The Global GF-TADs progress report

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Institutional report (1/6): meetings

Management Committee met on July 20, 2010 to prepare the third GF-TADs Global Steering Committee meeting on September 16 and 17, 2010. Main subjects:

• Second external evaluation of GF-TADs
• Report on Global Activities
• Progress reports:
  ➢ joint FAO/OIE tools (GLEWS, OFFLU, CMC-AH)
  ➢ One health
  ➢ OIE PVS pathway
• Activities of the Regional Steering Committees
Institutional report (2/6): GF-TADs second evaluation

- 50 recommendations, of which 19 referred to GF-TADs sensu stricto; the remainder referred to the common tools.

- **Overall positive conclusion:**
  “In a short time and in a difficult context, GF-TADs has proved its usefulness and has achieved significant results for the benefit of animal health worldwide” and:
  “Stakeholders and partners believe that decisive progress has been made with epidemi-surveillance and disease notification, early warning, rapid response capacity and animal health support mechanisms.”
Continued (3/6)

- “Adjustments are still required between the organizations that created the initiative and efforts must be made to improve the information and communication”
- “However, the main concern lies in the fragility of GF-TADs, which does not benefit from long-term financial resources”

NB: This is still problematic: Global Secretariat has two temporary staff members (one part time) and both provided “in kind” by member countries (Italy and the Netherlands)
Institutional report (4/6): Response to the external Recommendations

MC and GSC accepted the RECs regarding:

- Presentation of GF-TADs/communication/visibility
- Increased contacts/cooperation between global and regional and between regions
- Strengthen the role of RSO’s and RSU’s
- Foster links between RSU’s and RAHCs
- Strengthen the role of WHO, in particular for zoonoses
- Improve donor lobbying and GF-TADs funding

Placed under study:

- Harmonizing requirements for Ref. labs and Ref. Centers
- Future of the RAHCs and regional networks
Institutional report (5/6): Overview present RAHCs

- **RAHC Vade Mecum** (under development)
- ‘Virtual’ RAHC in Bangkok for Asia and the Pacific
- Feasibility for a RAHC in Katmandu? (GSC2 Rec #11)
- Feasibility for a RAHC in the Stan countries (under the GF-TADs for Europe)
Institutional report (6/6): Generic ToRs WGs

• Generic ToRs agreed for GF-TADs global working groups
• Now operational:
  ➢ FMD working group
  ➢ Rift Valley Fever Study Group
• Next:
  ➢ PPR Working Group (to be discussed during GSC-4, October 18 and 19, 2011)
GLEWS
What is GLEWS?

- Global Early Warning System for Major Animal Diseases including zoonoses
- A joint FAO, OIE and WHO platform to improve disease intelligence
  - to share (zoonotic) disease outbreak information
  - to inform each other about follow-up/verification actions undertaken or ongoing
  - to share epidemiological and risk analysis results
  - to support and deliver early warning messages to the international community on areas at risk of TAD
- GLEWS was launched in 2006
- Future funding not yet assured
Technical report: Rinderpest

Rinderpest

- Joint Committee

- Post eradication strategy (sequestration, surveillance, disease management)

- Roadmap:

  [Diagram of the roadmap: Pré-Déclaration, Accord FAO-OIE, Résolution, Déclaration, Post-Déclaration.]

  - October 2010: FAO: end of field operations
  - May 2011: OIE 79th GS
  - June 2011: FAO Conference

The Global Rinderpest Eradication Programme
Status report on progress made to date in eradication of rinderpest: highlighting success story and action required till global declaration in 2010
Major animal disease threats in 2010

- RVF
- ASF
- FMD
- PPR
- H5N1 HPAI

FMD: Foot and mouth disease
ASF: African swine fever
PPR: Peste des petits ruminants
PRRS: Porcine respiratory/reproductive syndrome
H5N1 HPAI: H5N1 Highly pathogenic avian influenza
H5N1 clades: 1st Jan 2010 – 11th March 2011

AI H5N1 outbreaks
- Red: Poultry
- Blue: Wild birds (captive)
- Green: Wild birds
FMD Outbreaks: 2010 - 2011

- Overall: 660 FMD outbreaks reported in 10 countries

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Source: EMPRES-i
Temporal trends – outbreaks by serotype (2005 - 2011)

Source: EMPRES-i
African Swine Fever
in Eastern Europe
(2007-2011)
RVF outbreaks in Africa; Jan. 2010 – March 2011
- At the end of September 2010, an unprecedented outbreak of Rift Valley fever was reported in the Sahelian northern region of Mauritania after exceptionally heavy rainfall.
- The rainfall created large ponds of water in the oases of the usually dry region of Adrar, rapidly colonized by several species of mosquitoes including competent vectors.
- Appropriate control measures were taken by veterinary and public health authorities, including restrictions of livestock movement, mass insecticide spraying, risk communication and public awareness campaigns.
- 63 RVF cases in humans were officially reported of which 13 fatal.
First serological results indicate an IgM/IgG prevalence reaching 33% in camels and 44% in small ruminants.

Camels undoubtedly played an important role in the outbreak.

Rift Valley Fever outbreak response, Mauritania, 2011

Atar, Janv. 2011

Dead camel with sign of abortion, convulsions and arching of the neck.
RVF at global level

• FAO has been involved in the development of prediction models, together with WHO and OIE, and supported by NASA and University of Oxford for several years.
• Prediction models are still not accurate enough, but becoming better - what to do then?
• Available RVF vaccines are not satisfactory.
RVF-vaccine development, progress and constraints

• Meeting held in Rome from January 19 to 21, 2011
• Organized together with Wageningen University and Research Center in the Netherlands under the umbrella of GF-TADs and supported by OIE, WHO and IAEA
• Bringing together some 25 foremost scientists in this highly specialized field, originating from the EU, USDA, GALVmed and the pharmaceutical industry
• To review the development status of candidate RVF vaccines, the requirements they should meet, standardization of challenge models, how to ensure that candidate vaccines reach market stage, the need for vaccine banks, protection of persons as risk etc.
Available or in the pipeline

- **Clone-13** (France) – from benign human case; has large deletion in NSs gene. Safe for and challenge-tested in pregnant sheep. Available already in South Africa. Field trials planned in Kenya and Senegal.

- **MP-12** (USA) - produced in cell cultures by chemical mutagenesis; has several deletions. Challenge-tested in lambs and sheep. Produced antibodies in cattle and human volunteers. Further deletion mutant prepared with DIVA characteristics. Not yet on the market.

- **Reverse genetics RVF strain** (USA) – lacking targeted mutations on two genome segments. Challenge-tested in rats, now in sheep. Potential DIVA vaccine.
• **Capripox vector vaccines** (SA, France, Kenya) – in particular attenuated Lumpy skin disease virus (active against cattle, sheep and goat pox). Experiments in laboratory animals and sheep ongoing

• **Avian paramyxovirus vector vaccine** (Netherlands) – using the La Sota NCD replication in mammals. Experiments in laboratory animals, calves and sheep ongoing

• **DNA vector vaccines** (Spain, UK) – using plasmid DNA or Modified Vaccinia Ankara. Still in an early stage, but interesting for vaccination of humans

• **Virus-like particles** (USA) – mimicking complete RVF virus. Still in an early stage
Crisis Management Centre-
Animal Health
Missions to date

52 missions
35 countries

(approx. 50% HPAI, 50% other TADs)
Missions
(Oct 2006 – Mar 2011)
OFFLU
OFFLU - general

• Focus broadened: all animal influenza viruses
• New OFFLU Strategy document for *Surveillance and monitoring of influenza’s in animals*
• New website launched
• Cooperation agreement signed with WHO to contribute to human vaccine strain selection process (Jan. 2011)
• Joint WHO-FAO project in Egypt and Vietnam – to improve the linkage between human and animal influenza epidemiology and virus information
• Regional representation within OFFLU
OFFLU – technical

- 3rd Annual Technical Meeting; Rome, Nov. 2010

**Technical focus on:**

- Quality assurance influenza diagnostic tests
  - Development of a reference H5 chicken antiserum
  - Validation of field tests (i.e. LAMP)
- Avian influenza control and vaccination
  - David Swayne (USDA) evaluating HPAI vaccination and control strategies (16 months)
  - Egypt OFFLU/FAO vaccination project (until June)
- Developing an animal influenza research agenda
• Empress-i genetic module to link virus sequence information with outbreak information

• Participation in development of a framework for Risk Assessment of emergence of influenza with pandemic risk (supported by CDC and ESFA)

• Integration of swine and equine influenza groups
  – Launch of Swine Influenza experts group
  – Mandate and priorities of the group defined

• Annual OFFLU report