart Technology (App)	Biosecurity Pathway Risk Mitigation Strategy	Biosecurity Response	Biosecurity Controls for Negative Impacts	Surveillance for Biosecurity Threats	Person Responsible for Biosecurity	Biosecurity Training for Staff	Biosecurity Training for Members	Biosecurity Education	Pre-border Biosecurity Protocols	Border Biosecurity Protocols	Post-border Biosecurity Protocols		
Human Health																												
WHO Action Plan to Improve Public Health Preparedness and Response in the WHO European Region 2018–2023						X	X	X	X	X	X	X	X				X		X		X					X		
WHO Recommended Strategies for the Prevention and Control of Communicable Diseases 2001						X		X	X	X			X	X			X		X	X	X		X					
WHO 2019 Novel Coronavirus Strategic Preparedness and Response Plan				X		X	X	X				X					X		X		X				X			
WHO Strategic Framework for Emergency Preparedness 2017				X		X	X	X		X		X	X	X			X	X	X		X	X			X			
WHO Assessment Tool for Core Capacity Requirements at Designated Airports, Ports and Ground Crossings 2009						X			X	X	X	X		X			X		X	X	X	X			X			
WHO Health Emergency and Disaster Risk Management Framework 2019						X		X	X	X		X	X	X			X	X	X	X	X	X	X					
WHO International Health Regulations 2005	X				X	X		X	X			X		X			X	X	X	X	X				X			
WHO Handbook for the Management of Public Health Events in Air Transport 2015		X		X	X	X	X		X			X		X	X		X		X		X		X	X	X			
WHO Handbook for Management of Public Health Events on Board Ships 2016					X	X			X			X		X			X		X		X		X		X			
UNWTO Travel and Tourism under Pandemic Conditions –Second Review and Preparation Exercise 2009		X				X		X				X		X			X											
IATA Emergency Response Plan 2018	X						X					X	X	X			X								X			
IASC Common Framework for Preparedness 2013						X	X	X				X	X	X			X											
IMO Report of the Maritime Safety Committee on its Ninety-Sixth Session 2016																												
International Cruise Shipping Association Public Health 2019																			X									
EU Decision No 1082/2013: Serious Cross-Border Threats to Health	X					X		X				X		X			X		X					X	X	X		
ECDC Strategic Multi-Annual Programme 2014–2020						X	X	X	X	X		X	X	X	X		X	X	X		X	X		X				
ECDC Long-Term Surveillance Strategy 2014–2020						X		X	X		X		X	X	X				X		X	X						
ECDC Country Support Strategy 2016						X		X	X	X		X		X			X		X		X	X	X					
ECDC Public Health Training Strategy 2015																					X	X						
ECDC Single Programming Document 2019–2021						X			X			X	X	X	X		X		X		X	X						
ECDC Single Programming Document 2020–2022						X						X	X	X	X		X		X		X	X	X					

The analysis revealed:

- 82% of all international biosecurity preparedness analysed were found to have no biosecurity vector mitigation measures for tourists.
- 91% of all international biosecurity preparedness analysed had no evidence of biosecurity communication for tourists in place.



- 95% were found to have no biosecurity tourist alerts in place for a biosecurity breach.
- 26% were found to not incorporate planning for biosecurity
- 87% were lacking specific biosecurity planning for the potential of tourist vectoring.



Irish Tourist Port of Entry		Tourism Criteria	Criteria Assessed																								Port of Entry Criteria				
		Biosecurity Vector mitigation measures for Tourists	Biosecurity Communication for Tourists	Biosecurity Tourist Alerts	Biosecurity Plan Integrates Tourism	Biosecurity Planning for Potential Risk from Tourists	Vectoring	Biosecurity Planning	Biosecurity Plan in Place	Biosecurity Planning for the Potential Impacts of a Biosecurity Breach	Biosecurity Policy	Biosecurity Strategy	Biosecurity Strategy with Timeframe for Implementation	Biosecurity Legislation or Regulations	Biosecurity Budget	Biosecurity Communication	Biosecurity Communication through Smart Technology (App)	Biosecurity Pathway Risk Mitigation Strategy	Biosecurity Response	Biosecurity Controls for Negative Impacts	Surveillance for Biosecurity Threats	Person Responsible for Biosecurity	Biosecurity Training for Staff	Biosecurity Training for Members	Biosecurity Education	Pre-border Biosecurity Protocols	Border Biosecurity Protocols	Post-border Biosecurity Protocols	Biosecurity Disinfection Procedures in Place for Tourists	Quarantine Facilities for Suspect Biosecurity Breaches	Biosecurity Passenger Arrival Card in Place
Cork Airport																															
Donegal Airport																															
Dublin Airport																															
Dún Laoghaire Harbour																															
Ireland West Airport																															
Kerry Airport																															
Killybegs Harbour																															
Port of Cork																															
Rosslare Europort																															
Shannon Airport																															
Waterford Airport																															
Waterford Port																															
X = Compliant.																															

- The analysis revealed:
- None of the essential criteria, tourism criteria, or port of entry criteria was found to be in place at all (100%) of the points of entry assessed.
 - This leaves the surveillance, interception, quarantine, communication, and overall biosecurity preparedness of a tourism destination critically lacking, or non-existent.

Conclusions and recommendations

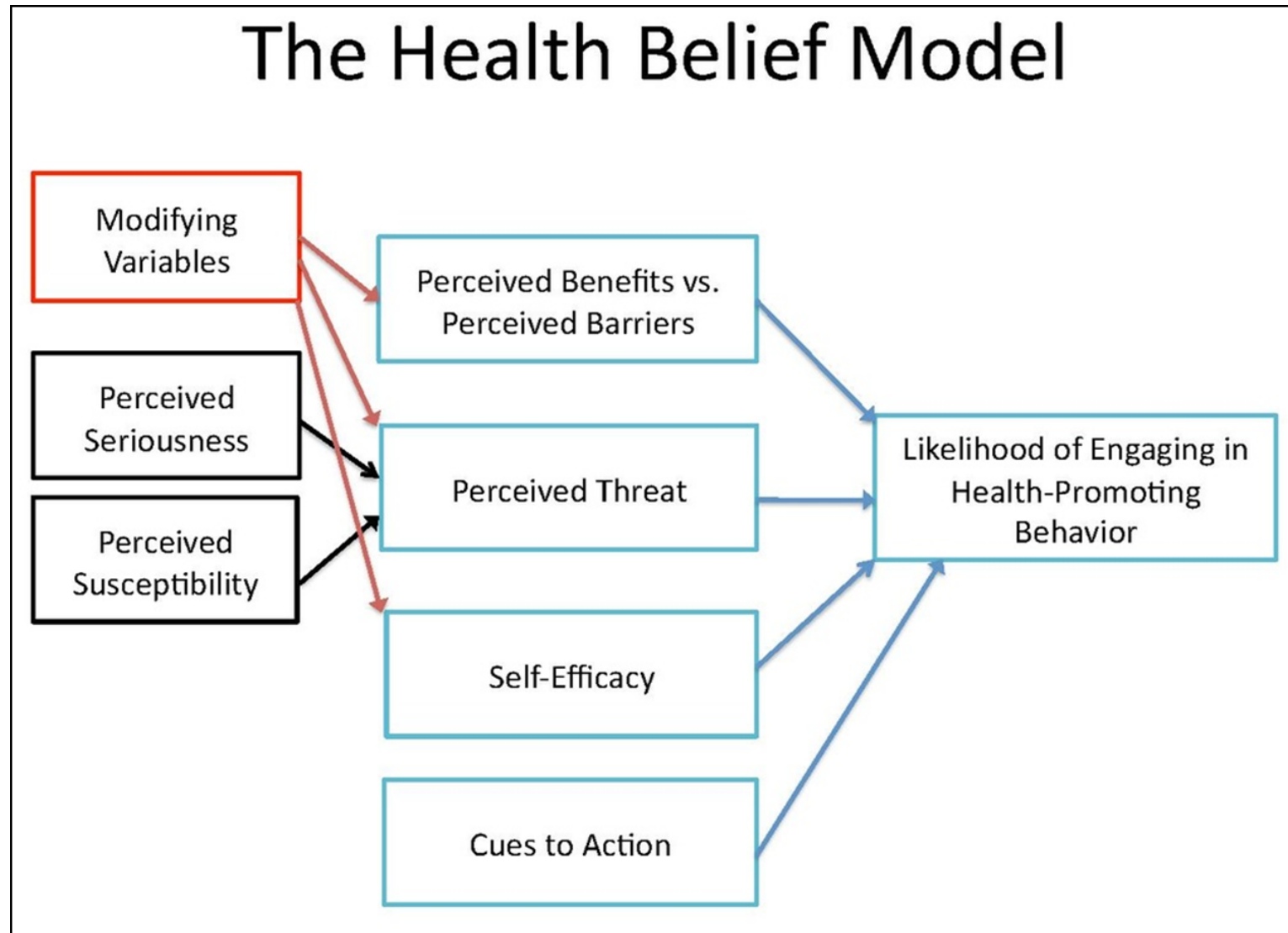
- The analysis has exposed a notable omission of tourism specific criteria within most international biosecurity preparedness structures
- However, planners and policymakers within destinations such as Ireland should take responsibility for the threats posed to their destination and develop robust biosecurity capacities



- A system for communication and information exchange are key for a harmonised and integrated approach to biosecurity
- Therefore, future international biosecurity preparedness will need to explicitly outline specific tourist biosecurity communication processes that are evidence-based.



- Incorporating the Health Belief Model (HBM) could align international biosecurity communication for tourists and the public during a pandemic yet remain region specific based on different pandemic and destination conditions.
- This could tailor strategic biosecurity communication and awareness approaches to the specific level of risk
- Combined with smart mobile technology, communication would match the mobile aspect needed to cater for vast tourist mobility



- Issues of national non-compliance specifically with the IHR 2005 and European regulations have long been recognised.
- Self-assessment scores of Joint External Evaluation (JEE) assessments are not subject to any form of critical review as is common in other areas of international law
- Nations were inadequately developing the appropriate capacities at tourist ports of entry despite scoring well in Joint External Evaluation (JEE) assessments

COLOUR SCORING SYSTEM

While overlaps exist among the capacity sections of the tool, each will be considered separately in the evaluation exercise. The implementation status of each core capacity will be delineated by a level of advancement or scoring, which reflects the capacity to be institutionalized and sustainable. Following describes the level of advancement or scoring with colour coding.

1. No Capacity : Attributes of a capacity are not in place Colour Code:

Red

2. Limited Capacity : Attributes of a capacity are in development stage (some are achieved and some are undergoing; however, the implementation has started). Colour Code:

Yellow

3. Developed Capacity : Attributes of a capacity are in place; however, there is the issue of sustainability and measured by lack of inclusion in the operational plan in National Health Sector Planning (NHSP) and/or secure funding. Colour Code:

Yellow

4. Demonstrated Capacity : Attributes are in place, sustainable for a few more years and can be measured by the inclusion of attributes or IHR (2005) core capacities in the national health sector plan. Colour Code:

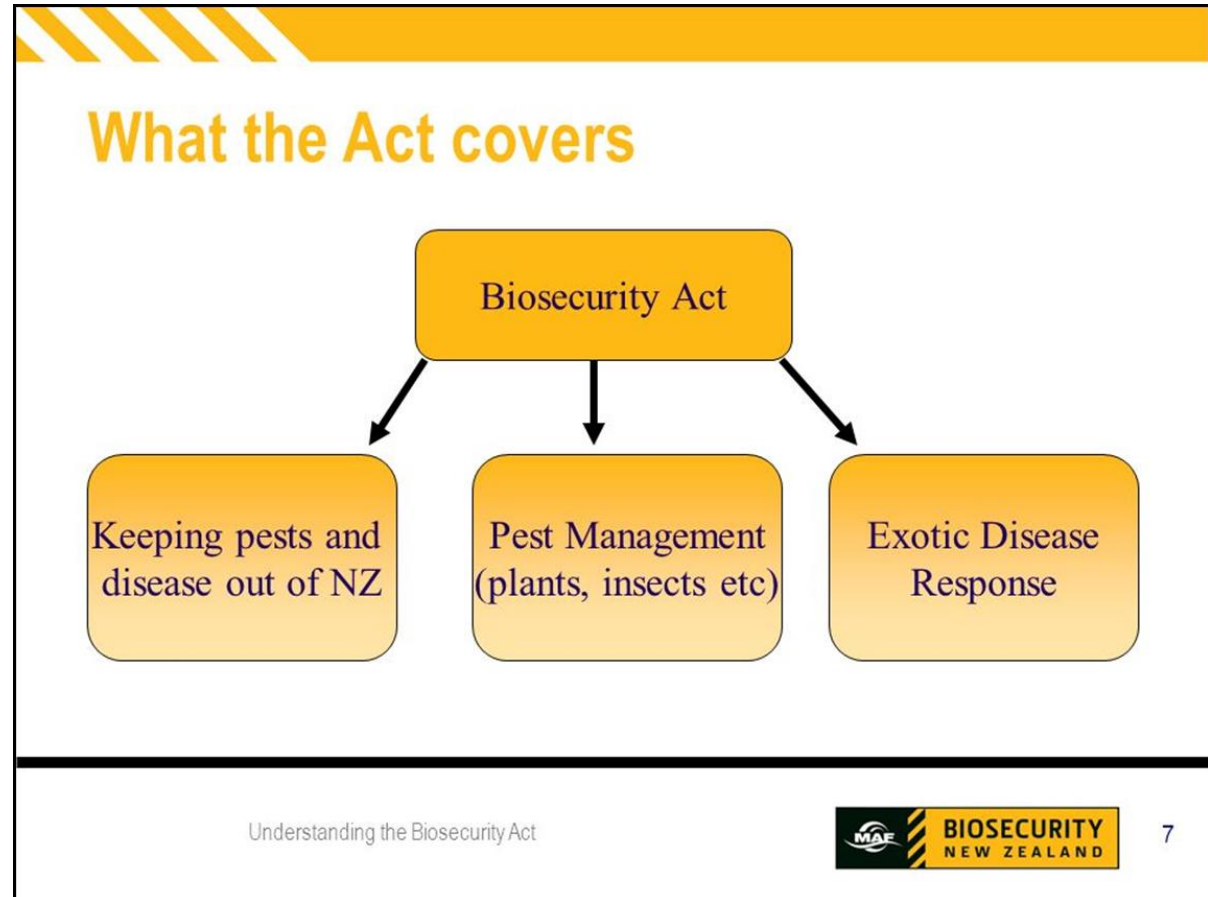
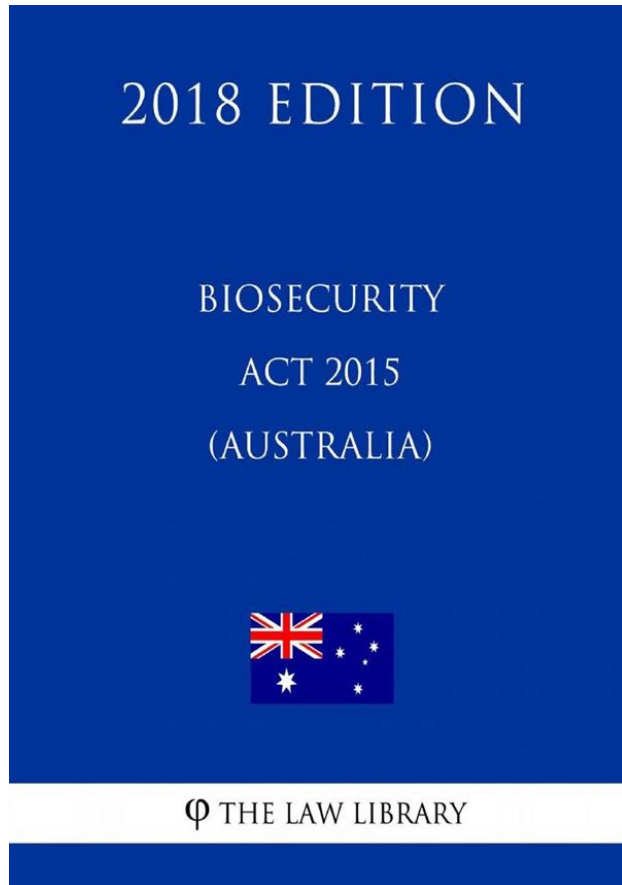
Green

5. Sustainable Capacity : Attributes are functional, sustainable and the country is supporting other countries in its implementation. This is the highest level of the achievement of implementation of IHR (2005) core capacities. Colour Code:

Green

1. Without achievement of all attributes at prior capacity levels, a country cannot progress to the adjacent levels (for instance, in order to reach demonstrated capacity, one has to meet all the attributes of developing and demonstrated capacity).
2. All responses should be supported by documentable evidence.

- Although Irish statutory instruments designed to ensure Ireland complies with the IHR core capacities at ports and airports, this research has exposed severe shortcomings for such core capacities within the relevant tourist port of entry which they should be assigned to.
- Adopting a national level legislative framework specifically designed for biosecurity within a national plan would entrust responsibilities and obligations on various stakeholders including tourist ports of entry.



Further reading based on this work:

Melly, D. Hanrahan, J. (2021) 'International Biosecurity Preparedness and Tourism Industry Resilience: Lessons Learned from COVID-19 in Ireland'. Journal of Place Management and Development (publication pending)

Melly, D. Hanrahan, J. (2020) Tourist Biosecurity Awareness and Risk Mitigation for Outdoor Recreation: Management Implications for Ireland. Journal of Outdoor Recreation and Tourism, Vol.31, No.100313.

Melly, D. Hanrahan, J. (2020). Tourism Biosecurity Risk Management and Planning: An International Comparative Analysis and Implications for Ireland. Tourism Review, Vol.75, No.1, (In press).

Hanrahan, J. Melly, D. (2019). Biosecurity Risk and Tourist Communication in Ireland. European Journal of Tourism Research, Vol.22, pp.45-61

Melly, D. Hanrahan, J. (2018). The Potential Role of Smart Mobile Technology in Mitigating Ireland's Tourism Biosecurity Risk. Journal of Tourism and Hospitality Management, Vol.6, No.6, pp.264-280.

Melly, D. Hanrahan, J. (2021) 'International Biosecurity Preparedness and Tourism Industry Resilience: Lessons Learned from COVID-19 in Ireland'. Journal of Place Management and Development (In Development)

Melly, D. Hanrahan, J. (2021). Preparedness for the Next Pandemic: A Destination planning and management model for Tourism biosecurity. Journal of Travel Research. (In Development)