



# **GUIDELINES ON DISASTER MANAGEMENT AND RISK REDUCTION IN RELATION TO ANIMAL HEALTH AND WELFARE AND VETERINARY PUBLIC HEALTH**

**(GUIDELINES FOR NATIONAL VETERINARY SERVICES)**





## INTRODUCTION

The World Organisation for Animal Health (OIE) has developed these guidelines for disaster management and risk reduction in relation to animal health, animal welfare and veterinary public health with the goal of strengthening the capacity of Veterinary Services in Member Countries.

Recent disaster events highlight the need to bring all components of disaster management together in cohesive response plans at both national and international levels using a multidisciplinary approach to achieve optimal efficiency and effectiveness.

The OIE guidelines use an all-hazards approach to the management of natural and man-made and technological disasters and suggest that a wide range of stakeholders from both government and society take action, adapting their interventions to meet local and regional needs.

They advocate the integration of disaster management and risk reduction measures relevant to national Veterinary Services into broader resilience and disaster management and response networks and policies, i.e. those that promote the health and welfare of animals, safeguard human and environmental health and assist Member Countries to restore and enhance economic and societal conditions in the aftermath of a disaster.

## SCOPE

These guidelines reflect the need for Veterinary Services to implement disaster management and disaster risk reduction measures with the objective of protecting animal health, animal welfare and veterinary public health during disaster events in their respective countries.

The document is aligned with OIE standards for Veterinary Services and animal welfare.

These guidelines provide a framework that veterinary professionals can use to develop processes and procedures for managing the veterinary sector's actions to reduce the adverse consequences of disasters. They outline guiding principles and the roles that Veterinary Services play in reducing the impact of disasters in all phases of the Disaster Management Cycle (DMC). They also highlight the importance of intra- and inter-institutional coordination and emphasise that the mandate of Veterinary Services falls within the larger national legal framework.

These guidelines complement existing technical and legal instruments for disaster management, both those at international and regional levels and those adopted in each Member Country, all of which specify the mandate of relevant actors in disaster situations. They are meant to be applied in conjunction with these existing tools.

The document does not prescribe how Veterinary Services should act, but leaves it to each OIE Member Country to adapt to local needs based on their context. It identifies inter-sectoral and multi-disciplinary approaches as essential principles in disaster management and stresses that the plans of Veterinary Services should be included in the National Disaster Management and Risk Reduction Plans.

## DEFINITIONS

There are many variations of definitions in the field of disaster management and risk reduction. The *ad hoc* Group of experts formed by the OIE to draft these guidelines has selected the following working definitions with the intent of following as closely as

possible standard international definitions.

Additional definitions on specific topics are included within the text of the guidelines. Individual countries and organisations may have different variations that they are required to use.

**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 the affected community or society to cope using its own resources'. (United Nations Office for Disaster Risk Reduction – UNISDR, 2015)

**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'.



## THE DISASTER MANAGEMENT CYCLE

The objectives for Veterinary Services in disaster management are to protect animal health and welfare, safeguard human and environmental health and assist Member Countries in restoring and enhancing economic and societal conditions.

Various disaster management models are available to provide a framework to develop disaster management plans, actions, and activities. A simple, commonly used DMC model has been selected in order to illustrate the phases of disease that must be addressed.

The DMC phases include: mitigation and prevention, preparedness, response, and recovery. Disaster management plans often focus on response, but effective disaster management includes activities in all four phases.

**MITIGATION** means 'the lessening or limitation of the adverse impacts of hazards and related disasters'. (UNISDR, 2015) and **PREVENTION** means 'any action aimed at reducing risks or mitigating adverse consequences of a disaster for people, animals, the environment and property, including cultural heritage'. (EU Civil Protection Mechanism, 2013)

**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)

**RESPONSE** means 'the provision of emergency services and public assistance during or immediately after a disaster in order to save human and animal lives, reduce health impacts,

ensure public safety and meet the basic subsistence needs of the people or animals affected'. (UNISDR, 2015)

**RECOVERY** means 'the restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors'. (UNISDR, 2015)

The four phases of the DMC are used as a framework to plan and organise the processes, policies and procedures involved in disaster management, including disaster risk reduction. The phases are not always distinct, but flow into one another in a continuous cycle. In a specific disaster event, different agencies may be in different phases of the DMC. Using this common framework will assist Veterinary Services to align their activities with other governmental and non-governmental actors.

There are certain elements that should always be considered as they are common to all four phases of the DMC (Fig. 1). These include: legislation and regulatory authority, budgeting and resourcing, internal and external communications (processes and infrastructure), training and education, information technology and knowledge management, and integration and coordination with other agencies, organisations and stakeholders.

**TECHNOLOGICAL/ MAN-MADE DISASTER** means 'a hazard originating from technological or industrial conditions or caused by man, including complex emergencies, conflicts, famine, displaced populations, industrial accidents, terrorist attacks and transport accidents. These are events that are caused by humans and occur in or close to human settlements. This can include environmental

degradation, pollution and accidents'. (International Federation of Red Cross and Red Crescent Societies – IFRC, 2015)

**NATURAL HAZARD** means 'the naturally occurring physical phenomena caused either by rapid or slow onset events which can be geophysical (earthquakes, landslides, tsunamis and volcanic activity), hydrological (avalanches and floods), climatological

(extreme temperatures, drought and wildfires), meteorological (cyclones and storms/wave surges) or biological (disease epidemics and insect/animal plagues)'. (IFRC, 2015)

**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

manner, including through the preservation and restoration of its essential basic structures and functions. It is determined by the degree to which the community has the necessary resources and is capable of organising itself both prior to and during times of need'. (UNISDR, 2015).

The Disaster Management Cycle is shown below.



**MITIGATION AND PREVENTION**

Mitigation and prevention activities occur prior to disaster events and they incorporate lessons learned from the response and recovery phases of previous disasters.

Most countries already have a National Disaster Management and Risk Reduction Plan which has been developed at central level and which explains the roles and responsibilities of all government and non-government services in the case of disasters. Veterinary Services should be involved in the preparation or review of these National Disaster Management and Risk Reduction Plans. Veterinary Services should involve all internal units in the preparation and review of the plan and consider the roles and responsibilities of actors such as farmers, animal owners and keepers, private veterinarians, pharmaceutical industries, the food industry, feed producers, traders, slaughterhouses, laboratories, transportation and border control authorities, national governments, intergovernmental bodies, non-governmental organisations and private voluntary associations.

Veterinary Services should establish their own National Veterinary Service Disaster Management and Risk Reduction Plan. These plans should encourage and support the private sector.

Figure 2 illustrates how Veterinary Services Disaster Management and Risk Reduction Plans are nested within international and national guidelines and plans and how they are linked to private-sector plans.

The National Veterinary Services Disaster and Risk Reduction Plan, which should be developed during the mitigation and prevention phase, should cover all four phases of the DMC. The plan will include the following chapters:

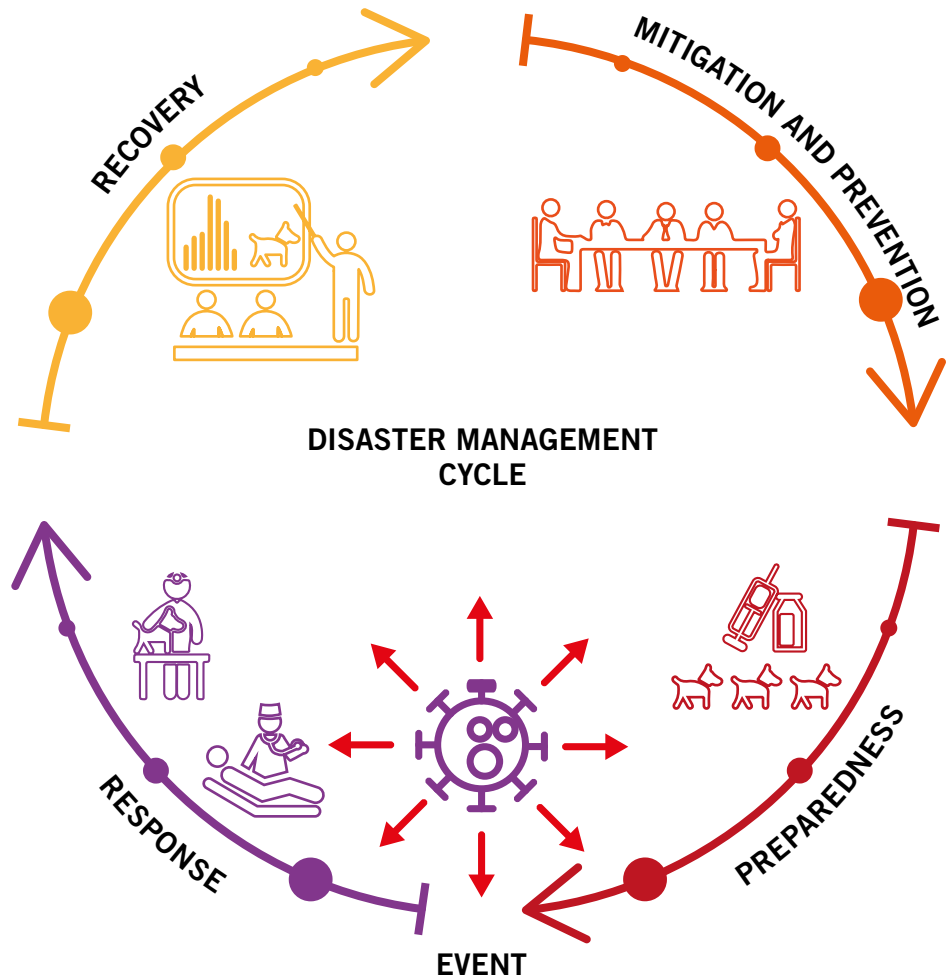


Figure 1. Phases of the Disaster Management Cycle

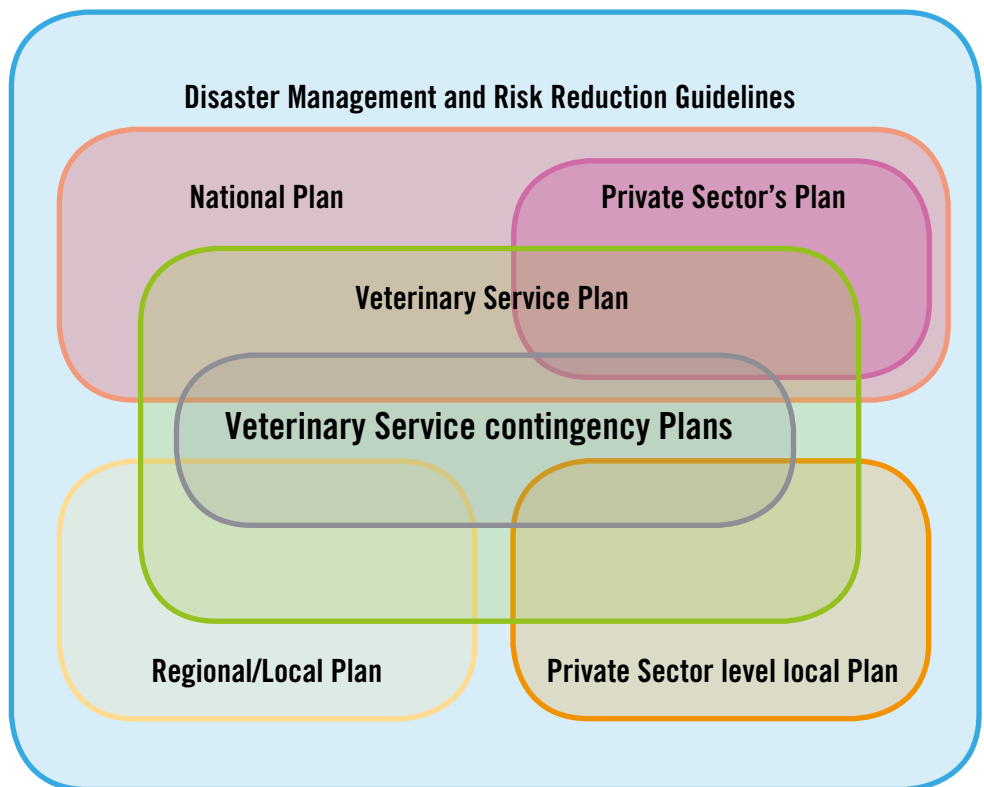


Figure 2. Relationship of Multi-Sectoral Disaster Management and Risk Reduction Plans and Guidelines

## **VETERINARY SERVICES AND OTHER STAKEHOLDERS: ROLES, RESPONSIBILITIES, COOPERATION AND COLLABORATION**

Central Government and civil defence typically play the lead role in preparing for and responding to disasters. The roles and responsibilities of the Veterinary Services should be clearly laid out and mechanisms for interaction with other Services and Ministries should be described.

Veterinary Services will play a leadership role in advising the authorities on animal health, welfare and veterinary public health in disaster situations. Veterinary Services should provide sufficient and appropriate input to ensure policies governing support for animals in disaster situations are effective.

The involvement of private veterinarians in all phases of the disaster management cycle is important as a primary link for producers and other animal owners. The roles and responsibilities of private veterinarians, livestock owners and keepers, producers, and other animal owners should also be described in the plan and, where relevant, they should receive appropriate training from Veterinary Services or other appropriate entities. Veterinary Services should support the development of disaster management plans by consulting with and advising other actors as appropriate.

Where appropriate, Veterinary Services should consider incorporating policies and procedures regarding the use of search and rescue animals in their plans.

## **LEGAL FRAMEWORK, LEGISLATION**

The plan should follow existing international frameworks where appropriate, such as the Sendai Framework for Action 2015–2030 and the International Strategy for Disaster Reduction of the United Nations. The plan should be harmonised with the national legislation for disaster management and make provision for interaction between official and private institutions and organisations. Veterinary Services should include their mitigation and prevention activities in national and regional plans and harmonise them with those of other sectors and the government. When Veterinary Services lack established legal authority for action in disaster situations, specific requirements should be identified and new legislation developed to address the gaps.

## **COMMUNICATION AND PUBLIC AWARENESS**

A clear communication strategy is central to the plan. The strategy should involve communication at all levels from government level to the general public. Prior agreements on communication responsibilities are essential to avoid any conflicting information. Communication should focus on transparency, listening, and responding, and will aim to build trust and distribute appropriate messages in a timely manner.

Communication is a two-way process, so communication tools, technologies, procedures and templates should be available for communication between central units and the field operational level, including field-based veterinarians, animal owners, and the general public. Communication should take into consideration the social and cultural aspects of content delivery to maximise effectiveness.

Public awareness campaigns in the mitigation and prevention phase help to maintain vigilance against disaster risks and improve the self-preparedness of animal owners. Making animal owners aware of their options in the case of disaster is a vital part of efficient disaster cycle management.

## **RISK ANALYSES**

Risk analysis means the overall cross-sectoral process of hazard identification, risk assessment, risk management and risk communication undertaken at national or appropriate sub-national level. Conducting a risk analysis prior to a disaster will enable stakeholders to prioritise investments for disaster risk-reduction activities and facilitate the decision process within the whole disaster management cycle. The risk analysis should include hazard identification and hazard mapping, risk assessment, vulnerability analysis, capacity analysis, risk evaluation, and risk communication.

## **STRUCTURE OF VETERINARY SERVICES**

The structure of Veterinary Services varies from one country to another and risks will vary from one region to another within the country. The plan should address regional specificities and address whether or not capacities are available for response within regions.

Response to disasters requires the ability to make quick evidence-based decisions and to convert those decisions into clear orders which can be conveyed down a very clear chain of command to those who are charged with the responsibility to carry them out. This requires the Veterinary Services in a country to be part of a well-defined command structure or line management system, at least for the duration of the emergency. This command system may differ from the structure in place for routine work and should be described in the National Disaster Management and Risk Reduction Plan.

All key staff in both central and decentralised offices should have a detailed job description defining their roles and responsibilities during all phases of the DMC, including mitigation and prevention.

## **HUMAN RESOURCES**

Different skills will be required during all phases of the DMC. It is important to provide on-the-job training, invest in early warning activities, and to provide for increasing the capacity of Veterinary Services for emergency responses.

## **FINANCING**

Finances should be available without delay during the preparedness and response phases. Budgeting for interventions and identifying sources of funding in advance will allow for rapid action. Budgets should include both contingency funds and funds for ongoing risk-reduction activities (such as education/training, biosecurity, surveillance activities, maintenance of early warning systems).

## **EARLY WARNING SYSTEMS, SURVEILLANCE SYSTEMS**

Veterinary Services have the duty and responsibility to ensure that disease surveillance and information related to livestock and other kinds of animals are integrated into early warning systems and they should be actively engaged in their development. Veterinary Services need to engage with other governmental agencies so that any warning information regarding all types of hazards can be received and effectively disseminated.



## CONTINGENCY PLANS AND STANDARD OPERATING PROCEDURES

Contingency planning means a management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations. (EU Civil Protection Mechanism, 2013)

Veterinary Services should develop one or more contingency plans which can cover each type of event identified during risk assessment exercises using an all-hazards approach. The plans should cover natural disasters (e.g. flooding, hurricanes, wind storms, drought, earthquakes, extreme cold, volcano eruptions, transboundary epizootics and pandemics) and man-made or technological disasters (e.g. chemical release, radiologic accidents, oil spills, loss of power or technological failure, transport problems, explosions, conflict and bioterrorism). Contingency plans cover sets of

activities carried out as part of the response and recovery phases of the DMC. They comprise both long-term measures and measures implemented in the immediate aftermath of the disaster. There should be contingency plans for responding to animal health, animal welfare and veterinary public health needs during natural and man-made disasters, including disease outbreaks. These contingency plans will be specific to each type of event: a flood, for example, will require a different contingency plan from a disease outbreak. Moreover, different disease types may require different contingency plans.

The process of developing a contingency plan provides valuable learning that helps successful implementation of the plan when a disaster occurs. It involves organising a team representing relevant authorities and stakeholders, identifying critical resources and functions, and establishing a plan for recovery beyond response (see Preparedness hereafter).

To ensure the quality of the contingency plans, Veterinary Services should develop Standard Operating Procedures (SOPs) for interventions that regularly recur during the preparedness and response phases.

The mitigation and prevention phase includes much more than just contingency plans. Mitigation and prevention require ongoing capacity development, continuous monitoring and surveillance, simulation exercises and regular updating of risk analyses and risk reduction activities.

All activities included in the Veterinary Services Disaster and Risk Reduction Plan should be periodically reviewed and updated.



## PREPAREDNESS

The preparedness phase often begins when warning of an impending disaster is received. Veterinary Services should get ready to activate their relevant contingency plans so that they are prepared for the foreseeable consequences as the disaster progresses. The implementation of contingency plans requires flexibility and adjustments according to the magnitude and circumstances of the disaster.

Relevant contingency plans should be put together by the Veterinary Authority in conjunction with representatives from the national and local governments, non-governmental organisations and relevant private-sector stakeholders. The contingency plans should take into account previous gap analysis and should include:

- Details of the types of disaster covered by the plan
- Information on animal populations
- Systems for rapid assessment and situation awareness
- Legislation
- Established chain of command system
- Plans for coordination with other relevant governmental agencies, inter-governmental agencies, NGOs and private sector
- Finance arrangements (including compensation policy)
- Human resource plan
- Communication plan and public awareness measures
- Established sustainable continuity plan and recovery plan.

During the preparedness phase, Veterinary Services will switch to emergency mode and start implementing the relevant command system, as described in the Disaster Management and Risk Reduction Plan, to maximise the response capacity and use early warning systems to communicate with relevant parties. Early in the preparedness phase, Veterinary Services will review the availability of human and financial resources as well as tailor the communication strategy to the specific disaster event.

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## RESPONSE



### IMPLEMENTATION OF NATIONAL VETERINARY SERVICES' CONTINGENCY PLANS

Impact assessment and situation awareness are the first steps to be taken following the activation of any contingency plan. The impact of the disaster on the Veterinary Services themselves and their capacity to implement the plan should be assessed. Veterinary Services need to prioritise activities in conjunction with key stakeholders. They must remain flexible and undertake appropriate action after an assessment of the impact on the health and welfare of animals, human safety and the environment. If there is no specific contingency plan for the type of disaster that is taking place, Veterinary Services should take a step-by-step approach to decision-making and refer to the contents described in the mitigation and prevention and preparedness phases of the contingency plans they have developed for generic guidance.

### GOVERNANCE

Each contingency plan (developed in the mitigation/prevention phase) will determine governance and the chain of command. Cooperation and coordination with stakeholders under clear lines of responsibility will be important to expand the capacity of Veterinary Services. Adaptability, efficiency, and continuity of support are critical to effective response.

### LEGISLATION ACTIVITY

Contingency plans will be based on existing legislation that will enable immediate action. Emergency management ordinances and specific regulations may be issued when required.

### COMMUNICATION

Appropriate communication is critical for good governance, knowledge management and contingency planning. Veterinary Services should

have detailed internal and external communication plans within their contingency plans.

### GAP ANALYSIS

Following an assessment of the impact of the disaster on the Veterinary Services themselves, a gap analysis should be carried out to identify Veterinary Services' needs. All relevant stakeholders must be included so that all significant issues are identified and addressed. Gap analysis should also take into account what will be required during the recovery phase and consider whether some earlier risk mitigation actions could avoid some of those recovery needs.

## RECOVERY



### RECOVERY PLAN

Following gap analysis during the response phase, a recovery plan should be developed in order to detail human and material resource requirements, and the related budget. After identifying gaps within Veterinary Services, and after further consultation with key stakeholders, Veterinary Services should evaluate the efficiency and effectiveness of their response to the disaster. The development of a recovery plan should include opportunities to 'build back better' (i.e. provide greater resilience) and should be multi-sectoral and multidisciplinary where applicable. The plan should include monitoring and evaluation.

### GOVERNANCE

In the recovery phase, consideration should also be given as to how Veterinary Services will continue to undertake their ongoing operations or 'business as usual'. This may require areas of governance to be reconsidered dependent upon

current resources, and may even require changes to some aspects of legislation.

### COMMUNICATION

High-quality communication is necessary to keep all relevant stakeholders aware of developments. Failures in communication may result in stakeholders not giving input to vital areas of recovery and reconstruction, and may result in a lack of adequate resourcing and funding to ensure a successful recovery phase. The most significant stakeholders to be considered throughout both the response and recovery phases are the affected community. Community engagement will increase buy-in and speed up recovery from the disaster.

### GAP ANALYSIS

The recovery plan should identify the most probable recovery needs of the disaster and these should inform subsequent contingency plans. Veterinary Services should consider

the different needs of both rural and urban communities, which are likely to include support for managing the consequences of livestock and production losses, companion animal displacement, and infrastructure loss. Veterinary Services should also consider how severely their buildings and facilities have been impacted and plan for their replacement during the recovery phase. These plans should take into account lag times for construction materials to be available and for key services, such as water and electricity supplies, to be reconnected.

Monitoring and evaluating the successes and failures of the recovery plan will identify both resource and process gaps. Like gap analysis from the response phase, gap analysis of the recovery phase may also identify areas for improvement in the mitigation phase.

## TOPICS RELEVANT TO ALL DISASTER MANAGEMENT CYCLE PHASES

**LEGISLATIVE FRAMEWORK** The National Disaster Management and Risk Reduction Plan should be supported by effective legislation at each level of government. Member Countries are encouraged to follow the OIE standards on veterinary legislation as described in Chapter 3.4. of the *Terrestrial Animal Health Code*. It is recommended that Veterinary Services review and analyse current legislation and engage in developing appropriate legislation to support animal health, animal welfare, and veterinary public health activities in disasters within the framework of disaster management and disaster risk reduction contingency plans.

**COMMUNICATIONS** Effective communication is essential throughout the DMC. There must be effective communication both within the Veterinary Services and between Veterinary Services and other stakeholders, i.e. other government departments, non-government stakeholders and the public. Communication plans should suggest alternative pathways for communication as telephone or electricity supply may fail. Veterinary Services should consider developing pre-scripted communications that can be modified for use in the preparedness and response phases. Veterinary Services are encouraged to incorporate disaster management communications in accordance with Chapter 3.3 'Communication' of the *Terrestrial Code*.

**TRAINING AND EDUCATION** Training and education are necessary to prepare Veterinary Services to execute their responsibilities during disasters. Technical training is essential, and should be supplemented with training on organisational and operational aspects of disaster management, including inter-agency (inter-ministry) and inter-sectoral collaboration. Disaster management training should be included in veterinary education and in training courses for private-sector stakeholders.

**INFORMATION TECHNOLOGY AND KNOWLEDGE MANAGEMENT** Information technology and knowledge management capacity should be developed in order to maintain awareness of the activities of Veterinary Services and to facilitate information sharing with other government and non-government stakeholders throughout the DMC.

**INTEGRATION AND COORDINATION** For nearly all disasters, Veterinary Service disaster plans will have to be incorporated into higher-level governmental frameworks for national disaster response. In addition, Veterinary Services should establish plans and processes to coordinate their activities with non-governmental and public stakeholders.

**LESSON LEARNT** To enable post-incident evaluation, it is important that issues are recorded at all the stages of the disaster. Enabling a systematic recording of incidents will maximise the benefits of lessons learnt.

## CONCLUSION

Disaster Management and Disaster Risk Reduction plans should be dynamic and in a continual process of development as hazards, technologies, legislation and standards evolve. These plans should cover public health, animal health and animal welfare aspects during all stages of the disaster. Applying internationally accepted guidelines and standards will allow Veterinary Services to provide efficient and effective plans. Critical to success will be risk analysis; planning; training; resource allocation; communication, integration and coordination with government; cooperation with private-sector and non-governmental stakeholders; and disaster simulation exercises. Prioritising risk reduction is vital to avoiding or successfully responding to future disasters.