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SUSTAINABILITY OF VETERINARY SERVICE DELIVERY – EVALUATION SURVEY IN AFGHANISTAN & TAJIKISTAN

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EXECUTIVE SUMMARY

Interviews with questions around six themes were undertaken with veterinary service providers in Afghanistan and Tajikistan in mid-2012. The questions and themes were designed to understand better the activities and policies that facilitated sustainable provision of veterinary services to livestock owners. Fifteen vet service providers were interviewed in Tajikistan and 13 in Afghanistan. The interviews were conducted in Pashto and Dari which are well understood in both each country.

A higher proportion of veterinary service providers were financially successful in Tajikistan than in Afghanistan. The number of years in practice did not correlate with success. There are numerous factors associated with successful veterinary service providers that are not struggling financially and are enjoying a higher quality of life. Some of these include: higher education (doctor of vet medicine > assistant vet > paravet); multiple income streams and multiple practitioners in each practice; working from a clinic building during the work-day and offering after-hours services from home; access to continuing education courses that could be monetized, i.e. that were practical and relating to services that could be offered to livestock owners; being paid for delivering public good services; working in one's home district; a higher mark-up for remedies; and owning a vehicle for making rural calls more easily, expanding the practice radius and/or for timely artificial insemination services.

In Tajikistan, local publicity and organizational support from district (and central too) government vet offices was deemed most useful for financial success. Such government collaboration or even infrastructure at district level is absent in Afghanistan.

Clients in both countries are generally use to and willing to pay cash for services, remedies and vaccines. At the same time, veterinary providers in both countries extend credit and charity to those they judge to be in need. It is surprising that credit is not used more commonly or effectively as a sound business practice for procuring veterinary remedies and supplies from distributors.

Periodic and frequent 'technical monitoring' with individual animal health care workers at their clinics was deemed essential for success in establishing veterinary practices in each country.

Some activities, policies or practices were identified which negatively affected success and sustainability of vet service providers. First among these is lack of personal security as in some districts in Afghanistan. Lack of security endangers livestock owners and vets as they travel to obtain or deliver treatments for livestock. Insecurity in some districts leads to over competition into the fewer, safer districts. In this study, excessive competition was associated with struggling practices and/or no change or worsening quality of life. Secondly, the lack of governance which allows exploitation by strong-arm commanders or warlords in some districts discourages private vet practices. This extortion may benefit a few in the short-run but could deprive the majority of livestock owners of vet services as providers move to safer districts.

Three recommendations are made for enhancing access and quality of veterinary (and livestock husbandry) services in the coming 10 years in both countries. The first is the **need to reorganize and rehabilitate the public veterinary services** in order to meet international sanitary mandates and protect public health. The delivery of private vet services has somewhat overtaken the capacity of the public vet services to provide for public goods. The second is that national veterinary authorities **need to use contracts for delivery of essential public good services** by private providers. This report shows that multiple income streams are essential for financial sustainability of private vet practices and contracts for delivering selected services are a recognized cost-effective method for financing effective delivery of public goods and services.

The third highlights the **need for revitalizing the agriculture and livestock extension capacity** in order to inform livestock raisers on best production technologies which in turn will lead to demands for additional goods and services and thus additional income streams. How 'financially light' but effective extension messages can be delivered is a most pressing dilemma. But there are several experiments in public-private partnerships in several countries that could offer the way forward.

INTRODUCTION

Institution building programmes for delivering community-based veterinary services in Afghanistan and Tajikistan began in the late 1980s and 1990s, respectively, when the countries were emerging from recent civil strife and clinical veterinary services were not readily available. It is a credit to the UN system which supported development assistance focused on crop and livestock agriculture in these two countries when development banks and bi-lateral funding were absent. The United Nations Agencies, particularly UN Development Programme, UN Office of Project Services and the Food and Agriculture Organization, plus a few international nongovernmental organizations¹ and numerous local NGOs² were the only development assistance partners on the ground during these more than 10 years in the two countries. In later years numerous bi-lateral donors and international NGOs provided essential assistance for the animal health service programmes in each country³

The strategy for implementing community-based veterinary services drew heavily upon policies and practices that evolved earlier in sub-Saharan African countries and from longer traditions in industrial countries. In particular, basic clinical services and remedies were made available for livestock owners on a fee-for-services basis, delivered by local veterinarians and/or animal health cadres who received refresher training on practical, modern clinical medicine, surgery and husbandry practices for large and small ruminants. These veterinary workers became private practice veterinarians⁴ who were technically competent to deliver clinical medicine and surgery and supported to practice; the importation of quality assured veterinary remedies and vaccines was liberalized and these products were to be readily available and used in the private veterinary practices. Being private practice veterinarians did not preclude working with and even being employed by government units to deliver selected public good tasks.

The strategy for delivering community-based vet services was based on experiences and assumptions (Annex1) from other developing countries and Western veterinary medical culture. More practically, in Afghanistan community-based services (as part of a larger crop, horticulture and livestock agriculture programmes) were established separately in the southern and northern halves of the country in order to materially assist much of the population. Rural areas were selected because this is where the farming was done and cities were largely insecure and what infrastructure built was likely to be destroyed by fighting. Similar reasoning was used in Tajikistan – to help the largest proportion of the poor who happened to be rural and have livestock. Sufficient funds were not available in the late 1990s to rehabilitate both the community-based and the central government veterinary structures. The success in Afghanistan encouraged restoring community-based clinical services next in Tajikistan.

The intention was to empower a large cadre of professionals covering most of the livestock raising areas to deliver curative and preventive services in demand by livestock owners as well as selected public good services for government. This cadre would deliver a practical mix of private and public

¹ Agha Khan Foundation (AKF), Dutch Committee for Afghanistan (DCA), German Afghan Foundation (GAF), Mission d'aide au développement des économies rurales [Aid Mission to the Development of Rural Economies] (MADERA), Mercy Corps International USA and UK (MCI), International Rescue Committee (IRC) and International Committee of the Red Cross (ICRC).

² In Afghanistan: Pamir Rehabilitation Bureau (PRB) and Committee Rehabilitation Aid to Afghanistan (CRAA).

³ Swedish International Development Cooperation Agency (SIDA) for fundamental support to veterinary privatization in Tajikistan, United States Aid for International Development (USAID) for extensive training under the Afghan Veterinary Association in Afghanistan and OXFAM for artificial insemination training in Tajikistan.

⁴ Private practice veterinarian or private practice animal health worker are persons who provide primarily clinical veterinary services (diagnosis, treatment and surgery), preventive vaccinations or herd health and production services such as deworming, control of external parasites, advice on nutrition, breeding or animal management and receive fees from animal owners for the services and remedies provided. They are also known as private vet, FAO Contractor, Veterinary Field Unit (VFU) vet or assistant vet or paravet. In contrast to government employed veterinarians who provide primarily public services including administration, inspection and laboratory diagnosis and who receive a salary from a state or local governmental unit.

goods and services, be paid market prices for their clinical services, and contracted for delivery of public good services under the supervision of government. It was not intended that only a purely private goods veterinary sector be set up as this is not the reality elsewhere. In the end, reforming and rebuilding the public sector animal health institutions was rather neglected which, among other effects, has constrained the financial viability of the 'private sector' veterinary workers to this day in both countries.

This private sector concept for establishing clinical and preventive veterinary services in communities in both countries was quite new. In the past, fees for veterinary services and the sale of medicines from the veterinary services were not allowed. In addition, most farmers in Afghanistan were not used to a non-government veterinary service and were not ready to pay for a private sector one. In Tajikistan, government veterinarians were available in limited areas but were not allowed to stock and sell medicines or charge farmers for services. Without government support for salaries or supplies they were unable to deliver needed clinical or preventive services.

Origin of programme names

The rationale for the VFUs gradually changed toward the concept of 'private veterinary practice' in the sense understood in Western industrialized countries. With the change in rationale, names used changed too, from 'VFU vet' to 'private clinic' or 'private vet' (in Afghanistan) and 'VFU vet' or 'FAO contractor' (in Tajikistan). As VFUs became better established in each of country, and some non-viable VFUs dropped out, the emphasis shifted toward 'privatization' which included changing laws to legalize private veterinary practice, enhancing continuing education courses on offer, wider distribution of quality assured remedies through base stations, training in practice management, and in client relations (PHIAM in Afghanistan).

Several key concepts from veterinary medicine in industrialized countries were periodically introduced, e.g. veterinary professional associations and licensing boards for vets and others based on educational qualifications and/or examinations. These institutions and policies are more applicable to private vet practices than to the early concept of VFUs. Thus 'veterinary field unit' was most often used in the questionnaire as this is what veterinary service providers in the field best understand. But the term 'private veterinary practices' (PVPs) best describes the current function, concept and business of providing animal health goods and services in the two countries today.

The several names used to denote community-based veterinary service programmes in Afghanistan and Tajikistan evolved as the programmes changed. In early days in Afghanistan (late 1980s – early 1990s), veterinary field unit (VFU) was used as the emphasis was on actually getting vet services' delivery up and functioning with less emphasis on privatization *per se*. A VFU generally consisted of one veterinarian and two paravets who were assigned in each district with five to ten Basic Veterinary Workers stationed at village level to deliver veterinary services. Cost recovery for goods and services was always the policy, but introduced with some resistance, and salaries were paid in cash or in-kind in order to kick-start the required basic services in rural areas. In Afghanistan as VFU service providers became better established and programme support activities, e.g. technical monitoring, importation of quality assured remedies, continuing education courses, technical backstopping, were functioning effectively and farmers awareness about the availability of veterinary services improved, salaries and in-kind support were systematically reduced and withdrawn. This withdrawal process, however, went on for more than 20 years! In Afghanistan, salary support for district and provincial veterinarians was withdrawn in stages in 2009 and 2011. Today, the Afghan official public vet service is furthest along in structural reorganization and reforming among former Soviet Union countries.

In Tajikistan, the same principles applied for making vet services available in rural areas but donor budgets were so small that salary support or in-kind support was not possible. Additionally Tajik VFU providers in most cases continued receiving a government salary, and still do today, even if the amount received is only a token. In addition, unlike in Afghanistan, in most Tajik communities local veterinarians were present even if they lacked clinical training or access to equipment and supplies. Any additional support from the projects was welcomed.

Sample selection of private veterinary practices for interviewing

In both countries, initial selection of PVPs for interviewing was based on the number of years in private practice and including providers with DVM degrees, assistant vets, paravets, animal health technicians and basic veterinary workers as recognized providers of animal health services. The selection criteria (page 1 of questionnaire, Annex 2) were provided in advance to responsible authorities in each country for preparing an initial list of eligible PVPs in each category. In practice those PVPs selected for interviews were somewhat of a 'convenience sample' based on time and funding constraints and, particularly in Afghanistan, on security constraints.

In Afghanistan at the time of the survey, there were approximately 199 private veterinary practices recognized by the Ministry of Agriculture, Irrigation and Livestock⁵. The lack of security for field visits limited where PVPs could be contacted. Thirteen interviews were carried out over 10 days with 6 persons interviewed in Kabul city plus five surrounding districts and 12 persons interviewed in Nangarhar province. Of the 13 completed interviews, data from number 23 were included in the table but not used for statistical calculations for reasons described in footnote 17, Table 1.

In Tajikistan there are 787 PVPs recognized by the Association of Veterinarians in Tajikistan (AVT)⁶. As above, selection criteria were sent in advance to the head of the AVT for preparation of an initial list of PVPs meeting the criteria. Again the fifteen PVPs interviewed were selected on convenience in two Oblasts in the central and southern half of the country as time and funding were limiting. Five interviews were carried out in Direct Rule Districts and 10 in Khatlan Oblast in the central and southern parts of the country. Of the 15 completed interviews, data from numbers 3 and 10 were included in Table 1 but were excluded from statistical calculations for reasons given in footnotes 8 and 11, Table 1.

The evaluation of private veterinary practices in Afghanistan & Tajikistan

This evaluation of the veterinary services in Afghanistan and Tajikistan was undertaken by the Food and Agriculture Organization (FAO) with the aim to review the perceived success and quality of life of PVPs today, highlight activities or policies that facilitated establishing private practices, identify options for improving present practices and suggest the way forward with essential policies, practices and tasks for the next 10 or more years. With the lessons learned, strategies for sustainable delivery of community-based veterinary and animal husbandry services could be initiated in other countries of the former Soviet Union and in others where governance has fallen down or where present services do not meet the needs of modern animal agriculture.

The subjective evaluation was undertaken by means of interviews using largely open-ended questions under six themes. Interviews took place from 25 April through 11 May 2013 in the two countries with three categories of private animal health workers, those who have been in private practice for 10 or more years; those who practiced for about 3 to 9 years; and those who quit their private practices and later returned. The interviews were in Pashto as well as in Dari which are well understood in Afghanistan and Tajikistan. The interviewer is an experienced Afghan vet, a native Pashtun speaker who is also fluent in Dari and who speaks and understands Tajik, Russian, English and French as well.

⁵ Kakar, S. S. (2012) *Post-Privatization Assessment Report of 199 privately operated Veterinary Clinics*, Government of Afghanistan - World Bank Horticulture & Livestock Project. pps 19.

⁶ Mahmadvazar Kashkuloev, Chairman, Association of Veterinarians in Tajikistan, personal communication

Figure 1. Interview scene in Tajikistan



Table 1. Summary of interview information

No.	Age	Afg/ Taj	District	Province	Edu	Private Practice	Pharm	AI ⁷	Lab	Practice Alone	Urban/ Rural	Years in PVP	Comp' tion	Success/ Struggle	Quality of life	Salary/ Pens.	Comment	
1	55	T	Rudaki	Dushanbe	DVM	Y	N	Y	N	Y	R	9	N	SU	MI	N	Dairy practice	
2	55	T	Gissar	Dushanbe	DVM	Y	N	N	N	N	R	13	Y	SU	NO CH	S		
3	54	T	Gissar	Dushanbe	DVM	N	N	N	N	--	R	10	--	ST	NO CH	S	NOT USED ⁸	
4	46	T	Shakhrenaw	Dushanbe	DVM	Y	N	N	N	N	R	6	YY	ST	NO CH	S	2 yrs Moscow	
5	47	T	Shakhrenaw	Dushanbe	VA	Y	Y ⁹	Y	N	N	R	11	Y	SU	MI	S		
6	63	T	Danghara	Khotlan	VA	Y	N	N	N	Y	R	12	N	SU	MI	S		
7	59	T	Danghara	Khotlan	VA	Y	Y ¹⁰	N	Y	N	R	12	Y	SU	MI	S	Dairy practice	
8	43	T	Kulob city	Khotlan	DVM	Y	Y	Y	N	N	R	4	Y	SU	MI	S		
9	51	T	Kulob city	Khotlan	AV	Y	N	N	N	Y	U/R	7	YY	ST	NO CH	S	3 yrs Moscow	
10	63	T	Kulob city	Khotlan	AV	N	N	N	N	--	U	8	--	ST	NO CH	S	NOT USED ¹¹	
11	63	T	Temormalik	Khotlan	DVM	Y ¹²	N	N	N	Y	U/R	12	N	SU	MI	S/P		
12	53	T	Temormalik	Khotlan	AV	Y	Y	N	N	N	R	3	YY	ST	NO CH	S		
13	44	T	Kurgan Tube	Khotlan	AV	Y ¹³	N	N	N	N	U	13	YY	ST	NO CH	S	Pet practice	
14 ¹⁴	42	T	Kurgan Tube	Khotlan	DVM	Y	Y	N	N	N	R	17	Y	SU	MI	S		
15	48	T	Wakhsh	Khotlan	DVM	Y	N	Y	N	Y	R/U	25	N	SU	MI	S	Also Head Dist. Vet	
Ave	51.5	Median: 51; Range 40 to 63 years of age										Ave	11.1	Median: 12; Range 3 – 25 years of private practice				

⁷ Artificial insemination of cattle

⁸ Not used because he is now Deputy District Vet and not serious about private practice; has high government salary; previously had a successful PVP & AI practice

⁹ Has small pharmacy only for daily use

¹⁰ Practices with his 2 sons both are MDs and who run the pharmacy selling human and animal remedies which are 40% of family income.

¹¹ Not used because now Deputy District Vet and inactive from private practice

¹² Retired but still has successful practice; main business is clothes and food shop that his son runs

¹³ 2 times worked in Moscow; last re-started PVP in 2011; 40 – 60% of income from pets

¹⁴ Never received FAO training or support; mark-up medications by 20 – 25%

No.	Age	Afg/ Taj	District	Province	Edu	Private Practice	Rec'ed vet kit 2009/11	Pharm	AI	Lab	Practice Alone	Urban/ Rural	Years in PVP	Comp' tion	Success/ Struggle	Quality of life	Salary/ Pens.	Comment
16	57	A	Ferza	Kabul	AV	Y	Y	N	N	N	Y	R	3+	YY	ST	W ¹⁵	N	
17	57	A	Guldara	Kabul	AV	Y	N	N	Y	N	Y	R	2	Y	SU	MI	P ¹⁶	Dairy practice
18	41	A	Phagman	Kabul	PARA	Y	N	Y	N	N	N	R	20	N	SU	NO CH	N	Dairy practice
19	48	A	Charasiab	Kabul	PARA	Y	N	Y	N	N	N	R	6	Y	SU	MI	N	
20	34	A	Kabul/Jal.	Kabul/Jal.	DVM	Y	Y	Y	Y	Y	N	U/R	8	N	SU	MI	N ¹⁷	
21	56	A	Sarobi	Kabul	DVM	Y	Y	Y	Y	Y	Y	R	17	Y	ST	MI	N	
22	52	A	Behsud	Nang.	PARA	Y	N	Y	Y	N	Y	R	10	YY	ST	NO CH	N	
23	47	A	Behsud	Nang.	PARA	Y	N	N	N	N	Y	R	4mo	YY	ST	NO CH	N	NOT USED ¹⁸
24	57	A	Mohmandara	Nang.	DVM	Y ¹⁹	Y	Y	Y	N	N	R	15	Y	ST	MI	N	
25	56	A	Surkhrud	Nang.	PARA	Y	Y	Y	Y	Y	N	R	14	YY	ST	MI	N	
26	47	A	Khewa	Nang.	VA	Y	Y	Y	Y	N	Y	R	13	Y	ST ²⁰	MI	N	
27	28	A	Darae Noor	Nang.	PARA	Y	Y	Y	N ²¹	Y	Y	R	7	YY	ST	NO CH	N	
28	53	A	Ghanikhil	Nang.	PARA	Y	Y	N	Y	Y	Y	R	8	YY	ST	NO CH	N	
Ave	48.8	Median: 52.5; Range 28 – 57 years of age										Ave	10.3	Median: 9; Range 2 – 20 years of private practice				

Code

Y	competition, other vet service or AI providers in the area	YY	heavy competition, many local service providers which significantly reduce incomes
N	not present or no significant competition		
ST	struggling to make a living or income from private practice activities	SU	successfully making a reasonable living or income from private practice activities
NO CH	no change in quality of life over the last 5 years	MI	much improved quality of life over the last 5 years
S	Salary	P	Pension
			W worse off

¹⁵ This PVP commutes 20 km to his government-designated clinic 5 days per week; this is not his home district, he lives far from the clinic which is located in a low potential area with low livestock density and significant competition from other providers.

¹⁶ On pension; charges less than colleagues in his area

¹⁷ Works in 2 clinics: one the well-equipped Afghan Vet Association clinic in Kabul, one in Jalalabad

¹⁸ Discontinued PVP and recently re-started; primary job is teacher 90%, PVP 10%

¹⁹ Works in 2 clinics; pharmacy sells both human and animal remedies

²⁰ Security is major financial constraint: commanders / warlords demand he treats their livestock (dairies) but refuse to pay

²¹ Desires and is trained to offer AI but government Agriculture Department prohibits

Table 2. Summary of key indexes

Index	Afghanistan (%)	Tajikistan (%)	Overall (%)	Proportion in study population (%)
Success vs. Struggling				
Total	4/12 (33)	9/13 (69)	13/25 (52)	
DVMs	1/3 (33)	6/7 (86)	7/10 (70)	10/25 (40)
Assist Vets	1/3 (33)	3/6 (50)	4/9 (44)	9/25 (36)
Paravets	2/6 (33)	n/a	2/6 (33)	6/25 (24) ²²
Quality of Life				
Much improved	7/12 (58)	8/13 (62)	15/25 (60)	
Worse off	1/12 (8)	0	1/25 (4)	
No change	4/12 (33)	5/13 (39)	9/25 (36)	
DVMs				
Much Improved	3/3 (100)	5/7 (71)	8/10 (80)	
Worse off	0	0	0	
No change	0	2/7 (29)	2/10 (20)	
Assist Vets				
Much Improved	2/3 (67)	3/6 (50)	5/9 (56)	
Worse off	1/3 (33)	0	1/9 (11)	
No change	0	3/6 (50)	3/9 (33)	
Paravets				
Much Improved	2/6 (33)	n/a	2/6 (33)	
Worse off	0	n/a	0	
No change	4/6 (67)	n/a	4/6 (67)	

SKILLS

Preparation, veterinary education and continuing education

Summary & analysis

Education & qualifications

Overall DVMs ran more financially successful practices (70%) and reported a much improved quality of life (80%) than did the assistant vets or paravets. DVMs' practices were particularly financially successful in Tajikistan (86%). Only 40 percent (6/15) of assistant vets and paravets in both countries considered themselves running financially successful practices. Only one-third of all three classes of vet service providers in Afghanistan considered they were running a financially successful practice.

Interestingly 60 percent of vet service providers judged their quality of life to be 'much improved' in all three provider groups in both countries. Thirty-six percent reported 'no change' and 4 percent (1/25) reported being worse off. See Table 2

Refresher & continuing education courses

The early VFU programmes in both countries emphasized refresher training and continuing education (CE) as essential for delivering vet services in communities. Multiple CE courses were given annually usually by national experts but occasionally from international specialists. PVPs noted that, in addition to the Introduction course, the AI and laboratory CE courses were most useful as they obtained skills that were in demand and could be monetized. Other courses were less useful at the time as they were not practical for daily needs (wildlife diseases) or government-related programmes they were intended to support (sanitary mandate) did not exist.

²² Paravets exist in Afghanistan but not Tajikistan

There was little imagination for proposing additional courses. But analysis of the survey suggests that it seems most desirable to offer a variety of CE courses annually in order to encourage 'specialty practices' based on species and local demand. In addition to basic CE courses on food animal diseases and surgery and treatment of reproductive diseases, it seems useful to include courses on equine diseases and lameness, diseases and surgery of pet animals, herd health medicine, and feeds and feeding. These specialties are in demand in some areas and are being developed by a few vets in the two countries.

Resource materials & contacts

Most PVPs had textbooks (in Russian but printed in the 1950s and 1960s) and limited, more recent, brochures or guidebooks printed in local languages. One successful DVM used the internet for assistance with diagnosis and treatment.

The use of mobile phones was common to all PVPs for contacting colleagues for advice on difficult cases and for following up the progress of cases treated with livestock owners. In Tajikistan, the veterinary association maintained a 'hot line' for PVPs for advice on difficult cases, reporting disease outbreaks and other urgent needs.

Technical & business aids

No interviewee stated that he was trained to 'recognize the good quality remedies and vaccines in the market' but they intuitively mentioned useful methods. These methods included official registration certificate issued by the government drug control department (Tajikistan), expiry date, company trademark, package design and recognizable colour or taste.

Given that quality assured remedies are basic for expecting good treatment outcomes and satisfied clients, CE courses might include basic therapeutics for farm animals, horses and pets plus the ethics of selecting quality assured remedies and vaccines. Likewise, government enforcement to ensure that sub-standard, poor quality and non-registered remedies and vaccines are kept out of the market could be a priority.

Surprising findings

The finding that DVMs were more successful in rural practice is surprising. It was assumed that DVMs were less likely to remain in rural areas instead preferring employment in the larger cities. Perhaps when the infrastructure is in place and supported and clients pay cash money for services, rural private practice looks attractive compared to alternatives. Also DVMs enjoy more prestige and respect in smaller towns that they might not receive in larger cities. Low government salaries, or lack thereof in Afghanistan, could be a strong force for DVMs and others to move to rural areas to practice their specialty.

The wide use of mobile phones for building practice clients and income was initially underappreciated.

Opportunities & threats

The positive role played by ready and wide access to mobile phones was not anticipated in early designs of the VFU programmes. There is good opportunity for incorporating mobile phone technologies for obtaining clinical assistance, disease surveillance and reporting and case follow up. Perhaps payments made over a mobile phone for goods and services will come to these countries and animal health providers can take advantage of this convenience too.

LOCATION

Physical, demographic and cultural features

Summary & analysis

Clinical practice setting, services on offer & practice management

Smallholders or large farmers and their food animals were usually the top two client groups of virtually all PVPs. The ability to reach these clients proved to be a critical constraint to successful practice especially in Afghanistan. And project designers assumed that mobility was critical for financial success and sustainability. The vet kits in both countries included a conventional bicycle, a battery run electric bicycle (in Tajikistan) or a motorbike (in Afghanistan). Some more successful PVPs own a car or have access to one for practice use. Even without owning or access to a vehicle, PVPs could organize a taxi or livestock owners would send transport in order to fetch the animal health provider.

Early on in the VFU programmes in each country PVPs expressed a felt need to ‘have a vet clinic’ from which to operate. This felt need was always weighed against the recognized need (above) for being mobile to reach rural clients. Based on experience in industrial countries where nascent PVPs are often started from the practitioner’s home with a pick-up truck for transport, building clinics was not assumed to be a priority in either country. And due to financial limitations, there were never sufficient funds to provide both. In Afghanistan in the late 1990s, an FAO financial sustainability study²³ found that PVPs were reluctant to own a clinic building due to potential civil insecurity. Renting shops in the bazaars (Afghanistan), practicing from rooms in the family home or using government-owned former vet clinics (both countries) rent-free were the most common practice settings. In Tajikistan with more security, FAO/SIDA through the Association of Veterinarians of Tajikistan and the Agha Khan Foundation made loans available for building clinics. Several Tajik vets took the loans for building a clinic and/or bovine artificial insemination (AI) capacity. All of these loans are being repaid satisfactorily. In fact in both countries, most PVPs work from a clinic building (rent-free) during normal working hours but after-hours services (a clinic and/or pharmacy) are available in their home.

Successful PVPs in both countries tended to: 1) serve in their practice area for many years, 2) work in their home district, i.e. the district of family origin, 3) be in ‘higher potential’ areas, i.e. where there are plenty of livestock (particularly dairies), and 4) have few other competing practitioners. Total years of private vet practice did not correlate with success/struggling or higher quality of life in either country. Where competition was felt to significantly depress practice income (YY in Table 1), every PVP (100%) in each country with a ‘YY’ rating also was ‘struggling’ to make an acceptable family living. Most (7/9, 78%) of these PVPs with high competition (YY) listed ‘no change’ for income status over the last 5 years; one practitioner was ‘worse off’ (11%), one was ‘much improved’ (11%).

Those PVPs who quit their practices, say for work in Russia or as a teacher, and returned had a particularly difficult time in re-establishing their clientele and being financially successful. Only one of four (a paravet in Afghanistan) who abandoned a practice then restarted was financially successful after more than 5 years.

‘Practicing alone’ has a relationship with financial success or quality of life scores. In Afghanistan 3 of 4 (75%) and in Tajikistan 5 of 9 (56%) of financially successful PVPs report they work with one or more colleagues. This finding is not surprising and supports experience elsewhere that working with colleagues to offer 24/7 access to multiple services, some in the clinic and some on the farm, is most efficient and financially rewarding.

²³ Ostrom, Kjell (1997) *Self-sustainability of Veterinary Field Units* (AFG/96/007). FAO, October 1997, pps. 30.

Both countries lack a culture of ‘multi-person’ practices where both facilities and clients are shared as needed to provide the required services on a daily basis. Even when interviewees report working with 2 – 3 colleagues from a clinic building, they remarked that ‘each has his own clients’. In Afghanistan PVPs ‘fight’ for clients throughout their districts which were assigned when they accepted (contracted) the vet kit in the privatization programme. These contracted PVPs compete with non-contracted PVPs in the same district for clients. In Tajikistan district-based PVPs democratically assigned villages within the district among themselves with the priority to provide services to their assigned villages.

High levels of competition (YY in Table 1) come when multiple PVPs, working from the same clinic or same town, are each struggling for clients in low potential areas with few livestock.

Income sources & charges

In general income from private clinics and/or pharmacies, laboratories or AI were all necessary for generating a sufficient family income. Frequently the family also farmed some crop land and raised livestock (milking cows, small ruminants). By end-2011, nearly all field vets in Afghanistan did not receive any government salary or in-kind assistance. In Afghanistan, one 57-year-old assistant vet receives a pension and runs a successful dairy practice. Part of his financial success comes from this pension and the fact that he ‘charges less than competitors’ in order to build clients.

In Tajikistan, most PVPs are government employees who primarily conduct a private practice but receive a government salary, albeit a token sum. In addition to earnings from practice and government salary, many also offer pharmacy and/or AI services. Interestingly, no Tajik interviewee listed tasks performed for the government in exchange for his monthly salary. Tajik PVPs, however, do collect blood samples for disease surveillance annually for testing and delivering to the laboratories and are supposed to provide quarterly and outbreak reports to District or Central State Veterinary Inspection Service (SVIS) officials in exchange for their salaries. Most of them receive some vaccines free of charge from the SVIS and charge farmers a modest service fee for vaccine administration. These salaries are rather low, not sufficient to support a family and certain fees are subtracted from monthly government salaries. Nonetheless, these small salaries provide a cushion for carrying out a private practice.

Of note is that all 4 dairy practices in the two countries were judged as ‘successes’ and 3 (75%) reported ‘much improved’ quality of life while one reported ‘no change’. All but one dairy practice also offered AI services. It is hard to separate out these two effects on success but as in other parts of the world, dairy practitioners tend to remain busy most of the year and have higher earnings compared to other types of vet practice. CE for dairy medicine and AI potentially offer a high pay off in terms of financial success for PVPs.

The majority of PVPs who offered AI (83%) services or ran pharmacies (69%) was either judged ‘successful’ and/or had a ‘much improved’ quality of life. Likewise, 3 of the 5 (60%) PVPs who offered in-clinic laboratory diagnostic services reported ‘successful’ practices and/or a ‘much improved’ quality of life. Practices offering all three services did not differ significantly from the above findings. Thus this data supports the assumption and experience that multiple income streams are required for financial success.

With few exceptions, PVPs in both countries follow a rather standard formula of client charges. This formula for clinical services and remedies includes the cost of remedies and preventive vaccines + 15 – 20 percent markup charge on each + service charge + syringes, needles or other consumables + transport charge (fuel or hired taxi). When the government issues free vaccines²⁴ for controlling state-mandated diseases (i.e. anthrax and others), PVPs must not charge for the cost of the vaccines *per se*.

²⁴ So-called ‘free’ government produced or procured vaccines may actually be sold illegally to the PVPs who then must apply a charge to livestock owners in order to recover this initial charge. This is one example of corruption in the countries.

But PVPs are allowed to charge a service fee of 12 – 15 US cents per dose of vaccine administered. In Tajikistan, and presumably in Afghanistan, vaccines bought on the market are costed at a markup of 15 – 25 percent and administered with a per dose service fee as well.

In Tajikistan, PVPs earn considerable income from seasonal vaccination campaigns for brucellosis control under the National Brucellosis Control Programme (NBCP) which started in 2003. FAO, donors and government implement the NBCP which includes biannual vaccination and ear notching of vaccinated sheep and goats. In 2009 FAO carried out an extensive study²⁵ on partial cost-recovery where it was determined that small ruminant livestock owners were willing to pay 50 Dirhams (~12 US cents) for each small ruminant vaccinated and identified. This fee is collected by PVPs with government and/or donors covering the remainder of costs. The transaction costs for this partial cost-recovery scheme are very low. Vaccination coverage remains over 70 percent of eligible animals and brucellosis prevalence was reduced by up to 80 percent in well vaccinated districts after 6 years of this NBCP²⁶. Local governments and/or village committees help organize and publicize these biannual campaigns.

In Afghanistan, PVPs do not mention receiving support from local government agencies perhaps because the field vet staff was downsized in 2009 and 2011. The Ministry of Agriculture, Irrigation and Livestock's (MAIL) Directorate of Animal Health is initiating a sanitary mandate programme whereby PVPs will be contracted to provide specific disease surveillance and control tasks. The Afghan National Brucellosis Control Programme started in the fall of 2013 as one activity under the sanitary mandate which should provide another income stream for some PVPs through contracts. The downsized staff of Provincial Veterinary and Livestock offices has the opportunity to advertise and support brucellosis campaigns in the country.

Pet practice is another emerging income stream for some PVPs. Pet practice accounts for from 1 to 60 percent of PVP income but generally is between 5 – 10 percent. Nonetheless, CE for basic pet animal medicine, surgery and preventive vaccinations seems warranted in practices where this specialty can be better developed.

Demographics

The average age of PVPs in Tajikistan was older by nearly 3 years (51.5 versus 48.8) but median ages were about the same at 51 years in Tajikistan versus 52.5 years in Afghanistan (Table 1). The age range of PVPs in Tajikistan's was narrower and older (40 – 63 years) while PVPs' ages in Afghanistan ranged from 28 – 57 years. The youngest PVP interviewed in Afghanistan was 28 years old while in Tajikistan the youngest interviewee was 42 years old.

For Tajikistan, the median age for males is 22.7 years and life expectancy is 66.7 years. In Afghanistan, similar statistics are 17.9 years and 50.1. For comparison, in Kazakhstan the median age for males is 28.1 years and life expectancy is 69.9 years. Some of effects of long-term civil war in Afghanistan on the population are evident.

In both countries, working for many years in the same district which happens to be the PVP's family home district, is associated with financial success. And those PVPs who are struggling tend to be located outside of their home districts and face significant competition from other providers.

Surprising findings

The consistency of the formula for charging clients, and the amount of markup, is surprising. Perhaps there is collusion among vets in both countries in setting costs for treatments, remedies and travel.

²⁵ Ahuja, Venod, Rukhshona Rajabova, David Ward & Anni McLeod (2009) *Willingness to pay for disease prevention: Case of brucellosis control in Khatlon Oblast of Tajikistan*, FAO, Rome, pps. 65.

²⁶ Ward, D, R. Jackson, H. Karomatullo, et al. (2012) *Brucellosis control in Tajikistan using Rev 1 vaccine: change in seroprevalence in small ruminants from 2004 to 2009*. Vet Record 170: 100 – 106.

More likely the few business courses and intuition are responsible for the similarity of method and rates of charges.

There was more variation in charges for AI services which ranged in Afghanistan from about Afs 200 (USD3.7) – Afs 600 (USD11.1) and in Tajikistan from 50 Somoni (USD11.6) – 100 Somoni (USD23.3). These charges include cost of the semen, insemination fee, consumables and transportation. The higher fees are charged for AI services delivered in the farm as opposed to cows inseminated at the clinic.

There is a conspicuous lack of public goods or tasks mentioned by interviewees in both countries. In Afghanistan this is perhaps understandable as of end-2011 the government provincial vet service was downsized and salaries no longer paid to field vets. We did not interview any remaining government vets. In Tajikistan, most PVPs receive a token government salary but none reported carrying out any public services or tasks in return even though they do mandatory vaccinations when the government provides free vaccines, collect blood samples for sero-surveillance, and they are supposed to provide outbreak information and quarterly disease reports.

Opportunities & threats

Reviewing the methods of selection of practice areas or assigning PVPs to clinics and areas needs to be examined with the object to obtain a better (thinner) distribution of PVPs in a country. The insecurity constraints in Afghanistan certainly influence the areas where PVPs can start up much less be successful or sustainable. Unless and until security improves in Afghanistan, this constraint will be formidable.

There are opportunities for reviewing charging formula. It is not clear that charges can go significantly higher as few practices are actually testing this. However PVPs who charge 20 – 25 percent markup for remedies were more frequently successful than the majority who charged only 15 – 20 percent markup.

As for vaccinations (and deworming), charging a rather high price per dose could be detrimental to PVP incomes as well as disease prevention. Wider vaccination coverage against preventable diseases (FMD, anthrax, PPR, clostridia, sheep pox) will reduce losses and improve livestock productivity. PVPs could consider charging only a normal markup of the price of vaccines (as they do now to cover breakage and outdating) but charge an hourly fee for work done (plus transportation and consumables). Charging on an hourly basis for rather routine work such as vaccination or deworming could be a win-win situation where vaccination coverage of village livestock is much higher (due to lower individual animal costs) but PVPs will vaccinate and/or deworm far more animals when villagers have an incentive to facilitate handling larger numbers of animals per hour. They can do this by publicizing vaccination days, organizing sufficient village helpers and constructing chutes and races that move animals through an efficient chain of vaccination and deworming.

Charging an hourly fee for routine vaccinations could capitalize on livestock owner's willingness to pay (demonstrated in Tajikistan) for largely public good vaccinations, i.e. brucellosis and rabies, if villagers were willing to organize and cooperate in maximizing the throughput of livestock per hour so that both livestock owners and vaccinators benefit from efficiency.

In both countries, there is opportunity for further experiments in contracting the delivery of public services and tasks as a method to augment PVP incomes as well as to deliver urgently needed services to the public. Contracting of Afghan PVPs for carrying out brucellosis vaccination and animal identification campaigns and the successful partial cost-recovery for brucellosis control in Tajikistan are two such experiments. Strengthening government vet services for delivering effectively the essential and internationally mandated public goods under Sanitary mandates, e.g. disease surveillance and reporting, disease investigation and diagnosis, public health vaccinations, etc., should be a major preoccupation for programme strategies, policies and implementation as a next step. Monitoring

contracts for delivering public good tasks by PVPs should be one preoccupation in the next phase. See RECOMMENDATIONS – The way forward section for further discussion.

Policies or incentives are needed to foster multi-person practices that effectively share clients and facilities to deliver 24-hour services, seven days a week, more widely geographically and more efficiently. Additionally, multi-person practices could facilitate development of specialty practitioners. In low potential, underserved areas if government authorities determine that veterinary services are necessary for the public good, e.g. high risk of transboundary animal disease entrance, sanitary inspections services or ongoing zoonotic disease epidemic such as brucellosis or rabies, then government could subsidize one or more practices in these special circumstances. As in other countries, the government could pay a portion of a fair annual salary, subsidize a clinic building or provide quality assured remedies or vaccines at a reduced price in order to support delivery of both public and private vet services in these priority areas.

As the median age is high and few students are enrolled in the veterinary programme in the Tajik Agrarian University, Tajikistan may soon be in urgent need of trained professionals for delivering both private and public veterinary services. The Tajik government and Association of Veterinarians of Tajikistan could work to make veterinary medicine more attractive for youngsters. A policy of pensioning off older vets in order to reduce competition should also be considered.

CLIENTELE

Relative wealth, rural versus urban, willingness to pay for services

Summary & analysis

Cliental & sources of income

Smallholders or large farm clients and their food animals were the most frequently noted client groups of virtually all PVPs. Most 'food animal practices' also derived 5 – 10 percent of their income from pets and, in a few cases, from horses. There were 4 (16%) primarily dairy practices and two (8%) largely pet animal practices generating 40 – 60 percent of income.

All PVPs reported occasionally accepting in-kind payment for services and remedies. All PVPs occasionally (or even often for dairy clients) extend credit to clients. And credit is usually always paid off in due time. All PVPs extend charity (waived their service fee and/or charge for remedies) to poorer livestock owners when services are required and clients are known to be poor. This said, having a daily cash income was a success factor and incentive for most PVPs.

The main complaint regarding non-payment came from two Afghan PVPs who reported that commanders or warlords in their districts demanded vet services and remedies for their livestock (dairies) but refused to pay. It is obviously hard for PVPs to refuse rendering services under the circumstances but nonetheless represents a financial stress to the practice.

As was initially assumed, and now verified, that successful PVPs usually had multiple income streams from a pharmacy (for animal and/or human remedies and supplies), AI for cattle, or an in-clinic diagnostic laboratory (primarily for diagnosing blood parasitic diseases).

Willingness to pay

Most clients in both countries were well acculturated to paying for goods and services on a fee-for-services basis. And the willingness to pay cash increased as time went on. But introducing a strict fee-for-services policy early in the two country's VFU programmes was a contentious issue particularly in Afghanistan. In Tajikistan in the late 1990s, charging clients was more or less an accepted norm after independence from the Soviet Union and thus met with little resistance. In fact, in both countries resistance came mainly from vets (both national and international) and not from clients.

Credit facilities

Most PVPs reported neither receiving nor seeking credit from remedy suppliers. Probably more than 50 percent of remedies are purchased from local markets and cash is paid. Purchasing remedies and supplies on credit was most frequent in Tajikistan from the Association of Veterinarians of Tajikistan but the association is generally pulling out of supplying remedies to PVPs. Many PVPs reported suffering from insufficient cash flow to buy in bulk, to buy quality assured remedies or to replace worn out equipment such as surgery instruments.

The question, ‘Is having sufficient monthly cash flow a major problem in your VFU? Or not a very big problem?’ was generally misunderstood with most stating that this was not a problem. But at the same time, many PVPs remarked that they had only a small reserve of remedies on hand. Additionally, no PVPs mentioned accumulating surplus funds for replacing worn out equipment or acquiring new capital items (car, clinic, AI equipment, etc.). It is evident that PVPs in both countries are not ‘getting rich’ from their practices and in fact are striving to maintain reasonable and competitive prices.

Surprising findings

That clients are overwhelmingly willing to pay cash for services, remedies and vaccines is most gratifying and justifies the hard line taken early in the VFU programmes to enforce a strict fee-for-services policy. In the end, this policy is largely responsible for the financial sustainability and continual progress of PVPs in both countries.

It was self-evident that governments were not in a position to continue providing free vet services and that donors would not continue to subsidize animal health and production services in these or any other country. It is to the credit of senior vets in both countries who figured out early these new ‘facts of life’ and thus fully supported fee-for-services policies promoted by FAO and others.

It is surprising that credit is not used more commonly or effectively by PVPs as a sound business practice and in the face of poor cash flow either for family living expenses or for investing in practice improvements. Establishing credit with remedy distributors takes time. Initially the projects or professional vet associations in each country extended credit for quality assured remedies and vaccines. Unfortunately, the two associations largely withdrew from providing this service to members. The reasons for withdrawing need to be better understood; some reasons could be related to donor policies and not to business practices within the country. Professional vet associations seem in a favourable position to extend credit because volume purchases could be made for cost savings, the members have technical knowledge of the required products and optimum seasons for their use, they can estimate quantity needed to reduce wastage, they can economically focus marketing on association members, they can evaluate quality and they would have leverage over borrowers in the form of peer pressure from the association’s members. Despite these potential advantages, uncollectable and high debts of some PVPs, the price competition from unregulated remedies and vaccines on the free market were just too much to overcome. The registration, quality assurance and maintaining a cold chain for vet (and human) remedies should be a matter of priority for governments in both countries.

Opportunities & threats

In Afghanistan better governance and rule of law is desperately needed if not only to cease exploitation by commanders and warlords but also to open up secure territory where PVPs can be safe and sustainable. There is no expectation; however, that security and better governance will occur soon. Nonetheless public goods and services are urgently needed. Policies and incentives need to be designed in anticipation of security and better governance evolving in the country.

In both countries, authorities have little if any control over the quality, efficacy or proper handling of veterinary remedies, vaccines or other biologicals. Under these circumstances, there could be serious detrimental effects when PVPs purchase the majority of remedies and vaccines from local markets. It is intuitive that using quality assured remedies and vaccines will most likely lead to more frequent positive treatment and prevention outcomes and thus to higher client satisfaction. Unless and until

effective registration and regulation of remedy and vaccine quality comes about, there is an argument for temporary importation of quality assured veterinary (and human) medicines. Professional veterinary associations could have a license, free of tariffs or fees, to import quality assured and foreign registered remedies, vaccines and diagnostic reagents. Donors or NGOs could subsidize the financing and distribution of selected imports and pricing would be based on actual costs plus a handling fee and anticipated inflation. There seems no justification for paying a government tax for importing these products when the government in fact cannot provide the required regulatory services.

STARTUP SUPPORT

Remedy & vaccine supply, equipment, training, capital or start-up salary

Summary & analysis

Facilitating start-up

The three most frequently mentioned useful startup support items were training (introduction, orientation and refresher CE), the kits of veterinary instruments, equipment, remedies, supplies and bicycle/motorbike (provided by various donors over the years in each country), and credit for purchase of quality assured remedies. These three items, complemented by already acquired education and experience, seem logical and essential for immediately jumping into private veterinary practice. These items were largely sufficient unto themselves to persuade animal health workers to take the risk of moving into private veterinary practice even with many remaining uncertainties in Tajikistan or with force when salaries were withdrawn in Afghanistan.

That the training, particularly the Introduction course, was accepted by all categories of animal health workers is a tribute to the high quality of national trainers in both countries. Private veterinary practice was rather new to national trainers but they were able to grasp concepts and learn quickly from international technical advisors who mentored in the early startup periods and through study tours, etc. And this cadre of national trainers had sufficient skills and stature to teach their colleagues.

The veterinary kits provided at several stages by international donors in both countries were necessary for startup, contained essential items for food animal practice (as well as for pets) and were well appreciated. In Afghanistan by 2008, the intent was to provide on a loan basis one kit per (secure) district to a qualified already present PVP and later to a former government employee who was well established working from the district government clinic. Of those PVPs interviewed in April – May 2013 and receiving vet kits in 2009 or 2011, 13 percent are ‘successful’ and 87 percent are still ‘struggling’.

The kits were awarded to successful candidates upon completion of Introduction or Orientation courses. In the first 14 years of the VFU programmes in Afghanistan, recipients who received a kit were never charged but in 2009 and 2011, kits were given on a two-year loan to recipients. The modest cost of the instruments and remedies was beyond the ability of Afghan or Tajik vets to procure even if local suppliers were readily available in the early days. FAO took great pains to procure high quality instruments and tools despite the institutional procurement rules which awarded contracts to the lowest bidder. Even today, most interviewees indicate they need new instruments and equipment to continue growing their practice.

The distribution network for remedies, supplies and for some vaccine was difficult to set up, an administrative nightmare and controversial for the donor agencies and the veterinary associations which implemented them. When the VFU programmes started, government distribution had largely broken down and in any case was linked to unreliable suppliers. There were few private sector distributors for veterinary remedies, vaccines or equipment in either country; there was no suppliers of quality assured products. But procurement and distribution of quality assured biologicals and pharmaceuticals were assumed to be essential for practicing quality medicine and for helping ensure

client satisfaction. The imported and quality assured medications, dewormers, vitamins, anesthetics and others were provided to veterinary associations who handled the distribution and accounting. These imported items were generally more expensive than comparable products on the open market. But in time the PVPs 'made the market' for these quality products which were effective, usually consistently available and could be replenished on credit. These procurement and distribution systems are currently scaled back by the veterinary associations in both countries and most remedies are now purchased on the local market.

Other useful items or activities for startup included: technical monitoring (both countries) and initial salaries and/or in-kind payment with quality assured remedies in lieu of salaries (Afghanistan).

Interviewees did not mention other startup items or activities that would have been useful. Likewise they did not note any services, remedies, vaccines or other activities that farmers want but that they cannot supply. This latter is a function of limited extension messages and agri-business opportunities in each country. That is, both farmers and vets are not up to date on modern agriculture practices, e.g. beef fattening feedlots, aquaculture, or production practices, e.g. oestrus synchronization, growth promotants, dry-cow treatments for prevention of mastitis, feed supplements, others. And this highlights the essential importance of CE for animal health workers and for national economies.

Practice monitoring

Periodic and frequent 'technical monitoring' with individual animal health care workers at their clinics was an essential feature of the VFU strategy in each country. VFU vet service providers kept medical records on all cases in a standard format (but in a bound book) which were the basis of the on-site technical review. Monitors did not visit just to chat and drink tea but had a purpose and methodology to review random case records in order to suggest improvements in diagnosis, treatment or prevention. This monitoring provided very practical continuing education and re-enforcement of best practices in vet medicine and surgery. Equally important, periodic and frequent monitoring kept VFU vets in contact with programme headquarters where complaints could be relayed from the field and changes or opportunities could be communicated to the field. National technical monitors were frequently chosen from among the talented trainers. In hindsight, technical monitoring turned out to be very cost-effective and essential for success of individual PVPs and for the PVP programmes in each country.

Case records are rarely being kept and technical monitoring has largely stopped in both countries. The main reasons for not keeping PVP activity records and technical monitoring in Tajikistan are that the majority of PVPs are on the government payroll and the SVIS does not have the capacity for technical monitoring. In addition, the PVPs avoid recording their activities in fear of higher taxation. In Afghanistan, while taxation is not a problem, the State Veterinary Inspection has no capacity, nor an enforcement method, i.e. salary payment, to implement technical monitoring. The Afghan Veterinary Association does not have any enforcement capacity over the PVPs for activity recording and has no finance for technical monitoring.

Private & public goods

In Tajikistan, case records are supposed to be reviewed at weekly meetings with State Veterinary Inspection Service District Vets but it is unknown for what purpose and why case records of individual animals are useful for government vet authorities. No systematically prepared practical case records were found during PVP monitoring in Tajikistan.

In both countries, PVPs indicate that they can report disease outbreaks as and when they occur and are not paid for this service. In the case of Tajikistan, PVPs report to District Vets. In Afghanistan, PVPs report to local Afghan Veterinary Association (AVA) offices not to local Provincial Veterinary & Livestock Officers.

Surprising findings

The technical, organizational and social value of ‘technical monitoring’ was underestimated.

It is surprising and disappointing that Tajik and Afghan PVPs have markedly reduced their demand for quality assured remedies and vaccines but tend to opt instead for lower cost items purchased in local markets.

It is surprising that credit is not used more effectively to invest in and build successful practices over the long-term.

Opportunities & threats

That technical monitoring has ceased in both countries could be detrimental to continuing PVP programme success and progress. Much yet remains to cement financial success of PVPs, to expand services into middle and low potential areas and to add newer services, techniques and pharmaceuticals for increasing animal productivity. Technical monitoring is a proven effective method for institution building and extension at the field level. It is an expensive component but serious thought should be given to reviving and broadening the scope of technical monitoring even as an essential function of the state veterinary authority.

Continuing education is needed for maintaining gains and for progressing the PVP system and livestock production as a whole. Providing a menu of appropriate and practical CE courses annually needs serious support. Perhaps professional veterinary associations and central government should take joint responsibility for this essential activity.

PRACTICE ENVIRONMENT

Competition, services demanded & offered, multiple income streams

Summary & analysis

Supporting institutions

In Tajikistan support from district government (Raion) and local village (Jamoat) officials proved most useful in building successful PVPs. Specifically, Raion and Jamoat officials announced and helped organize vaccination (brucellosis, PPR, anthrax) and deworming campaigns at village level. This publicity and organizational support helped build financial success. In some cases local Imams publicized animal disease risks and prevention campaigns. The central and district SVIS also supported PVPs by handing out free vaccines (FMD, anthrax) which PVPs charged a service fee for use in client livestock.

In Afghanistan, the substantial support for refresher training and CE was most recently arranged by the Afghan Veterinary Association (AVA) and provided by NGOs (DCA), the Horticulture and Livestock Project (HLP) (World Bank) and from USAID. In earlier VFU programmes, FAO arranged refresher training, technical assistance and CE with its own experts and NGOs. The veterinary kits, along with a lump sum severance pay of over USD7,500, distributed by the AVA under the HLP in 2009 / 2011 were a most helpful and essential input as part of the Law on Privatization of Veterinary Practices.

In Tajikistan PVPs remain as government employees, receive a small government salary and work from district vet centers, their private clinics or from homes. These PVPs divided the villages in their district among themselves and assigned these as exclusive practice areas accordingly.

Threats

Essentially no ‘...things, people, policies or activities that **have been most unhelpful or threatening** for sustaining and growing your vet work and VFU’ were noted by PVPs in either country. Perhaps this question was seen as a threat in itself. However threats emerged from other sections of the questionnaire and are summarized here.

One threat in both countries comes from an overconcentration of PVPs in some districts or in some government clinics. In the case of Afghanistan, insecurity in parts of the country may account for some degree of concentration. But there may be policy issues involved too (see below).

In Afghanistan in the 2009 / 2011 privatization programme provided orientation training and a vet kit to one veterinary provider (DVM, paravet, assistant vet) in each (secure) district. Approximately 212 kits have been provided as of the end of 2011. PVPs receiving these kits are ‘contracted’ by the district government (not the vet department) to provide clinical services in the district and are usually solo practitioners. However they compete fiercely for clients with other PVPs in the districts with better security. Table 1 shows those PVPs interviewees who received a kit and those who did not.

In both countries individual PVPs may work out of the same clinic building but, in fact, do not cooperate in ‘sharing clients’. They each struggle for clients and are often in effect solo practitioner’s with all of the inefficiencies and constraints recognized for this practice model. The use of mobile phones, where clients have ready access to their favorite PVP, helps to break some detrimental effects associated with solo practice. But there are limitations particularly for efficiently serving ‘walk in’ clients to clinics or pharmacies or for dealing with emergencies.

In Tajikistan PVPs (only SVIS employed vets) pay a fee each month on their government salary and on their private practice income directly to the District SVIS vet in addition to several direct or indirect taxes. The reported amounts deducted range from 40 to 70 Somoni (USD 7 – 16) or approximately 13 percent of the government salary plus another 7 - 9 percent on their practice income. These deducted monthly amounts could be considered as rent for use of the government district clinic or as a fee for various administrative services. Nevertheless these fees seem arbitrary and non-transparent.

Note: Taxation in general and local SVIS deductions from the veterinarians’ income in Tajikistan has been a major uncertainty and hindrance for veterinarians to engage in private practices. Since the VFU evaluation interview in Tajikistan took place in April – May 2013, the Government has accepted a ‘patent’ form of taxation for PVPs. This patent is a fixed rate of lump sum tax which was agreed in August 2013. Thanks for this agreement go to the Association of Veterinarians of Tajikistan for their long struggle to convince Government authorities to include PVPs in the patent form of taxation.

In Tajikistan, PVPs hold weekly half-day meetings, usually in the morning, with District SVIS directors. Such scheduled meetings are a potential for non-practice and non-income earning wasted time. Alternatively these meetings could be an opportunity for significant practice improvement in terms of reinstating technical monitoring and even going beyond. See RECOMMENDATIONS – The way forward.

In Afghanistan insecurity in many districts is a constant threat. Most PVPs mentioned a lack of physical security as a threat because both government and opposition sides were suspicious as PVPs traveled widely delivering services in rural areas. PVPs, however, are carrying on in spite of this threat, as this was their only income earning opportunity.

A more financial but real threat came from commanders or warlords in several Afghan districts who demanded services (and remedies) from local PVPs but refused to pay. It would seem that central government authorities have a responsibility to eliminate this strong-arm abuse.

In Table 1, the designation ‘YY’ indicates that PVPs perceive that competition significantly decreases their incomes and thus is a significant threat. Striking the balance is very difficult between assuring sufficient vet service providers so that livestock owners have reasonable access to services while vet service providers are busy enough to make a reasonable living. No country has been able to meet this balance continually. But in general, former Soviet Union countries tend to have an excess of vets and animal technicians who are now struggling to make a living in the private sector. Tajikistan is an example of this.

In Afghanistan there is the question of ‘freedom to practice’. First, in several districts the local MAIL has a monopoly right to deliver AI services but PVPs cannot offer these services even if qualified and willing. Government field veterinarians had their salaries abolished and thus ‘privatized’ and allowed to offer animal health and production services on a free market basis. It follows that the Agriculture Department’s AI technicians should have their salaries abolished and set free to compete in the market. This restraint of trade for AI services is contrary to the Afghan privatization policy and principles.

Secondly, it is unclear why PVPs in Afghanistan were contracted by accepting vet kits to practice in specific districts that were low potential (few livestock), had an abundance of other PVP providers already (too much competition), in locations that were not their home areas, and had to travel long distances to attend in these assigned clinics.

Both situations violate recognized success factors and were mentioned as reasons contributing to ‘struggling’ practices and low incomes by many PVPs interviewed.

In Tajikistan local / district SVIS Directors or Deputy Directors sometimes have a private practice along with their government responsibilities. In other cases, senior district administrators seem well enough salaried or busy enough so that they do not bother with establishing a private practice.

In Afghanistan, local / district government vets are not present and thus there is no competition from government vets; they were ‘privatized’ as per the 2009 / 2011 vet privatization process. Presently salaried government vets within the MAIL are limited to heads of administrative departments and technicians working in the diagnostic laboratories. Under the Afghan 2008 law of privatization, government salaried vets are not allowed to undertake private clinical practice. Some government vets, however, do run their own private clinics outside of official office hours. The practice of running a clinical vet practice outside of office hours is common in other countries, e.g. Indonesia, Trinidad & Tobago, others. No Afghan PVP interviewee mentioned that these after-hour practices led to significant competition with their private practices. Government paid vets providing clinical services, using government vehicles and remedies during normal working hours, in competition with full-time PVPs is a common threat experienced in other countries.

Weaknesses

A distinct weakness in both countries is that the public veterinary services now seriously lag behind the private veterinary services. For the last almost 20 years, development agencies and banks focused on establishing community-based delivery by nominally private veterinarians. Despite the early obstacles, this has turned out to be the ‘low hanging fruit’ for reestablishing veterinary services in many countries. Serious attention is now needed to re-direct, re-train and re-habilitate the public service veterinary institutions in Afghanistan, Tajikistan and elsewhere. The private and public vet services each have a comparative advantage for delivering selected goods and services. There is much overlap where the private sector can and should be contracted for carrying out some tasks under supervision by government regulatory authorities. But there is much work to do in order to define the strictly public sector tasks and the shared tasks as well as to re-educate government vets and animal health workers to carry out these new tasks.

The reduced presence of government vets in Afghan districts and provinces removes a potential support base for promoting any activities, even those with a high public good component. This void

needs to be filled by competent authorities at provincial and district level particularly as a national brucellosis control campaign soon gets underway. It is hoped there will be sufficient local government or military authority to effectively support this public good.

As mentioned previously, technical monitoring was perceived as a very useful success factor for PVPs in both countries. It is a real weakness now that this activity has largely ceased in both countries.

Opportunities

There are many specific opportunities for promoting successful PVPs including:

- Multiple services on offer generating multiple cash flows.
- ‘Freedom to practice’ in locations of choice and where financial success is expected. If underserved areas are judged to require an animal health and production service presence, then a subsidy system as in other countries (Sweden, Canada, USA) could be applied.
- Encouraging and fostering 2 or 3 person practices where multiple services are on offer 24/7 and generating higher incomes that can be truly shared among PVP providers.
- Continuing education and refresher training on offer. Holding an annual national vet conference offering a wide variety of refresher courses and introduction to new technology could be most useful.
- Better governance such that PVPs are not exploited by commanders (Afghanistan) and that protects them from unreasonable or arbitrary fees (Tajikistan).
- Technical monitoring presents so many positive opportunities that its re-establishment in both countries should be a matter of urgency. See further discussion in RECOMMENDATIONS – The way forward.

Surprising findings

There is some surprise that District SVIS officers in Tajikistan played an overall positive role in supporting PVPs. There was some early resentment from Tajik district vets against privatization and providing services on a fee-for-services basis.

It is surprising that district SVIS vets are collecting fees and their use is not transparent. In other countries, government vets do not take on responsibility for collecting taxes. See *Note*, page 22.

SOCIAL ENVIRONMENT

Satisfaction with lifestyle, satisfaction with clients

Summary & analysis

Overall about 60 percent of PVPs interviewed in both countries said that their quality of life was much improved compared to five years ago (Tables 1 and 2). The rates of ‘much improved’ or ‘no change’ were not different in the two countries. Only in Afghanistan did one PVPs state that he was ‘worse off’. These are rather remarkable findings given the markedly different social and security conditions in the two countries.

From this limited sample, DVMs in both countries achieved higher qualities of life scores compared to assistant vets or paravets. The sample size, however, may be too small in each country to generalize and in Tajikistan, vets and assistant vets still receive a (token) government salary while salaries were abolished for PVPs in Afghanistan under the 2008 privatization law.

Interestingly, all PVPs rated their clients as generally ‘good people and good neighbours’. Most PVPs had high regard for colleagues even in the face of stiff competition and less than stellar incomes or quality of life.

Surprising findings

It may be remarkable that measurable progress was made at all over the last 20 years given the continuing civil unrest and often war that has occurred in Afghanistan.

FINAL QUESTIONS & COMMENTS

Summary & analysis

Success factors

The list of mentioned success factors is long and similar in both countries. This is not surprising as running a successful veterinary private practice should be rather similar around the globe and the programme assumptions (Annex 1) shaped the strategy around sound business practices. What is perhaps surprising and an unknown at the time was that livestock owners and most vets rapidly accepted and actively applied a fee-for-services policy.

A list of main success factors includes:

1. Useful introductory technical training course / orientation course for all new participants and frequent, practical CE courses particularly on infectious disease diagnosis and treatment, AI and basic laboratory methods.
2. A free-of-charge initial kit containing basic vet instruments, equipment, remedies, disposable supplies and a modest vehicle for transport (bicycle or motorbike).
3. Quality assured remedies consistently available and easily obtained on credit with refresher training on their use.
4. Periodic but frequent technical monitoring by competent national veterinary monitors.
5. Good relations and good attitudes toward clients with specific training on ‘how to talk to farmers’ (PIHAM in Afghanistan) which enabled and encouraged PVPs to get out of their clinic offices, meet with livestock-owning clients in villages and fields and actively promote their private practices.
6. Good relations with district and village authorities (in Tajikistan).
7. Following up cases post-treatment or surgery. Wide access to mobile phones allowed this proven client-building practice to be practical and economical.
8. Daily cash income encouraged animal health workers in their private practices.
9. Hard work and good technical skills (plus quality assured remedies) led to satisfied clients and increased incomes.
10. Charging reasonable professional fees and pricing remedies rather low.
11. Striving for good outcomes and satisfied clients and relying on word of mouth advertising to increase client numbers.
12. Working in one’s home district consistently for a number of years; working both from a clinic and from home (after hours) increased accessibility for clients. Client ease of access (24/7 and close proximity) to PVPs may be more important than technical competency for boosting clients and incomes.
13. Concrete support from local government to organize and advertise vaccination campaigns (Tajikistan).
14. Having sufficient quantity of remedies in stock in order to sell and use proper remedies as and when needed. This avoids writing prescriptions which are a waste of time for livestock owners and deprived PVPs of potential income. Recall the businessmen’s motto: “You cannot sell what you do not stock.”
15. Early introduction and acceptance of a fee-for-services policy where farmers agreed to pay for clinical and preventive services. In Tajikistan, farmers’ willingness to pay for public goods,

i.e. brucellosis vaccination in small ruminants, was tested and a high acceptance rate (~80% vaccination coverage) was achieved. This proved to be another income stream for Tajik veterinarians.

16. Multi-person practices (not solo practitioner) working collectively to offer multiple services for multiple income streams.
17. Owned transport (car or motorcycle) which proved essential for expanding practice areas, increasing punctuality and the number of clients and, thus, practice incomes. Additionally, if PVPs are offering AI services, assured access to a car is necessary for providing insemination services as and when they are biologically most appropriate leading to higher conception rates. Again, better service leads to more satisfied clients and higher incomes.
18. A credit facility for credit-worthy PVPs to purchase a car or for building a clinic. In Tajikistan the professional veterinary association was able to offer credit (for remedies and clinic buildings and vehicles) and successfully collect amounts due. In both countries commercial, non-veterinary related business are generally not willing to offer credit to PVPs.
19. Business management training which provides guidance in using credit for stock (remedies, dewormers, vaccines) control, practice investment (vehicle, AI equipment and/or semen, clinic building) and money management such as living on a monthly 'draw' from the practice and budgeting for replacement stock, staff salaries, fuel, heat and other normal business expenses. Stronger financial controls would be useful such as issuing receipts for goods and services. Receipts could be incorporated into brief clinic records (signs, clinical findings, tentative diagnosis, treatment and instructions for follow up to livestock owner.)

Having recognized and elaborated on success factors, there were few suggestions as to who or which institutions could help in providing more of these success factors for improving practice incomes and quality of life. Some interviewees recognized that they themselves are best responsible for actually incorporating success factors into their practice.

CONCLUSIONS

The objectives of this evaluation have been reasonably well met. Specific activities, policies and practices that *favourably affected* felt success in private vet practice and quality of life of a sample of PVPs in Afghanistan and Tajikistan are elaborated throughout the document. It is not useful to summarize these findings here as detail will be lost, context will be missing and in some cases, well described in the text, findings are different for each country. Also the detail and country context are critical to applying lessons learned to other countries. This short evaluation document should be read in its entirety if information will be usefully applied.

It is useful, however, to highlight some of the activities, policies or practices that *negatively affect* private vet practice success or quality of life. First among these is lack of personal security as is the case in some districts in Afghanistan. Not only does lack of security endanger livestock owners and vets as they travel to obtain or deliver treatments for livestock. Insecurity in some districts or provinces also prevents vets from setting up practices thus crowding those who want to practice into the fewer, safer districts. This crowding of practitioners significantly increases competition to the extent where financial viability for all practitioners is threatened. High rates of competition may benefit livestock owners in the short run with lower prices for goods and services and increased access to vet service providers. In the long-run, however, excessive competition was associated with struggling practices and/or no change or worsening quality of life. Some providers will drop out if practices are not financially viable after several years even despite heavy investments from donors and technical development agencies in equipment, quality assured remedies, and training. Additionally, in insecure districts where no vet practitioners are located, livestock owner's situations have returned to pre-VFU days where neither services nor remedies are readily available.

Secondly, the lack of governance which allows exploitation by strong-arm commanders or warlords in some districts discourages private vet practices. This extortion may benefit a few in the short run but could deprive the majority of livestock owners of vet services in the long-run.

Unfortunately the above two negative influences in Afghanistan are not likely to resolve anytime soon. Nevertheless, the VFU programme there proved sustainable despite years of civil war, areas of insecurity and poor governance. This success may be a result of giving the poor livestock-owning families what they wanted and were willing to pay for. Livestock raising is an integral part of the livelihood systems in both countries and healthy livestock with more animals surviving and more productive are expected to improve incomes and livelihoods of families. Likewise, the VFU programmes in both countries supported trained professional animal health service providers primarily as individuals and not through the official government vet services. Finally market forces, with demonstrable competition, and acceptance of fee-for-services payment have led to financial sustainability of PVPs in both countries²⁷.

In both countries, the state veterinary authority has not set aside budgeted funds for contracting public good services from the PVPs. To date both governments rely on donor funds to finance what are primarily public good services and which are responsibilities of the national authorities. Unless and until state veterinary services are reorganized, personnel staffing is 'right-sized' and budgets for contracts are secured annually, essential public good services such as control of zoonotic diseases and food inspection will suffer. The Government of Afghanistan has made good progress in reorganizing and privatizing delivery of vet services but has yet to provide annual budget funds for contracts.

RECOMMENDATIONS – The way forward

It is most useful, however, to apply the findings beyond just an *ex-post facto* evaluation. Charting the way forward for the next 10 or more years is elaborated here based on current country status of the animal health and production complex and the lessons learned.

Three themes and recommendation from this evaluation are highlighted. The first is the **need to reorganize and rehabilitate the public veterinary services** in both countries in order to meet international sanitary mandates and protect public health. Included within reorganization and rehabilitation is the need for **dedicated budgets for contracting delivery of some services from the PVPs**. The third highlights the **need for re-vitalizing the agriculture and livestock extension capacity** in each country in order to inform livestock raisers on best production technologies which in turn will lead to demands for additional goods and services and thus additional income streams.

The groundwork for re-organizing and re-habilitating the public veterinary services in both countries was carried out using the World Organisation for Animal Health (OIE) 'OIE Evaluation of the Performance of Veterinary Services Tool' methodology. In Tajikistan both the PVS Tool and the Gap Analysis reports are available from the government. In Afghanistan, the PVS Tool report is available from the government and a Gap Analysis mission has been requested (as of June 2013). The comprehensive findings, recommendations and budgets from these analyses and proposed development programmes are the basis for re-forming and re-habilitating comprehensive vet services.

An initial focus for rehabilitation could be for zoonosis control in each country under the global 'One Health' initiative. The World Bank in 2011 completed such a study, using the PVS Tool and Gap Analysis methodology, and drew up an investment plan for Tajikistan. This comprehensive study report is available from the World Bank. The same methodology could be carried out in Afghanistan.

A corollary to reorganizing the public veterinary service and a strong recommendation is for authorities to budget funds for contracting public good services from PVPs. This report shows that multiple income streams are essential for financial sustainability of PVPs. More use of contracting for

²⁷ Easterly, William (2007) *The White Man's Burden – Why the west's efforts to aid the rest have done so much ill and so little good*. Oxford University Press, pps. 380

delivery of essential public good services from the national treasury is cost-effective and efficient²⁸. International standards allow and encourage public veterinary authorities to contract delivery of selected services by the private sector. The responsibility for quality assurance is retained by the state veterinary authority who can plan, facilitate and monitor regulatory and disease control programmes. Unless and until responsible ministries and state veterinary authorities are serious about budgeting for contracts, essential public good services such as control of zoonotic diseases and food inspection will suffer.

Equally important is the need for re-vitalizing the agriculture and livestock extension capacity in each country. As livestock raisers and agriculturalists are informed of new technologies and agri-practices, as policies enabling more profitable cropping choices are applied and as investments are made, new goods and services will be in demand and thus create additional income streams for PVPs. For livestock raising and animal health, it is likely that new services will include advice to farmers (breeding / selection of AI sires for higher milk production, herd health programmes, winter or fattening rations made from locally available feeds); new goods in demand could include agri-chemicals to increase animal growth (promotants) or milk production (bovine somatotrophin); and new technologies could include ultrasound for pregnancy diagnosis in large and small ruminants.

The veterinary privatization programmes in both countries have largely accomplished the original and urgent need to make community-based clinical and preventive vet services available and financially sustainable. But the evaluation highlights the limitations and constraints and more work is needed in the private veterinary sphere. But the evaluation also concludes that re-training and re-habilitation of the public veterinary sector is part of the solution.

Two specific policies or activities are suggested that could have a high impact in the short-term in both countries that solidify gains made to date for sustaining the PVPs. The first includes **better governance policies that remove monopolies, curb strong-arm exploitation and allow mobility of PVPs with assured 'freedom to practice'**. The second is a major effort to **reinvigorate and broaden the scope of 'technical monitoring'** for all PVPs in both countries.

The assumption that multiple income streams are required for financial success is supported by the evaluation in both countries. In Afghanistan the monopoly that the Agriculture Department apparently has on being the only provider of AI services, at least in some districts, should be removed so that interested PVPs can provide this service and livestock owners can be better served by enhanced competition. This seems a simple government policy matter. The 'privatization' of some government Agriculture Department staff may be required.

More difficult but seemingly possible in Afghanistan is to sanction commanders and warlords who exploit PVPs by not paying for goods and services rendered. Perhaps an Afghan Ombudsman system is present or could be established where such extortion is reported, publicized and hopefully rectified. Perhaps existing law enforcement procedures could curb such extortion.

In Afghanistan PVPs are contracted to provide clinical vet services only in a specified district once they receive orientation training and accept the vet kit under the 2008 veterinary privatization law. It seems that this kit offers no unfair competitive advantage to PVPs (Table 1) because there are other established providers and competition for clients is fierce. Accepting this kit may actually be a burden in some low potential districts or where there are too many PVPs already. Accepting the kit and contracting with the local government turns into a form of indentured servitude.

A better situation is a 'freedom to practice' policy that allows PVPs, whether contracted or not, to move freely and practice in a location that they determine has a good potential for success. If a district is underserved as PVPs move out and local government officials determine that there is a priority need

²⁸ Leonard, David K. (1997). *Structural reform of the veterinary profession in Africa and the new institutional economics*. Development and Change. 24: No.2, 227-267.

for veterinary service providers, then a subsidy and vet kit could be offered to entice PVPs to practice in these districts. A sealed-bid auction system could award a contract to the lowest bidding PVP who agrees to provide specific animal health and production services in a district for an agreed yearly (or multi-year preferably) fee. The subsidy comes from the local government and/or local farmers' group that determines what services are required. Alternatively, the local government and/or farmers' group could simply hire one or more vets to provide the required services. Such a system was used in New Zealand where a group of local dairymen contracted vets for the services they required.

The insecurity in parts of Afghanistan is a major constraint on any 'freedom to practice' policy. But tying PVPs down to a contracted district that has too much competition is not a viable solution either.

As 'technical monitoring' proved a most useful support system early on for VFUs in both countries, a major effort to re-invigorate and broaden the scope of 'technical monitoring' is a high priority for the way forward. Re-invigoration of technical monitoring should include bringing back periodic reviews of clinical case records in the field with the view to improving practice competence and outcomes. The technical monitoring team could usefully include a skilled clinical trainer (from the vet association, university or donor-funded project) plus a central or regional government veterinary officer. Enhanced technical monitoring is a skeleton for rebuilding a smaller, more efficient outcome-oriented government vet service.

The scope of technical monitoring could be broadened to include extension information from research on best agronomic practices in the region. For example, extending results of forage trials could be provided during technical monitoring visits and PVPs could pass this information on to their clients. Improved forage seeds could be distributed through PVPs. An 'extension package for livestock' could be introduced for animal disease prevention and production improvement and followed up under the umbrella of technical monitoring. This extension package could include information on relevant preventive vaccinations (anthrax, clostridial diseases, PPR, brucellosis or rabies in pets) plus seasonal deworming and ectoparasite control plus seasonal vitamins/minerals (vitamins A, E and Se prior to winter) plus castration of unwanted males for breed improvement plus advice on housing and supplemental winter feeding. Extension packages for livestock health and production are widely promoted in industrial countries with good examples from South America that are applied to improving subsistence livestock farming. These extension messages should increase the demand for preventive vaccinations and herd health improvement practices and, thus, incomes for PVPs.

Disease investigation and disease rumor follow up could be a component of technical monitoring. For the former, local PVPs could be contracted to investigate, report and collect samples from disease outbreaks. For the latter, making full use of mobile phones for contact, quickly and cheaply gathering disease signs and lesions in coded format, and reporting to central authorities is a cost-effective method for disease surveillance and investigation. Rehabilitating cost-efficient disease investigation and surveillance is urgently needed as both governments have international obligations under the OIE.

A related component of technical monitoring could include post-vaccination seromonitoring following brucellosis or FMD vaccinations. Post-vaccination seromonitoring is an integral part of quality control for national brucellosis or FMD control programmes and is a responsibility of the state vet department. The fieldwork, however, can be carried out through contracts with local PVPs under state government supervision.

Technical monitoring is an opportunity for communication from the field to provincial and central government authorities. Veterinarians in former Soviet Union countries have extraordinary social bonds as members of the veterinary profession. These bonds resemble a 'veterinary brotherhood' which can be put to good use. Technical monitoring is a formal opportunity for central vet authorities to understand what is actually going on in the field and to act on information received. The value of 'two-way' extension and communication has been underestimated and reviving the technical monitoring system is an opportunity to re-establish these useful activities.

ANNEXES

ANNEX 1. Assumptions

The strategy for implementing community-based veterinary and animal husbandry services in Afghanistan and Tajikistan drew heavily from many years of implementing similar but far wider strategies for ‘privatization’ and ‘liberalization’ of the service sector in sub-Saharan Africa countries. The basic assumptions specific to the community-based veterinary and animal husbandry services delivery include:

1. Livestock owners will pay for competent, effective services that are conveniently available.
2. Accessibility of services is more important than the technical quality of a service.
3. Vets and coworkers need mobility to conveniently reach where livestock are located and only secondarily need clinics or pharmacies for clients to come to them.
4. Financial viability will be dependent upon the number of public and private good services and tasks that practitioners can offer to clients in return for fees.
5. Donors will not continue indefinitely to subsidize delivery of vet services. Therefore financially sustainable delivery must be based on fee-for-services from satisfied livestock owning clients for private goods and contracts from government for public goods.
6. ‘Private’ veterinary practices cannot flourish where government-paid employees compete in providing the same services.
7. Governments must come eventually to support policies and laws that are conducive to PVPs.
8. PVP may need financial support in early years (salary or in-kind remedies) but this support will decline annually and last only 3 or so years.

For each of the above assumptions a portfolio of activities, policies or inputs was incorporated into implementation programmes. For instance, for item 1 it was felt that refresher training and continuing education in practical clinical medicine and surgery were keys for delivering effective services that saved animal lives and increased productivity. Likewise, easy access to quality assured remedies and vaccines was felt to be essential for optimizing animal disease treatment and prevention outcomes.

Private veterinary practice startup:

With the above assumptions, an understanding of the political realities in each country and agreement from national authorities, a suite of activities, policies and inputs was developed and implemented. In both cases, government veterinary authorities were generally supportive of developing community-based delivery of clinical veterinary services. At the same time, they agitated, rightly, for strengthening the public veterinary services too. To the credit of national leaders, they realized that the former centralized delivery of vet and animal husbandry services was no longer viable, that reform was needed and were patient enough to let the clinical and preventive services proceed first.

Refresher training & continuing education:

Introductory training for 6 or more days was given to all newly recruited participants. Continuing education (CE) in the form of 1-, 3- or 10-day short courses on sub-specialties of veterinary medicine, surgery or animal husbandry or business management were a widely appreciated feature. Usually several courses were given annually and were in wide demand. It is apparent that practical and applied courses which PVP could turn into goods, services or tasks that they could sell to livestock owners were most appropriate and most in demand. Examples include artificial insemination of cattle, pregnancy diagnosis, laboratory practice methods, large and

small animal surgery and diagnosis and treatment of common diseases. Skills learned could be easily monetized in their practices. Other courses proved less useful because governments were not implementing disease control programmes and were not in a position to pay PVPs, for instance to collect samples for disease diagnosis.

Quality assured remedies and vaccines:

It is intuitive that quality assured medicines, vaccines and diagnostic reagents are a key to expecting desirable outcomes when treating sick animals or vaccinating to prevent diseases. These countries did and still do suffer from a flood of questionably manufactured, ineffective or fraudulent remedies, vaccines and reagents on sale in bazaars. Use of these products by PVPs is not conducive to establishing a loyal clientele.

Veterinary practice kit:

An initial starter kit of basic instruments, remedies, office furniture, exam/surgery table, a bicycle or motorcycle plus a refrigerator (preferably solar) are essential inputs to start delivering services. Kits including all of these items could easily cost over USD8,000. It is most useful to procure good quality surgical and medical instruments that are made to last not cheaper almost disposable instruments. The same applies to a motorcycle or bicycle; these should be sturdy, fit for purpose and preferably, service and parts should be readily available in the country of use.

Fee-for-service policy agreed:

An aim of the PVP programme is that sustainable services be available to livestock owners and their animals. Implementing fee-for-services is the most cost-effective strategy for reaching this goal. Thus the programme needs to get agreement from national authorities and take steps to educate livestock owners about this new policy of paying for services. Most importantly is that a fee-for-services policy be accepted by livestock owners not simply imposed from above. National project staff and/or national authorities must take responsibility for getting livestock owners to accept this policy. And acceptance can take considerable time, perhaps several years. Intuitively this seems a major hurdle for changing attitudes and customs of livestock owners. In fact, livestock owners readily understand their need for services, that PVPs need an income to support their families and that “there is no free lunch” anymore. It often proved more difficult to get veterinarians to accept that they have to charge reasonable fees for their services than it was to convince livestock owners! In time, legislation needs to be changed to officially allow privatization. Also a licensing body for quality assurance and discipline of practitioners and a veterinary professional association need to be legally established.

Technical monitoring of PVPs:

Best success came when programmes provided a team of competent national trainers or monitors who visited each PVP several times annually for at least one-half day in order to review technical aspects (review of random cases diagnosed and treated), provide on-the-spot mentoring and generally encourage and support nascent private practitioners. This mentoring was very well appreciated by PVPs and should be kept up for many years. Additionally, this is an opportunity for programme managers to become aware of issues and problems in the field so that corrective measures are taken. Also management or other issues, needs for CE or new services or products, as felt by the PVPs in the field, can be brought to the attention of programme managers.

ANNEX 2. Questionnaire setting

SELECTION OF PERSONS TO INTERVIEW:

1. Approximately **4 active Veterinary Field Units (VFUs)** in each country, some with 10 or more years of continuous delivery of community-based veterinary and related services, approximately **3 active VFUs** with 3 to 9 years of continuous delivery of community-based veterinary services, and at least **3 formerly active VFU staff** who have not been delivering community-based veterinary services for some years.
2. Include for interviewing as many as possible of the **senior vets, assistant vets, paravets, Animal Health Technicians** and/or **Basic Veterinary Workers** presently or formerly connected with each selected VFU.
3. Include several **livestock raisers** in the practice area of each selected VFU (both active and formerly active) for interviewing as is possible and practical.

INTRODUCTION OF THE ENUMERATOR:

Please take a few minutes to introduce yourself to the interviewees selected for the interview session. Try to make them feel at ease with ‘small talk’ about the weather, recent or upcoming holidays, family health or even a joke or two. Explain that you are an Afghan veterinarian, who has worked a long time in Afghanistan and Tajikistan and in other countries in various capacities on veterinary projects and may be well known to some in the interviewee group present.

Explain that you are contracted by FAO and that FAO wants to gather information on how VFUs have succeeded or not done so well over the last 10 years or so. FAO wants to interview vets, assistant vets, paravets, animal health technicians or Basic Veterinary Workers connected with VFUs to see how their practice and personal lives are after these last 5 or 10 years.

FAO wants to better understand which **specific support, training, policies or other activities** helped professional vet practice and personal life the most or which were not very useful. Your assessment will help improve the design of future community-based delivery of vet service projects in Southeast and Central Asia.

The interview will take about 2 hours, there will be coffee breaks and no personal or embarrassing questions will be asked. The enumerator will try to talk with some livestock owners in the same villages in the VFU practice area. The goal is to determine their relation with the local VFU veterinary workers and his/her opinion about the **availability, quality and usefulness of the community VFUs for controlling or preventing local diseases and for increasing livestock production for the owners and for the community**. FAO wants to understand how well local community-based VFU veterinary services have affected family livelihoods over the last 5 to 10 years.

Questioning and discussion will be informal. The main spokesman interviewed can give his own answer or chat with colleagues to get a consensus of opinion. There are six evaluation themes. The FAO enumerator will give a short introduction about each theme to help the interviewees form their answers. After each theme, the main VFU spokesman can give a summary with his or her own feelings of what is most important or give other key information that has not been covered yet. The FAO enumerator will give a brief summary of each theme to be sure that the group agrees with what he has learned and written down during the interview. Corrections and additions can be made at this time.

After all interviews are completed, the results will be analyzed by the FAO enumerator and SEC Livestock Development Officer in order to identify key activities, policies and practices that contributed to success and sustainability of the VFUs. The survey will also try to identify why some VFUs could not last or are continuing to struggle after all these years.

Your friends and colleagues in FAO and from the projects, if you remember, thank you for your time and frank, truthful answers.

SITUATION STATEMENT:

The main goals of the VFU programmes in Afghanistan and Tajikistan have always been to first restore or establish delivery of essential animal health services to livestock owners at the community level. Secondly, to build up the government vet service to deliver services and tasks that only the government can deliver best. By

making these services and tasks again available in communities, livestock diseases could be prevented or treated, production of meat, milk, wool and eggs would rise and more food would be available for families and markets.

At the same time as farmers and consumers hoped to benefit, Afghan and Tajik vets and animal health workers were the main 'actors' in delivering services that only they were qualified to deliver. So this survey focuses on you, the vets and animal health workers in the VFU programmes in each country. You need to analyze and tell us if you are better off by practicing your vet profession today, the reasons for success or failure, and your recommendations for the future.

SIX EVALUATION THEMES:

The informal and open ended questions asked will try to cover the key features that are thought to be critical and that lead to active, financially sustainable delivery of veterinary services at the community, farm and village level. It is thought that these key features are important in the success or failure of individual vets or animal health workers for making a good living from providing vet services instead of some other occupation.

1. **SKILLS** – preparation, veterinary education and continuing education
2. **LOCATION** – physical, demographic and cultural features
3. **CLIENTELE** – relative wealth, rural vs. urban, willingness to pay for services
4. **START UP SUPPORT** – remedy & vaccine supply, equipment, training, capital and start-up salary
5. **PRACTICE ENVIRONMENT** – competition, services demanded & offered, multiple income streams
6. **SOCIAL ENVIRONMENT** – satisfaction with lifestyle, satisfaction with clients

PERSONAL INFORMATION & DATA:

Your (main VFU spokesperson / senior vet) age when you first started working in a VFU _____

Age when you started working in your present VFU _____

Are you now married _____?

Are you making a reasonably good family living now by working as a vet _____? Are the assistant vets, paravets, Basic Veterinary Workers (BVWs) or animal health workers in your VFU making a reasonably good living too _____?

Do you have another job or source of income outside of your VFU work _____?

What are the main sources of income (both cash and in-kind) for your family (include income from wife's work, children's work and your work):

Do you consider that your current veterinary work (connected with a VFU even if 'contracted' by an association) is financially successful _____?; is struggling pretty hard _____?; or you quit the vet / VFU business in the past because you could not make a decent living _____?

Since the beginning of your work in the VFU, did you leave the VFU work and came back _____? If so, how many times _____? and what was/were the reasons for leaving:

- i- Economical, problem to buy needed remedies for your VFU store,
- ii- low income (cash and in-kind) earned from your VFU work,
- iii- too small area or territory with too few animals for VFU work,
- iv- security problems,
- v- economical problem of the livestock owners,
- vi- livestock owners were not ready to pay cash for remedies or services,
- vii- you got a good job in another type of work, or
- viii- other

What were the reasons that you started again your veterinary activities:

- i- you lost your other job or business,
- ii- demand of the livestock owners for your VFU services,
- iii- based on support of the central government (veterinary department of ministry of agriculture), or local government, or district shura or jamot or other).

Please tell us the main reasons of your success in the VFU:

Anything else you would like to add on this theme?

ANNEX 3. Questionnaire

SKILLS – preparation, veterinary education and continuing education

What were your academic / work qualifications when first starting in a VFU? Were you a Vet Doctor____? An Assistant Veterinarian____? An Animal Health Technician / Feldshers / Paravet____? A BVW or Community Health Worker____? Or other (explain)?

Did you receive Introduction or Continuing or Refresher Training courses that **were useful for your VFU work**? Yes____ or No_____.

What were the titles of useful courses and how many weeks or months of continuing education or refresher training did you receive since first starting in your VFU? About how many days per year do you receive continuing education or refresher training _____ ?

What were the titles and content of training courses (sponsored by FAO, vet associations or others) that **were not very useful**?

What would you add to the content of the courses?

Do you have veterinary books to help you in the diagnosis of diseases _____? Are these books provided by veterinary department _____, veterinary association _____, NGO _____, university _____ or others _____? Are these books in your own language _____?

During a difficult diagnosis or surgery, the available veterinary books may not help you. What can you do or where can you get help? Can you contact through your cell phone a veterinary expert (vet monitor / trainer) or another VFU vet or training center or other? Or don't you have much option for assistance? Explain.....; Are you trained to recognize the good quality remedies and vaccines in the market? If yes, give some methods that you use and examples.

Have you learned during your training courses some methods or ways to increase your income (both cash and in-kind) during your work in the VFU? If yes, explain and give examples that you have used to increase the work of your VFU over the years.

Give some examples from your own experience on how you get livestock owners to become your clients and use your VFU services. Would you explain?

What else would you add on this theme?

LOCATION – physical, demographic and cultural features –

If you are now successfully working in a VFU: How many years have you worked in your VFU in the present location _____ ?

Is the district your VFU is located in and where you now work your home district, where you or your family come from, or are you a newcomer or outsider in this district?

Do you work alone in your VFU or do you have other doctors or technicians working with you? How many vets _____ or technicians _____ in your practice?

Do you have a vet clinic _____ ?

Is your base in a room or two in your house____? Are you primarily a 'mobile vet' working from your own car, motorbike or bicycle____? What other clinic base do you work from?

What do you think is the ideal situation regarding successful VFU operation – practicing from a clinic____?

Having your own car or motorbike for travel to clients____? Or it is essential to have both____?

Can your VFU practice afford to pay for and operate a separate vet clinic building _____? A car or motorbike _____? Both _____?

Is the district you work in considered high potential____, middle potential _____ or low potential _____ for agriculture or livestock raising?

What type of transport do you own for your vet practice work or regularly use during your VFU work? Do you own this vehicle _____ or do livestock owners hire (like a taxi) or use private vehicles to transport you _____? Do you use a government vehicle in your VFU practice _____ ?

What are the **main sources of your family income** (both cash and in-kind), including your veterinary practice, such as: farming, selling in market, paying jobs, others?

What **livestock or animal health supplies** do you regularly sell?

Sale of veterinary medicines?

Sale of dewormers?

Sale of other agriculture chemicals?

Sale of livestock feeds or forage seeds?

Other sales?

Do you routinely charge a service or professional or consultation fee for your vet services provided to livestock owners _____ ?

Do you charge a fee for transportation and / or your time taken to travel to and from farms to treat animals _____ ?

Do you and your VFU staff charge a fee for professional services plus fee for transportation plus for the sale and use of medicines or vaccines given to animals for treatment or prevention _____ ? If not, which fees are regularly charged?

Do you charge for individual vaccinations given per head _____, for time spent in vaccinating on the farm or village _____ or no charge for vaccinating animals _____? Or do you only charge for some vaccinations and not others? If so, which ones are charged for and why?

Do you provide artificial insemination (AI) services _____? And charge for them per insemination _____?

What percentage of your VFU practice income (both cash and in-kind) comes from pet animals _____ ?

What percentage of your VFU practice income (both cash and in-kind) comes from farm animals _____ ?

Do you house or board small or large animals and charge a fee for the feeding and boarding service _____ ?

Can you receive a payment by the government or NGOs for carrying out various tasks like disease reporting, inspections, surveys, campaigns, etc. _____ ?

What percentage of your VFU work and sales is with big farmers _____ ?

What percentage of your VFU work and sales is with individual family / small farmers _____ ?

What are your other sources of veterinary or livestock production income (both cash and in-kind), such as offering AI services?

If you are now struggling to make a good living or you actually quit working in a VFU:

How many years or months did you work in a VFU in your first location _____ ?

Why did you leave this first location? What other type of work did you take up?

Did you work alone in your former VFU or did you have other doctors or technicians working with you?

Does your previous VFU still operate giving vet services _____? Why did you leave your previous VFU?

Did you work from a vet clinic _____ or from a room in your home _____ or as a mobile vet practice without a clinic or other _____ ?

Was the district where you first started vet work or are working now but struggling considered high potential _____, middle potential _____ or low potential _____ for agriculture or livestock raising?

What province / oblast and district were you first working in?

Why do you think your first VFU position failed or you are still struggling after many years in your present VFU?

What do you want to add about this theme?

CLIENTELE – relative wealth, rural versus urban, willingness to pay for services --

Who are your main clients?

Rank from highest to lowest the amount of income (both cash and in-kind) from: smallholder farmer families (men or women heads of households) in villages _____; small farms (Dekhan) _____; larger flocks or farms (government or private) _____; from dairies or large-scale poultry farms _____; from horses; or from pet animals _____.

Are most of your vet work fees and medicine sales for village livestock _____, or for farms _____, large flocks _____ or dairies _____, horses _____ or pets _____?

Does your income (both cash and in-kind) come from government vet work as well as have your own private vet practice or VFU _____? Does the government pay you to do government vet work _____? If so, on average how much (in USD) per month _____ ?

Is your monthly government payment actually a pension _____ ?

What types of non-vet or seasonal or family business work do you do?

Is each of the above client groups where you work generally willing to pay cash money for your services, medicines and vaccines? Very willing _____ ? Generally but not always willing _____ ? Very reluctant and most clients do not pay cash _____ ?

Is farmer's willingness to pay cash getting better over the last years _____ ? Staying the same _____ or gotten less _____ ? What has most brought about this change in attitude of farmers to paying cash for VFU services?

Is having sufficient monthly cash flow a major problem in your VFU? Or not a very big problem _____?

Has the willingness and ability of your clients to pay cash affected your ability to remain in business as a vet _____ ?

Do you receive credit from private companies or vet associations or other distributors that supply you with vet remedies _____ ? Vaccines _____ ? Other supplies _____ ?

Do you receive 'in-kind' payments instead of cash for medicines or vet services _____? If yes, do you receive in-kind payments less than 25% of the time _____, about 26 – 50% of the time _____, or more than 50% of the time _____?

Do you give credit for vet services or medicines? No _____, Just occasionally _____, Very commonly _____

If you give credit for medicines or services, do clients usually pay what is owed to you _____?

What is your policy on giving charity to needy farm families or small animal owners?

What do you want to add about this theme?

START UP SUPPORT – remedy & vaccine supply, equip, training, capital or start-up salary --

What 2 or 3 things did you receive in the early VFU startup period that were essential for your successful VFU work?

Where did these 2 or 3 things come from (rank all that apply): FAO _____? Professional vet association _____? Implementing Partners or NGOs _____? Central government officials or policy _____? Local government official policies _____? Your clients themselves _____? Others (explain) _____?

What things do you think you lacked or would have made start up easier for you?

What things are now essential for sustaining and growing your vet work / VFU?

What services, remedies, vaccines or other activities do the farmers want from you that you cannot supply?

Do you provide artificial insemination _____? If not, why not?

Were your VFU activities monitored or supervised in the past? If yes, by whom?

Were the monitorings useful _____? Explain why?

Who is monitoring your VFU now _____? Is it useful _____?

Do you record your daily activities (treatment, deworming, vaccination, surgery or diagnosis) in some type of book _____? If not, why?

If yes, why and what do you do with the recorded information?

Can you record your charges, like a receipt, for each case _____?

Do you report to anyone _____? If yes, to whom and how often _____?

Do you report on the disease outbreaks when they happen _____? To whom _____? Are you paid by anyone for disease outbreak reporting _____?

Do you report monthly disease surveillance information _____? If, yes, to whom _____?

Do you get paid for this public service _____?

What would you like to add to this theme?

PRACTICE ENVIRONMENT – competition, services demanded & offered, multiple income streams --

What things, people, policies or activities **have been most helpful** for sustaining and growing your vet work and VFU in your community?

Rank the first 3 starting from the most helpful. Support from central government vet service _____. Local / district government vets _____. Local Imams _____. Local government offices such as fire protection, sanitation, tax collection, business licensing _____. National or local laws relating to businesses or private vet practice _____. Others (explain) _____?

Give several examples of how they were helpful.

What things, people, policies or activities **have been most unhelpful or threatening** for sustaining and growing your vet work and VFU? Support from central government vet service _____. Local / district government vets _____. Local Imams _____. Local government offices such as fire protection, sanitation, tax collection, business licensing _____. National or local laws relating to businesses or private vet practice _____. Others (explain) _____?

Rank the first 3 starting from the most unhelpful or threatening to your VFU work.

Give several examples of how they were unhelpful or threatening.

Are there other vets (from university, retired) or non-vets / animal health technicians (from pharmacies, drug suppliers, others) that compete with you for vet clients?

If so, which ones compete? How much damage does this competition now do to your VFU business?

Does a local / district government vet also provide clinical services that compete with your vet work _____?

Do these competing vets or animal health technicians really decrease your business or are they only a minor threat to your VFU business?

If not a major threat, explain why not.

Are you generally busy most weeks throughout the year with your vet work / VFU practice _____? Or is most of your vet work only during some seasons or months of the year _____? Explain and which months are most busy.

Do you make most of your annual family income (cash and in-kind) from non-vet work? If so, what type of non-vet work?

Are you able to offer most of the services that your clients want or are you limited in offering what you want or they need?

As one of your VFU activities do you have private pharmacy or veterinary medicines shop or agro veterinary drugs shop ____? If yes, what is your approximate total income (cash and in-kind) annually from medicine sales _____? Approximately what percentage of your total VFU income (cash and in-kind) comes by sales from your pharmacy _____?

What types of services or medicines or vaccines would your clients like that you are not now able to offer? Why can't or don't you offer these medicines or vaccines?

How much in the past, and even now, did insecurity from local conflicts and personal safety contribute to the failure of your VFU?

Was local security a big or minor factor in your decision to stay in vet practice / VFU in your district _____?

How much in the past, and even now, does protection from local government officials, or unreasonable taxes, fees or charges contribute to the success of your VFU? What kinds of things are financial threats to your vet practice?

Is this a big or minor factor in your decision making to stay in vet practice / VFU in your district _____?

Give several examples of local influences that could contribute to the failure of your VFU.

How or what organization protects your VFU from these unreasonable taxes, fees or charges? Explain.

What else would you add to this theme?

SOCIAL ENVIRONMENT – satisfaction with lifestyle, satisfaction with clients --

How do you rate your family's quality of life at the beginning of your vet practice / VFU and now (say over last 5 years)? No change ____; little change ____; much improved ____; worse off ____.

How do you rate most of your practice clients? Good people and neighbours ____? Some good & some bad people and neighbours ____? Generally difficult to get along with ____?

How do you rate your VFU fellow colleagues, if you practice in a group? Usually good people, motivated and supportive of common goals ____? Difficult to work with, not too motivated or supportive for common goals _____?

What do you want to add about this theme?

FINAL QUESTIONS & YOUR COMMENTS

Generally what has contributed to your success or failure in your vet work / VFU? Was this something within you? Something from your local vet colleagues? Something from your clients or neighbours? Something from local / district government or village authorities? Or something else? Please list and describe each situation briefly.

If you were to continue or get back into active vet work in a VFU, rank 3 or 4 essential things you would want to help your vet work.

Who should or could best provide each of these 3 or 4 essential things? Local / district government _____?

Village authorities _____? Central government vet service, Ministry of Agriculture or parliament

_____? Donor funded development projects _____? The private sector _____? Your clients

_____? Local / national professional vet associations _____? A statutory vet registration board _____?

Others (explain)?

In addition to FAO, name other organizations, groups or businesses that supported you in re-starting to deliver community-based veterinary services and in what way did each make a major contribution? For example, general NGOs, donor development organizations, private sector businesses, universities, NGO technical veterinary organizations, national or international professional veterinary associations, local government or veterinary service department.

What else do you want to add for this survey?

ANNEX 4. Introduction, Orientation and Continuing Education Courses

Implementing agencies designed an **Introduction Course** (approximately 12 days) for all candidates selected for the programmes in each country. This course consisted generally of general information about the practical, clinical veterinary practice, clinical diagnosis of common food animal diseases, surgery (pets and caesarian sections in cattle), reproduction diseases and gynecology, internal and external parasitology, common and reportable infectious diseases, pharmacology especially of imported remedies which were not familiar to the participants (antibiotics, anthelmintics, vitamins, minerals, anesthetics, others), and the concept of cost recovery and self-sustainability of veterinary practices. These courses were given for each batch of inductees by national project officers in local languages. A wide menu of continuing education (CE) courses, generally lasting 3 or 6 days) were given annually in each of the countries including: surgery, horse diseases + surgery, diseases of pets, bovine artificial insemination (AI), general poultry diseases (also specific intense courses in 2006 – 2007 on avian influenza recognition, diagnosis, sample taking and reporting), basic laboratory diagnostic practices, sample collection from the field (Afghanistan) and a 3-day business management course (Tajikistan). Interviewees welcomed each course as useful; no ‘un-useful’ courses were noted.

In Afghanistan, an intensive informational **Orientation Course** (6 weeks) to introduce the Veterinary Privatization Law and the donor-supported private veterinary practice (PVP) programme was undertaken in 2007 - 2009. This introduced the policy change where government employed vets were not allowed to practice private, fee-for-service veterinary medicine or surgery. Previously employed government vets were given a lump sum severance pay and enrolled into the Orientation Course for delivering basic vet services. At the end of the course, successful participants received a kit of instruments, remedies, equipment, furniture, motorcycle and sometimes a refrigerator in order to establish a private vet practice under contract to a district administration. Contracted private practice vets no longer received a government salary and were bound to set up private practices in designated districts. If they abandoned these districts without agreement with authorities, they had to return the veterinary kit.