OIE Guidelines and “Disaster Management Cycle”
Animal Welfare and Climate Change

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Global Risks over next 10 years

For the next 10 years

Water crises 39.8%

Read more: wef.ch/risks2016  #risks2016
Veterinary Service Disaster Preparedness and Response Gaps in the 2014 Survey

21% no National Legislation - animals in disasters
Veterinary Service Disaster Preparedness and Response Gaps in Survey

66% Veterinary Service with no disaster guidelines.
OIE Guidelines on Disaster Management

Figure 2. Relationship of Multi-Sectoral Disaster Management and Risk Reduction Plans and Guidelines
OIE *ad hoc* Group on Disaster Management and Risk Reduction in Relation to Animal Health and Welfare and Veterinary Public Health Guidelines

- Uses an **all-hazards approach** including natural disasters, bio-threats, agroterrorism, conflict, technology disasters.
OIE *ad hoc* Group on Disaster Management and Risk Reduction in Relation to Animal Health and Welfare and Veterinary Public Health - Guidelines

- Uses a **whole of nation** approach.

- **Coordination** with government, intergovernmental, private sector, and public entities and **other countries**.
OIE *ad hoc* Group on Disaster Management and Risk Reduction in Relation to Animal Health and Welfare and Veterinary Public Health - Guidelines

- Emphasis on **preparedness** and **mitigation/prevention**.

> An ounce of prevention is worth a pound of cure.
Disaster Cycle

Figure 1. Phases of the Disaster Management Cycle
What Animal Species are Covered in National Disaster Management Plans?

- Livestock: 81%
- Wildlife: 42%
- Companion Animal: 52%
- Zoo and Aquatic: 52%
The Future

"Prediction is very difficult, especially if it's about the future."

-Niels Bohr
Projections of Extreme Temperatures

Map 2.4  Projections of extreme high temperatures

1961–1990

Number of combined tropical nights (> 20 °C) and hot days (> 35 °C)

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Legend:
- No data
- Outside coverage
A 2001 study in *PNAS* showed that the genetic changes responsible for the shift can manifest in as little as five years, according to lab tests.
Impact of Climate Change on Human Health

- Injuries, fatalities, mental health impacts
- Asthma, cardiovascular disease
- Heat-related illness and death, cardiovascular failure
- Malaria, dengue, encephalitis, hantavirus, Rift Valley fever, Lyme disease, chikungunya, West Nile virus
- Forced migration, civil conflict, mental health impacts
- Extreme heat
- Changes in vector ecology
- Environmental degradation
- Increasing allergens
- Respiratory allergies, asthma
- Water and food supply impacts
- Water quality impacts
- Cholera, cryptosporidiosis, campylobacter, leptospirosis, harmful algal blooms

CDC
Centers for Disease Control and Prevention
Future Shock to Food Systems
Although there is a large amount of uncertainty about exactly how climate change might impact world food production over the coming decades, there is general consensus that the overall effect will be negative.

This is further exacerbated by the growing issue of water scarcity, which is accelerating at such a pace that two-thirds of the world’s population could live under water stress conditions by 2025.
Hurricane
Pollution Overflow From Heavy Rain
Floods
Wildfire
Drought
Direct Impacts of Climate Change on Animal Health

Heat stress

Incursion of Parasites

Incursion of Disease
Indirect Impacts of Climate Change on Animal Health

Extreme weather – Floods-Drought-Landslides

Wildfire

Competition for Food and Water