

## **Minutes of RATZOOMAN meeting held in Pretoria, South Africa, 6-8 February 2006**

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

Lorraine Arntzen, National Institute for Communicable Diseases, Health Laboratory Service, South Africa  
Steven Belmain, Natural Resources Institute, UK  
Godfrey Chikwenhere, Plant Protection Research Institute, Zimbabwe  
John Frean, National Institute for Communicable Diseases, Health Laboratory Service, South Africa  
Rudy Hartskeerl, Royal Tropical Institute, the Netherlands  
Frikkie Kirsten, Plant Protection Research Institute, ARC, 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  
Emil von Maltitz, Plant Protection Research Institute, ARC, South Africa  
Martha Mpisaunga, Syngenta, Zimbabwe  
Rassul Nala, National Institute of Health, Mozambique  
Peter Taylor, Durban Natural Science Museum, South Africa  
Ricardo Thompson, National Institute of Health, Mozambique  
Moses Zimba, Harare City Health, Zimbabwe

### **Links to following sections of this document**

[Summary of meeting](#)

[To do list](#)

[Invoice example](#)

[Sponsorship list](#)

[Financial breakdown explanation](#)

[List of potential research papers](#)

[Agenda and timetable for May workshop, indicating roles and responsibilities](#)

[Analysis questions for rodent and human disease data](#)

### **Summary of meeting**

#### **Finances**

Steve asked all countries to ensure that they submitted corrected claims for old claims that had been rejected. In many cases this was simply a case of re-submitting sub-contract invoices in an acceptable form or in other cases ensuring that the overhead rates charged were clearly indicated on the submission forms. Steve reminded that in some cases the NRI had paid for funding out of their own budgets and that these funds would have to be recovered by NRI. Third cost statements must have been sent by now. Any that had not been sent or that needed correction MUST be sent immediately. Corrections from old submissions MUST be submitted with third cost statements. Steve asked all countries to review the reasons why some claims had been rejected. The amounts rejected and the reasons why the rejections have been made are identified on the forms returned by the EU. These corrections must be made as soon as possible. Both first and second cost statements must be corrected as soon as possible.

#### **Target Date**

**Submissions of 3<sup>rd</sup> Cost Statement by end February.**

**Submit Corrections of 1<sup>st</sup> and 2<sup>nd</sup> Cost Statements with 3<sup>rd</sup> Cost Statement**

#### **Technical Reports**

To be submitted by Wednesday 8<sup>th</sup> February. Steve to circulate annual report for comment by 24 February and submit to EC by 28 February.

#### **Final Workshop**

Lorraine spoke for some time about organisation progress. Registration is necessary as soon as possible and payment for those who have already registered must be made by the 15<sup>th</sup> February. Final registration MUST be undertaken by 1<sup>st</sup> March 2006. Game Drives must be paid personally and can be paid on the day of the Drive.

Steve has obtained ten thousand euros from the CTA for payment of delegates to come to the workshop. These funds must only be used for delegates from Africa. Nominations for this fund should be made to Steve as soon as possible.

Steve reminded everyone that if any collaborators had spare funds within their budgets they could use this money for payment of delegates to attend. These funds could be used for payment of delegates outside the countries concerned, even outside Africa.

Sponsorship deals are currently under discussion which may pay for additional attendees, as well as drinks, conference packs, game drives, etc. Lorraine asked everyone to ensure that when they booked flights they let the organisers know so that transport arrangements can be made to collect them from the airport and bring to the lodge .

A press release should be generated prior to the Workshop – Steve will produce and circulate a draft asap.

Steve is expecting everyone involved with the project to arrive on Monday 1<sup>st</sup> May. The costs of the extra days are not covered by the registration fees and will have to be paid additionally when sending the money through.

The desirability of producing a video that illustrates rodent behaviour was discussed. It was agreed that it would be useful to have the Bangladesh video running in the foyer or other area where delegates might congregate. The objective of the video would be simply to draw delegates attention to the rodent issue by using the work in Bangladesh. There is no equivalent material for African rodent issues.

The provisional programme was discussed at great length to establish agenda and speakers. See **Agenda and timetable for May workshop, indicating roles and responsibilities.**

### **Presentations**

Agreement was made on who is presenting what and the individuals should start drafting their Powerpoint talks up now. Presentations should be standardised and we will do this by circulating drafts and finalising content during the first working days at the lodge before the workshop. It was agreed that each country will present its work related to the disease results in rodents and humans. These four presentations will need to be standardised as much as possible giving the following.

- a. Overview of past country knowledge for plague, leptospirosis and toxoplasmosis
- b. Descriptions of sites
- c. Tables and graphs summarising results. Important to differentiate between rodent species where applicable and linking the rodent and human results where possible. If help with analysis is required contact Steve as soon as possible.
- d. Conclusions and summary

NB. All sampling in **Mozambique** is completed and results from Lorraine awaited.

NB. **Zimbabwe**. A further 150 rodent samples still have to be sent to Lorraine although all trapping is now complete. Also 159 human samples from blood banks due to be sent. Still need to obtain information about the individuals who contributed the samples so that they match Peter's data. Dog samples also need to be analysed.

NB. **Tanzania & South Africa**. Ensure that Mapate data presented in a similar way to Cato Crest as far as possible. Tanzania data should focus on where rodents and human samples have been collected from same areas.

### **Posters**

If anybody wishes to produce a poster they may do so. The details and content of the posters should be emailed to both Steve and Frikkie, including text, graphs, photos, figures, etc. Frikkie agreed to try and have the posters laid out by an ARC colleague. Frikkie will need the final details by 1<sup>st</sup> April.

## Logo

John Frean is making one for use on conference materials and posters and will circulate an electronic version.

**Note this is now complete and pasted here in black and green versions.**



## To do list

### Financial

- Sort out third cost statement and send to Jane Shirley and Philip Davies
- Sort out rejected costs from 1<sup>st</sup> and 2<sup>nd</sup> cost statements and resubmit along with 3<sup>rd</sup> cost statement – mainly issue of certified copies of subcontractor invoices (with VAT and company registration numbers). Cost statement should have a covering note explaining what is being resubmitted for previous cost statements.
- Cost statements and resubmissions must be sent by end of February
- Figure out whether you will fully spend the total money allocated to you in your part of the ratzooman budget so that leftover money can be used to pay for workshop attendees. We don't want unspent funds remaining.

### Technical reports in my hand before you leave today.

### Workshop

- Get yourself and ratzooman colleagues registered and send payment by 15 February
- Payment amount is more than that mentioned in the registration form as ratzooman people are expected to arrive on the Monday. Work it out based on daily rates mentioned in flyer.
- Send flight details through to Lorraine and Sue McGuinness so that collection from Nelspruit airport can be arranged
- Remind people about the workshop and that they must register soon or it will be too late.
- Steve will draft up a 2<sup>nd</sup> announcement and will send to everyone to circulate to colleagues and potential candidates.
- Steve will draft up press release and circulate
- Steve will draft up policy document and circulate
- Everyone to send Steve the full contact details of people nominated for CTA funding. He must have name and email address so that he is able to contact them directly and get them to look into flight costs to the meeting.
- Take note of your responsibilities mentioned in the workshop agenda. Start preparing powerpoint presentations you are meant to present. Circulate draft of presentation to Steve by 31 March.
- Mediators to investigate subheadings to key constraints and circulate to Steve by 31 March.
- If you want to make a poster for display at the workshop, all the text, photos, figures, etc must be sent to Frikkie and Steve by the 1<sup>st</sup> April.

- Everyone should gather together any corporate material from your own institution you wish to include in workshop bags.
- Lorraine, Sue dealing with sponsorship, conference bags, name tags, logo – as per John's design. Sponsorship amounts and what they are to be directed to need to be sorted soon. Would be good if commercial sponsors would not only support conference activities such as drinks, entertainment, but attendance of young scientists.

#### **Data**

- Outstanding samples in Zimbabwe to be sent to Lorraine ASAP. Lorraine to try to complete analysis in time for data to be incorporated into presentation.
- Lorraine to send results of sample analysis and revised spreadsheets to partners to Judith, Linda and Steve
- Judith to make pivot tables on rodent and human samples and send to relevant partners
- Herwig to work out age classes for rodent species with abundant samples and send to partners and send by 17<sup>th</sup> February
- Presenters of country reports of rodent and human disease to pick out the most important correlations found from pivot tables generated by Judith to incorporate into their presentations. These presentations should try to be standardised giving overview of issues in country, summary of results related to locations, conclusions – particularly highlighting difficulties and capacity constraints and how they were resolved.
- Anthropology report for Mozambique – Steve and Rassul to discuss, Monica to finalise and send to Jens to assist in his presentation.

**Invoice example**

TAX INVOICE

TO:  
Syngenta, Zimbabwe - address  
NICD, South Africa - address  
INS, Mozambique - address  
Sokoine, Tanzania – address

Date:  
Invoice number:  
Invoice date:  
Reference: ratzooman ICA 4 CT 2002 10056

Expenses related to ratzooman research project  
(VAT inclusive) ..... Amount (state the amount in local currency)  
  
Total payable .....\$£

Signature: Date:  
  
Name: Anabela, Godfrey, Moses, Pfarelo, etc.  
Position:

---

Name and address of subcontractor

e.g.  
Dr Steven Belmain  
Natural Resources Institute  
University of Greenwich  
Central Avenue  
Chatham Maritime  
Kent ME4 4TB

VAT registration number: .....  
Company registration number: .....

Phone:  
Fax:

**Sponsorship list – particularly CTA, but also through spare funds available through ratzooman partner budgets.**

CTA funding – notify Steve with full contact details by 24 February.

Lila Rahalison, Institut Pasteur, Madagascar  
[lrahalison@pasteur.mg](mailto:lrahalison@pasteur.mg)

Prof. Dr. Dudu Akaibe, Faculté des Sciences, University of Kisangani, Congo  
[duduakaibe@yahoo.fr](mailto:duduakaibe@yahoo.fr)

Prof. Buketi Kilonzo, Sokoine University of Agriculture, Tanzania  
[kilonzo@suanet.ac.tz](mailto:kilonzo@suanet.ac.tz)

Chris Appleton, University of KwaZulu-Natal, South Africa  
[Appletonc@ukzn.ac.za](mailto:Appletonc@ukzn.ac.za)

Susanne Leclerc-Madlala, University of KwaZulu-Natal, South Africa  
[Leclercmadlals@ukzn.ac.za](mailto:Leclercmadlals@ukzn.ac.za)

Jean-Christophe Shako, Directeur - Administrateur du Laboratoire Médical de Référence de l'ITURI à Bunia, Congo  
[shakochri@yahoo.fr](mailto:shakochri@yahoo.fr)

Prof. Jean-Jaques Muyembe Tamfum, Directeur Institut de Recherche Biomédicale Kinshasa, Congo  
[jjmuyembe@yahoo.fr](mailto:jjmuyembe@yahoo.fr)

Victoria Ngowo, National Rodent Control Centre, Tanzania  
[Ngowov@yahoo.com](mailto:Ngowov@yahoo.com)

Mr. S.M. Msingwa, District Medical Office, Lushoto, Tanzania  
[Mgemasam@yahoo.co.uk](mailto:Mgemasam@yahoo.co.uk)

Dr Mutambu Ministry of Health Communicable diseases, Zimbabwe

Lukwa Nzira, Blair Research. National Institute for Research, Zimbabwe (rodenticides)

Loth Mulungu, SUA, Tanzania

Apia Massawe, SUA, Tanzania

Rhodes Makundi, SUA, Tanzania

Chris Chimimba, South Africa – accommodation and subsistence costs only?

Mozambicans will not need flight costs as can drive there. They only need registration, accommodation subsistence at workshop. Provincial Directors of Zambezia and Tete can be funded by Mozambique budget.

Elizabeth Calvet to be funded by Belgian budget  
Elizabeth Carniel?  
Alan Buckle?

Grant Singleton to be funded through IRR

Aubrey Silinyana funded by South African budget

## Financial breakdown explanation

Partner	Total budget	Amount received from EC (advance + 1st + 2nd)	Additional amount received from NRI	Total sent to partner	Outstanding funds (TB - TS)	Percent remaining
United Kingdom	394,355.00	351,374.75	0.00	351,374.75	42,980.25	10.90%
Denmark	103,543.00	71,634.10	0.00	71,634.10	31,908.90	30.82%
Netherlands	236,268.00	161,582.44	0.00	161,582.44	74,685.56	31.61%
Belgium	200,106.00	87,804.51	0.00	87,804.51	112,301.49	56.12%
Tanzania	121,922.00	94,114.45	4,908.55	99,023.00	22,899.00	18.78%
Mozambique	133,761.00	71,504.00	37,000.00	108,504.00	25,257.00	18.88%
South Africa	178,748.00	137,467.33	0.00	137,467.33	41,280.67	23.09%
Zimbabwe	81,297.00	44,479.01	34,726.04	79,205.05	2,091.95	2.57%

Partner	1st submitted	1st accepted	1st rejected	2nd submitted	2nd accepted	2nd rejected
United Kingdom	123,024.19	122,974.16	50.03	149,519.00	150,224.96	-705.96
Denmark	16,944.00	8,448.20	8,495.80	42,344.00	42,325.66	18.34
Netherlands	72,794.81	60,463.61	12,331.20	53,803.12	53,798.11	5.01
Belgium	30,183.00	30,193.21	-10.21	57,612.02	57,611.30	0.72
Tanzania	45,911.00	39,754.90	6,156.10	33,851.00	29,854.59	3,996.41
Mozambique	30,576.47	26,368.13	4,208.34	41,143.21	19,030.82	22,112.39
South Africa	60,491.53	56,073.77	4,417.76	69,470.15	45,781.21	23,688.94
Zimbabwe	38,902.44	29,731.51	9,170.93	32,168.85	14,747.50	17,421.35

Partner	Total rejected	Unclaimed funds (TB - TS)	Partners must still claim for (TR+UF)	Percent to claim	Difference between % remaining and % to claim
United Kingdom	-655.93	121,811.81	121,155.88	30.72%	19.82%
Denmark	8,514.13	44,255.00	52,769.13	50.96%	20.15%
Netherlands	12,336.21	109,670.07	122,006.28	51.64%	20.03%
Belgium	-9.49	112,310.98	112,301.49	56.12%	0.00%
Tanzania	10,152.51	42,160.00	52,312.51	42.91%	24.12%
Mozambique	26,320.72	62,041.32	88,362.04	66.06%	47.18%
South Africa	28,106.71	48,786.32	76,893.03	43.02%	19.92%
Zimbabwe	26,592.28	10,225.71	36,817.99	45.29%	42.72%

## List of potential research papers

Durban Museum *Novitates* paper to be prepared by Peter Taylor on Durban actions  
Authors Peter, Lorraine, John

South African Journal of Science to be prepared by  
authors Peter, Lorraine, John, Frikkie, and Emil, Steve

African Zoology, Koedoe, Annals of the Transvaal Museum for paper on new genus in South Africa  
Authors Peter, Frikkie, Emil, Herwig

Regional paper with entire team listed as joint authors to be submitted to *Acta Tropica*.  
Author list Rudy, Herwig, Anabela, Rassul, Ricardo, Robert, Godfrey, Martha, Moses, Frikkie, Jens, Peter, Abdul, Malcolm, Monica, Solveig, Anne-Charlotte, Judith, Linda, Alan, John H, Stephen, Emil, John F, Adrian, Lorraine, Steve to be corresponding author

Paper on Leptospirosis serovars in Tanzania. *International Journal of Systematic and Evolutionary Microbiology*  
Robert, Rudy, Abdul, Ahmed

Regional paper on leptospirosis submitted to Journal of Emerging Diseases  
Authors, Rudy, Robert, Ricardo, Anabela, Rassul, Martha, Moses, John, Lorraine, Andrew Potts

*Belgian Journal of Zoology*. PCR detection of leptospire in rodents and insectivores. IF 0.7  
Herwig, Rudy, Robert, Georgie, Mhamaphi, Abdul, Paemelatre, Willekens,

Model of Leptospirosis submitted to *Acta Tropica* authors of UK and Belgium  
Herwig, John H, Stephen

Plague paper to resubmit to *Acta Tropica* authors of Belgium and Tanzania  
Stephen, Robert, Herwig, Rhodes

Paper to *Mammalia* on Movements of rodents .... Denmark, Tanzania  
Herwig, Solveig plus either Georgie or Abdul

*R. tanzumi* paper to be submitted by Amanda Bastos et al. to *Molecular Phylogeny and Evolution*.  
Peter, Frikkie, Steve, Emil, Amanda, Chris, Herwig, plus a couple others

Paper on anthropology and socioeconomics to be submitted as an entire team joint authorship  
Monica, Malcolm, Nemarundwe, Rassul, Anabela, Colaco, Damas, Mshote, Takalani, Peter, Susanne, Pharelo, Frikkie, Emil,

Mark recapture studies to be submitted to *Oikos* or *Journal of Tropical Ecology* as an entire team authorship  
Herwig, Frikkie, Emil, Solveig, Anabela, Rassul, Martha, Godfrey, Moses, Robert, plus number of students involved

Rodent species compositions and link to biotypes. Small mammals in urban peri-urban Africa. *Journal Tropical Ecology*  
Herwig, Frikkie, Emil, Solveig, Anabela, Rassul, Peter, Martha, Godfrey, Moses, Robert,

Lepto and toxo results together and plague results separately to be submitted to Mozambican Medical Journal after an English international paper as been published  
Rassul, Anabela, Lorraine, John, Ricardo, Rudy, Mirjam

Rodent paper specific on Mozambican results in Portuguese after English version has been published  
Rassul, Anabela, Aida, Quiba, Gawana, Milagre, Susana, Alberto, Ricardo, Herwig, Solveig

*Journal of Medical Geography* for GIS as a tool for disease and disease risks.  
Judith, Ricardo, Linda, Alan

Paper on management actions related to rodent diseases. Pest Management Science IF 1.17  
Author list Rudy, Herwig, Anabela, Rassul, Ricardo, Robert, Godfrey, Martha, Moses, Frikkie, Jens, Peter, Abdul, Malcolm, Monica, Solveig, Anne-Charlotte, Judith, Linda, Alan, John H, Stephen, Emil, John F, Adrian, Lorraine, Steve to be corresponding author

Chris Appleton to submit parasitology papers

Vector borne zoonotic diseases?  
Emerging Infectious Diseases?

Remember to acknowledge EC and mention contract number ICA4 CT2002 10056

## Agenda and timetable for May workshop, indicating roles and responsibilities

Programme for Ratzooman workshop in May 2006

Before May	Content of talks drafted up by presenters. Content of pack information drafted up including: <ul style="list-style-type: none"><li>• Workshop schedule – best if this can be finalised and printed at Lodge on 2<sup>nd</sup> May along with group id cards so that people know what group they will be in on 5<sup>th</sup> May</li><li>• Policy paper</li><li>• Copies of publicity material (Rats! CD, video of Aubrey?, copies of papers, institutional promotional material)</li><li>• Commercial sponsorship material and advertising</li></ul>
1 <sup>st</sup> May	Ratzooman team to arrive at Pestana Kruger Lodge Europeans likely to arrive before lunch, everyone should arrive before nightfall. Organise an evening game drive before dinner for those who arrive in time – 3pm departure
2 <sup>nd</sup> May	Finalise talks (which should be mostly drafted before arrival) by working in teams to improve content of presentations where possible, adding in pictures, etc. Grouping of attendees for session on 5 <sup>th</sup> May. This is likely to be a long hard day with minimal break times
3 <sup>rd</sup> May	Practice run through of talks by presenters Workshop attendees start to arrive in afternoon Registration desk – name tags, packs handed out 18:00 Bar open – on own account or sponsored? 19:30 Opening dinner – SA buffet, welcome speech by Steve
4 <sup>th</sup> May	Breakfast
07:00	Welcome by Steve, introduce guest of honour
08:00	Welcome by guest of honour – SA Head of Communicable Disease Control in Dept of Health
08:10	Overview of workshop, objectives, introduce session chair – Steve
08:25	Session chaired by Lorraine
08:35	Overview of ratzooman – Steve
08:55	Overview of rats and disease – Herwig
09:15	Overview of leptospirosis – Rudy
09:30	Overview of toxoplasmosis – Ricardo
09:45	Overview of plague – John
10:00	Discussion Session chaired by Frikkie
10:10	Lassa Fever - Elizabeth Calvet
10:30	Enteric diseases, salmonella, and food borne pathogens - Rolf Uys AIB
10:50	Coffee
11:20	Parasites, worms - Chris Appleton UKZN
11:40	Plague globally - Russell Ensore CDC
12:00	The agriculture/health divide rodents - Grant Singleton IRRI
12:20	Discussion
12:30	Lunch Session chaired by Rudy
13:20	Human behaviour and socio-economics combined into one - Monica
13:40	GIS – Ricardo
14:00	Cato Crest part one – Peter
14:20	Rodent ecology results – Herwig
14:40	Mozambique disease results in rodents and humans - Rassul
14:55	Zimbabwe disease results in rodents and humans - Godfrey
15:10	Tanzania disease results in rodents and humans - Robert
15:25	South Africa disease results in rodents and humans – Lorraine
15:40	Discussion
15:50	Tea – can carry on for those who do not go on game drive
16:00	Game drive for two hours only
18:00	Bar open – alcohol on own account or sponsored?
19:30	Dinner – performance by Aubrey

5<sup>th</sup> May

07:00 Breakfast  
Session chaired by Martha

08:00 Cato Crest part two – Guy Redman, Mel Hayter

08:20 Modelling plague and leptospirosis – John and Stephen

08:40 Rodent control – Adrian Meyer

09:00 Disease management recommendations – Jens

09:20 Practicalities of management / Introduction to policy paper discussion – Adrian/Steve/Martha

09:40 Discussion

10:00 Formulation of key constraints – Mediator will be Malcolm who will explain procedures. Groups will be uniform status level, e.g. scientists, ministry of health, pest control operators, environmental health, etc. Each group will be given two constraints to discuss from the below list. Each question will be discussed in the group for 30 minutes, and the mediator for each group will direct the conversation. Groups will nominate a reporter who will write down the information and report back to workshop.

- How should we improve surveillance and monitoring of diseases and diagnostic capacities within African countries? Moses to investigate subheadings to be addressed
- How can improve clinical treatment, prevention and interventions against rodent diseases? John to investigate subheadings to be addressed
- How do get Departments of Agriculture, Health and Environment working together to develop national rodent management strategies? Robert to investigate subheadings to be addressed
- How can we influence national and international research priorities and funding opportunities to improve knowledge about rodent transmitted diseases? Rudy to investigate subheadings to be addressed
- How do we raise awareness about the risk of rodents transmitting diseases with the general public, service providers and the international community? Peter to investigate subheadings to be addressed

10:10 Group discussion – Mediator for each group, groups should elect spokesperson. We will need between 4 and 6 mediators – John, Robert, Moses, Peter, Herwig, Rudy

11:10 Coffee

11:40 Group reports – 15 minutes per group by elected spokespersons

13:00 Lunch

14:00 Discussion about reports made in mixed groups or with the whole workshop depending on number of attendees

14:45 Synthesis, development of common statement, reports from groups – Steve

15:15 Where do we go from here? – Steve

15:30 Closing Discussion – Steve

15:45 Tea – can carry on for those who do not go on game drive

16:00 Game drive for two hours only

18:00 Bar open – alcohol on own account or sponsored?

19:30 Dinner – Swazi dancers?

6<sup>th</sup> May

07:00 Breakfast, departure

Below is proposed Ratzooman team arriving on 1<sup>st</sup> May. The costs of these people should come directly from the ratzooman budgets for each country. Problems in meeting these costs must be determined now! I am hoping that any project underspend by particular countries can be used to fund further people's attendance.

Steve Belmain  
Monica Janowski  
Malcolm Iles  
John Holt  
Adrian Meyer  
Rudy Hartskeerl  
Herwig Leirs  
Stephen Davis  
Jens Lodal  
Robert Machang'u  
Rassul Nala  
Ricardo Thompson  
Anabela Manhica  
Lorraine Arntzen  
John Freat  
Peter Taylor  
Frikkie Kirsten  
Emil von Maltitz  
Phanie Malebana  
Martha Mpisaunga  
Godfrey Chikwenhere  
Moses Zimba  
Anne Laudisoit  
Malodi Setshedi  
Guy Redman

Those from our institutions that we know will come on Wednesday

Abdul Katakweba  
Mel Hayter  
Sagren Moodley  
Aubrey Silinyana  
Mirjam Englebarts

Any budget underspend from ratzooman budgets can be used to pay for as many people to attend as possible. We may want to target this at people from consortium partner countries. However, we do have permission from the EC to use any project underspend to fund anyone from anywhere in the world with preference given to African countries. We all must, therefore, carefully assess whether partners will fully utilise their budgets. Any partner thinking they won't use all the money allocated to them in the contract should get in touch with me.

We have 10,000 euros granted through the CTA which should fund approximately 10 people from African nations to attend.

Commercial sponsorship of attendees – may find some Agrochemical sponsors willing to do this as well as perhaps some of the larger South African pest control companies

## Analysis questions for rodent and human disease data

Rat species relationship with disease positives – number of tested animals and number of positives

In relation to disease found in rodents, where have the rodents been trapped (house, field, etc.)

Make a contingency table with habitat, disease status and rodent species

Make a contingency table with locality (focal area) and disease status and rodent species

Age and sex status of rodents with relation to disease – contingency table with age, sex, disease status

In order to determine age, you will need to break down status using two different methods. One contingency table should be made using weight categories and other table should be done using maturity status (i.e. immature vs. mature).

Time series of sample collection vs disease prevalence.

Judith to run the above once data input to database.

Herwig to supply age categories for main rodent species to be assessed.

For human disease

Relationship between human positives and rodent positives for Zimbabwe, Cato Crest, Morrumbala, Morogoro, Masasi, but should probably leave out samples collected from clinics outside of rodent areas.

Table correlating age, sex and disease prevalence

Spatial relationship among human positives and against disease prevalence in rodents

Temporal relationship in human sample collection in Tanzania