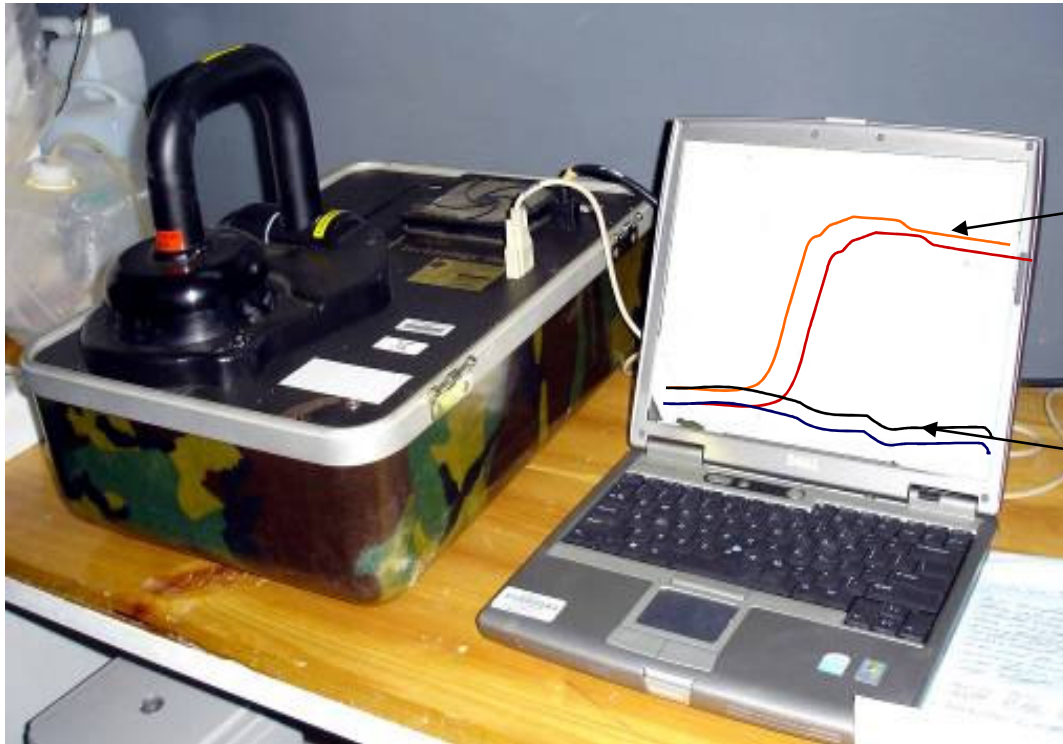


Rift Valley Fever outbreak response, Sudan

- Laboratory: NAMRU-3 was deployed in Kosti (PCR) for 5 days and in Khartoum (IgM by ELISA) for 7 days. NAMRU-3 confirmed 16/47 human cases in Kosti and Khartoum labs.



RT-PCR pos.

RT-PCR neg.

The lab. of the Vet. Invest. Center, Mpwapwa district,





Le laboratoire régional vétérinaire,
District de Mpwapwa, Tanzanie

Equipes sanitaires du district de
Mpwapwa,
Tanzanie, 2007



2. General strategy to **CONTROL** RVF outbreak

- Establish active **surveillance** system
 - Identify new cases. Clinical suspicions
 - Chain of reporting
 - Sampling, chain of transport
 - Follow-up human clinical suspicions (ocular, neurological, haemorrhagic)

- Implement appropriate **vector control** program based on entomological surveys





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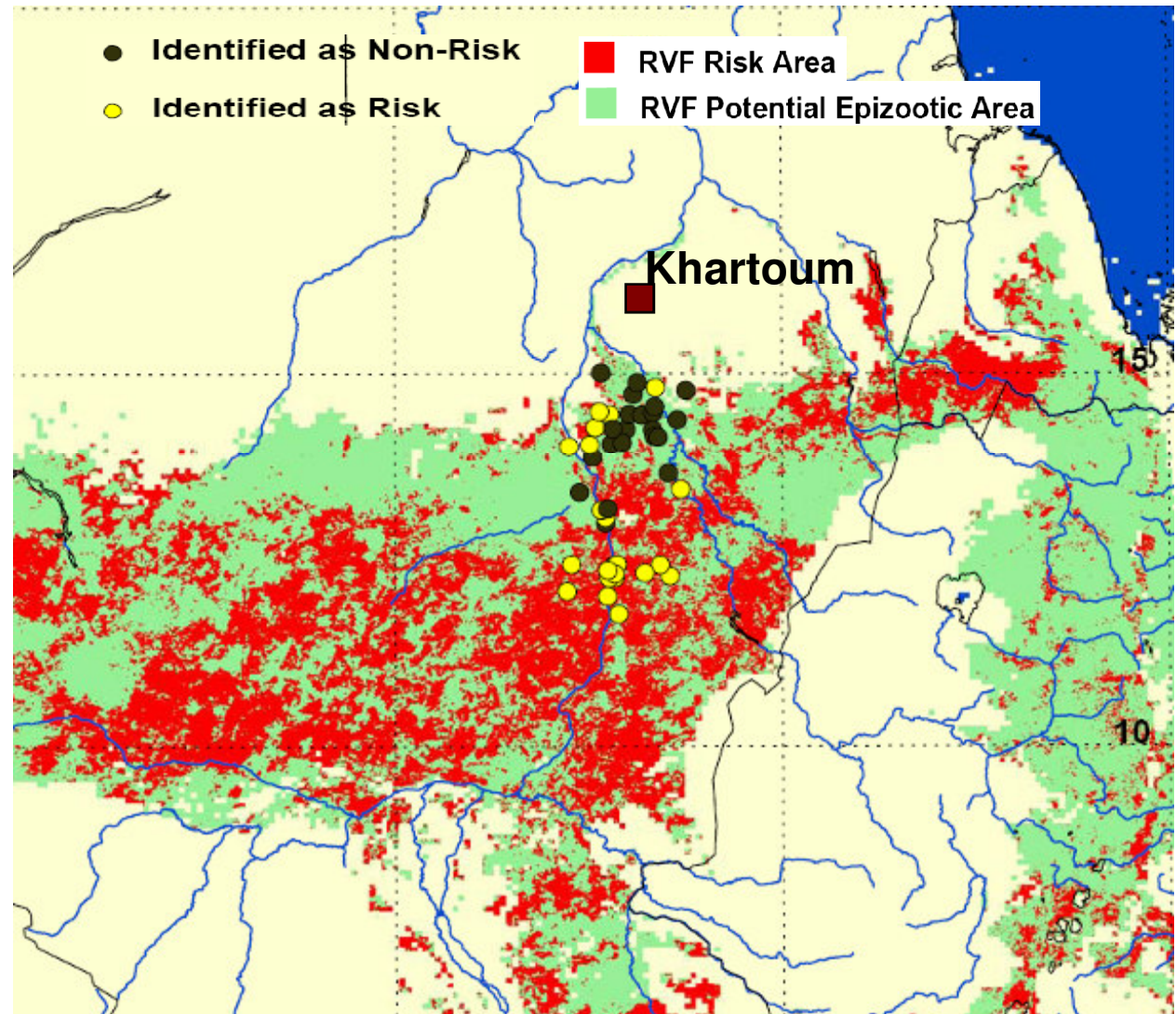
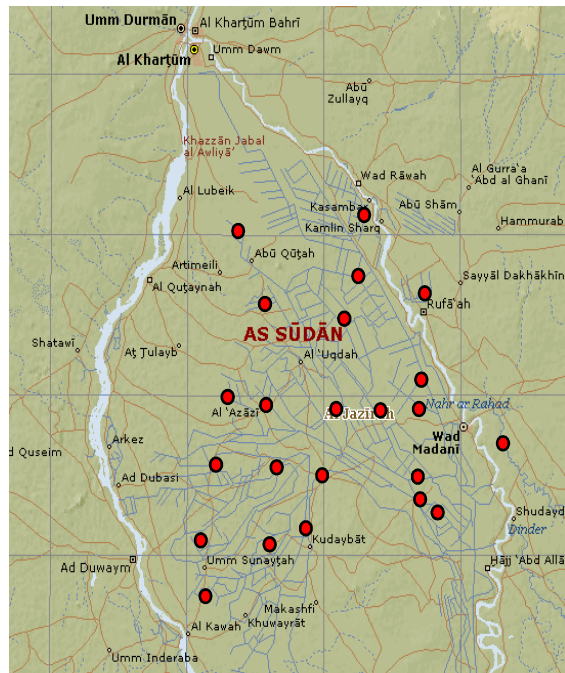
- **Animal Health** :
 - Restrict **animal movement** from epizootic areas to clean areas



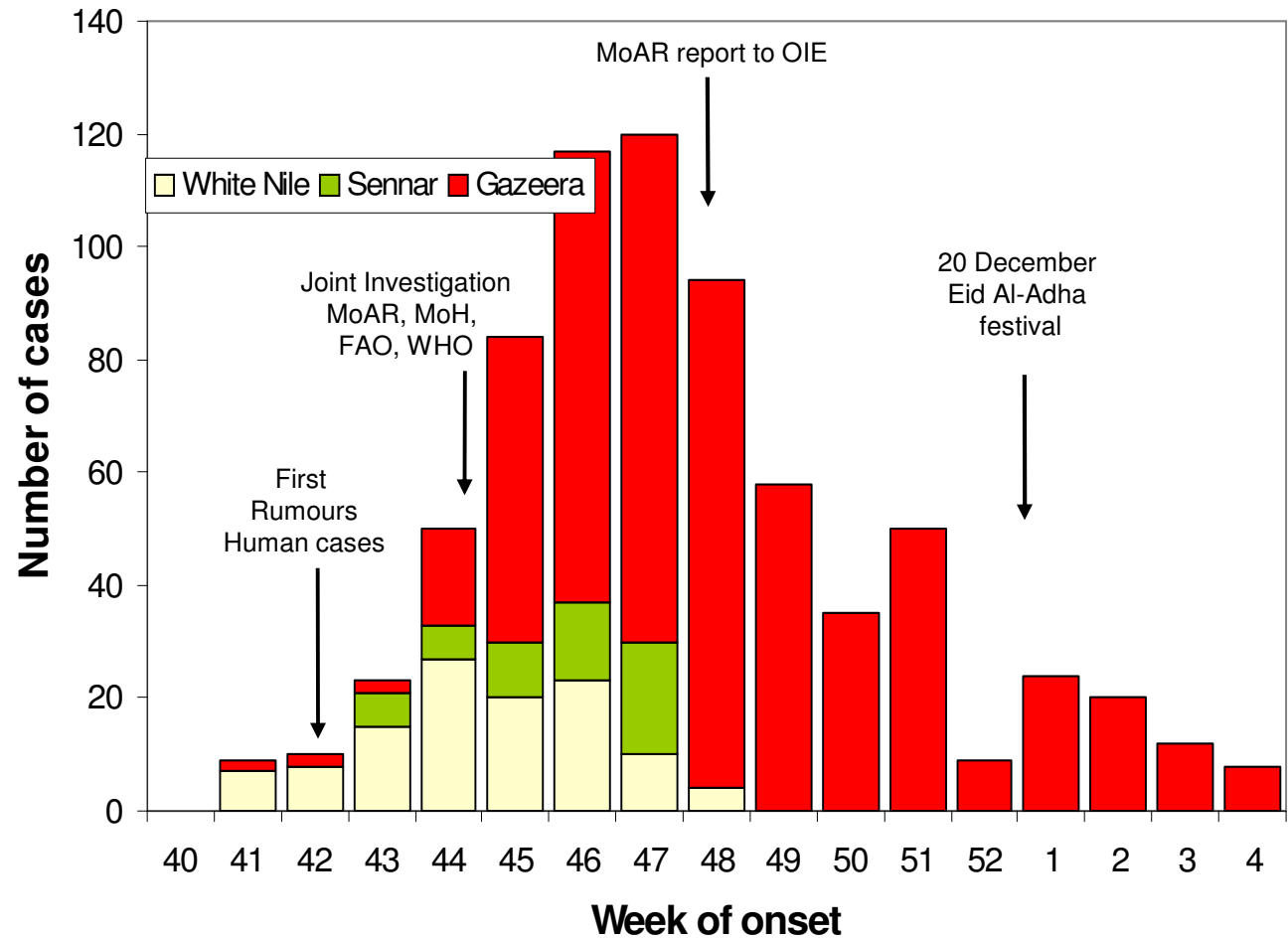
Climatic and ecological conditions and RVF outbreak sites Sept 2006 to May 2007

RVF human cases

- 50% in areas at risk
- 50% out



Cases of RVF reported in Sudan, by date of reporting from week 48/2007 to week 4/2008 (n = 738 human cases).



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- **Animal Health** :
 - Restrict animal movement from epizootic areas to clean areas
 - Control **slaughtering activities** – at home, and in facilities

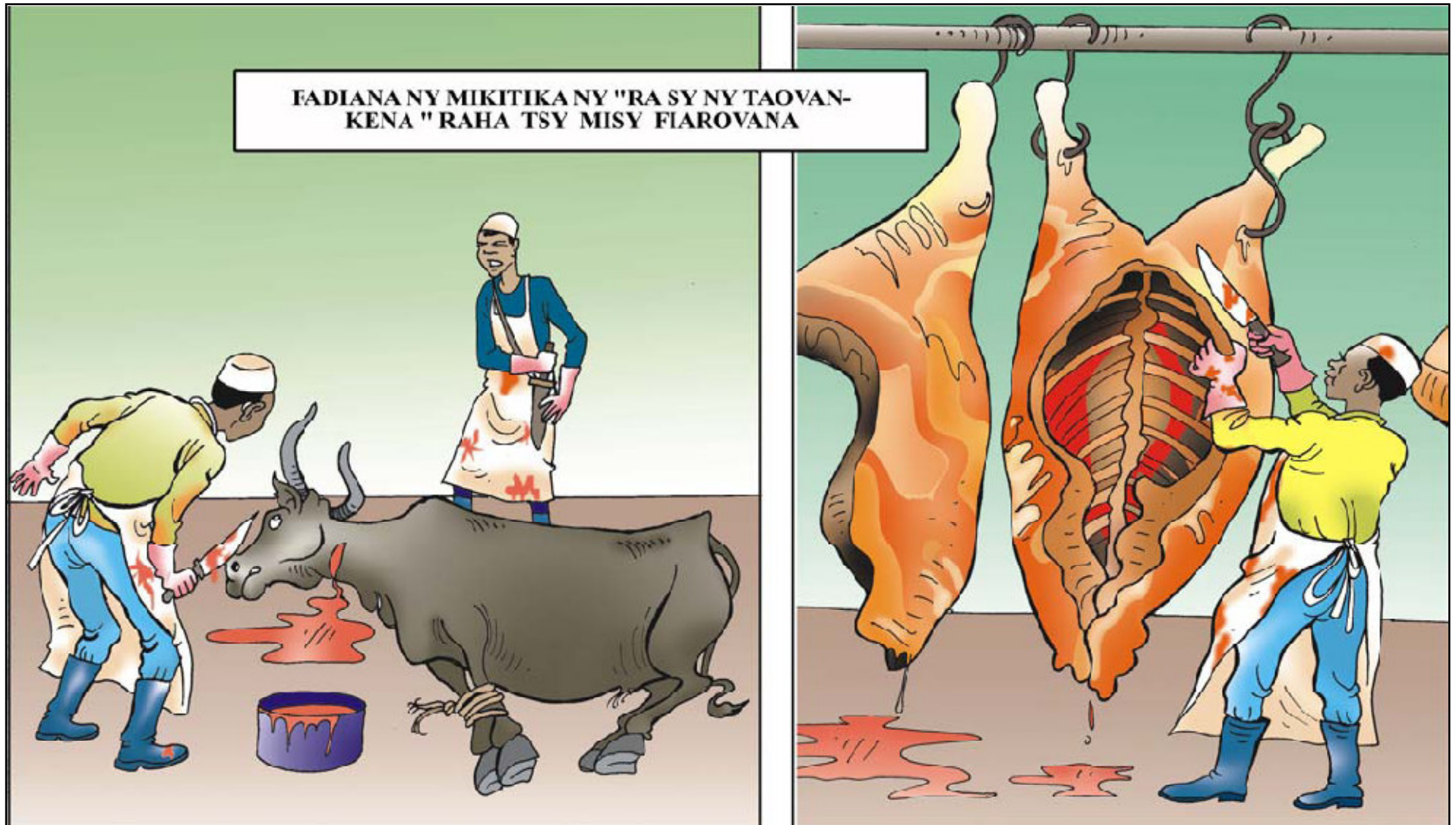


Social Mobilization

- The social and cultural aspects are usually underestimated or neglected when they are key. The support of medical anthropology is highly beneficial.



Rift Valley Fever outbreak control



Le Préfet communique
La fièvre de la vallée du Rift ,
« mieux vaut prévenir que guérir ! »

La fièvre de la vallée du rift a été identifiée à Mayotte sur le bétail.
Cette maladie peut être transmise à l'homme.
Chez l'homme, la maladie est souvent inapparente.
Dans le cas contraire, les symptômes s'apparentent à ceux de la grippe. Il peut cependant exister, rarement, des formes plus graves, hémorragiques, oculaires ou neurologiques.

Comment se transmet la fièvre de la vallée du Rift ?

- au contact du bétail infecté
- par ingestion de viande mal cuite et de lait cru ou caillé
- par piqûre de moustique

Que faut-il faire pour se prémunir de cette maladie ?

- Pour les personnes pratiquant des abattages de zébus, de chèvres ou de moutons,
 - se protéger : port de masques, lunettes et gants
 - Assurer une meilleure saignée des animaux : suspendre les carcasses et les nettoyer avec de l'eau potable
 - Se laver les mains avec du savon
- Pour l'alimentation,
 - bien faire cuire la viande
 - faire bouillir le lait
 - Ne pas consommer le lait caillé
- Pour les piqûres de moustiques,
 - éliminer les lieux de ponte
 - éviter les piqûres de moustiques



رسال يهريف
أودو « فيفر دلفل دو ريفت »
الحدري قبل لجير

و « فيفر دلفل دو ريفت » أيرحن
موزنم ز مور. أود أن أجهر مؤلدم.
دم ينتم ذرود يخ ير.
أود أن أهر مئك، علم زح ديزن؛
غم. يتشو شخرو..
أن أهلك عطريف.
تا أير جيج أود أن ؟
سك لثم بش إن أود أن
لذ نم كيف فتر
لو فزي بش أو للل
كشيو لثم.

ن الحدري جيج أود أن؟
موزو وئسزؤ زنم مؤر لثم، غير
أيريو.
حفظ ليدم يتلثم يشعي
ن، مئن، مئس أو حئن.
لذ ينتم ير دم ي لوك فتر.
يس فتر ينتم ن مچ يرين.
يس فتر مئن يتل لئس.
موزيشل
أيرج زنم ير حيف فتر.
ير مئس لئري لثم قبل اللو.
رشنو موزي للل.
موز لثم
أيريو فحن مئ ذرؤو
أود الحدريش لثم.

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- **Animal Health** :
 - Restrict animal movement from epizootic areas to clean areas
 - Control slaughtering activities – at home, and in facilities
 - **Do not vaccinate in epizootic areas.**





2. General strategy to **CONTROL** RVF outbreak

- International Organizations
 - Inform member states FAO, WHO and OIE.
 - +/- WHO recommendations on travel (IHR 2005)
 - +/- OIE recommendations on animal trade



3. General strategy to **AFTER** RVF outbreaks

- To announce the end of the epidemic and ensure follow-up with press coverage.
- To evaluate outbreak management
- To work out an end of the outbreak report
- To file outbreak documents in archives
- To go back to **surveillance activities** of the pre-epidemic phase
 - Monitoring of the climatic data
 - Monitoring of the human and animal epidemics



Take home messages

- Need for an integrated approach and more collaboration between MoH, MoA, Vet Services (animal data)
- International: at global level OIE FAO and WHO do have a common strategy, from Forecasting to Outbreak response
 - → need for **SOPs** for RVF from forecasting to outbreak containment: *One Health, One Message*
 - → **preparedness guidelines** for occupational health (e.g. how to protect slaughtering house personnel in different technology settings)
 - → field lab for human + animal health / outbreak response



Outbreaks of RVF from forecasting to control

- Forecasting. Several RVF Alerts send to countries and Regions
=> RVF outbreaks forecast (2003, 2006, 2007) BUT
 - Only some countries take appropriate measures, prepare outbreak response team and vector control program
 - Need for a more systematic way of **sharing forecasting** maps with countries (web site is not enough)
 - Alert message is not enough → **Forecasting field team.**
 - Need to improve forecasting model (knowledge in ecology, Indian Ocean Dipole, database of outbreaks, generating risk maps, bioclimatic zones...)



Thank You

Ministry of Health and Ministry of Agriculture Kenya

Ministry of Health and Ministry of Agriculture Madagascar

Ministry of Health and Ministry of Agriculture Somalia

Ministry of Health and Ministry of Agriculture Senegal

Ministry of Health and Ministry of Agriculture South Africa

Ministry of Health and Ministry of Agriculture Sudan

Ministry of Health and Ministry of Agriculture Tanzania

Bob Swanepoel, NICD; Assaf Anyamba, NASA/GFSC; Tom Ksiazec and Pierre Rollin, CDC Atlanta; H EIBushra EMRO, JM Reynes IP Madagascar, D.J. Rogers Uni. Oxford...

KEMRI-CDC in Nairobi, Kenya; NAMRU-3 in Cairo, Egypt; Institut Pasteur Sénégal; Institut Pasteur Madagascar; NICD South Africa;

Médecins Sans Frontières

World Animal Health Organization (OIE), Paris, France.

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