

A satellite view of New Zealand, showing the two main islands, North and South Island, with their characteristic mountain ranges and green landscapes. The surrounding ocean is a deep blue, and the atmosphere is visible as a thin white layer at the top of the frame.

USING ECONOMICS TO MAKE BETTER BIOSECURITY DECISIONS

- The NZ experience

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AARES, 10-11 September
Canberra, Australia 2009

NEW ZEALAND. IT'S OUR
PLACE TO PROTECT.



OUTLINE

- Early use of economic analysis
- Economics in pest response decisions
- Valuing benefit shares for government industry agreements
- Funding decisions for biosecurity services
- A bigger role for economics in making importing decisions for risk goods?

ABOUT MAFBNZ (ESTABLISHED 2004)

- Brought together the biosecurity functions of all government agencies
- Responsible for protecting economic, environmental, socio- cultural and human health values

ABOUT MAFBNZ (ESTABLISHED 2004)

- Set up on functional (rather than sector) basis to provide integration and critical mass
- Includes policy, regulatory and delivery aspects of biosecurity
- Modest economics capability

EARLY USE OF ECONOMICS FOR BIOSECURITY DECISIONS

Two early examples of using economic analysis in biosecurity (mid 1990s):

- Optimisation modelling for forest health pest surveillance
- Optimisation modelling for container inspections for forest pests

EARLY USE OF ECONOMICS FOR BIOSECURITY DECISIONS

Concluded that:

- a survey design that gave a detection level of 85% of new pest arrivals was warranted
- a much higher level of container inspection was warranted

ECONOMICS IN PEST RESPONSE DECISIONS

- White spotted tussock moth (Auckland 1995) was (probably) the first example
- Have now done cost benefit analyses for 16 pest incursions
- Do sufficient economic analysis for decision
- Overall cost of pests to NZ also determined

ECONOMIC ASSESSMENT IN PEST READINESS

- Have prepared cost-benefit analyses for 4 pests with high impacts and establishment risk
- Includes assessment of the cost of a foot-and-mouth disease national standstill
- More emphasis on valuing intangibles as focus moves onto protecting the environment

VALUING BENEFITS IN GOVERNMENT INDUSTRY AGREEMENTS

- Government has recently announced decisions to proceed with industry readiness and response agreements
- Phased in over the next six years
- Increases importance of comprehensively valuing the benefits of responding to risk organisms for cost allocation purposes

FUNDING DECISIONS FOR BIOSECURITY SERVICES

- The Government is considering a number of major new biosecurity initiatives:
 - Joint Border Management Systems (with NZ Customs Service)
 - National Animal Identification and Tracing System (with industry)
 - Farms-On-Line

FUNDING DECISIONS FOR BIOSECURITY SERVICES

- We have been able to draw on existing collection of cost-benefit analysis done to date to evaluate the biosecurity benefits of these new initiatives

FUNDING PRINCIPLES – Who should pay?

- Funding principles aim to improve biosecurity risk management and promote more efficient allocation of resources

FUNDING PRINCIPLES – Who should pay?

- Three key questions: Which party is best placed to:
 1. Reduce risks that need to be managed?
 2. Assess whether the benefits of a service outweigh the costs?
 3. Determine whether the service is being provided most cost-effectively?

FUNDING PRINCIPLES – Who should pay?

- Have applied at a high level to all biosecurity services and at a more detailed level to some (for example Bovine Tb Strategy, funding of border services and market access work)

ROLE IN RISK GOODS IMPORTING

- There may be an opportunity to include trade benefits more explicitly in risk good import decisions.
- Currently trade benefits are included implicitly in setting the appropriate level of protection for a country

ROLE IN RISK GOODS IMPORTING

- A trade benefits approach could be used more explicitly in particular risk product import decisions
- Would be a major change and would require a review of SPS and (for NZ) domestic legislation

SUMMARY

- Economic analysis is increasingly critical for biosecurity
- Building up experience and baseline examples
- Valuing intangibles is increasingly important
- The right funding gives better risk management
- Could use economics more in the trade policy/ biosecurity interface?