

Afghanistan and the development of alternative systems of animal health in the absence of effective government

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Summary

This case study describes the efforts by both non-governmental organisations and United Nations agencies to develop an alternative system for delivering animal health services in Afghanistan, during a period in which there was effectively no government. The authors examine the period from the mid-1980s to the year 2003. During this time, Afghanistan experienced war and severe civil unrest, resulting in the collapse of the veterinary infrastructure. As most trained animal health professionals had fled the country, an initial emphasis was placed on training intermediate and lower-level veterinary auxiliary personnel, as well as on the implementation of emergency treatment and vaccination campaigns. Gradually this programme has developed from an emergency-oriented approach to a more development-oriented process, resulting in a community-based system of animal health care in more than 250 districts (out of approximately 360). Some 500 paraveterinarians, trained for a period of five months, play a pivotal role in this programme, supported in outlying villages by trained vaccinators and basic veterinary workers. In this paper, the authors present an estimation of the impact of this programme. Essential elements of the programme are, as follows:

- the recruitment of trainees from areas where need has been identified
- an emphasis on practical and problem-oriented training
- the deployment of staff in so-called 'veterinary field units', supervised by more highly qualified staff and monitors
- a guaranteed supply of veterinary medicines, anthelmintics and vaccines
- a gradually increasing rate of cost recovery.

The ultimate objective of the programme is to establish a self-sustaining system, based on the 'user-pays' principle. The paper concludes by describing the present-day problems of the animal health infrastructure in Afghanistan. Not only must the new government try to regain its central position, it must also assimilate two decades of development in the veterinary sector, which has occurred largely outside governmental control.

Keywords

Afghanistan – Alternative system – Animal health service – Community-based animal health – Cost-benefit analysis – Paraveterinarian – Privatisation – Veterinary field unit.

Introduction

It is clear that innovative systems are needed to deliver comprehensive animal health services during prolonged civil disturbances and when a country has no effective government. Many will view Afghanistan today as a country in a disastrous

position yet, at least with regard to veterinary services for livestock, the situation is promising. There are two reasons for this. The first is that, although long years of civil disturbance have destroyed the capacity of central government, this has created the opportunity to rebuild agricultural production systems, using modern technology and along sustainable lines.

The second reason is that the Afghan people have endorsed the concepts of 'user-pays', tempered with subsidies for the public good, and privatisation of selected services, thus leading towards a sustainable system for the delivery of animal health services.

No one would wish that others should have to experience the hardships suffered by Afghanistan to come to the same conclusions. At the same time, the Afghan experience has a great deal to teach other countries about establishing a user-pays system to deliver 'private good' animal health services.

This case study describes the key technical innovations and services offered by a community-based animal health service which lasted from the late 1980s through to the year 2003, and the policies which enabled such services to be developed. The Afghan Veterinary Department is at an important stage in 2003. On the one hand, the Department is attempting to build a modern public Veterinary Service; on the other, it must incorporate the community-based animal health structures developed in the recent past. The authors hope that this case study will be useful to both policy-makers within Afghanistan and newcomers to the livestock sector, in understanding how the delivery of animal health services has evolved in Afghanistan over the past twenty-five years.

Continuing rural disorder and absence of an effective government

From the mid-1980s onwards, Afghanistan had no functioning government ministries, at least outside the major cities. Neither central government structures nor the claims of local warlords were recognised and, in any case, all of government structures lacked the sufficient technical capacity or funds to perform their responsibilities effectively. Into this void, United Nations (UN) agencies and international non-governmental organisations (NGOs) sought to deliver essential emergency services inside Afghanistan.

Local civil disorder and war were the extremes in which the community-based animal health programme (CBAHP) operated from its inception. Nonetheless, the programme progressed as and when possible, aided by several unique design features. The first of these design features was the 'cross-border' operational strategy (see 'Different veterinary programmes', below). The second was the fact that Afghans could and did operate within the country almost at will. Senior Afghan staff needed good diplomatic and negotiating skills to relate to local commanders, Taliban mullahs or government ministry authorities alike. The veterinary and poultry programmes designed to involve women, in particular, required special diplomacy when dealing with the Taliban authorities but, in general, the CBAHP was able to function throughout the country and over the years, as and when possible.

Livestock production in Afghanistan

Raising livestock represents a major component of the agricultural economy of Afghanistan (3). The farming systems are mainly traditional, but, in most parts of the country, tractors are used for draught as well as oxen, donkeys and horses. In the sedentary farming systems, ruminants are raised under subsistence conditions for household food, manure, draught power and limited sales. The transhumant system caters for large flocks of sheep and goats for the sale of milk products, skins and meat. Both family and semi-commercial poultry raising are present in Afghanistan. All of these livestock systems are resilient, but none has recovered completely from the effects of war and recent drought.

Government estimates of the livestock numbers in Afghanistan in 1978, from 325 districts, were as follows:

- 3.3 million cattle and buffalo
- 24.7 million sheep and goats
- 5.7 million poultry (1).

In 1996, the Food and Agriculture Organization (FAO)/United Nations Development Programme (UNDP) animal health and livestock production programme completed a ground census of 267 districts (82% of the country). The livestock numbers were calculated to be, as follows:

- 1.4 million cattle and buffalo (the vast majority being cattle)
- 18.0 million sheep and goats
- 6.6 million poultry (2).

A combined livestock census from the FAO and Government of Afghanistan for the year 2002-2003, which has yet to be published, indicates approximately:

- 3.5 million cattle and buffalo
- 14.8 million sheep and goats
- 1.5 million donkeys
- 152,000 camels.

Origins of the community-based animal health programme

Different veterinary programmes

Between 1986 and 1989, all veterinary services were undertaken mainly by independently financed international NGOs, situated across the border in Pakistan (4). There was considerable variation in the approach of these NGOs to actually delivering services. Some, such as the Swedish Committee for Afghanistan, trained vaccinators for one month, or opted for organised vaccination campaigns, as did

Experiment in International Living (EIL) and Mercy Corps International (MCI). Others, for instance, the German Afghanistan Foundation (GAF) and the Dutch Committee for Afghanistan (DCA), focused on a longer-trained, intermediate veterinary auxiliary worker, the paraveterinarian ('paravet'). In all cases, services, remedies and vaccines were provided free of charge.

Between 1989 and mid-1994, two separate veterinary programmes were developed and implemented. Both were primarily funded by the UNDP, but also by international NGOs, in addition to bilateral assistance from the Netherlands and Scandinavian countries. The first of these programmes began in 1989, in the south, when a few of the major participating NGOs and the animal health specialists of the United Nations Office for Project Services (UNOPS) further developed and implemented a district-based clinical veterinary service delivery system involving veterinary field units (VFUs), supported from bases in Pakistan.

The term 'veterinary field unit' dates back to a proposal submitted by DCA to the Netherlands Government in 1987. This proposal suggested that lower or intermediate level veterinary personnel be employed within the organisational structure of an VFU, preferably under the supervision of more highly qualified staff. The boundaries of the VFU could coincide with the administrative boundaries of the district. This suggestion formed the base of the 'cross-border' delivery system, which made use of recently developed veterinary clinics staffed mainly by paraveterinarians and supported by basic veterinary workers (BVWs). BVWs are comparable to vaccinators, but are not paid.

International and Afghan NGOs, known as implementing partners (IPs), were contracted to provide logistics, training and supervision of VFUs within Afghanistan, under the umbrella of the UNDP-funded programme. It was largely former employees of the government technical ministries, particularly the Ministry of Agriculture, who formed and staffed Afghan NGOs.

In 1991, the second type of veterinary programme, the 'cross-lines' (across the military lines) veterinary delivery system, began in northern Afghanistan. This system used rehabilitated government clinics and laboratories and village vaccinators, trained at provincial and district levels under FAO management and within the government service, which at that time still existed, to some extent. Even then, funds were limited, so farmers paid for services, remedies and vaccinations. In addition, self-sustainability was a primary goal of the cross-lines programme in the North. Village vaccinators derived their entire income through the sale of veterinary remedies and vaccines and the use of their services. This was, however, sustainability within the context of the former government structure.

The two separate veterinary programmes funded largely by the UNDP, but also by international NGOs, merged after two independent UNDP evaluation missions proposed that the 'southern approach' be used as a model for a nation-wide approach (4). From the beginning, full cost recovery for services, remedies and vaccinations was an objective of this amalgamated veterinary project. Both programmes were merged under FAO management in 1995, to become an integrated livestock programme. With this merger, the VFUs became the basis for delivering veterinary services. The FAO assumed responsibility for providing services and technical support or 'backstopping', and uniform cost recovery policies were adopted in both the North and South of the country. The NGO-IP system was the method of choice for implementing this common programme throughout the country.

The community-based animal health programme

The majority of funds under the UNDP/FAO livestock programme, and from international NGOs, supported clinical and preventative 'private good' veterinary services in Afghanistan at the community level. In the absence of an effective Government Service, some 'public good' services were also supported. The CBAHP included VFUs staffed with various levels of veterinary personnel. The VFU centre was housed in a veterinary clinic, usually in a larger town. These clinics could be, as follows:

- owned houses
- leased shops
- government purpose-built veterinary clinics
- other government buildings loaned to the VFU.

The VFUs were supported by the following:

- training facilities and refresher training curricula
- international and Afghan managers
- senior Afghan staff to provide training, supervision and monitoring
- private-sector businesses and NGOs to obtain and distribute quality-assured vaccines and remedies, as well as extension programmes.

Both international NGOs and the FAO/UNDP programmes actively contributed to the CBAHP. In addition, the FAO/UNDP supported the establishment of a disease investigation unit and a laboratory for enzyme-linked immunosorbent assay (ELISA).

In the climate of emergency aid for Afghanistan throughout the 1990s, with the emphasis on increasing food production and providing a livelihood for returned refugees, the CBAHP aimed to provide primary health care to livestock through preventative vaccinations, drenching against parasites and simple treatments. At the same time, because of predicted

decreases in funding, the programme aimed to ensure that VFU personnel became more and more self-sustaining.

Staff of veterinary field units and basic veterinary workers

Ideally, each VFU consisted of a veterinarian, two or more paraveterinarians (the number depended on the geographical area they had to cover) and between five and ten BVWs. By the late 1990s, VFUs were staffed by approximately 200 veterinarians and assistant veterinarians, 500 paraveterinarians and 1,000 or more BVWs. In total, the CBAHP had management contracts with up to twelve IPs (either international or Afghan NGOs). The VFUs were supervised and supported by the IPs, and gained technical and contract monitoring support from five FAO regional offices and various international NGO support offices.

To expand the reach of clinical veterinary services to more distant villages, farmers were selected from such villages and trained as BVWs. These BVWs received basic livestock health and animal husbandry instruction for one month and, at the end of their course, were supplied with a 'start-up' or preliminary kit of medicines and equipment. The BVWs received no direct financial support other than training, the start-up kit and a bicycle (as an incentive for the most active), plus varying amounts of supervision and coaching from VFU staff. They provided basic animal health care to farmers in villages and earned income from profits on medicines and fees for their services, such as vaccinations and treatments. In practice these local animal health care workers were not very well integrated into the VFU system and 'follow-up' (continuing) assistance and supervision from more highly qualified VFU staff either did not occur or were very limited.

Co-operation between United Nations agencies and Afghan and international non-governmental organisations

From the beginning, CBAHP policy was to spread clinical and preventative veterinary health care as wide as possible. To achieve this, both international and Afghan NGOs were contracted as IPs to manage an ever-increasing number of VFUs. The Afghan NGOs were essential in that their freedom of movement in war-torn Afghanistan was greater than that of the international organisations.

In addition to this structure for managing contracts, in 1996 the FAO/UNDP programme contracted veterinary committees as IPs in Kabul. These committees were composed of experienced animal health monitors from NGOs, VFU staff and senior civil servants. Through being directly involved with operating the VFU system, Kabul-based civil servants quickly came to understand the user-pays system and the motives prompting the drive towards privatisation.

Key technical innovations and services for self-sustainability

Training

As rural Afghanistan had witnessed a complete disruption of existing veterinary services during the decade of Soviet invasion, resulting in an exodus of trained professionals, in general, all early veterinary programmes faced a shortage of trained animal health workers. Therefore, several NGOs established paraveterinarian training courses.

In 1986, the GAF commenced a nine-month course; in 1988, DCA instituted a five-month course, while EIL began a course in Quetta in 1990 (Pakistan). Shorter training courses, usually of between two and four weeks, were also conducted for vaccinators (and later for BVWs), but it was soon realised that vaccinations alone could not provide a living, and that a somewhat higher qualified level of veterinary worker was required to replace fully fledged veterinarians. Paravet training was a cornerstone of all community-based veterinary programmes and is still being offered by DCA. Trainees selected for these courses are preferably high-school graduates and are recruited from their future working area. Paravets assist (or, in reality, take the role of) veterinarians in VFUs, supplemented by BVWs in more remote areas. A comprehensive manual entitled *Training package: basic veterinary worker programme* was written by Dr D. Sherman and Afghan colleagues at MCI and translated by UNOPS into Pushto and Dari (13). Initial and refresher training of BVWs was conducted by the VFU veterinarian and, in some cases, by an experienced trainer (DCA courses). In addition, training schemes were implemented for female BVWs and conducted by women veterinarians in various parts of the country.

The FAO/UNDP programme and NGOs helped to redress the lack of continuing education by making refresher training available for veterinarians or paravets through continuous technical assessment by FAO/UNDP regional veterinary monitors at each VFU site. This assessment included the following:

- a detailed review of the VFU casebook records and joint field visits with IP monitors for consultation and training in the diagnosis and treatment of various cases
- two-week refresher training courses at provincial level for veterinarians and paravets, based on various common problems encountered by VFUs
- the production of a practical manual, in local languages, for VFUs.

Extension

In 1991, the UNOPS programme contracted the British Broadcasting Corporation (BBC) Afghan Language Programme

to develop a drama series for Afghan farmers, broadcasting important issues on livestock health and production. This series also assisted in educating farmers to accept the 'user pays' principle. According to BBC surveys, the programme was seen to be effective in communicating such issues. Therefore, the BBC voluntarily continued to further develop and broadcast the programme with only technical assistance from the FAO and NGOs.

An extension arm within the FAO/UNDP was created to assist in the following:

- reaching the farmer
- trying to help the livestock production effort 'on the ground'; that is, at the farm level
- helping veterinarians of all grades to develop a sympathetic approach to farmers.

Initially, this arm took the form of a conventional extension agent, funded through the NGOs. However, in 1996, training focused on participatory rural appraisal techniques under a programme called Animal Health and Production Improvement Module: Afghanistan (AHPIM, or PIHAM in Dari) (14).

Two factors led to the creation and support of PIHAM. One was the need for extension to improve animal production on the farm. The second was the poor attitude of VFU veterinarians towards farmers. A generic module of PIHAM was adapted for Afghanistan and used to train extension workers (both men and women), VFU veterinarians and even Taliban mullahs.

Availability of quality assured medicines and vaccines

Between 1996 and 2000, veterinary medicines were largely available on full cost recovery, with farmers paying the full costs, but supplies fluctuated in quality and quantity. Only some of the larger international NGOs invested in a distribution network to ensure quality. For more than ten years, DCA has operated its own veterinary remedy distribution network by creating both sales and storage distribution centres serving VFUs in its area of operation as well as in other areas. The European NGO, Mission d'Aide au Développement des Economies Rurales en Afghanistan (MADERA), has established a similar pharmacy supply for its working area.

The FAO/UNDP and field veterinarians established Veterinary Service Associations (VSAs) to import quality medicines in bulk, thus reducing costs. Afghan veterinarians paid an annual membership fee (US\$6) to belong to their local VSA and become eligible to order and receive medicines. The VSA members ordered and paid in advance for the types and

quantities of medicines which they needed. Payment was made in local currency (Afghanis, Pakistani rupees) and individual VSAs granted credit on an individual member basis. Bulk orders were purchased from one or two recognised international distributors. The FAO/UNDP facilitated customs clearance in Pakistan, the main VSA office in Peshawar (Pakistan) managed the distribution of supplies and currencies were converted into the required currency of payment in Pakistan, at local exchange rates. The FAO/UNDP supported the VSAs with accountancy training and some staff members were paid from programme funds. The FAO National Programme Co-ordinator is a member of the VSA board of directors.

These systems for obtaining reasonably priced, quality-assured medicines worked reasonably well before the drought years, which greatly affected the economic position of livestock owners and curtailed the market for all sorts of veterinary services and supplies.

Disease surveillance, the disease investigation unit and the reference diagnostic laboratory

A VFU clinical case reporting system was initiated in late 1995, based on a grouping of diseases by affected body systems. Body systems diagnosis separates clinical diagnoses, as registered by VFUs, into ten categories, based on which body systems are primarily and secondarily affected. The purpose is to understand major livestock health and production problems better, taking into account the limited diagnostic laboratory capacity.

Disease surveillance is one of the major preoccupations of the FAO/UNDP programme, which continues to provide financial support for an Afghan disease investigation officer and an international veterinary epidemiologist. However, the capacity for disease diagnosis is limited to clinical and post-mortem examinations, except in regions close to major laboratories in Afghanistan, such as Mazar-i-Sharif and Jalalabad, which are supported by the FAO and NGOs. A few VFUs are equipped with microscopes and stains but not all are used.

In 1996, the FAO established a modern diagnostic laboratory (located in Islamabad until 2002, then moved to Kabul) centred on ELISA technology. The FAO and the joint FAO division in the International Atomic Energy Agency, Vienna, support the laboratory, which has very competently conducted major serosurveys of rinderpest (in Afghanistan and Pakistan) and peste des petits ruminants (PPR) (Afghanistan). Similarly, the laboratory was and still is used routinely to investigate outbreaks and confirm the presence of PPR throughout Afghanistan, and is recognised as the Afghan reference laboratory for animal disease diagnosis.

Key policies leading to sustainable delivery of services

Government and community responsibilities for delivering animal health services

Certain veterinary services, services for 'the public good', cannot be undertaken without central government planning and supervision. Examples of activities which are generally recognised as coming under government responsibility include the following:

- border protection
- animal health inspection
- animal movement control and quarantine
- laboratory disease diagnosis.

Individual livestock owners are expected to take responsibility and pay for private good services (individual animal treatments, deworming, vaccinations against certain less-contagious diseases, etc.) as they are the ones who receive the primary benefits. It is possible, indeed advisable, for the public and private sectors to share the responsibility for delivering both public and private goods. What is important is for countries to strike an effective and affordable balance between the two (7). The CBAHP attempted to build a sustainable private sector system, the VFUs, thus laying the foundation for being able to contract out public good services. This 'public good' role of the VFUs could then be continued and expanded when a recognised government was in a position to assume its responsibilities.

Theory and practice of privatised veterinary services

In the early 1990s, in the absence of effective government influence, the greatest obstacle to the privatisation of veterinary services seemed to be the attitudes of Afghan veterinarians themselves and of some international agencies which supported veterinary services in Afghanistan. Three major obstacles had to be overcome, as follows:

- the attitude of Afghan veterinarians towards private practice
- the conventional wisdom that farmers either will not or cannot pay for animal health services
- the poor communication between veterinarians and farmers.

Nevertheless, when there was no recognised government to provide resources, and no alternative sources of financing, most of the Afghan veterinary community moved enthusiastically towards cost recovery, privatisation and the self-sufficient delivery of veterinary clinical services.

Clinic-based veterinarians generally preferred to remain in their clinics and wait for the farmers to bring farmer-identified animal health problems to their attention. The idea that a veterinarian should go to the farmer, and go regularly, was difficult to instil (which was the main reason for renaming clinics 'field units'). Nevertheless, changing habits such as these was necessary to establish a financially successful privatised system. Veterinarians, and some international NGOs, also believed that paying for their services would be a major burden for farmers. Yet it has been shown in Afghanistan, and many other countries, that, if farmers are approached with a sympathetic and professional attitude, then fees are not an issue at all and the farmer will pay whatever is asked, within reason, for the ready availability of services and medicines. Service availability and the veterinarian/farmer-client relationship may well be more important than even the quality of the service offered (6).

The FAO introduced PIHAM primarily to encourage the necessary changes in attitude. Thus, PIHAM attempted to teach a questioning, sympathetic, participatory approach from veterinarians, rather than an attitude which assumed the existence of problems and told farmers what to do, providing advice with which the farmer would often not agree nor be able to comply.

Veterinary field unit incentives, the grading system and reducing salaries

Early in the existence of the veterinary programmes, the Afghans, FAO and NGOs working in animal health held numerous discussions, agreeing to gradually implement a user-pays policy and reduce VFU staff salaries. The important role played by the Veterinary Co-ordination Meeting of the Agency Co-ordinating Body for Afghan Relief (ACBAR) should be mentioned here. In brief, ACBAR is an umbrella organisation formed by (mainly international) NGOs. International agencies also actively participate in its disciplinary committees. In 1995, the CBAHP accelerated the adoption of cost recovery and privatisation policies, with the goal of establishing a self-sustaining field Veterinary Service. The end result was expected to be a system where the 'public purse' would pay for work undertaken by veterinarians for the 'public good', while the individual livestock owner paid for the inputs (remedies, vaccines) plus services of value to his or her own animals, i.e. services for the 'private good'.

Reducing VFU staff salaries was of course unpopular. The mechanisms agreed upon to reduce salaries and high subsidies for medicines and vaccines were as follows:

- a) the implementation of a grading system for paying VFU veterinarians and other staff (except BVWs, who never received salaries), which progressively reduced salaries to zero
- b) the gradual reduction of subsidies on medicines to zero, thus gaining full cost recovery (achieved in early 1996)

- c) similar progressive reductions on subsidies for vaccines, to be achieved over several years (and, in fact, not yet accomplished)
- d) the introduction of an agreed contract fee from the FAO/UNDP to VFUs for performing 'public good' services, such as conducting the livestock census, supervising BVWs and monthly disease reporting (these contract payments for public good services were to be taken over by the government when possible)
- e) the provision of a 'start-up package' of veterinary equipment which, in some cases, included a clinic.

The final stage was expected to be direct contracts with VFUs. That is to say, VFUs would no longer need outside management under an IP but be fully self-sustainable and able to manage their own affairs. At this point, VFUs would be answerable to their farmer-clients, to the government Veterinary Department for disease reporting and other public good functions, and to a professional veterinary association for continuing education and discipline. By 2002, this final stage had not been achieved, due to a war for the removal of the Taliban, a severe, prolonged drought (2000-2002) in much of the country and declining donor funds throughout 2001.

However, international NGOs resisted reducing salaries to zero. These NGOs were not convinced that VFUs could be economically viable in the short term, in a war-torn and impoverished Afghanistan, especially with the disastrous effects of the recent drought. Some NGOs (such as MADERA) reduced salaries (but not to zero) as earnings from the user-pays scheme increased. The DCA purchased remedies with its own or donor funds for use as a partial 'payment in kind', in lieu of cash salaries.

In 1995, the FAO/UNDP continued the progressive reduction in VFU salaries, which was partially offset by payment for public good services, such as disease reporting, biannual vaccination campaigns and supervision of BVWs. However, by mid-2000, a reduction in external funding caused an abrupt decrease in all FAO/UNDP-supported VFU salaries to the zero grade. In fact, there were no funds for field work, much less salaries. This was an unwanted shock, coming in the middle of a prolonged drought. The majority of these *de facto* privatised VFUs, however, continued to function and remained in place, albeit at a much reduced level of operation. Paraveterinarians recruited from their own home area were more likely to remain there than veterinarians deployed from elsewhere.

After the fall of the Taliban Government, and during the humanitarian crisis programmes of 2001 to 2002, DCA, other NGOs, the FAO and the International Committee of the Red Cross (ICRC) generally revived animal health programmes with fresh donor funds for emergencies. Newly arrived NGOs and the ICRC paid salaries to private VFUs according to the market demand for skilled staff and to implement emergency programmes.

Afghan veterinary legislation and policies

A significant achievement came when the new level of intermediate veterinary personnel was first officially recognised by the then Government in 2000, mainly as the result of a workshop organised by DCA in 1999. Unfortunately the agreement disappeared, together with the Taliban Government, shortly afterwards.

After 2002, as the Afghan Transitional Government gained international recognition, the Ministry of Agriculture and the Veterinary Department struggled to re-organise their departments and become effective. In 2002 and 2003, the FAO/UNDP programme tentatively began the capacity building process within the Ministry of Agriculture in Kabul. Programme staff moved into the Ministry offices in 2002, providing limited technical and policy advisory support, plus some equipment, vehicles and refurbished offices.

Technical assistance was also provided to assist the Veterinary Department to formulate policies on privatisation, cost recovery and on forming a semi-privatised organisation to produce veterinary bacterial vaccines (8). The current livestock and disease prevention legislation dates from the mid-1980s and does not allow for charging Afghan farmers for veterinary services, nor does it recognise paraveterinarians.

For this reason, Directorate officials were uneasy with any departmental re-organisation or policies which took the VFU system into account or relied heavily on paraveterinarians. With FAO assistance (9), new legislation was drafted for the Veterinary Services in Afghanistan. This draft legislation included the following:

- recognition of the user-pays principle
- recognition of privatised veterinary practices
- the creation of an advisory body, the Veterinary Academic Council
- the modernisation of veterinary hygiene and disease prevention codes and amending of regulations for biological materials.

Measuring the impact

Cost-benefit analysis of the community-based animal health programme

The impact of the animal health programme was measured in a number of ways. First and foremost, Schreuder *et al.* (12) conducted a comparative study, contrasting districts which had VFUs with neighbouring districts which had no animal health care coverage.

The districts with VFUs were situated in four different provinces. Each district had had approximately three years of functional, DCA-provided, animal health coverage. The

selected control districts had had no veterinary care for about ten years. Care was taken to ensure that these control districts were comparable with the districts covered by the animal health programme, in terms of ecological conditions, animal husbandry practices and the effects of war. This allowed a comparison between pairs of districts.

Within each district, three villages were randomly selected. In each of these randomly selected villages, 30 farmers were interviewed. In total, more than 700 farmers were interviewed. Independent enumerators, hired from outside DCA, conducted the interviews.

Overall annual mortality rates differed (in relative amounts, and in favour of the VFU districts) by 25%, 30% and 22% in calves, lambs and kids, respectively. Adult mortality in the VFU districts was reduced by approximately 30%, 40% and 60%, in cattle, sheep and goats, respectively (Table I). The study also provided valuable data on the impact of diseases in the absence of any veterinary intervention. Few countries offered this 'opportunity' of having had no animal health programme for more than ten years.

In addition, an economic assessment was conducted on the data collected in the above survey. The annual financial benefits to regions with animal health coverage, based on differences in mortality alone, were calculated at US\$120,620 per district. Benefits due to increased production were not taken into account. The total cost of providing veterinary services per district per year amounted to US\$24,986. This cost was composed of the following elements:

- operational expenditure (with partial cost recovery in place)
- the value of technical support or 'backstopping'
- the local village contribution (partial payment for medicines)
- the cost of training the personnel.

The results thus showed a benefit-cost ratio of 4.8 for the provision of a preventative vaccination package, deworming and miscellaneous treatment services. Even the 'worst-case scenario' in the sensitivity analysis resulted in a benefit-cost ratio of 1.8, which is well within the bounds of acceptability for a livestock project (11).

The study, however, also revealed limitations in the animal health programme. The positive effects were almost absent in winter, and the programme was of limited value in preventing losses in very young animals, those that were still suckling. The highest positive impact occurred in the period during which animals were in contact with other flocks, i.e. during the grazing season. It was therefore concluded that additional inputs (e.g. extension activities) were required to improve the effect of the programme in winter and in the neonatal period.

Availability of veterinary services

The former government-provided veterinary services were limited in the number of districts they covered and the clinics they operated. Therefore, to most farmers, an increased availability of veterinary services was a new phenomenon. In the beginning, many farmers were not prepared to vaccinate their animals or treat them against parasites or any other diseases. The livestock programmes started in the late 1980s, delivering free veterinary services until farmers began to appreciate the benefits. A charging policy was in effect by 1994 and farmers gradually became accustomed to paying for services, vaccinations and medicines. In 1995, 22.6 million livestock received treatment from the Veterinary Services. Vaccinations (15.1 million), deworming (4.5 million) and other treatments (3 million) were paid for by farmers and administered by VFU staff. Approximately 255 VFUs covered 75% of the districts in Afghanistan, containing the vast majority of livestock.

Table I
Summary of annual livestock mortality in eight districts in Afghanistan over a two-year period, from 1991 to 1992

Type and age category of animal	Four districts covered by Veterinary Services			Four control districts (not covered)		
	Number of animals at risk	Dead animals Number	Percentage*	Number of animals at risk	Dead animals Number	Percentage*
Adults						
Cattle	2,217	84	3.8% (3.6%)	3,227	171	5.3% (6.5%)
Sheep	9,047	745	8.2% (7.2%)	14,433	1,960	13.6% (15.1%)
Goats	5,814	349	6.0% (6.3%)	13,701	2,140	15.6% (13.6%)
Young						
Calves	974	158	16.2% (14.5%)	1,217	262	21.5% (23.1%)
Lambs	4,830	837	17.3% (16.3%)	8,621	2,172	25.2% (31.4%)
Kids	3,343	639	19.1% (17.8%)	6,524	1,602	24.6% (29.5%)

*The first figure was calculated by animal-level analysis, the second (between brackets) was calculated as a mean of the district percentages

Perseverance of veterinary field unit staff

With the reduction in VFU remuneration from the CBAHP from 1995 onwards, many veterinary field staff received very little income other than their fees for services to farmers. In spite of the annual reduction in salary, virtually no VFU staff left for other jobs or businesses. This was particularly the case when the programme implemented by MADERA experienced a temporary lack of funding. The VFU staff 'voted with their feet' to remain (i.e. few left), which was an indication of their ability to provide their families with a livelihood, despite the loss of funding. Whether this is true for other regions as well, and for the period after the sudden withdrawal of external support at the end of 2000, remains to be seen, as this era coincided with an extended period of drought. This issue is presently the subject of an extensive survey.

Conclusions

The CBAHP in Afghanistan laid the foundations for an innovative and financially more sustainable delivery of both animal health and livestock production services in rural areas. The basis of the programme was technical support to privatised VFUs and their personnel, who deliver basic clinical and preventative animal health services to farmer-clients on a user-pays basis. At the same time, the international community temporarily subsidised public good activities. The concept of government contracts for delivering public goods to livestock owners would be endorsed by the Veterinary Department of the newly recognised government Ministry of Agriculture and Animal Husbandry (MAAH). This policy, however, is yet to come into effect.

By late 2003, the MAAH and its Veterinary Department had not accepted or articulated a policy which included the VFU system and its valuable potential for delivering selected veterinary services. The Afghan government ministries were constantly under pressure to provide everything to farmers free of charge, as this had been the policy up to 1979. By 2003, most donors and international NGOs focused on reviving the private sector and marketing agricultural commodities. It is still uncertain whether the concept of cost recovery and the privatisation of VFUs will continue from 2004 and beyond. Nevertheless, unanimous agreement, including that from government representatives, was reached on these issues in a symposium held in Kabul in October 2003 (5).

International donors and UN agencies have yet to fund capacity building for central or provincial technical ministries. However, it is difficult to see how momentum for the balanced delivery of public and private veterinary services will be achieved without the following:

- a viable public sector
- parallel capacity in the private sector (i.e. VFUs, vaccine and remedy distribution)
- a professional Afghan veterinary association.

Public goods, such as disease investigation, quality assured remedies and vaccines, public health and the capacity to control OIE (World organisation for animal health) List A diseases, for the time being, will be absent or ineffective at best (10). If and when the government recognises and performs its public service tasks, it will also need policies that facilitate the delivery of private sector goods and services. Once this circle is completed, the livestock industry will be in a better position to prosper. ■

Développement de systèmes alternatifs de santé animale en Afghanistan en l'absence de pouvoirs publics en activité

B.E.C. Schreuder & D.E. Ward

Résumé

Cette étude de cas décrit les efforts entrepris par les organisations non gouvernementales et les agences des Nations Unies pour établir un système alternatif de prestation de services de santé animale en Afghanistan, à une époque où il n'y avait pas de gouvernement en place. L'étude couvre la période allant de la seconde moitié des années 1980 à 2003, au cours de laquelle l'Afghanistan a connu une guerre et une forte instabilité civile se traduisant par l'effondrement des infrastructures vétérinaires. Face à l'exode d'une grande partie du personnel qualifié en santé animale, les efforts ont tout d'abord porté sur la formation d'auxiliaires vétérinaires de niveau intermédiaire et subalterne et sur la mise en place de campagnes de soins et de vaccinations d'urgence. Par la suite, le programme est progressivement passé du traitement de l'urgence à des processus orientés sur le développement, avec la mise en place d'un système de

santé animale communautaire dans plus de 250 districts (sur un total d'environ 360). Quelque 500 paravétérinaires ayant bénéficié d'une formation de cinq mois ont joué un rôle déterminant dans ce programme, soutenus, dans les villages les plus éloignés, par des vaccinateurs entraînés et des auxiliaires vétérinaires de base. Les auteurs dressent le bilan de ce programme et en soulignent les aspects essentiels, à savoir :

- le recrutement de candidats à la formation dans les zones où ils auront à opérer par la suite ;
- l'accent mis sur la formation pratique axée sur la résolution des problèmes ;
- le déploiement de personnel au sein « d'unités vétérinaires de terrain » encadrées de personnel plus qualifié et de moniteurs ;
- une distribution garantie de médicaments vétérinaires, de traitements anthelminthiques et de vaccins ;
- un taux régulièrement croissant de récupération des coûts.

L'objectif ultime du programme est d'arriver à mettre en œuvre un système financièrement viable, selon le principe de « l'utilisateur payeur ». Les auteurs concluent leur article en décrivant les problèmes auxquels l'infrastructure zoonositaire est actuellement confrontée en Afghanistan. Non seulement le nouveau gouvernement devra s'efforcer de recouvrer son autorité centrale, mais encore devra-t-il tenir compte d'une évolution du secteur vétérinaire qui, depuis vingt ans, s'est jouée en grande partie en dehors de tout contrôle de l'État.

Mots-clés

Afghanistan – Analyse coût-bénéfice – Paravétérinaire – Privatisation – Santé animale communautaire – Service vétérinaire – Système alternatif – Unité vétérinaire de terrain.



Afganistán y la creación de sistemas alternativos de sanidad animal en ausencia de gobierno efectivo

B.E.C. Schreuder & D.E. Ward

Resumen

Los autores describen los esfuerzos de organizaciones no gubernamentales y organismos de las Naciones Unidas para implantar un sistema alternativo de prestación de servicios zoonositarios en Afganistán durante un periodo marcado por el desgobierno del país (desde mediados de los años ochenta hasta 2003). La guerra y los graves desórdenes civiles que Afganistán conoció durante esa época acabaron arruinando sus infraestructuras veterinarias. Toda vez que la mayoría de profesionales cualificados de sanidad animal habían huido del país, en un primer momento se puso el acento en la formación de personal auxiliar veterinario de nivel bajo y medio y en la realización de campañas de emergencia de tratamiento y vacunación. Con el paso del tiempo, aquel programa fue abandonando la lógica de emergencia con la que había nacido para adoptar planteamientos más orientados al desarrollo, lo que a la postre culminó en un sistema de sanidad animal de ámbito comunitario en más de 250 distritos (de un total de aproximadamente 360). En este programa desempeñan un papel central unos 500 paraveterinarios, formados durante un periodo de cinco meses, que en pueblos aislados cuentan con el apoyo de vacunadores formados y de trabajadores veterinarios que efectúan labores básicas. Los autores evalúan las

repercusiones del programa, cuyos elementos fundamentales se resumen en los siguientes:

- contratación de aprendices de zonas donde se prevén necesidades en el futuro;
- énfasis en la formación práctica y orientada a la resolución de problemas;
- despliegue del personal en las llamadas 'unidades veterinarias locales', supervisadas por personal de seguimiento más cualificado;
- suministro garantizado de medicamentos veterinarios, antihelmínticos y vacunas;
- tasa progresivamente creciente de recuperación de los costos.

El objetivo último del programa se cifra en crear un sistema autosuficiente, basado en el principio de que 'el usuario paga'. Los autores terminan describiendo los problemas que conoce actualmente la infraestructura zoonosanitaria de Afganistán. El nuevo gobierno debe no sólo tratar de reconquistar su lugar central sino también asimilar dos décadas de desarrollo de un sector veterinario que ha evolucionado en gran medida fuera de su control.

Palabras clave

Afganistán – Análisis de la relación costos-beneficios – Paraveterinario – Privatización – Sanidad animal de ámbito comunitario – Servicio zoonosanitario – Sistema alternativo – Unidad veterinaria local.



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