Rift valley fever, viral haemorrhagic fevers and others emerging zoonotic diseases.

Pierre Formenty – 31 January 2007, Roma, Italy
Key aspects of the new IHR 2005

- **Scope – notification, response**
  [Public Health emergencies of international concern (PHEIC)]
  Broaden scope, Careful of areas that overlap with other mandated organisations, Assisting States who request it

- **Obligation to establish core capacities**
  Surveillance and response, Points of entry, What happens in countries is most important – par to Global health security

- **Recommended measures**
  Context specific & Flexible

- **External advice regarding IHR**
  Emergency committee, Review committee, World Health Assembly role

Epidemic and Pandemic Alert and Response
World Health Organization
Epidemic and Pandemic Alert and Response Department (EPR)

Operational arm of IHR 2005
Emerging Infectious Diseases: outbreak alert and response

Forecasting Readiness → Rapid Response

Early Detection

Number of Cases

Control Opportunity

General strategy for controlling outbreak

Epidemic and Pandemic Alert and Response

World Health Organization
Response strategy and Operations

Epidemic Intelligence

Verification

Risk Assessment

Response strategy and Operations

Formal
WHO laboratory networks, (sub-)regional networks, WROs & MoH, UNOs

Official Sources e.g. WRO, MoH

Informal
Global Public Health Intelligence Network (media), NGOs

Social Mobilization
Health Education
Medical Anthropology

Logistic Security Communications

Coordination Technical & Operational Medias - Information Finances

Epidemiological Investigation Surveillance Laboratory

Case management Funerals Infection Control

GOARN

Epidemic and Pandemic Alert and Response
Rift valley fever
Forecasting Rift Valley Fever outbreaks

El Niño
FAO

NASA / GSFC
WHO

Forecast possible RVF outbreaks
Early Warning

WHO Warning message
1. Intensified surveillance
2. Human/Vet. collaboration
3. General guidelines
4. Reference laboratories
5. Shipment guidelines

Animal Outbreaks (FAO)
Human Cases GOARN

Epidemic and Pandemic Alert and Response
Climatic and Ecological Conditions for RVF Risk during November 2006

Animal and Human

Epidemic and Pandemic Alert and Response
Several RVF Alerts send to countries and Regions

=> only 2 RVF outbreaks forecast (2003 and 2006) BUT

– Some countries take appropriate measures, prepare outbreak response team and vector control program

– Detection of other Arboviruses outbreaks (dengue, West Nile, Yellow Fever)

– Need for a more systematic way of sharing forecasting maps with countries (web site)

Need more collaboration with MoA, VetServices, NGOs working in conservation

Need to improve mathematic model (ecology)

Extend to others arboviruses (tick borne diseases?)
Rift valley fever, Kenya 2007

Human cases

Animal cases

Epidemic and Pandemic Alert and Response

World Health Organization
Rift valley fever, Kenya 2007

Human cases of RVF in NEP and Tana River and Isiolo districts, Kenya, by date of onset of symptoms (estimated for 31 cases), December 2006 – January 2007 (n = 259 cases). As of 29 January 2007.

Slaughter ban

Animal vaccination
Rift valley fever, Kenya 2007

- Forecasting: OK, good collaboration
- Alert ?? Human cases first reported
- Outbreak control:
  - pb with slaughter ban,
  - vaccination (Smithburn vaccine) in epizootic areas,
  - Weakness of veterinary surveillance (few animal data)
Crimean-Congo Haemorrhagic Fever
Crimean-Congo Haemorrhagic Fever Geographic Distribution

50° North limit for the geographic distribution of genus *Hyalomma* ticks

- **Country at risk (serological evidence + vector):** 50 to 200 cases per year
- **Country with low risk (presence of vector):** 20 to 49 cases per year
- **5 to 15 cases per year:**

*Map of the world showing the distribution of Crimean-Congo Haemorrhagic Fever.*

**Legend:**
- Pink: Country with low risk (presence of vector)
- Yellow: Country at risk (serological evidence + vector)
- Orange: 5 to 15 cases per year
- Brown: 20 to 49 cases per year
- Red: 50 to 200 cases per year

Epidemic and Pandemic Alert and Response
Crimean-Congo Haemorrhagic Fever

- CCHF Joint WHO (MZCP-EMRO-EURO-HQ) Intercountry Workshop on Crimean-Congo Haemorrhagic Fever (CCHF) in collaboration with WHOAH-OIE and FAO/UN and the Integrated Consortium on Ticks and Tick-borne Diseases (ICTTD). **RECOMMENDATIONS** → need to strengthen Animal and Human Health, case management (clinical trials)

- Reinforce by EMRO VHF meeting in Damascus

- Focus on EMRO region and Central Asia

- Same approach as for RVF, need to support Tick expertise
Viral Haemorrhagic Fevers worldwide, 1967-2007

Crimean Congo HF
Ebola HF
Marburg HF
Lassa HF
South American HF
Hantavirus

Epidemic and Pandemic Alert and Response

World Health Organization
Hantavirus and Lassa (arenaviridae), Monkeypox

- Hantavirus International meeting in CHINA
- Lassa, Kenema BSL3, case management (clinical trials)
- Rat Born viruses network
Filoviruses, Nipah, SARS

- Intense collaboration with NGOs working in wildlife health (WCS, ..) . Current outbreak in Congo
- Bat Born viruses network