REMOTE EXPLOSIVE SCENT TRACING (REST) WORKSHOP IN TANZANIA

The GICHD is currently actively involved in a research project aimed at developing and validating a technology for landmine detection known as Remote Explosive Scent tracing (REST). Despite some past and current operational use of REST, much remains to be learned about how best to train the animal detectors, how best to test them, and how best to collect and present operational samples. In short, the project aims to identify methods of best practice for REST by empirically validating in behavioural and chemistry research each integral component of the entire complex system. The GICHD is conducting this research and development (R&D) project in cooperation with the Swedish Rescue Services Agency (SRSA). A training and laboratory facility has been established adjacent to APOPO's facility in Morogoro, Tanzania, which accommodates 14 dogs, and is staffed by around 24 local and two expatriate staff. A consultant behaviour analyst employed by GICHD and an Advisory Committee comprised of mine-detection dog trainers, general dog trainers, and behavioural scientists oversee the research.

From 21 to 24 October 2007, this Advisory Committee met in Morogoro to review the research that has been conducted at the SRSA facility for the past 15 months. This meeting was combined with a meeting of the Steering Committee overseeing the Odour Signature Project; a closely related R&D project that seeks to artificially create the odour of buried landmines. Furthermore, members of both committees were introduced to the work being conducted by APOPO with African giant pouched rats. Consequently, a total of about 25 people spent most of the week together discussing issues related to researching the use of animals for the detection of landmines.

The week was organized in a way that sought to maximize the quantity and quality of feedback received by visitors to the projects. Initially, the senior research scientists based in Morogoro described in formal presentations the methods and results of the work they have been conducting, highlighting the various phenomena that they discovered on the way to establishing an operational capacity. The Advisory Committee was then given detailed guided tours of the facilities being used, and had opportunities to view training and laboratory procedures being implemented while having in hand the Standing Operating Procedures prescribing those methods. Discussions then focused on specific areas of activity such as how samples are being prepared, how they are being presented to the animals, the consequences arranged for various types of responses from the animals, how data are being analyzed, etc. These discussions culminated in a set of recommendations for procedure changes and a prioritized list of phenomena that should be further investigated. Although changes were often presented as improvements, the task for the behavioural scientists serving on the project is now to design condition changes and experiments that isolate and assess the value of those changes. In this way, procedures for training and testing animals to detect the odour of buried landmines can be based on scientific evidence rather than simply experts' opinions, as has often been the case in the past.

The consensus opinion from the workshop was that the project has made excellent progress over the past 15 months, but that further sustained progress is required before REST can be safely and validly employed in humanitarian demining. The GICHD will continue to take a leading role in the research and development of REST, and arrange more similar meetings of the Advisory Committee in 2008.

For further information about the GICHD/SRSA REST project**,** or details regarding the topics discussed at the October workshop, please contact Dr. Max Jones (Brent.Jones@umassmed.edu) or Håvard Bach (h.bach@gichd.ch).