

## **Minutes of RATZOOMAN meeting held at the Royal Tropical Institute, the Netherlands, 27-29 April 2005**

### **The following people were in attendance:-**

Lorraine Arntzen, National Health Laboratory Service, South Africa  
Steven Belmain, Natural Resources Institute, UK  
Nan Chalmers, Syngenta, Zimbabwe  
Godfrey Chikwenhere, Plant Protection Research Institute, Zimbabwe  
Mirjam Engleberts, Royal Tropical Institute, the Netherlands  
Rudy Hartskeerl, Royal Tropical Institute, the Netherlands  
Ann-Charlotte Heiberg, Danish Pest Infestation Laboratory, Denmark  
Monica Janowski, Natural Resources Institute, UK  
Frikkie Kirsten, Plant Protection Research Institute, South Africa  
Herwig Leirs, Danish Pest Infestation Laboratory, Denmark and University of Antwerp, Belgium  
Jens Lodal, Danish Pest Infestation Laboratory, Denmark  
Robert Machang'u, Sokoine University of Agriculture, Tanzania  
Anabela Manhica, National Veterinary Research Institute, Mozambique  
Martha Mписаунга, Syngenta, Zimbabwe  
Rassul Nala, National Institute of Health, Mozambique  
Judith Pender, Natural Resources Institute, UK  
Linda Ritchie, Natural Resources Institute, UK  
Peter Taylor, Durban Natural History Museum, South Africa

### **WP1 Retrospective and prospective investigation of human sera for zoonotics.**

Representatives from each DC partner reported on progress since the last meeting in Denmark. Human samples have been collected in [Mozambique](#), [Tanzania](#) and [Zimbabwe](#), with the results summarised in their respective reports. Although no samples have yet to be collected from [South Africa](#), the ethical clearance procedures have now been approved, and sample collection is due to commence within a few weeks. It was expected that human samples from Mapate and Cato Crest would take about three weeks to complete collection from local clinics and community volunteers. Although nurses will be paid to collect samples, it was agreed that blood donors must volunteer and will not be paid for ethical reasons. The only analysed human samples we have are from Tanzania as summarised in [Robert's report](#). In Tanzania, human samples have been coming from hospitals. Samples from Morogoro have only been screened for leptospirosis. Samples from the south of Tanzania have been screened for toxoplasmosis only. No samples have been collected from Lushoto; however extensive plague data already exists for Lushoto. In Mozambique, human samples have been collected during two separate visits, collecting about 250 samples the first time and 1000 samples the second time in Zambezia province. No samples have been collected from Maputo yet but should be collected by end of May. In Zimbabwe, about 150 samples have been collected from Nkai from blood bank programmes. Efforts to collect from Harare will be emphasised to aid quick collection of larger sample sizes.

**Action:** It was agreed that samples collected in Zimbabwe would be sent to South Africa for analysis, as the information is needed for the project now.

**Action:** Outstanding samples from Mozambique to be sent to South Africa by end of May, now that border clearance problems are sorted out.

**Action:** It was agreed that staff from Mozambique and Zimbabwe will visit South Africa to assist in the analysis of samples in time for the results to be presented at our next meeting.

**Action:** Martha to contact blood banks to collect large sample sizes and send to South Africa for analysis.

**Action:** Samples to be collected from Maputo, Mapate and Cato Crest to happen in the next few weeks, targeting households involved in other parts of the project as well as the general population and nearby clinics

### **WP2 Taxonomic Identification of rodent species found in rural and peri-urban habitats.**

Field work is continuing. Summary of outstanding information and data collection requirements is summarised in [Herwig's presentation](#).

### **WP3 Isolation and identification of zoonotics from rodents and domestic animals.**

Samples from Zimbabwe and Mozambique are being analysed in [South Africa](#) along with their own samples. Port Elizabeth is now collecting samples after staff have received training, and results will

be fed into WP2 as well. For leptospirosis, the only test for which we have results is using the human dridot test which will be used to compared against MAT results which are still outstanding. Isolation and MAT results are outstanding for these three countries all going through the same system. Samples from Tanzania are being serologically tested and isolated, where progress continues as described in the [Tanzania report](#). Progress on collecting samples from domestic animals has been slow and difficult, analysis of samples that have been collected is still outstanding for all sites.

**Action:** Lorraine to chase up the MAT results.

**Action:** Domestic animal samples (pigs, goats, cattle, sheep, dogs, cats) are still required from the sites. Those samples that have been collected must be analysed asap.

**Action:** A more complete set of results is desperately needed if we plan to invite WHO staff to our next meeting.

#### **WP4 Rodent Ecology in rural/peri-urban Africa**

Analysis of CMR data generally shows that seasonality is less pronounced in urban areas than in more fallow/rural areas. There is good correlation among the grids in the same area, emphasising the data is robust. Breeding rates do appear to change between different localities, e.g. breeding in Mapate is over a longer period than breeding in Morogoro.

**Action:** Herwig emphasised that various problems still exist in the collection of CMR data in different localities. [Please refer to his presentation](#) to remind yourself of what information is still required and needs further attention.

**Action:** CMR sites are all due to complete by end of December, the exception being sites in Zimbabwe which will continue until the end of February 2006.

#### **WP5 Impact of environmental factors, water management and land use strategies upon zoonotics.**

[Judith gave a presentation](#) about the analysis that has been conducted on land use changes for the sites. A large number of land use categories were established using the more recent SPOT images for each site. She emphasised that the resolution of the older images implies few land use categories can be established, but that general changes in urbanisation and agricultural intensification/deforestation will be possible. This has not been done yet. There are still a few images which are missing. These have been ordered. Judith will be able to send high resolution maps of the sites to everyone very soon.

**Action:** Judith to send everyone maps showing how the sites have changed over time.

#### **WP6 Socio-economic impact and livelihood constraints of disease**

Summaries have been produced for Cato Crest, Mapate and Lushoto and the report of this can be found within the second annual report. Data files from the Mozambique survey were collected at the meeting and will be analysed over the next month by Malcolm Iles. A report from the survey in Harare was handed over at the meeting, and data files that produced this report need to be sent Malcolm so he is able to incorporate the analysis into the summary report.

**Action:** Martha to send data to Malcolm

**Action:** Robert to quickly sort out what needs to be done to collect socio-economic data in Morogoro

**Action:** Malcolm to incorporate data from Mozambique and Zimbabwe into final report.

#### **WP7 Measuring factors of anthropogenic change upon rodent ecology**

Final reports for Cato Crest, Mapate and Lushoto are available on the project website. Data from Morrumbala must be sent to Monica so that a report for this site can be drafted. Negotiations with the anthropologist in Zimbabwe are still ongoing and it is not certain that this work will go ahead as the anthropologist is asking for too much money.

**Action:** Martha and Monica to liaise with Rudo and try to come to arrangement for at least one site to be done within the next month.

#### **WP8 Geographic Information System**

Judith gave a demonstration of what GIS information is currently available. Data sheets for the results of human sample analysis were sorted out by Rudy, Linda and Lorraine to facilitate their importation into the GIS.

**Action:** Linda/Judith to send round an updated version of the ratzooman database to everyone.

**Action:** Monica and Linda to discuss how the anthropological data can be incorporated

**Action:** Everyone to tell Judith what sorts of queries they would like the database to make

**Action:** Judith, Rassul and Ricardo to sort out a time for Ricardo to visit the UK. As Linda, Judith and Alan all need to hand over and train Ricardo, Ricardo will have to be the one to make the trip. This must happen well before the next project meeting so that Ricardo will be able to demonstrate the database to invited WHO staff.

#### **WP9 Predictive Modelling for assessing zoonotic transmission risks.**

Stephen Davis and John Holt are in the process of drafting up a publication on the leptospirosis model which should be submitted soon.

#### **WP10 Development of Sustainable Control Strategies**

[Jens presented](#) an overall summary of the relevant issues which was followed by [Anne-Charlotte who gave](#) a more detailed presentation specific to Cato Crest. [Peter Taylor then gave](#) a presentation that discussed activities and results in Cato Crest.

**Action:** It was agreed that DPIL will deliver a draft report by the 1<sup>st</sup> June which will give a generalised summary and case examples for those sites where all the data have been collected so far, i.e. Mapate, Cato Crest and Lushoto. Skeleton reports will be drafted for the other sites, with the detail added in once it has been collected and reported.

#### **WP11 Analysis of Policy Issues**

[Martha gave](#) a presentation summarising her discussions with WHO staff and Health Ministers from the various SADC member countries. Generally, SADC countries have no or few policies and strategies related to rodent borne diseases. There is generally little awareness about rodent-transmitted diseases, except when bubonic plague is a known problem. Leptospirosis and toxoplasmosis are not monitored or even recognised to be a problem in any of the SADC countries.

**Action:** Invite WHO and FAO to our next meeting. Everyone must send Steve contact details of WHO and FAO people that should be contacted. Steve will then update everyone on whether anyone would be able to attend and whether the dates of our meeting need to be changed in order to accommodate WHO staff.

**Action:** There is no point inviting WHO staff to our meeting unless we can give them an excellent presentation of our project results. Without clear human prevalence data on the three diseases, there is little point in inviting them to the meeting. We will therefore have to pull out all the stops to ensure that we get human blood analysed in time for a meeting in September.

#### **WP12 Stakeholder Workshop**

[Lorraine discussed](#) having the workshop at a game lodge, Pestana Lodge, just outside Kruger Park. Everyone agreed we should pursue having the meeting there.

**Action:** Steve to develop draft of 1<sup>st</sup> announcement flyer that will be posted to potential attendees. This will be circulated within a couple weeks for everyone to comment on before it is printed and posted.

**Action:** Steve to draft up proposals to CTA and SSA for further funding. SSA proposal is submitted in September, CTA proposal is submitted asap.

**Action:** Lorraine to draft up workshop programme and circulate.

**Action:** Everyone to send list of attendees to Lorraine by the end of May.

#### **WP13 Output Dissemination**

[Monica gave](#) a presentation of the BBC World Service series RATS! which draws heavily on ratzooman activities and researchers. Drafts of the two programmes were listened to and a presentation of the material and photographs which will appear on the BBC website was shown. The programmes are likely to be broadcast in June.

**Action:** times of broadcast and website address to be circulated once the details are known.

#### **Administration / Financial Issues**

There is a slight conflict of dates with our next meeting in September as it is shortly before the deadline for proposals to the EC on neglected communicable diseases. We may therefore want to delay the meeting. This also depends on whether WHO staff will attend our next meeting and what dates would be best for them as well as uncertainty over whether we will have managed to get enough human and animal samples properly analysed by then. Steve Belmain will communicate with everyone to sort out the timing of the next meeting. Problems with money continue with no relief in sight. The Director of NRI plans to go to Brussels to find out what is going on and hopefully put pressure on decision makers to release our advance funds.

**Action:** Everyone to send contact details of WHO staff who should be invited to our next meeting in Harare. Steve Belmain will then contact them to see whether they are interested to attend and could make a meeting in September/October.

**Dates of next meetings:**

Harare meeting current stands at 7-9 September 2005. However, this is likely to change in response to EC proposal deadline conflict, WHO staff invitations, and our ability to deliver analysed results in time. Steve will inform asap

Final workshop scheduled for 4-5<sup>th</sup> May. Pre-meeting of ratzooman partners to take place over 2-3<sup>rd</sup> May, therefore everyone arriving on in South Africa on 1<sup>st</sup> of May.