

**COMMUNITY-BASED ANIMAL HEALTH SERVICES  
IN THE GREATER HORN OF AFRICA: AN ASSESSMENT**

**For  
USAID - Office of Foreign Disaster Assistance  
in cooperation with the  
USDA - Famine Mitigation Activity**

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## TABLE OF CONTENTS

	page
Acknowledgements	i
Abbreviations	ii
Summary	iii
<b>INTRODUCTION</b>	<b>1</b>
<b>FINDINGS AND LESSONS LEARNED</b>	<b>2</b>
<b>1.0. Community-based Animal Health Workers (CAHW) as Service Providers.</b>	<b>2</b>
1.1. Why a community-based approach to animal health service delivery in pastoral areas?	2
1.2. Problems of quantitative data collection within CAHW projects	3
1.3. Has the community-based approach demonstrated effectiveness?	3
1.3.1. Examples of OFDA-supported projects	3
1.3.2. Some experiences from other CAHW projects in GHA	4
1.4. Potential roles for CAHW's delivery of rinderpest vaccines	5
1.5. CAHW's for disease reporting-rationale	5
1.5.1. Examples of CAHW disease reporting in OFDA-supported projects	6
1.6. CAHW's, policy and government	6
1.7. Supervision of CAHW's: technical, community-based and market-oriented options	7
1.8. The PARC-VAC project.	7
1.8.1. Technical capacity	8
1.8.2. Coordination of CAHW projects and collation of lessons learned	8
1.8.3. Regional and national policy reform	8
1.9. Community participation and the wider implications of the CAHW approach	8
1.9.1. Examples of CAHW projects acting as entry points for other benefits	9
1.9.2. Other opportunities for broadening PARC-VAC activities	9
<b>2.0. Financial and Economic Issues</b>	<b>10</b>
2.1. Cost recovery	10
2.2. Economic impact	12
2.3. Privatization progress and trends	13
2.4. Lessons learned about financial viability	14
<b>3.0. Social and Cultural Issues</b>	<b>15</b>
3.1. Community-based approach/participatory methodology	15
3.2. Collaboration and coordination	16
3.3. Ethiopia CAHW's	17
3.4. Paravet selection	17
3.5. Social and cultural roles/paravet mobility	17
3.6. Traditional veterinary practitioners/EVK	18
3.7. Community selection/attention to vulnerability groups	18
3.8. Gender/small stock	18
3.9. Integration of CAHW program and human health	18
<b>CONCLUSIONS AND RECOMMENDATIONS</b>	<b>19</b>
<u>Annexes</u>	
Annex 1: Itinerary of Assessment Team.	
Annex 2: The Roles and Effectiveness of Community Animal Health Workers in the Greater Horn of Africa: Some Lessons Learned and Ideas for Future Work	
Annex 3: Social and Cultural Issues	

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NOTE: This assessment was conducted as an independent evaluation for USAID and USDA. The opinions based on the findings in the main report and annexes are those of the consultants and do not necessarily represent those of USAID, USDA, OAU/IBAR, PARC, PARC-VAC or UNICEF-OLS

## ABBREVIATIONS

ACROSS	Association of Christian Resource Organizations Serving Sudan
ADRA	Adventist Development and Relief Agency
AHA	animal health auxiliary
ASAL	arid and semi-arid lands
ALRMP	Arid Lands Resource Management Project
CAH	community-based animal health
CAHW	community animal health workers
CB	community based
CD	community dialogue
CHHW	community-based human health workers
CBPP	contagious bovine pleuropneumonia
EVK	ethnoveterinary knowledge
GAA	German AgroAction
GHA	Greater Horn of Africa
GHAI	Greater Horn of Africa Initiative
GTZ	German Development Agency
HHW	human health worker
IBAR	Interafrican Bureau for Animal Resources
ICRC	International Committee for the Red Cross
IDS	Institute of Development Studies
IIED	International Institute for Environment and Development
ITDG	Intermediate Technology Development Group
KVB	Kenya Veterinary Board
KVAPS	Kenya Veterinary Association Privatization Scheme
NGO	non governmental organizations
NPA	Norwegian Peoples Aid
OAU	Organization of African Unity
ODI	Overseas Development Institute
OFDA	Office of Foreign Disaster Assistance, USAID
Oxfam UK/I	Oxfam United Kingdom and Ireland
PARC	Pan African Rinderpest Campaign
PARC-VAC	Participatory Community-based Vaccination and Animal Health Project
RASS	Relief Association of Southern Sudan
RP	Rinderpest
SDDP	Samburu District Development Program
SCF(UK)	Save the Children UK
SRRA	Sudan Relief and Rehabilitation Association
TUSVM	Tufts University School of Veterinary Medicine
TRVTT	Thermostable Rinderpest Vaccine and Technology Transfer Project
UNICEF-OLS	United Nations Childrens Fund, Operation Lifeline Sudan
VSF-Belgium	Veterinaires sans Frontieres, Belgium
VSF-Switzerland	Veterinaires sans Frontieres, Switzerland

Note: Exchange rate April 1998, 60 ksh = \$1 USD.

## SUMMARY

Given the inability of government to deliver sustainable veterinary services to remote pastoral locations, the community-based animal health worker (CAHW) approach was initiated several years ago in various African countries. Linked to OAU/IBAR/PARC, PARC-VAC was formed in 1995 with OFDA funding through Tufts University to engage in the development of procedures to assist pastoral groups to organize and support their own CAHWs. Also, PARC-VAC often works in collaboration with government and NGOs to promote private-sector activities related to CAHW delivery and to initiate policy reforms aimed at ensuring sustainability of the programs.

The overall purpose of this assessment was to determine what factors contributed to the success of CAHW programs in Kenya, southern Sudan and Ethiopia. These findings were to provide “lessons learned” useful to USAID decisions about continued funding and for future design modifications and expansion of activities to other pastoral locations.

The CAHW program has been successfully implemented in southern Sudan by UNICEF-OLS facilitated by PARC-VAC. This coordination has led to establishment of standard procedures for community organization, selection of CAHW’s, training, drug supply, monitoring and interacting with the public and private sectors. These procedures are being adopted such that PARC-VAC, other implementing partners and many NGO’s can successfully extend the program to other ASAL locations. PARC-VAC’s participatory approach is technically sound and incorporates both excellent PRA methodology and culturally appropriate training and programming. The CAHW program in the Afar Region of Ethiopia has been operational for over four years and is a good example of the long term viability of community-based delivery of animal health services. The PARC-VAC selection process for paravets involves a variety of participatory methodologies and affords communities the real opportunity to “buy-in” to the selection process. PARC-VAC has begun the process of analysis to understand the social and cultural roles of CAHW’s in their communities and has worked to better include traditional veterinary practitioners in the selection process.

It was evident in this assessment that the sustainability of CAHW development relies on the degree of integrity of financial management of drug inputs and a satisfactory remuneration for the individual CAHW’s. Financial transactions through private sector channels without the involvement of committees or associations were most sustainable. Generally, many committee-managed revolving funds were found to break-down in short order. The privatization scheme in Kenya has been very successful in establishing private veterinary practices in high potential areas. Indications are that extending such privatization to practices in the ASAL, as is now being actively developed, can enhance the move of CAHW programs toward integration into the private sector for drug supplies and technical assistance.

The assessment concludes that both the UNICEF-OLS and PARC-VAC projects funded by OFDA via Tufts University achieved excellent results in improved animal health delivery focused on rinderpest eradication and treatment of livestock disease via CAHW’s in ASAL. Both projects benefited longer term sustainable animal health services to pastoralists via local institution building and policy reform initiatives. Despite emergency situations, these projects have laid foundations relevant to the relief-to-development continuum. There is clear opportunity for USAID to capitalize on this success. There is much scope for PARC-VAC to continue using its own field experience to expand the advances in animal health delivery, policy reform and privatization of service. Furthermore, there is growing evidence that the CAHW approach acts as an effective point of contact with remote, pastoral communities leading to other potential benefits such as human health service delivery, conflict mitigation and cross-boarder livestock disease control. PARC-VAC can be regarded as a center of excellence in advice and training for CAHW development and contributes to the activities of other international, governmental and non-governmental players. Therefore, the assessment strongly recommends that USAID consider core-funding for PARC-VAC for at least two years to ensure that its field activities and policy reform initiatives are not interrupted.

## INTRODUCTION

The PARC-VAC community-based animal health delivery activity grew out of the successful project carried out by technical assistance from Tufts University supported by USAID, USDA and other donors to develop a thermostable rinderpest vaccine in the early 1990's. This vaccine development enabled the effective vaccination of millions of livestock in marginal and frequently insecure pastoral areas of Somaliland, Chad, Ethiopia and southern Sudan. In 1993 the project began placing more emphasis on the delivery of RP vaccine and other animal health inputs through trained animal health workers who are selected by members of their communities or pastoral groups and who are part of the constant livestock movement patterns. The need for such a cost-effective, sustainable delivery service is obvious. The present government veterinary services with their chronic shortage of resources and personnel and lack of integration with many ethnic populations simply cannot deliver satisfactory service to remote ASAL locations in a sustainable manner. These areas have some 60% of the livestock herd and constitute some 80% of the landmass of most nations in this part of the world. About 25% of the national population survive on the off take from this production mix of livestock and land resources.

To advance the development and implementation of this community-based animal health worker (CAHW) delivery approach, PARC-VAC was formed in 1995 to engage in the development of procedures to assist traditional pastoral groups to organize and support the animal health workers they select. PARC-VAC also works to design special training and monitoring procedures, to advocate national policy changes which may be needed, to encourage profitable arrangements between private veterinarians and CAHW'S and to assist NGO'S involved in improving animal health delivery in their areas of work. Another major effort of PARC-VAC is to promote the adoption of private-sector involvement in cost recovery procedures for pharmaceuticals and vaccines used by CAHW'S in delivery of service. This is critical for the sustainability of animal health delivery to the ASAL without subsidies over the long term.

### Purpose of this Assessment.

The overall purpose of the assessment was to determine what factors or conditions contributed to the success of the CAHW program and conversely, to determine those factors which have led to poor performance of the program in areas of Kenya, southern Sudan and Ethiopia. Based on these findings, the assessment aimed to provide "lessons learned" and draw conclusions and recommendations useful for decision-making on future funding of PARC-VAC and UNICEF-OLS activities and for the design of continued activities and their expansion to other ASAL pastoralist locations. Several issues are of key importance for this investigation to yield the information needed for the overall purpose.

- The viability and sustainability of cost recovery schemes
- The interaction of present government veterinary services and the CAHW programs, and the role that private veterinarians can/should play in this type of delivery
- The impact of CAHW's on focused RP control or eradication and on reducing losses from other diseases
- The effectiveness of NGO's involved with CAHW program's and their relationships to national veterinary services
- The impact of the TUSVM/PARC-VAC projects on RP eradication in the Horn of Africa and its effectiveness in reaching the most vulnerable and remote pastoralist populations
- The socio-economic role of CAHW's in gender relations and changing attitudes toward the use of ethno-veterinary medicine

The purpose of the assessment as described in the TOR was enlarged after discussions with USAID officials to include, where possible, evaluations and conclusions about the potential for CAHW program to provide more broad social benefits to pastoralist groups which are frequently involved in complex emergency situations from ethnic and/or political disputes. Therefore, the assessment provides some additional evaluations on the role of successful CAHW programs and improved general community functional capacities in the areas of:

- Providing improved avenues for conflict mitigation
  - Improved understanding of the livestock-wildlife interface with regard to disease
  - Resolution of some problems of cross-border livestock movements and disease control
  - Facilitation of delivery of human health services to pastoral societies.

The assessment team carried out investigations in the Turkana, West Pokot, Samburu and Wajir areas of Kenya and in the Afar region of Ethiopia. Information about CAHW activities in southern Sudan, where this approach was started in 1993, was gained from interviews with numerous NGO and UNICEF-OLS personnel in Lokichoggio, Kenya. The team was not allowed to visit southern Sudan for security reasons. Also, valuable data was gathered from NGO'S, donors, government veterinary services, pharmaceutical companies and OAU/IBAR/PARC in Nairobi and Addis Ababa.

## **FINDINGS AND LESSONS LEARNED**

### **1.0 CAHWs AS SERVICE PROVIDERS**

#### **1.1. Why a Community-based Approach to Animal Health Service Delivery in Pastoral Areas?**

Throughout the arid and semi-arid areas of the GHA, conventional government veterinary services have consistently failed to establish effective or sustainable systems of delivery. This lack of success is due to both resource constraints, organizational weaknesses, professional biases against pastoralism and numerous logistical problems associated with servicing highly mobile communities in harsh terrain with limited infrastructure. The weaknesses of state veterinary services are exemplified by rinderpest eradication campaigns which were unable to reach communities or their cattle in more remote areas of Africa.

While the community-based approach recognizes the weaknesses of public sector veterinary services as outlined above, it also relies on at least five key features of pastoralism which provide opportunities for alternative and more effective modes of animal health care:

- For pastoralists, animal health is a priority and along with water, livestock disease usually features as the first or second most important problem during participatory needs assessments.
- It is widely recognized that pastoralists possess detailed indigenous knowledge on livestock and wildlife disease.
- Pastoralists are willing and accustomed to moving long distances to access resources. Pastoral CAHWs are capable of moving with livestock herds and traveling to fixed-point outlets for veterinary drugs.
- Indigenous pastoral institutions are often well organized (see annex 3) and can be effective democratic decision-making units. Animal health related issues (such as movements to specific grazing areas) are already discussed in these traditional forums.
- Although some pastoral communities have been exposed to free or heavily subsidized veterinary services, they usually acknowledge the rationale for payment for veterinary services. Experience from throughout the GHA strongly indicates that the problem of poor veterinary service delivery relates to availability of services rather than cost.

## **1.2 Problems of Quantitative Data Collection within CAHW Projects**

Within CAHW projects generally in the GHA there is often a marked absence of quantitative data. When projects are established in emergency situations, conventional livestock disease surveys or livestock censuses are rarely conducted. Participatory assessments do yield data on which to base immediate inputs but typically, this data is disregarded by workers outside the NGO sector. In addition, due to the isolation of many pastoral areas baseline data has never been collected. Published material such as that produced in colonial times is usually out of date and in post-conflict situations, government records (if any) have often been destroyed.

## **1.3 Has the Community-based Approach to Animal Health Service Delivery Demonstrated Effectiveness?**

### ***1.3.1 Examples of OFDA-funded projects***

Looking specifically at community-based veterinary work in the GHA which is being supported by OFDA, an understanding of context is crucial when discussing the impact of the CAHW approach. The most well-established project, the UNICEF-OLS/SS Livestock Program operates in a complex emergency situation in which a range of external factors have interrupted project activities and limited the capacity of the program to invest in long-term planning. As outlined in sections 1.1 and 1.2 above, CAHW projects are frequently located in areas with severe operational difficulties. In the cases of the UNICEF-OLS/SS Livestock Programme, the TRVTT Project (e.g. in Afar region, Ethiopia) and PARC-VAC these constraints should not be understated - project sites are among the most difficult to reach and insecure in Africa.

One finding of the assessment was that in contrast to many other projects involving CAHWs, useful data on animal disease impact was actually available from OFDA-supported work. The main enabling mechanism for community-based approaches for both UNICEF-OLS and PARC-VAC was the successful development of the heat stable rinderpest vaccine "Thermovax" by the TRVTT Project. Without Thermovax, many of the positive CAHW experiences detailed in this report and annexes would not have occurred and consequently, the development of the vaccine should be viewed as both a major technical achievement and a catalyst for the development of the CAHW approach. The assessment found that CAHWs can be an extremely effective means of delivering a basic veterinary service to remote communities. The most dramatic evidence of effectiveness related to rinderpest vaccination.

In southern Sudan. Following the introduction of Thermovax delivered by CAHWs in 1993, rinderpest vaccination increased more than 10 times to 1 million plus cattle per year, reported rinderpest outbreaks decreased from 14 outbreaks in 1994 to 1 outbreak in 1997. UNICEF-OLS recognizes that much work remains to be done with respect to maintaining rinderpest vaccination levels and responding effectiveness to news of disease outbreaks. While resource constraints have hindered the program's ability to conduct seromonitoring, this problem is being addressed in 1998 with the appointment of a veterinarian with specific responsibility for monitoring work.

The program has now established a network of 563 CAHWs, 40 AHAs and 16 Stock Persons who currently reach approximately 70% of southern Sudan with treatments and vaccinations for important livestock diseases. The specific diseases treated by the CAHWs are determined by community priorities as identified during community dialogues and disease ranking sessions. This approach means that the type of diseases treated varies according to area-specific preferences for livestock species and production systems. UNICEF-OLS/SS data on numbers of cattle treated showed that 30.5% (1,272,922 head of cattle) of the estimated cattle population of southern Sudan received treatment from CAHWs for important livestock diseases during 1996. CAHWs also treated 156,115 small ruminants and 99,934 chickens. These treatments were considered by ex-government livestock personnel to be a dramatic improvement relative to the pre-war situation.

In Afar Region, Ethiopia. With technical and training support from the TRVTT in Afar, PARC-Ethiopia began to implement a community-based rinderpest vaccination program using Thermovax in 1994. Prior to this activity, conventional vaccination campaigns had vaccinated around 20,000 cattle per year in Afar, achieving approximately 60% immunity. In 1994, 20 CAHWs trained by PARC-Ethiopia/TRVTT vaccinated 73,000 cattle with Thermovax in previously inaccessible areas of the region and achieved 83% immunity. No outbreaks of rinderpest have been confirmed in Afar or elsewhere in Ethiopia since November 1995. As PARC acknowledges in its 1996 Annual Report, *"The success in the Afar region is perhaps the most striking example of the impact of participatory techniques in remote, marginalized communities"*.

The impact mentioned by PARC was two-fold. First, the control of rinderpest in Afar had direct benefit for herding communities in terms of reduced cattle mortality. Second, the removal of rinderpest from a previously endemic area allowed Ethiopia to move away from an expensive blanket vaccination programme towards a strategy involving non-vaccination, comprehensive serosurveillance and rapid response to disease outbreaks. The latter is now advocated by PARC epidemiologists as the model for rinderpest eradication in other African countries.

### ***1.3.2 Some experiences from other CAHW projects in the GHA***

A considerable number of CAHW projects have been implemented in the GHA during the last twenty years or so. The bulk of the grey and published literature on these projects focuses on the mechanics of project implementation and the potential benefits of the approach. As outlined in section 1.2, hard data on project impact is often lacking but one of the most striking examples of CAHW activity was reported by ICRC in Somaliland soon after the end of the Somali civil war. In an emergency situation and using CAHWs to deliver Thermovax, 95% rinderpest vaccination coverage was achieved. This level of coverage exceeds typical government service coverage of 50-80%

Rather than attempt a comprehensive review of all CAHW projects in the GHA, a few common themes are presented because in some cases, they help to illustrate the comparative advantage of projects being involved with PARC-VAC.

In terms of what CAHWs can do and how veterinary medicines are used,

- A very clear lesson derived from the CAHW approach was that illiterate or poorly-educated (in a western sense) livestock herders can be trained in the proper use of veterinary vaccines and drugs, even those products which require careful dilution or special administration. Reports of drug misuse by CAHWs were few and anecdotal.
- In pastoral areas, concerns that veterinary medicines might be used to treat human ailments are of limited importance. The overriding message from field-level workers was that human drugs were far more likely to be used to treat animals rather than vice-versa. This experience probably relates to local prioritization of animal health above human health.

In terms of the quality of CAHW project implementation,

- While some NGOs have been at the forefront of the CAHW approach and have developed technically proficient ways of working, among other organizations there is huge variation in technical capacity to implement community-based work. Weaknesses vary from a lack of understanding of the overall concept i.e. community participation, through to specific technical weaknesses such as the procurement of inappropriate veterinary medicines for use by CAHWs. In this situation, the coordinated approach used by UNICEF-OLS and facilitated by PARC-VAC is particularly valuable because standard CAHW selection, training, drug supply and monitoring

systems can be established over a wide area, and inexperienced or new NGOs can learn how to implement effectively.

- In contrast, government has a poor record of coordinating CAHW projects. While field-level veterinary personnel often develop good links with NGOs and report to central authorities, the latter usually claim to know nothing about NGO activities and that NGOs avoid communicating with government. Information flow between those government bodies responsible for regulating NGO activities and line ministries is limited.
- Many CAHW projects face a problem of inadequate follow-up and monitoring of CAHWs. This weakness is closely linked to the large geographical areas in which these projects operate and the logistical difficulty of locating the CAHWs when they are moving with livestock herds in remote areas with no roads and poor security. Monitoring is often based on the collection of verbal or written reports from CAHWs when they visit an outlet for veterinary drugs. UNICEF-OLS have developed considerable experience in appropriate monitoring methods for CAHWs.

In terms of appropriate policy environment,

- Many of the most dramatic examples of CAHW effectiveness have emerged from areas where in reality, there is no government e.g. Somalia/Somaliland, southern Sudan, Afar. CAHW-government relationships are discussed in section 3.0 but in summary, experience to date indicates that inappropriate government policy has been a major constraint to the effectiveness, coordination and sustainability of the CAHW approach. Policy reform with respect to CAHW roles and public-private sector division of veterinary activities is taking place but progress has been slow.

#### **1.4 Potential Roles for CAHWs in the Delivery of Rinderpest Vaccines**

The assessment provided numerous opportunities for the team to discuss the potential value of a vaccinia-vectored recombinant rinderpest vaccine in relation to the pros and cons of the Plowright vaccine and Thermovax. In summary, rinderpest can be eradicated if conventional Plowright vaccine is used in accessible areas and Thermovax is delivered by CAHWs in inaccessible areas. Also, good disease surveillance systems and a capacity to respond effectively to disease outbreaks are needed. CAHWs have clear roles to play in the delivery of vaccine, as well as for disease surveillance and responding to disease outbreaks. When the recombinant vaccine is further developed and is proven to be efficacious, safe, low cost and superior to Thermovax in terms of heat and ultraviolet light stability, obviously it would be administered by CAHW's as are the vaccines presently in use.

#### **1.5 CAHWs For Livestock Disease Reporting-Rationale**

The reasons for using CAHWs in livestock disease reporting systems are similar to those for supporting community-based animal health generally - government veterinary services are often ineffective, animal health is a local priority and livestock-dependant communities, particularly pastoralists, possess detailed indigenous knowledge on both livestock and wildlife disease. The latter point is demonstrated by the considerable body of literature on ethnoveterinary medicine in Africa, including GHA countries. In addition, formal studies on livestock health and production (in Sudan and Zambia) have showed that African livestock owners can provide information on disease signs, mortality and production losses which is of scientific relevance and cost effective. Work in Niger and Somalia has shown how pastoralists who receive basic training in animal health and disease reporting can form the basis for effective livestock disease information systems.

### ***1.5.1. Examples of CAHW disease reporting in OFDA-supported projects***

As the most long-running of the OFDA-supported CAHW projects, the UNICEF-OLS/SS Livestock Program has gained considerable experience in the development of appropriate reporting systems for CAHWs. The current system is based on pictorial reporting formats for the CAHWs which are summarized by CAHW supervisors in the field before being passed to UNICEF-OLS veterinary staff via partner NGOs.

In 1997 UNICEF-OLS designed a database which is now located in the Nairobi office and used for the storage and analysis of information derived from the CAHWs and AHAs. At the time of the assessment, information was still being entered into the database but it was evident that in the near future the facility will enable analysis of CAHW treatments and vaccinations according to variables such as geographical area, season, NGO and cost of treatments. The amount of data which might be handled by the program is substantial as it will comprise both past and future records obtained from 616 animal health workers. Consequently, as the program develops it should begin to produce very detailed, quantitative data on the type of service being offered by the CAHWs and demand for different medicines and vaccines. Indirectly, this data can be linked to disease incidence or local perceptions of disease risk. This level of data collection and analysis is a notable improvement on systems used by most government veterinary services in the GHA. In theory, at some stage the database could be handed over to a new administration in southern Sudan.

In addition to the CAHWs completing their routine treatment and vaccination records, they also act as reporters of disease outbreaks. By passing message either to their supervisors, AHAs, stockpersons or NGO staff, news of disease outbreaks can be forwarded by radio to UNICEF-OLS veterinary staff in Lokichokio or Nairobi. This system seems to work well - the most recent rinderpest outbreak in Torit County was first reported by radio by a UNICEF-OLS/SS trained stockperson directly to the program veterinarian.

In the PARC-Ethiopia CAHW project in Afar region, there was also evidence of CAHWs acting as effective messengers of disease outbreaks. In 1996 an epidemic of respiratory disease affected camels in Afar. This previously unknown disease was first reported to government veterinarians by a CAHW trained by the TRVTT project.

## **1.6. CAHWs, Policy and Government**

When reviewing animal health policy in the GHA the following constraints to policy reform should be recognized:

- Livestock make major contributions to both national and household economies in countries throughout the region. Consequently, livestock policy is a key political issue and within much of the livestock sector, animal health is the main expense faced by livestock owners.
- A number of GHA governments continue to suffer profound institutional weaknesses related to corruption, patronage and political decision-making based on the channeling of resources towards specific ethnic groups or individuals. In these situations, professional judgements by veterinarians and others tend to take second place to political allegiances and short-term personal gain.
- Professional bias is a well-recognized constraint to working with and empowering rural communities. The western style education of African veterinarians does not encourage open-minded debate on the capabilities of livestock owners. In some countries this problem is compounded by veterinarians' limited understanding of rural, particularly pastoral, society and livestock production systems.

The assessment team examined policy on both CAHWs and veterinary privatization in southern Sudan, Ethiopia and Kenya. A major achievement of both the UNICEF-OLS Livestock Program, PARC and PARC-VAC has been their affect on senior-level veterinarians who influence regional and national policy on animal health service delivery in the GHA. By demonstrating the effectiveness of CAHWs for both rinderpest vaccination and provision of a basic diagnostic and curative service, these projects have started to change deeply entrenched attitudes towards public sector control of service delivery. A commitment to cost recovery and initial work on links between CAHWs and private practitioners has formed a foundation for future policy development. These impacts are particularly significant considering the emergency context of the work and some profound operational constraints.

Although attitudes are changing, there is still considerable work to be done in terms of policy reform, formal recognition of CAHWs and veterinary privatization. CAHWs and privatized approaches are a long way from becoming mainstream, legislated components of veterinary services in GHA countries.

### **1.7. Supervision of CAHWs: Technical, Community-based and Market-orientated Options**

Although numerous NGO projects use government veterinary staff to assist with CAHW monitoring and supervision, in general state services have limited capacity to conduct these activities on a long-term, sustainable basis. In this situation, two unofficial forms of CAHW control can be considered.

First, there is good evidence from NGO reports that community-level supervision of CAHWs can be effective. This level of control is concerned more with CAHW relationships with the community (equity of service and behavior of CAHWs), agreements on drug prices, incentives for CAHWs and disease reporting rather than technical control. To a large extent, the willingness and capacity of local people to take some responsibility for CAHWs seems to depend on the level of community dialogue and participation in the project. When the roles, responsibilities and incentives for different players in a CAHW project are fully discussed and agreed upon, community-level monitoring and evaluation can work extremely well.

The other form of CAHW control is market forces. Livestock owners, particularly pastoralists, are usually pragmatic and opportunistic. They support and pay for services which work and reject those services which offer no benefit. When an animal recovers from a serious disease following treatment provided by a CAHW, news of this event travels far and wide. Likewise, news of unsuccessful treatments is also shared and CAHWs who fail to operate effectively are unlikely to receive much demand for their services.

Looking more closely at technical supervision of CAHWs, there seemed to be common agreement among NGOs, UNICEF-OLS, PARC-VAC and government that where possible, CAHWs should be receive some level of technical backup from a veterinarian. These linkages were required in order to ensure supervision of CAHW activities, facilitate or provide refresher training, provide some form of referral service or second-opinion, act as a point of contact for disease reporting and in some cases, act as a source of veterinary medicines. PARC-VAC is beginning to address the sustainability of vet-CAHW links by supporting private veterinary practice in pastoral areas based on networks of CAHWs supported by a private practitioner.

### **1.8. The PARC-VAC Project**

The objectives and activities of the PARC-VAC Project are well documented in various visit reports, quarterly reports and the 1997 annual report. In summary, project activities are aimed at community-based animal health service delivery and policy reform in pastoral areas of the GHA. Although operational for only 14 months at the time of the assessment, it was clear that significant progress had

been achieved with respect to both field-level implementation of CAHW work and policy reform. The project had also started to support broader development issues, most notably by working with Oxfam UK/I in Uganda on conflict resolution. Rather than repeat a long list of activities, partnerships and coordination work which is already described in project documents, information is presented here which focuses on PARC-VAC's unique position with respect to improved veterinary services in the GHA and its potential to facilitate work in other sectors.

### **1.8.1. *Technical capacity***

A key feature of PARC-VAC is attention to the technical aspects of CAHW project implementation. This characteristic of the project is important because there is wide variation among NGOs in their technical capacity to implement animal health work. Furthermore, government veterinarians and donors tend to possess superficial understanding of participatory approaches in the context of improved veterinary services and the potential to use animal health as an entry point to pastoral communities. PARC-VAC currently employs two veterinarians with unique experience of participatory development in the GHA and houses a large collection of CAHW reports and publications. Consequently, the project can be regarded as both the institutional memory of CAHW projects in the GHA and a center of excellence with respect to technical aspects of this approach. The project receives frequent requests for advice and technical assistance from a range of NGOs, donors and government agencies. In order to collate existing knowledge and experience, PARC-VAC has proposed that a comprehensive manual on community-based animal health systems be produced in the next year. The production of such a manual is clearly a priority as more agencies, often with limited technical capacity, become involved in the CAHW approach.

### **1.8.2 *Coordination of CAHW projects and collation of lessons learned***

In response to the varying institutional capacities outlined above, the project recognizes the need for better coordination of CAHW projects and the use of common approaches to CAHW selection, training, incentives and so on. In part, this lesson has emerged from the UNICEF-OLS/SS Livestock Program. There is also a need to collate project experiences and publicise these experiences. Since January 1997 the project has supported coordination of CAHW projects in Turkana, Karamoja, West Pokot and southern Sudan.

### **1.8.3. *Regional and national-level policy reform***

The project is crucial in terms of contributing towards the debate on veterinary service reform in Africa. Donor-driven veterinary privatization initiatives continue to focus on support to veterinarians with limited attention to the needs of livestock owners, particularly those in pastoral areas. Due to its participatory character, field activities, links with NGOs and location within OAU/IBAR, the project is extremely well-placed to influence policy on appropriate animal health services in pastoral areas. During the last 14 months the project has actively engaged senior-level decision makers in government and donors, exposing them to new ways of working and justifying the combined community-based/privatized approach. OAU/IBAR has an international mandate and close links with Chief Veterinary Officers, donors, FAO, OIE and various regional bodies and research institutes. During the assessment, NGOs expressed support to PARC-VAC continuing its advocacy role and acting as a channel through which NGO field experiences could contribute more effectively to policy reform.

## **1.9. *Community Participation and the Wider Implications of the CAHW Approach***

The guiding principle behind PARC-VAC's approach is commitment to community-level involvement in animal health service delivery leading to both immediate impact with respect to improved food security and long-term impact through the creation of constructive and transparent relationships with pastoral communities. The latter should be viewed in the context of marginalised social groups who have often experienced inappropriate aid or no aid, and who have tended to avoid contact with government

programs. This long term impact might be described as "community-level capacity building" and leads to openings for discussion on issues such as conflict, water, natural resource management or human health. In other words, when working with pastoral communities, animal health can act as an entry point for other development activities. PARC-VAC's future role as a facilitator of work in other sectors is most apparent for human health and conflict mitigation as there is already evidence that animal health projects can facilitate work in these areas.

### **1.9.1. *Examples of CAHW projects acting as entry points for other benefits- "value added"***

#### *a. Conflict mitigation*

Features of CAH relevant to conflict resolution:

- CAH seeks to identify and work with traditional pastoral institutions/forums/committees e.g. PARC-VAC's work with Turkana adakars.
- CAH works directly with traditional leaders who both initiate and prevent raiding.
- Increasing incidence of raiding partly linked to failure of traditional leaders to control warriors. CAH works with both leaders and warriors.
- Animal health prioritized by herders hence CAH receives strong local support; vets and CAHWs well-respected.
- Animal health projects often the only projects existing in remote, pastoral areas.

The potential value of PARC-VAC in conflict resolution arises from it's,

- Field level implementation of CAH leading to understanding of social organisation, local decision-making processes and reasons to raid.
- Links with NGOs and local government.
- International scope and capacity to facilitate links between players on opposite sides of national borders.
- Impartiality.
- In-house, practical experience of peace making initiatives in pastoral areas.

#### *b. Human health*

(The integration of human health with animal health has succeeded in several programs in GHA.

See section 3.9.)

### **1.9.2. *Other beneficial opportunities for broadening PARC-VAC activities***

There are also opportunities for PARC-VAC to look more closely at wider animal health issues such as cross-border disease control and wildlife-livestock interactions. The indigenous knowledge of herders has already been mentioned in this report and there are clear opportunities for a project such as PARC-VAC to work with, or facilitate work which uses local know-how to improve understanding of livestock and wildlife movements, seasonal interactions and wildlife disease. CAHWs are already well-trained in history taking and there is potential for developing their existing disease reporting role to also cover outbreaks of disease in wildlife.

PARC-VAC is located within OAU, which has an international mandate, and the project is already working in border areas e.g. the Karamojong cluster. Also, OAU/IBAR/PARC has long experience of border harmonization meetings bringing together veterinary services from neighboring countries. Finally, PARC-VAC has the proven ability to work with both government and NGOs (a rare achievement) and has access to remote areas. Consequently, the project could improve the flow of information from these

areas to central veterinary and wildlife authorities.

## **2.0. FINANCIAL AND ECONOMIC ISSUES**

The successful establishment of a community-based animal health delivery system within a pastoral group may take a year or two from the initial dialogues to the selection and training of the health workers. Throughout this time the financial issues about the workers charging for their services and other supplies are clearly explained and agreed upon by group leaders or some other decision-making forum. In addition, a type of management or supervisory committee is usually formed (in OLS programs in southern Sudan these are called Veterinary Coordinating Committees or VCCs). One role of these committees is to manage the procurement of drugs, transfer the drugs to the CAHW and keep an account of money he returns from his charges. Then supposedly, the committee will pay the CAHW his “fee” (maybe 20% of drug costs) and retain some money to pay for committee activities and then ultimately use the remainder for purchase of more drugs as deemed appropriate. Thus the committee acts as manager of a “revolving-fund.” In many cases the first batch of drugs are given to the community groups on a free or subsidized basis by NGO or donor agencies who buy them from local DVO’s or directly from the private suppliers.

In CAHW projects generally, there is a wide variation in the roles and success of these community-level committees. One can imagine the variety of problems that can lead to the collapse of this system ranging from outright theft of money or drugs, to poor record keeping or to owners not able or willing to pay the CAHW. And, indeed, the assessment team learned that in several cases breakdowns in this “drug-to-money-to-repurchase” accountability chain had occurred in this committee system as well as some “livestock user associations.” All the veterinary drug revolving funds created in the ASAL districts under the World Bank loan Emergency Drought Recovery Program in 1994/95 operate at a deficit because of unrecoverable debts, insufficient sales margins or general leakage as described in Mission Report, October 1997.

### **2.1. Cost Recovery**

The long term sustainability of the CAHW system hinges on the integrity of cost recovery practices, as well as, the technical abilities of the animal health workers themselves in serving their livestock owners. (See section 1.7.) The workers’ fees from cost recovery are the main incentives they need to stay active continuously and enable them to buy transport such as bicycles, camels or motorbikes. And cost recovery is the key for the entire system to move away from dependency which is the goal of the NGO’s, PARC-VAC and agencies such as the Arid Land Resource Management Program(ALRMP) funded by a World Bank loan. Various approaches to cost recovery were investigated during this assessment. Many are in their early stages of implementation. Following are a few examples:

**Southern Sudan.** In spite of the disaster situation, the CAHW program has been successfully developed in numerous locations through the work of UNICEF/OLS in coordination with several NGO. Although there are some instances of poor accountability of money from drug sales, livestock owners are generally paying for treatment services (now on a full cost basis) as well as for RP vaccination. Because of the crisis situation, the income in Sudanese pound currency cannot generally be converted to Kenya shillings to be used for repurchase of drugs, so essentially the NGO are funding a development program through the importation of animal health products. The money generated by CAHW charges is being managed by local committees usually in conjunction with an NGO. This money is used in local development activities to pay some construction workers, build schools or health centers, buy food for severely disadvantaged peoples and so forth. In many cases payments are made “in kind” in the form of goats, chickens or milk which may be sold to gain Sudanese pounds also for use locally.

**Turkana.** CAHW programs are just getting organised by PARC-VAC. The plans are to form

committees within the Adaker groups to manage veterinary products and finances. Serious efforts are being made by PARC-VAC to enable a Turkana veterinarian about to graduate from Kabete to establish a private practice here in Lodwar in the fall of 1998 to serve the northern and southern livestock areas of Turkana. The plan is he would sell drugs to CAWH's and further to act in a supervisory role in the near future. Turkana was one of 10 ASAL Districts where the World Bank Drought Recovery Program was focused in 1994. This program established "livestock user" associations to sell livestock drugs to association members and manage revolving funds. In Turkana District 4 out of the 5 associations formed have collapsed due to disappearance of funds. The main problems appear to have resulted from improper selection of committee members, lack of adequate training and supervision of the management committees and cumbersome procurement and delivery procedures through the government veterinary officials. The one surviving "livestock user" association is judged to be successful due to the strict financial management by its chairwoman and the fact that the association members were all livestock owners.

**Wajir District.** Presently, the ALRMP and Oxfam/UK are active in programs to train CAHW'S and develop pastoral associations in different areas of Wajir District. (The CAHW in Wajir is called a "daryele"-meaning "one who cares.") The approaches of the ALRMP and Oxfam are similar. They emphasize the importance of moving carefully with regard to setting up a drug revolving funds run by the pastoral associations which are assisted by a pastoral steering committee having representation from NGO'S and the district veterinary officer among others. This steering committee oversees the transfer of the start-up supply of drugs to the individual pastoral associations. But to receive this first lot of drugs, worth about 100,000 Ksh, the pastoral association leaders must receive training, setup a commercial bank account with three signatories and have their own committee constitution. This process can take several months before the donors are satisfied that a pastoral association is qualified and will show responsible management.

Over the last two years, the ALRMP has authorized four pastoral associations to operate in Wajir and another five are in some stage of becoming qualified. Oxfam is assisting five pastoral associations and frequently checks their bank accounts and drug inventory. One of these five local associations has recently collapsed because of members not paying for drugs or not repaying loans taken out from the association during the drought. Oxfam is also training more CAHW'S and offering refresher courses every six months or so. In Wajir there appears to have been very little emphasis in the past on the need for CAHW'S to receive payment incentive for service and many simply sell drugs to their group members or others with little or no markup.

Both ALRMP and Oxfam expect to remove themselves from the drug purchase activity as soon as possible after the pastoral associations are formed and operating. They are encouraging association leaders to deal directly with suppliers in Nairobi and on one occasion sponsored a trip to Nairobi for local leaders to visit pharmaceutical firms and establish business connections. However, this idea has not progressed very well so far. Most associations now buy drugs through the DVO who deals directly with Nairobi firms as he is legally qualified to buy the "ethical" injectable drugs like antibiotics, trypanosomides and East Coast fever drugs. The DVO also sells drugs to individual livestock owners.

**Samburu District.** Since 1994 the Samburu District Development Program (SDDP) funded by GTZ in cooperation with Kenya Government has trained some 80 CAHW's who work in 10-20 communities. Except in northern Samburu where there has been much dislocation due to civil conflict, most of these workers are still active. In contrast to other areas, now the drug finances are not managed by committees or associations in Samburu. The transactions are directly between CAHW's and local shops, some of which are run by a private veterinarian in the Maralal area.

The CAHW's said they also get advice on treatment and dosage from these shops. Although the CAHW's got subsidized "kits" (worth about 30,000ksh) to start off with, they were encouraged or forced to go directly through commercial channels for drug replenishment. These CAHW's also charge fees for their service which has enabled several to buy bicycles. Livestock owners stated they were happier with the CAHW service than they had been with the erratic government service in the past as well as their own attempts to treat their sick animals. The success of this program apparently is due to the cooperation of the DVO and the guidance of GTZ and strong technical assistance from Farm Africa. Also, this district had learned about drug revolving fund problems by experiencing failures in the past of "revolving funds" that only revolved once.

## 2.2. Economic Impact Evaluation

Estimating the economic return to CAHW services, or any type of animal health service or disease impact for that matter, is difficult under the best of circumstances because before and after disease loss data is difficult to determine. (See section 1.2.) This is especially true in the subject areas of this assessment. It can be argued that the increasing desire for service from CAHW's by owners and their interest in participating in such a program indicated that benefits exceed costs. Livestock owners are rational users of inputs and are willing to pay for service which they perceive to increase their production. This sort of "market place" evaluation will also result in owners seeking treatments that give good results from use of right dosage, proper and effective medicines and appropriate diagnosis and timing of treatment. In a way this will also act to control quality of medicines and to validate the quality of CAHW training and refresher courses as time goes on. There are three recent animal health economic studies recently done that are worthy of note.

1. Effect of Veterinary Interventions on Livestock Mortality in Afganistan. The authors of this study describe results from a questionnaire-based survey about mortality in districts which received veterinary (mainly paravets) intervention for three years as compared to neighboring districts that had not had any type of animal health services for ten years because of disruption from the Soviet invasion. The differences were large and significant. Overall annual mortality in adult and young cattle, sheep and goats range from 22% to 60% lower in the districts which had received animal health services than those which had none for ten years. The cost of the animal health intervention was low because it was implemented by a volunteer-run, NGO which involved the training of paravets and basic veterinary workers. Veterinarians previously in government service were also directly involved. Owners paid for services after an initial period of subsidization was phased out. The main services were for vaccinations in ruminants and poultry and anthelmintic administration. The authors concluded that programs of this nature are a highly cost effective manner to rebuild livestock numbers. (Schreuder, B.E.C. et.al. 1996 In Preventive Veterinary Medicine.)
2. Economic Impact Assessment of the Pan African Rinderpest Campaign in Ethiopia. This is an *ex-poste* study using benefit-cost and economic surplus analysis to consider the outcome of the PARC interventions as compared to the projected scenario "without control" as would have been run by government operating under substantial financial difficulties and in the face of civil unrest. The results show that the control of rinderpest under PARC yields 40% higher returns than if the investments had been made under government veterinary service strategy. PARC's strategy focuses on ring vaccination around areas of out break as opposed to the veterinary service nation-wide, blanket vaccination strategy. (Tambi, N.E. et.al., 1997, OAU/IBAR/PARC and ILRI Publication)
3. Return to Rinderpest Control in Southern Sudan. The complex emergency situation facing pastoralists in southern Sudan is indeed an unusual setting for the financial evaluation of animal health intervention. The consultant based a cost-benefit evaluation on estimates of calf mortality avoided and the sparing of expense for WFP food aid due to the increased supply of human

nutrition (milk and meat) resulting from the improved control of rinderpest in endemic areas with no vaccination. The cost of rinderpest control is estimated to be \$200,000 for vaccine and equipment which is 40% of the 1994 cost of the UNICEF-OLS livestock program. It is assumed that rinderpest is controlled in only one-half of the young cattle in the southern Sudan. The mortality avoided by vaccination is valued at \$3.8 million per year. There would be an increase in cattle numbers of about 7% per year. This increase would yield milk and meat to feed an extra 21,000 people per year. With cereal food costing \$1000 per metric ton delivered by airdrop to southern Sudan, this "extra" food from livestock translates to a savings of \$3.8 million to the food aid program. Thus, the cost-benefit estimate is 1:34 (3.0+3.8/0.2) for the investment in rinderpest control. Benefits for control of other diseases in large and small ruminants from CAHW activities were not included because the effects of that program had not become evident at that time. (Blakely, S. 1995, in Evaluation of the UNICEF-OLS/Southern Sector Livestock Program.)

### **2.3. Privatization Progress and Trends**

The sustainability of CAHW programs will best be secured by building links with private veterinarians for the purchase of veterinary drugs and for sources of on-going technical assistance. The role of government veterinary service, although supportive in some areas now, will continue to weaken as budgetary constraints increase and fewer veterinary graduates are brought into public service. This is particularly true for the ASAL regions where the CAHW's operate.

Several countries in sub-Saharan Africa have initiated policy reform and the transition from government service delivery to that of private veterinarians as well as cost recovery for vaccinations programs. PARC has been a major force behind these changes. The success of this transition varies from country to country some of which started the process in 1986, like Mali and Senegal. In Kenya, a privatization scheme was launched in 1994 with the formation of Kenya Veterinary Association Privatization Scheme (KVAPS). The basic idea is to provide start-up loans to veterinarians wishing to get into private practice. The interest-bearing, guarantee trust fund was established by EU through PARC. These loans, up to 800,000ksh, are granted to applicants who submit applications and collateral data to the steering committee and which are acceptable in commercial terms by Barclays Bank. If the veterinarian regularly meets his loan payments, 50% of the interest is returned as a bonus every three months. So far most of these loans have performed well with only four out of thirty-four in arrears and three veterinarians have completely paid off their loans. Presently these private veterinarians are operating mostly in the high potential areas of Kenya. They provide clinical, AI, vaccinations and drug sale services to more clients and earn more income than their counterparts in government service. Many employ trained technicians who deliver AI and other services using motorcycle transport. The veterinary practices are visited a few times a year by scheme officials to supervise practice performance and to advise on financial matters. This monitoring is critical to the on-going success of the scheme. The directors report that loan repayment performance of women veterinarians is superior and plan to direct more attention to attracting them to the scheme. The main mandate of KVAPS is to encourage delivery of service rather than just sell drugs, which older veterinarians are inclined to do. So the directors will target more young, recent graduates as clientele for small, startup loans to better satisfy this mandate.

The directors of KVAPS plan to expand their activities such that the scheme can assist veterinarians develop practices in the ASAL areas. Presently there is one KVAPS practice starting in Meru which serves the drier grazing areas of that district. One practice has been recently started in Loita serving Masai pastoralists and this is being monitored closely with the view of starting more clinics in ASAL using the Loita experience. FARM-Africa is engaged with KVAPS in pilot efforts to identify and enable veterinarians set up practices and provide technical support on a contractual basis to CAHW programs which FARM-Africa assists in Marsabit and Samburu. Additional security for loanees may be provided by funds placed in targeted Barclays Bank branches. So the scheme already is moving beyond the high potential areas to a limited degree. It should be kept in mind that some Kenyan veterinarians have started private businesses without the assistance of KVAPS. This trend toward privatization and its involvement with CAHW 's offers reasonable expectations for successful sustainability of the developing CAHW

program.

Another form of private sector development is the contracting of rinderpest vaccination with private veterinarians. PARC has had good experience with this through tender solicitations to veterinarians in two areas of Kenya. This vaccination contracting with private veterinarians managing their own teams has also worked well in Tanzania. As for cost recovery for vaccination, there is limited experience in sub-Saharan Africa, however, attempts to recover cost of providing vaccination service have been successfully implemented in parts of Chad, Cameroon and southern Sudan through the establishment of community-based animal health delivery, under which CAHW's earn incentives for vaccination work.

In Ethiopia, starting a few years ago, PARC has actively pursued the privatization objective by: establishing a loan program, funding a consultancy for the Privatization/Credit Program, conducting workshops and assisting in establishment of the Veterinary Privatization Promotion Office. To date, these efforts have progressed very slowly with only 12 of 422 loan applications approved by The Development Bank of Ethiopia after 4 years. Although a few private clinical practices have been established, mainly in the form of veterinary pharmacies and rural drug stores, the vast majority of service remains the responsibility of government through a system of veterinary clinics. This acts as a competitive deterrent to privatization in that the highly subsidized (only about 45% of drug costs are recovered) service discourages interest in setting up private businesses. Privatization is further hindered greatly by the fact that legislation reform initiated 10 years ago has not been finalized creating an insecure legal environment facing prospective private veterinarians. One study (Moorhouse and Ayalew, 1997) clearly indicates that Ethiopia's livestock owners would be most cost effectively served by private, rural veterinary practices having networks of AHA's and/or CAHW's. Such enterprises could also fulfill tender contracts for area vaccination programs.

#### **2.4. Some Lessons Learned About Financial Viability**

1. The financial viability of the CAHW system is most successful under conditions where the CAHW operates his service as a business. This means he charges fees above drug costs, buys drugs directly from suppliers, negotiates his own discounts, delivery and storage arrangements. Many times the supplier will be a pharmacy operated by a veterinarian who also provides technical advice. As was shown in the case of Samburu, this arrangement is superior to having a committee manage financial aspects of CAHW services such as drug selection and purchase, recovery of debts and accounting. PARC-VAC has been promoting the idea of CAHW a "small-business people" for some years.
2. Drug sale prices should be based on actual costs including shipping and coverage of losses due to expiration or spoilage. This is important for the CAHW operating his own business as well as the case of a committee managing the finances of drug cost recovery and repurchase. PARC-VAC has learned that subsidizing drug prices to livestock owners leads to problems later when they try to recover full cost plus 25%. It is difficult to convince the owners that they need to pay full cost, i.e. to move them from dependency on subsidies or gifts, to a real market world. PARC-VAC concludes it is best to charge full price right from the start in their future ventures.
3. In situations when it seems that the only, or best way, to handle the finances of animal health delivery to a group or larger community, that a committee or association is absolutely required, it is critical that the managing committee be carefully selected, trained and demonstrate its financial responsibility. Although this committee management practice maybe necessary at the early stages of development of a CAHW program in an area, plans should be established to move this money management aspect to commercial channels as soon as possible as ALRMP in Wajir is trying to do. In the early stages of programs in a few areas of Kenya, money collected from drug sales by committees or "users associations" was deposited in district treasuries which were to manage the revolving fund accounts. Later it proved difficult for the association to get these funds back. This tie to government financial systems caused serious problems. The practice was changed so that most revenue is now deposited in commercial banks. The plans to link CAHW's to private veterinarians, perhaps through a network of AHA's and CAHWs as PARC-VAC is

emphasizing is a major step in the right direction to achieve this transition to commercial transaction within the private sector.

4. Coordination of CAHW development with local DVO's is important and in many cases DVO's have been supportive and assisted in training and in the selection and purchasing of drugs and supplies, at least in the start-up phase. This has happened in spite of central veterinary organization's announced disapproval animal health delivery by "non certified" individuals. At the local level this disapproval appears to be by and large ignored in actuality.

5. Particularly in the early stages of implementation of CAHW practices, the first year or two, provision of refresher courses is important for continued success of the CAHW's. It is important that they get questions answered about technical aspects of their work. Also, it is a forum where they can get guidance about financial matters such as fees, collecting debts and dealing with suppliers. FARM-Africa has been effective in providing such courses in Samburu as has Oxfam in Wajir.

### **3.0. SOCIAL AND CULTURAL ISSUES**

#### **3.1. Community-Based Approach /Participatory Methodology.**

A growing body of evidence in the development literature is beginning to recognize what organizations like ODI, IIED and IDS have argued for more than a decade: community-based participatory approaches generate better end results than traditional, top-down, macro-level development projects.

While there are a myriad of definitions of concepts like "community-based" and participation, not all such programs effectively capture real participation and grass-roots involvement. "Community-Based" is a catch-all term which is utilized differently by disparate implementing organizations. The spectrum of projects which include the concepts of "community-based" and "participation" ranges from macro-level infrastructural projects which include the "participation" of local level economic or political elites to grass roots community dialogue leading to project design and proposal-writing.

Despite the wide range of definitions and institutional understandings of "participation" outlined above, the CB approach adopted by PARC-VAC and UNICEF-OLS has been uniquely effective in achieving real community participation. These projects pay more than lip service to the ideas of participation and community involvement and are regarded by other NGOs and implementing agencies as centers of excellence with respect to participatory methodologies. The PARC-VAC and UNICEF/OLS approach is uniquely effective in achieving community participation. It is seen as a "center of excellence" in participatory methodology by other NGOs and implementing partners. PARC-VAC technical expertise in actively sought out in the area of participation and community involvement. Specifically, the key elements in their success seem to be:

1. Strong PRA methodology. While the PRA methodology has been in use for over a decade, it is not uniformly applied and it is, in practice, a very difficult methodology to do well. The PARC-VAC and UNICEF/OLS programs have developed a strong, well-documented training methodology for the implementation of PRA in difficult field situations. They have successfully incorporated lessons learned from field situations in such diverse areas as Afghanistan and southern Sudan. Their strong technical skills in PRA are a key to their success.

2. This CB approach is understood conceptually not as a model but as a process of development. CB is not merely a mechanism of service delivery but an approach which facilitates the improvement of social and economic conditions in local communities. The distinction is a subtle but important one as it means that the provision of animal health care is not seen as an end in and of itself but rather as a means to a greater good: improved quality of social, cultural, and economic life and livelihoods.

3. The CB approach assures a “buy-in” by stakeholders, both individuals and communities, at each and every stage in the process.

4. The process of community dialogue is bi-directional. The fact that local participation and expertise is on equal footing with western bio-medical and cultural information both facilitates the improvement of animal health service delivery and provides value-added in community empowerment.

5. The CB approach recognizes the heterogeneity extant within cultural groups and pays particular attention to equity issues by consciously giving voice to groups which might otherwise have been silenced. This strategy both improves the quality of information gathered and hence the nature of the technical interventions (by talking to women, for example, who handle small stock) and encourages the continued participation of such individuals in the subsequent phases of the process (by giving voice to their knowledge publically and validating its importance in the project design). It also contributes to consensus-building and strengthening local institutions of good governance. Groups singled out for attention include: women, traditional leaders, “average” pastoralists, nomads, and new social groups. PARC-VAC and UNICEF-OLS have included women, traditional leaders (e.g. *waquils* in Turkana), “average” pastoralists, nomads, and new social groups in all their CDS.

6. The CB approach recognizes and reinforces traditional cultural values, structures, and institutions. The incorporation and validation of such concepts as kinship, collective responsibility, generalized reciprocity, and honesty has two important impacts. Firstly, it diminishes the potential of rejection of or backlash against new ideas. While concepts which are perceived as completely foreign often take several generations to be adopted and often fail to persist in the medium to long term, those that are seen as merely slight modifications of traditional practice can often be incorporated in a much shorter time frame and are more likely to be sustainable. Secondly, it reinforces the validity of traditional institutions and those who embody them and consequently builds their capacity for community development.

7. The use of existing cultural concepts to explain new technologies and ideas greatly facilitates the learning process and further validates indigenous culture. The utilization of cultural concepts goes beyond mere linguistic translation by keying in to core cognitive processes. It enables CAHWs to “crack their heads open” to new ideas and concepts by utilizing concepts such as vaccines protecting cattle from disease in the same way that guas protect herders from raiding

### **3.2. Collaboration and Coordination**

The key lesson learned is that timely, ongoing, and collegial interaction on the part of donors, international organizations, NGOs, and local, regional, and national government is a critical component in the success of the CB animal health approach.

The collaborative efforts of the various actors in CB animal health care in the region are frequent and substantial. PARC-VAC regularly liaises with other NGOs and donors in the form of CAHW Coordination workshops, gender workshops, training methodology workshops, and the like. PARC-VAC further provides both formal and informal technical assistance to a variety of NGOs newly entering the animal health field. Such technical assistance is provided at each step in the CB process and includes assisting with project and proposal design, sharing course and training materials, and providing PARC-VAC staff for CAHW training and community dialogues.

The small grants program administered by PARC-VAC was especially helpful in building the capacity of smaller NGOs working in this area. Specific examples include: support for ITDG in Turkana, support for new start-up NGO in southern Sudan: Vetwork Sudan and Christian International Peace Services (CHIPS) in Uganda. PARC-VAC has further engaged in advocacy work with other implementing partners

about the nature of their CB programming and is seen as a leader in this field by many other organizations.

At the national and regional levels, PARC-VAC and UNICEF/OLS engage in dialogue with key policy makers about the future of veterinary service delivery throughout the region. The presence of other indigenous actors, including KPF (Kenya Pastoralist Forum), has also substantially facilitated the dialogue process.

UNICEF/OLS is the “umbrella” organization which coordinates and organizes the various implementing NGOs in southern Sudan. Their frequent meetings and workshops have resulted in a remarkably well-integrated program in southern Sudan.

### **3.3. Ethiopia CAHWs**

The PARC-Ethiopia CAHW program has been operating in Central Afar region since 1994. A total of sixty CAHW's have been trained by the program and 60% of those are still active, four years after receiving training. The participation of these CAHWs was described as a “critical” element in the apparent success of PARC-Ethiopia in eradicating RP from the central Afar region.

CAHW's continue to receive refresher training and supervision from the PARC-Ethiopia staff. Most CAHW's interviewed demonstrated significant technical knowledge and were able to effectively demonstrate the use of their veterinary kits and supplies.

CAHW's are also substantially tied to their communities by virtue of their additional “supervision” by community elders. This latter supervision is to ensure honesty and accuracy in reporting of monies and drug supply. Since most CAHWs are relatively young men, a criterion established by the Afar community because these are the herders/warriors who are best able to move with the herds, such supervision is important.

This program is not yet sustainable and CAHW's depend on PARC-Ethiopia for drug supply. There are no government or private veterinary services (or any other services, for that matter) available in the central Afar region.

### **3.4. Paravet Selection**

Paravets are chosen through a thorough and participatory process. This process begins with the initial assessment, in which members of diverse social and economic groups are sought out for input. The second phase in the selection process is a formal community dialogue (CD). The CD utilizes a full range of participatory methodologies including: pile sorting, wealth ranking, problem ranking, brainstorming, small group discussions, and role plays. This CD generally concludes with a call for the community to think together about selection criteria. While the criteria vary from community to community, some common selected traits include: honesty, cattle ownership, youth (able to travel with herds), and physical fitness. Because PARC-VAC staff have been through this process before, they are able to prod communities to consider factors which might not seem obvious to them. For example, they commonly remind people during the CD that women might be appropriate candidates as CAHW's. Some women have been chosen and trained in both southern Sudan and Karamoja. They also consistently point out that literacy is not necessarily a prerequisite for CAHW training. In fact, the PARC-VAC experience has shown that illiterate CAHWs often work better than their literate counterparts (due, perhaps, to the latter's tendency to seek urban employment and abandon herding). PARC-VAC's experience has also shown that communities are more successful in choosing appropriate CAHWs in the second phase, after they have experience with the success and failure of some individuals.

### **3.5. Social and Cultural Roles of Paravets/Paravet Mobility**

The social and cultural roles of paravets vary tremendously across the project communities. Generally speaking, the paravets are seen as new specialists who do work that is independent of other, traditional, health specialists in the community. Virtually all paravets interviewed expressed pride at being selected and the position seems to convey considerable prestige (as well as some additional income). All paravets are mobile and travel to their clients. Role plays and other educational tools during the CD emphasize the role of community paravets as a communal resource which should be equally accessed by all members of the community, and not simply members of the CAHWs kin group.

### **3.6. Traditional Veterinary Practitioners/EVK**

While traditional veterinary practitioners are not completely integrated into the process, their involvement is sometimes sought. The PARC-VAC process actively solicits information about Ethnoveterinary Knowledge (EVK) during both the initial assessment and the subsequent CD. Such knowledge, which includes local disease terms and treatments, is subsequently utilized to tailor the CD presentations and the CAHW training curriculum.

### **3.7. Community Selection/Attention to Vulnerability of Groups**

Due to the particular circumstances of the PARC-VAC and UNICEF-OLS programs, the selection of communities has been somewhat ad hoc to this point. However, by definition, both projects are targeting marginal and vulnerable groups - pastoralists in conflict areas. In southern Sudan, the stated project goal is the inclusion of ALL communities in the catchment area. The PARC-VAC project has just begun the pilot phase and has only chosen a handful of communities. These are selected in consultation with local government partners, traditional leaders, and a process of CD. Continued attention this issue will be important in the near future.

This CB approach significantly addresses the concerns about vulnerability WITHIN communities by utilizing CD and other participatory methodologies. Community planning intentionally includes the most vulnerable members of these pastoralist communities, including women, the elderly, and those with few animals. Continued attention to issues of equity with respect to the impacts of the projects will be important.

### **3.8. Gender/Small Stock**

Women's opinions are actively solicited by PARC-VAC and UNICEF-OLS during both the assessment and CD phases. Particular attention is paid to the gender-based division of labor and the important role that women play in the household economy generally and in the care of small stock particularly. Specific role plays and other community dialogue tools target the role of women in decision-making and the provision of animal health care. As a consequence of this persistent dialogue, communities are compelled to discuss the current and potential roles for women in animal health. In some communities in Karamoja and southern Sudan, women have been selected and trained as CAHWs. In most others, they have become increasingly vocal in their participation in CD. There is substantial room for further incorporation of women into the approach.

### **3.9. Integration of CAHW program and Human Health.**

The integration of human health with animal health has succeeded in several programs in the Horn. Examples of the limited integration of human health can be found in southern Sudan (CBAHWs used for polio vaccination campaign and guinea worm eradication), Samburu, Kenya (SDDP project training both CAHWs and CHHWs), and Wajir, Kenya (*daryelles*, traditional healers, trained in both animal health and basic human health). This limited success seems to be predicated on several key elements:

1. Human health is consistently ranked by communities as a key priority. It is usually listed as the

third or fourth priority, following animal health and/or water. The fact that human health is considered a priority facilitates community involvement in human health programming.

2. Human health is often phased-in following the successful implementation of animal health programs. This phase-in allows the build up of community trust and household incomes, both of which facilitate the successful incorporation of human health interventions.

3. Culturally appropriate models for the provision of human health are key. In some communities, traditional healers treated both humans and animals. In others, separate specialists were utilized for animal and human illness. The programs which are working best follow the traditional structures when designing their human health add-ons to the animal health program.

4. HHW seem to achieve the most success when their interventions are discreet and/or limited to “public” health activities such as vaccinations and IEC campaigns.

5. The ability of HHWs to recover costs for human drugs and human health services is often constrained by past practice of subsidized drugs and/or cultural practices which do not include payment for traditional human health providers.

## CONCLUSIONS AND RECOMMENDATIONS

The assessment focused on two projects which currently receive Tufts University technical assistance supported by OFDA viz UNICEF-OLS Livestock Program and the PARC-VAC Project.

The key conclusions of the assessment were that:

- Both the UNICEF-OLS and PARC-VAC projects achieved excellent results with respect to improved animal health service delivery focused on rinderpest eradication and basic treatment of livestock disease via community-based animal health workers (CAHWs).
- Both projects impacted on the longer term development of sustainable animal health services in pastoral areas via:
  - Local institution-building through commitment to participatory approaches and strong community-level dialogue.
  - Policy reform through exposing existing and future policy makers to alternative and effective systems of service delivery. This work focused on options for official recognition of CAHWs and the potential for combined community-based and privatised approaches.

The above progress should be viewed in the context of the complex emergency status of southern Sudan for UNICEF-OLS livestock program and severe operational difficulties in many of PARC-VAC’s project sites. Despite this, both projects have laid foundations which are directly relevant to the relief to development continuum and consequently, there is a clear opportunity for USAID to capitalize on the success which has been achieved thus far.

In particular the assessment advises that:

- There is much scope for PARC-VAC to continue to use it’s own field experience to inform policy debate within government veterinary services, OAU/IBAR, donors and other players involved in veterinary service reform in the Great Horn. PARC-VAC’s comparative advantage in terms of policy development consists of:
  - In-house, practical experience of community-based and privatized approaches in countries throughout the Greater Horn.

- Well-established links to stakeholders including livestock owners, indigenous NGO's international NGO's, pharmaceutical companies, government veterinary services, research institutes and OAU/IBAR/PARC. There is also potential for PARC-VAC to expand it's policy development role by channeling information via OAU/IBAR to other international actors.
  - Success of continued encouragement and support of the privatization of veterinary service and promotion of commercial channel cost recover for veterinary drugs.
  - Existing in-house experience with respect to policy dialogue, particularly in relation to CAHW's and veterinary privatization.
- There is growing evidence that the CAHW approach does act as an effective point of contact with remote, pastoral communities and leads to constructive and transparent dialogue.
    - In the areas of conflict resolution and human health, there are examples of CAHW projects acting as a successful vehicle for these sectors e.g. southern Sudan, northern Kenya, northern Uganda.
    - There is also clear potential to develop CAHW systems to improve understanding of cross-border livestock disease control, wildlife-livestock interactions and natural resource management.
- PARC-VAC can be regarded as a center of excellence in the field of participatory methods in relation to community-based animal health systems. Other players, both governmental and non-governmental, are already seeking technical input from PARC-VAC and there is potential for this advisory and training role to expand. To assist in the expansion of this role, it would be beneficial to develop a training manual useful to other organizations which documents the experiences and lessons learned to date.
- PARC-VAC has successfully sourced short-term, non-USAID funding to develop it's implementational role in recent time. In order to develop PARC-VAC's policy reform initiatives and ensure that important field-level activities are not interrupted, it is recommended that USAID strongly consider core funding to PARC-VAC, and further support for the UNICEF-OLS livestock program, for at least two years from September 1998. This support from USAID would enable PARC-VAC to further broaden it's funding base with respect to both international and bilateral donors.

## ANNEX ONE

### ITINERARY OF ASSESSMENT TEAM

HM. Hunt McCauley - PD. Patti Delaney - AC. Andy Catley  
1998

26th March AC arrives in Nairobi.

27th March Meet Bryony Jones, Livestock Project Officer, UNICEF-OLS.

28th March HM arrives in Nairobi.

30th March Meetings in Nairobi:

- USAID REDSO, Sudan desk and food for peace staff - John Mullanex, John Marks, Joao de Quieroz and Larry Meserve.
- Dr. Walter Masiga, Director OAU/IBAR.
- Dr. William Mogga, Livestock Officer, OLS/SS
- Dr. Solomon Haile Marium, Chief Livestock Projects Officer, OAU/IBAR/PARC and Dr. Rene Bessin, Liaison Officer, PARC.
- Drs. Saunders, Risto and Thompson, PARC.
- Dr Simon Kihu, veterinarian, ADRA (NGO working in southern Sudan).

Between meetings attend EU-sponsored workshop on improving animal health services to ASAL areas of Kenya.

- 31st March Meetings in Nairobi:
- Dr.Jim Cavanaugh, veterinarian, USDA/APHIS Nairobi.
  - Dr.Emmanuel Tambi, PARC Economist.
  - Bryony Jones, Livestock Project Officer, UNICEF-OLS and Jesus Cespedes, Household Food Security Project Officer, UNICEF-OLS.
  - Mr.Okwiri, Manager and Mrs Kariuki, Kenya Veterinary Association Privatisation Scheme.
  - Dr.Bengat Kigen, Chief Veterinary Field Officer, Kenya.
  - Els Bedert, Programme Coordinator (Training Centres), VSF-Belgium.
- 1st April Attend EU-sponsored workshop on improving animal health services to ASAL areas of Kenya.
- 2nd April AC continues meetings in Nairobi
- Jill Sowerby and Jeremy Hollands, UNIVET Laboratories Ltd.
  - Dr.Asenath Omwega (Rural Agriculture and Pastoralist Programme Manager), Sammy Keter, Dr.Jacob Wanyama and Dr.Timothy Orito, IT-Kenya.
- HM field visit with Mr.Okwiri and Mrs Kariuki of KVAPS to private veterinarians in Nyeri, Karatina Town, Xothaya, Kiriani, Musanga and Gatunda in the Highlands area.
- 3rd April Meetings in Nairobi:
- Dr.Phillipe Viallate, Rural Development Adviser, EC.
  - Dr.Robert Bain, KARI/ODA NARP Helminthology Project.
  - Dr.Hank Fitz-Hugh, Ralph von Kaufmann and Dr.Brent Swallow, ILRI.
  - Dr.Kariuki, Kenya Agriculture Research Insititute.
- 4th April HM and AC travel to Lokichokio, Turkana District. Meetings with:
- John Sebur, Chief Veterinary Coordinator, SRRA.
  - Dr.Elizabeth Waithanji, veterinarian, Oxfam UK/Ireland.
  - Dr.William Mogga, Livestock Officer, OLS/SS.
- 5th April Meetings in Lokichokio:
- Tim Fison, veterinarian, Save the Children UK
  - Steven Kanyia, veterinarian, ACROSS.
  - Dr. Gichengo-UNICEF-OLS epidemiologist
  - Els Bedert, Programme Coordinator (Training Centres), VSF-Belgium.
- 6th April Travel to Lodwar. Meeting with:
- Reuben Kottich, District Commisioner, Turkana District.
  - Dr. Makori (DVO) Alphonse Emuria Longoli (ITDG Livestock Officer for Turkana), Dr.Darlington Akabwai (PARC-VAC), World Vision and Peter Emuria (Arid Lands Resource Management Project).
  - John Fox, ALRMP.
- 7th April Travel to Lokichar with Dr.Akabwai of PARC-VAC. Observe community dialogue meetings.
- PD arrives in Nairobi; meets Bryony Jones, UNICEF-OLS.
- 8th April HM and AC continue community dialogue meetings in Lokichar. Meet:
- Micheal Eregei (veterinary undergraduate) and Dr.David Eereng
- PD meets Sammy Keter, IT-Kenya and Vetwork Sudan in Nairobi.
- 9th April HM and AC travel to , West Pokot District. PD meets Dr Solomon Haile Marium, Chief Livestock Projects Officer OAU/IBAR/PARC in Nairobi; travels to Kitale with Tim Leyland, PARC-VAC. Meet up with HM and AC; overnight in Kitale.
- 10th April Observe rinderpest vaccination practical session of ELCK CAHW training program. Interviews with CAHW trainees and ELCK staff.
- 11th April Travel to Maralal, Samburu District. Preliminary meeting with George Kaesler, Samburu District Development Programme.
- 12th April Visit SDPP project site and interviews with community members.
- 13th April Visit SDPP project site and interviews with CAHWs and community members. Travel to Nairobi.
- 14th April Meetings in Nairobi:
- Patrick Durisch, Regional Coordinator, VSF-Switzerland.

- Christine Cornelius, World Bank, Arid Lands Resource Management Program.
  - Abdi Umah, Kenya Pastoralist Forum
  - Bob Dransfield and Bob Brightwell, SNV/KEPDA
- 15th April Meetings in Nairobi:
- Mohammed Elmi and Peter Kisopia, Oxfam Kenya. Dr. Yusuf Mohammed, DVO and private practitioner, Wajir District
  - John Waita, Patrick Mutia and Dr Bonface Kaberia, FARM Africa.
  - Mario Muor Muor, SPLA.
  - Dr. Njau, Managing Director, Coopers Kenya.
- 16th April Meetings in Nairobi:
- Mohammed Sheik, EPAG.
  - Vincent Lelei, Office of the President, ALRMP
- Team meeting to review progress and outline reporting format.
- 17th April Meetings in Nairobi:
- Lammert Zwagstraat, Technical Adviser, CDTF.
  - John Hammock and Chip Stem, Feinstein Famine Centre.
- 18th April AC and PD travel to Addis Ababa. HM meetings with ILRI with Chip Stem and C.deHaan, World Bank
- 19th April Review documents; begin report writing.
- 20th April AC and PD in Addis Ababa. Meetings with:
- Dr Temesgen Alemu, National Coordinator, PARC Ethiopia
  - Dr Wondwassen Asfaw, Veterinary Services Team Leader, Animal and Fisheries Resource Development and Regulatory Department, Ministry of Agriculture.
  - W/ro Hadera Gebru, Head of Animal and Fisheries Resource Development and Regulatory Department, Ministry of Agriculture.
  - Dr Jeffrey Mariner, PARC Ethiopia
  - Dr Giys van't Klooster, PARC Ethiopia
  - Meg Brown, USAID Ethiopia
  - Dr Jonathan Geddes, veterinarian with SIM, Mursi.
- (NGO and UN offices closed due to Ethiopian Easter holiday).
- 21st April AC and PD travel to Dessie with Gebehu Afework, Assistant Communications Officer, PARC Ethiopia. Meet Dr. Berhanu Admassu, PARC Branch Coordinator, Kombulcha and Mesfin Getachew, PARC Branch Office, Kombulcha.
- HM meet: MP from Turkana David Ethuro
- 22nd April AC and PD travel to Afar with Dr. Berhanu, Ato Gebehu and Ato Mesfin.
- travel via Alele Subula to CAHW training site at Heda. Meet Yassin Hule, CAHW monitor.
  - travel to Regden and interview Abdulkadir Ahmed, CAHW
- Overnight at Chifra.
- HM travels Nairobi to Wajir. Meetings until 24/4/98 with:
- Mr. Farah, Deputy Coordinator, ALRMP, Wajir District.
  - Dr. Wangiji, former DVO, Wajir District.
  - Dr. Yusuef Hussein, new DVO, Wajir District and owner of Wajir Veterinary Centre.
  - Mr. Sharif, Oxfam UK/I Wajir Livestock Programme.
  - Ms. Shuria, Oxfam UK/I Monitoring and Supervision.
  - Mr. Harun, Acting Director, Nomadic Primary Health Care Project, Wajir.
- 23rd April AC and PD in Afar:
- meet Tahir Arba, CAHW and Awol Mohammed, CAHW near Chifra.
  - travel to Fecha. Interview Mohammed Saha, clan leader and other clan members.
- Travel to Kombulcha via Wama River.
- 24th April AC and PD travel Kombulcha to Addis Ababa
- HM interviews CAHW'S and elders in the WAJIR District.
- 25th April AC and PD travel Addis Ababa to Nairobi
- HM travels Wajir to Nairobi.
- 26th April Team meeting to review findings, recommendations. Prepare transparencies for

debriefing.

27th April      Debriefing attended by representatives from OAU/IBAR, PARC, PARC-VAC, EC, USDA, USAID/REDSO (Dennis McCarthy and Joao de Quieroz) and others.

28th April      Meeting with Dennis McCarthy, REDSO. Further debriefing with USAID.

## ANNEX TWO

### THE ROLES AND EFFECTIVENESS OF COMMUNITY ANIMAL HEALTH WORKERS IN THE GREATER HORN OF AFRICA: SOME LESSONS LEARNED AND IDEAS FOR FUTURE WORK

Andrew Catley

#### Preamble

This annex is organised according to the SOW for the livestock veterinarian. Information has been drawn from project reports, published material and interviews with project and donor staff as detailed in the assessment itinerary (annex one) and bibliography (this annex). Although focused on three OFDA-supported projects viz. the UNICEF-OLS/SS Livestock Programme, PARC-Ethiopia's community-based work in Afar Region (which received support from the TRVTT project) and PARC-VAC, experiences from other CAH projects have been used in an attempt to broaden the scope of the report and place experiences from OFDA projects in the wider context of community-based animal health work generally in the GHA.

#### Contents

	page
1.0 CAHWs as Service Providers	1
1.1 Why a community-based approach to animal health service delivery in pastoral areas?	1
1.2 Problems of quantitative data collection within CAH projects.	2
1.3 Has the community-based approach to animal health service delivery demonstrated effectiveness?	3
1.3.1 Examples of OFDA-supported projects	3
a. UNICEF-OLS Southern Sector Livestock Programme, Sudan	4
b. UNICEF-OLS Northern Sector Livestock Programme, Sudan	5
c. PARC-Ethiopia/TRVTT, Afar Region, Ethiopia	6
1.3.2 Experiences from other CAHW projects in the GHA	6
1.4 Potential roles for CAHWs in the delivery of recombinant vaccine	8
2.0 CAHWs For Livestock Disease Reporting	9
2.1 Rational for using CAHWs in livestock disease information systems	9
2.2 Examples of CAHW disease reporting in OFDA-supported projects	10
3.0 CAHWs, Policy and Government	11
3.1 Background	11
3.2 Examples of CAHW policy development	12
3.2.1 Southern Sudan	12
3.2.2 Ethiopia	12
3.3.3 Kenya	14
4.0 Supervision of CAHWs: technical, community-based and market-orientated options.	16
5.0 The PARC-VAC Project	17
5.1 Technical capacity	17
5.2 Coordination of CAHW projects and collation of lessons learned	18
5.3 Regional and national level policy reform	18
5.4 Community participation and the wider implications of the CAHW approach	18
5.4.1 Examples of CAHW projects acting as entry points for other work	19
a. Conflict mitigation	19
b. Human health	19
5.4.2 Other opportunities for broadening PARC-VAC activities	20
Bibliography	21

## 1.0 CAHWs as Service Providers

### 1.1 Why a community-based approach to animal health service delivery in pastoral areas?

An assessment of the CAHW approach in the GHA should include reference to the current state of conventional, government veterinary services in GHA countries and the rationale for investing in decentralised, participatory approaches, particularly in pastoral areas.

The introduction of community-based animal health workers into the more remote and marginalised pastoral areas of the GHA is often explained by reference to the limitations of conventional, government veterinary service delivery in recent years. Frequently, the constraints faced by government services related not only to lack of financial and manpower resources, but also to cultural and professional biases against pastoralists. The stereotypical situation involved a government veterinarian, usually of highland descent and perhaps of Christian faith, posted to a hot, lowland, pastoral area where he (as it was nearly always a man) was unable to speak the local language and had limited respect for or understanding of the pastoral, often Muslim, way of life. When these problems were compounded by no vehicle (or no fuel or spares), no equipment, no medicines, delays in receipt of salary and expectations raised by a western-based veterinary education, it was easy to see why so many government veterinarians in dryland areas described (and continue to describe) their work as a punishment. In addition, the delivery system used by government was based on fixed-point service delivery from veterinary clinics, sub-clinics or animal health posts. In the absence of vehicles and roads, each type of facility might cover an area of radius 10km, assuming that the veterinarian was willing to walk 10km to examine sick livestock. Even when vehicles were available, the cost of running 4WDs rendered a western-style, mobile service virtually untenable in terms of cost-efficiency - pastoral communities were highly mobile and operated within huge systems boundaries.

Looking specifically at rinderpest eradication, while large-scale vaccination programmes eradicated or controlled rinderpest in much of Africa, the disease persisted in a number of more remote pastoral areas where contact between herders and government veterinary services was extremely limited. These areas included the Afar region of Ethiopia, southern Sudan and parts of northern Kenya and northern Uganda. While campaign-style vaccination programmes worked well when livestock owners cooperated with vaccination teams, in pastoral areas relationships between herders and government veterinary staff were often characterised by mistrust at best and open hostility at worst. In this situation, comprehensive vaccination of cattle in marginalised, dryland areas did not take place. One important consequence of this situation was the persistence of rinderpest in Africa.

While the community-based approach recognises the weaknesses of public sector veterinary services as outlined above, it also relies on at least five key features of pastoralism which provide opportunities for alternative and more effective modes of animal health care:

- For pastoralists, animal health is a priority and with along water, livestock disease usually features as the first or second most important problem during participatory needs assessments<sup>1</sup>.
- It is widely recognised that pastoralists possess detailed indigenous knowledge on livestock and wildlife disease, including understanding of disease signs, disease transmission and information on livestock movements and seasonal variations in disease incidence (ethnoveterinary knowledge is discussed in more detail in Annex Three). Consequently, using participative training it is

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<sup>1</sup> The evidence for local prioritisation of animal health among pastoralists is substantial. The author viewed NGO participatory assessments including reports from Somalia, Somaliland (ActionAid; VetAid), eastern Ethiopia (Save the Children UK), south-west Eritrea (VSF, 1996) and Uganda (Gonda, 1991).

relatively easy to train herders to treat a few important diseases because training can build on existing knowledge and often tends to focus on the correct use of medicines rather than disease recognition.

- Pastoralists are willing and accustomed to moving long distances to access resources. Pastoral CAHWs are capable of moving with livestock herds and travelling to fixed-point outlets for veterinary drugs.
- Indigenous pastoral institutions are often well organised (see annex three) and can be effective and democratic decision-making units. Traditionally, animal health related issues (such as movements to specific grazing areas) are already discussed in these traditional forums.
- Although some pastoral communities have been exposed to free or heavily subsidised veterinary services, they usually acknowledge the rationale for payment for veterinary services at commercial rates. Experience from throughout the GHA strongly indicates that the problem of poor veterinary service delivery relates to availability of services rather than cost. When considering herders' ability to pay for veterinary care it should be realised that:
  - pastoral communities have well-established and complex social support mechanisms designed to assist the less wealthy and share key resources.
  - veterinary care is usually the only expense incurred by herders using extensive, traditional livestock production systems.
  - within pastoral communities, local definitions of poverty are often based on the ownership of too few or no livestock. Hence, the poorest pastoralists are often people who do not have animals to treat.

## **1.2 Problems of quantitative data collection within CAH projects**

Before looking at evidence of effectiveness of the CAHW approach adopted by OFDA-supported projects, it should be noted that for CAH work generally there is often a marked absence of quantitative data in NGO project reports. Typically, basic data on livestock populations, livestock production, disease prevalence, disease incidence and livestock mortality is lacking. Information linking animal health to human livelihoods in terms of food security and household economies is also extremely limited in most NGO reports. Various factors, which tend to vary according to project context and implementing agency, contribute to this situation:

- Most CAH projects are implemented in areas which are characterised to varying degrees by "operational difficulties". These areas are geographically and politically isolated and have harsh climates, poor infrastructure, poor telecommunications and bad roads. Government veterinary services are either extremely weak or non-existent. Some projects are currently being implemented in conflict zones where operational difficulties can be extreme and project staff are at risk of personal injury. In conflict or post-conflict settings, target communities can include a substantial proportion of displaced families who have experienced major human and material loss. As a result of conflict, these communities can also include large numbers of female-headed households, orphans and physically or mentally disabled people. In remote pastoral areas where some CAH projects are implemented in the absence of large-scale conflict, local communities may have experienced either no aid or inappropriate aid. In these situations, people are often wary of outsiders yet have high expectations of material inputs.

- When considering the above operational features of many CAH projects, it is perhaps not surprising that quantitative baseline data on livestock disease in projects areas usually does not exist. Although in some cases, it might be possible to conduct pre-implementation surveys using conventional veterinary investigation methods, target communities tend to expect immediate assistance and are often reluctant to cooperate with survey work<sup>2</sup>. A key problem with formal systems of inquiry is that in most cases, data is analysed according to livestock populations. The capacity of most CAH projects to assess livestock populations in project areas, at least with any scientific accuracy, is limited.
- In addition to a lack of useful baseline data against which to measure project impact, monitoring and evaluation of CAH in relief contexts has been dominated by process indicators<sup>3</sup>. Emphasis has been placed on the delivery of material inputs rather than the associated immediate or long-term impact. While NGOs final reports on rehabilitation projects express concerns regarding the suitability and sustainability of inputs, these issues have tended to be overlooked by some donors during project assessments.

### **1.3 Has the community-based approach to animal health service delivery demonstrated effectiveness?**

#### *1.3.1 Examples of OFDA-funded projects*

Looking specifically at community-based veterinary work in the GHA which is being supported by OFDA , an understanding of context is crucial when discussing the impact of the CAHW approach. The most well-established project, the UNICEF-OLS/SS Livestock Programme operates in a complex emergency situation in which a range of external factors have interrupted project activities and limited the capacity of the programme to invest in long-term planning. While the ongoing civil war in Sudan is the most obvious constraint and can lead to limited access to field sites, other constraints included an insecure funding based and a need for senior programme staff to invest heavily in proposal preparation and liaising with potential donors. Short-term funding has also influenced PARC-VAC with respect to negative impact on medium to long term planning. As detailed in sections 1.1 and 1.2 above, CAHW projects are frequently located in areas with severe operational difficulties. In the cases of the UNICEF-OLS/SS Livestock Programme, the TRVTT Project (e.g. in Afar region, Ethiopia) and PARC-VAC these constraints should not be understated - project sites are among the most difficult to reach and insecure in Africa.

One finding of the assessment was that in contrast to many other projects involving CAHWs, useful data on impact was actually available from OFDA-supported work. To a large extent, this data related to rinderpest vaccination figures and PARC's ability to determine the effectiveness of vaccination via seromonitoring, reports of rinderpest outbreaks and comparisons of vaccination coverage before and after the introduction of the community-based approach. The UNICEF-OLS/SS Livestock Programme had also developed an effective CAHW monitoring system though data analysis was still in progress at the time of the assessment.

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<sup>2</sup> Animal health surveys based on participatory methods can be of value for identifying local priorities in a relatively short time-frame, though typically, this data is qualitative and viewed as irrelevant by veterinarians working outside the NGO sector.

<sup>3</sup> "Process indicators" are used to measure events (e.g. a training event by "number of trainees") or material inputs (e.g. delivery of veterinary drugs by "value of drugs provided"), cf "Impact indicators" which measure the effect of an activity or input on a target institution or community (e.g. effect of provision of livestock drugs by "livestock mortality").

The main enabling mechanism for community-based approaches for both UNICEF-OLS and PARC-VAC was the successful development of the heat stable rinderpest vaccine "Thermovax" by the TRVTT Project. Without Thermovax, many of the positive CAHW experiences detailed in this report would not have occurred and consequently, the development of the vaccine should be viewed as both a major technical achievement and a catalyst for the development of the CAHW approach.

**a. UNICEF-OLS Southern Sector Livestock Programme**

Through OFDA support to Tufts University, a community-based approach to rinderpest vaccination using Thermovax was introduced into the UNICEF-OLS/SS Livestock Programme in 1993. In the following 12 months, the use of CAHWs in southern Sudan led to a ten-fold increase in the numbers of cattle vaccinated against rinderpest. Since 1993, vaccination coverage has been maintained at >1 million cattle per year and reported rinderpest outbreaks decreased from 14 outbreaks in 1994 to 1 outbreak in 1997. More than 7.5 million doses of heat stable rinderpest vaccine were delivered via the CAHWs. Considering the complex emergency context of southern Sudan and the importance of rinderpest in a cattle-centred economy and culture, the effective control of rinderpest control by UNICEF-OLS/SS disease can be viewed as a major achievement.

UNICEF-OLS recognises that much work remains to be done with respect to maintaining rinderpest vaccination levels and responding effectiveness to news of disease outbreaks. While resource constraints have hindered the programme's ability to conduct seromonitoring, this problem is being addressed in 1998 with the appointment of a veterinarian with specific responsibility for monitoring work.

Regarding the effectiveness of CAHWs for the treatment of livestock diseases, there are now nine NGOs<sup>4</sup> working within the UNICEF-OLS/SS Livestock Programme under the coordination of an OFDA-funded veterinarian. A network of 563 CAHWs, 40 AHAs and 16 Stock Persons has been established which in terms of geographical coverage, reaches approximately 70% of southern Sudan. To a large extent, the specific diseases treated by the CAHWs are determined by community priorities as identified during community dialogues and disease ranking sessions. This approach means that the type of diseases treated varies according to area-specific preferences for livestock species and production systems. Variations in local preferences are most apparent if agropastoral areas (cattle, sheep, goats) are compared with agricultural areas (fewer cattle, more small ruminants and poultry).

UNICEF-OLS/SS data on numbers of cattle treated showed that 30.5% of the estimated cattle population of southern Sudan received treatment from CAHWs for important livestock diseases during 1996. CAHWs also treated 156,115 small ruminants and 99,934 chickens. These treatments are summarised in Table 1 and were considered by ex-government livestock personnel to be a dramatic improvement relative to the pre-war situation<sup>5</sup>.

**Table 1: Livestock treatments conducted by the CAHWs of the UNICEF-OLS/SS Livestock Programme, 1996.**

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<sup>4</sup> Association of Christian Resource Organisations Serving Sudan (ACROSS), Adventist Development and Relief Agency (ADRA), Diocese of Torit, German AgroAction (GAA), Norwegian Peoples Aid (NPA), Oxfam UK/I, Save the Children UK, VSF-Belgium and VSF-Switzerland. The programme also implements CAHW directly in some areas and works closely with the Sudan Relief and Rehabilitation Association (SRRA) and the Relief Association of Southern Sudan (RASS).

<sup>5</sup> Pre-war government veterinary service records were not available for viewing.

Livestock type	Treatment type/health problem	Number of animals treated
cattle	bacterial diseases responsive to oxytetracycline	435,153
	trypanosomiasis	180,776
	internal parasites	506,741
	tick control	93,383
	miscellaneous	<u>55,869</u>
		1,272,922
goats/sheep	bacterial diseases responsive to oxytetracycline	44,744
	internal parasites	79,732
	tick control	8,222
	miscellaneous	<u>23,417</u>
		156,115
fowl	all treatments	99,634
Total treatments for all livestock types		1,527,671

NB Treatment figures for 1997 were being processed at the time of the assessment. In 1996, CAHWs also vaccinated 39,383 cattle against anthrax, CBPP and haemorrhagic septicaemia.

Regarding options for a more rigorous, technical assessment of the effectiveness of CAHW treatments, such an assessment might refer to changes in the incidence of health problems listed in Table 1 before and after the CAHW system was introduced. However, the absence of baseline data describing the pre-CAHW disease situation prevents this type of comparison. Furthermore, in southern Sudan the confirmation of disease diagnosis according to standard veterinary procedures is hindered by the virtual absence of veterinary laboratory facilities within the UNICEF-OLS/SS Livestock Programme. A small veterinary laboratory has been established by Save the Children UK in Lokichokio with assistance from UNICEF and VSF-B, and this facility is able to conduct basic parasitology, haematology, brucellosis serology and forwards samples to other laboratories. Considering the resource and operational constraints within the programme, the use of PRA tools for improving understanding of the "before" and "after" livestock health situation might be of value. In order to avoid alterations to the existing monitoring system, such tools could feature in one-off impact assessments. The existing data collection activities of the UNICEF-OLS/SS programme are outlined in section 2.0 below.

#### **b. UNICEF-OLS Northern Sector Livestock Programme**

An update of community-based activities in the UNICEF-OLS Northern Sector Livestock Programme was provided by Dr. Chip Stem. The programme trained 65 CAHWs and 306 community vaccinators and during 1997 these workers vaccinated 635,000 cattle using a cost-recovery system involving profits for the CAHWs.

#### **c. PARC-Ethiopia, Afar Region**

In 1993 the Afar Region of Ethiopia was considered to be one of the main endemic foci of rinderpest in the country. Seasonal movements of cattle from the Afar lowlands to highland areas of Tigray and Wollo were associated with rinderpest outbreaks and the persistence of the disease in Afar was a major

constraint to Ethiopia - the country with the largest cattle population in Africa<sup>6</sup> - achieving rinderpest-free status. During a visit to Afar by two members of the assessment team it became apparent that the region had many features in common with other lowland, pastoral areas of the GHA viz. inaccessibility, very poor infrastructure, lack of basic services and government attempts to delivery animal health care via fixed veterinary clinics and with limited community dialogue. The Afar also had a reputation for lack of cooperation with government agents.

With technical and training support from the TRVTT in Afar, PARC-Ethiopia began to implement a community-based rinderpest vaccination programme using Thermovax in 1994. Prior to this activity, conventional vaccination campaigns had vaccinated around 20,000 cattle per year in Afar, achieving approximately 60% immunity. In 1994, 20 CAHWs trained by PARC-Ethiopia/TRVTT vaccinated 73,000 cattle with Thermovax in previously inaccessible areas of the region and achieved 83% immunity. No outbreaks of rinderpest have been confirmed in Afar or elsewhere in Ethiopia since November 1995. As PARC acknowledges in it's 1996 Annual Report, *"The success in the Afar region is perhaps the most striking example of the impact of participatory techniques in remote, marginalised communities"*.

The impact mentioned by PARC was two-fold. First, the control of rinderpest in Afar had direct benefit for herding communities in terms of reduced cattle mortality. Second, the removal of rinderpest from a previously endemic area allowed Ethiopia to move away from an expensive blanket vaccination programme towards a strategy involving non-vaccination, comprehensive serosurveillance and rapid response to disease outbreaks. The latter is now advocated by PARC epidemiologists as the model for rinderpest eradication in other African countries<sup>7</sup>.

### ***1.3.2 Some experiences from other CAHW projects in the GHA<sup>8</sup>***

A considerable number of CAHW projects have been implemented in the GHA during the last twenty years or so by organisations ranging from indigenous NGOs, church-based groups, international NGOs, government veterinary services, other government bodies, bilateral agencies and multilateral agencies. The bulk of the grey and published literature on these projects focuses on the mechanics of project implementation (e.g. how to do CAHW selection or training) and the potential benefits of the approach with respect to community participation and improved animal health leading to better food security or economic development. As outlined in section 1.2, hard data on project impact is often lacking but one of the most striking examples of CAHW activity was reported by ICRC in Somaliland soon after the end of the Somali civil war. In an emergency situation and using CAHWs to deliver Thermovax, 95% seropositive rates were achieved. This level of coverage exceeds typical government service coverage of 50-80%

Rather than attempt a comprehensive review of all CAHW projects in the GHA, a few common themes are presented because in some cases, they help to illustrate the comparative advantage and effectiveness of OFDA-supported projects.

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<sup>6</sup> Ethiopia's cattle population is estimated to be 30 million head.

<sup>7</sup>Note that the non-vaccination approach only follows after blanket vaccination and that once adopted, the demand for both conventional and heat stable rinderpest vaccine nationally will be drastically reduced.

<sup>8</sup>Although not located in the GHA, readers might also make reference to the Dutch Committee for Afghanistan's veterinary programme which reported statistically significant lower mortality in livestock in districts of Afghanistan covered by their programme compared with districts with no veterinary services (Schreuder et al., 1996a). A benefit-cost analysis of DCA inputs based on livestock mortality figures estimated a benefit-cost ratio of 5:1 (Schreuder et al, 1996b).

In terms of what CAHWs can do and how veterinary medicines are used,

- A very clear lesson derived from the CAHW approach was that illiterate or poorly-educated (in a western sense) livestock herders can be trained in the proper use of veterinary vaccines and drugs. The ability of CAHWs to use medicines properly applied even to those products which required careful dilution or special administration. Reports of drug misuse by CAHWs were surprisingly few and in common with reports of mishaps by government veterinary staff, were largely anecdotal. The role of government as a regulator of CAHWs is discussed in section 3.0.
- In pastoral areas, concerns that veterinary medicines might be used to treat human ailments seem to be of limited importance. There were examples of accidental human ingestion of veterinary medicines but the overriding message from field-level workers was that human drugs were far more likely to be used to treat animals rather than vice-versa<sup>9</sup>. This experience probably relates to local prioritisation of animal health above human health.

In terms of the quality of CAHW project implementation,

- While some NGOs such as ITDG, Oxfam UK/I and FARM Africa have been at the forefront of the CAHW approach and have developed technically proficient ways of working, among other organisations there is huge variation in technical capacity to implement community-based work. Weaknesses vary from a lack of understanding of the overall concept i.e. community participation, through to specific technical weaknesses such as the procurement of inappropriate veterinary medicines for use by CAHWs. In this situation, the coordinated approach used by UNICEF-OLS and facilitated by PARC-VAC is particularly valuable because standard CAHW selection, training, drug supply and monitoring systems can be established over a wide area, and inexperienced or new NGOs can learn how to implement effectively.
- In contrast, government has a poor record of coordinating CAH projects. While field-level veterinary personnel often develop good links with NGOs and report to central authorities, the latter usually claim do know nothing about NGO activities and that NGOs avoid communicating with government. Information flow between those government bodies responsible for regulating NGO activities (e.g. the Disaster Prevention and Preparedness Bureau in Ethiopia) and line ministries (e.g. Ministry of Agriculture) is limited.
- Many CAHW projects face a problem of adequate follow-up and monitoring of CAHWs. This weakness is closely linked to the large geographical areas in which these projects operate and the logistical difficulty of locating the CAHWs when they are moving with livestock herds in remote areas with no roads and poor security. Monitoring is often based on the collection of verbal or written reports from CAHWs when they visit an outlet for veterinary drugs. UNICEF-OLS have developed considerable experience in appropriate monitoring methods for CAHWs - see section 2.0.

In terms of appropriate policy environment,

- Many of the most dramatic examples of CAHW effectiveness have emerged from areas where in reality, there is no government e.g. Somalia/Somaliland, southern Sudan, Afar. CAHW-government relationships are discussed in section 3.0 but in summary, experience to date

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<sup>9</sup>For example, a commonly reported practice was that untrained livestock owners used oxytetracycline or penicillin capsules to treat sick livestock.

indicates that inappropriate government policy has been a major constraint to the effectiveness, coordination and sustainability of the CAHW approach. Policy reform with respect to CAHW roles and public-private sector division of veterinary activities is taking place but progress has been slow.

#### **1.4 Potential roles for CAHWs in the delivery of recombinant vaccines**

The assessment provided numerous opportunities for the team to discuss the potential value of capripox and vaccinia recombinant rinderpest vaccines in relation to the Plowright vaccine and Thermovax<sup>10</sup>, as delivered by CAHWs. The main finding from these discussions was that during the last 11 years, PARC has proven that rinderpest can be eradicated using a combination of conventional Plowright vaccine in accessible areas, Thermovax delivered by CAHWs in inaccessible areas, good disease surveillance systems and effective response to disease outbreaks. In future, CAHWs have clear and important roles to play in the deliver of Thermovax, disease surveillance and in responding to disease outbreaks.

Regarding the use of recombinant vaccines, the success of CAHWs in delivering Thermovax indicates that these workers would be capable of using other heat-stable rinderpest vaccines. However, the extent to which new vaccine technology is adopted depends on a range of technical, biosafety, economic, policy and political issues. In the case of the various recombinant vaccines which are currently being developed, immunity and other technical studies are still in progress. Some issues related to the potential use of these vaccines by CAHWs are as follows:

- Demand for CAHW-delivered rinderpest vaccine

PARC is supporting an eradication strategy of targeted rinderpest vaccination in endemic foci. While CAHWs have played a crucial role in implementing this strategy and will continue to feature in vaccination programmes during the next few years, as more areas are declared rinderpest-free the demand for rinderpest vaccine will decline. At this stage of an eradication programme, the role of CAHWs as rinderpest vaccinators will tend to take second place to their disease monitoring work. Future economic impact assessments of rinderpest eradication might consider the relative costs of the development and use of different vaccines delivered by CAHWs. For recombinant vaccines, such assessments might reflect costs which might be incurred by the commercial vaccine producers (such as investments in new technology) and costs associated with both the retraining of CAHWs and the close supervision required during the early stages of vaccination programmes which use novel vaccines. In view of PARC's current rinderpest eradication strategy and commitment to CAHWs delivery systems, there may be opportunities for PARC to work with commercial vaccine companies to determine the most cost-effective approach to vaccination as government veterinary services use less vaccine and endemic foci are cleared of rinderpest.

- Biosafety and CAHWs

The use of vaccinia as a vector for rinderpest virus genes has prompted debate and studies on the safety of recombinant vaccines and the risk of accidental vaccinia infection of humans<sup>11</sup>. In the context of CAHW

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<sup>10</sup> For technical information on these vaccines see Plowright and Ferris (1962) for the tissue culture vaccine, Mariner et al. (1990) for heat-stable tissue culture vaccine (Thermovax), Romero et al. (1993; 1994) for the capripox-vectored vaccine and Yilma et al. (1988), Tsukiyama et al. (1989), Barrett et al. (1989) and Yamanouchi and Barrett (1994) for vaccinia-vectored vaccine.

<sup>11</sup> For example, see OIE (1989).

vaccine delivery, it will be necessary to ensure that future vaccinia recombinants can be handled safely by CAHWs. Some researchers have noted that this problem does not apply to capripox recombinant vaccines because unlike vaccinia, capripox has a narrow host range (cattle, sheep and goats only) and does not cause disease in humans<sup>12</sup>. It is known that both the Plowright vaccine and Thermovax can be used safely by CAHWs.

- Policy

Official policy on CAHW activities in GHA countries is still being developed and progress to date has been modest (see section 3.0). Considering this policy environment, it is likely that government veterinary services will resist the notion proposed by some researchers that African livestock owners might produce their own rinderpest vaccine by scarifying cattle with a vaccinia-vectored recombinant. Such activity would be novel, involve unknown disease transmission risks and would probably require policy changes within government veterinary services. Experience to date indicates that policy reform requires a timeframe of three to five years. Now that the non-vaccination strategy for the final stages of rinderpest vaccination has been adopted by PARC, access to and use of rinderpest vaccine needs to be tightly controlled.

Other issues related to the use of rinderpest vaccines currently being developed are the vaccination of wildlife and the role of a modified Plowright vaccine or recombinants to distinguish between vaccinated and naturally infected animals. These issues were considered to be outside the assessment team's TOR and readers are advised to consult the relevant scientific literature and PARC regarding these matters.

## **2.0 CAHWs For Livestock Disease Reporting**

### **2.1 Rational for using CAHWs in livestock disease information systems**

The reasons for using CAHWs in livestock disease reporting systems are similar to those for supporting community-based animal health generally - government veterinary services are often ineffective, animal health is a local priority and livestock-dependant communities, particularly pastoralists, possess detailed indigenous knowledge on both livestock and wildlife disease. While some veterinarians have described pastoralists as uncooperative, unreliable or dishonest, these experiences differ markedly from those of field workers who have taken time to listen to herders and who try to work in a participatory manner. The latter point is demonstrated by the considerable body of literature on ethnoveterinary medicine in Africa, including GHA countries<sup>13</sup> and is further supported by a commonly-held view among NGO and PARC veterinary staff that once pastoralists begin to talk freely about livestock disease it is often difficult to bring the discussion to a close. In addition, formal studies on livestock health and production have showed that African livestock owners can provide information on disease signs, mortality and production losses which is of scientific relevance and cost effective<sup>14</sup>. Work in Niger and Somalia has shown how

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<sup>12</sup> See Yamanouchi (1997).

<sup>13</sup> A brief review of documents from GHA countries yielded ethnoveterinary information from southern Sudan on the Dinka (Schwabe and Kuojok, 1981; UNICEF-OLS, 1996c) and Nuer (Evans-Pritchard, 1940; Schwabe, 1978; UNICEF-OLS, 1996c); from Ethiopia on the Afar (Mariner and Van't Klooster, 1996), Amhara (Mesfin and Obsa, 1994; Berhanu, 1996), Sidama (Ghirotti, 1996) and Dassanech (Houtteman, 1996); from Kenya on the Maasai (Schwabe, 1978), Turkana (Morgan, 1981; Ohta, 1984), Samburu (Wanyama, 1997), Pokot (Mariner, 1992; Bollig, 1995), Yaa Galbo (Lindquist and Adolph, 1996); from Uganda on the Karimojong (Jost, 1994); and 25 references from Somali-occupied areas (summarised by Catley and Walker, 1997).

<sup>14</sup> See McCauley et al. (1983), Perry et al. (1984), Perry and McCauley (1984), Zessin and Carpenter (1985).

pastoralists who receive basic training in animal health and disease reporting can form the basis for effective livestock disease information systems<sup>15</sup>.

## **2.2 Examples of CAHW disease reporting in OFDA-supported projects**

As the most long-running of the OFDA-supported CAHW projects, the UNICEF-OLS/SS Livestock Programme has gained considerable experience in the development of appropriate reporting systems for CAHWs. The current system is based on pictorial reporting formats which require the CAHW to record numbers of different types of animals treated and vaccinated by marking boxes placed under diagrams which depict different diseases and medicines. The information on these records is summarised by CAHW supervisors in the field before being passed to UNICEF-OLS veterinary staff via partner NGOs. Since the start of the project the reporting formats have undergone numerous revisions according to the capacity of CAHWs to complete the formats and the type of information required centrally. These changes are well-documented in the various Livestock Programme Coordination meetings minutes.

In 1997 UNICEF-OLS designed a database which is now located in the Nairobi office and used for the storage and analysis of information derived from the CAHWs and AHAs. At the time of the assessment, information was still being entered into the database but it was evident that in the near future the facility will enable analysis of CAHW treatments and vaccinations according to variables such as geographical area, season, NGO and cost of treatments. The amount of data which might be handled by the programme is substantial as it will comprise both past and future records obtained from 560 CAHWs, 40 AHAs and 16 stockpersons who cover approximately 70% of southern Sudan. Consequently, as the programme develops it should begin to produce very detailed, quantitative data on the type of service being offered by the CAHWs and demand for different medicines and vaccines. Indirectly, this data can be linked to disease incidence or local perceptions of disease risk. This level of data collection and analysis is a notable improvement on systems used by most government veterinary services in the GHA. In theory, at some stage the database could be handed over to a new administration in southern Sudan.

In addition to the CAHWs completing their routine treatment and vaccination records, they also act as reporters of disease outbreaks. By passing messages either to their supervisors, AHAs, stockpersons or NGO staff, news of disease outbreaks can be forwarded by radio to UNICEF-OLS veterinary staff in Lokichokio or Nairobi. This system seemed to work well - the most recent rinderpest outbreak in Torit County was first reported by radio by a UNICEF-OLS/SS trained stockperson directly to the programme veterinarian.

In the PARC-Ethiopia CAHW project in Afar region, there was also evidence of CAHWs acting as effective messengers of disease outbreaks. In 1996 an epidemic of respiratory disease affected camels in Afar. This previously unknown disease was first reported to government veterinarians by a CAHW trained by the TRVTT project.

## **3.0 CAHWs, Policy and Government**

### **3.1 Background**

The assessment team was able to examine current government attitudes and policy affecting CAHWs in Kenya, Ethiopia and southern Sudan. However, before presenting area-specific findings, a brief overview of factors affecting animal health policy generally in GHA countries is provided below. Also, it can be noted that in terms of civil strife and political stability during the last ten years or so, Kenya has been

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<sup>15</sup> See Sollod and Stem (1991), Baumann (1990) and Zessin et al. (1993).

reasonably stable, civil war has ended in Ethiopia and rehabilitation is in progress under a new government and constitution, and opposition groups in southern Sudan is still engaged in major conflict with the Sudanese government based in the north of the country.

The first general point to consider is that animal health policy in many African countries is of major political importance. When livestock production makes substantial contributions to economies at both national and household levels, governments are wary of reform which might reduce their control over veterinary services. Veterinary services are also one of the few expenses faced by livestock owners who use low-input, low-output production systems. In addition to the high political profile of animal health services, it is generally recognised that many African states continue to suffer from profound institutional weaknesses such as corruption, patronage, and political decision-making based on the channelling of resources towards specific ethnic groups or individuals<sup>16</sup>. In these situations, professional judgements by veterinarians and others tend to take second place to political allegiances and short-term personal gain.

Regarding recent experiences arising from structural adjustment, since the 1980s there have been numerous donor-driven attempts to encourage veterinary privatisation in GHA countries. Although the impact of these projects has been mixed, a couple of experiences which are relevant to the development of CAHW policy seem to have emerged. Perhaps the most important of these early lessons has been a gradual realisation by veterinary policy-makers that sooner or later, government monopoly over clinical animal health services will end. In addition, both donors and government are recognising that due to many of the institutional weaknesses cited above, policy reform and the formulation of new legislation is proving to be a tortuous process. Arguably, donor support to this aspect of the structural and economic reform of veterinary services has so far been a low priority.

Looking more closely at community-based approaches to service delivery, it should be realised that veterinarians are among the most conservative of professionals and typically, hold rather entrenched views regarding the ability of livestock owners to diagnose disease and treat animals. While numerous NGOs have successfully developed the CAHW approach while working alongside field-level government veterinary staff, the ability of NGOs to influence policy at central level has been limited. This lack of influence should be viewed in the context of the development objectives of different NGOs, a wide range of institutional capacities and ways of working, and NGO-government relationships which are often characterised by mutual distrust<sup>17</sup>. Some NGOs such as ITDG and Oxfam have actively publicised their work and sought to disseminate project experience via regular CAH workshops and other means<sup>18</sup>. To some extent NGOs have also influenced government indirectly by contributing towards the development of donor aid policies although this influence has been most evident in relation to gender, community participation and environmental issues.

## **3.2 Examples of CAHW policy development**

### **3.2.1 Southern Sudan**

The long-running war in southern Sudan led to a total breakdown of government veterinary services in all areas other than a few government-held towns. Consequently, the main providers of veterinary services at the current time are the NGOs operating within the UNICEF-OLS/SS Livestock Programme and traditional livestock healers. Although UNICEF-OLS/SS operates within a complex emergency situation,

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<sup>16</sup> See Leonard (1993).

<sup>17</sup> See Catley (1997) for analysis of NGO roles in animal service delivery.

<sup>18</sup> For examples see Grandin et al. (1991) and Young (1992)

the livestock programme has developed a long-term, post-war perspective of community-based and privatised approaches, and was actively seeking to influence future policy on animal health service delivery in southern Sudan. It was evident that by working closely with the SRRA and RASS, the programme had resulted in "formal" recognition of CAHWs by local authorities. SRRA veterinary personnel described how the programme had demonstrated that herders could diagnose disease, handle vaccines and drugs, and deliver a service to areas where the previous government veterinary service had failed to reach. Also, the programme had shown how communities could take responsibility for CAHW selection and pay for services. Discussion on options for combined community-based and private systems had featured in recent OLS Veterinary Coordination meetings involving UNICEF veterinarians, NGOs, SRRA, RASS and technical assistance from PARC-VAC<sup>19</sup>.

A specific point of discussion raised by the assessment team was the likely future policy on CAHWs and private sector activity within a new southern Sudanese administration after the war. These discussions indicated that a new government veterinary service in the south would not resort to pre-war delivery systems based on a public sector monopoly, but would seek to develop the CAHW-private veterinarian approach<sup>20</sup>. When considering a post-war scenario in southern Sudan and new policies on animal health service delivery OFDA should be aware that despite the efforts of UNICEF-OLS/SS and PARC-VAC, support to CAHWs and private sector clinical services by a future southern Sudanese administration cannot be guaranteed. A process of continued dialogue, close monitoring of the CAHW system and exposure to privatisation experiences from other African countries is required. UNICEF-OLS/SS and PARC-VAC may also need to consider whether more clearly defined institutional support to a future administration is feasible, particularly if donors such as USAID are willing to move towards a development strategy for southern Sudan.

In the event of peace in southern Sudan, UNICEF-OLS/SS and PARC-VAC are well placed to inform policy on public and private sector veterinary activities. USAID should also be aware that recent animal health "rehabilitation" efforts supported by major donors in post-conflict areas have focused on reconstruction of public sector veterinary infrastructure such as clinics and laboratories, with limited attention to rational, sustainable delivery systems or the past failings of the government managed services<sup>21</sup>.

### **3.2.2 Ethiopia**

Ethiopia is an interesting case study with respect to the development and liberalisation of animal health policy. Following the overthrow of the Mengistu regime in 1991, a Transitional Government of Ethiopia (TGE) was established under the Ethiopian People's Revolutionary Democratic Front (EPRDF). While Mengistu's ideology was Stalinist, the EPRDF evolved from a Marxist-Leninist movement. Surprisingly perhaps, the New Economic Policy of the TGE outlined in an EPRDF "Five Year Plan" focused on liberalisation of the Ethiopian economy by stimulating private entrepreneurship.

TGE animal health policy was governed by the Animal Disease Control Proclamation No.171/1961 which detailed the role of the executive agency, the Ministry of Agriculture (MoA). However, despite an apparently strong commitment by the EPRDF to reform of the state veterinary service, progress has been

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<sup>19</sup> For example, see the 15th OLS Livestock Coordination Meeting Minutes, August 1997.

<sup>20</sup> Interviews with John Suber Mansuk, SRRA (4/4/98), William Mogga, OLS/SS (30/3/98; 4/4/98) and Mario Muor Muor, SPLM (15/4/98).

<sup>21</sup> For example, post-war rehabilitation programmes in Eritrea, Ethiopia and Mozambique funded by donors such as the EU and World Bank have focused on the re-establishment of government veterinary services (laboratories, clinics, veterinary drug revolving funds) with limited analysis of the success of these services in the pre-war environment.

limited. For example, although private veterinary activities are now allowed in Ethiopia, private practice is not supported by appropriate legislation because the process of legislative reform initiated more than ten years ago has still not been finalised. In the absence of clear legislation, private investors are wary of establishing new businesses, and credit schemes for veterinarians, such as that provided by the PARC III Project, face intense bureaucracy and indecision within the project's technical and financial implementing partners<sup>22</sup>. In summary, in 1998 animal health service delivery in Ethiopia is still dominated by a heavily subsidised state system despite substantial evidence that public sector delivery of clinical veterinary services is highly inefficient, undermines the private sector and fails to provide services to livestock owners who are willing to pay<sup>23</sup>. While institutional weaknesses within line ministries are partly responsible for this state of affairs, lack of political will to change the system can not be overlooked. In Ethiopia the process of policy and legislative reform is further complicated by a system of regional autonomy in which regional governments have, in theory, power to define regional policy within a national policy framework. Regarding veterinary privatisation, this system currently results in marked regional variation in terms of commitment to structural and economic reform of government veterinary services.

Regarding the history of basic veterinary workers in Ethiopia, the idea to use community-level workers to improve services and information flow is not new. Thousands of farmers selected from peasant associations received six months training in basic animal health and production by the government-run Agarfa Peasant Training Centre during the Mengistu regime. The government-linked Third Livestock Development Project and Fourth Livestock Development Project trained "vetscouts" and "Farmers Animal Health Representatives" respectively, the latter being linked to service cooperatives. An FAO emergency project trained approximately 100 "Community Veterinary Agents" in North Wollo and Wag Hamra in 1994. For varying reasons, these projects were not successful. Drug supply systems based on revolving funds failed, per diems and other payments for veterinary workers dried up and in the case of the FAO project, post-training monitoring did not take place. When relating these projects to typical NGO, community-based work in Ethiopia and elsewhere, it should also be noted that the projects were implemented by government using conventional, top-down approaches in which "community" was synonymous with "peasant association". In reality, the latter was the lowest level of political organisation in Ethiopia and historically, was used as a mechanism for ensuring state control over the masses.

Despite these failing, it is to the credit of the Ethiopian veterinary service that the concept of community-based animal health services was not dismissed. Using more positive experiences of CAHWs from NGOs and with better understanding of community participation, a "Policy on Veterinary Service Delivery in Remote Areas" was formulated by the Animal and Fisheries Resource Development and Regulatory Department, MoA in 1997. The policy states clear roles for CAHWs and to a large extent, was influenced by PARC-Ethiopia's experience of CAHWs in the Afar region. Consequently, the policy can be regarded as a positive if indirect impact of the TRVTT project.

Looking at some specific details of the policy, the document acknowledges that veterinary manpower levels in Ethiopia are insufficient to meet the demand for veterinary services from livestock owners and that fixed-point, government facilities do not reach many rural areas. CAHWs are proposed as a means to extend basic services to remote areas, improve animal health extension, enable community involvement in service design and develop better disease reporting systems. The policy also makes frequent reference to the need for full cost-recovery systems to be established.

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<sup>22</sup> For example, the loan agreement between the MoA and the Development Bank of Ethiopia took over two years to negotiate. After four years and the receipt of 422 loan applications from veterinary personnel, only 12 proposals have been approved.

<sup>23</sup> For example, see Moorhouse and Ayalew (1998).

Although the development of this policy can be viewed as a very useful step forward in terms of placing CAHWs on the official agenda in Ethiopia, there is still a need for further clarification with respect to community participation and government-imposed limitations on CAHW activities. While the policy states that CAHWs should address the *"felt needs of the community and the animal health situation in the specific area"* and that communities should be directly involved in the *"design, execution, supervision and evaluation"* of these programmes, the policy also limits CAHW activities to *"deworming, spraying (tick control), wound treatments, closed castration and hoof trimming"*. Hence, the policy risks emphasising a disparity between community priorities and government priorities. For example, it is well known that in highland areas of Ethiopia diseases such as anthrax, blackleg and pasteurellosis are usually ranked among the top five animal health problems by farmers and yet CAHWs are not officially allowed to vaccinate (or attempt to treat) livestock against these diseases.

Recent CAHW projects in Ethiopia give cause for both optimism and concern with respect to future policy development and modifications to the existing policy. Some projects implemented by NGOs are working closely with the MoA at zonal level in order to encourage government to become more involved in the CAHW approach and take responsibility for both CAHW monitoring and coordination of CAHW selection and training<sup>24</sup>. Other projects such as the government-linked Ethiopian Social Development and Rehabilitation Fund are funding CAHW training via regional Bureaus of Agriculture with limited attention to effective community participation, proper selection of CAHW trainees or appropriate training methods. The concern here is that ineffective CAHW will impact negatively on future policy. Regarding better coordination of NGO-implemented CAHW work, all NGO projects in Ethiopia require agreement with a government body called the Disaster Prevention and Preparedness Bureau (DPPB) which operates at both regional and central levels. Hence, information on NGO activities is already available within government, albeit in a bureau with no livestock expertise. As yet, the Ethiopian veterinary services have not compiled a register of CAHW projects currently in operation in the country.

### 3.2.3 Kenya

During the EC-sponsored workshop on improved veterinary service delivery in ASAL areas of Kenya (held in Nairobi in early April 1998) the assessment team was able to witness current debate on CAHW activities and status, and veterinary privatisation. The two key pieces of Kenyan legislation relevant to these issues were the Veterinary Surgeons Act and the Pharmacy and Poisons Act, and both acts seemed to date from the colonial period. Some of the main features of the legislation were as follows:

- The Veterinary Surgeons Act specified that only qualified veterinarians were allowed to engage in private practice in Kenya and that these veterinarians must be registered with the Kenya Veterinary Board (KVB). Under the act, the KVB had legislative authority to discipline veterinarians and ensure adherence to a professional code of ethics defined by the act. Only veterinarians could be registered with the KVB and therefore, holders of diploma and certificate-level veterinary qualifications could only work privately if employed by a private veterinarian. The KVB had no authority to discipline diploma or certificate holders, or other types of animal health worker. The majority of seats on the KVB were allocated to veterinarians.
- The Pharmacy and Poisons Act assumed control for the pharmacy profession and trade in drugs (both human and veterinary) and poisons in Kenya. The act was implemented via a Pharmacy and Poisons Board which was chaired by a doctor and whose other members comprised four pharmacists, two doctors and one veterinarian. In relation to private veterinary practice, the act

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<sup>24</sup> A good example of an NGO-government partnership for the implementation of CAH work is the animal health component of the SCF(UK) Agricultural Rehabilitation Programme in North Wollo and Wag Hamra zones, Region 3.

stipulated that a veterinarian was not allowed to stock large quantities of medicines unless a registered pharmacist controlled the premises where the medicines were stored and sold. However, a pharmacist could stock and sell veterinary medicines without employing a veterinarian and veterinarians were not included in the pharmaceutical inspectorate<sup>25</sup>.

In January 1998 the KVB used national newspapers to publicise a "*Statement on the training of paravets on primary veterinary health care assistants and the distribution/handling of veterinary ethicals*"<sup>26</sup>. In summary, the statement reflected the KVB's concern that NGOs, donor agencies and others were training CAHWs and encouraging the handling and distribution of ethical drugs. According to the statement, these activities were illegal. The KVB statement did not mention that much of the CAHW training conducted in Kenya uses District Veterinary Officers or other government veterinary staff as trainers, that in rural areas government veterinary staff are an important source of ethical drugs, that pharmacists with no veterinary knowledge are selling ethical veterinary drugs legally and directly to the public and finally, since Kenyan independence there seems to have been a notable absence of attempts to prosecute veterinarians who violate KVB rules. This lack of KVB capacity to enforce the Veterinary Surgeons Act seemed to be common knowledge among veterinarians in Kenya.

Rather than present further details of contradictory and unenforceable legislation related to the veterinary and pharmacy professions in Kenya, it might suffice to say that the participants in the EU workshop were generally agreed that appropriate legislation was needed in order to encourage CAHW activities in ASAL areas. It was noticeable that even senior government staff were willing to discuss the CAHW issue whereas less than five years ago the topic was virtually unmentionable. At present the capacity of regulatory bodies to enforce legislation is limited and this problem is most apparent in areas where CAHWs are present. Clearly the KVB and others should avoid the sanctioning of new rules which cannot be enforced because government inspectors are unwilling or unable to visit rural clinics or pharmacies. Options for supervising CAHWs are discussed in section 4.0. In a practical sense, the most difficult legislative changes might relate to the handling of veterinary drugs by pharmacists whose close links to the medical profession places them in a strong lobbying position.

A further cause for concern in Kenya is the problem of poor quality drugs. While there have been anecdotal reports of ineffective drugs originating in Kenya for a number of years, a recent scientific publication described the pharmaceutical quality of anthelmintics sold in Kenya and revealed that some products contained no active ingredient. The paper concluded that,

*"Many anthelmintic preparations marketed in Kenya are clearly of very poor quality and the controls on their sale are inadequate. The use of products containing no anthelmintic on parasitised animals will clearly be ineffective. ....These results indicate the necessity for the introduction and policing of appropriate quality control procedures in the production and distribution of anthelmintics in Kenya."*<sup>27</sup>

The impact of this publication on the sale of Kenyan manufactured drugs is unclear but CAHW projects may well seek to procure products from international rather than local companies.

Regarding the impact of NGOS on policy debate in Kenya, NGOs such as ITDG and Oxfam UK/I have attempted to engage the Kenya veterinary authorities in dialogue since 1991 through activities such as

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<sup>25</sup> Regarding this last point, the Kenya National Drug Policy of 1994 stipulates inclusion of veterinarians in the pharmaceutical inspectorate but as yet, the legislation remains unchanged.

<sup>26</sup> The italicised words are reproduced exactly as written in the KVB statement.

<sup>27</sup> See Monteiro et al. (1998).

annual workshops on animal health service delivery. More recently, PARC-VAC has played a role in policy development through regular meetings with government and donor personnel, and active attendance at meetings such as the EU workshop mentioned above. The policy development /advocacy role of PARC-VAC is discussed in more detail in section 5.0.

#### **4.0 Supervision of CAHWs: technical, community-based and market-orientated options**

The SOW for the livestock veterinarian mention supervisory structures for CAHWs and support to controls over drug usage. Legislation related to CAHWs is summarised in section 3.0 and an important conclusion is that even when legislation does exist, regulatory bodies are often unable to inspect veterinary workers and facilities, or enforce legislation. Also, the development of appropriate laws governing CAHW working practices and supervision by veterinary professionals is likely to be a slow process in GHA countries.

In this situation, two unofficial forms of CAHW control can be considered. First, there is good evidence from NGO reports that community-level supervision of CAHWs can be an effective. This level of control is concerned more with CAHW relationships with the community (equity of service and behaviour of CAHWs), agreements on drug prices, incentives for CAHWs and disease reporting rather than technical control. However, should technical problems be so severe that livestock fail to respond to treatment or die, community-level awareness of these problems is usually high. In many CAHW projects, including the UNICEF-OLS/SS Livestock Programme and the Afar project, CAHWs are supervised by specific individuals or committees. These community-level supervisors are usually selected during the initial stages of the project and tend to take their responsibilities very seriously. As previously mentioned, animal health is a local priority and the role of CAHW supervision although unpaid, infers improved status on those involved. To a large extent, the willingness and capacity of local people to take some responsibility for CAHWs seems to depend on the level of community dialogue and participation in the project. When the roles, responsibilities and incentives for different players in a CAHW project are fully discussed and agreed upon, community-level monitoring and evaluation can work extremely well. When discussing community participation in CAH projects, it is also worth remembering that in the wider context, support to local forums such as CAHW committees is sometimes used by NGOs as an entry point for discussion on other problems faced by a community such as water shortages or human health. This aspect of CAH projects is discussed in section 5.0.

The other form of CAHW control is market forces. Livestock owners, particularly pastoralists, are usually pragmatic and opportunistic. They support and pay for services which work and reject those services which offer no benefit. When an animal recovers from a serious disease following treatment provided by a CAHW, news of this event travels far and wide<sup>28</sup>. Likewise, news of unsuccessful treatments is also shared and CAHWs who fail to operate effectively are unlikely to receive much demand for their services. Other evidence of pastoralists' attention to the quality of private animal health services comes from areas such as Somalia where increasingly, herders are aware of the problems of drugs with broken or altered packaging and no expiry dates<sup>29</sup>. They are also becoming more familiar with the pros and cons of drugs originating from different countries and there are anecdotal reports of herders requesting traders to provide "good quality oxytetracycline from Europe" in preference over other products i.e. when a range

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<sup>28</sup> This point was emphasised by Dr. Berhanu of PARC-Ethiopia. He explained how traditional Afar greetings were based on the exchange of news which included much reference to the health of livestock and were organised according to information on different livestock species. Other pastoralists such as the Somalis have similar greetings and sophisticated methods of transferring messages rapidly across the range.

<sup>29</sup> For example, Abdullahi (1994) describes how herders in the Ogaden had recognised that acaricides sold in the market by traders were often ineffective and "*nothing but a waste of time and money*".

of veterinary medicines are available, some clients opt for a more expensive but better quality product. The lesson from these experiences seems to be that when livestock owners are provided with choice and good information, they make rational decisions about animal health care.

Looking more closely at technical supervision of CAHWs, there seemed to be common agreement among NGOs, UNICEF-OLS, PARC-VAC and government that where possible, CAHWs should be receive some level of technical backup from a veterinarian. These linkages were required in order to ensure supervision of CAHW activities, facilitate or provide refresher training, provide some form of referral service or second-opinion, act as a point of contact for disease reporting and in some cases, act as a source of veterinary medicines. To a large extent, links between CAHWs and veterinarians already exist. For example, in some NGO projects and within UNICEF-OLS and PARC-VAC projects, either project or government veterinarians oversee the CAHWs. PARC-VAC is beginning to address the sustainability of vet-CAHW links by supporting private veterinary practice in pastoral areas based on networks of CAHWs supported by a private practitioner.

## **5.0 The PARC-VAC Project**

The objectives and activities of the PARC-VAC Project are well documented in various visit reports, quarterly reports and the 1997 annual report. In summary, project activities are aimed at community-based animal health service delivery and policy reform in pastoral areas of the GHA. Although only operational for only 14 months at the time of the assessment, it was clear that significant progress had been achieved with respect to both field-level implementation of CAH work and policy reform. The project had also started to support broader development issues, most notably by working with Oxfam UK/I in Uganda on conflict resolution. Rather than repeat a long list of activities, partnerships and coordination work which is already described in project documents, information is presented here which focuses on PARC-VAC's unique position with respect to improved veterinary services in the GHA and its potential to facilitate work in other sectors.

### **5.1 Technical capacity**

A key feature of PARC-VAC is attention to the technical aspects of CAHW project implementation. This characteristic of the project is important because there is wide variation among NGOs in their technical capacity to implement animal health work. Furthermore, government veterinarians and donors tend to possess superficial understanding of participatory approaches in the context of improved veterinary services<sup>30</sup> and the potential to use animal health as an entry point to pastoral communities. PARC-VAC currently employs two veterinarians with unique experience of participatory development in the GHA and houses a large collection of CAHW reports and publications. Consequently, the project can be regarded as both the institutional memory of CAHW projects in the GHA and a centre of excellence with respect to technical aspects of this approach. The project receives frequent requests for advice and technical assistance from a range of NGOs, donors and government agencies. PARC-VAC has proposed that a "ways of working" manual on CAH is now needed in order to provide NGOs and government veterinary services with a reference guide to the CAHW approach and contacts to other projects and resources. Such a manual would be timely considering the growing interest in community-based work worldwide.

### **5.2 Coordination of CAHW projects and collation of lessons learned**

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<sup>30</sup> For example, see contributions to the FAO electronic conference on rational delivery of veterinary services, January to March 1997.

In response to the varying institutional capacities outlined above, the project recognises the need for better coordination of CAHW projects and the use of common approaches to CAHW selection, training, incentives and so on. In part, this lesson has emerged from the UNICEF-OLS/SS Livestock Programme. There is also a need to collate project experiences and publicise these experiences. Since January 1997 the project has supported coordination of CAHW projects in Turkana, Karamoja, West Pokot and southern Sudan.

### **5.3 Regional and national-level policy reform**

The project is crucial in terms of contributing towards the debate on veterinary service reform in Africa. Donor-driven veterinary privatisation initiatives continue to focus on support to veterinarians with limited attention to the needs of livestock owners, particularly those in pastoral areas. Due to its participatory character, field activities, links with NGOs and location within OAU/IBAR, the project is extremely well-placed to influence policy on appropriate animal health services in pastoral areas. During the last 14 months the project has actively engaged senior-level decision makers in government and donors, exposing them to new ways of working and justifying the combined community-based/privatised approach. OAU/IBAR has an international mandate and close links with Chief Veterinary Officers, donors, FAO, OIE and various regional bodies and research institutes. In 1997 and 1998 PARC-VAC staff participated in the 7th and 8th East African PARC Coordination Meetings, the 5th and 6th PARC Technical Meetings, PARC Strategy Workshops, the 5th OAU Livestock Ministers' Meeting in Swaziland, an OAU/IBAR/PARC mission to Tanzania and a FARM-Africa workshop on improving livestock production in low potential areas. PARC-VAC were also involved in discussions on the Agriculture Sector Improvement Plan (ASIP) for Kenya and participated in both the FAO planning meetings for flood response activities in north east Kenya and the EU-sponsored workshop on veterinary service delivery in ASAL areas in Kenya. During the assessment, the policy reform role of PARC-VAC was readily acknowledged by NGOs who recognised that the project's placement within OAU/IBAR increased its lobbying capacity. These NGOs also expressed support to PARC-VAC continuing this role and acting as a channel through which NGO field experiences could contribute more effectively to policy reform.

### **5.4 Community participation and the wider implications of the CAHW approach**

The guiding principle behind PARC-VAC's approach is commitment to community-level involvement in animal health service delivery leading to both immediate impact with respect to improved food security and social well-being via improved animal health, and, long-term impact through the creation of constructive and transparent relationships with pastoral communities. The latter should be viewed in the context of marginalised social groups who have often experienced inappropriate aid or no aid, and who have tended to avoid contact with government programmes. This long term impact might be described as "community-level capacity building" and leads to openings for discussion on issues such as conflict, water, natural resource management or human health. In other words, when working with pastoral communities, animal health can act as an entry point for other development activities<sup>31</sup>. PARC-VAC's future role as a facilitator of work in other sectors is most apparent for human health and conflict mitigation as there is already evidence that animal health projects can assist work in these areas.

#### **5.4.1 Examples of CAHW projects acting as an entry points for other work**

##### ***a. Conflict mitigation***

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<sup>31</sup> The idea to use veterinary projects as a starting point for integrated pastoral development has been well-documented. For example, see Majok and Schwabe (1996).

Some features of CAH relevant to conflict resolution are as follows:

- CAH seeks to identify and work with traditional pastoral institutions/forums/committees e.g. PARC-VAC's work with Turkana adakars.
- CAH projects work directly with traditional leaders who both initiate and prevent raiding.
- The increasing incidence of raiding is partly linked to the failure of traditional leaders to control warriors. CAH projects work with both leaders and warriors.
- Animal health is prioritised by herders, hence CAH receives strong local support; veterinarians and CAHWs are usually well-respected and influential people.
- Animal health projects are often the only projects existing in remote, pastoral areas.

***Examples***

Oxfam UK/Ireland Turkana-Karimojong peace meetings in 1995-1996

ActionAid Erigavo peace meeting in 1993 involving four Somali clans.

The potential value of PARC-VAC in conflict resolution arises from,

- Field level implementation of CAH leading to understanding of social organisation, local decision-making processes and reasons to raid.
- Links with NGOs and local government.
- International scope and capacity to facilitate links between players on opposite sides of national borders.
- Impartiality.
- In-house, practical experience of peace making initiatives in pastoral areas.

Although CAHW projects can lead to opportunities to facilitate conflict resolution in pastoral areas, it should be recognised that a range of external factors affect raiding, and raiding occurs in various forms. When raiding is linked to organised crime (as is sometimes the case in Kenya) or is conducted by armies to feed themselves or terrorise communities (e.g. southern Sudan), the role of CAH projects in peace-making is less clear.

***b. Human health***

see Annex 3

**5.4.2 Other opportunities for broadening PARC-VAC activities**

***a. Cross-border disease control***

Some features of PARC-VAC relevant to cross-border disease control are:

- The project is located within OAU which has mandate to work throughout Africa; PARC-VAC is already working in border areas e.g. the Karamojong cluster.
- OAU/IBAR/PARC has long experience of border harmonisation meetings bringing together veterinary services from neighbouring countries.
- The project has a proven ability to work with both government and NGOs.
- The project has access to remote areas and works with NGOs in remote areas where government services are absent. These activities lead to the potential for improved information flow from these areas to central veterinary authorities.

***b. Livestock-wildlife interactions***

PARC-VAC's potential contribution to improved disease reporting in wildlife arises from:

- A widely recognised view that pastoralists possess useful local knowledge on wildlife and livestock seasonal movements and interactions, disease transmission (e.g. windborne disease, disease vectors).
- The use of CAH as an entry point to remote pastoral communities and opportunity to prompt discussion on diseases involving wildlife and livestock (e.g. rinderpest, FMD, MCF, rabies, distemper, trypanosomiasis).
- CAHWs are already well-trained in history taking. Hence, there is potential for developing their existing disease reporting role to also cover outbreaks of disease in wildlife.
- The project's ability to work with both government and NGOs.
- The project's access to remote areas and work with NGOs in remote areas where government services are absent, leading to potential for improved information flow from these areas to central veterinary and wildlife authorities.

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### **ANNEX THREE**

## **SOCIAL AND CULTURAL ISSUES**

### **Patricia Delaney**

**Executive Summary:** PARC-VAC is a recognized “center of excellence” in the CB approach. Their participatory approach is technically sound and incorporates both excellent PRA methodology and culturally appropriate training and programming. PARC-VAC should continue to expand its role in the development of participatory methodologies. PARC-VAC and UNICEF-OLS play critical roles as focal points for collaboration and coordination among NGOs, Ios, and other implementing partners in the veterinary health field. PARC-VAC should strengthen its role in collaboration and continue to take the lead in advocacy at the level of national policy. The PARC-VAC selection process for paravets involves a variety of participatory methodologies and affords communities the real opportunity to “buy-in” to the selection process. Selection of paravets should continue to pay special attention to issues of equity and gender. PARC-VAC should continue the process of analysis to understand the social and cultural roles of CAHWs in their communities in order to guarantee long-term sustainability. PARC-VAC and UNICEF-OLS should further incorporate understandings of EVK and traditional veterinary practitioners into all phases of the project process. The projects should redouble their efforts to reach vulnerable groups through the deliberate process of community selection. The considerable incorporation of gender considerations, and the specific incorporation of isles of small stock, should be enhanced through ongoing gender-sensitive programming. The important lessons learned and possibilities for cross-training with the PARC-Ethiopia project should continue to be explored. The integration of animal health projects with

human health should be further explored as a possible future intervention.

**Introduction:** This annex provides both lessons learned and recommendations for each of the topics in the Social and Cultural Issues section of the TOR. Following the general outline of the team report, this annex provides illustrative examples of lessons learned from the field and indicates specific programmatic recommendations which are designed to further enhance the project objectives.

While the details of the cultural and social issues relevant to this project will become clear throughout the text of the annex, it is worth repeating the central lesson learned from this project: thorough participation of stakeholders at each step in the project is the key to the remarkable success of both PARC-VAC and UNICEF-OLS. Or stated more plainly, **this project is succeeding precisely because it is truly participatory**. The limited recommendations provided in this annex should be seen simply as an attempt to further build on the substantial success of the PARC-VAC and UNICEF-OLS processes.

### **3.1.A. Community-Based Approach /Participatory Methodology: Lessons Learned.**

A growing body of evidence in the development literature is beginning to recognize what organization like ODI and IDA have argued for more than a decade: community-based participatory approaches generate better end results than traditional, top-down, macro-level development projects.

While there are a myriad of definitions of concepts like “community-based” and participation, not all such programs effectively capture real participation and grass-roots involvement. “Community-Based” is a catch-all term which is utilized differently by disparate implementing organizations. The spectrum of projects which include the concepts of “community-based” and “participation” ranges from macro-level infrastructural projects which include the “participation” of local level economic or political elites to grass roots community dialogue leading to project design and proposal-writing.

This particular CB approach is efficacious because it does more than pay lip service to the ideas of participation and community involvement. The PARC-VAC and UNICEF/OLS approach is uniquely effective in achieving community participation. It is seen as a “center of excellence” in participatory methodology by other NGOs and implementing partners. PARC-VAC technical expertise in actively sought out in the area of participation and community involvement. Specifically, the key elements in their success seem to be:

1. Strong PRA methodology. While the PRA methodology has been in use for over a decade, it is not uniformly applied and it is, in practice, a very difficult methodology to do well. The PARC-VAC and UNICEF/OLS programs have developed a strong, well-documented training methodology for the implementation of PRA in difficult field situations. They have successfully incorporated lessons learned from field situations in such diverse areas as Afghanistan and southern Sudan. Their strong technical skills in PRA are a key to their success.
2. This CB approach is understood conceptually not as a model but as a process of development. CB is not merely a mechanism of service delivery but an approach which facilitates the improvement of social and economic conditions in local communities. The distinction is a subtle but important one as it means that the provision of animal health care is not seen as an end in and of itself but rather as a means to a greater good: improved quality of social, cultural, and economic life and livelihoods.
3. The CB approach assures a “buy-in” by stakeholders, both individuals and communities, at each and every stage in the process. For example:
  - a. Communities prioritize their own problems and potential solutions (animal health

interventions work because communities' perceive them as critical)

b. Communities decide on own selection criteria for CAHWs - based on culturally and socially appropriate factors (CAHWs are consequently likelier to succeed than if they were appointed by outsiders or by consultation only with traditional political leaders)

c. Communities decide on appropriate rules of conduct for CAHWs and determine appropriate sanctions and punishments for those who violate those rules (Such social sanction is far likelier to carry substantial weight when it comes from insiders). In some instances, communities assume responsibility for the failure of individuals to follow the rules. (E.g. community leaders in southern Sudan collected monies to repay the cost of the drug supply which was stolen by an errant CAHW.)

d. Individuals are required to "buy in" both symbolically and monetarily by contributing a portion (usually 20%) of the cost of their start-up kit and paying full cost for their drug supply.

e. CAHW trainees are not paid "sitting fees" during the training period. The skills they acquire are "payment" for their time.

4. The process of community dialogue is bi-directional. The fact that local participation and expertise is on equal footing with western bio-medical and cultural information both facilitates the improvement of animal health service delivery and provides value-added in community empowerment.

a. Brainstorming, disease ranking, and the solicitation of local disease terms occur at every step in the CB process.

b. General Ethnoveterinary Knowledge (EVK) and the expertise of animal health care specialists (bone setters, herbalists, and seers) are sought during initial assessments and community dialogues and are substantially incorporated in the CAHW training. (See Section 3.5. for a complete discussion of EVK and potential for its further incorporation.)

c. Training methodologies incorporate the Freyrian model of consciousness-raising and empowerment.

5. The CB approach recognizes the heterogeneity extant within cultural groups and pays particular attention to equity issues by consciously giving voice to groups which might otherwise have been silenced. This strategy both improves the quality of information gathered and hence the nature of the technical interventions (by talking to women, for example, who handle small stock) and encourages the continued participation of such individuals in the subsequent phases of the process (by giving voice to their knowledge publically and validating its importance in the project design). It also contributes to consensus-building and strengthening local institutions of good governance.

a. *Gender* Women's opinions are actively solicited during both the assessment and community dialogue phases. Particular attention is paid to the sexual division of labor and the important role that women play in the household economy generally and in the care of livestock particularly. Specific role plays and other community dialogue tools target the role of women in decision-making and the provision of animal health care. As a consequence of this persistent dialogue, communities are compelled to discuss the current and potential roles for women in animal health. In some communities in southern Sudan and Karamoja, women have been chosen as CAHWs. In most others, they have become increasingly vocal in their participation in community dialogue. (See Section 3.7. for a complete discussion of gender and the potential for its further incorporation.)

b. *Traditional Leaders* The CB approach does not rely exclusively on political leaders appointed by national or regional governments. During all phases of the CB process, it seeks out traditional spiritual, political, and kin-based leaders. For example, in southern Sudan the input of cattle camp

leaders was sought while in Karamoja it was the seers whose input was critical. The incorporation of traditional leaders and decision-makers both ensures the participation of culturally appropriate leaders (e.g. cattle camp leaders who deal with livestock issues on a regular basis instead of urbanized, sedentary chiefs who know little or nothing about cattle) and enhances the credibility of the program by mobilizing traditional mechanisms of community involvement and activity.

c. *“Average” pastoralists* A wide sample of “average” individuals is solicited for involvement in the community dialogue process. Such individuals, who are neither traditional health specialists nor political or clan leaders, are included in order to insure that the resultant “community-based” project actually meets the needs of the majority of the herder population, instead of just the needs of a handful of individuals.

d. *Rural/migratory individuals* Given the increasing sedentarization of many pastoralist populations, an increasing gap is emerging between more urbanized and sedenterized individuals and those who continue to maintain a more traditional, and nomadic, lifestyle. Given the relative ease with which urban individuals are contacted, the CB approach takes special care to make sure that these individuals are not overrepresented in the community dialogue process. Targeting nomadic populations for input is logistically difficult and requires additional time and planning. Such targeting, however, ensures that the most vulnerable and under served populations are adequately represented in both the planning and implementation of the project.

e. *Other groups.* Perhaps most significantly, the CB participatory process creates a mechanism through which other social groups can be identified and incorporated into the community dialogue process. For example, the CB process has demonstrated that literacy is often NOT a criterion which should be used to select CAHWS. As literate individuals often tend to be members of the elite, they also tend to be more urban and sedentary and less willing to travel to distant areas to provide community-based animal health care. There is no way to predict which particular social groups might be most relevant among other ethnic groups but the CB process creates a mechanism through which they can be found and involved in the dialogue.

6. The CB approach recognizes and reinforces traditional cultural values, structures, and institutions. The incorporation and validation of such concepts as kinship, collective responsibility, generalized reciprocity, and honesty has two important impacts. Firstly, it diminishes the potential of rejection of or backlash against new ideas. While concepts which are perceived as completely foreign often take several generations to be adopted and often fail to persist in the medium to long term, those that are seen as merely slight modifications of traditional practice can often be incorporated in a much shorter time frame and are more likely to be sustainable. Secondly, it reinforces the validity of traditional institutions and those who embody them and consequently builds their capacity for community development.

a. *Community Dialogue.* The process of Community Dialogue itself builds on traditional patterns of consensus-based decision making at the local level. While it modifies that structure to include previously excluded individuals, including women and “average” herders, it does so within the context of longstanding cultural institution.

b. *Role Plays.* A variety of role plays utilize culturally appropriate characters and settings to depict potential moral dilemmas. Such role plays are designed to generate substantive discussions which grapple with the interface of traditional and modern structures and values in the community. In one role play, for example, a CAHW is faced with the competing pressures of kin-based understandings of mutual obligation and the project-imposed rule of cost recovery.

The CAHW is called to his father-in-law’s compound to treat some of his sick animals. After administering the appropriate drugs, he asks his father-in-law for payment. The father-in-law is appalled and offended by this request. He appeals to his

son-in-law's sense of family responsibility and says "aren't these your cattle? didn't you give these to me when you married my daughter? Are you now abandoning your responsibility to these animals? What kind of a son are you? Why don't you just take them back?" and so on. The CAHW is cowed into submission and leaves the compound without receiving any payment. A similar scene is played out as the uncle of the CAHW calls him to treat his animals. Before treating the animals, the CAHW raises the topic of payment. The uncle is more incensed that his father-in-law and asks "How can you abandon your family? How does your mother allow this? Never mind. Just let my cow die if you will not help your family." After looking to make sure that no one is looking, the CAHW provides the services free of charge to his uncle. At the end of the role play, the CAHW has used his whole drug supply but has recovered none of the costs.

The facilitator follows this role play up with a series of questions. These include: what did you see? How many animals did he treat? What did he receive in payment? Does this kind of thing happen? What are some examples of times people have expected things from you as a right? After those issues are addressed, the facilitator asks if a CAHW program can work in this community. The facilitator asks the community what steps it will take to ensure that this type of problem will not happen in the community. The discussion which follows inevitably centers on the relative importance of kin and communal responsibilities and on the need to balance or reconfigure those responsibilities in order to guarantee the long-term sustainability of the program. The facilitator emphasizes the fact that CAHWs are community resources which need to be utilized by the entire community, not only by immediate kin members. The end result is usually the beginning of discussions about appropriate selection criteria for CAHWs and their rules of conduct.

c. *Rules of conduct* for CAHWs often vary widely from one community to the next. The fact that they are tailored to the particular cultural and social context assures both their efficacy and the likelihood that they will be followed. In the Afar region of Ethiopia, one of the recommendations made by participants was that they treat the CAHW supply kit with the same care that they treat their gun (AK-47).

7. The use of existing cultural concepts to explain new technologies and ideas greatly facilitates the learning process and further validates indigenous culture. The utilization of cultural concepts goes beyond mere linguistic translation by keying in to core cognitive processes. It enables CAHWs to "crack their heads open" to new ideas and concepts by utilizing concepts such as vaccines protecting cattle from disease in the same way that guns protect herders from raiding.

a. *Causation of disease* was cited by project personnel as one of the cognitive concepts which was most difficult for pastoralists' to grasp. Given their markedly different cosmology and world view, the Western notions of bio-medicine, disease process, and germ theory are decidedly foreign. In order to facilitate the understanding of this critical concept, which is the underlying structure upon which the entire technical training is based, the CB approach utilizes the culturally familiar concept of cattle raiding. CAHWs are asked to think about what they need to know in order to fight those who want to steal their cattle. They need to know: who they are, what their tactics are, and what their culture is like. The analogy is drawn to fighting disease. The CAHWs need to know who they are (the names of the diseases), what their tactics are (causes, symptoms and disease process), and what their culture is like (anatomy, biology, and the larger bio-medical system).

b. *Power of vaccination* is symbolized in both oral discussions and pictorial representations. The analogy of a gun providing protection is utilized to symbolize the potency of vaccination as a mechanism of protection. Additional images showing two and three guns superimposed on the image of a cow are utilized to symbolize the added protection of subsequent vaccinations.

### **3.1.B. Community-Based Approach /Participatory Methodology: Recommendations.**

1. PARC-VAC and UNICEF/OLS should continue to emphasize high quality participatory techniques and should seek further staff to continue training in this area.
2. PARC-VAC should be supported in its plan to publish a "how-to" manual for CB programming in CBAH. Such a "guide" should go well-beyond the currently available curriculum for CAHW training. Additional chapters

might include: PRA training, development of IEC materials and reporting forms; appropriate incentives and sustainability.

3. PARC-VAC should consider utilizing the “how to” manual as the basis for a training workshop for interested NGOs and implementing partners.

4. PARC-VAC should consider developing a “living” document (akin to PLA Notes) such as a newsletter to provide updates and additional field examples of lessons learned, monitoring and evaluation forms, and the like.

5. PARC-VAC should continue to develop the “participatory” nature of the program by ever-increasing participation of stake holders. One example discussed during the consultancy was the possibility of soliciting paravets’ own ideas for role plays and teaching metaphors for refresher trainings and follow-ups. Such a brainstorming exercise would ensure even more culturally appropriate information and would further stimulate participant interest.

6. PARC-VAC and UNICEF-OLS should be supported in their efforts to further “participatize” the monitoring and evaluation process. Continued collaboration with projects such as ITDG’s “participatory monitoring” in Marsabit should facilitate their advocacy with donors and others as they push the envelope of participation.

7. PARC-VAC and UNICEF/OLS should continue to work on incorporation of traditional practitioners and the use of EVK in training and selection of paravets. Care should be taken to mitigate against the potential loss of cultural knowledge in this area. (See Section 3.4 for a complete discussion of this topic.)

8. PARC-VAC and UNICEF/OLS should redouble efforts to incorporate diverse groups within each community. Particular attention should be paid to the incorporation of women in all projects. (See Section 3.7 for a complete discussion of this topic.)

### **3.2.A. Collaboration and Coordination: Lessons Learned**

The key lesson learned is that timely, ongoing, and collegial interaction on the part of donors, international organizations, NGOs, and local, regional, and national government is a critical component in the success of the CB animal health approach.

The collaborative efforts of the various actors in CB animal health care in the region are frequent and substantial. PARC-VAC regularly liaises with other NGOs and donors in the form of CAHW Coordination workshops, gender workshops, training methodology workshops, and the like. PARC-VAC further provides both formal and informal technical assistance to a variety of NGOs newly entering the animal health field. Such technical assistance is provided at each step in the CB process and includes assisting with project and proposal design, sharing course and training materials, and providing PARC-VAC staff for CAHW training and community dialogues.

The small grants program administered by PARC-VAC was especially helpful in building the capacity of smaller NGOs working in this area. Specific examples include: support for ITDG in Turkana, support for new start-up NGO in southern Sudan: Vetworks Sudan. PARC-VAC has further engaged in advocacy work with other implementing partners about the nature of their CB programming and is seen as a leader in this field by many other organizations.

At the national and regional levels, PARC-VAC and UNICEF/OLS engage in dialogue with key policy makers about the future of veterinary service delivery throughout the region. The presence of other indigenous actors, including KPF (Kenya Pastoralist Forum), has also substantially facilitated the dialogue process.

UNICEF/OLS is the “umbrella” organization which coordinates and organizes the various implementing NGOs in southern Sudan. Their frequent meetings and workshops have resulted in a remarkably well-integrated program in southern Sudan.

### **3.2.B. Collaboration and Coordination: Recommendations**

1. PARC-VAC and UNICEF/OLS should be supported in their efforts to continue extensive collaboration and coordination within the Greater Horn region.
2. PARC-VAC should capitalize on its reputation as a “center of excellence” in community-based animal health care and utilize its substantial power as an advocate for CB programming to continue to inform the policy debate at both national and regional levels.
3. PARC-VAC and UNICEF-OLS should continue the substantial “cross-fertilization” that has occurred in the projects thus far. Continued cross-visits would greatly enhance further collaboration and cooperation.

### **3.3.A. Paravet Selection: Lessons Learned**

Paravets are chosen through a thorough and participatory process. This process begins with the initial assessment, in which members of diverse social and economic groups are sought out for input. The second phase in the selection process is a formal community dialogue (CD). The CD utilizes a full range of participatory methodologies including: pile sorting, wealth ranking, problem ranking, brainstorming, small group discussions, and role plays. This CD generally concludes with a call for the community to think together about selection criteria. While the criteria vary from community to community, some common selected traits include: honesty, cattle ownership, youth (able to travel with herds), and physical fitness.

Because PARC-VAC staff have been through this process before, they are able to prod communities to consider factors which might not seem obvious to them. For example, they commonly remind people during the CD that women might be appropriate candidates as CAHWs. Some women have been chosen and trained in both southern Sudan and Karamoja.

They also consistently point out that literacy is not necessarily a prerequisite for CAHW training. In fact, the PARC-VAC experience has shown that illiterate CAHWs often work better than their literate counterparts (due, perhaps, to the latter’s tendency to seek urban employment and abandon herding).

PARC-VAC’s experience has also shown that communities are more successful in choosing appropriate CAHWs in the second phase, after they have experience with the success and failure of some individuals.

### **3.3.B. Paravet Selection: Recommendations**

1. PARC-VAC and UNICEF-OLS should continue to build upon their substantial field experience in paravet selection to further refine the selection process. This process, which walks a fine line between “participation” and coercion (to encourage communities to select appropriate, and not simply politically well-connected, paravets) is fraught with difficulties and should be constantly re-evaluated.
2. PARC-VAC and UNICEF-OLS should be mindful of the fact that gender and equity issues of particular concern. The projects should develop explicit strategies to address issues of equity and vulnerability (are the neediest populations being selected and/or served by paravets) and gender. (See Sections 3.5 and 3.6 for specific recommendations of possible mechanisms for addressing these issues.)

### **3.4.A. Social and Cultural Roles: Lessons Learned**

The social and cultural roles of paravets vary tremendously across the project communities. Generally speaking, the paravets are seen as new specialists who do work that is independent of other, traditional, health specialists in the community. They are seen as a community resource.

Virtually all paravets interviewed expressed pride at being selected and the position seems to convey considerable prestige (as well as some additional income). The extent to which paravet retention is high seems directly related to the community “buy-in” into both the selection and ongoing support of paravets. In the PARC-Ethiopia project in the Afar region, community-based “supervisors”, typically elder males in the community, are responsible to monitor the moral and ethical conduct of the paravets. Actual clinical supervision is undertaken by PARC-Ethiopia staff but the community-based “supervisors” serve as a motivating force for the young paravets.

All paravets are mobile and travel to their clients. The continued mobility of paravets is a critical factor in their success.

Role plays and other educational tools during the CD emphasize the role of community paravets as a communal resource which should be equally accessed by all members of the community, and not simply members of the CAHWs kin group or political clan.

### **3.4.B. Social and Cultural Roles: Recommendations**

1. Further research needs to be done on the way in which paravets are understood within their local communities. Special attention should be focused on the relationship, if any, between CAHWs and traditional practitioners with an eye towards the better collaboration between the groups.
2. Community “buy-in” and support of paravets should be continue to be cultivated by both UNICEF-OLS and PARC-VAC. The PARC-Ethiopia model in Afar might serve as an illustrative example of ways to further involve the community and mobilize traditional mechanisms of social pressure to ensure continued participation of the paravets.

### **3.5.A Traditional Veterinary Practitioners/EVK: Lessons Learned**

While traditional veterinary practitioners are not completely integrated into the process, their involvement is sometimes sought.

The PARC-VAC process actively solicits information about Ethnoveterinary Knowledge (EVK) during both the initial assessment and the subsequent CD.

Such knowledge, which includes local disease terms and treatments, is subsequently utilized to tailor the CD presentations and the CAHW training curriculum.

Preliminary research in Afar, Ethiopia, corroborates findings from other regions of the Horn: the importation of western bio-medical practice can overshadow traditional practices. Unless EVK and traditional practitioners are thoroughly integrated into the process from the beginning, their decline and demise seem certain.

### **3.5.B Traditional Veterinary Practitioners/EVK: Recommendations**

1. PARC-VAC and UNICEF-OLS should be supported in their efforts to more completely incorporate EVK into both training and data collection. Such incorporation would both enhance treatment options and strengthen local capacity. Such incorporation should include the full range of indigenous practice - including that associated with small stock.

2. PARC-VAC and UNICEF-OLS should take special care to consider issues of indigenous copyrights and the return of proprietary information in usable format for the affected populations.

3. PARC-VAC and UNICEF-OLS should take special care to validate and support EVK and traditional veterinary practice, even while training in western bio-medical practice.

### **3.6.A Community Selection/Attention to Vulnerability of Groups: Lessons Learned**

Due to the particular circumstances of the PARC-VAC and UNICEF-OLS programs, the selection of communities has been somewhat ad hoc to this point. However, by definition, both projects are targeting marginal and vulnerable groups - pastoralists in conflict areas. In southern Sudan, the stated project goal is the inclusion of ALL communities in the catchment area. The PARC-VAC project has just begun the pilot phase and has only chosen a handful of communities. These are selected in consultation with local government partners, traditional leaders, and a process of CD.

This CB approach significantly addresses the concerns about vulnerability WITHIN communities by utilizing CD and other participatory methodologies. Community planning intentionally includes the most vulnerable members of these pastoralist communities, including women, the elderly, and those with few animals. The flexibility of the CB approach allows for a range of paravet models which more accurately reflect community needs.

Anecdotal evidence from field visits to non PARC-VAC sites indicates that equity issues do arise from the cost-recovery component of the project. Some “poor” herders appear to be unable to pay for services.

### **3.6.B. Community Selection/Attention to Vulnerability of Groups: Recommendations**

1. Both PARC-VAC and UNICEF-OLS should continue to make a concerted effort to ensure 100% coverage in these remote, pastoralist areas. The coordination/collaboration function of these organizations should be strengthened in order to ensure that the most vulnerable populations are included.

2. PARC-VAC and UNICEF-OLS should be supported in their efforts to strengthen the participatory methodology which is currently utilized to address issues of equity/vulnerability within project communities.

3. Further monitoring and evaluation is needed in order to determine the extent to which equity issues (such as inability to pay or membership in particular co-resident group) influences service delivery.

4. To the extent that equity issues do arise, the participatory methods developed by PARC-VAC and UNICEF-OLS could be mobilized to ameliorate the problem. For example, further role plays and messages could be developed during the CD which emphasize the need for equitable service delivery. Community Action Plans (such as those developed by SDDP) might be utilized to address the issues of communal responsibility for poorer households.

### **3.7.A Gender/Small Stock: Lessons Learned**

Women’s opinions are actively solicited by PARC-VAC and UNICEF-OLS during both the assessment and CD phases.

Particular attention is paid to the gender-based division of labor and the important role that women play in the household economy generally and in the care of small stock particularly.

Specific role plays and other community dialogue tools target the role of women in decision-making and the provision of animal health care.

As a consequence of this persistent dialogue, communities are compelled to discuss the current and potential roles for women in animal health. In some communities in Karamoja and southern Sudan, women have been selected and trained as CAHWs. In most others, they have become increasingly vocal in their participation in CD. There is substantial room for further incorporation of women into the approach.

PARC-VAC and UNICEF/OLS staff expressed “surprise” at the extent to which women have been incorporated into the program and expressed concern about “forcing” too much female participation.

### **3.7.B Gender and Small Stock: Recommendations**

1. Women should be further incorporated into the CD process. While PARC-VAC and UNICEF-OLS should continue to be careful about “forcing” female participation, they should consciously seek creative ways to further that process. One such tool might be the design of a “women’s only” CD in the design phase of the process.

2. PARC-VAC and UNICEF-OLS should continue to involve women in project design and should actively pursue the recruitment of female staff.

3. PARC-VAC and UNICEF-OLS staff should resist the understandable tendency to assume gender role stereotype which places pastoralist women outside of decision-making. While some such patterns are true, the pastoralist literature clearly shows that many such assumptions come from outsiders’ own perceptions of gender roles.

### **3.8.A Ethiopia CAHWs: Lessons Learned**

The PARC-Ethiopia CAHW program has been operating in Central Afar region since 1994. A total of sixty CAHWS have been trained by the program and 60% of those are still active, four years after receiving training. The participation of these CAHWS was described as a “critical” element in the apparent success of PARC-Ethiopia in eradicating RP from the central Afar region.

CAHWs continue to receive refresher training and supervision from the PARC-Ethiopia staff. Most CAHWs interviewed demonstrated significant technical knowledge and were able to effectively demonstrate the use of their veterinary kits and supplies.

CAHWs are also substantially tied to their communities by virtue of their additional “supervision” by community elders. This latter supervision is to ensure honesty and accuracy in reporting of monies and drug supply. Since most CAHWs are relatively young men, a criterion established by the Afar community because these are the herders/warriors who are best able to move with the herds, such supervision is important.

This program is not yet sustainable and CAHWs depend on PARC-Ethiopia for drug supply. There are no government or private veterinary services (or any other services, for that matter) available in the central Afar region.

### **3.8.B Ethiopia CAHWs: Recommendations**

1. PARC-VAC and UNICEF/OLS should continue to dialogue with PARC-Ethiopia in order to draw more lessons learned and to facilitate cross-visits with the Afar project.
2. PARC-VAC should pay particular attention to the “community supervisors” component of the PARC-Ethiopia project and assess the viability of such an approach in other areas.
3. PARC-VAC should seek support to provide technical assistance to PARC-Ethiopia as they seek to make the transition to sustainability. They are particularly interested in learning about privatization and drug supply issues.

### **3.9.A. Integration of CAHW and Human Health: Lessons Learned**

The integration of human health with animal health has succeeded in several programs in the Horn. Examples of the limited integration of human health can be found in southern Sudan (CAHWS used for polio vaccination campaign and guinea worm eradication), Samburu, Kenya (SDDP project training both CAHWs and CHHWs), and Wajir, Kenya (*daryelles*, traditional healers, trained in both animal health and basic human health). This limited success seems to be predicated on several key elements:

1. Human health is consistently ranked by communities as a key priority. It is usually listed as the third or fourth priority, following animal health and/or water. The fact that human health is considered a priority facilitates community involvement in human health programming.
2. Human health is often phased-in following the successful implementation of animal health programs. This phase-in allows the build up of community trust and household incomes, both of which facilitate the successful incorporation of human health interventions.
3. Culturally appropriate models for the provision of human health are key. In some communities, traditional healers treated both humans and animals. In others, separate specialists were utilized for animal and human illness. The programs which are working best follow the traditional structures when designing their human health add-ons to the animal health program.
  4. HHW seem to achieve the most success when their interventions are discreet and/or limited to “public” health activities such as vaccinations and IEC campaigns.
5. The ability of HHWs to recover costs for human drugs and human health services is often constrained by past practice of subsidized drugs and/or cultural practices which do not include payment for traditional human health providers.
6. Human health works as an add-on AFTER the incorporation of CBAH because animal health is the top priority for pastoralists. The reverse process (with animal health added after human health would be unlikely to succeed.)

### **3.9.B. Integration of CAHW and Human Health: Recommendations**

1. Linkages between CAHWs and human health should be pursued diligently.
2. Donors should recognize the complexity of such linkages and should facilitate complete and thorough participatory assessments in each cultural and social context.
3. Assessment and program design should carefully consider the timing of the human health intervention. In most pastoralist areas, it will probably be most appropriate for human health work to follow only after animal health services have been firmly established.

4. Assessment and program design should carefully consider the structure of the HHW system. In some areas, the same individuals may be trained in both human and animal health. In other communities, distinct individuals may be chosen.
5. Assessment and program design should carefully consider the level of human health services to be delivered through CBHHWs. In most pastoralist areas, it will probably be most appropriate for human health workers to serve in the limited capacity of public health service provision. Appropriate interventions might include: national vaccination campaigns, IEC messages, and discrete drug sales such as anti-malarials. After such interventions have been established, a further phase-in should be considered.
6. As PARC-VAC has no in-house technical expertise in human health, the incorporation of human health will require the technical input of other partners. PARC-VAC will also need to draw on the partners' knowledge of the policy environment in human health and their relationships with the human health public sector.
7. NGOs and other implementing partners working in human health should be sought out for either technical input or collaboration and joint programming. Donors should facilitate and encourage these partnerships.
8. Ideally, such partnerships will combine the health sector NGO's experience with PARC-VAC's on-the-ground presence and state-of-the-art participatory methodology.