



Management of animal health and welfare issues during disasters

Ashish SUTAR

7-Nov-2025

Capacity building coordinator
WOAH SRR SEA



World Organisation
for Animal Health



- Introduction to principles and key concepts of disaster management
- WOAAH initiatives on emergency management
- Overview on disaster preparedness: how veterinarians and animal owners can be prepared?
- Application of concepts in practice : lessons from past disasters.
- Summary





Section 1

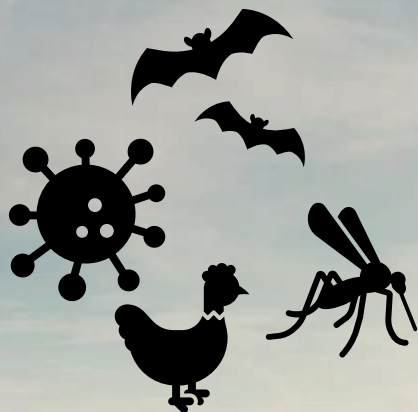
Principles of emergency management



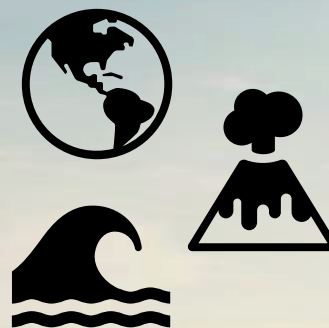


Hazards, whatever their nature is, have the potential to affect society as a whole, and animal health sector is no exception.





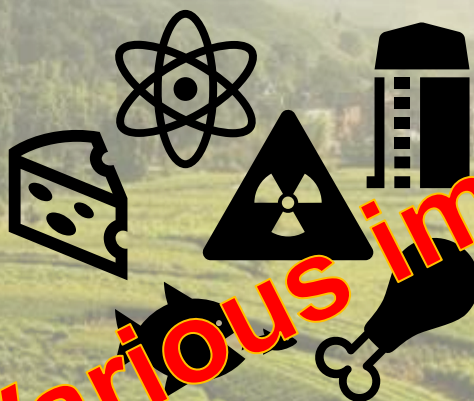
Infectious diseases, including emerging zoonoses and vector-borne pathogens



Geological events: earthquakes, volcanoes and tsunamis



Adverse weather and climatic events: storms, floods, fire and drought



Technological disasters and contamination of food and feed chains



Transport and maritime accidents, including oil spills



Agro-crime, agro-terrorism, cybersecurity, conflict, refugees

Various impacts on animal health and welfare



Disaster (Definition)

6

Disaster means “ **a serious disruption of the functioning of a community or a society** involving widespread human, material, economic or environmental losses and impacts which exceeds the ability of affected community or society to cope using its own resources”.

Disaster Risk Management (DRM): The systematic process of using administrative directives, organisations, and **operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts** of hazards and the possibility of disaster.

Disaster risk reduction (DRR) is the **concept and practice of reducing disaster risks** through systematic efforts to analyze and reduce the causal factors of disasters.





Common terminologies

7

Risk the potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

Hazard means a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Vulnerability The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

Exposure People, property, systems, or other elements present in hazard zones that are there by subject to potential losses.

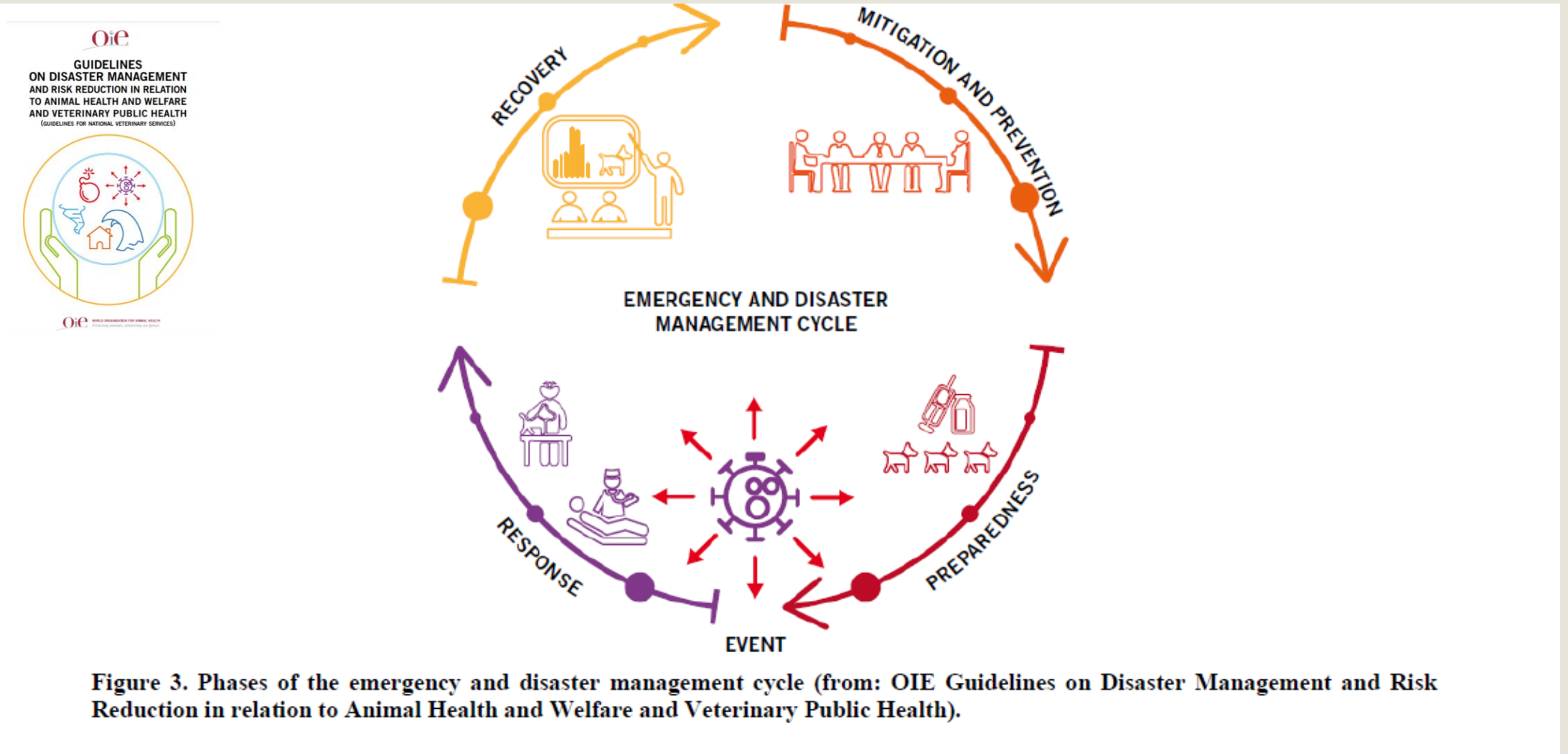
Resilience means 'the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient.





The Emergency and Disaster Management Cycle – a Planning Tool

8



PREPAREDNESS means ‘a state of READINESS and CAPABILITY of human and material means, structures, communities and organisations enabling them to ensure an effective rapid response to a disaster, obtained as a result of action taken in advance’. (EU Civil Protection Mechanism, 2013)

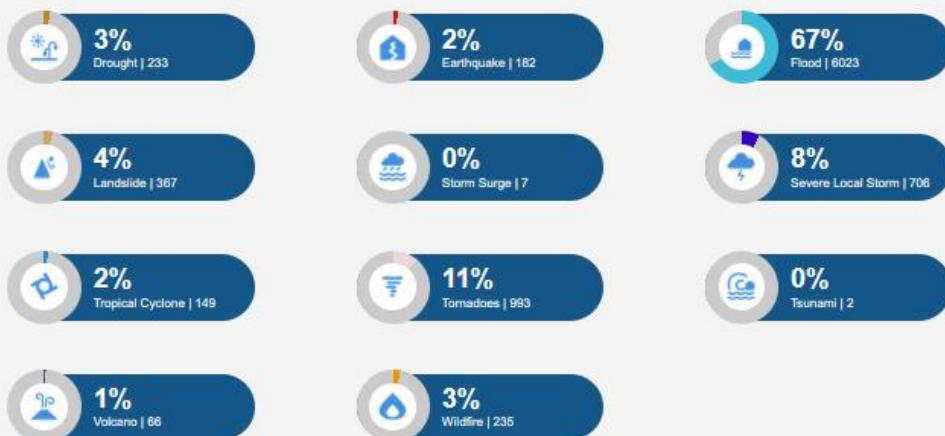
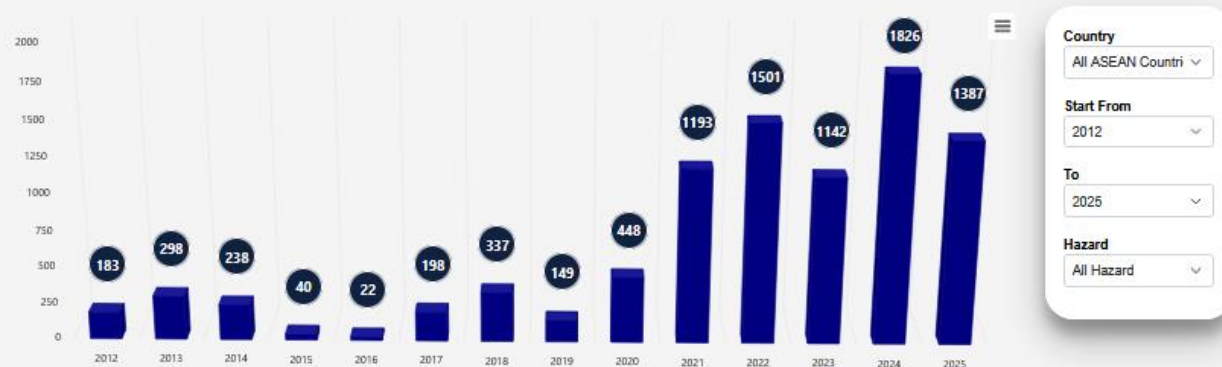


Summary of Disaster Events in SEA

9

DISASTER BY THE NUMBERS IN THE ASEAN REGION

2012 TO PRESENT



- ☐ Brunei Darussalam
- ☐ Cambodia
- ☐ Indonesia
- ☐ Lao PDR
- ☐ Malaysia
- ☐ Myanmar
- ☐ Philippines
- ☐ Singapore
- ☐ Thailand
- ☐ Viet Nam



1.7K
Disaster Events



4.9K
Dead



40M
Affected Person



2.2M
Displaced Person



85.8K
Damaged Houses

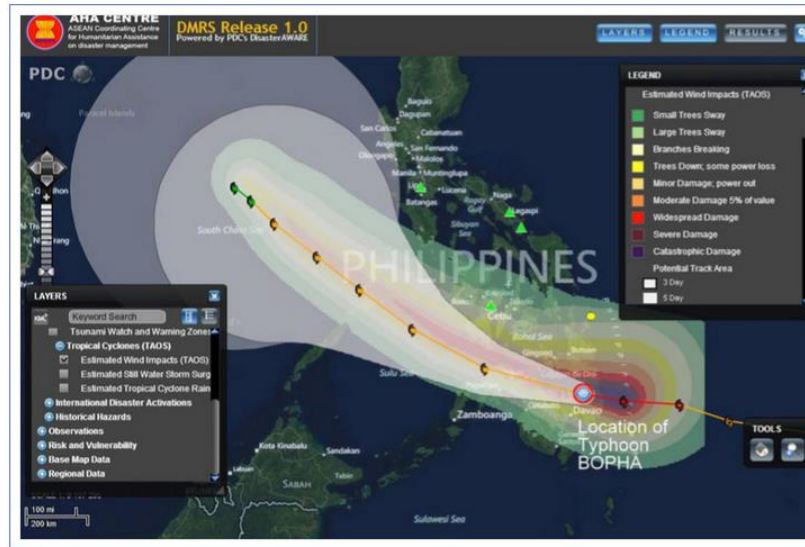


2.1B
Cost Damage (USD)

Source: <https://adinet.ahacentre.org/>



Disaster Monitoring & Response System (DMRS)



The Disaster Monitoring and Response System (DMRS) of ASEAN is one of the disaster monitoring tools utilised by the AHA Centre. The tool was designed in partnership with the Pacific Disaster Center (PDC), an applied science and information centre based in Hawaii, with the support of the Government of the United States of America. DMRS receives constant information feeds from the PDC system. It shows real time information of the hazards in the region as they happen, as well as hydrometeorological data, such as wind direction and speed,

The ASEAN Disaster Information Network (ADInet)



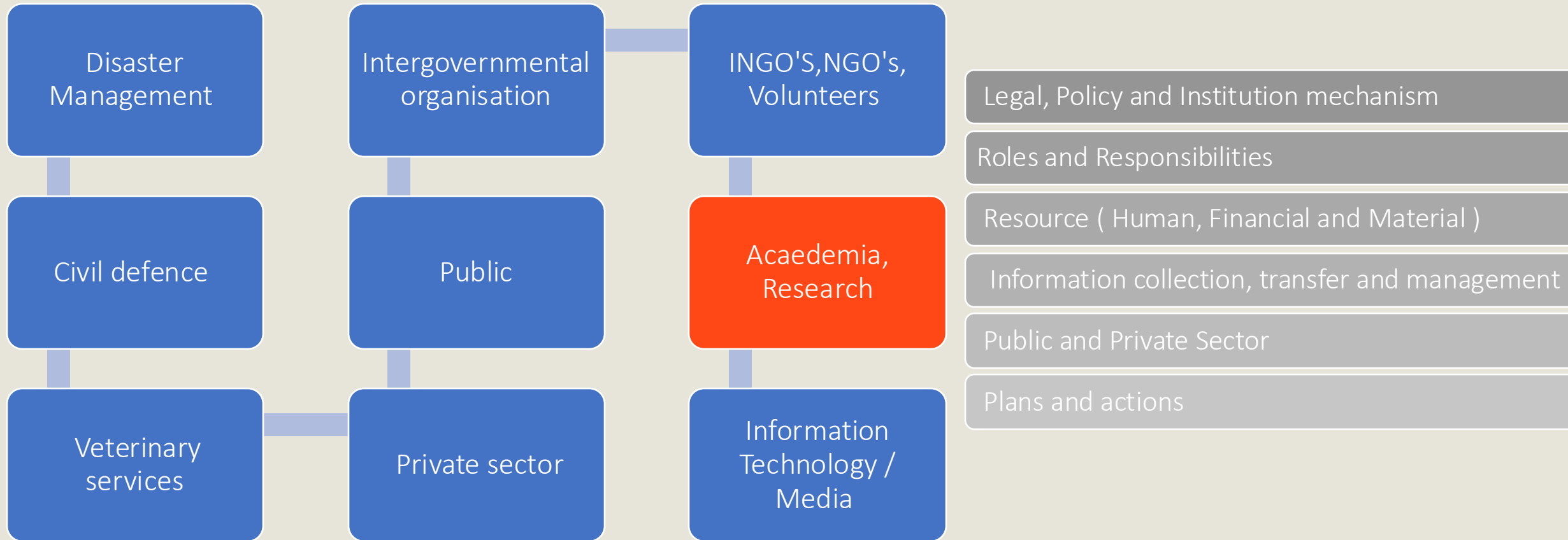
The ASEAN Disaster Information Net ([ADINET](https://ahacentre.org/disaster-information-management-2/)) is a repository of information concerning hazards and disasters that have happened in the region. The platform is open for public, which means that the public can submit information about any hazard and disaster to the AHA Centre. Thereafter, the AHA Centre will verify and validate any submitted information to ensure the accuracy of the data inputs. The AHA Centre can also add new information when relevant and as necessary. ADINET has been recording disaster information in the region since

Source : <https://ahacentre.org/disaster-information-management-2/>



Animals in disasters – stakeholder involved (+ add local context)

11





Disaster assessment

Deployment

Operation

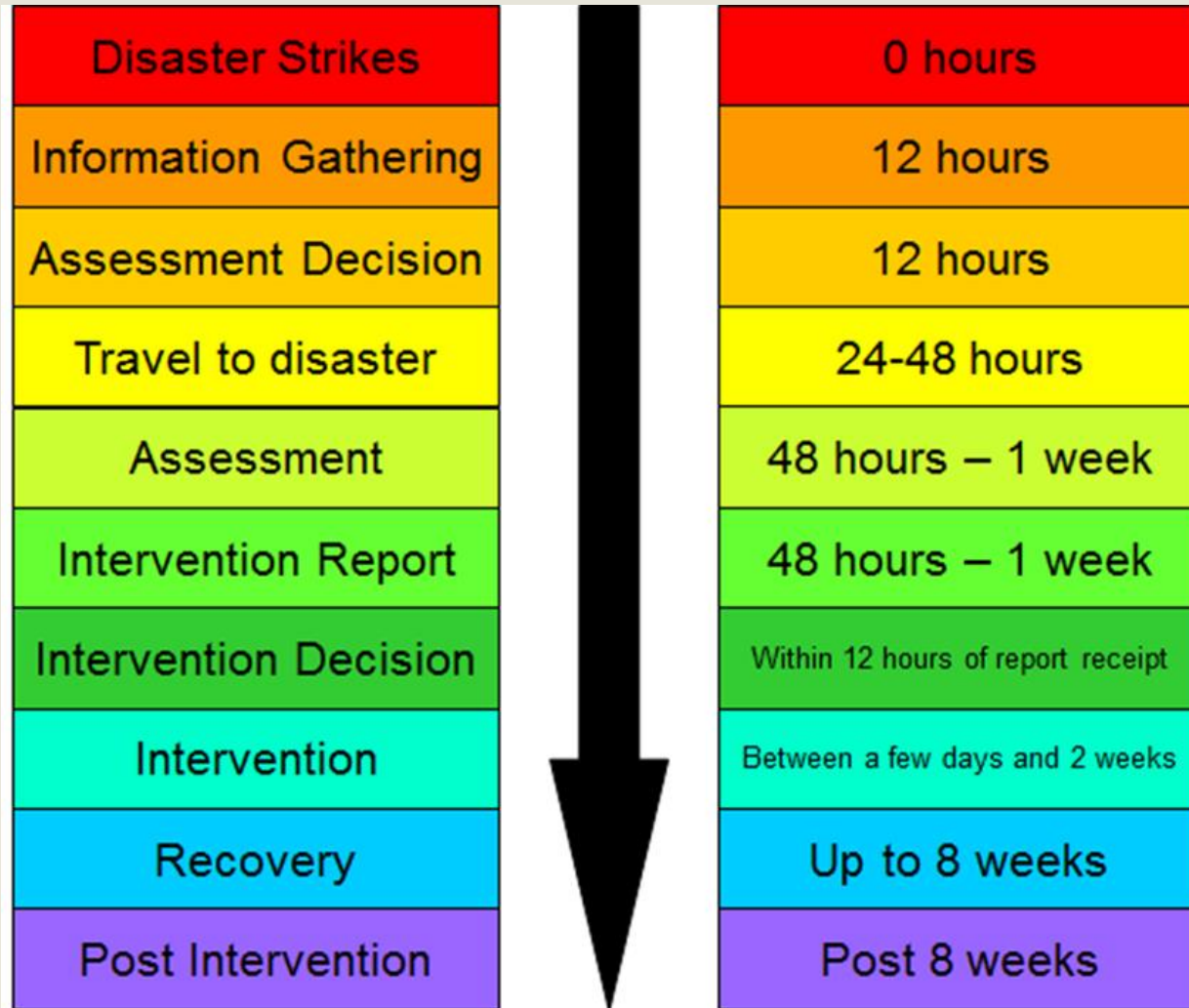
Post Intervention





Tentative timelines in disaster assessment and response

13



The ideal situation!!!!

**But every disaster is different
and so the local context**



Section 2

WAOH initiatives on emergency management



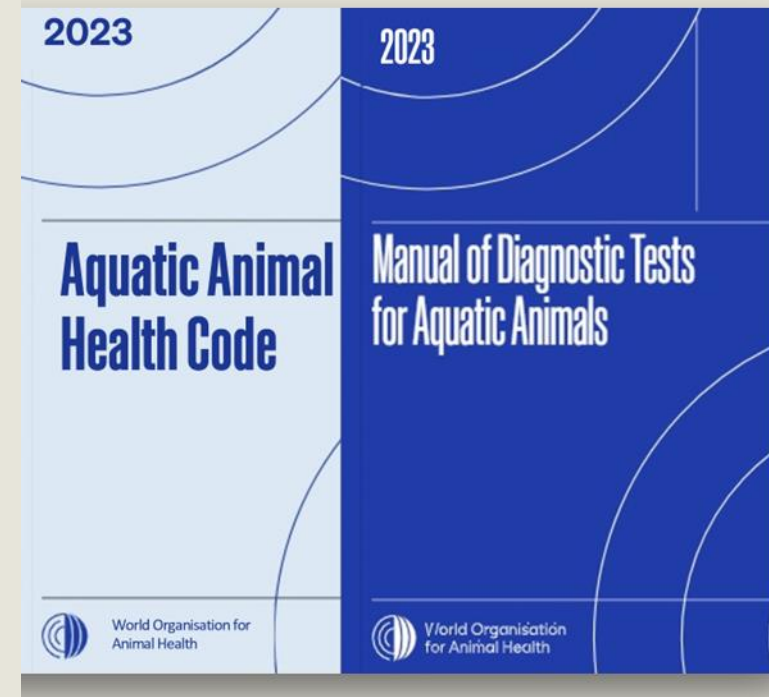
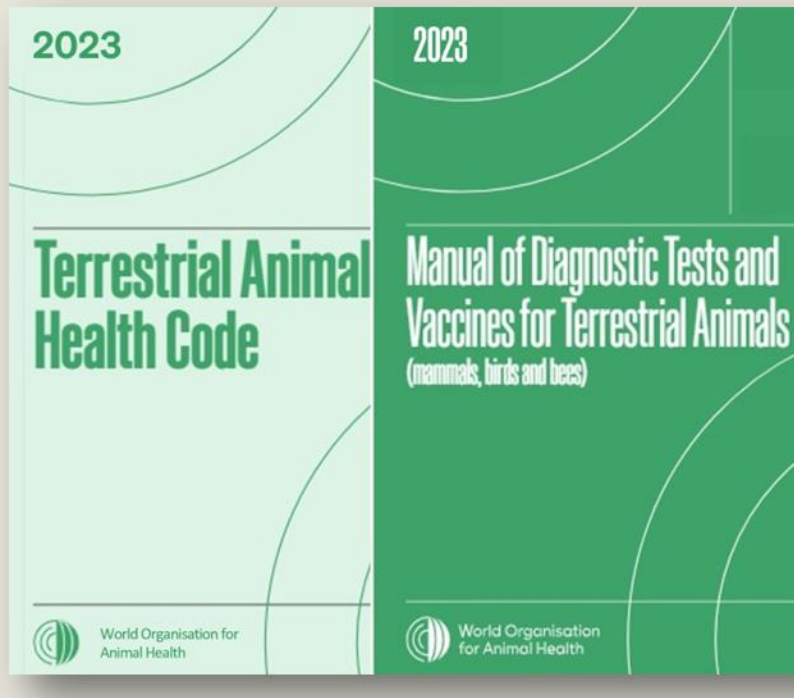


WOAH Standards and Manuals

15

Improvement of animal health, welfare, veterinary
public health
Safe international trade in terrestrial and aquatic
animal health

Standardised approach to the diagnosis of the
diseases listed in the Terrestrial and Aquatic
Codes.



Technical Item - Resolution 28 (GS 2022)

89th General Session World Assembly Oie
World organisation for animal health Paris, 23-26 May 2022

<https://doi.org/10.20506/bull.2023.1.3394>

SG89/8

Original: English

WORLD ORGANISATION FOR ANIMAL HEALTH, VETERINARY SERVICES AND AQUATIC ANIMAL HEALTH SERVICES ENGAGEMENT IN GLOBAL, REGIONAL AND NATIONAL EMERGENCY MANAGEMENT SYSTEMS

Matthew Stone¹, Daniel Donachie², Chadia Wannous², Keith Hamilton²

¹ SPADE Solutions Ltd, Wellington, New Zealand
² World Organisation for Animal Health, Paris, France

Executive Summary : Avian influenza, Ebola, African swine fever and COVID-19 epizootics, epidemics and pandemics in recent years have highlighted infectious diseases emergencies affecting public health and animal health. Emergencies from adverse weather events are expected to increase in frequency and severity driven by climate change.

A wide variety of other hazards, natural and man-made, have demonstrated their potential to evoke emergencies with impacts that require a coordinated One Health approach. Veterinary Services and Aquatic Animal Health Services have an important role to play in prevention, preparedness, response and recovery for these events, working with One Health partners, the Security Sector and Emergency Services, and this works best when coordinated through a National Emergency Management System. Emergency management uses specific disciplines and is increasingly organised in national, regional and global systems that the World Organisation for Animal Health (OIE) and its Members must become expert in and integrated into.

This paper describes the current global context and systems for emergency management, identifies and characterises threats, describes planning approaches and tools, discusses the range of objectives that must be balanced, and introduces the emergency management disciplines. OIE's expanding programmes and services to Members to develop emergency management capacities are summarised, with conclusions drawn that will shape future directions.



Global Conference on Emergency Management (3-5 April 2023, Paris, France)

April 2023



Calls for Action

Multisectoral and international cooperation to mitigate biological threats, whether natural, accidental or deliberate, has improved. However, gaps remain and further progress and support is needed across all of society and government including to take the One Health approach.

There should be universal recognition of the benefits of investing in the emergency management capacity of Veterinary Services and Aquatic Animal Health Services, and that further efforts are needed to strengthen the functional relationship between health and other sectors, such as security (including Law Enforcement).

Greater efforts should be made to adopt an inclusive and sustainable all-hazards approach to emergency management through education, planning, partnerships and networks, and resources.

FAIR* and open access to data and scientific evidence are required to support national, regional and international epidemic intelligence and emergency management systems.

The process of mobilising, prioritising and receiving resources should be better integrated into emergency preparedness (e.g. contingency planning and exercising), and resource mobilisation mechanisms need to be fit for purpose to ensure timely response, whilst being able to adapt to opportunities and local needs.

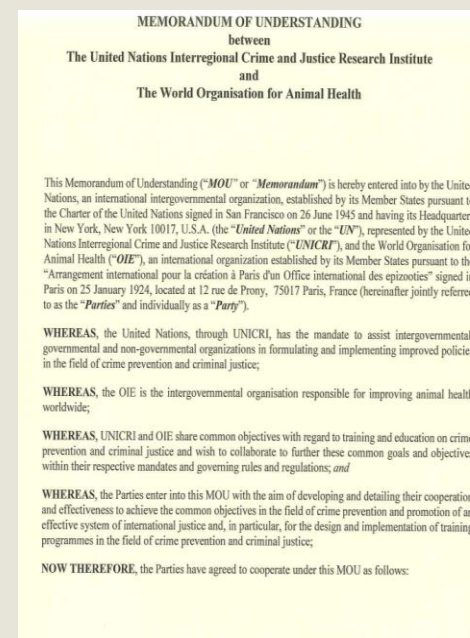
Emergency management must keep up to date by anticipating new challenges including cybersecurity, misinformation and disinformation, and by learning from preparedness activities and real events.

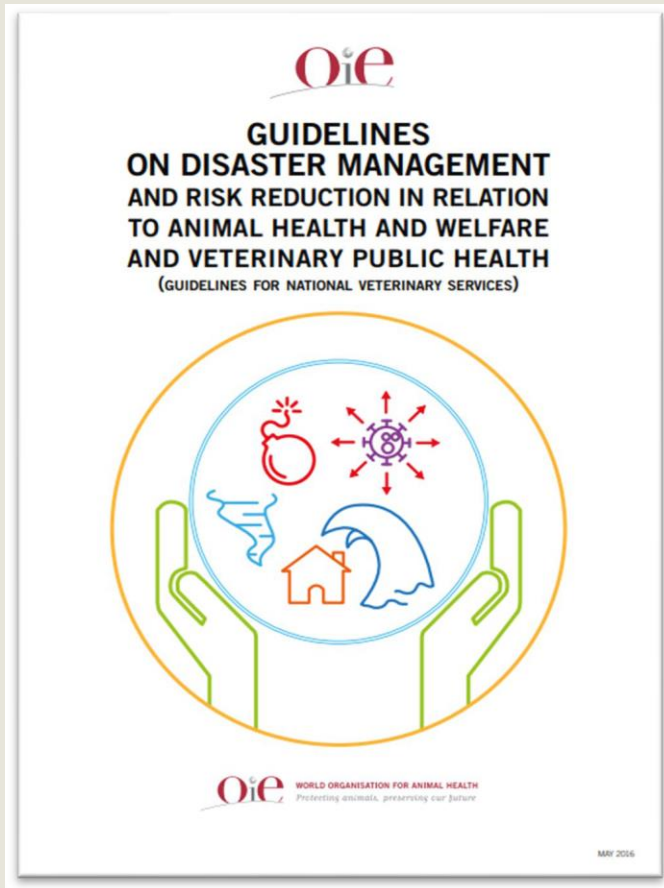
*Findable, Accessible, Interoperable, Reusable



World Organisation
for Animal Health
Founded as OIE





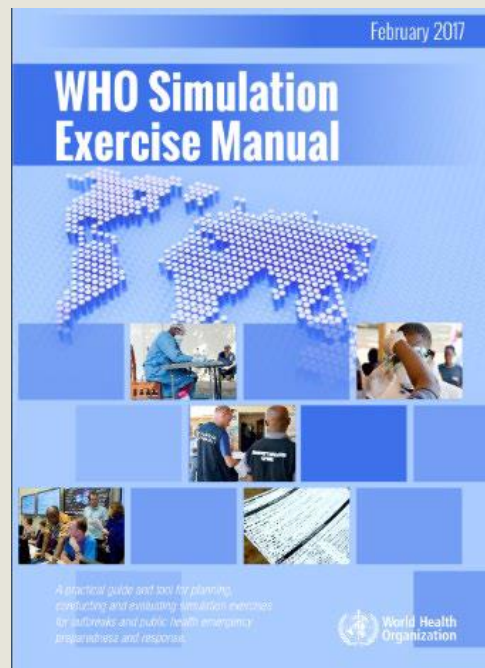
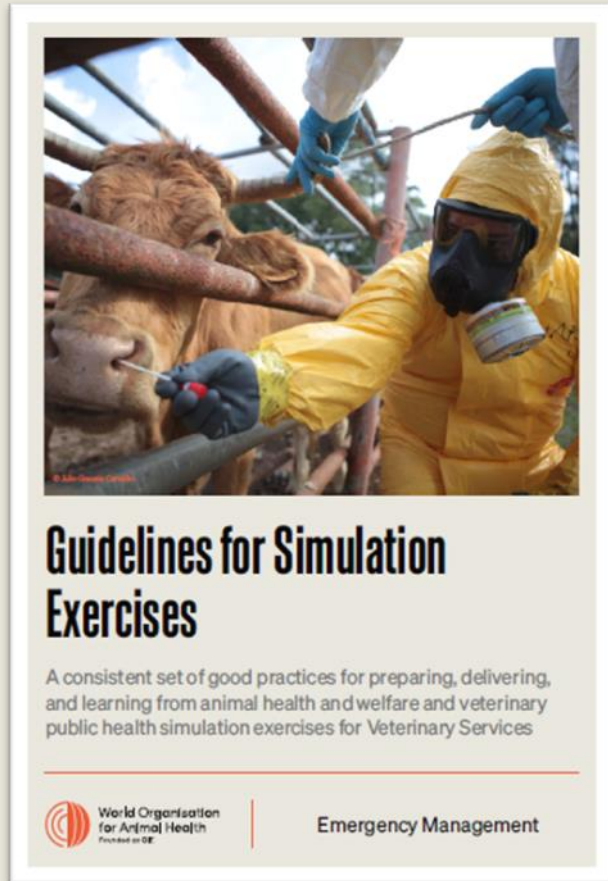


Disaster Management and Disaster Risk Reduction plans should be dynamic and in a continual process of development as hazards, technologies, legislation and standards evolve.



Guidelines on simulation exercise

19



Several simulation exercise manuals already but limited guidance for Veterinary Services

- Developed by the **WOAH *ad hoc* Group on Veterinary Emergencies** and published in 2020
- Goal: **Strengthen the capacity** of WOAH Members for preparedness against **all hazards** through a set of simulation exercise **good practices**
- Aim to be **scalable** and **adaptable**. Encourage **multi-sectoral collaboration** and be applicable to a wide target audience. Align with other frameworks and resources



- [Regional Workshop for Focal Points of Communication in Asia and the Pacific \(Nov 2024\)](#)

- training in risk communication concepts in the context of animal health and related disease emergencies.
- misinformation and disinformation
- prevent, prepare for and respond to infodemics





II-5. EMERGENCY PREPAREDNESS AND RESPONSE

DEFINITION

The authority and capability of the VS to be prepared and respond rapidly to a sanitary emergency threat (such as a significant disease *outbreak* or food safety emergency).

LEVELS OF ADVANCEMENT

1. The VS have no field network or established procedure to determine whether a sanitary emergency threat exists or the authority to declare such an emergency and respond appropriately.
2. The VS have a field network and an established procedure to determine whether a sanitary emergency threat exists, but lack the legal and financial support to respond effectively. The VS may have basic emergency management planning, but this usually targets one or a few diseases and may not reflect national capacity to respond.
3. The VS have the legal framework and financial support to respond rapidly to sanitary emergency threats, but the response is not well coordinated through an effective chain of command. They have national emergency management plans for some exotic diseases, but they are not updated/tested.
4. The VS have the legal framework and financial support to respond rapidly to sanitary emergencies through an effective chain of command (e.g. establishment of a *containment zone*). The VS have national emergency management plans for major exotic diseases, linked to broader national disaster management arrangements, and these are regularly updated/tested such as through simulation exercises.
5. The VS have national emergency management plans for all diseases of concern (and possible emerging infectious diseases), incorporating coordination with national disaster agencies, relevant *Competent Authorities*, producers and other non-government stakeholders. Emergency management planning and response capacity is regularly tested, audited and updated, such as through simulation exercises that test response at all levels. Following emergency events, the VS have a formal 'After Action Review' process as part of continuous improvement.

I-9. EMERGENCY FUNDING

DEFINITION

The capability of the VS to access extraordinary financial resources in order to respond to emergency situations or newly emerging issues, as measured by the ease with which contingency and related funding (i.e. arrangements for compensation of producers in emergency situations) can be made rapidly available when required.

LEVELS OF ADVANCEMENT

1. No emergency funding arrangements exist.
2. Emergency funding arrangements with limited resources have been established, but these are inadequate for likely emergency situations (including newly emerging issues).
3. Emergency funding arrangements with limited resources have been established; additional resources may be approved but approval is through a political process.
4. Emergency funding arrangements with adequate resources have been established; their provision must be agreed through a non-political process on a case-by-case basis.
5. Emergency funding arrangements with adequate resources have been established and their rules of operation documented and agreed with interested parties.



WOAH Incident Management System (IMS)

22

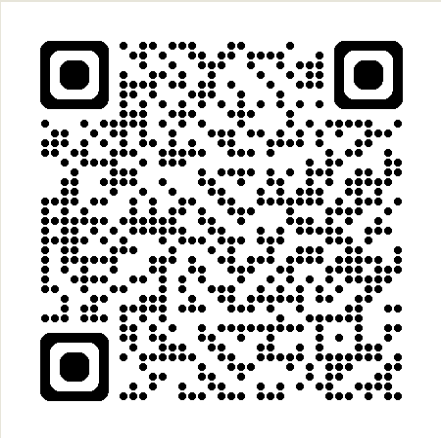
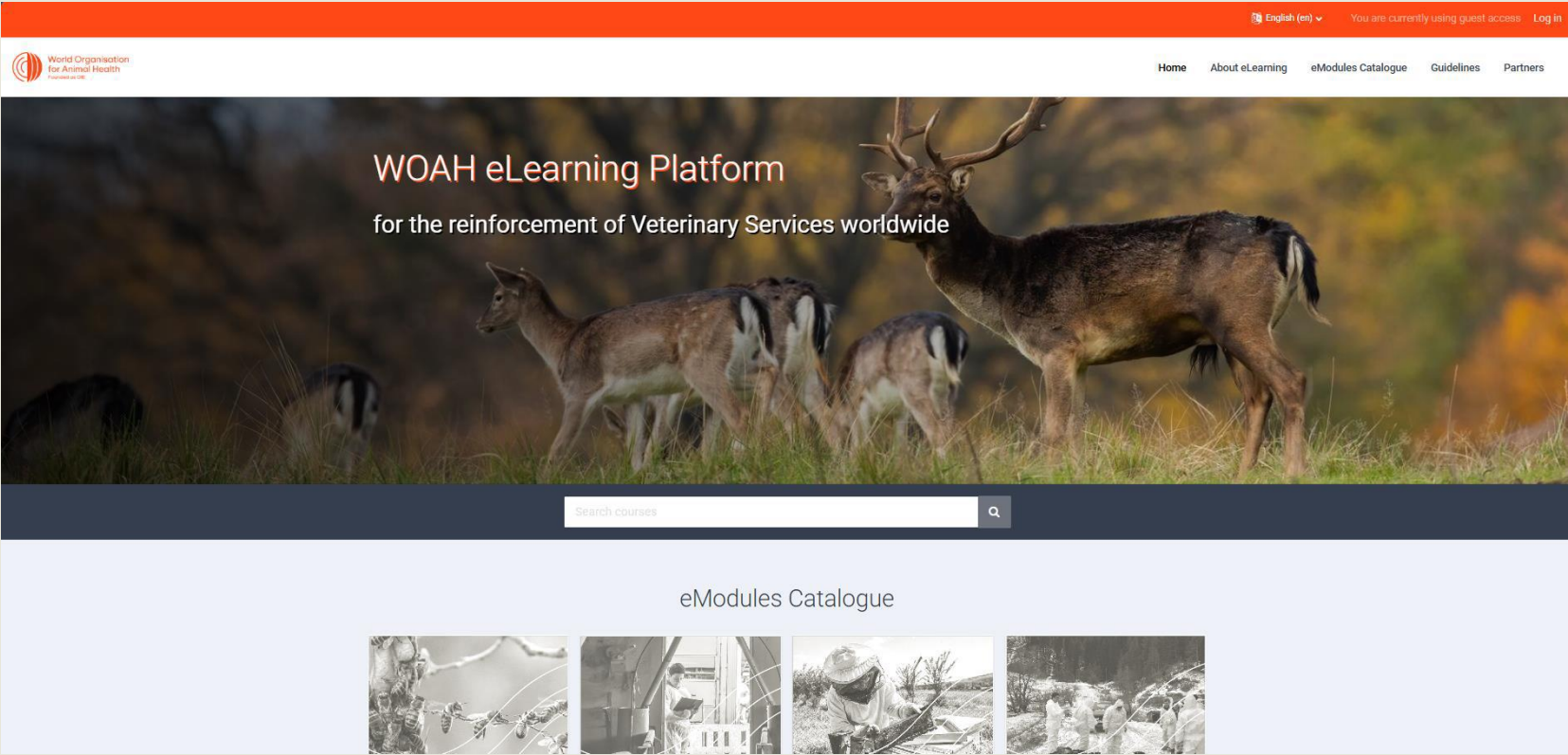
Incident management consists of processes, decisions and actions aimed at resolving incidents and supporting recovery

DRAFT Policy

**Incident Management System:
Responding to significant incidents**

Version: 0.7
Version Date: 24/10/2024

The WOAHSIMS takes an **all-hazards approach**, **builds on past experiences** and **supports WOAHSIMS, its Members and Partners** during international emergencies





Introduction Emergency and Disaster Management

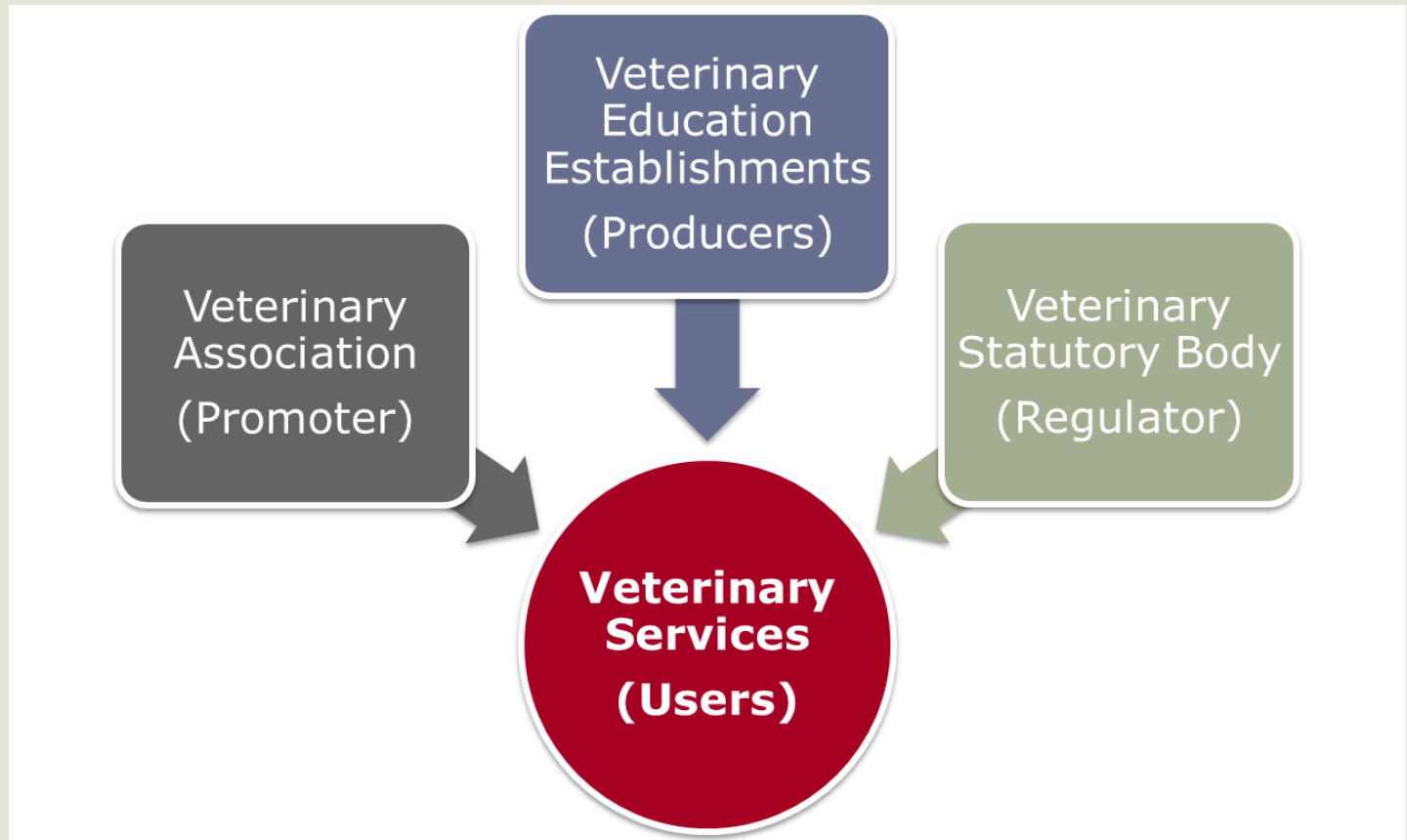
PDF Description:

Leadership Module

e-module title	Education level
Introduction to emergency and disaster management	Day 2
Planning for emergencies and disasters	Day 2
Planning for emergencies and disasters	Expert
Emergency and disaster response	Day 2



Veterinary education serves as the foundation for the delivery of effective Veterinary Services (both public & private sectors).

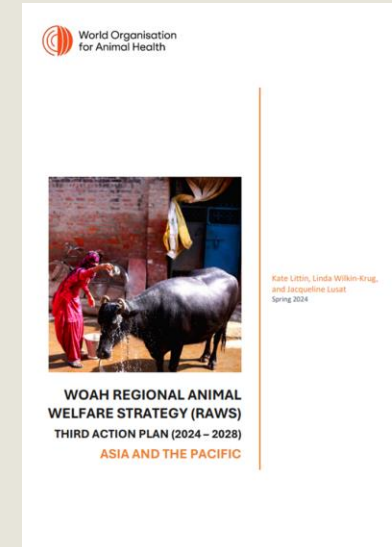




- Platform for animal welfare in Europe
 - [welfare of animals in disasters](#) (since 2017 ,second action plan)
- [EmVetNet](#) : WOAHA Collaborative Centre Network on Veterinary Emergencies



Regional Animal Welfare Strategy (RAWS)



IMPACT

(long term objectives)

Stronger regional animal welfare achieved via standards development, capacity building, and education



WOAH Sub-Regional Workshop on Emergency Management

14-16 August 2024

Bangkok, Thailand

Action plan/Recommendations

- Recommendations for Members:

1. **Elevate regional cooperation and coordination** to effectively prevent, prepare for, respond to, and recover from future animal health emergencies. This could include information sharing on animal health risks and hazards thereby enhancing situational awareness, cross-border cooperation, and strengthening the early warning system.
2. **Improve data sharing and utilisation** within the region including **World Animal Health Information System (WAHIS)** reporting and follow-up and leverage other data to strengthen early warning systems for animal health emergencies including natural disasters.
3. **Establish a Community of Practice** (individuals or organisations that share a common interest or expertise) **across the subregion with a focus on sharing best practices, improving preparedness and response to agricultural emergencies.**
4. **Build relationships** between **Veterinary Authorities and National Emergency Management agencies**, including disaster management, law enforcement and the private sector, to enhance efficiencies of emergency responses and ensure animal health considerations are integrated into broader emergency plans.



One of the recommendations of the meeting is **to build relationships between Veterinary Authorities and National Emergency Management agencies, including disaster management, law enforcement and the private sector, to enhance efficiencies of emergency responses and ensure animal health considerations are integrated into broader emergency plans.**



Ongoing activities (Global and regional)

27

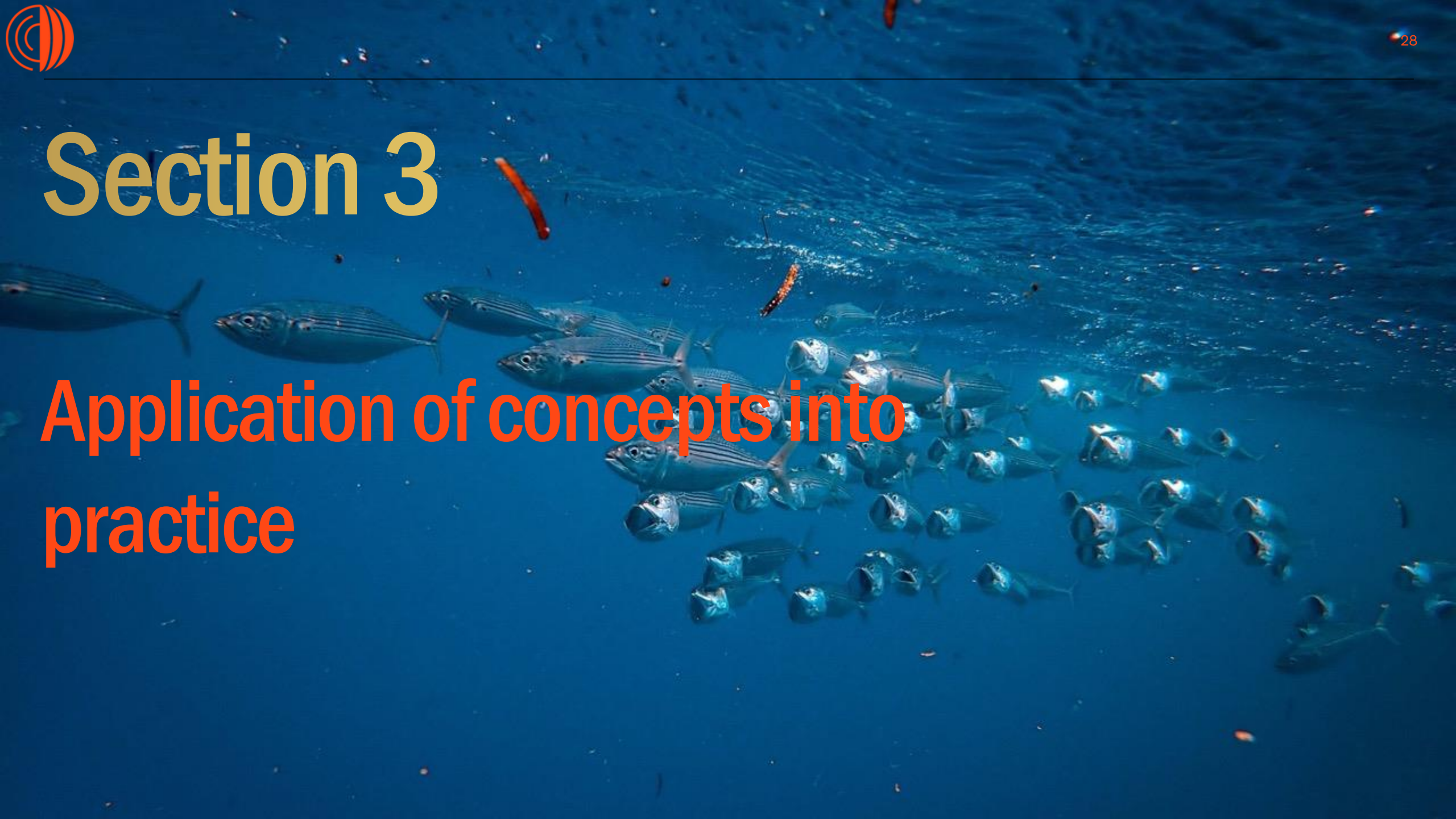
- **Emergency management standards:** Development of Chapter on emergency management,
- **Guidance for national incident management systems :**Ad hoc Group on Veterinary Emergencies,
- **Advocacy and whole of government response to emergencies** Academic study to identify and develop solutions to better engage Veterinary Services in whole-of-government frameworks for emergencies (2024-2025),
- [WOAH e-learning platform](#) : E-module on CP-6 emergency management and CP-7 animal welfare [CP- Competency Package],
- Training Workshop on How to conduct simulation exercise 10-12 Dec,2025 in Manila, Philippines.
- Training on leadership in Veterinary Services





Section 3

Application of concepts into
practice





Coordination is essential for the effective disaster response

- Differentiation between theoretical knowledge and its practical application
- Incident command system
- Common language
- Leadership gaps
- Data availability
- Resource management
- Communication



Safety and security

- Protect team, ensures operational continuity and maintain morale

Risks

Physical hazards,
Security threats,
Health risks,
Psychological stress

Preparedness

Risk assessment-
identify risks-Risk
management – PPE,
communication tools

Response

Follow safety,IMS
protocols, Work in
teams, mental health
support,



Training and refresher training on safety, security, leadership ,negotioan, resource management etc.



Lessons learnt

31

- Information keep changing
- Resource shortages
- Physical and mental stress "Everyone"
- Local support – situation awareness and remote assessment, validation of information available in public
- Access to the area for assessment and response
- Incident Management System
- Inter -agency coordination
- Mixed communication, rumours



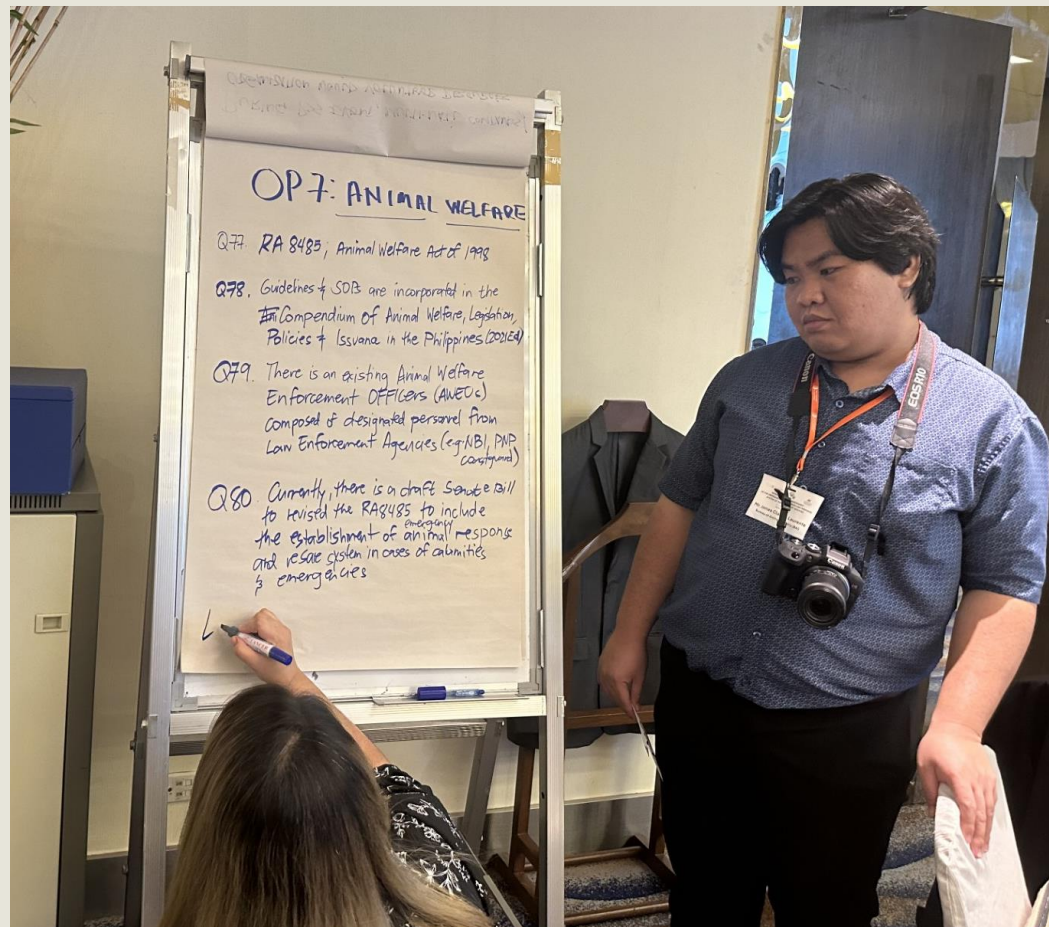


EPR in the Philippines [2023-24]



Workshop on the Assessment of Emergency Preparedness and Response System of Veterinary Services of the Philippines (6-7 Feb, 2024)

46 participants including BAI staff representing various departments, divisions and sections including Office of the **Civil Defense (OCD)**, **Disaster Risk Reduction Management (DDRM)**, **Department of Health (DOH)** and **Department of Environmental and Natural Resources (DENR)**

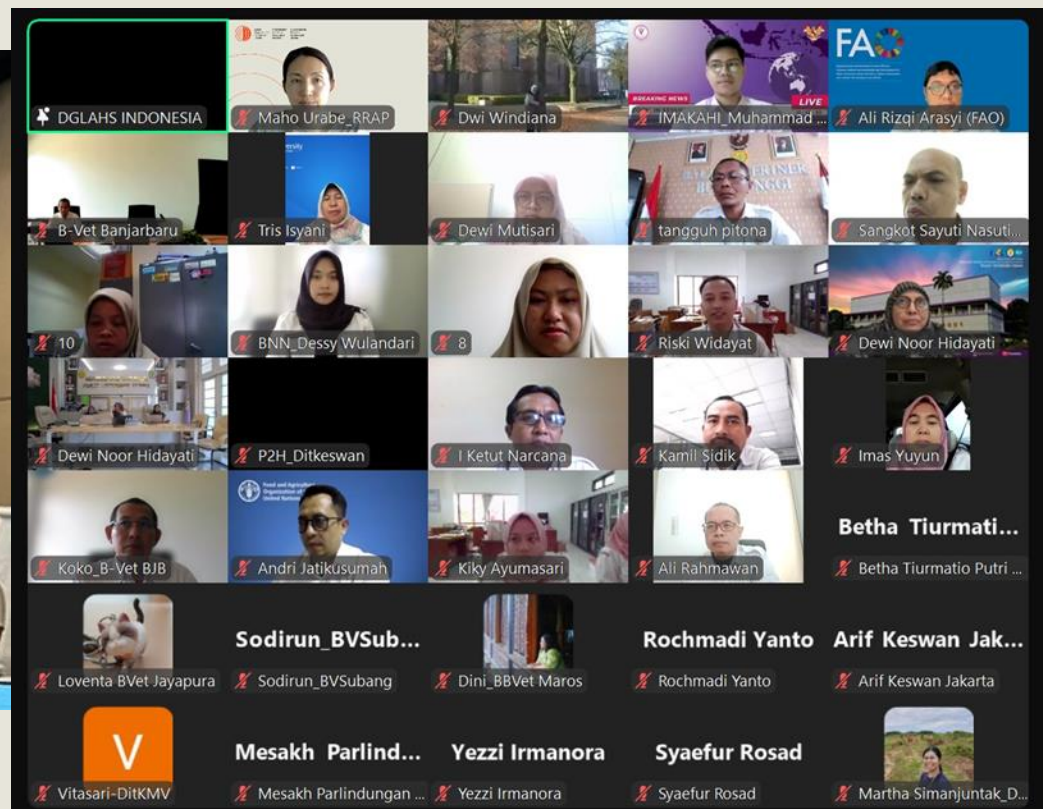


5 virtual consultation
1 Physical Workshop (Feb 2024)
46 Participants



National Workshop on Veterinary Workforce Development in Indonesia (9-11 Apr,2025)

33





Priority areas to enhance Emergency Management competencies

34

- Legislation : review, modernisation, awareness of the act knowledge and enforcement of legislation – practical implementation – guidelines, SOP's
- Stakeholder engagement : relevant public and private stakeholders for development /review of legislation, national animal welfare strategies.
- Inter-agency coordination and collaboration
- Operations : logistics, access, resources (human, financial and equipment's)
- Preparedness and response:
 - After action reviews, simulation exercises that incorporate animal welfare components.
 - Education and Training on disaster preparedness and response that incorporate animal welfare components.
- Communication materials and awareness campaigns involving emergency preparedness and response situation.





Main constraint on managing emergencies and disasters

35

- **Surge capacity** - e.g. Manpower during emergencies at field and laboratory level
- **Role and responsibilities** - States and territories are primarily responsible for managing emergency animal disease outbreaks within their jurisdictions. Each jurisdiction has their own legislation to support emergency management
- **Speed of funding disbursement**
- **Logistic** including immediate availability - e.g. equipment for disease control response
- **Surveillance** - involvement of private sector veterinarians, livestock farmers, and private laboratories
- **Legislation** – outdated, missing provision for engaging other agencies in disease control response, compensation, coordination, state or local government legislation are some of the key issues.
- **Enforcement** - movement control, biosecurity at border
- **Communication** - existing public awareness is ineffective for certain groups, relevant stakeholders and communities are still not being engaged



Section 4 Summary





- As the global animal health authority, WOAHA's mandate covers all-hazards relevant to safeguard animal health and welfare
- **Planning, Coordination, intersectoral** (animal health, public health and security) **and multidisciplinary approaches** are essential principles in emergency management.
- **WOAH standards** provide clear, scientifically-backed frameworks that help veterinary services to establish and enforce national animal health and welfare policies and regulations.
- **WOAH tools such as PVS pathway, Guidelines on disaster management** for National Veterinary Services (2015), Guidelines for **Simulation Exercises** (2020), **Countering misinformation and disinformation** (2024), WOAHA e-learning platform are available.
- **Strengthening capacities of frontline veterinarians**, a technical priority and shared responsibility – veterinary services, veterinary faculties, students
- **Planning for animal health emergencies and disasters underpins the preparedness...are we ready ?**



- WOAHA website for further reading on Emergency Preparedness and Response ([EPR](#)) and Performance of Veterinary Services ([PVS](#))
- Gulf between contingency plans and resources <https://pubmed.ncbi.nlm.nih.gov/33046938/>
- Inclusion of veterinary services in national emergency management plans <https://pubmed.ncbi.nlm.nih.gov/33046939/>
- Cost benefit of preparing VS for national emergencies <https://onlinelibrary.wiley.com/doi/10.1155/2023/1765243>
- Innovative approaches to emergency management https://www.woah.org/fileadmin/Home/MM/DD_Exploring_Innovative_Approaches_to_Improving_Sustainable_Management_of_Animal_Health_Emergencies.pdf
- Livestock Emergency Standards and Guidelines ([LEGS](#))
- Good Emergency Management Practices ([GEMP](#)) –A guide preparing for animal health emergencies.

Thank you

Acknowledgement:

- Dr Daniel Donachie
- Dr Maho Urabe

c/o DLD, 69/1 Phaya Thai Road
Ratchathewi 10400, Bangkok
THAILAND 4 15 19 49
M. +66 2 653 48 64
F: +66 2 6534904

srr.sea@woah.org
www.woah.org

[Facebook](#)
[Twitter](#)
[Instagram](#)
[LinkedIn](#)
[YouTube](#)
[Flickr](#)



World Organisation
for Animal Health

