
Disasters and diseases in Africa: Information support for animal and human health

T.Coetsee, A. Lourens, M.Nel and E.van der Westhuizen

IFLA Satellite Session: Health & Biosciences, Durban,
18 August 2007

Disasters



Hurricane Katrina, USA



Help Pets Hurt by Katrina



Please donate
to our
Disaster Rescue
Teams today.





Floods (Wales)



Recent floods in the UK

- July 2007



Fires



Types of disasters in Africa

- Drought
 - Oil spills
 - Fires
 - Floods
 - Zoonoses
 - Emerging diseases
-

Drought



Oil spills along coast



Oil spills

- Cleaning operation, Cape Town



Bush fires, Pilanesberg, SA



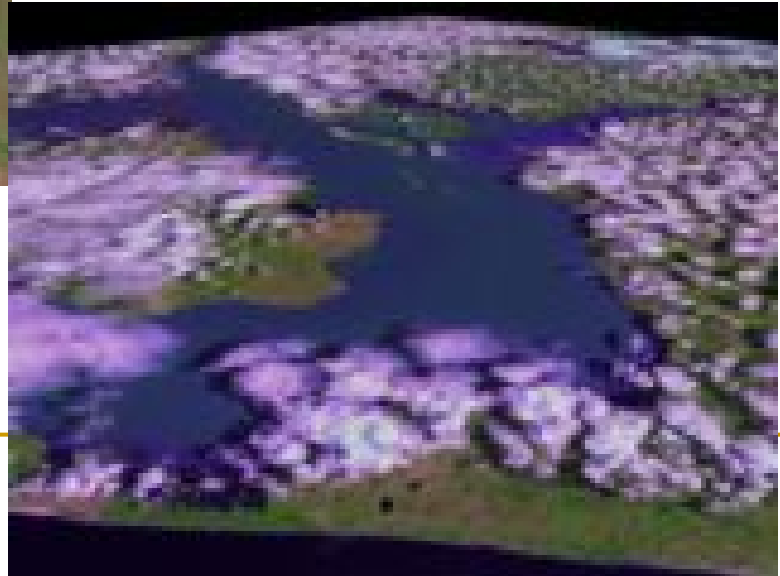
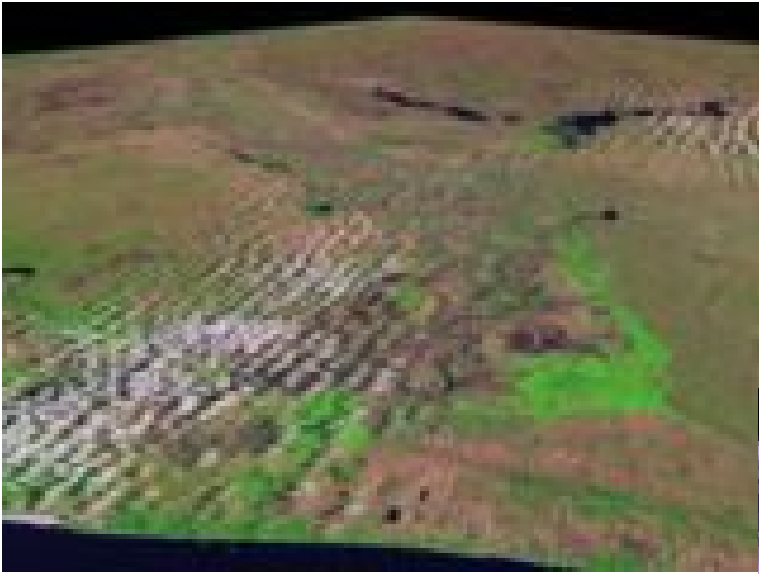
Floods Mozambique

- Sunday, 27 February, 2000, 20:58 GMT
Eyewitness: Flying over the flood
 - Awaiting rescue on a rooftop



Floods, Mozambique 2000

- Pre-flood and during flood



Disease outbreaks

- Animal diseases – disastrous for the economy

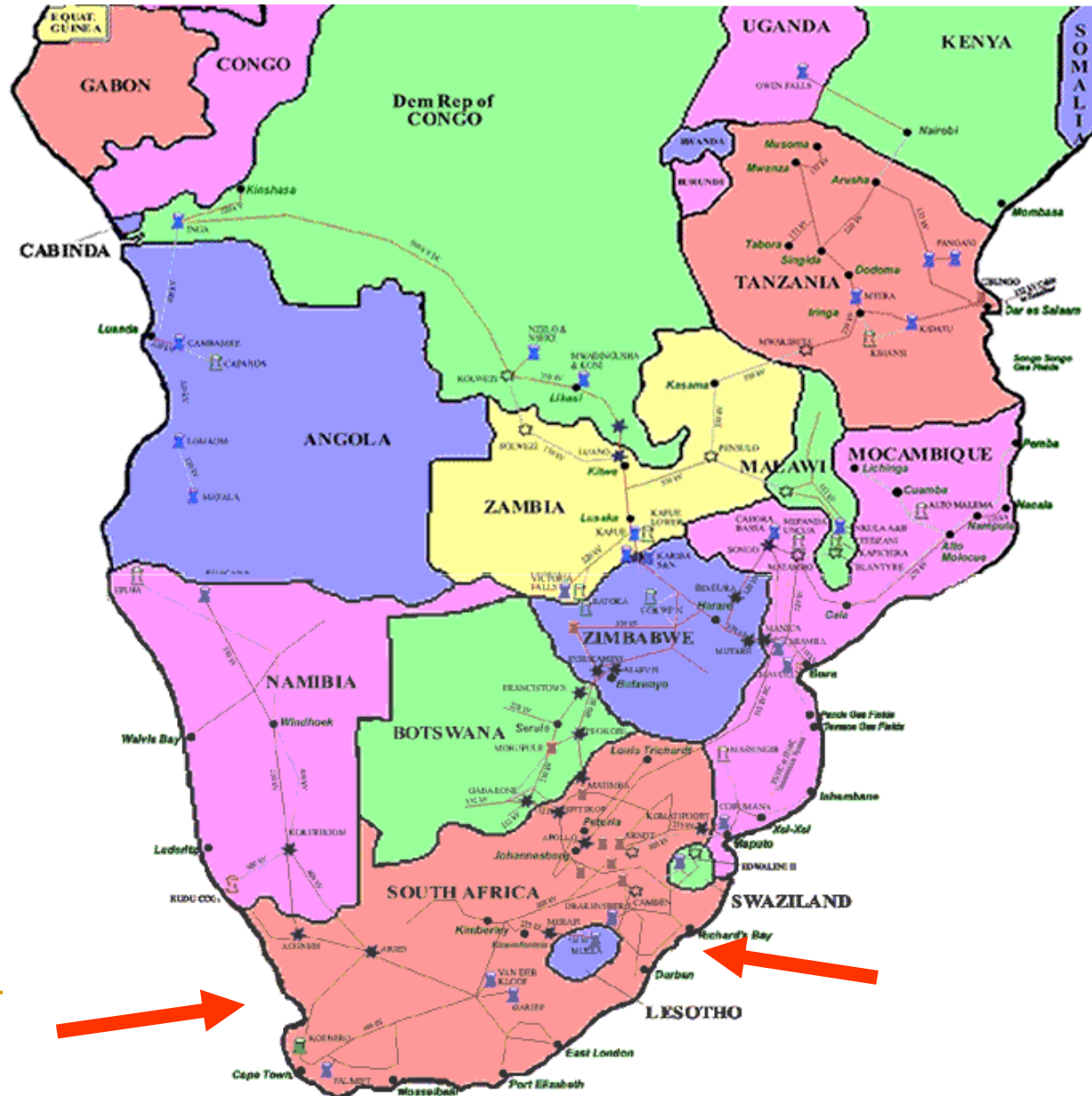
2001 Foot & Mouth, UK - nearly 2,000 cases
– 3,5 million animals slaughtered



Foot and Mouth in pigs, UK



South Africa



Examples in South Africa

- Newcastle disease – ostriches



South Africa

- Avian flu – ostriches



SA bird flu ostrich cull begins

- **South Africa's government has begun the slaughter of 6,000 ostriches in an effort to contain an outbreak of bird flu in the south of the country.**

BBC News / Africa 10 August 2004

Diseases in South Africa

- African horse sickness



Zoonoses

- Crimean-Congo
 - Ebola
 - Anthrax
 - Avian flu
 - HIV
-

Chimps - bushmeat

- Nature news item on chimps as source of HIV
 - *Nature* 1 June 2006 : 553

Chimps and HIV



VIROLOGY

Chimps harbour HIV in wild

Science doi:10.1126/science.1126531 (2006)

Wild chimpanzees (pictured above) have long been suspected as the source of the human immunodeficiency virus, HIV. Now that theory has been confirmed: evidence from southern Cameroon shows that wild members of the chimpanzee subspecies *Pan troglodytes troglodytes* harbour the strain of simian immunodeficiency virus (SIV) that is most closely related to pandemic HIV.

Researchers led by Beatrice Hahn of the University of Alabama at Birmingham report the presence of antibodies against the SIV strain in droppings left by wild chimps. This strain had previously only been detected in captive animals.

The virus, which does not seem to cause disease in the chimps, was probably transmitted to humans by exposure to blood during bushmeat hunting or butchery. The

M. WILSON

Emerging diseases

- Avian flu



Epidemic and Pandemic Alert and Response (EPR) WHOsite

■ Diseases covered by EPR

- Anthrax
 - Avian influenza
 - Crimean-Congo haemorrhagic fever (CCHF)
 - Dengue/dengue haemorrhagic fever
 - Ebola haemorrhagic fever
 - Hepatitis
 - Influenza
 - Lassa fever
 - Marburg haemorrhagic fever
 - Meningococcal disease
 - Plague
 - Rift Valley fever
 - Severe Acute Respiratory Syndrome (SARS)
 - Smallpox
 - Tularaemia
 - Yellow fever
-

Wikipedia article

■ References

- ^ G. Bankoff, G. Frerks, D. Hilhorst (eds.) (2003). *Mapping Vulnerability: Disasters, Development and People*. ISBN ISBN 1-85383-964-7.
 - ^ B. Wisner, P. Blaikie, T. Cannon, and I. Davis (2004). *At Risk - Natural hazards, people's vulnerability and disasters*. Wiltshire: Routledge. ISBN ISBN 0-415-25216-4.
 - ^ D. Alexander (2002). *Principles of Emergency planning and Management*. Harpenden: Terra publishing. ISBN ISBN 1-903544-10-6.
-

Biosecurity

- To prevent exportation of infectious agents or noxious materials



UK laboratory (F&M)



Biosecurity


- **Laboratory in UK foot-and-mouth probe**
 - Story Highlights (5 August 2007) [CNN.com](#)
 - Speculation that foot-and-mouth virus may have leaked from a laboratory
 - Foot-and-mouth disease found on farm in Surrey, southern England
 - European Union bans livestock imports from Britain
 - 2001 epidemic led to slaughter of more than 3.5 million sheep, cows and pigs
-

Biosecurity and the veterinarian

Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal





Biological disasters of animal origin

The role and preparedness of veterinary and public health services

Catastrophes biologiques d'origine animale
Le rôle et la préparation des Services
vétérinaires et de santé publique

Desastres biológicos de origen animal
Papel y preparación de los servicios
de sanidad animal y salud pública



Revue scientifique et technique

Vol. 25 (1), 2006

UK Biosecurity - Pirbright



Disciplines - Disaster management

- Epidemiology
 - Public Health
 - Veterinary Public Health
 - Virology
 - Parasitology
 - Zoonoses
 - Ecology
-

Veterinarian's role



Veterinarian's role

- Assessment of medical needs of animals
 - Medical treatment of animals
 - Animal disease surveillance
 - Zoonosis surveillance
 - Ensure food and water safety
 - Biological and chemical terrorism surveillance
 - Animal decontamination
 - Police, rescue dogs
-

Veterinarian's role

- ...the first line of defense in biological attack
 - ...key to bioterrorism preparedness
 - Biological terrorism and veterinary medicine... *JAVMA 1 September 2000*
-

Curriculum

- Are our students adequately prepared for their role?
-

University of Pretoria – Veterinary curriculum

■ PHE 500 (Vet Pub Health & Applied Epidemiology)

- Role of vet
- Vet food hygiene
- Meat / milk hygiene
- Legislation – safe foods
- Environ. Health
- Zoonoses
- Vet epidemiology



University of Pretoria – Veterinary curriculum

- PHE 600 Applied Vet Pub Health
 - Practicals
 - Assignment in Library – emergency / disaster plan



University of Pretoria – Veterinary curriculum

- Postgraduate (VPH 7^{2A} Veterinary Public Health)
 - Environmental health (zoonoses, dead animals)
 - Animal wastes
 - Pollution
 - Occupational hazards diseases during disasters



Curricula – other veterinary schools

- Univ of Tennessee
 - Norway Veterinary School
 - Univ of Missouri
 - Univ of Edinburgh
 - Univ of Illinois
-

Univ of Tennessee website

- Disaster preparedness and biosecurity
- www.utextension.utk.edu/topics/Biosecurity/default.asp



The screenshot shows the website for the University of Tennessee Extension, specifically the "Biosecurity and Disaster Management" section. The page features a navigation menu on the left with links to various sections such as "Extension Home", "Local Offices", "People Search", "Extension Administration", "Vision/Mission Statements", "About Extension", "News/Events", "Departments & Centers", "Publications", "Priority Programs", "Job Opportunities", and "Faculty & Staff". The main content area includes a paragraph explaining the extension's role in disaster preparation and mitigation, accompanied by a photograph of people working in a damaged area. A "What's Contained in this Site:" section lists several key resources available on the page.

THE UNIVERSITY of TENNESSEE Extension

University Links A-Z Index / WebMail / Dept. Directory Enter search terms Select type of search

Biosecurity and Disaster Management

The University of Tennessee Extension is preparing to meet the needs of Tennessee communities related to biosecurity and disaster management. Through the Extension Disaster Education Network (EDEN), extension agents are preparing to provide educational programs on disaster preparation and mitigation, to assume locally appropriate roles during disasters, and collaborate in recovery efforts. For more information on programs available in your county, contact **your local UT Extension office**.



What's Contained in this Site:

- ▶ [Hot Topics](#)
- ▶ [Resource/Teaching Materials](#)
- ▶ [News and Highlights](#)
- ▶ [Educational Programs and Services](#)
- ▶ [Department and Unit Web Sites Related to Biosecurity and Disaster Management](#)
- ▶ [Publications Related to Crops and Nursery](#)

Hot Topics

Information sources in Libraries

- Are we able to support veterinarians in dealing with disasters and emergencies?
-

US National Library of Medicine

Disaster management

- Health planning & policies
 - Health facilities management
 - Public health training
 - Communicable disease control
 - Emergency medical services
 - Health information systems
 - Laboratory diagnosis
 - Bioterrorism/chemical weapons
-

Benchmarking collections in 8 libraries

- University of Guelph
 - University of Illinois
 - University of Missouri
 - University of Cambridge
 - University of Edinburgh
 - University of Melbourne
 - National University of Singapore
 - University of Pretoria
-

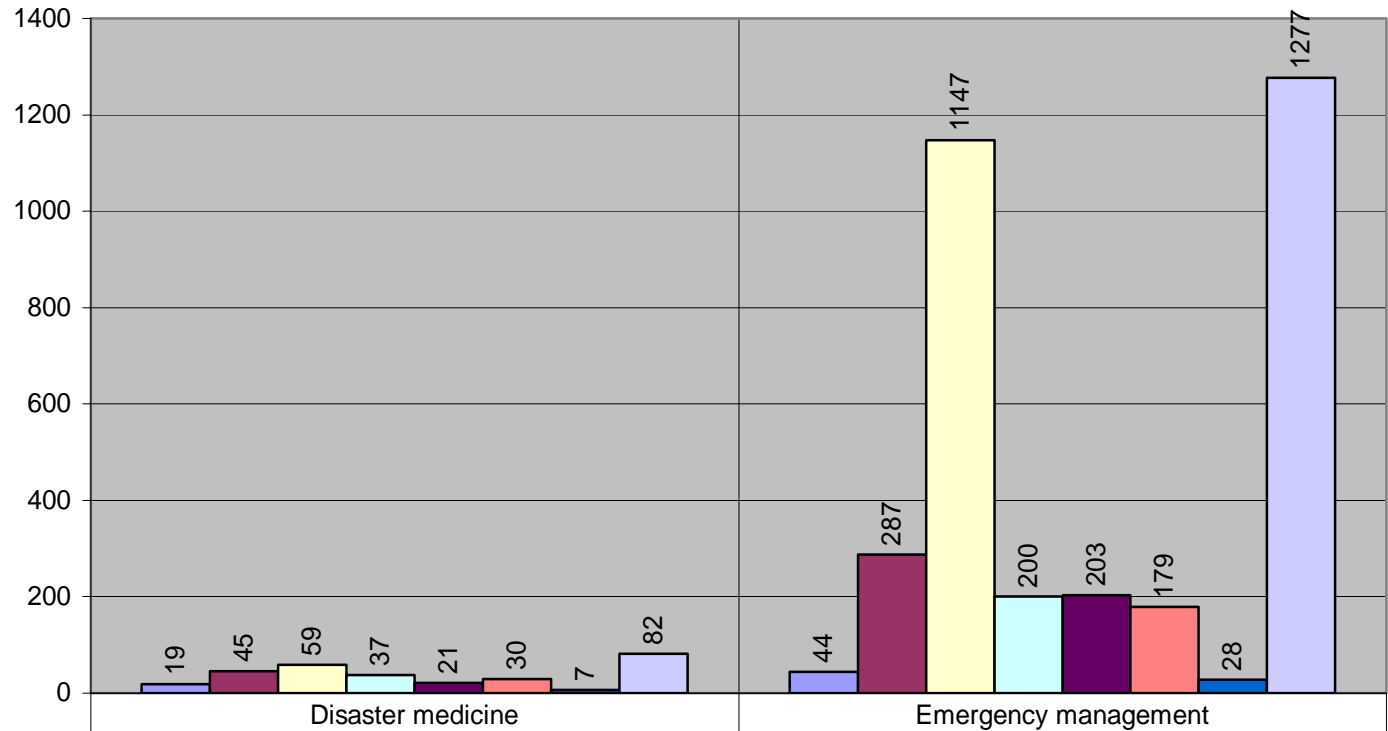
LC Subject Headings

- Disaster medicine
 - Emergency management

 - *Classification Web of LC*
 - *DC numbers*
-

Number of catalogue entries

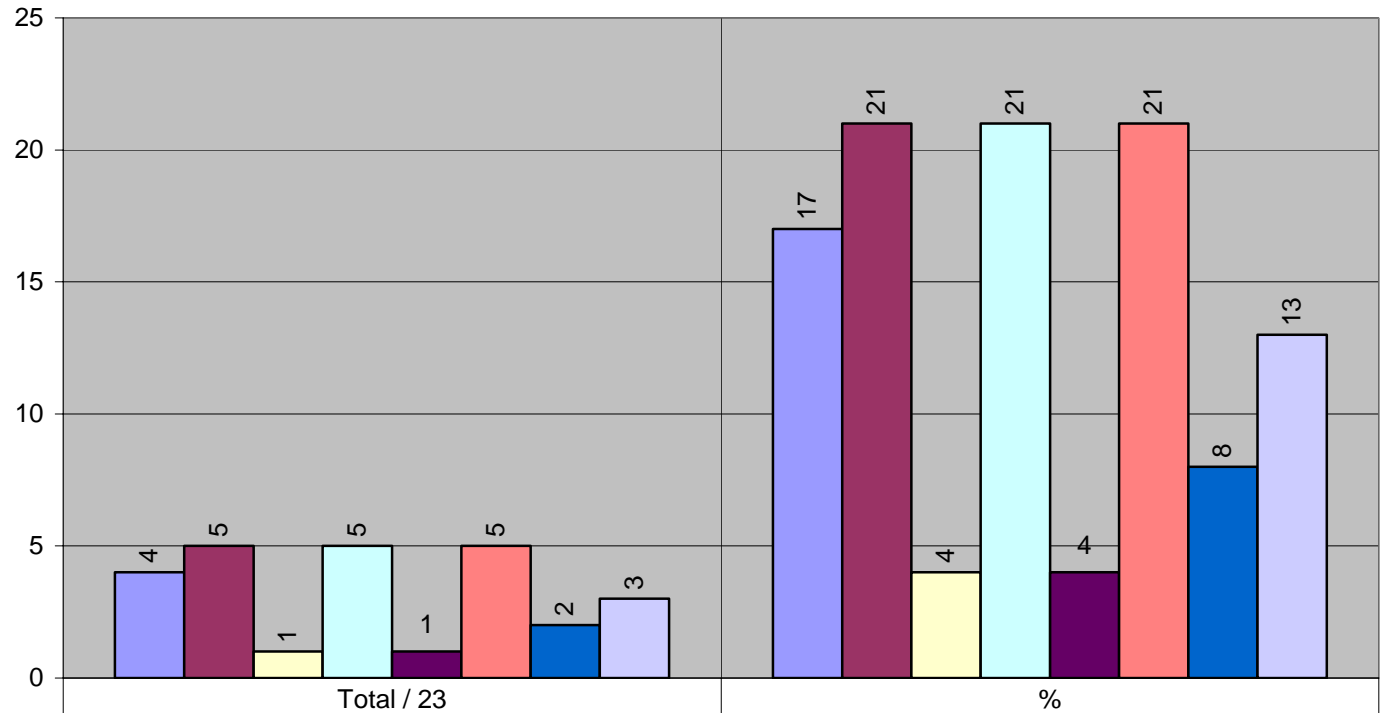
Catalogue entries of university libraries



University of Pretoria	19	44
University of Guelph	45	287
University of Illinois	59	1147
University of Cambridge	37	200
University of Melbourne	21	203
National University of Singapore	30	179
University of Edinburgh	7	28
University of Missouri	82	1277

Total journal titles available

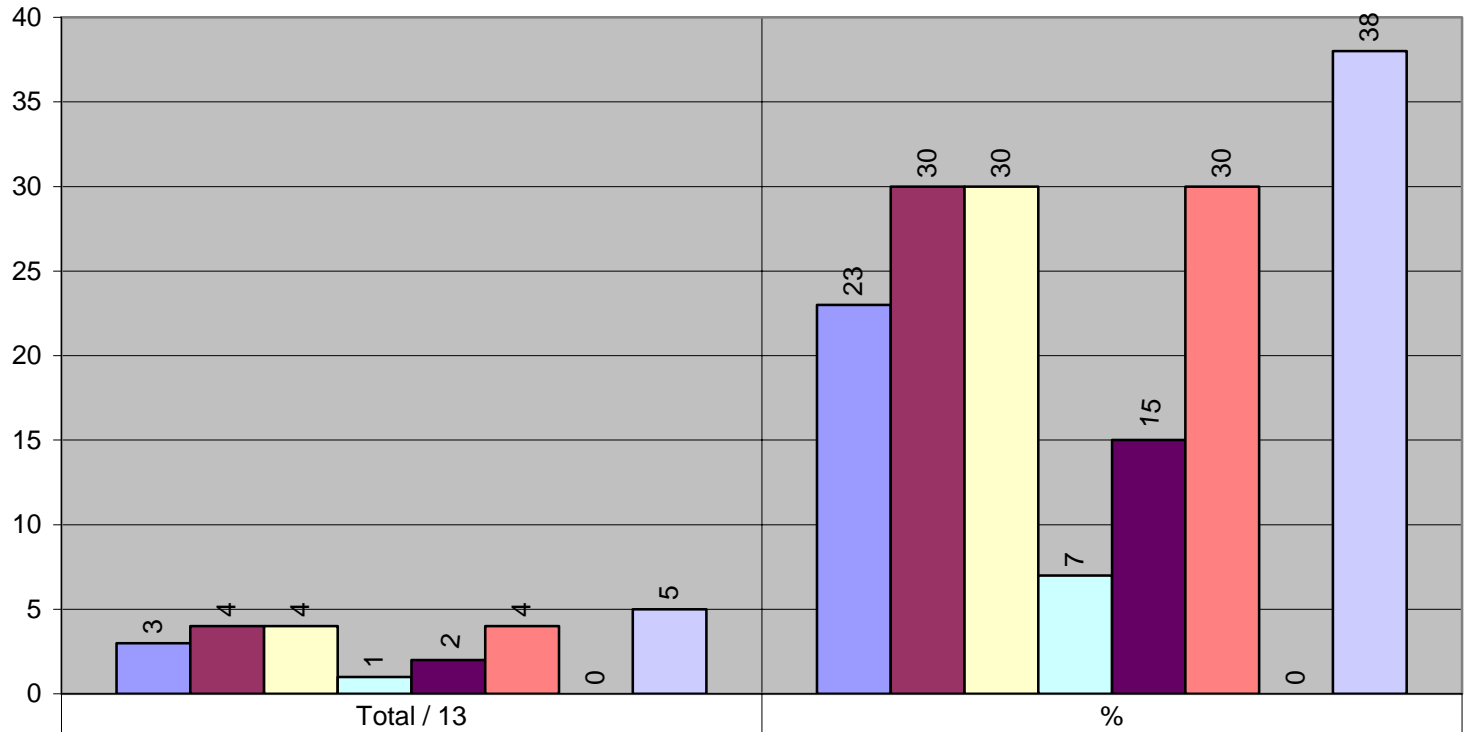
Total available journals from list



University	Total / 23	%
University of Pretoria	4	17
University of Guelph	5	21
University of Illinois	1	4
University of Cambridge	5	21
University of Melbourne	1	4
National University of Singapore	5	21
University of Edinburgh	2	8
University of Missouri	3	13

Total book titles

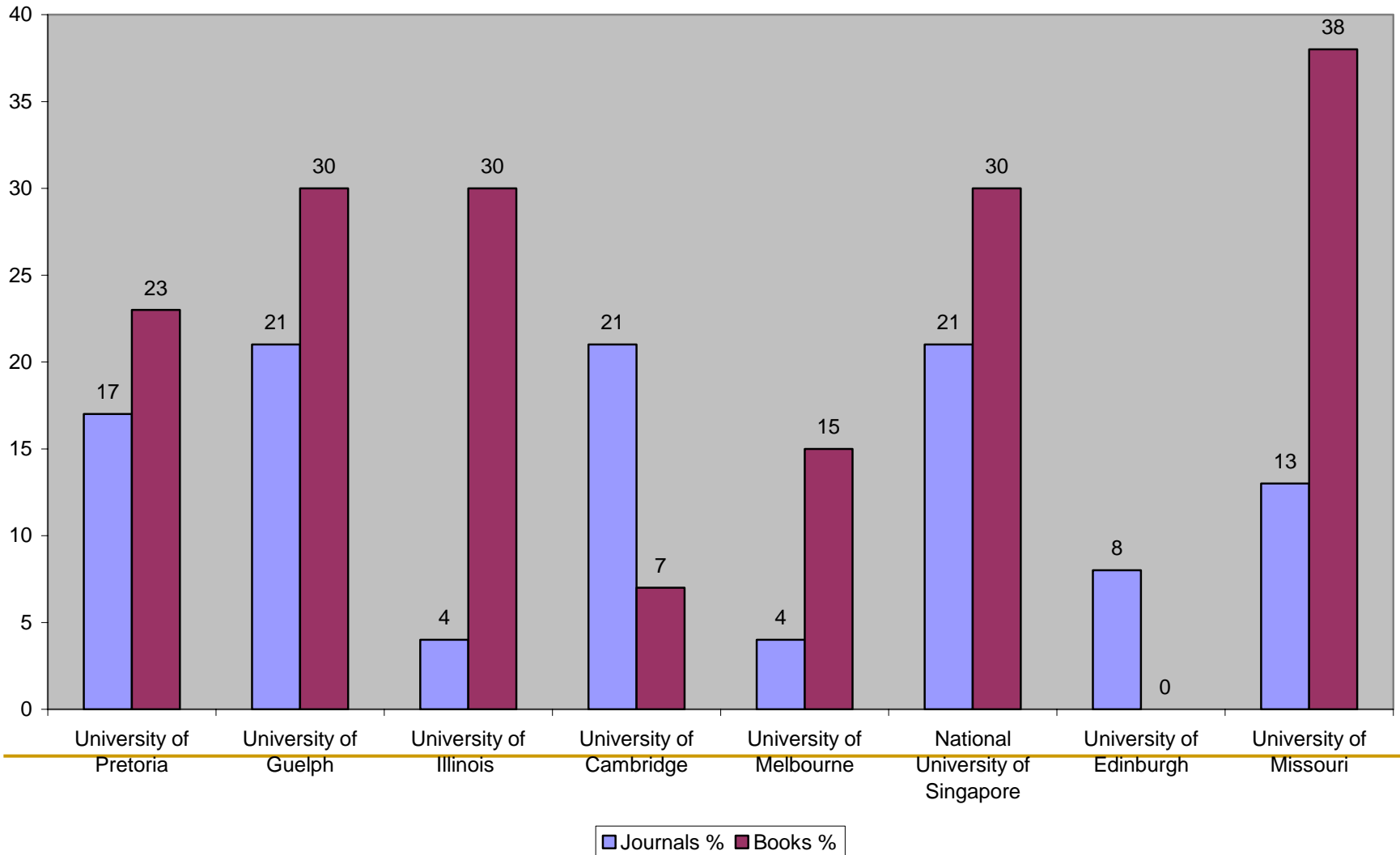
Total available books from list



University	Total / 13	%
University of Pretoria	3	23
University of Guelph	4	30
University of Illinois	4	30
University of Cambridge	1	7
University of Melbourne	2	15
National Univ of Singapore	4	30
University of Edinburgh	0	0
University of Missouri	5	38

Journal & book titles

Journals and books available in catalogues

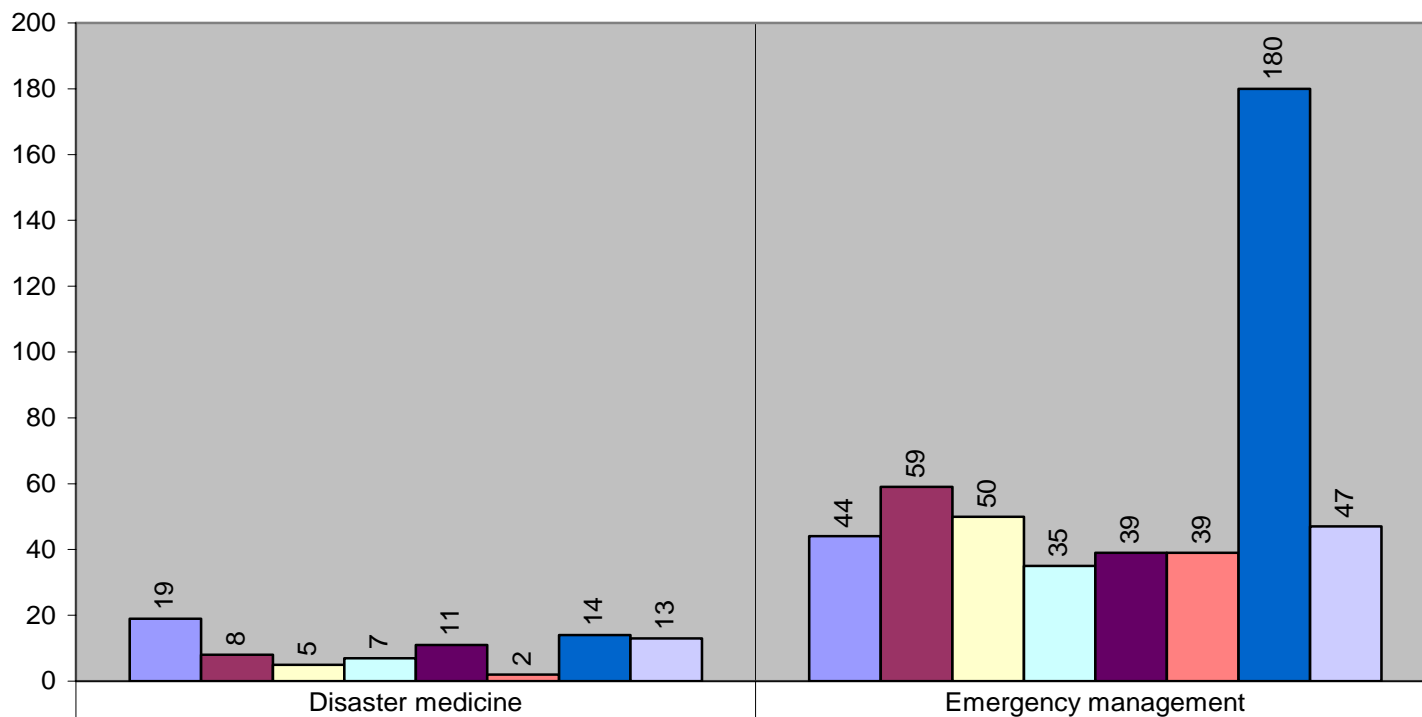


South African collections

- Are we able to serve our clients' information needs adequately?
-

No of catalogue entries – South Africa

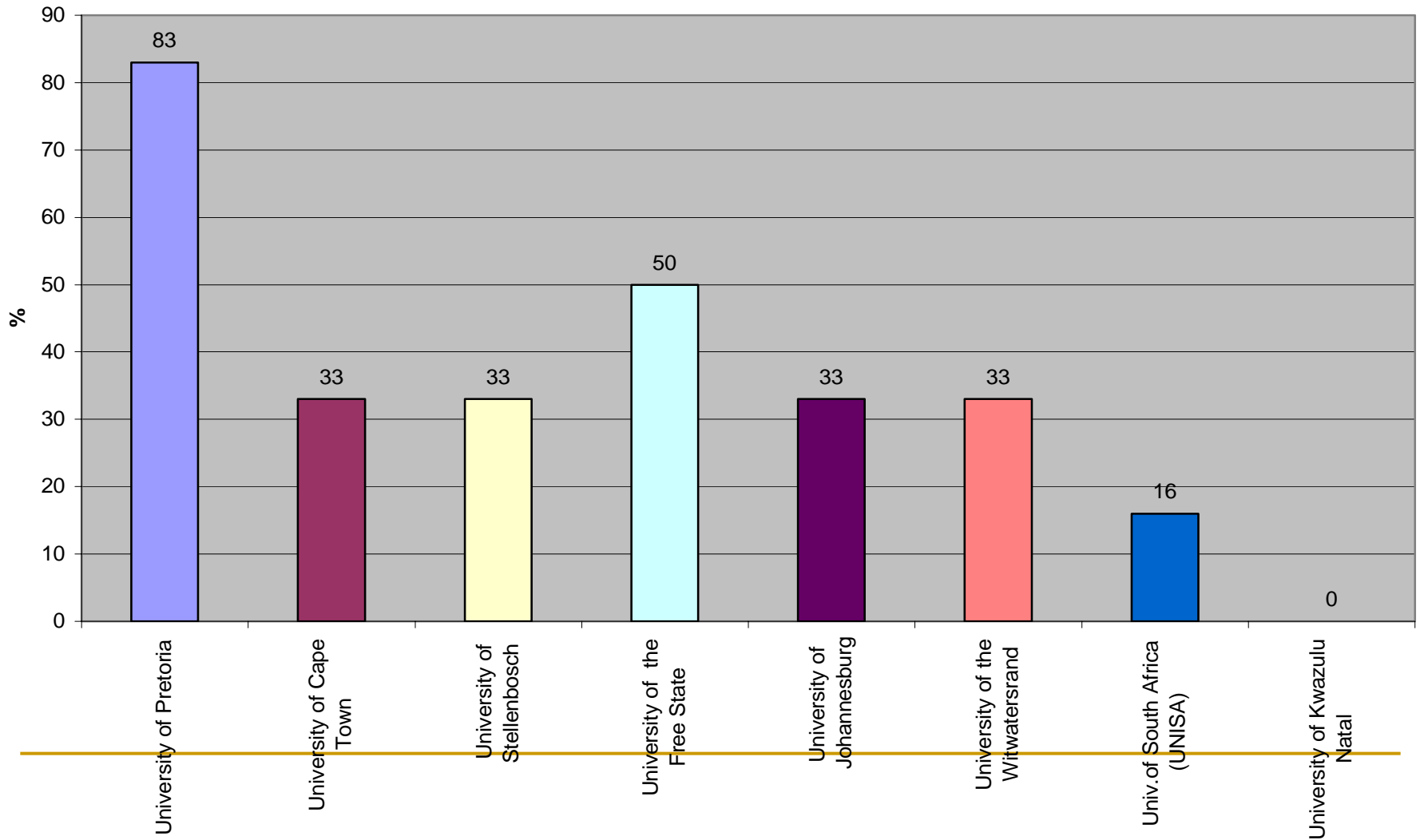
Catalogue entries in South African university libraries



University of Pretoria	19	44
University Cape Town	8	59
University of Stellenbosch	5	50
University of the Free State	7	35
University of Johannesburg	11	39
University of the Witwatersrand	2	39
Univ. of South Africa (UNISA)	14	180
University of Kwazulu Natal	13	47

Journal & book titles – South Africa

Total items owned (%)



Information on the Web

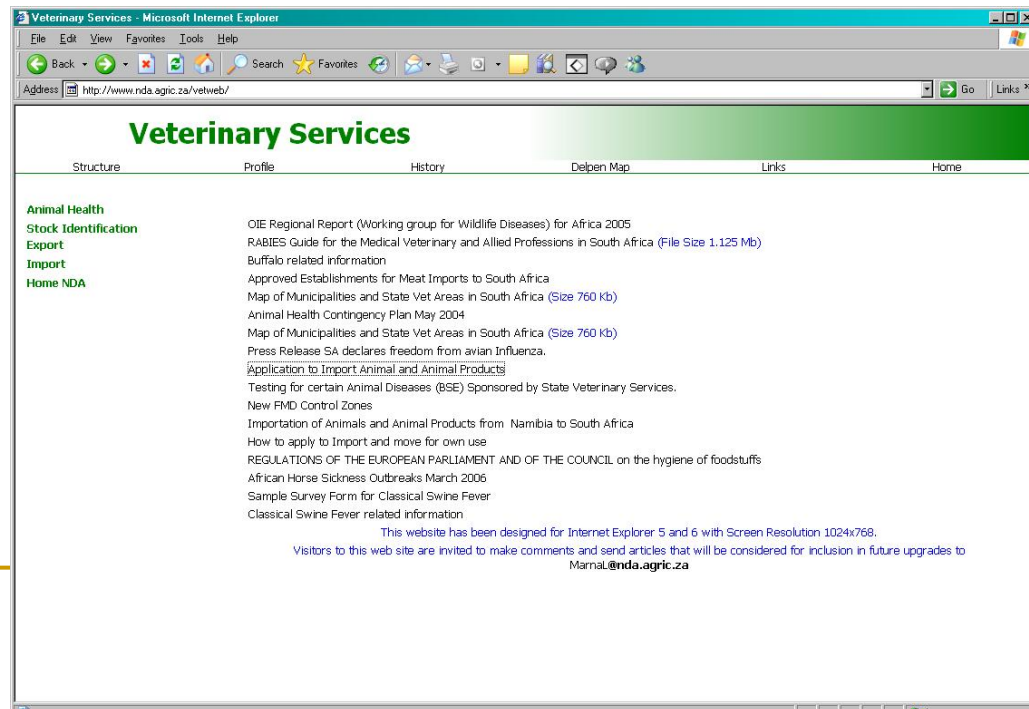
- Is it adequate?
 - For South Africa? NO!
-

Web information for SA

- SA Veterinary Association
 - SA Medical Association
 - Dept of Agriculture (Veterinary)
 - Agricultural Research Council
 - Dept of Health
 - Health Sciences Faculties (universities)
-

Websites for SA - food safety

- Directorate Veterinary Services
- SA Government Services
 - ❑ Importation documents – requirements and procedures for import of meat etc.
 - ❑ BUT NO OTHER INFO on disaster management



Creating a website on Disaster Management

- For whom?
 - Who are the experts?
 - What type of info?
 - With whom should we collaborate?
 - What info should be excluded?
-

Relevant websites

- AVMA (American Veterinary Medical Association)
 - University of Tennessee
 - CDC (Centers for Disease Control)
 - UK Institute of Animal Health
 - UK DEFRA (Dept for Environ., Food & Rural Affairs)
-



Search AVMA

[Search Tips](#) | [Advanced Search](#)

Search Animal Health

Search within Animal Health only.

[Disaster Home](#)

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[Saving the whole family](#)

[Disaster preparedness for veterinary practices](#)

[Veterinary medical assistance teams \(VMAT\)](#)

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Animal Health

[Animal health](#) > [Disaster preparedness](#)

AVMA disaster preparedness

The educational materials listed below are provided to assist veterinarians, animal owners, and others interested in the well-being of animals to prepare for animal safety in the event of a disaster.

For information about ordering these materials, or for further information about the **AVMA Disaster Preparedness Program**, please [contact us](#).

Animal disaster plans and resources by state

[▲ Top](#)



Click on the map to view disaster resources by state

University of Tennessee

THE UNIVERSITY of TENNESSEE

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Hot Topics



Emergency Preparedness & Response

SEARCH

[CDC A-Z Index](#)

This site is intended to increase the nation's ability to prepare for and respond to public health emergencies.

Replay

Anthrax
Identifying Suspicious Packages **GO»**

Flu Vaccination

Ricin

Preparedness »

Top Emergency Resources

Communicating in the First Hours: Initial Communication With the Public During a Potential Terrorism Event

National Public Health Week: podcasts & slides now available!

Languages:

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- [Français \(French\)](#)
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- [Italiano \(Italian\)](#)

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CONTACT CDC

800-CDC-INFO
888-232-6348 (TTY)
cdcinfo@cdc.gov
[Report an Emergency](#)

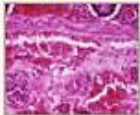
News & Events [What's New](#)

NEWS & EVENTS

- [2007 HHS PHEMC Enterprise Stakeholders Workshop](#)
- [Important CDC Findings Published on Mental Health in Tsunami-Affected Areas in Thailand](#)

Agents, Diseases, & Other Threats

Bioterrorism Emergencies



Anthrax
Plague
Q fever
Tularemia

[» More](#)

Mass Casualties



Burns
Explosions/blasts
Injuries
Preparedness Tools

[» More](#)

Chemical Emergencies



Chlorine
Nerve Agents
Ricin
Toxic Alcohols

[» More](#)

Natural Disasters & Severe Weather



Extreme Heat
Hurricanes
Floods
Wildfires

[» More](#)

Radiation Emergencies



Acute Radiation Syndrome
Dirty Bombs
Nuclear Blast
Polonium

[» More](#)

Recent Outbreaks & Incidents



Bridge Collapse
Formaldehyde
Asbestos
Botulism

[» More](#)

A-Z Index of All Agents, Diseases, & Other Threats

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)


UK Institute of Animal Health

INSTITUTE FOR ANIMAL HEALTH - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address <http://www.iah.bbsrc.ac.uk/> Go Links



INSTITUTE FOR ANIMAL HEALTH

good science, useful science

IAH is an international research centre working to improve the health of farm animals worldwide

Information on...

- [The Institute](#)
- [Research](#)
- [Publications](#)
- [People](#)
- [Applied Research](#)
- [News](#)
- [Events](#)
- [Disease fact files](#)
- [Schools](#)
- [2006/7 BT Outbreak in Northern Europe](#)
- [FMDV Fact File](#)

New to this site...

- [Statement from the Institute for Animal Health regarding allegations on biosecurity](#) - 12 August 2007
- [Statement from Institute for Animal Health](#) - 9th August 2007
- [Institute for Animal Health statement on allegations of Legionella contamination](#) - 9th August 2007
- [Institute for Animal Health transcript of Director's statement to media](#) - 7th August 2007 at 20:30
- <http://www.hse.gov.uk/news/archive/07aug/pirbright.htm> - Initial HSE Report
- <http://www.hse.gov.uk/news/archive/07aug/letter.pdf> - Benn Letter
- [Institute for Animal Health transcript of Director's statement to media](#) - 5th August 2007 at 15:00
- [Institute for Animal Health statement on Foot and Mouth Disease outbreak](#) - 5th August 2007 at 00:01
- For further information concerning the FMDv outbreak see: <http://www.defra.gov.uk/footandmouth/>
- [Bluetongue active again near the Belgian coast](#) (23 July 2007)
- [Development in Germany heightens the concern that bluetongue virus may come to UK this year](#) (press release of 22 June 2007)

Done Internet

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- Access to information/FOI
- Links

Defra helpline

08459 33 55 77

Mon-Fri: 9.00am to 5.00pm
(6.00am to 10.00pm 7 days a week)

Latest news

Foot and Mouth Disease in cattle
(Updated 15/08/07 13:30)

Public attitudes and behaviours toward the environment
14/08/07

Consultation: Recycle on the Go
13/08/07

Flooding review: independent chair appointed
08/08/07

Directgov
Public services all in one place

info4local.gov.uk

Business Link

Media centre

News releases, ministers' statements and speeches

Focus



Act on CO2 campaign hits the road

Search

Index

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z

Quick links

- ▶ **Foot and Mouth Disease**
- ▶ Animal Welfare Act
- ▶ Avian influenza
- ▶ Access to open country
- ▶ CAP - Single Payment Scheme
- ▶ Climate change and energy
- ▶ Environmental Stewardship
- ▶ Flooding
- ▶ Personal food imports
- ▶ Pet Travel Scheme
- ▶ Recycling and waste
- ▶ South Downs update

International sites

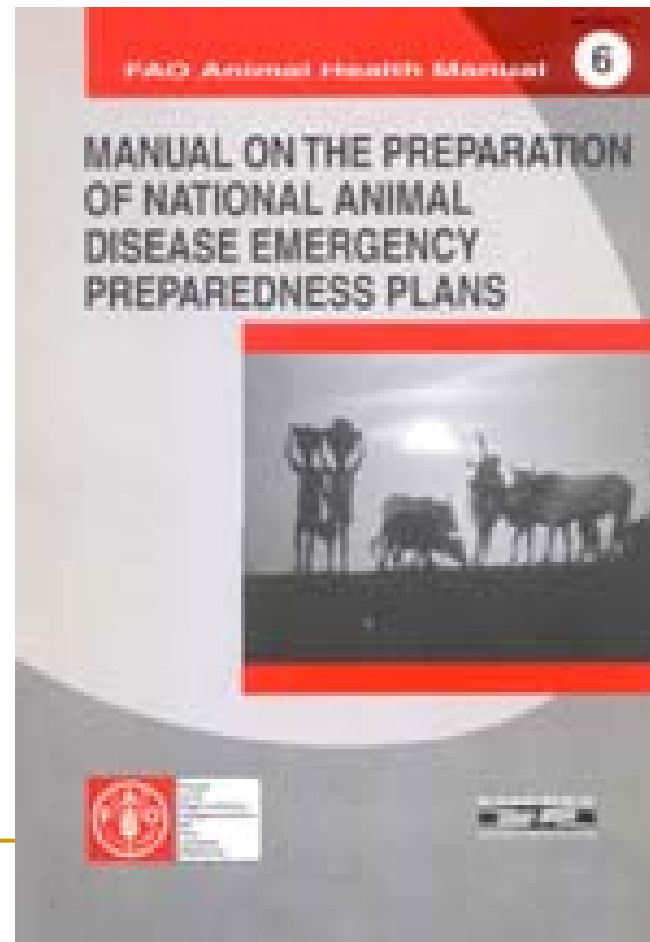
- OIE (World Organisation for Animal Health)
 - WHO (World Health Organisation)
 - FAO (Food & Agriculture Organisation)
 - UN Early Warning Programme
-

International Early Warning

- In 2000, the United Nations launched the International Early Warning Programme to address the underlying causes of vulnerability and to build disaster-resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development, with the goal of reducing human, social, economic and environmental losses due to hazards of all kinds (UN/ISDR, 2000).
-

FAO (Food and Agriculture Organisation)

- *FAO Animal Health Manual No. 6*



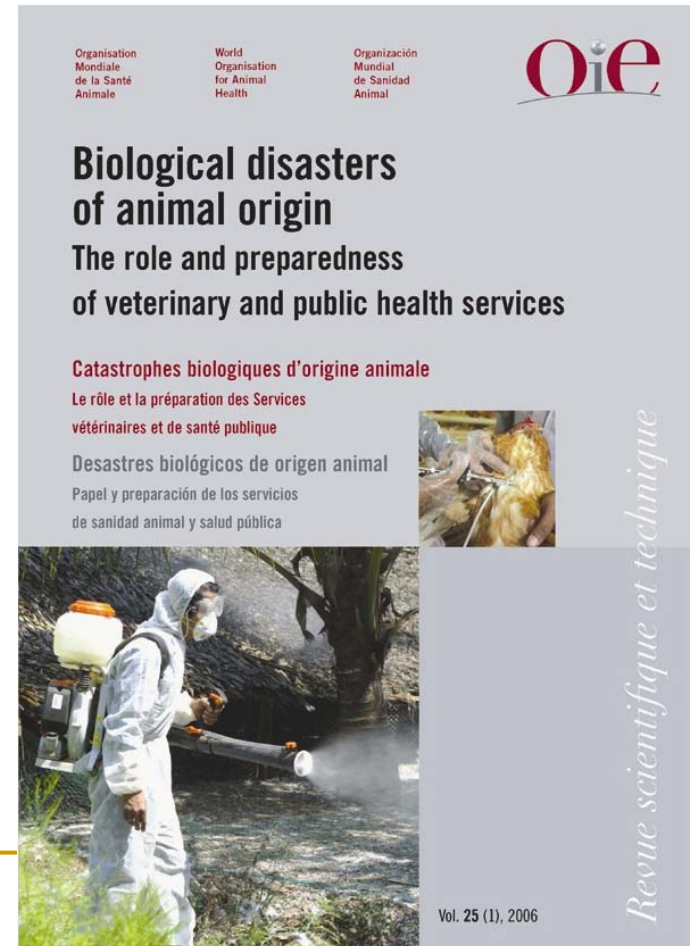
OIE World Organisation for Animal Health

- **Disease Emergency Preparedness**
 - a gateway to National Disease Contingency Plans and Disease Introduction Simulation Exercises between OIE Member Countries
-

OIE World Organisation for Animal Health

The role and preparedness of veterinary and public health services

- “facing health threats of animal origin “
- “coping with provoked and accidental disasters”



WHO website

- **Avian influenza**
 - WHO is coordinating the global response to human cases of H5N1 avian influenza and monitoring the corresponding threat of an influenza pandemic. Information on this page tracks the evolving situation and provides access to both technical guidelines and information useful for the general public.
 - **Latest information**
 - **25 July 2007**
Avian influenza - situation in Egypt - update 19
[Full text](#)
-

AVMA Website

AVMA



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Animal disaster plans and resources by state

[▲ Top](#)



Click on the map to view disaster resources by state

AVMA Disaster Preparedness and Response Guide

[▲ Top](#)

New website for Southern Africa

■ For one-stop info



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Disaster Preparedness and Management

[University of Pretoria](#)

[Faculty of Veterinary Science](#)

[Veterinary Science Library](#)

Maintained by
[Antoinette Lourens](#)



Hot Topics

- [Foot and Mouth Disease in Surrey, UK](#)

Guidelines for the Faculty of Veterinary Science, University of Pretoria

- Disaster Management Plan for the Faculty of Veterinary Science, University of Pretoria
- Biosecurity for the Faculty of Veterinary Science, University of Pretoria

News and Highlights

- Handpicked Blog

Role of the Veterinarian in Emergencies and Disasters

Disaster preparedness and management

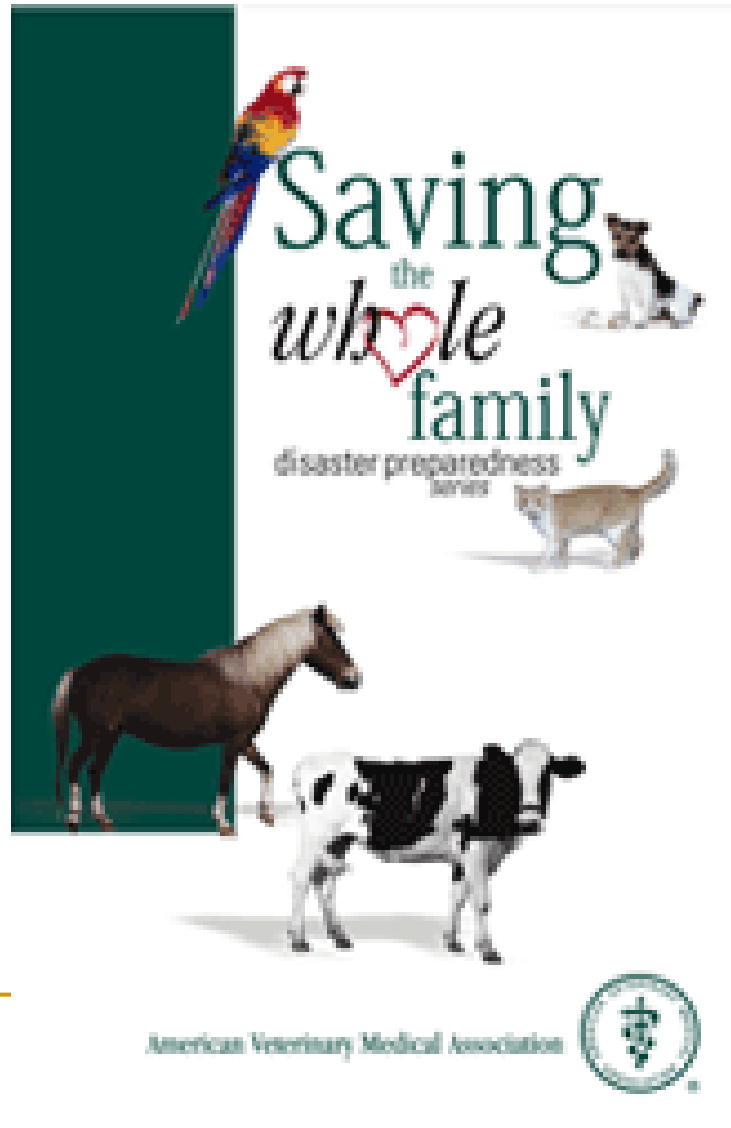
- [University of Tennessee Extension](#)
- [Animal Management in Disasters](#)
- [LGC Disaster management](#)
- [Federal Emergency Management Agency: Information for Pet Owners](#)
- [Disaster Management in South Africa](#)

Safe Laboratory Procedures

- [Laboratory Animal Management Association Disaster Resource](#)

Biosecurity

Our ultimate goal



Librarians and Disasters

- Essential part of the team
 - Listservs
 - Blogs

e.g. Recent F&M outbreak in UK

Blogs keep us up-to-date

- August 06, 2007 - Foot & Mouth
 - Blog: “Hand-picked and carefully sorted”
 - Run by Robert Taylor, CABI
-

Listservs

- VetLib-L
 - CNN.com items posted on listserv by colleague in USA
 - This alerted us to the F&M outbreak
-

Librarians and Information

- The quicker the authorities can take the necessary steps, the lesser the negative impact
 - **The Right Information in the right place at the right time!**
-