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BIOSECURITY  
STUDIES**



## WILDLIFE TRADE AND ITS RELEVANCE. A RISK-BASED APPROACH

**Dr. Kirk Douglas**

Director, Centre for Biosecurity Studies

20th April 2023

**Second meeting of the GF-TADs Standing Group of Experts on Avian Influenza (SGE-AI)**

Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) Regional Representation for the Americas of the World Organisation for Animal Health (WOAH) and Food and Agriculture Organisation (FAO) Joint Workshop

Mexico City | Mexico

19th - 21st April 2023



Food and Agriculture  
Organization of the  
United Nations



World Organisation  
for Animal Health  
Founded as OIE



**GF-TADs**  
GLOBAL FRAMEWORK FOR THE  
PROGRESSIVE CONTROL OF  
TRANSBOUNDARY ANIMAL DISEASES



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# CHANGE IS....

# CONSTANT

# &

# WHAT IS MEASURED IS MANAGED

recently.

**VISIONARY VOICES**

**Health Solidarity Is Health Security**

ABUJA - Kicking off the United Nations' second annual Sustainable Development Goals Moment last month, UNICEF Goodwill Ambassador Priyanka Chopra Jonas emphasized the role of solidarity as a driver of change. "Global solidarity is more important than ever," she said. "Together, we have an..."



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News: 2 & 4 Comment: 7 Executive Knowledge Series:



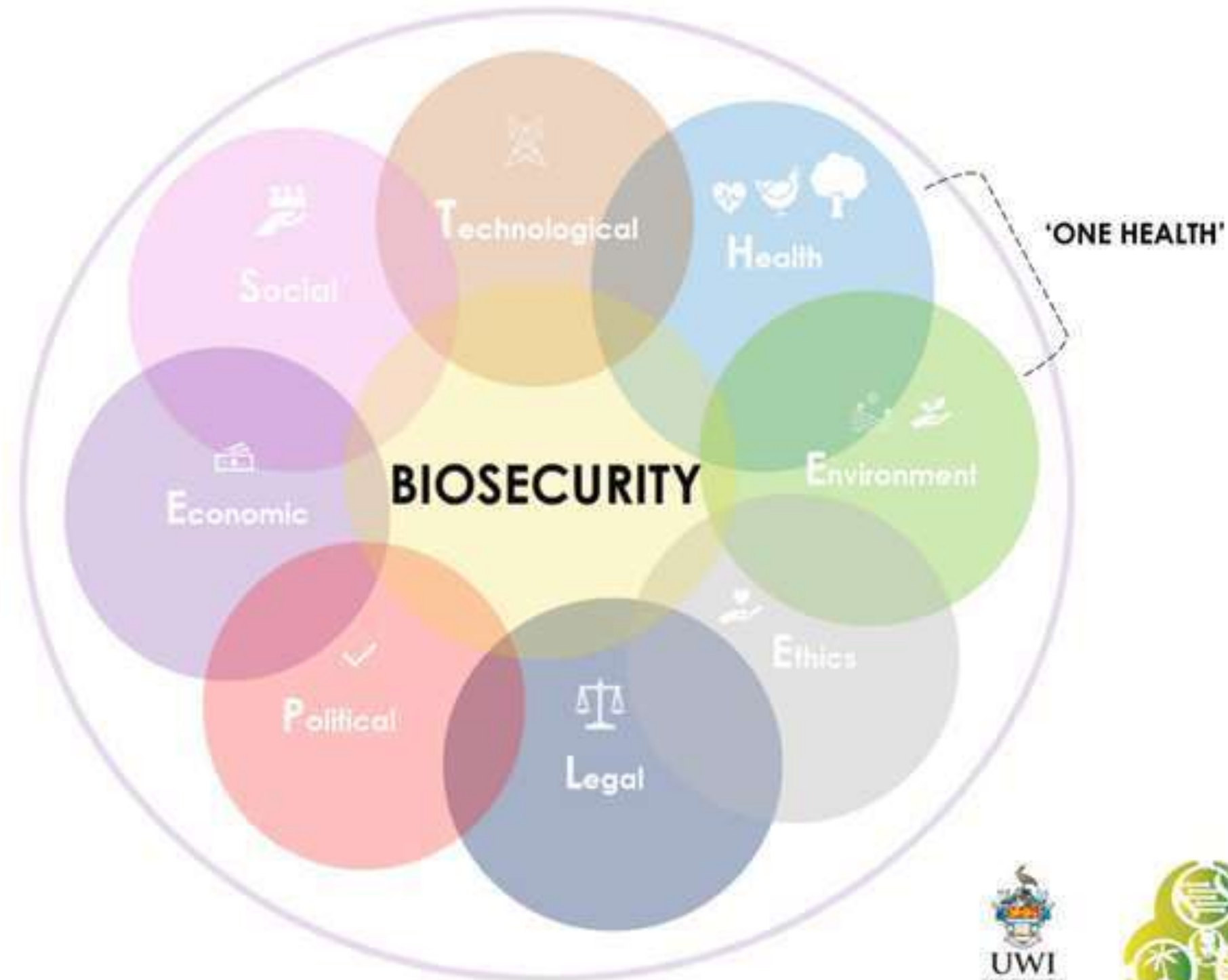
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# PESTHEEL ANALYTICAL TOOL



an analytical framework tool to

- assess
- mitigate
- manage and
- prevent

**Vulnerabilities** to major biosecurity threats

- **Multidisciplinary**
- Foster **cross-collaboration** and reinforcement of **systems thinking**
- Generate **comprehensive & inclusive** solutions
- Saving **lives & livelihoods**





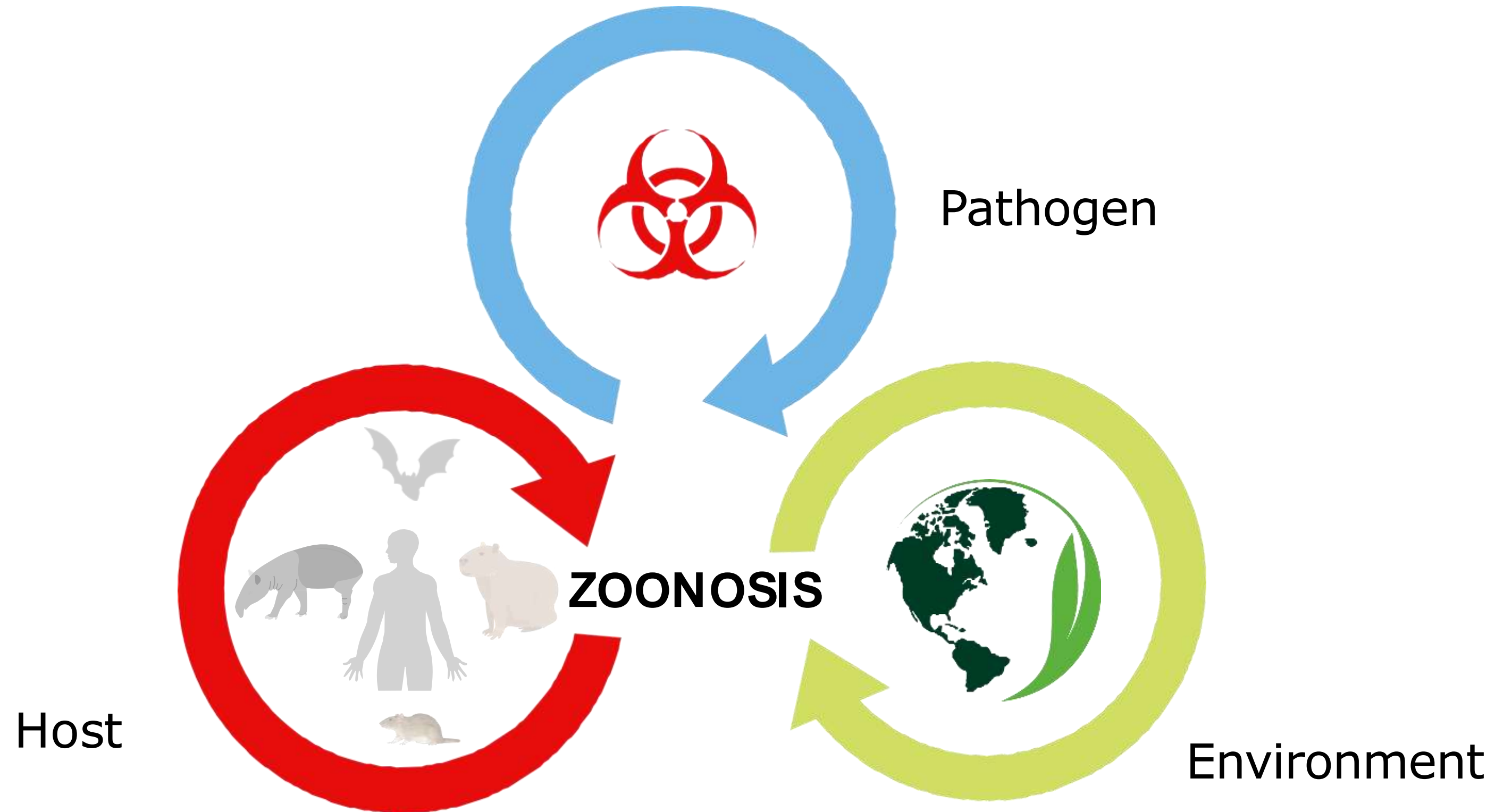
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# DISEASE TRIANGLE



# RISK CONVERGENCE



## Infrastructure

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**International trade supply disruptions**

**International travel resumptions**

**Weak wildlife surveillance at origin & ports of entry**

**Mining & extractive operations**

**Live wildlife trade and 'wet' markets**



## Environment

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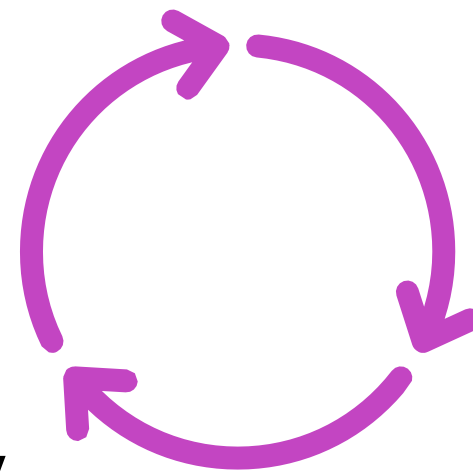
**Climate change**

**Ecosystem degradation**

**Exotic infectious diseases**

**War in Ukraine - Russia**

**Hunting & 'wildmeat' consumption**



## Human

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**China - USA 'war'**



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# ENVIRONMENT



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# CLIMATE

# INFECTIONIOUS

# NEXUS



# BIOSECURITY VULNERABILITIES or T's



## Travel



Global and regional travel allow the movement of mass volumes of people and also facilitates spread of infectious and communicable diseases



## Tourism



Tourism is a major source of revenue in the Caribbean but it is also a huge vulnerability. It brings mass volumes of people and goods together from varied parts of the world mixing with locals and facilitating transmission chains for food or water-borne illnesses.



## Trade



International and regional trade involve the movements of goods from one environment to another with risks of pathogens and pest moving too.



## migraTory

Migratory wildlife can transmit infectious diseases over very long distances such as **bird flu**. They can contaminate water bodies with enteric pathogens and zoonotic pathogens as well posing a threat to livestock, poultry and humans.



## Transport



Different modes of transport exist including airplanes, boats, buses, cars and trains. In food safety the transport of food items can influence the security of the food as microbial contamination or growth can be supported



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# WILDLIFE TRADE RISK & WOAAH



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The OIE's mandate is to improve animal health and welfare worldwide, to improve transparency in reporting animal diseases and zoonoses, to contribute to safeguards at the animal/human/ecosystems interface, and to facilitate safe trade in animals and animal products by setting-up sanitary standards. The OIE delivers on its mandate through the establishment for Member Countries of animal health standards, guidelines, and recommendations.

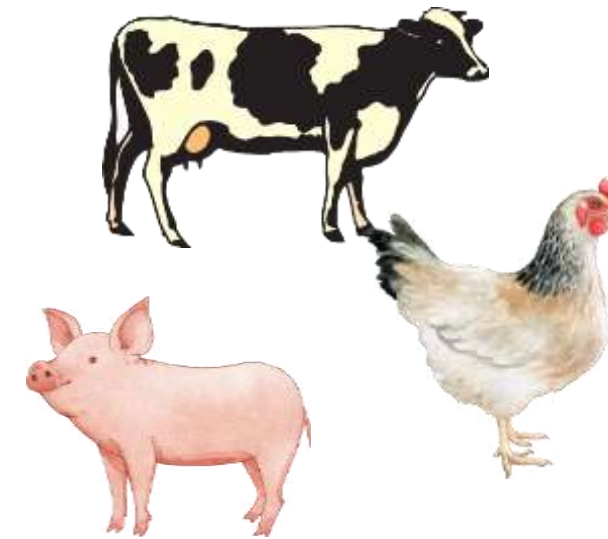
In April 2020, the OIE committed to develop guidelines or standards for trade in wildlife to reduce health risks, and support animal welfare and biodiversity conservation (OIE 2020). Amongst the stated goals are; (i) to support sustainable and responsible practices in legal trade, transportation, capture, farming, marketing, and consumption of wildlife; (ii) create tools for Members to ensure best practices regarding risk assessments and disease management associated with the value chain for the wildlife trade; (iii) strengthen scientific networks to increase sustained Member country capacity for early threat detection, wildlife disease surveillance, information management, risk assessment, prevention of spillover events, and implementation of mitigation

A RAPID REVIEW OF EVIDENCE ON MANAGING THE RISK OF DISEASE EMERGENCE IN THE WILDLIFE TRADE

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measures; (iv) communicate risk and prevention measures to stakeholders to increase knowledge and awareness of Veterinary Services' role in reducing spillover events; and (v) inform at-risk populations of the risks and reduction strategies, to effect appropriate behaviour change.

The OIE currently is still in an 'exploratory phase' regarding the role of Veterinary Services in the illegal wildlife trade. Collaborations have started with INTERPOL on this topic and the OIE is having conversations with the likes of the United Nations Interregional Crime and Justice Research Institute and the United Nations Office on Drugs and Crime. The implications of focussing effort on only the legal trade are unclear. Extreme regulatory risk aversion in the control of legal trade can increase informal or illegal trade, with the unintended consequence of creating additional risks outside regulatory purview (Hueston et al 2011).



## EFFECTIVE SURVEILLANCE

*Domestic animals  
Farm animals*



## INEFFECTIVE SURVEILLANCE ABSENT FRAMEWORK

*Pet wildlife/animals (pet trade)*







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# ILLEGAL WILDLIFE TRADE (IWT) OF WILD BIRDS

## Interceptions at JFK Airport, NY, USA

### 'Finch-Smuggling Kingpin' Gets Prison Time for Sneaking Birds Into NY for Competitions

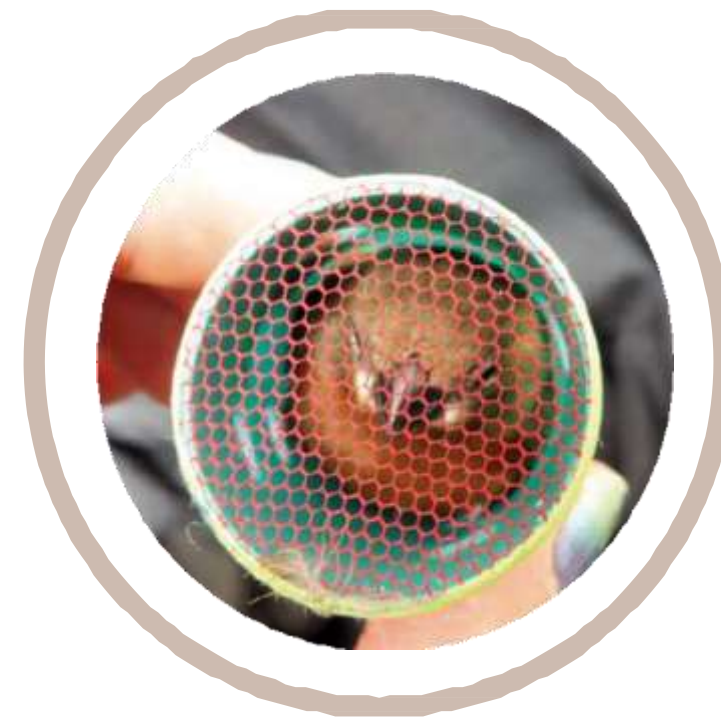
"I'm going to stay away from the birds," the man pledged in a video he submitted to the court, "because it's trouble."

By Jennifer Peltz • Published February 9, 2023 • Updated on February 10, 2023 at 2:46 am



More than two dozen little finches were found crammed in hair rollers inside a man's luggage at JFK Airport on Sunday, officials with U.S. Customs and Border Protection said.

A man who repeatedly admitted scheming to smuggle finches from Guyana into New York for birdsong competitions was sentenced Thursday to a year and a day in prison.



# ILLEGAL WILDLIFE TRADE (IWT) OF WILD BIRDS

Guyana & Trinidad & Tobago

1

**Social & Cultural Norms**  
*Singing competitions*

2

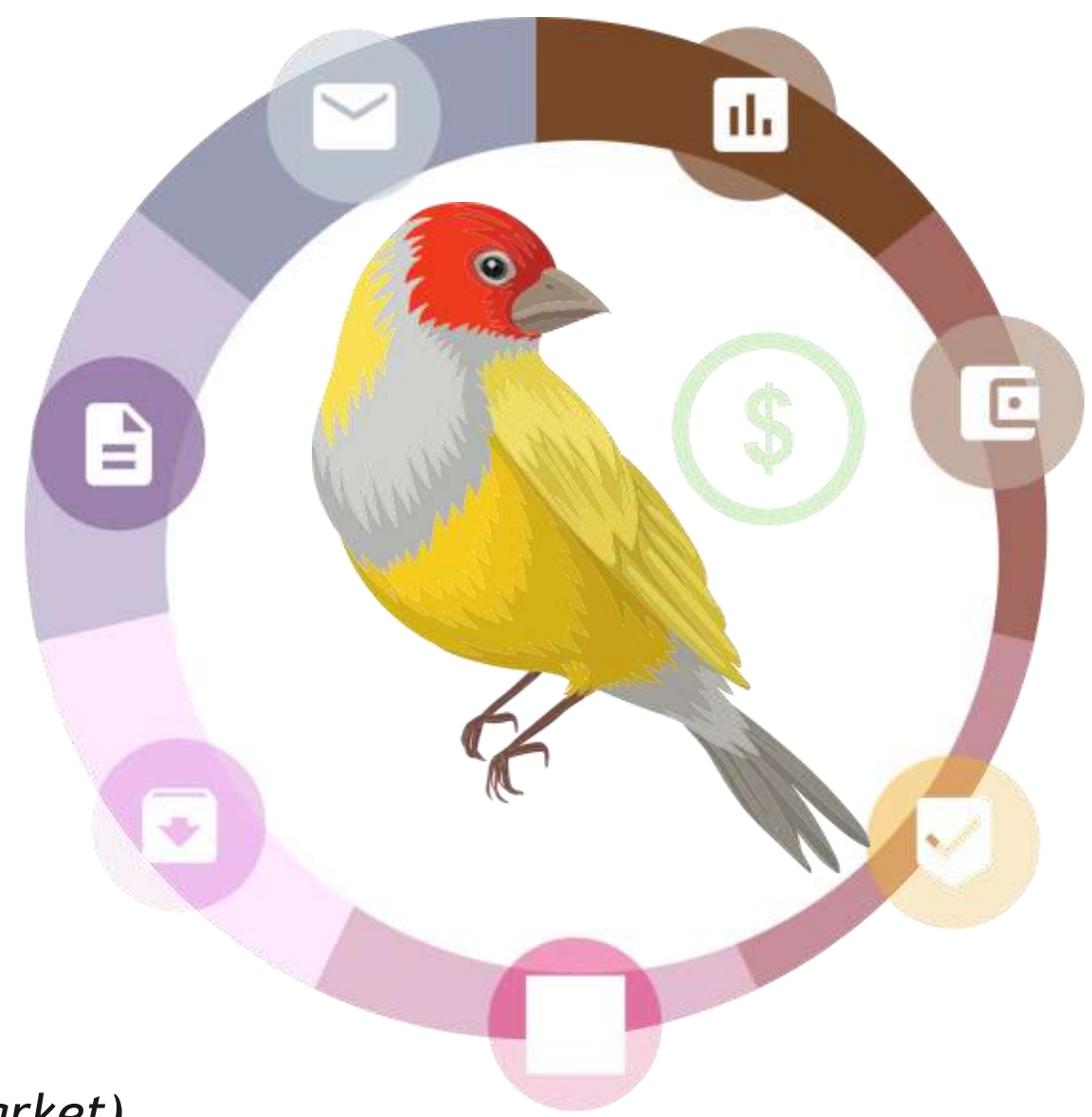
**Economically Challenged**  
*Opportunity Seeking*

3

**Low Risk High Reward**  
*Financially attractive*

4

**Diaspora**  
*Preservation of culture (ready market)*



**Ineffective Legislation**  
*Insufficient deterrence*

5

**Small animal size**  
*Ease of concealment*

6

**Corruption**  
*Inadequate governance*

7

**Species Endemism**  
*Rare and highly sought*

8

# Outputs and Results

ACTION-ORIENTED STUDIES IN GREEN CRIMINOLOGY AND A HARMFUL TRADE  
IN PET WILDLIFE IN TRINIDAD AND TOBAGO

By  
Mark Charles Gibson

A DISSERTATION  
Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of  
Criminal Justice—Doctor of Philosophy  
2022

## Trade Overview



## The Harmful Pet Wildlife Trade in Trinidad and Tobago

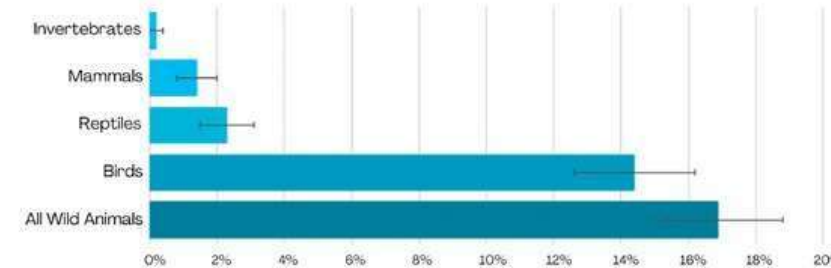
There is a large, thriving, and harmful "pet" wildlife trade in Trinidad and Tobago and the wider Southern Caribbean. Here are 15 key facts you should know.

### Fact #1: Approximately 1-in-6 households keep wild animals as pets in T&T.

Based on a national survey, 16.9% ( $\pm 1.9\%$ ) of households keep wild birds, invertebrates, mammals, and reptiles. Wild birds are most popular and are estimated to be kept in 14.4% ( $\pm 1.8\%$ ) of households. Parrots are the most popularly kept bird order and are found in 12.0% ( $\pm 1.7\%$ ) of households.<sup>1</sup>

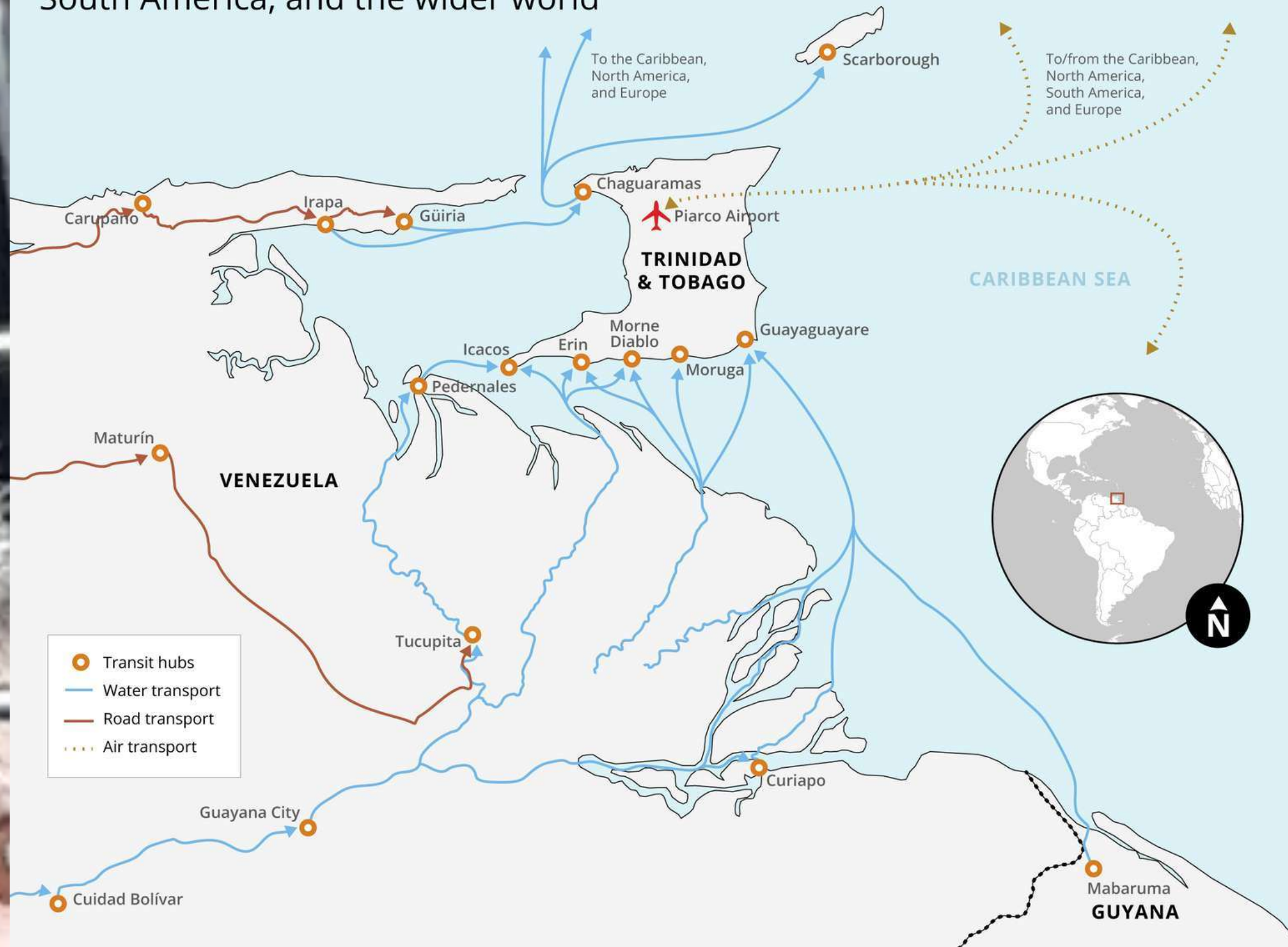
Above: Blue and Gold Macaws, once extirpated by the pet trade, have been re-established by local conservationists. © David Steffan Huggins.

Right: Household prevalence rates of terrestrial wild animal keeping.

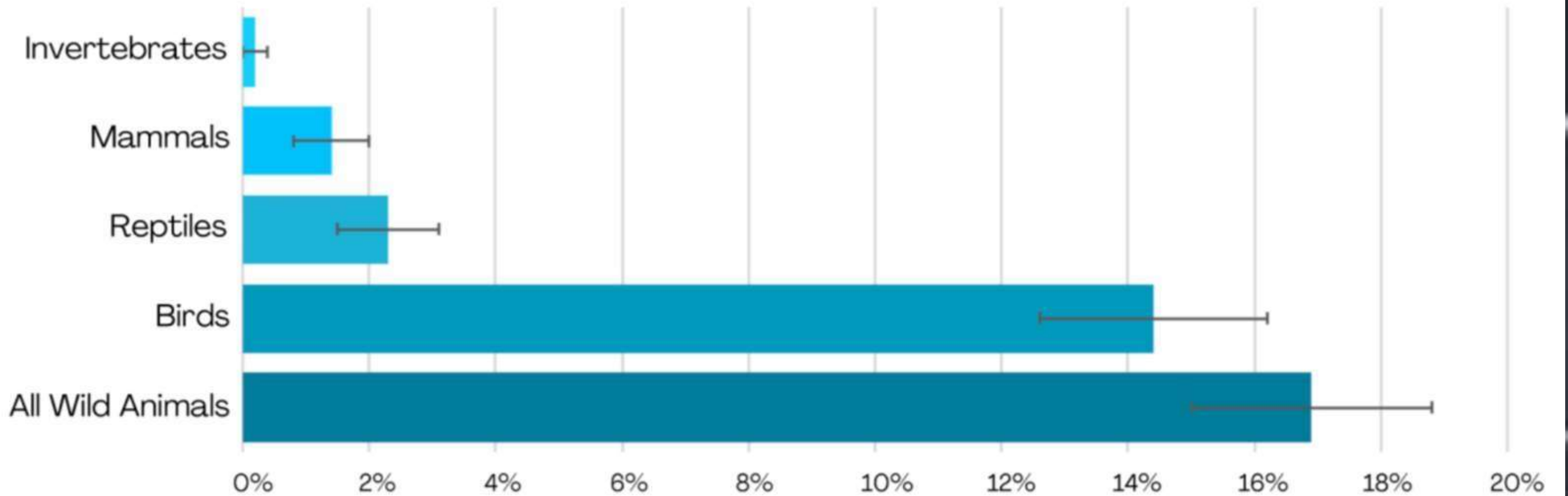


# Outputs and Results

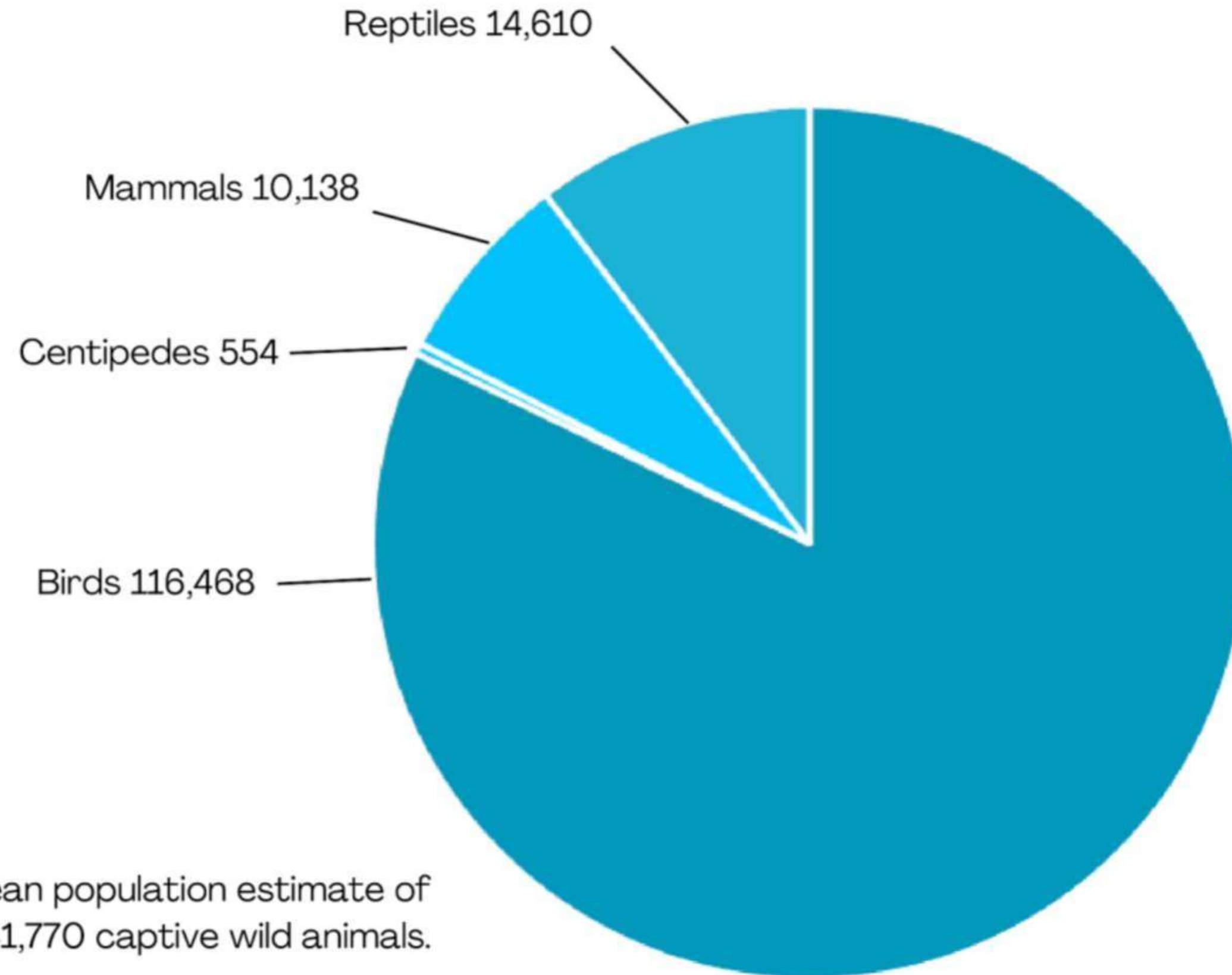
## Wildlife trafficking between Trinidad and Tobago, South America, and the wider world



# Outputs and Results



# Outputs and Results



A total mean population estimate of 141,770 captive wild animals.

# Harms to Public Health and Safety

## Zoonotic Diseases

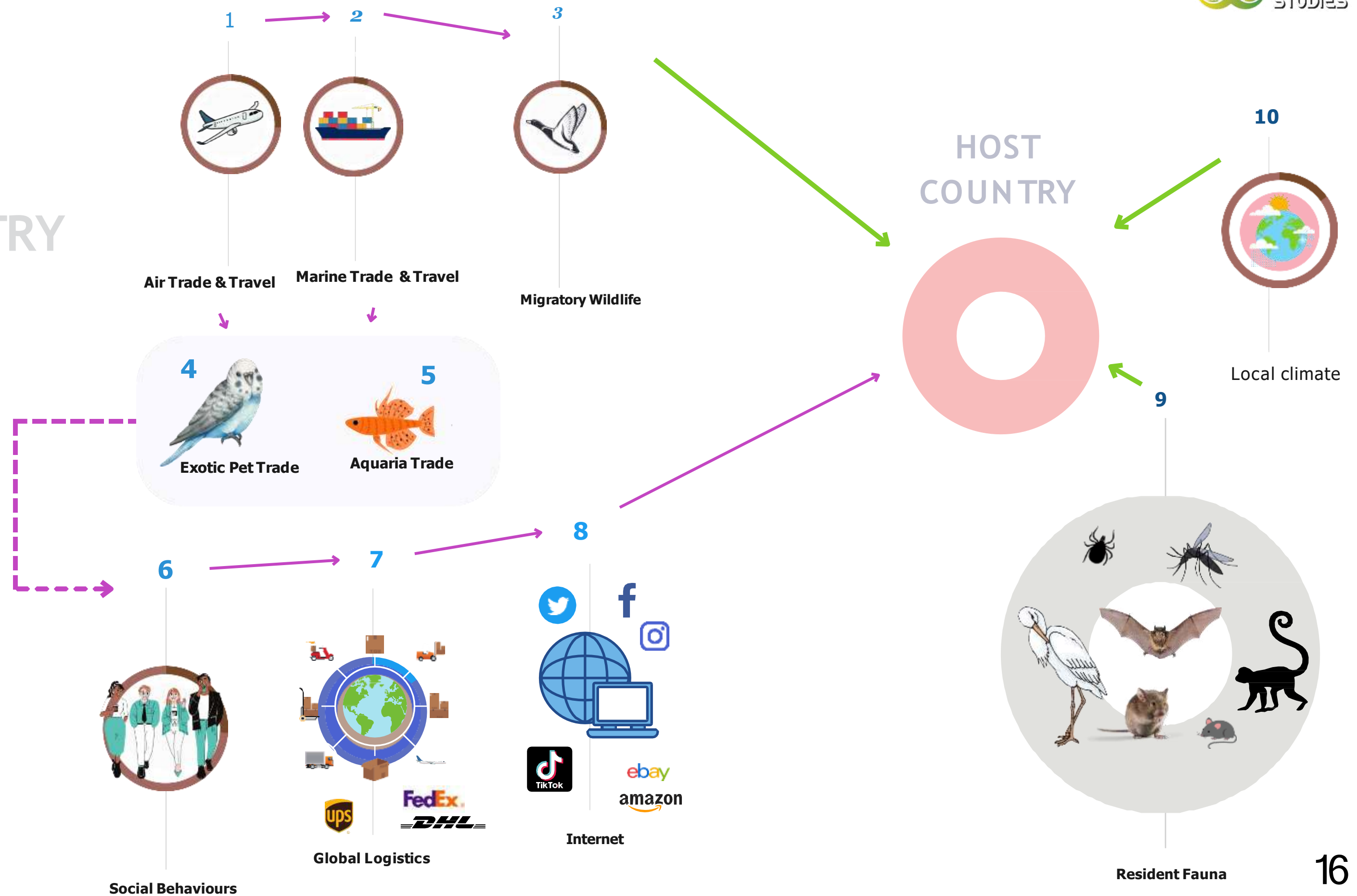
- Sickesses
  - “Those birds come in with all kinds of diseases” [P036]
  - Common songbird illnesses: coccidiosis, avian pox, avian mites
- Releasing Sick Birds
  - “There are plenty who have a sick bird and let it go back into the wild..I do it already” [P040]
- Crowding and Use of Chicken Crates
  - Risks avian influenza, Newcastle disease, and more
- Long-term repositories and mixing
  - Observation of zoological parks indicate regular mixing with rats and pigeons

# ENTRY & ESTABLISHMENT OF ZOOZOSES VIA PET & AQUARIA TRADE



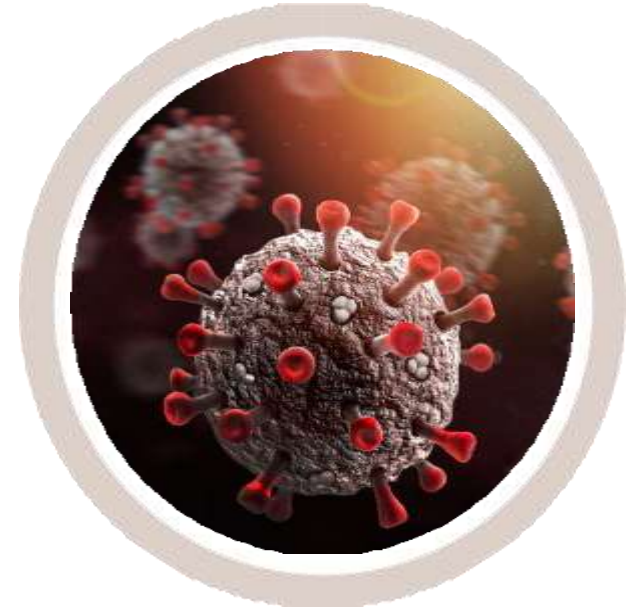
ENTRY

DRIVERS

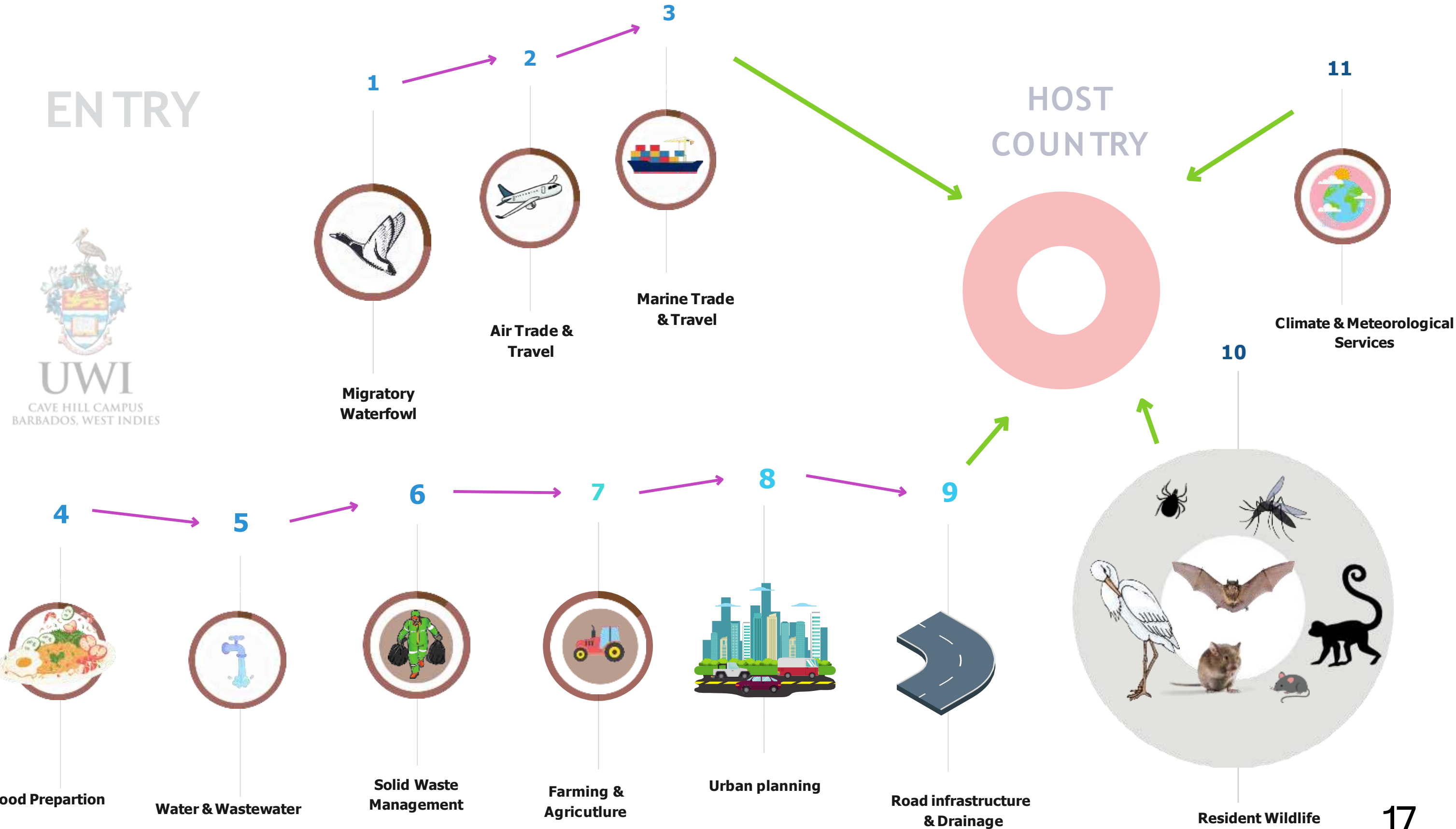




# ENTRY & SPREAD -EMERGING INFECTIOUS DISEASES

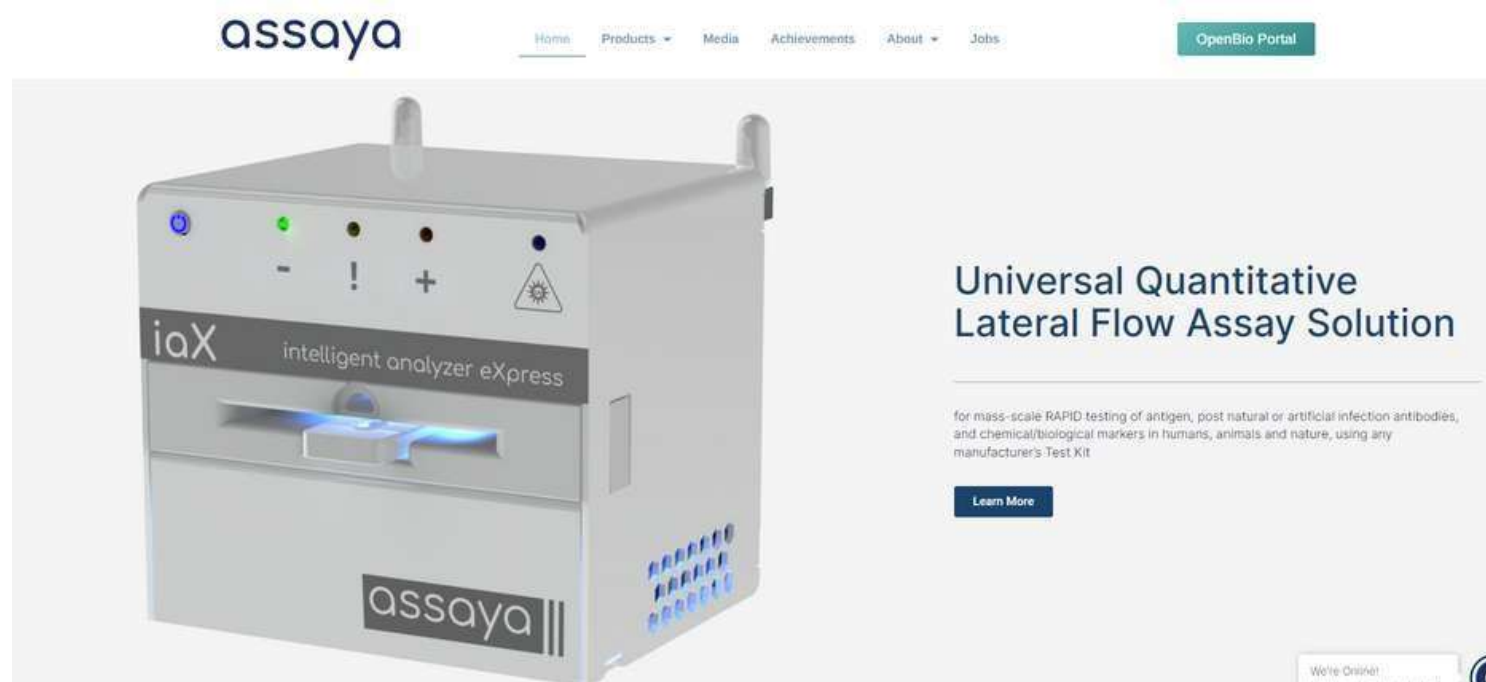


ENTRY



SPREAD

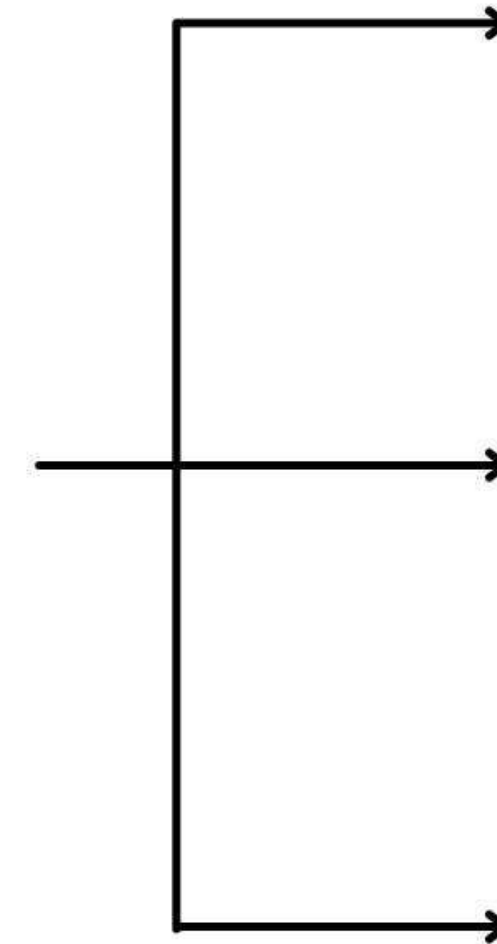
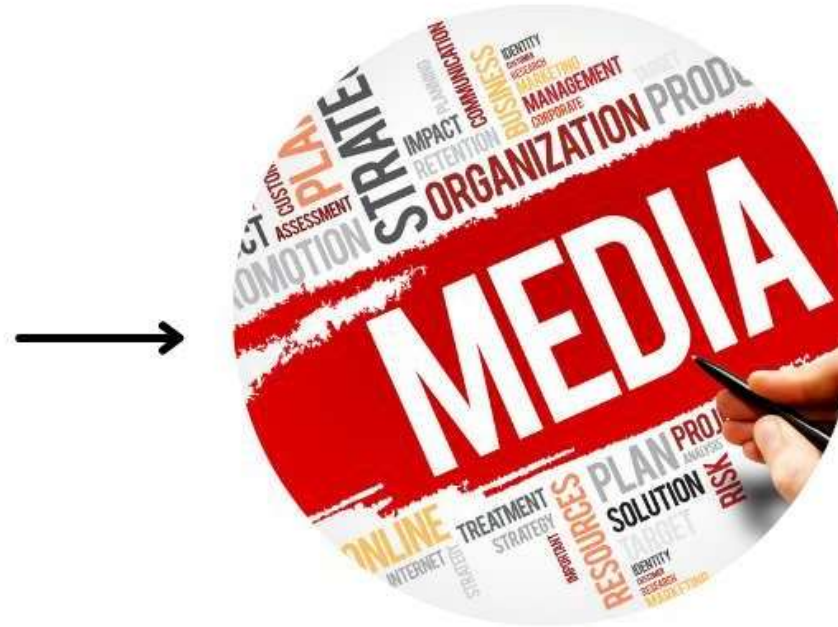
# RAPID DIAGNOSTIC TESTING



- Rapid **ANTIGEN ASSAY TESTS**
- High **SENSITIVITY** and **SPECIFICITY**
- Cloud-based data storage
- Wide diagnostic testing range for pathogens
- Implementation laboratories, border security sites
- **Sharing of cloud data in a global network (WHO?)**
- **GENOMIC SEQUENCING**

# RISK COMMUNICATION - BIOSECURITY

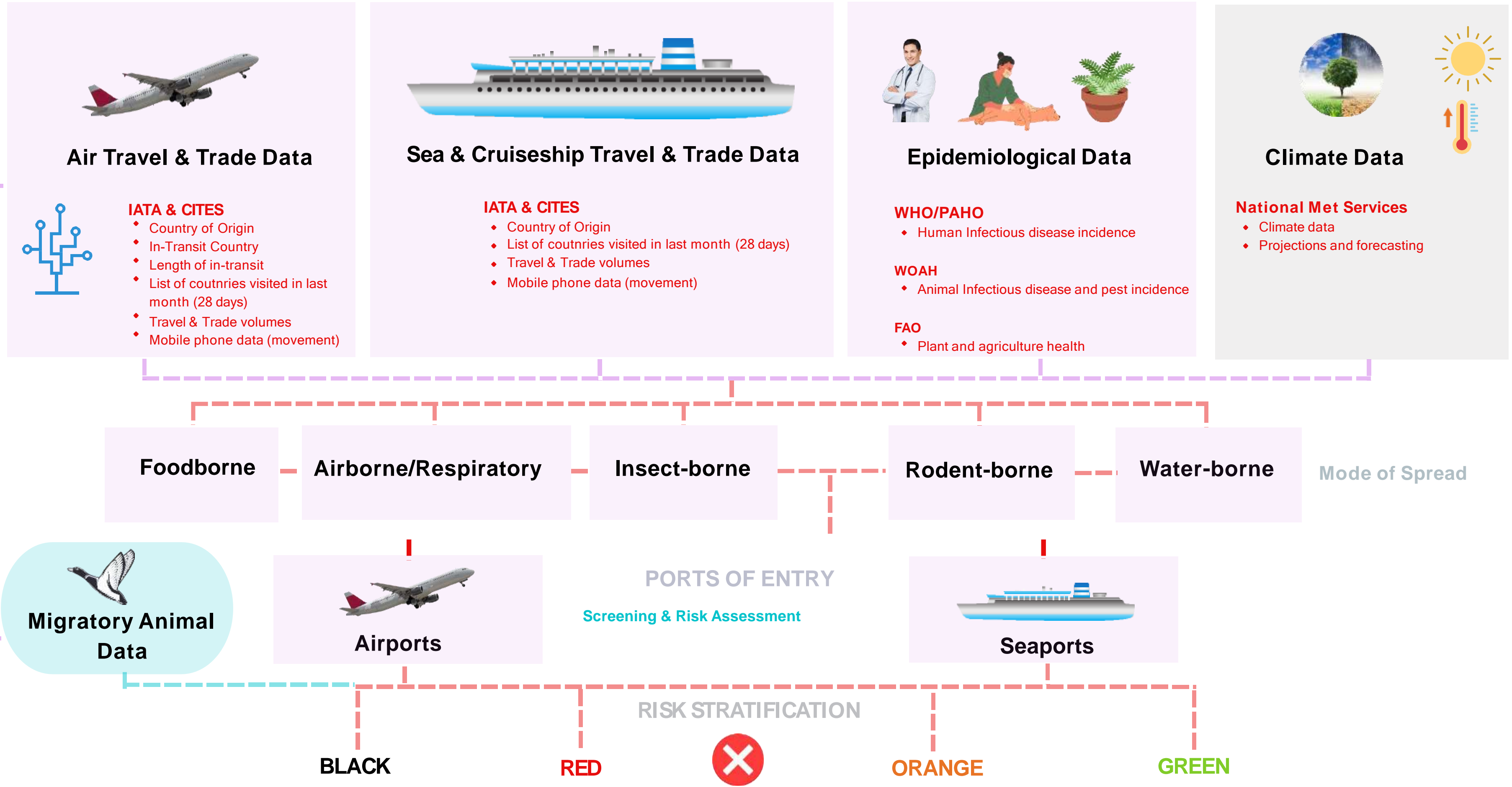
....transporting information from sectors of production to those of reception (Briggs 2011)



Risk communication is forward-looking in that it identifies, in advance, situations where decision-making is required in the face of uncertainty

- **INFRASTRUCTURE, HUMANS & ENVIRONMENT**
  - Global Wildlife Health Security needs to **change its approach...quickly!**
  - Efficient **data collection** and **rapid risk analysis**
  - **Cyber border traffic data, global trade & travel data, climate data etc.**
  - Rapid **diagnostic testing** to determine infectious risk
  - Rapid **communication** of risk to public and global sharing
  - Rapidly breaking **infectious chains of transmission**
  - Risk continues to change (**dynamic**)
- **GWHS systems** need to be able to manage this dynamism

# GLOBAL BIOSECURITY & IAS PROBLEM AND SOLUTION FRAMING



# Work with Us



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