



World  
Organisation  
for Animal  
Health  
Founded as OIE

Organisation  
mondiale  
de la santé  
animale  
Fondée en tant qu'OIE

Organización  
Mundial  
de Sanidad  
Animal  
Fundada como OIE

Country  
partner logo

Any other  
affiliation /logo



# Principles of Emergency Management: Animal Health, Public Health

## Emergencies And Disasters

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**Sub-Regional Workshop on Emergency Management  
14 - 16 August 2024 Bangkok, Thailand**



# Presentation covers

1. Increasing risk and need for Emergency Management

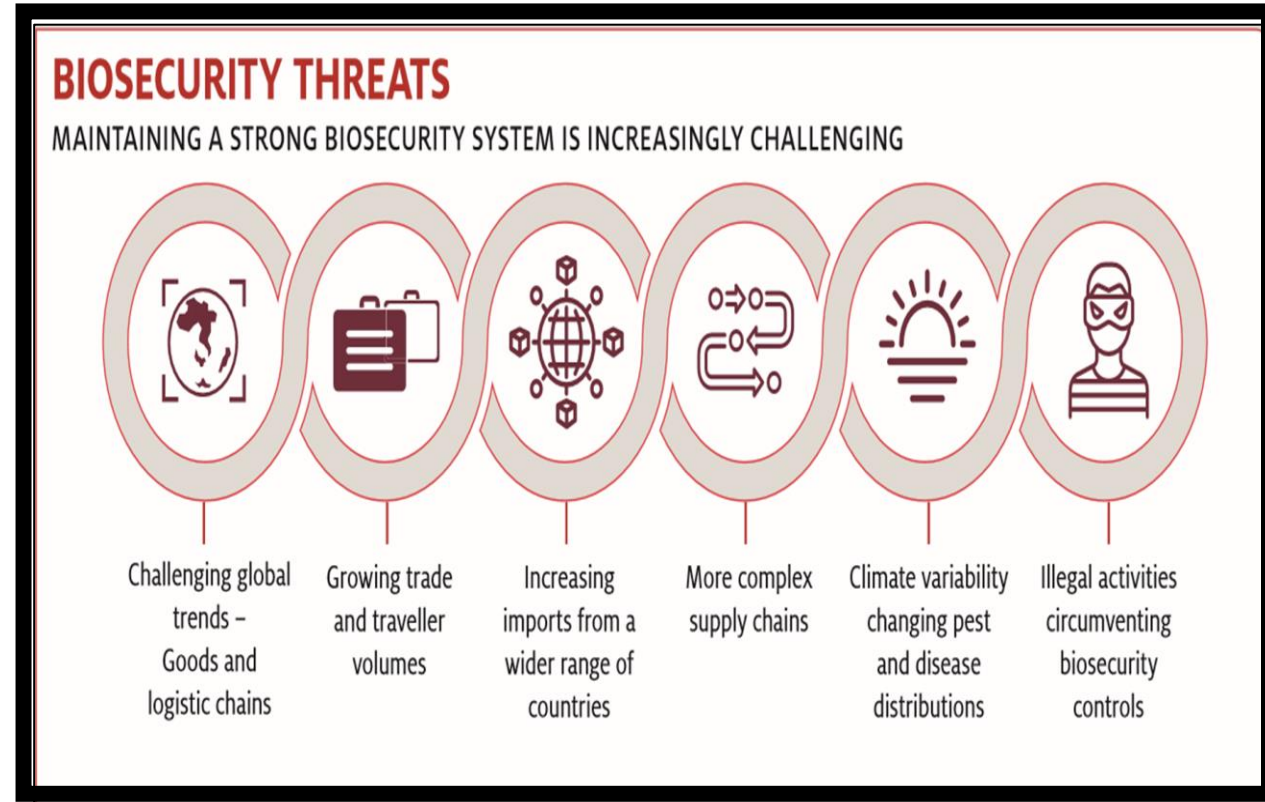
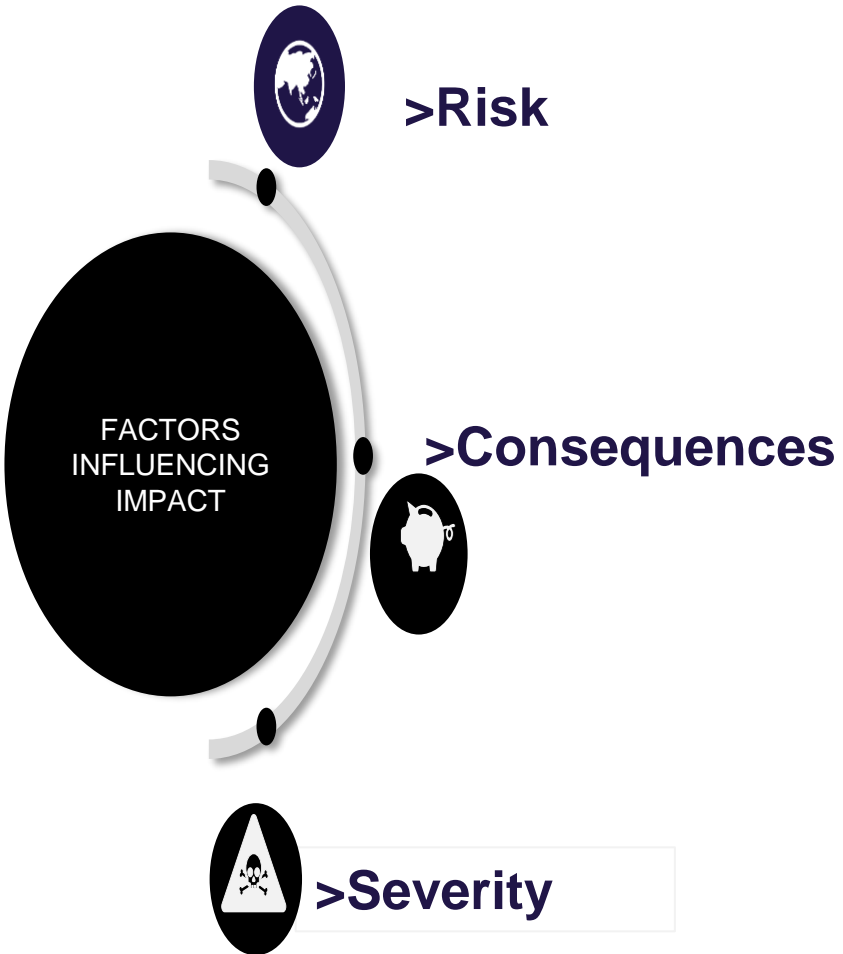
2. Principles of Emergency Management

- A case study where the principles were both emphasised and relearned
- Need for preparedness capability

3. Overview



# Biosecurity risks are increasing



African swine fever

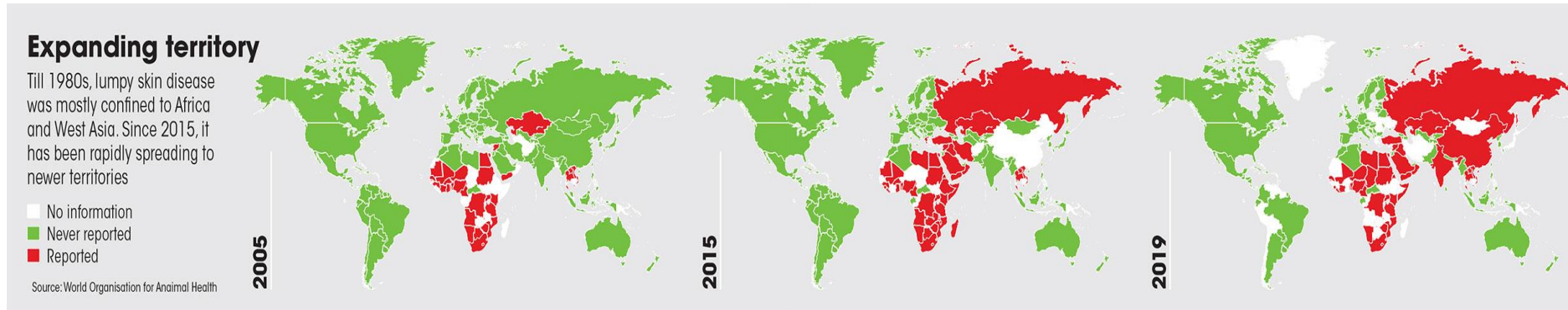
African horse sickness

Lumpy skin disease

Foot and mouth disease



# Lumpy skin disease is spreading globally



## LSD was confirmed in new areas of Asia and during March 2022

- After being first reported in Zambia in 1929, LSD spread throughout many parts of Africa.
- Since 2012, LSD has spread beyond Africa, to the Middle East and south-eastern Europe
- LSD was first reported in south and east Asia in 2019, and its distribution has widened



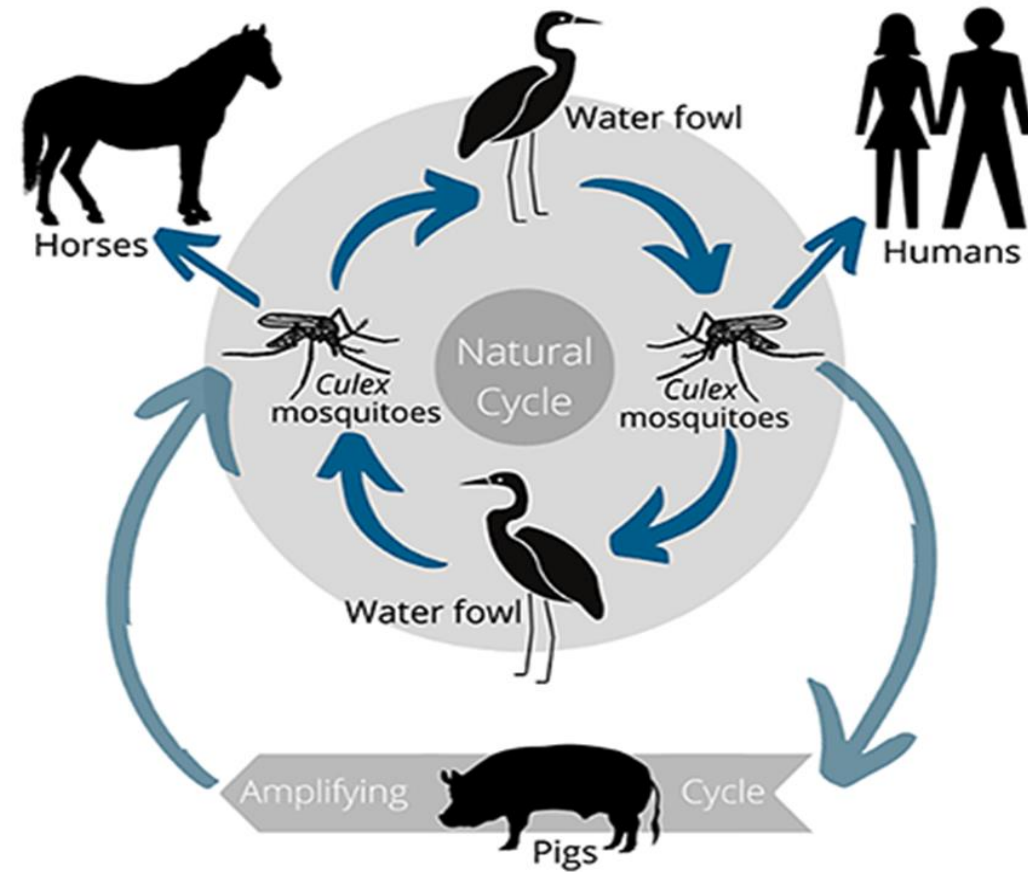
# Japanese Encephalitis Virus – Global Distribution



**Source:** Hills SL, Lindsey NP, Fischer M. Japanese encephalitis. In: CDC Yellow Book 2020: health information for international travel. New York, NY: Oxford University Press; 2019:248–57.



# Lifecycle of Japanese Encephalitis Virus (JEV)

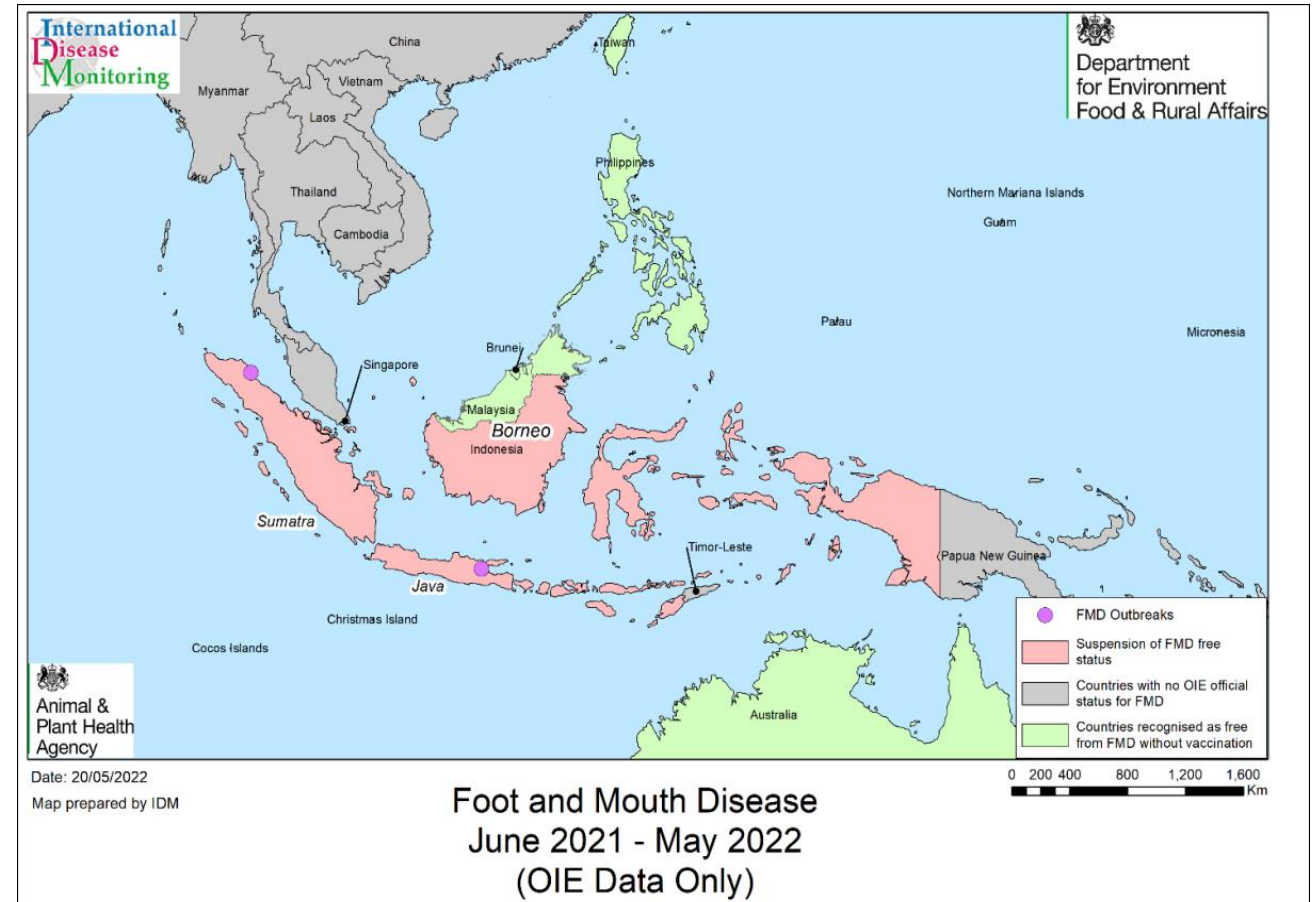


Mosquitoes are only infected when the animal they are biting is viraemic - which only lasts days



# Foot and Mouth Disease (FMD) Controls

- Wide scale **animal movement bans**
- **Communications** – full spectrum
- **High Consequences** – highly **joined up approaches**
- **Many tracings identified** – and robust action to be taken
- **Culling policy choices** – in close proximity to IP
- **Vaccine policy choices** for *some* strains — vaccinate “to live” or “to die”
- **Cleansing and disinfection and disposal**
- **Significant surveillance** activities before freedom





**Ministry of Agriculture Food and Fisheries (MAFF) One  
Page Street, Westminster, London, UK  
15th March 2001**



Unofficial







# Army Doctrine Publication AC71940

## Planning and the 7 Questions Estimate Process

### Plan

- 9-27. Planning determines the commander's initial balance of effort, within a framework of available time, resources and freedom of action. However, in a dynamic operating environment, pragmatic and flexible plans are more likely to be successful than those that are prescriptive. The commander needs to develop contingency plans to address other outcomes that could be foreseen, and must be poised to cope with the unexpected. Military planning is based on an estimate process.
- 9-28. An **estimate** is a logical process of reasoning by which a commander, faced with an ill-structured problem, arrives at a course of action to be taken to achieve the mission. Commanders at all levels use estimates appropriate to the complexity of the problems. The estimates used by the British Army all follow the same broad approach: continuous understanding of the situation; identification of outcomes, objectives and effects to be achieved; selection, resourcing and programming of a particular course of action; and preparation of orders. Depending on the nature of the problem, level of command and immediacy of execution, contingency and branch plans may also be produced for subsequent refinement.



# Question 1 “What is the actual problem?”

## Foot and Mouth Disease (FMD)

- **Found in all secretions and excretions** from acutely infected animals - and before other signs show
- **Virus can plume and travel vast distances** to be carried on wind
- **Trade/transport** of animals and their products can spread the disease. **Why no one wants to trade with you**
- **Contamination of inanimate objects** – eg a milk tanker’s tyres, drover’s footwear etc allows spread
- **Ingestion (by a susceptible species)** – of either contaminated feed/meat products



## Question 2

**“What is happening here, why and how can it be fixed”?**

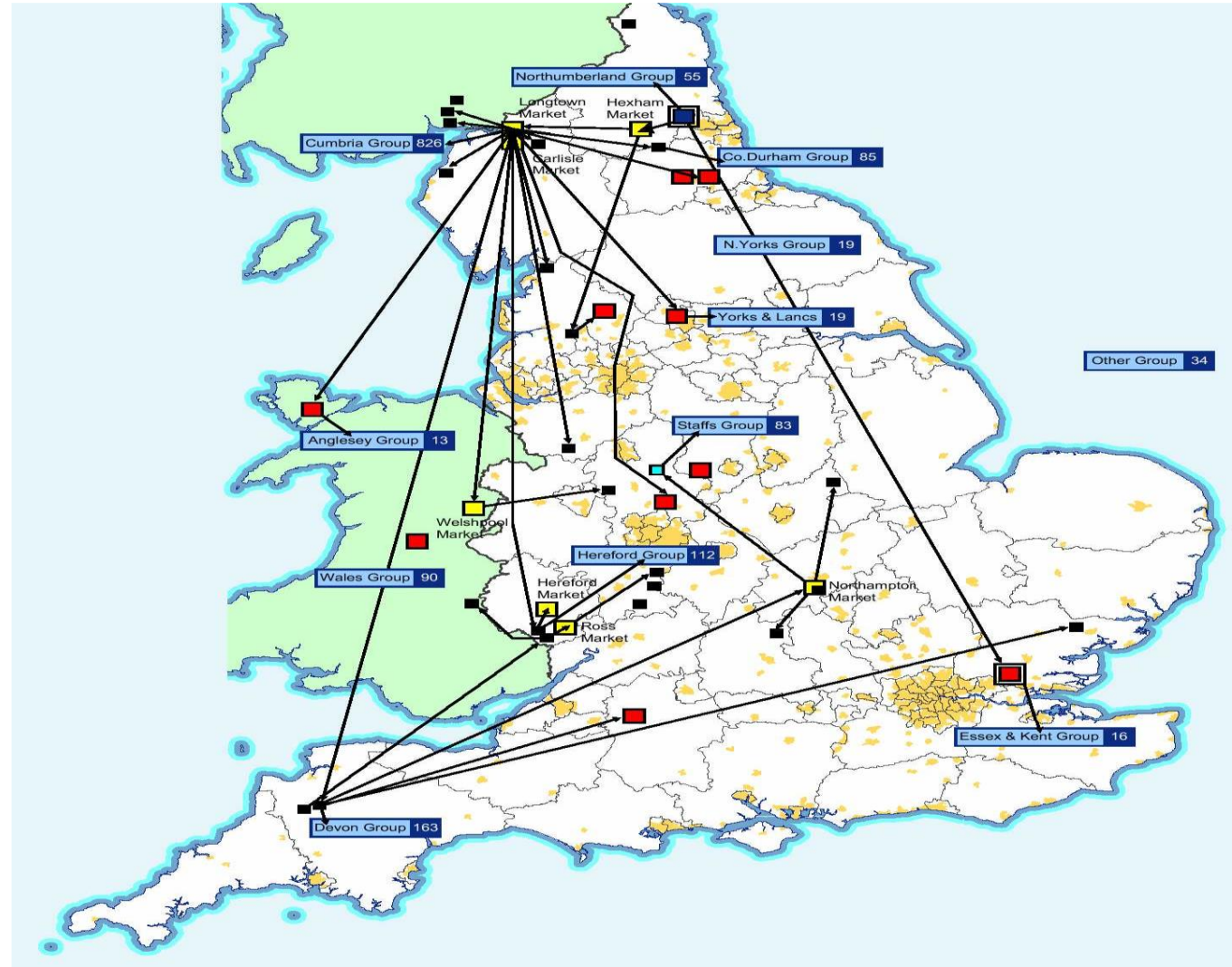


# Past UK FMD Outbreaks

- The previous large-scale outbreak of FMD was in **1967**
- Before that **1922, 1924, 1954**
- Disease detected on Isle of Wight in **1981** – viral plume blew across the English Channel – quick action was a huge success
- **2001** – The one that changed an Agriculture Department and Government
- **2007** – accidental release from FMD from a facility
- With **70%** of global livestock in endemic areas - **it will happen again – regularly - almost everywhere**



# Key Routes of UK spread of Foot and Mouth Disease (FMD) in 2001



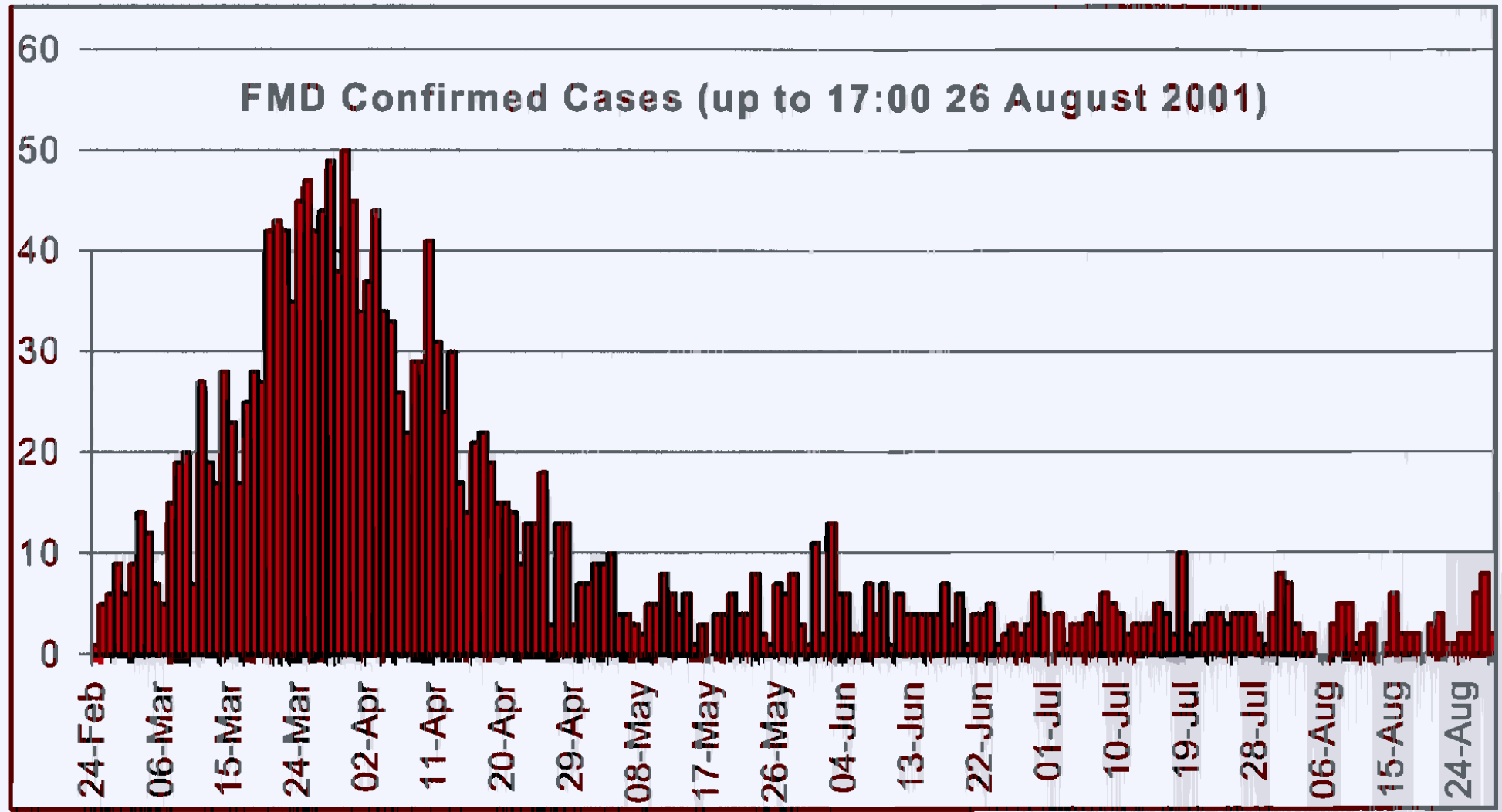
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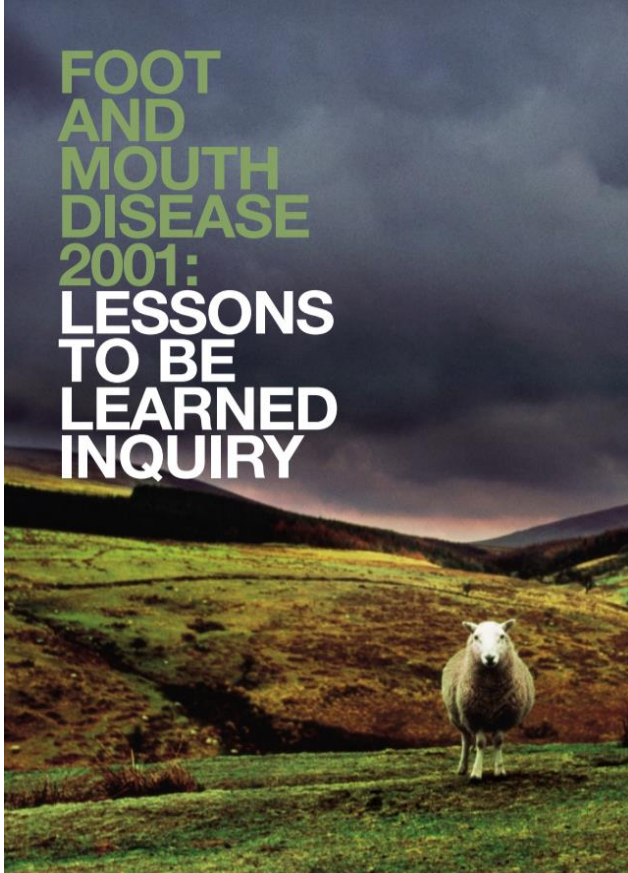
# Mobility - A means that allows the rapid spread of animal disease

## Example - Sheep movements within and into SE Australia









## UK FMD Lessons Identified Report 2022

- **A major lessons learnt report about an animal disease response**
- **The importance of structures**
- **Logistics to meet the requirements of planning**
- **! EXERCISES !**
- **Policy choice needs**
- **Focus on Animal Health in context of Government Crisis management**
- **Culture**
- **Thinking through scenarios in advance and preparing**



# Principles of Emergency Management: Animal Health, Public Health Emergencies And Disasters

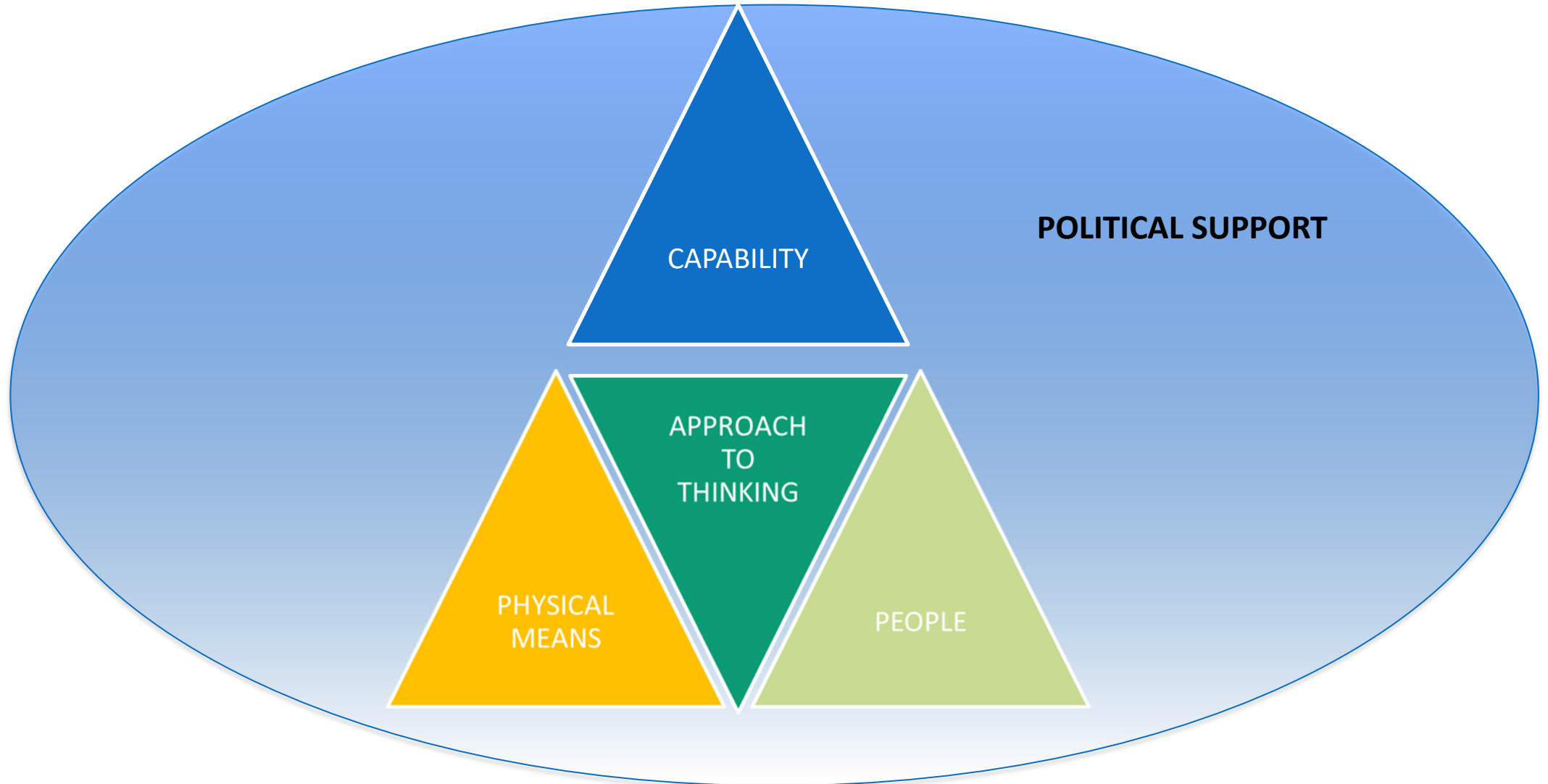
**EMERGENCY MANAGEMENT NEEDS PREPAREDNESS  
CAPABILITY**

*"By failing to prepare, you're preparing to fail" —*

**Benjamin Franklin**



# The principles and components of any capability





# INCIDENT MANAGEMENT STRUCTURE EXAMPLE



Figure 1: Incident Management Team structure



# PREPAREDNESS - The physical means (1)

## Levels of Preparedness

- **Adopt lessons learned** from other very large outbreaks i.e. Dutch 1997 CSF outbreak, Avian Influenza Outbreaks
- A lack of **ambition for speaking the truth about the resourcing and funding needed for the physical preparedness**
- **EXERCISES** - for enough people at enough levels
- **Raising known problems to higher levels**
- **Make time for preparing** – not absorbed into the “here and now” work i.e. BSE in 2001

## Personnel

- **Have ability to surge staff** - UK unprepared and had a say do gap
- **Have epidemiology trained staff** – lack leads to a poor understanding of the emerging picture for the key decision makers
- **Have a system of where to best allocate staff**
- **Know what contractors can do**



# PREPAREDNESS - The physical means (2)

## Performance

- **Contingency planning needs ownership** - had been spread across too many teams - not centralised– confused
- **Fill the well-known gaps in policy** - not let drift in discussions
- **Delegate to the affected regions – centralisation can lead to overloading and inefficiency**
- **Use early time well** (UK 3 days delay until introduction of a livestock standstill - added up to 50% more cases !)

## Equipment

- **Do not fixate on sticking to old plans an old ways** i.e. pyres
- **Have basic IT systems that speak to each other**
- **If modelling resources exist – use them in advance**



## **PREPAREDNESS** - The approach to thinking (1)

- **“ Decision Cycles” can overload the leadership** - Hierarchical ‘pursuit of perfection’ approval culture caused poor outcomes (OODA loops)
- **Avoid large “Committees Approach” to decision making** – reducing speed and risk appetite and lack of bold direction
- **Link into the Central Government Crisis system** – earlier the better
- **Make Biosecurity part of National Risk Register** – so a core government focus is already in place
- **Agriculture and Animal Health should not be culturally siloed from other government areas** – especially from other Emergency Management areas



## **PREPAREDNESS** - The necessary thinking

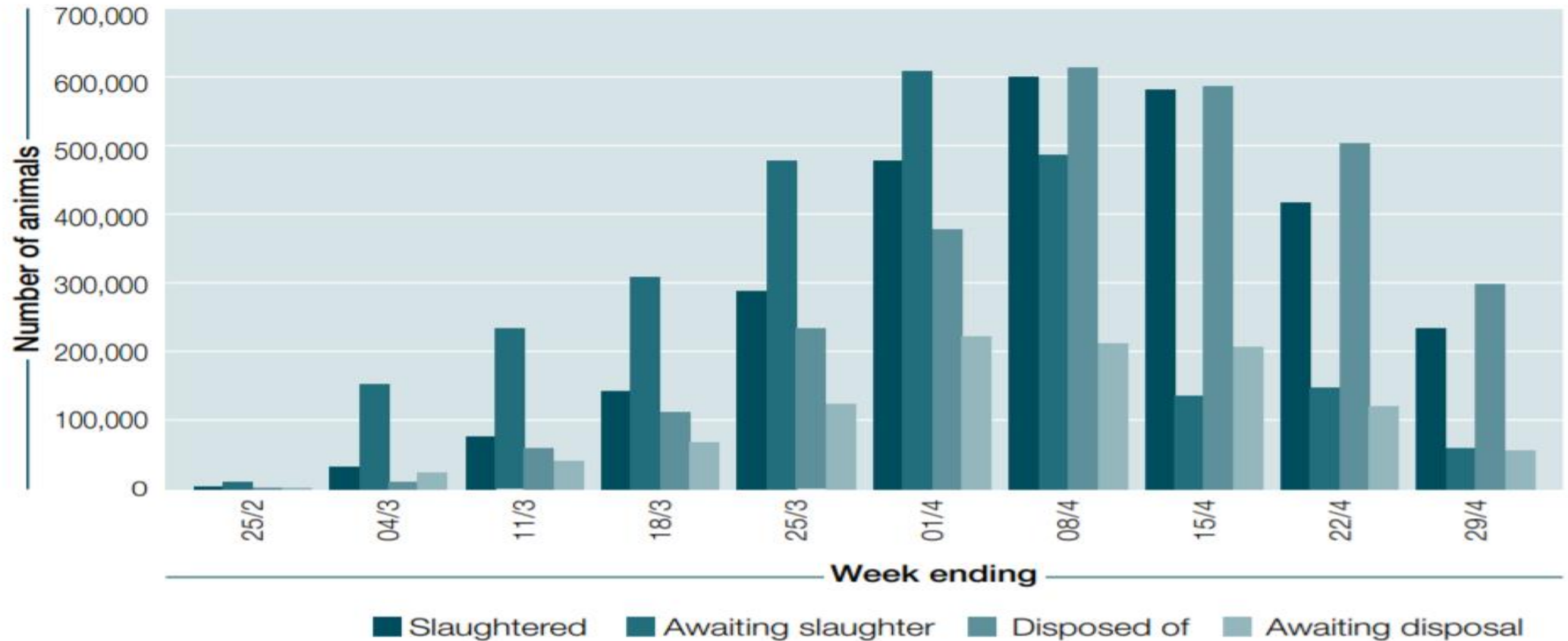
- **Political Support”** should be in place early – from before the event
- Establish a **“Joint Coordination Centre”** approach from start – to coordinate the many response components. Especially when needed with Dept of Health colleagues
- **Ensure Staff annual work objectives** give staff the time needed everyday to make important changes needed
- **Avoid Runaway messaging - Avoid careless messaging - But Important Messaging must be repeated often**
- **Match plans – with the logistics needed**







## 12.2.1 Slaughter and disposal of animals



The backlog of slaughtering and carcasses awaiting disposal is shown in chart 12.2.1. By 1 April, at the peak, 622,000 animals were awaiting slaughter and 230,000 were awaiting disposal.



## PREPAREDNESS - The people component

- **If possible, avoid paper transfers of Data and have common standards -** greatly delays decisions
- **Avoid an isolated overloaded leadership -** unaware of problems on the ground made overly optimistic statements - **leading to a loss of trust**
- **If other departments asked to provide staff – avoid a “say do gap”**
- **Have a movement permitting system in place -** businesses need to be able to carry on
- **Be aware that Comms effort will take a lot of time - resource it properly**
- **Beware of increasingly crowded comms space**



# MODERN COMMUNICATIONS – FRIEND AND FOE



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# Industrialised approach to stamping out disease

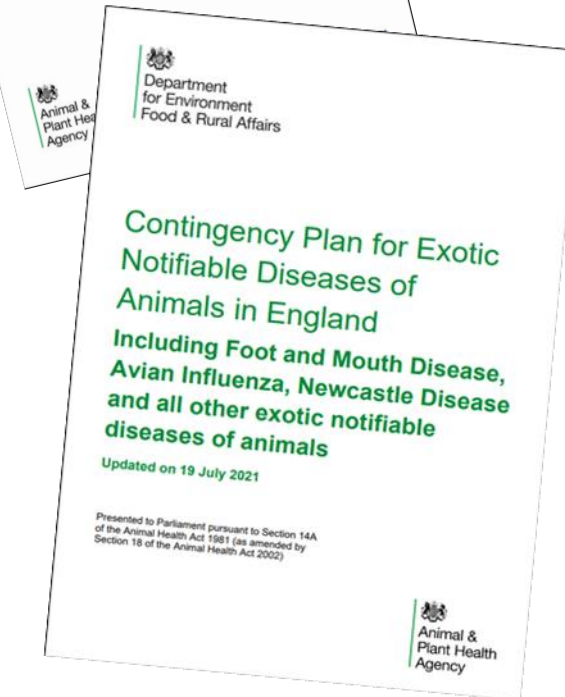
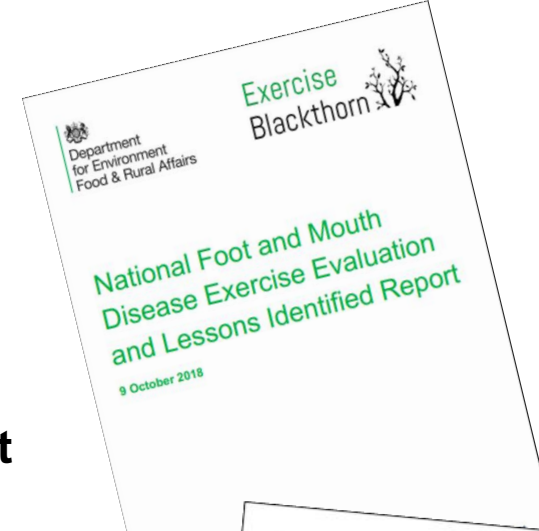


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# LEGACY

- **National Movement Standstill ASAP – Quick Bold decisions**
- **Legal need for two large Agriculture EXERCISES at least every 5 years – reported on to parliament**
- **Comprehensive Strategy devised that understood by all**
- **Much bigger Epi and Risk teams**
- **Agriculture made part of National Resilience thinking**
- **Immediate Joint Coordination EM Centre thinking (esp Health)**
- **Biosecurity Contingency planning centralised**
- **Flatter culture and SMEs having their say**
- **Agriculture built relationships across government**
- **Ministers Biosecurity updates including preparedness**





## EMERGENCY MANAGEMENT PRINCIPLES

- **Clearly dedicate people and time to the elements of preparedness**
  - Perfection cannot be the enemy of the good
  - Know how to scale up and resource (procurement etc)
  - Identify the needs before and act on them
- **Have a structure that both clarifies responsibilities but also coordinates**
  - Use a nationally recognised Emergency mindset that can expand
  - Make bold directional decisions early but make them know why and what exit is
  - Empower people to move things forward
- **Have EXERCISES and adopt the lessons learned**
  - Fail early, learn fast !
- **In an emergency response be clear early what the objective is**
  - Communicate clearly internally and externally – over the long time they last
- **Have a daily structured regular rhythm of cross briefing – “Driving a Battle Rhythm”**
  - A means of collecting and passing the situational information to the leadership
- **Have a leadership that is prepared to decentralise Operations and Decisions**



## PREPAREDNESS

- **"Success depends upon previous preparation, and without such preparation, there is sure to be failure"**

*Confucius*

- **"There's no harm in hoping for the best as long as you're prepared for the worst."**

*Stephen King*

- **"*Hope is not a plan*"**

*Anon*

- **"All things are ready, if our mind be so."**

*William Shakespeare*







**Thank you**

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