

Setting disease and cross-cutting priorities

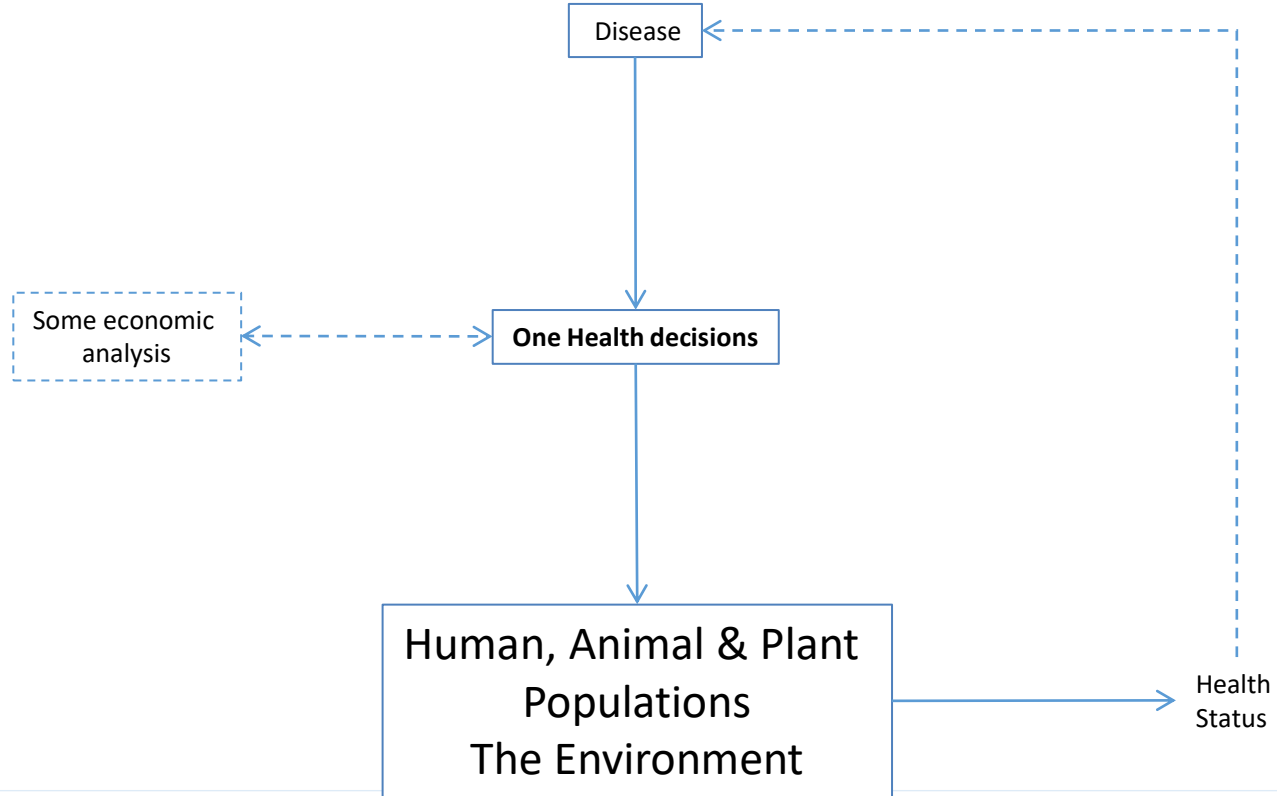
Global Burden of Animal Diseases

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Acknowledgements

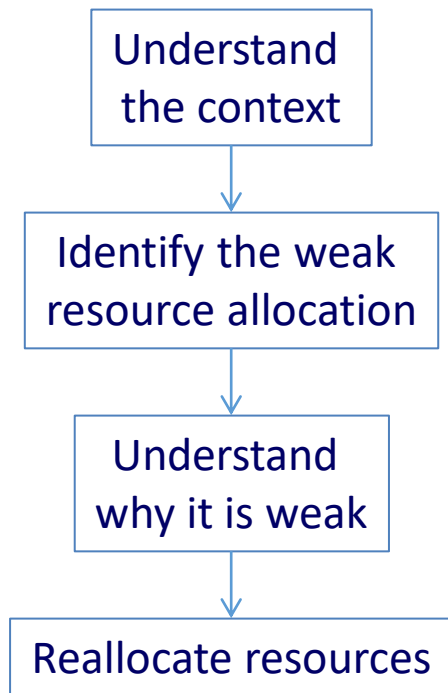
- OIE – Monique Eloit, Matthew Stone, Emily Tagliaro, Edna Massay Kallon, Alice Pineau
- GBADs – collaborators
- OIE collaborating centre – Wilma Steeneveld, Arjan Stegeman, Edgar Brun, Paul Stein, Chiek Er
- DECIDE project - Gerdien van Schaik and colleagues  **DE CIDE**
- University of Liverpool – Matthew Baylis, Nicola Williams, Rob Smith
- DISCONTTOOLS – Johannes Charlier

How socio-economics is used...

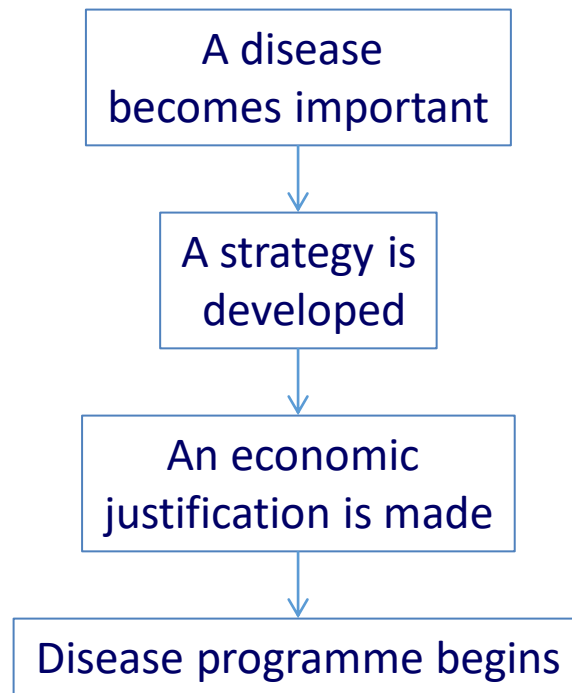


Applications of economics to animal health

An economic approach



An animal health approach



Applications of economics to animal health

An economic approach

Understand
the context

**Adding value
through
searching for
optimality**

Why it is weak

Reallocate resources



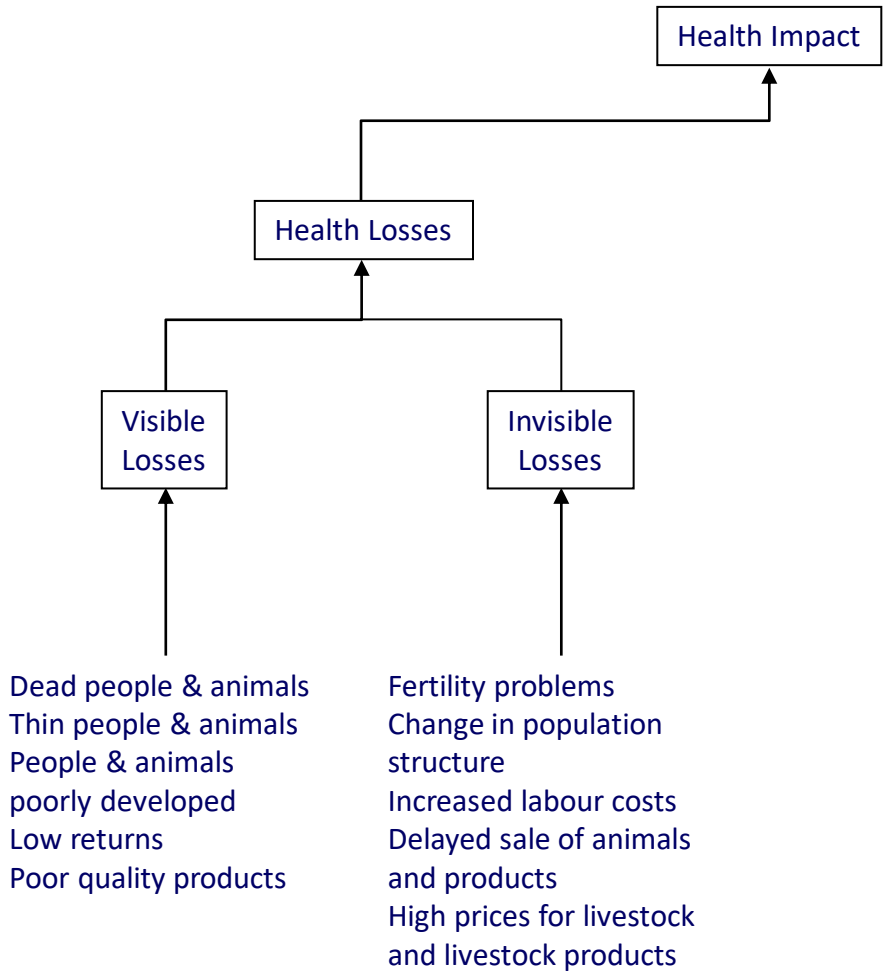
An animal health approach

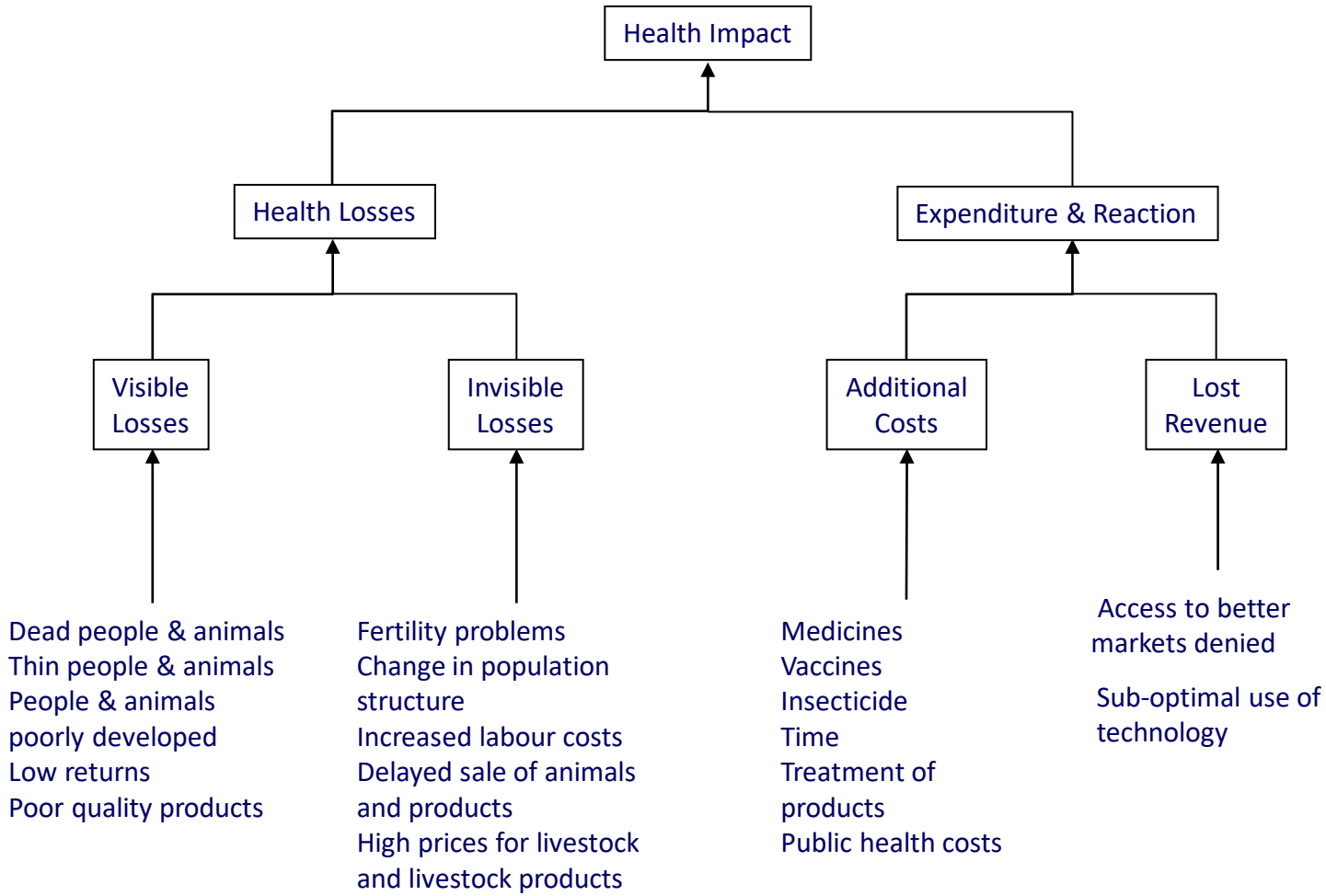
A disease
becomes important

**Adding value
through
advocacy**

An economic
justification is made

Disease programme begins





Health Impact

Health Losses

Visible Losses

Invisible Losses

Impact caused by diseases & health problems

- Dead people & animals
- Thin people & animals
- People & animals poorly developed
- Low returns
- Poor quality products
- Fertility problems
- Change in population structure
- Increased labour costs
- Delayed sale of animals and products
- High prices for livestock and livestock products

Expenditure & Reaction

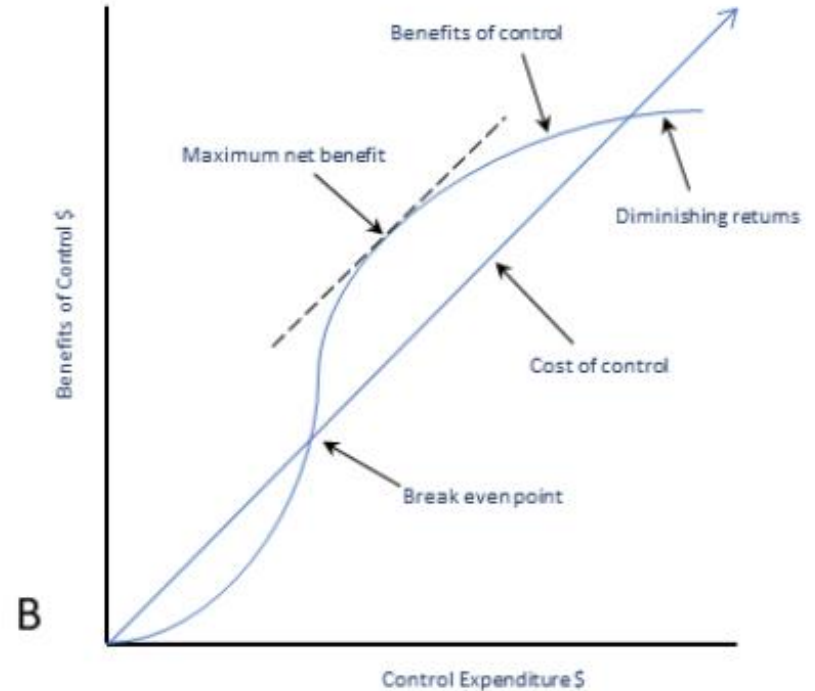
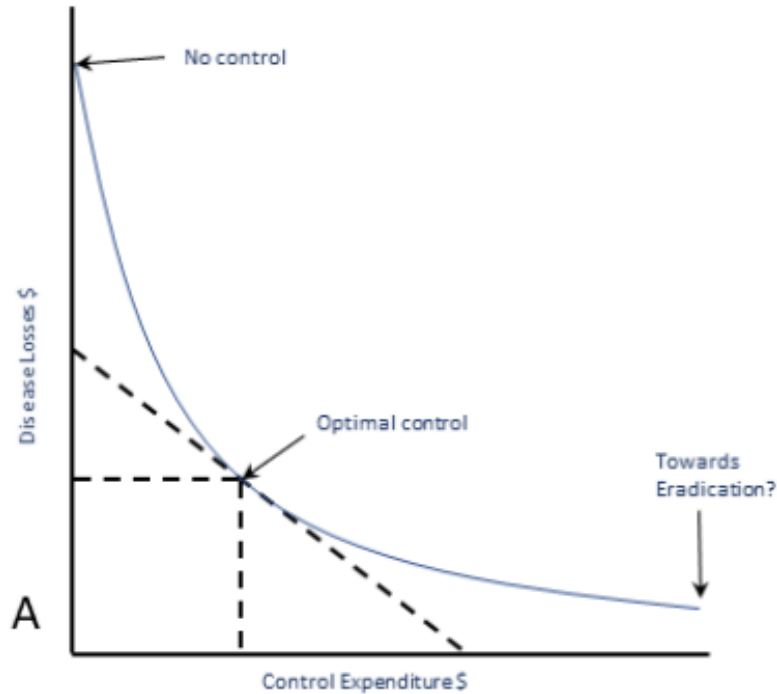
Additional Costs

Lost Revenue

Impact caused by human reaction

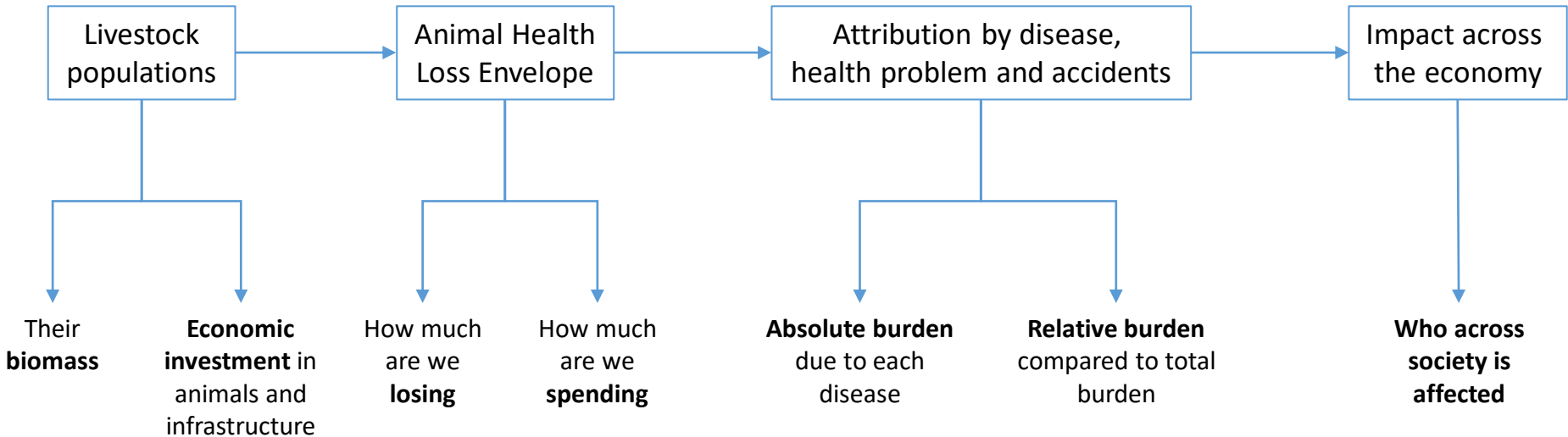
- Medicines
- Vaccines
- Insecticide
- Time
- Treatment of products
- Public health costs
- Access to better markets denied
- Sub-optimal use of technology

An economic approach includes expenditure and it needs a context



Adapted from [McInerney](#) (A) and [Tisdell](#) (B)

GBADs - Analytical structure



Rushton et al 2021

Data Source

FAOSTAT

Parameters for
Dataframe

Select country:

- United Kingdom of Great Britain and Northern Ireland

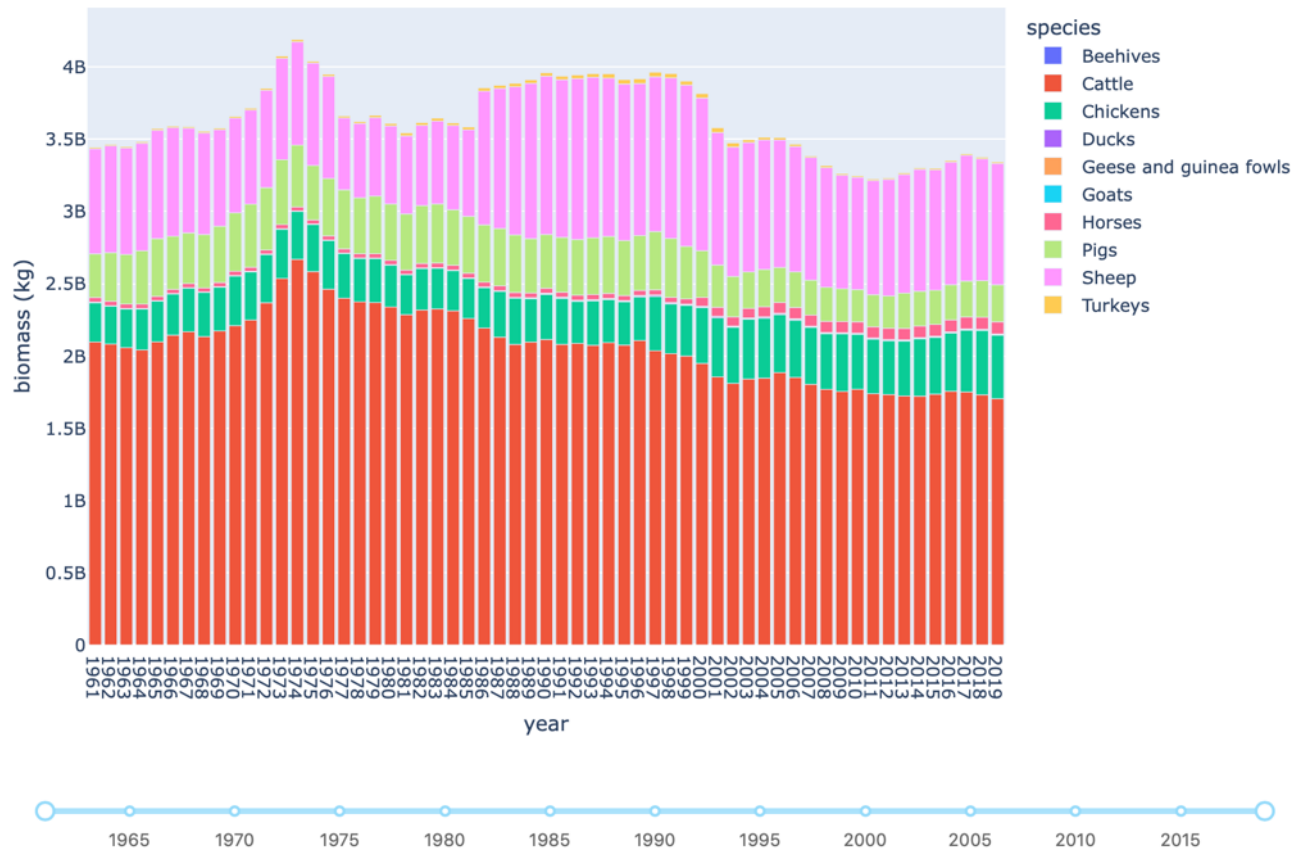
Select species:

- Asses
- Beehives
- Buffaloes
- Camelids, other
- Camels
- Cattle
- Chickens
- Ducks
- Geese and guinea fowls
- Goats
- Horses
- Mules

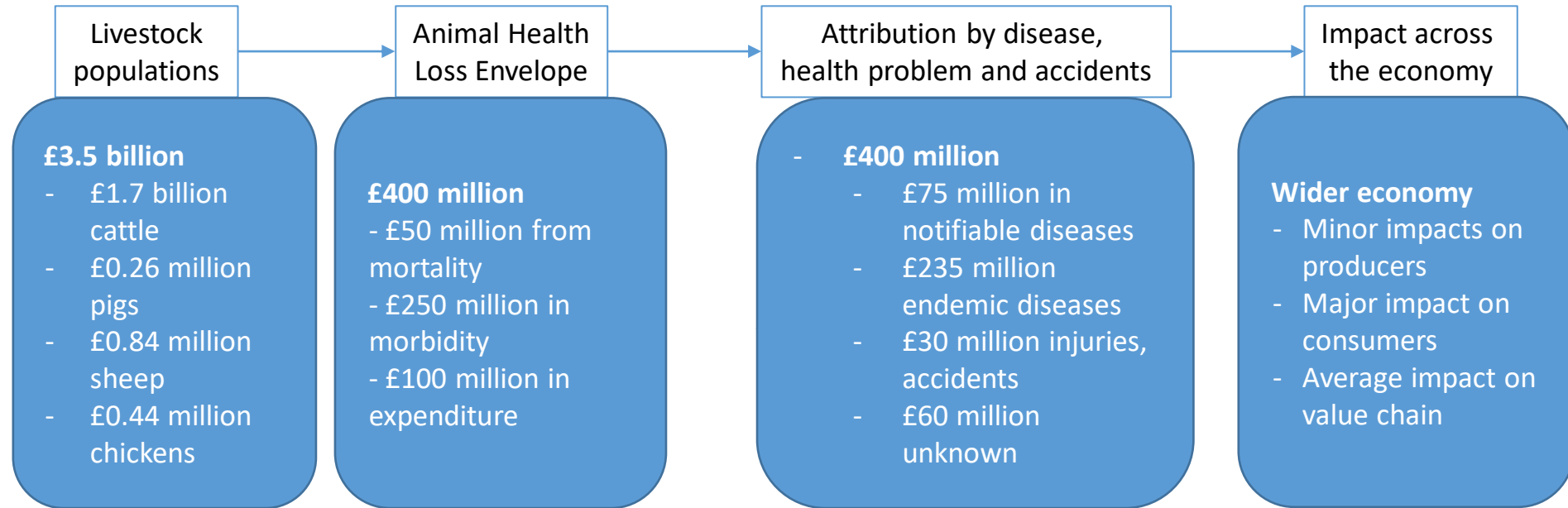
Playground

Map

Metadata

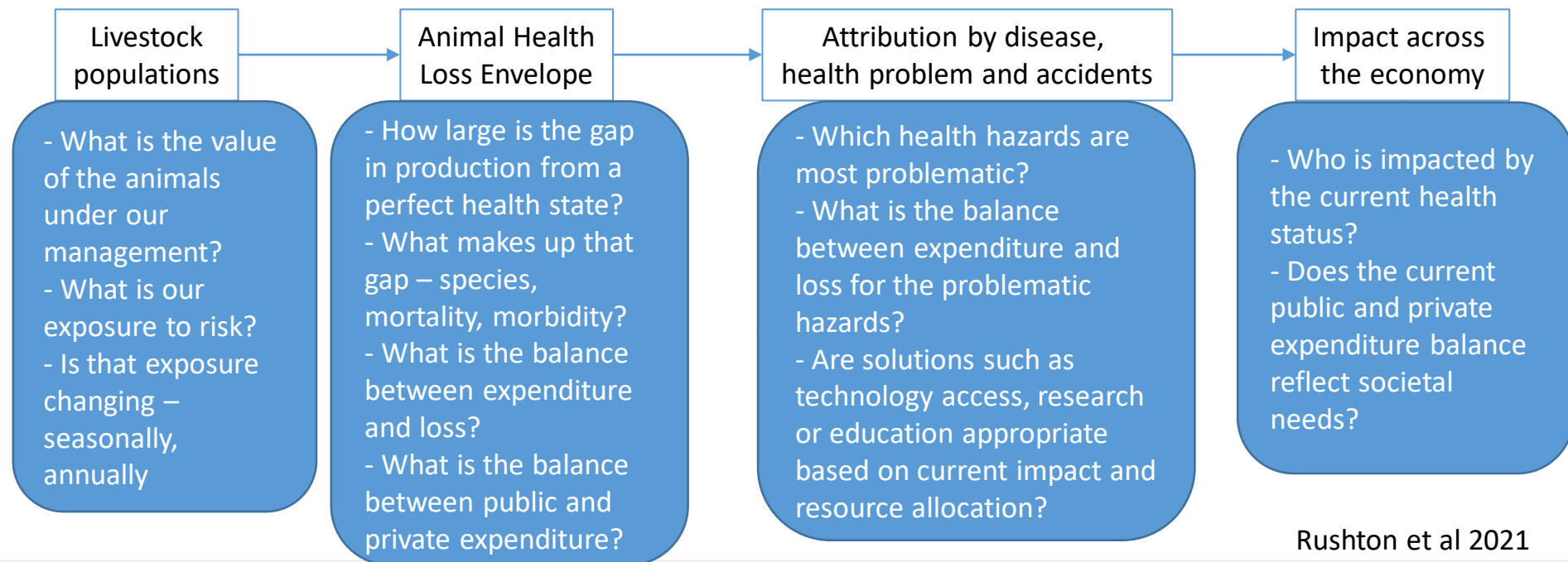


GBADs - Analytical structure – illustrative figures



Rushton et al 2021

GBADs - Analytical structure



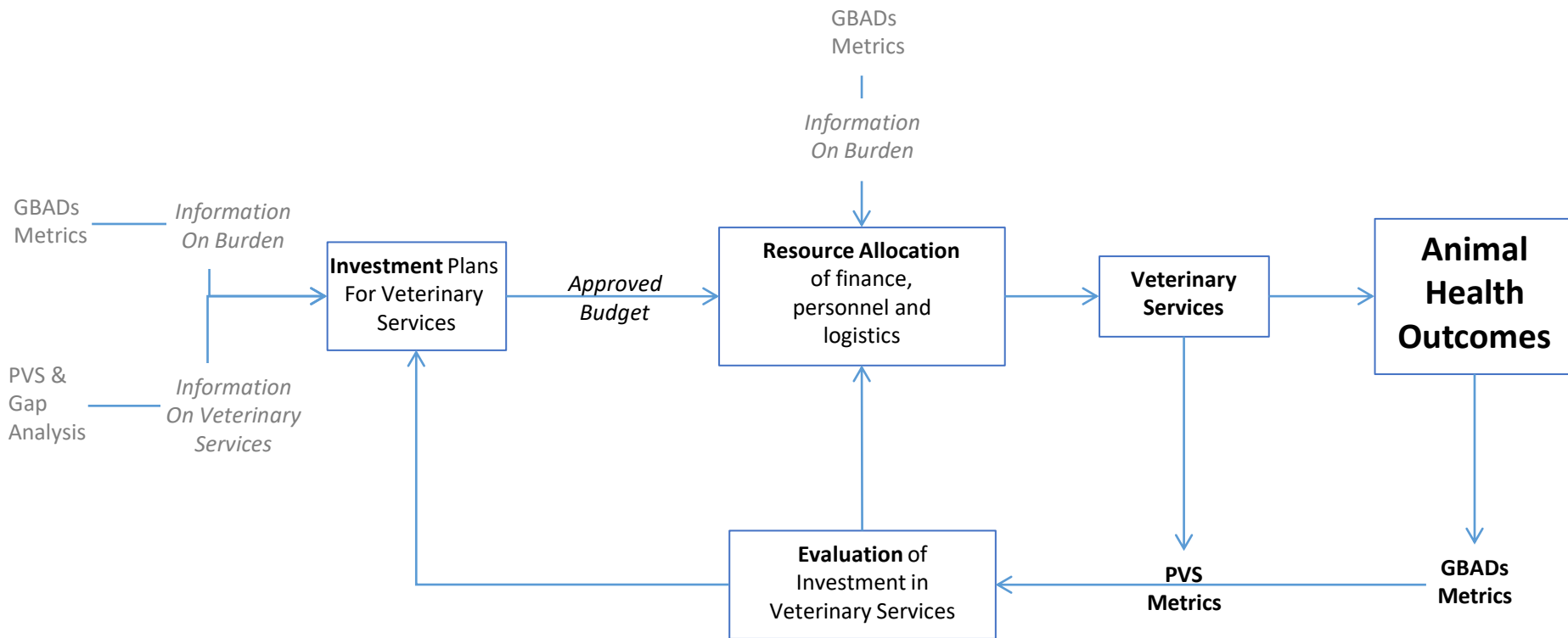
Rushton et al 2021

GBADs supporting the investment cycle

Our livestock keepers, consumers and the environment need:

- **Investment plans** which ensure there are adequate animal health systems
- **Allocation of resources** to problems that most affect their health and wellbeing
- **Evaluation** of animal health investments to ensure they are delivering on societal outcomes

GBADs supporting the investment cycle



Huntington et al. 2021 [10.20506/rst.40.2.3246](https://doi.org/10.20506/rst.40.2.3246)



Check all Uncheck all

DISEASE KNOWLEDGE - 10 criteria ▾

IMPACT ON ANIMAL HEALTH AND WELFARE - 3 criteria ▾

IMPACT ON PUBLIC HEALTH - HUMAN HEALTH - 6 criteria ▾

IMPACT ON WIDER SOCIETY - 3 criteria ▲

Economic direct impact (including cumulative costs (e.g. Enzoonotic vs Epizootic))

Economic indirect impact (social, market)

Agriterrorism potential

IMPACT ON TRADE - 4 criteria ▲

Impact on international trade due to existing regulations

Impact on EC trade due to existing regulations

Potential for zoning

Impact on security of food supply

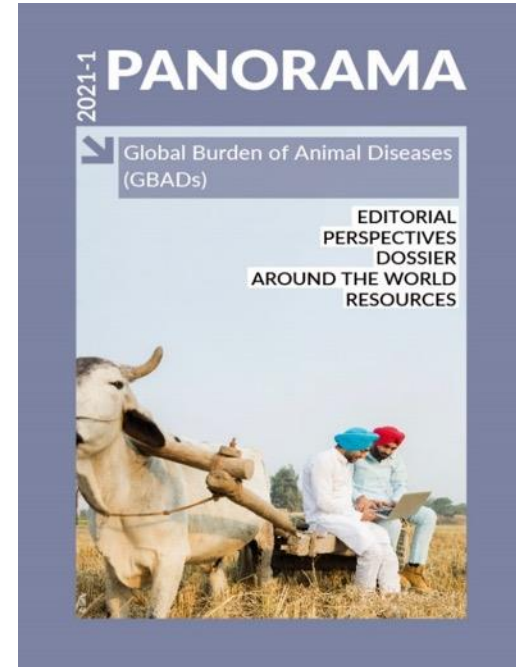
CONTROL TOOLS - 3 criteria ▾

GBADs

For your information

The OIE Panorama on GBADs has been published.

- https://oiebulletin.com/?page_id=150
- https://oiebulletin.com/?page_id=373&lang=fr
- https://oiebulletin.com/?page_id=381&lang=es



Thanks to Ben Huntington for editing this document

For your information

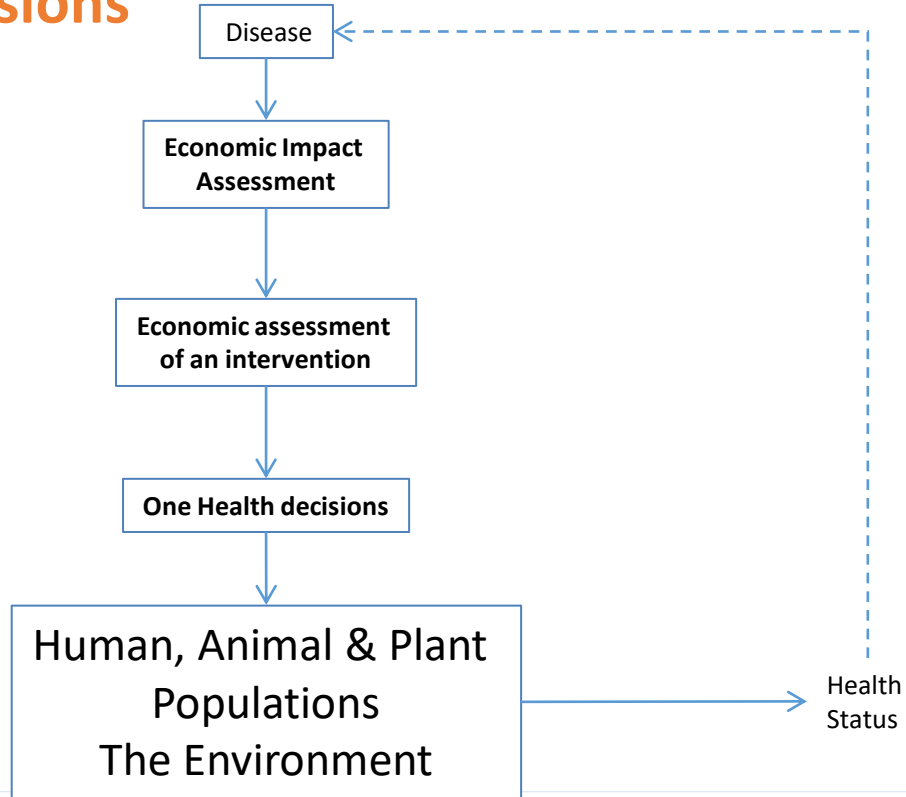
Rev. Sci. Tech. Off. Int. Epiz., 2021, 40 (2), 567-584

Global Burden of Animal Diseases: a novel approach to understanding and managing disease in livestock and aquaculture

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<https://www.oie.int/app/uploads/2021/05/402-18-huntington-rushton.pdf>

How socio-economics could be used to have informed and evidence-based decisions



GBADs funders, partners, collaborators

BILL & MELINDA
GATES foundation



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