



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Canadian Food Inspection Agency



Our vision:

To excel as a science-based regulator, trusted and respected by Canadians and the international community.

Our mission:

Dedicated to safeguarding food, animals and plants, which enhances the health and well-being of Canada's people, environment and economy.

Redefining Biosecurity In A One Health World

Dairy Farmers of Canada

February 2, 2012

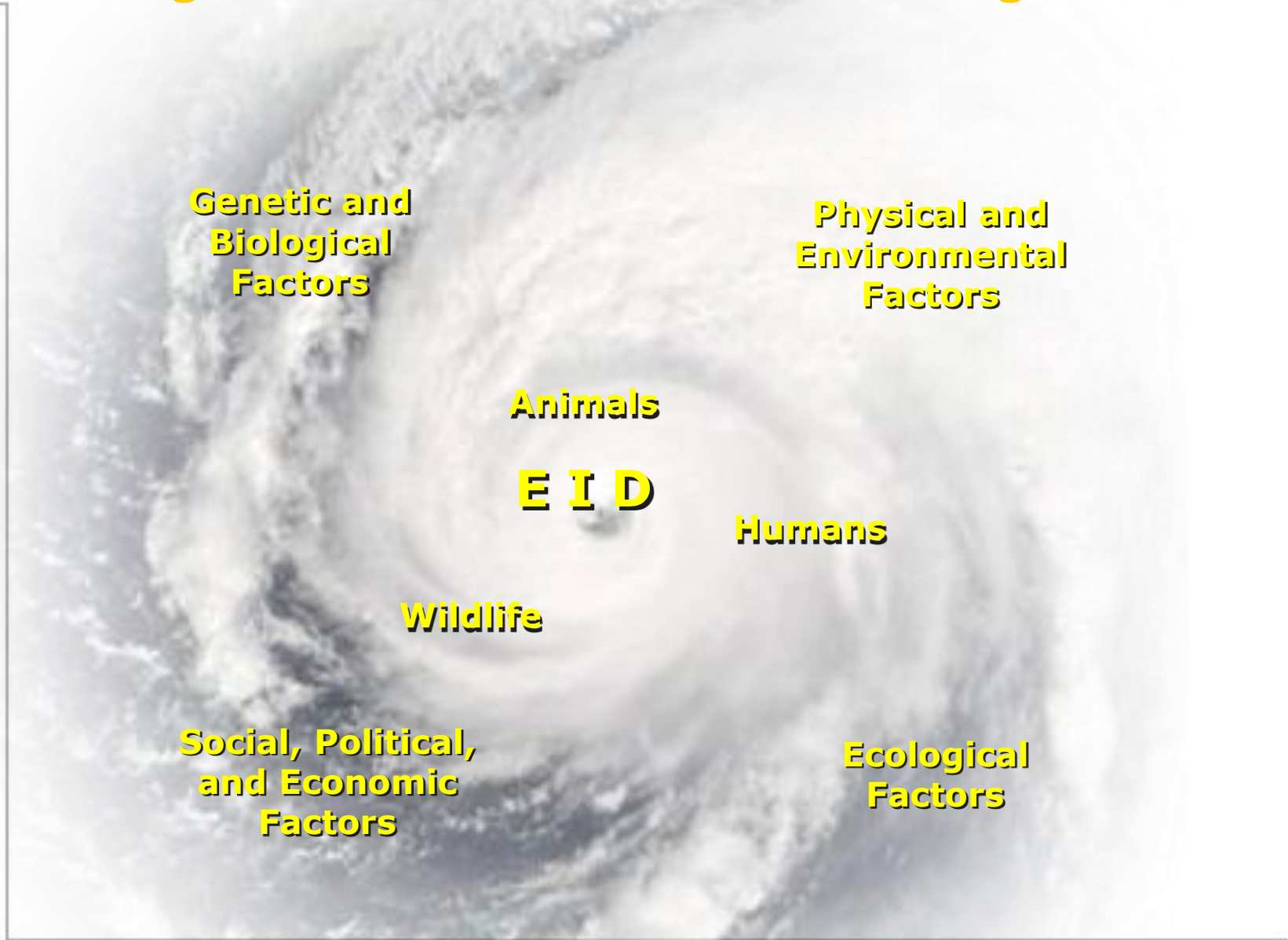
Canada

Overview

- *Farming Is A Risky Business*
- *Evolution of International Standards*
- *Defining Biosecurity*
- *Pause for Reflection*
- *Critical Messages*



Convergence Model : The Perfect Biological Storm



Drivers For A BioSecurity Imperative

Genetic and biological factors

- Microbial adaptation and change
- Susceptibility to infection
- Loss of biodiversity

Physical environmental factors

- Climate and weather
- Economic development and land use

Ecological factors

- Changing ecosystems
- Human demographics and behavior
- Animal production systems

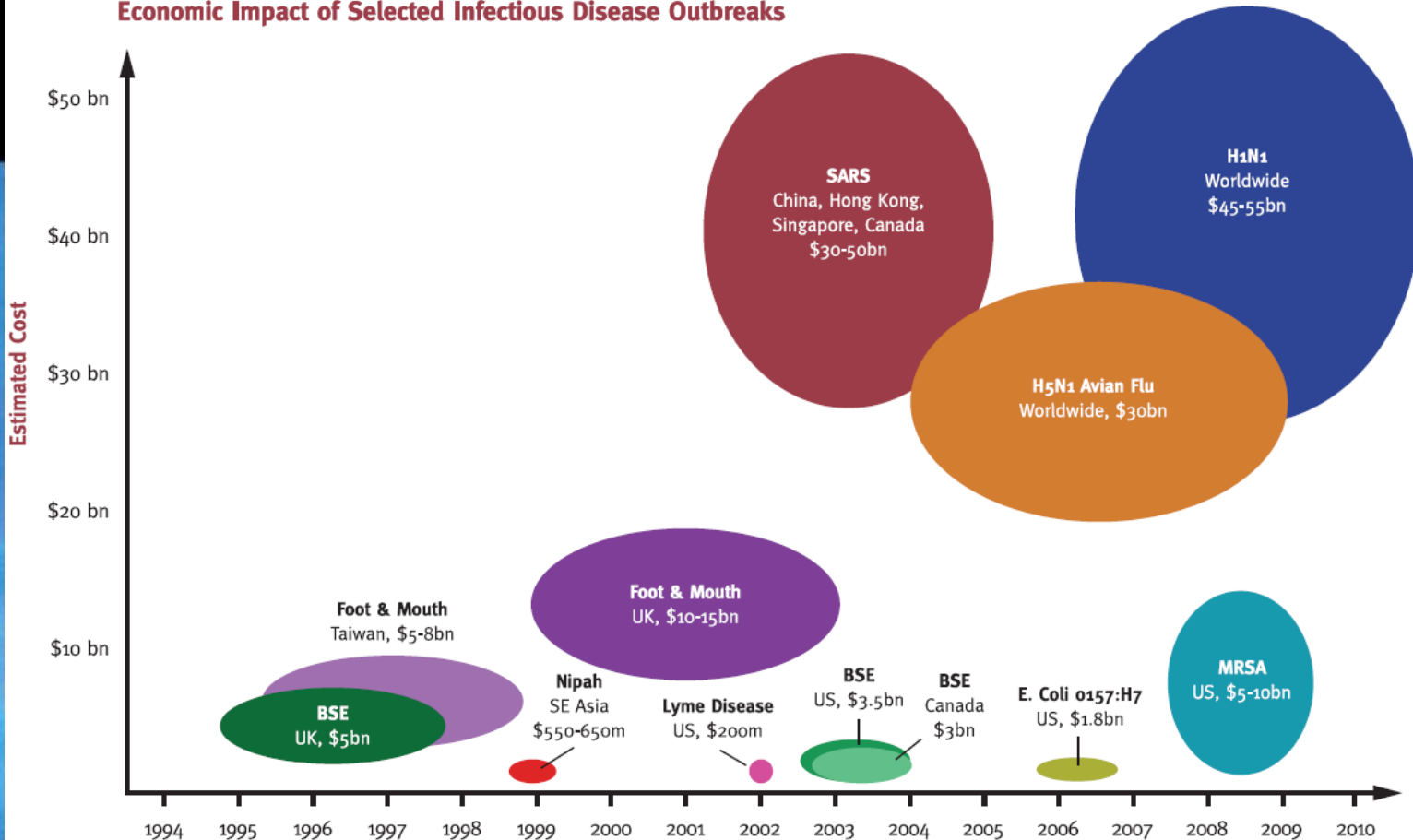
Social, political, and economic factors

- Globalization of people and commerce
- Poverty and social inequity
- Food security
- Intent to harm



Challenges: Economic Impact of Emerging Infectious Disease

Economic Impact of Selected Infectious Disease Outbreaks



Figures are estimates and are presented as relative size. ©2011 bio-era



Canadian Food Inspection Agency

Agence canadienne d'inspection des aliments



The Evolution of International Standards

- Move from emphasis on country freedom status to regionalization and compartmentalization
- Increased focus on commodity risk rather than disease free status
- Emphasis on reward for investment in surveillance, reporting and biosecurity measures



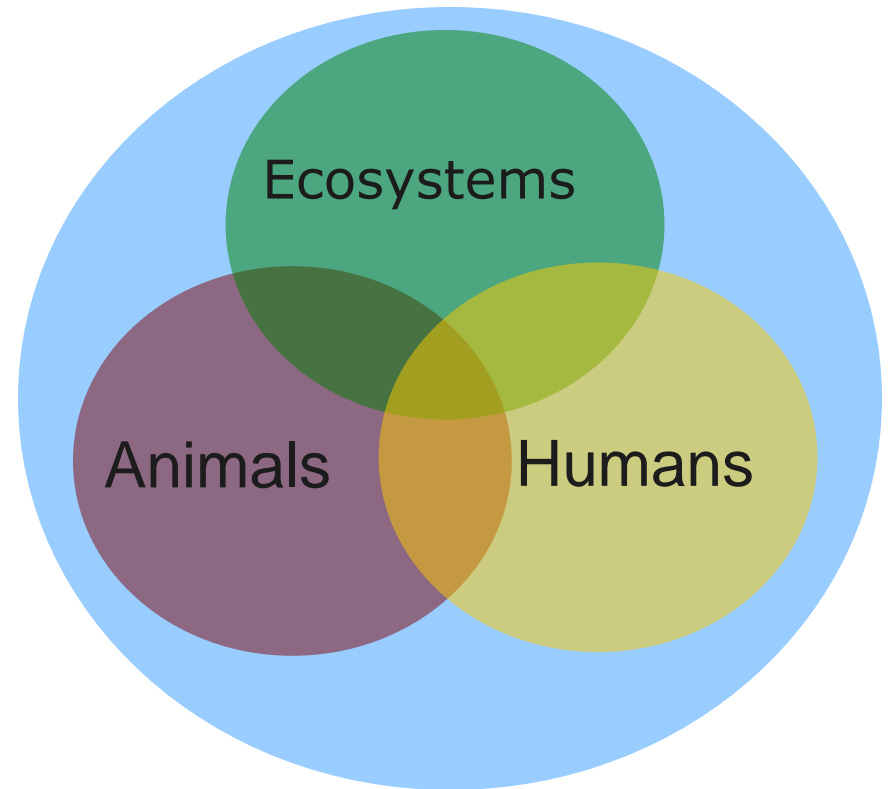
The Evolution of International Standards

- Changes in disease reporting obligations
- Elimination of historic list A and list B
- Move to report:
 - First occurrence of a listed disease
 - Reoccurrence of a listed disease following declaration of eradication
 - First occurrence of a new strain of a pathogen
 - Sudden or unexpected increase in the distribution, incidence, morbidity or mortality of an indigenous disease
 - An emerging disease with significant morbidity, mortality or zoonotic potential
 - Evidence of change in the epidemiology of a listed disease such as host species or pathogenicity



What is One Health?

- One Health is managing threats at the interface between eco-system health, animal health and human health
- It recognizes that the health of people, animals and the ecosystem of which we are a part, are interconnected.



Definition of Biosecurity

“Biosecurity is a strategic and integrated approach to analysing and managing relevant risks to human, animal and plant life and health and associated risks to the environment”

-as derived from the [FAO Biosecurity Toolkit](#)

Biosecurity 101 In Animal Production

- **Mapping of risk pathways, developing and implementing mitigation strategies**
- **Prevention of entry**
 - **Access control of people, wildlife, vehicles and vectors**
 - **Recording of movements**
 - **Awareness of health of animal attendants**
 - **Managing contact with susceptible species outside of work**
 - **Know health status of herd for diseases of concern**
 - **Confirm status of animals prior to addition**
 - **Isolate animals on arrival and on animals returning following external contact such as exhibitions**
 - **Monitor water and feed sources**



Biosecurity 101 In Animal Production

- **Early identification and response**
 - Monitor for changes in behaviour, appetite, appearance
 - Isolate sick animals
 - Be aware of disease emergence and prevalence
 - Consider vaccination and other measures in endemic areas
 - Seek veterinary attention and advice

- **Prevention of extension**
 - Maintain identification integrity and movement records of all animals
 - Avoid temptation to shoot, shovel and shut up
 - Do not transport or ship unfit animals to slaughter
 - Inform animal health and public health officials
 - Arrange for rendering or burial of dead animals



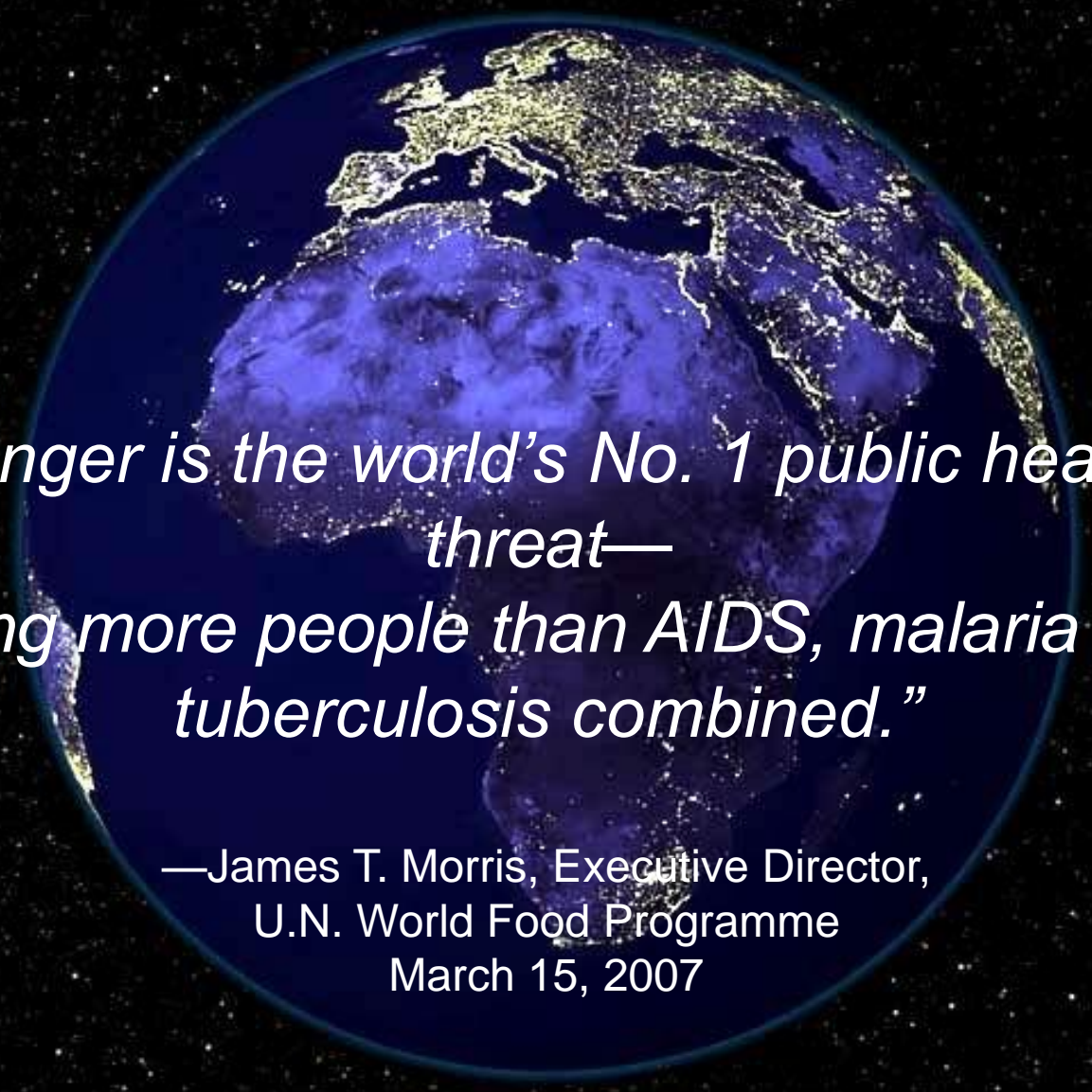
Pause For Reflection

- *Biosecurity is critically important to the health and economic well being of animal owners and farm families*
- *Most livestock sectors are developing and advocating biosecurity strategies for producers*
- *Compensation increasingly tied to investments made by the producer to mitigate risk*
- *Biodiversity impacts of historic disease approaches are significant*

Pause For Reflection

- *The food supply and animal production system is extremely vulnerable and deliberate threat should not be ignored*
- *New tools, new technologies require new thinking: DIVA vaccines, genomics, bioactives*
- *International standards have changed to consider zoning/regionalisation, compartmentalisation, commodity based risk but can only be recognized if traceability, surveillance and biosecurity programs are in place and effective*
- *Changing social values and awareness*





*hunger is the world's No. 1 public health
threat—
killing more people than AIDS, malaria and
tuberculosis combined.”*

—James T. Morris, Executive Director,
U.N. World Food Programme
March 15, 2007

Critical Messages

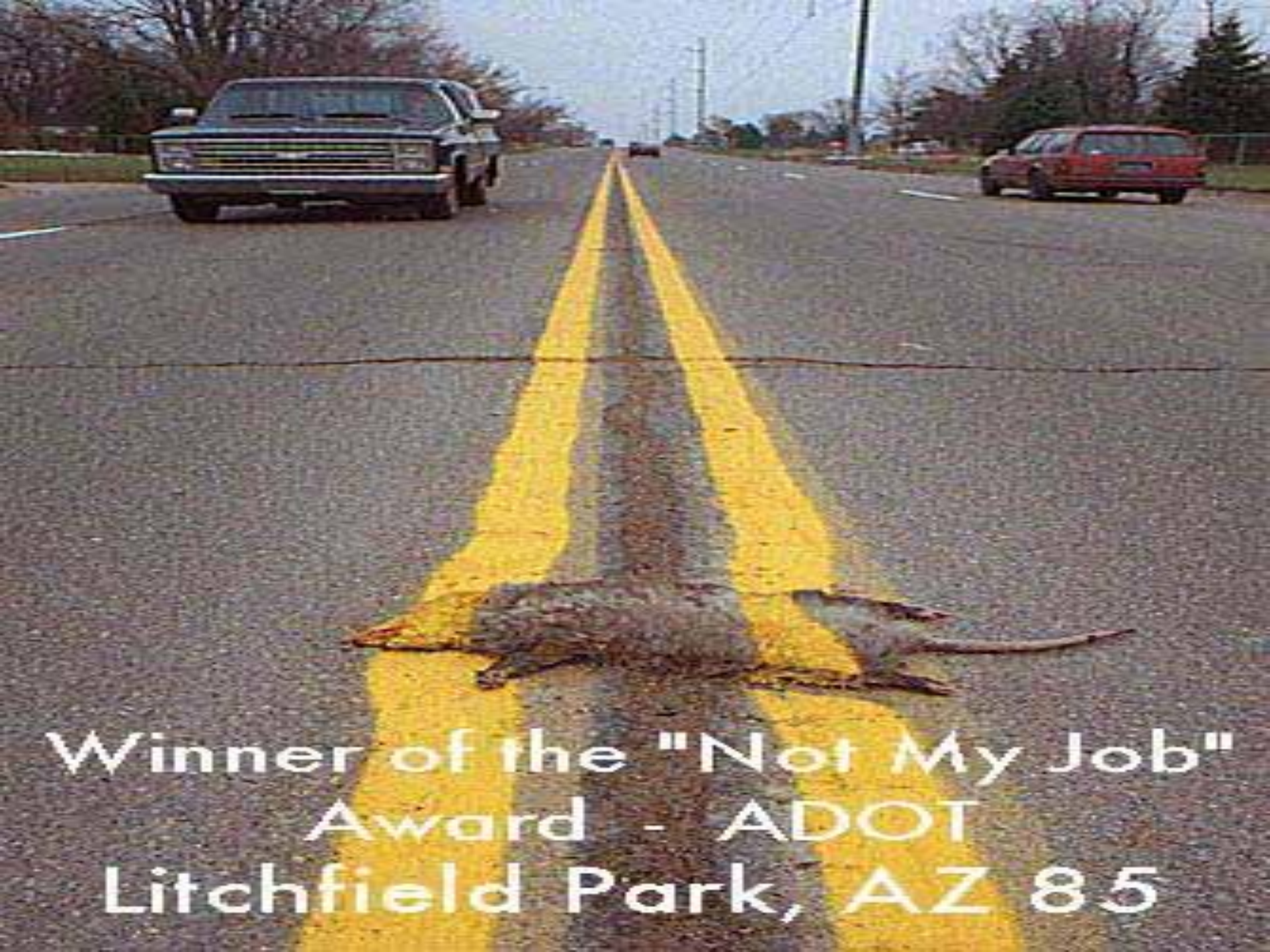
- Risk transfer is not risk management
- Consequence transfer is not consequence management
- Biosecurity is a continuum of interdependencies with enormous consequence potential
- Biosecurity is critical to health and economic well being



Critical Messages

- Zero risk is not attainable but this should not deter us from maximizing our investments in prevention
- Requires a community approach which transcends disciplines and jurisdictions





Winner of the "Not My Job"
Award - ADOT
Litchfield Park, AZ 85

Canada