



**CONSERVATION BREEDING  
SPECIALIST GROUP**  
**SOUTHERN AFRICA**



**SECOND MID-TERM PROGRESS REPORT**

**AHEAD GREATER LIMPOPO TRANSFRONTIER CONSERVATION AREA SEED GRANTS**

**February 2009 – July 2009**

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## **INTRODUCTION:**

The Lion (*Panthera leo*) Bovine Tuberculosis Disease Risk Assessment Workshop was held from 16 – 20 March 2009 in Skukuza, South Africa. Feedback from the participants was positive and everyone enjoyed the Lion darting outing on Wednesday night (18 March).

The workshop participants reached consensus on the input values required for SIMSIMBA (Lion biology model), INFECTOR and OUTBREAK (bovine tuberculosis (BTb) epidemiology model). A fairly solid disease metamodel was compiled at the workshop; however, the hard work lies ahead with sensitivity testing of the model, identifying gaps in the data and determining potential research management options and priorities.

The modelling team has returned to the USA to run the sensitivity analyses on the multiple variables and several models. They hope to have this completed in a few months and preliminary results will then be sent to the workshop participants for comment and feedback. These results will then be discussed by remote means and various management recommendations made. During this time a full report on the proceedings of the workshop will be compiled and disseminated to participants and interested institutions.

Since the workshop, feedback from the modelling team is that the past couple of months have seen a significant amount of work on refinement of and revision to the analytical models of BTb transmission and Lion population dynamics in the Kruger National Park. Specifically, work has been done to allow the user to specify initial frequencies of exposed and diseased individuals in each territory within the Lion population. This has now been added to the software. Additionally, the capability to specify changes has been added in TB prevalence in Buffalo in southern, central and northern regions of the Kruger National Park as a function of time within the simulation. This will be implemented as temporal changes in territory-specific TB exposure probabilities through predation. Finally, numerous software issues that surfaced during the workshop have been fixed.

Including these additional features into the model was complicated; however, Phil Miller is happy that the modelling team are now very close to having a software package that has all the functionality needed. Construction of the models discussed in Skukuza will begin in due course.

## A. OVERVIEW OF ACTIVITIES AND OUTPUTS FOR SEPT 2008 TO JUNE 2009:

### 1. MILESTONES AND SCIENTIFIC PROGRESS

An overall review of all activities and related outputs (tangible products) accomplished to-date is provided (table 1) and an assessment of the work plan was done through determined indicators and review of inputs and means used. Any significant change in the project work plan or in the time schedule are mentioned and explained.

In order to measure project progress, a list of indicators has been identified. The specific indicators have been identified to:

- Provide relevant and robust measures of progress towards the targets.
- Be clear and straightforward and provide a basis for comparison.
- Be constructed from well-established data sources, be quantifiable and be consistent to enable measurement over time.

Table 1: Details of the verifiable indicators and verification means in determining progress to-date

<b>Task list and objectives</b>	<b>Activities</b>	<b>Verifiable Indicators</b>	<b>Means of Verification</b>	<b>Progress to-date</b>
1. Successfully facilitate a Disease Risk Assessment Workshop	1. Contact expert modellers and develop a network of expertise: <ul style="list-style-type: none"> <li>▪ JP Pollak</li> <li>▪ Margaret Kosmala</li> <li>▪ Bob Lacy</li> <li>▪ Phil Miller</li> </ul>	<ul style="list-style-type: none"> <li>▪ Experience in disease risk assessments</li> </ul>	<ul style="list-style-type: none"> <li>▪ List of contact details for modellers</li> <li>▪ Functional metamodel ready for the workshop</li> <li>▪ A realistic dataset for use in the risk assessment models</li> </ul>	Complete.
	2. Confirm workshop date and venue	<ul style="list-style-type: none"> <li>▪ Date set 16 – 20 March 2009</li> </ul>	<ul style="list-style-type: none"> <li>▪ Email correspondence</li> </ul>	Complete.
	3. Compile workshop budget		<ul style="list-style-type: none"> <li>▪ Approved budget structure</li> </ul>	Complete.
	4. Compile invitee list		<ul style="list-style-type: none"> <li>▪ Approved and final list</li> </ul>	Complete.
	5. Invites to be circulated	<ul style="list-style-type: none"> <li>▪ Email correspondence</li> </ul>	<ul style="list-style-type: none"> <li>▪ Complete participants list</li> </ul>	Complete.
	6. Finalise workshop programme and agenda	<ul style="list-style-type: none"> <li>▪ Meetings and email correspondence to discuss and plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Approved workshop programme and agenda</li> </ul>	Complete.
	7. Provide each participant with a copy of the reading material (pre-workshop preparation)	<ul style="list-style-type: none"> <li>▪ Create website to facilitate the download of reading material</li> </ul>	<ul style="list-style-type: none"> <li>▪ Workshop documentation / reading material</li> <li>▪ Website URL and link</li> </ul>	Complete.
	8. Briefing book development	<ul style="list-style-type: none"> <li>▪ Reference list</li> </ul>	<ul style="list-style-type: none"> <li>▪ Complete electronic copy of the briefing book</li> </ul>	Complete.
	9. Finalise accommodation and travel itinerary for facilitators and expert modellers, also	<ul style="list-style-type: none"> <li>▪ Suitable venue and accommodation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Booking and travel confirmation</li> <li>▪ Confirmation</li> </ul>	Complete.

	confirm details with caterers	▪ Catering needs identified	(quote and invoice) from caterers	
	10. Facilitate workshop	▪ Workshop attended and successfully facilitated	▪ Interaction by group i.e. completed tasks (activities)	Complete.
	11. Compile and finalise workshop proceedings	▪ Review and finalisation by editors	▪ Complete workshop proceedings for distribution	Percentage of work complete 75%
<b>Project administration</b>				
1. Mid-term Project Report	Progress Report	▪ Milestones reached.	▪ Email correspondence	Complete.
2. Second Mid-term Project Report	Progress Report	▪ Milestones reached.	▪ Email correspondence	Complete.
3. Final-Project Report	Workshop Proceedings	▪ Milestones reached.	▪ Email correspondence	No activity this reporting period

## 2. DURATION AND ACTION PLAN

Project Proposal Submission:	4 July 2008
Project Start Date:	9 September 2008
Mid-term Progress Report:	28 February 2009
Disease Risk Assessment Workshop:	16 March 2009
Second Mid-term Progress Report:	23 July 2009
Final generated results from modellers:	30 September 2009
Submission of draft model results to participants:	15 October 2009
Review and comments back from participants:	6 November 2009
Second iteration (if needed):	23 November 2009
Implement report changes:	7 December 2009
Final Workshop Proceedings:	18 December 2009
Project End Date:	18 December 2009

## 3. MEETINGS / NETWORKING:

- **Workshop report implementation:** Numerous reference papers need to be cited in the draft workshop report. Paul Funston has agreed to complete this section of the report as many of the references are from his research and that of Dewald Keet.

## 4. SUMMARY OF FINDINGS

The project is approximately 75% completed, with final model results still to be incorporated. Initial project goals and indicators developed at the start of the project to direct project activities fed into a monitoring and evaluation framework for measuring project progress. The majority of the time spent on this phase of the project has been on facilitating the workshop and compiling the workshop report for dissemination to workshop participants. Project management has not encountered any major obstacles during this reporting period.

## 5. SELF-EVALUATION AND OUTLOOK ON THE PROJECT STATUS

Contrary to the original plan, EWT anticipated that a simulation modelling tool to assist in the evaluation of various management options would have been completed at the workshop for final write up within two months of the workshop. However, these plans changed when only the input values for the model were determined for a solid disease metamodel. Once the model has been run, preliminary results will be sent to the workshop participants for comment. Results will then be discussed by remote means and various management recommendations made. During this time a full report on the proceedings of the workshop will be compiled and sent to participants.

There have unfortunately been deviations from the original timelines set and corrective actions have been deemed necessary.

## 6. PROBLEMS ENCOUNTERED

Time constraints at the workshop, having only generated input values for SIMSIMBA, INFECTOR and OUTBREAK has meant that there is a delay in disseminating the workshop proceedings.

## B. FINANCIAL REPORT:

This section details all project expenditures to-date within the reporting period. This was done against budget lines approved by Animal Health for the Environment And Development (AHEAD) as well as against the work plan and time schedule.

Term of funding cycle:	10 month contract from Sept 2008 to June 2009
Total amount of the contract:	R151,367.91
Total amount spent:	R151,367.91
Balance of funds based on maximum amount:	R00.00

Table 2: Expenditure during the period 28 February 2009 to 30 June 2009.

Date	Description	Expense	Income
12/11/2008	Instalment received from AHEAD		R151,367.91
12/11/2008	Administration and Management (10 % of the total project income)	R15,136.79	
11/03/2009	Accommodation (Guest House 117 x 8 nights)	R9,849.60	
11/03/2009	VUSWA Fleet Services – Guesthouse	R900.00	
11/03/2009	Casual Labour	R800.00	
18/03/2009	Accommodaiton (Veterinary Camp)	R3,850.00	
25/03/2009	Catering costs	R45,500.00	
25/03/2009	General Expenses (Petrol for hired bus)	R352.35	
30/03/2009	Ice	R268.50	
01/04/2009	General Expenses (Toll fees, icebreaker snacks, petrol and workshop gifts)	R2,314.87	
03/04/2009	Travel – Chris Foggin	R6,016.00	
03/04/2009	Accommodation (Research Camp)	R3,780.00	

03/02/2009	Bus Hire (Quantum 8 seater x 8 days)	R11,186.82	
03/04/2009	Cr Card expenses (Toll fees and petrol)	R544.85	
15/05/2009	Travel Expenses: P Miller C Packer M Kosmala (International delegate)	R42,135.27	
31/05/2009	Ice breaker drinks	R3,692.00	
31/05/2009	Travel – Brenda Daly and Yolan Friedmann	R5,584.00	
<b>Total</b>		<b>R 151,911.05</b>	

### **C. CONCLUSION:**

On behalf of SANParks and the Conservation Breeding Specialist Group Southern Africa (CBSG SA) staff, I would like to thank the Animal Health for the Environment And Development for the donation of R151,367.91, contributing towards the Lion (*Panthera leo*) Bovine Tuberculosis Disease Risk Assessment Workshop.

Thank you very much for your contribution and support. We sincerely appreciate our worthwhile working relationship with AHEAD to address matters of mutual concern.

Please contact us if you require any additional information.

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