

February 2009

## **ICAM Coalition report on rabies control project in KwaZulu-Natal in South Africa**

### **Background**

The three projects selected as pilots for elimination of dog-mediated human rabies, primarily through dog vaccination, have the potential to be extremely influential for the future of rabies control in the developing world. Currently, rabies control is the most common driver leading to the use of inhumane methods of dog population control. As a result, the animal welfare community has a strong motive for supporting rabies control projects that are effective and utilise humane methods. Finally, both the WHO and the Gates Foundation have made it clear that they require attention to animal welfare principles to be adhered to throughout these projects. This sentiment is echoed through the project proposals and by the national/provincial project managers. It is in this context that the ICAM Coalition (see Annex A for description of ICAM Coalition) offered its support to these pilot projects.

### **Details of visit**

Dates – Feb 10<sup>th</sup>-15<sup>th</sup>

ICAM Co members on visit – Nick de Souza (WSPA Africa) and Elly Hiby (WSPA HQ)

Previous visits – no previous visit, this was the first.

Aims –

- To understand the activities used by the project in order to develop a complete list of activities that involve direct interaction with animals and could therefore have an impact on animal welfare.

- To develop minimum and ideal criteria for each activity that adhere to animal welfare principles and are realistic and suitable for the KZN context (very similar criteria will be used with the other two Gates Foundation funded projects, however there will be the opportunity to adapt these to the different locations).

- To describe the actual activities as they are used in KZN and where these are below minimum standards to make recommendations for improvements.

- To explore opportunities for additional components to improve animal welfare or data collection relating to animal welfare or population management.

### **Summary of KZN project aspects related to animal welfare**

Below is a narrative summary of the aspects of the project that are related to animal welfare in some way, including the involvement of animal welfare experts, activities with direct interactions with animals and data collection relating to animal populations and welfare. At Annex B is a table that lists all these activities with direct interaction with animals, and therefore have the potential to impact animal welfare, and the tasks involved in each activity. For each task there is a minimum criteria that if followed should ensure animals are not harmed, and an ideal criteria that in some cases will actually lead to a benefit in animal welfare. The 'actual' column describes the current protocols used in KZN project and the final column lists any recommendations.

### **Project stakeholders relevant to animal welfare**

The project benefits from a close and supportive relationship with the Pietermaritzburg SPCA, in particular one of their SPCA inspectors Daniel Stewart. This has provided a constant input of animal welfare principles which has clearly benefited the project immensely with regards to its animal welfare standards. The training provided to the vaccination teams has been developed over the past years in collaboration with the SPCA and is constantly being updated. The project SOPs at Annex C were developed alongside the training in collaboration with the SPCA and clearly show recognition of the importance of animal welfare principles.

### **Rabies vaccination**

The main focus of the project is mass dog vaccination across the entire province of KZN (10 million people and approximately 1.5 million dogs assuming a ratio of 6.5:1, see figure 1 for location in South Africa) using state veterinary network of vets and animal health technicians with 138 vehicles. Vaccination is delivered from the back of the vehicle as they travel along each road to minimise concentrations of dogs and distances travelled and therefore disease (e.g. distemper) transmission. Public announcement systems on vehicles are used to advertise free vaccinations the day prior to vaccination and both public announcement systems and sirens are used to announce the arrival of vaccination teams on the day of vaccination. 20-30 vehicles with 2-man teams are used together in each village to sweep across the village. In previous years approximately 300,000-500,000 dogs have been vaccinated per year.

### **Services in addition to rabies vaccination**

The vaccination teams have now extended the services they offer, to include euthanasia and ivermectin injections, in addition to rabies vaccination.

The euthanasia 'service' is carried out by state vets and Animal Health Technicians and uses humane methods as trained on a course designed with the SPCA (see annex B and project SOPs). Euthanasia is not widely advertised or proactively pushed, rather this is usually a reactive service provided at the request of the owner, although most members of the vaccination team will advise euthanasia if they see that the dog is clearly unwell or injured and is suffering. The reasons for euthanasia fall into two categories; because the animal is suffering or because the dog is unwanted either because it can't be cared for anymore or because it is causing problems (e.g. worrying or killing livestock and aggression towards people). Euthanasia for an animal that is suffering and has no chance of effective treatment clearly has significant animal welfare benefits. Euthanasia of dogs that are unwanted also has indirect animal welfare benefits as such dogs are very unlikely to receive adequate care and will eventually be abandoned or killed. This issue of unwanted dogs in KZN is important as HIV/AIDS is high in this province (approx 39%) and is leading to the breakdown of normal household structure and a change in priorities that may lead to dogs becoming unwanted or receiving less oversight hence allowing for problem behaviours to develop. The impact of this situation is clear from the increasing number of complaints about aggressive uncontrolled packs of dogs killing livestock and injuring people. It is hoped that the euthanasia service will help to curb the development of these packs and hence reduce the requests for reactive measures once packs have formed.

Ivermectin injections are delivered to dogs that have visible skin conditions. This will improve the welfare of the dog for the next few weeks/months as Ivermectin will impact on both ecto and endo-parasites.

Both these additional services are very welcomed by the communities, which can lead to a subsequent increase in rabies vaccine delivery as the perceived value of the services

offered by the vaccination teams increases and hence communities make more effort to bring their dogs.

### **Holistic primary veterinary healthcare campaigns**

Over the past few years, field clinics that provide holistic veterinary healthcare, including surgical sterilisation, have been trialled in key areas of need. The villages selected are those with high rabies incidence and these clinics have been run in close collaboration with the SPCA, involving both state veterinary department and SPCA staff.

The clinics offer primary healthcare in the form of preventative medication, basic treatments, euthanasia of sick animals and surgical sterilisation and tend to run for an average of 3 days. All dogs that are attended by the clinics are brought by local people. Annex B lists the various tasks included in these activities and the minimum criteria, ideal criteria and actual protocols used.

The response to these clinics has been significant and the services are clearly valued by the communities. In addition, the subsequent response to rabies vaccination campaigns is improved, with twice as many dogs being brought for rabies vaccination following a clinic in one particular example village. There is some anecdotal evidence that 'problem' dogs are reduced following the campaign, although follow-up visits to assess impact have been rare to date. It is important to note that the aim of these clinics is not population size reduction, but rather removal of unwanted animals through euthanasia and by preventing unwanted births (because owners volunteer their dogs to the clinics they effectively target those dogs whose future puppies are not wanted) and improving the health and longevity of remaining animals; essentially improving the health and stability of the dog population.

In 2009, using the additional support provided by the Gates Foundation funding, ten 3-day clinics are planned. This will cover a small percentage of the total villages in KZN, but these villages will be carefully targeted to ensure this limited resource is used to best effect.

### **Rabies outbreak management**

In the case of a rabies outbreak, a ring vaccination of 20km around the outbreak is carried out to prevent spread of the disease. Rabies cases and in-contact animals (animals bitten by a rabid dog) are euthanased by either the state veterinary service or the SPCA as post-exposure treatment of animals is not permitted. However, rabid animals are usually found already dead, having either died from the disease or been killed by other animals, people or cars.

### **Quarantine and movement control**

Quarantine is rarely used in KZN as most suspect rabies cases will be euthanased at request of the owner. However, if observation or quarantine of a suspect case is requested this will be done at the owners home under guidance from the state vet department or at the SPCA.

### **Sample collection**

There are no plans currently to collect samples from dogs, other than brain samples from dead animals for rabies testing. However, blood samples may be collected from Jackals in the south of the province to establish the virus type from antibodies, as there have been outbreaks in that area, presumably from animals moving across the East Coast/KZN border. Humane trapping, handling, sampling and release will be done in collaboration with the KZN wildlife department, using the vaccination team staff and support from expert wildlife trappers.

## **Data collection**

6.5:1 human to dog ratio seems very high in our experience of Africa and density did not appear that high from our very short visit, we hence very much support the plan to run a questionnaire survey through the human health community workers to establish a better estimate of this ratio, as the current ratio is based on a very small sample size. We suggest that in a sample of representative villages/areas the dogs are marked during vaccination (either using non-toxic paint or a fur clip) and a survey used a few days after vaccination to establish the percentage marked/unmarked. Using the percentage marked/unmarked and number of marks applied, a dog population estimate can be calculated, although errors will be increased if the groups differ in their visibility to the counters. This will provide data to triangulate with the questionnaire results.

Indicators of animal welfare/human attitudes and behaviour/population dynamics?

- Number of dogs euthanased by vaccination teams for welfare reasons – high number would suggest a specific problem area. A reduction in cases could suggest a general improvement in welfare – but could easily be confounded.
- Percentage of lactating females presented to the vaccination teams could provide information on peak breeding seasons. High percentage of lactating females would indicate an area of high breeding capacity. Decreased percentage of lactating females seen on follow-up visit to villages after clinics would indicate an impact on the breeding capacity of the population.
- Qualitative reports from communities regarding the impact of the euthanasia service on 'problem' dogs (problems reported are usually livestock worrying/killing). If these 'problem' dogs are usually those that have been abandoned because they are unwanted then euthanasia should help, however many of these dogs may actually be owned roaming dogs, hence the impact may not be large.

## **Conclusions**

The KZN rabies project adheres very well to animal welfare principles; the actual protocols used for the majority of tasks were at or close to ideal.

Our recommendations for improvement are minimal, as it was agreed that shooting of uncontrolled packs of aggressive dogs does not form part of the future project; this has been an extremely rare occurrence in the past, used in emergency situations and as an opportunity to explore the causes of the development of these packs rather than develop this as a method of control. Our other recommendations listed in Annex B are mostly related to the surgical protocols involved in the holistic healthcare campaigns.

There are several activities involved in the project that improve animal welfare in addition to supporting effective rabies control. The provision of euthanasia and Ivermectin during the vaccination campaigns have important animal welfare benefits. The holistic primary veterinary healthcare clinics will clearly also benefit animal welfare significantly.

We would advise the KZN project to continue to look for opportunities to improve animal welfare through their activities, as they have clearly done to date, not only for the sake of animal welfare itself but also as this builds trust in the local community and hence an improved commitment to the rabies control activities. We would also advise

maintenance of the relationship with SPCA, which has benefited the project immensely in terms of animal welfare.

### **Next steps**

We were not able to observe a vaccination campaign or field clinic in action (although observed surgical procedures used at SPCA outreach clinic). Suggest a fellow ICAM Coalition member Michelle Morters visits the project later in 2009 to observe both a vaccination campaign and field clinic, can be done whilst already in SA to visit field sites for data collection for PhD.

### **Attachments:**

Annex A – description of ICAM Coalition

Annex B – activities, tasks and minimum criteria, ideal criteria and actual protocols for KZN project, plus recommendations for improvement.

Annex C – 3 project SOPs; primary health care clinic, euthanasia and dog handling, inoculation techniques for dogs and cats. These SOPs are in development, so changes are to be expected.

## **Annex A**

### **The ICAM Coalition**

The ICAM (International Companion Animal Management) Coalition was formed in 2006 as a global forum for discussion of companion animal population management issues. The impetus for this coalition came from the realisation that several of the main funding bodies for companion animal population management had similar views on the most effective approaches to dog and cat population management but needed a common forum where differences and/or new developments could be discussed and supported. This coalition has helped to improve understanding of the common goals and methodologies of the member organizations – currently consisting of representatives from the World Society for the Protection of Animals, Humane Society International, the Royal Society for the Prevention of Cruelty to Animals International, the International Fund for Animal Welfare, the World Small Animal Veterinary Association and the Alliance for Rabies Control. Our mission is to support the development and use of humane and effective companion animal population management worldwide. Our first publication was completed in 2007 and can be found at [www.icam-coalition.org](http://www.icam-coalition.org). We also have consultative group membership open to specialists that want to participate in the mission.