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# QUALITY COMMUNITY ANIMAL HEALTH ARRANGEMENTS



Experience  
documenting  
animal health workers

Notes of experiences,  
analysis, lessons learnt  
and recommendations



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vétérinaires  
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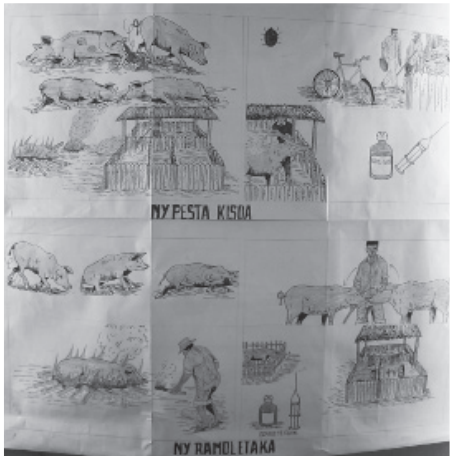
**Notes of experiences,  
analysis, lessons learnt  
and recommendations**

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## Acronyms

ACSA	Community Based Animal Health Worker
AVE	Village Based Livestock Worker
AVSF	Agronomists and Veterinary without Borders
CAHW	Community Animal Health Worker
GDS	Sanitary Defense Group
OIE	World Animal Health Organization
NGO	Non-Governmental Organization
VAHW	Village Animal Health Worker

## Introduction

Recent threats against Veterinary Public Health, and particularly the Avian Influenza epizootic, have highlighted the worldwide importance of animal health issues. It appears more and more evident nowadays that we are sharing a single planet where the risk factors know no borders. More than ever, we are becoming aware of the global scale of problems, hence the necessity of a global response to these problems.

If this global nature is admitted in terms of geographic scope, it must also be understood as being effective throughout territories, including remote areas, among populations who seem more and more marginalized but who are fully participating in our world.

In addition, direct and indirect animal disease related losses, estimated at about 100 billion US dollars over the past ten years (Dina L. Umali & coll.1994), seriously prevent achieving food security and sovereignty in numerous countries.

For a period of twenty five years, Agronomists and Veterinarians without Borders have been working in the area of animal health in Asia, Africa, and Latin America. Numerous actions have involved the setting up and animation of community based quality animal health service.

This is a presentation of this rich experience and we wish to disseminate the conclusions that its analysis reveals.



## Background & Method

### Background

The threats to health alluded to in the introduction highlight the extreme inadequacy of livestock services in preventing, detecting and managing risks: as it happens, it's the shortcomings of the animal health arrangements (taken as a whole, i.e., including all stakeholders, public veterinary services, private veterinarians and farmers) which account for the ineffectiveness of the measures.

Numerous countries of the south, often under structural adjustment policies, have disengaged themselves from their prerogatives of helping farming agriculture, which has led to dramatic situations:

- Inadequate access to basic animal health services which always are one of the main economic risk factors for farmers and a significant obstacle to livestock development;
- Lack of epidemiological control chain from the highest levels of Government Services all the way down to the farmers [quality staff – veterinarians – in largely inadequate numbers, lack of budget, etc.]

In order to remedy these shortcomings and the lack of veterinarians in the field (who often lack logistical resources to move around or who often consider farmers as insolvent), multiple structures, particularly Non-Governmental Organizations, have trained farmers in the organization and implementation of prophylactic campaigns, in basic medical techniques and veterinary care, pharmacy and medicine stock management.

On the other hand, and most often without coordination, other structures (or sometimes the same structures) had conducted reinforcement actions with Public Veterinary Services and with private veterinarians.

Agronomists and Veterinarians without Borders have intervened and brought such support in numerous countries. This document contains a description of the reflections from this varied experience.



The persons providing farmers with animal health services are designated by various names depending on the country or agency:

- Community Animal Health Worker
- Community Animal Health Worker [ACSA] in Madagascar or Community Animal Health Worker [CAHW] for Anglophones
- Village Animal Health Worker ([VAHW] in Cambodia
- Para-veterinarian in Vietnam
- Veterinary Assistant
- Community Livestock Worker
- Vaccinator
- Para-Veterinary Worker in Niger
- Village-based Livestock Worker (AVE) in Togo
- Promotor Pecuario (Livestock Promoter) in Latin America
- Etc.

This multitude of designations reveals different approaches depending on the aspect of their function that is stressed, and depending on the context. For example, in Vietnam, animal health actors are “para-veterinarians”, livestock technicians receiving additional animal health training. In this context where the para-veterinarians are sometimes given compensation by the Vietnamese government, the AVSF activities sometimes include even capacity building of public veterinary services. **In order to avoid locking ourselves in an a priori position, we have chosen the broader term of auxiliary (Of whom? Of what?) and ACSA (Community Animal Health Worker) to be discussed again only at the end of the document, in the recommendations.**

“As a reminder, an auxiliary is defined as an actor from the environment, approved by the community, in charge of providing care and carrying out baseline zootechnical actions, using and managing a stock of non-hazardous veterinary products, gainfully employed by the beneficiaries and trained through short and consecutive training sessions built according to an objective based methodology (Bangui seminar, 1988(4)).”

The following box specifies a few definitions by the OIE (World Animal Health Organization).

### **Veterinary Statutory Body**

Designates an independent authority tasked with regulating veterinary professionals and para-professionals. The veterinary statutory bodies regulate the registration, authorization to exercise and the aptitude of veterinarians and veterinary para-professionals to continue practice.

### **Para-professional veterinarian**

Designates an individual who, in application of the provisions of the present terrestrial code, is entitled by the veterinary statutory body to fulfill, on the territory of a country, certain functions which have been assigned to him (which depend on the category of para-professional veterinarian to which this individual belongs), under the responsibility and supervision of a veterinarian. The functions which each individual category of para-professional veterinarian is assigned must be defined by the veterinary statutory body based on qualifications and training of the individuals concerned and according to need.

### **Veterinary Services**

Designates the governmental or non-governmental organizations which ensure implementation of measures relative to the protection of animal health and well-being, as well as other forms of recommendations found in the present terrestrial code on a country's territory. The veterinary services are placed under the control and direction of the veterinary authority. The private sector organizations, the veterinarians and paraprofessional veterinarians are generally accredited, or entitled by the veterinary authority to carry out the tasks above.

The Sanitary Code for terrestrial animals provides standards and guidelines on the quality, organization and structure of veterinary services (...) as well as on the qualifications, level of instruction and professional experience of their human resources.

The auxiliary therefore is not necessarily a para-professional veterinarian; he could become one according to countries and according to his skills.

## Method

We have tried to avoid, in this document, a tedious list of progress reports of projects without any links with one another or again any statement of a doctrine illustrated somehow by field examples.

We have organized our reflection around what we wish to achieve: a community quality animal health arrangement, which is also sustainable.

We will study, using field examples, what the terms community and quality mean in order, ultimately, to single out what characterizes such arrangement in our understanding, and how to promote it with public services and farmers.



## First section: Proximity

The issue of community based seems self evident given that it often justifies by itself the interventions: it is in order to remedy the lack of veterinarians in the field with farmers (in the bush, steppe, forest or desert) that the need for a community worker has been formulated and its corresponding notion constituted.

However, this notion apparently raises many practical issues:

- What social proximity, and hence what selection criteria for the community worker?
- What must the area of activity of a community worker be?
- What "density" of community workers?
- What sustainability of the community worker?

### 1.1. Selection criteria of community workers

According to situations, different selection criteria are taken into account for the prospective community workers to demonstrate the required characteristics. Often, a guarantee will be sought that the community worker, once he has been trained, will not go settle in another region, but that his acquired skills will be truly used for the benefit of his community. In order to assure the nearness of the community worker and farmers, the criteria above for the selection of community workers in the bibliographic study on animal health workers" (9) and which are very often selected by the different projects are:

- 1 → **Communal level stability** (family, children, job) in order to avoid going to work elsewhere. In general, this will involve young and adult men and women.
- 2 → **Chosen by the community** and socially accepted
- 3 → Preferably **motivated** and **voluntary**: the prospective worker must not be designated, if he has not applied for the job himself; but in Vietnam, for example, the prospective worker will always be designated by the Government's deconcentrated services.
- 4 → **Farmers used to animals** (have a good empirical knowledge of pathologies and/or a mastery of traditional treatments and may be recognized and valued in the course of such selection)
- 5 → Have **sufficient time** for this activity (the candidate should not hold concurrently too many jobs)
- 6 → **Education or literacy level**, we will try to gain here a certain homogeneity in the group of trainees
- 7 → **Dedicated** (not seeking too much financial gain and aware of the services he should be rendering to his community)

To this list of criteria, one can add those defined by the community in the course of a participatory diagnosis (a criterion often cited by farmers interviewed in Madagascar, for example, is soberness!).

It should be noted that an oft discussed criterion is level of education: some people would impose a minimum level (or at least the ability to write and count, or even the BEPC) for a community worker to be able to receive trainings using information aids which he will encounter in his practice (cf. partly qualified). However, this criterion is often in conflict with closeness criteria to the extent that it may include a social bias: in certain villages, the relatively few literate or educated individuals are members of an elite accumulating other tasks, and hence other powers.

It may seem useful then not to keep this criterion. In this case, the methods and pedagogic aids utilized during the training should be adapted to audiences which are hardly literate if literate at all. At the same time, strengthening the literacy training of future community workers may be enacted (if the project life and budget permit) in order for the latter to be able to value in an autonomous manner the documentary resources which they could subsequently have. Whatever the case, we will systematically seek to have a homogenous group of individuals to be trained in order to have training aids and methods fit for all candidates.

Another criterion which may be discussed is political neutrality: we will often avoid selecting a community worker who exercises political functions, which are often unstable, to preserve his community function from disappearing with a change of political majority (of the commune, the region, or the State). In certain cases, the country's organization itself would not allow implementation of this criterion: in Cambodia, for example, community workers are chosen by the political organization and according to the administrative division.

→ **We will choose, as community workers, those individuals stable in their commune with relevant selection criteria for the community and a schooling level as homogenous as possible. We will focus more on avoiding social biases in the course of the selection.**

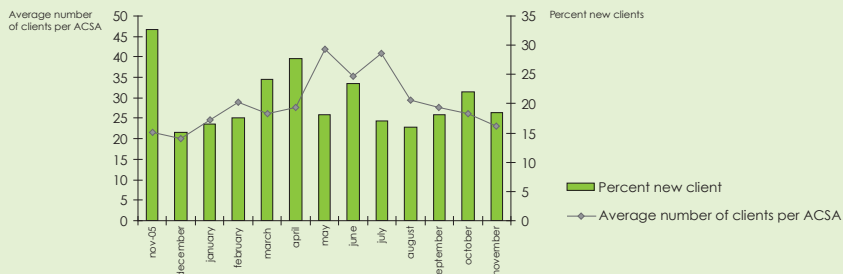
## 1.2. Choice of the number of community workers and areas of activity

An estimate of the number of necessary assistants may be made on the basis of the density of the animal population: an adequate number of animals per assistant is necessary for the profitability of the service and as a result, for the sustainability of the arrangement. It determines worker motivation, the upkeep of skills through practice and minimum pay.

The following box provides an example of the benefit gained by community workers and the number of farmers seeking their services.

### 1. Benefit of community workers over their workload, evolution of their clientele: example of Madagascar.

In Madagascar, in the lake Alaotra region where AVSF has trained about forty community workers in 2004, a worker covers a geographic area with a minimum of 600 heads of cattle. They provide on the average 20 to 30 services per month, devote 11 days per month to their community activity and make a monthly benefit of about twenty euros (which is higher than the daily wage of a farm laborer).



This data stems from the monitoring of community worker activities by the project team.

The size of the ACSA clientele increases regularly from November 2005 through May 2006, then slowly decreases until November 2006 (dark curve). This initial rise must be perceived with a gradual setting of farmers' trust in new animal health actors then in the descending phase an increasingly marked entry in the hungry period.

From March through October, the total number of clients does not decrease below 600 per month. As far as the number of new clients is concerned, it stagnates at around 20 per month but does not seem to decrease excessively. This indicates that the ACSA clientele is always in a rising trend and that the overall size of the clientele will continue increasing in the second year of activity.

We can notice a clientele peak during the harvest period (from May through July); such peak corresponds to greater financial capacity among farmers. The average number of clients per ACSA comes close to thirty in times of harvest and drops under the bar of 20 in the hungry period. The proportion of new clients (red histograms) follows approximately this evolution and thus oscillates between 20 and 40% of the clientele if one excludes the first month of activity when the great majority of clients are of course composed of new clients.

For the year 2006, the average monthly number of clients is 20 per ACSA with a 30% average of new clients.

Here the community animal health service provided by 40 ACSAs reach 8,000 households.

The estimation of the minimum number of animals necessary for any correct remuneration and/or adequate social recognition rests of quantified data:

- livestock census,
- Estimation (participatory diagnosis) of the average annual expenditure per species,
- Potential margin (survey of health authorities, wholesalers and retailers of veterinary products...).

This "number of animals" criterion must then be crossed with geographical requirements (area to be covered) in order to ensure a community service. These geo-

graphical criteria are determined with farmers and authorities, who are knowledgeable about the field (for example, a maximum distance of 10 km between the place of residence of the community worker and the most distant farmer may be selected, to be adapted to the context).

A proposed division is built and refined throughout the selection process, by taking into account several data:

- **Finer geographical data:** the presence of waterways separating two areas, the extended area of a preselected area...
- **Cultural data:** certain communes or villages may present characteristics which could make necessary an adaptation of the arrangement (example of religious taboos that certain individuals would observe vis-à-vis an animal species which is nevertheless raised in surrounding villages).
- **Livestock development:** in certain areas, livestock and care practices are more developed than elsewhere (even though the livestock is not superior) and the potential workload per community worker is henceforth more important.

The final distribution of areas of activity is done after the final selection of community workers who will thus have the possibility to strike an agreement with them on dividing the areas.

In certain areas, several valid candidates may be presented. As the choice is difficult between candidates, competent human resources may be preferred instead of letting them go, and competition will ultimately decide. The fact of having several individuals trained within an area may also help remedy migratory phenomena which could occur (movement of trained community workers towards another area or towards the city). However, this requires adequate funding for training more people.

However, the administrative and social structure is such that it is sometimes difficult to resist pressure by local authorities who would want to have a community worker only for their area. Thus, it is essential that the community be warned of the importance of the choice of community worker.

Another debate may be addressed here, that of the role and position of women among these community workers. It is noted that generally speaking, there are very few women volunteers or selected by their community to become community workers. However, in Mali, women community workers do receive such social recognition that the salary matters little. On the other hand, the working conditions of community workers are often hard and require physical force.

## 2. Selection process: Example of an AVSF project at Vohipeno, Madagascar

**Total duration of the process:** about 4 months

**Place and project:** training 19 ACSAs in the 19 rural communes of the district of Vohipeno (south-eastern coast of Madagascar).

### Elections

→ **Rationale** Following the holding of information meetings in the rural communes, the latter presented their candidates to us. We did not have any idea about the method used by the communes to present these people to the ACSA position, nor their motivation. These were often people close to the Mayor (family or friends). In addition, in our area of study, the automatic designation for communal tasks by authorities is common practice.

AVSF has therefore decided to hold elections in order to help farmers voice their opinions on candidacies and to any motivated individual to apply for the ACSA position. The choice of holding an election by fokontany (a commune is divided into several fokontany's) has stemmed from a will to consult a maximum number of farmers and not limiting oneself to communal chief-towns.

#### → Organization

The project team has held elections in each fokontany of the 19 rural communes. The selection criteria of the candidacies were presented to the local authorities; they are the ones who made calls for applications and informed the population on the holding of elections. These elections were held by

### Recruitment Test

#### → Rationale

The organization of a test to help make a final recruitment has been unanimously requested by farmers and authorities in order to avoid conflict in the communes. This was the best way for them to make a final choice among different elected candidates.

#### → Organization

Candidates' CV's were collected and examined using the selection criteria. Three test venues and dates were set in the district. The test was administered in two parts:

- written test with 4 test areas (arithmetic, knowledge of animals, motivation and positioning, and knowledge of the environment)
- personal interview for those candidates who scored higher than average in the written test, with 4 test areas (negotiating skills – relational quality, organizational skills, training skills – extension, motivation and positioning).

The written test and the interview guide were developed by the closest private veterinarian (located at about forty km away) and the chief veterinary post officer at Vohipeno (Government employee). The final recruitment decision was made by

secret ballot, under the control of an AVSF employee and a communal employee. For each selection, a report was written.

#### → Results

86 candidates were elected throughout the district. Farmers' participation has been good: one can note that certain fokontany's did not wish to participate; others held communal elections only (case of small size communes); certain fokontany's held deliberations but not elections. All candidates who were initially proposed by the communes were not elected, which made us feel comfortable with our method.

AVSF and the chief veterinary post officer based on the written test results, the interview and the CV.

#### → Results

17 ACSA's were selected after the test. The former volunteer vaccinator, assistant chief veterinary post officer on the job for 20 years, was admitted automatically as ACSA to practice in the district chief-town. This was a difficult choice, in fact, because the fact that he had not been elected had placed him immediately in a different position from that of other ACSAs. However, we thought that in order to harmonize the animal health work in the district, it was preferable to integrate him into the ACSA network, instead of running the risk of turning him into a rival or an opponent.

The general profile of ACSAs is as follows:

- Average age: 35 years (21 to 47 years old)
- Sex: male (17), female (1)
- All are farmers
- Level of education: BEPC minimum level (one ACSA of 6th grade level and one ACSA of senior high school level)
- 10 ACSA have already received additional livestock training.

→ **The number and distribution of community workers are determined by market potential of animal health care and geographic accessibility for a real community level service. It is conceivable to train twice as many community workers as are necessary in order to have a competitive process in selecting the best.**





## Second section: Durability

As with any development activity, durability is a crucial factor. In the case of agriculture and livestock services, this is particularly true: numerous arrangements, set up perhaps in an artificial and imposed manner, have disappeared at the end of the interventions, reducing to nil the investments made, and even worse, leaving in the field some community workers without any monitoring, with risks of important drifting (use of illegal drugs, in particular). In addition, this concern must be in the heart of the methodology utilized, and we have seen that the selection of community workers took it into account (community recognition, adequate pay, age and insertion into the community....).

The principal risk weighing on the durability of service provision is an economic one:

- The lack of cash in the hands of farmers often makes them insolvent clients,
- The supply of community workers with veterinary inputs also presumes their solvency.

The cooperation project at the origin of the establishment of community workers must refrain from introducing durable biases in the exercise of the function of community worker: **recurrent economic interventionism must be banned**; one must conceive of the economic durability of the community worker's activity as soon as possible. As a matter of fact, if the community worker can benefit from an initial stock of veterinary products provided by the project, he should rapidly become financially autonomous; he should renew his stock of veterinary products and replace his worn-out material. For that end, he should manage his activity correctly and reinvest a portion of his profits in the purchase of veterinary products and the maintenance and renewal of his material.

A response proposed by the AVSF to this challenge resides in the structuring of farmers and community workers who, gathered in associations, are better tooled than isolated individuals to face these difficulties (and this is all the more so that access to credit is often as problematic as access to other services!) A strong link between community worker and private veterinarian also helps manage critical periods of insolvency for the farmers; the veterinarian generally having more cash than the community worker, he could support the latter by granting him credit. This of course presumes a relation of trust and is often not possible at the beginning of the community worker's activities. Finally, a sound relation between the community worker and his community also facilitates the work and notably the recovery of the payment for the community worker's intervention.

The availability of quality veterinary products is also an important condition for system sustainability: the service provided by the community worker cannot last if stock shortages are frequent or products used are adulterated. Here again comes out the major role of the private veterinarian or the community workers' association, which is critical for this stocking. If they are not present, the supply of products will be much more difficult to set up and the quality of products may not be guaranteed.

But what sustainability are we looking for? It goes without saying that an animal health system must rest on human resources with the best skills possible. In this field, the ideal would be not to have any recourse within the arrangement only to degree holders or veterinary doctors. However, this implies that veterinarians be numerous enough to cover all the farmers, that they have adequate means of transportation, that the farmers be able to pay them reasonably. This is the reason why we will try to set up a evolutionary system capable of adaptation and ultimately leave their place to veterinary doctors who would come to set up a practice.

Finally, it is noted that a few years after the implementation of the projects, about 50% of the community workers trained remain active. Thus, there is a great disparity according to individual countries and contexts, this percentage varying sometimes between 0% and 80%.

## 2.1. Farmers' associations: the Sanitary Defense Groups

The sanitary defense groups are farmers' associations which intend to have a better collective management of sanitary risks of the animal population. They often form around a common fund which helps better manage in time the animal health related expenditures.

These are generally structures facilitating the sensitization and dissemination of information to farmers, thus inciting them to resort to community worker services.

Finally, these SDG's, where they exist, are engines of livestock development. However, improved animal health and livestock development are closely related: livestock development can only take place once the sanitary control are mastered and triggers in return an increased demand for animal health.

### 3. Example of SDG's: the model statutes of SDG's of Arkhangai, Mongolia

#### **Project: Supporting the structuring of sanitary defense groups in two Mongolian provinces.**

The Mongol herd is vulnerable both because of a very cold climate and an important deficit of livestock services. In the course of particularly harsh winters (dzuds) these past years, cattle losses reached up to 70 percent of the herds (Arkhangai and Bayankhongor between 2000 and 2002). This has triggered an important rural out-migration and the impoverishment of these nomadic communities which are entirely dependent on their herd.

The chronic lack of cash for the farmers is

the major obstacle to the motivation of veterinarians (privatized profession) and to the effectiveness of veterinary services. In order to revitalize these services, AVSF has chosen to help farmers improve their decision making and negotiating power by structuring themselves in "Sanitary Defense Groups" (SDG), farmers' associations whose main activity is to organize prophylactic campaigns (deworming, vaccination, animal care) according to farmers' needs and in coordination with local authorities. The SDGs produce treasury reports: the SDG program officer, together with each farmer member, would determine his animal health needs.

For the upcoming year and determines the necessary amount, collects the amount determined at the time of the cashmere (spring) sale by the farmers and pays for the veterinary service in due course with the money saved. This enables farmers to have animals in good physical condition at the beginning of the winter season.

15 SDGs were established in the Arkhangai between 2005 and 2008 and have been federated since June 2006 by the "Federation of Aimag Arkhangai Farmers" (FEAA). The goal of this Federation is to defend the interests of Arkhangai and Bayankhongor farmers, help networking with new farmers via the SDGs and plays the role of a contracting office for the veterinary products necessary for the implementation of prophylactic campaigns.

### Excerpts of the Statutes of SDGs in Mongolia (NGO Status)

#### ARTICLE 1: CREATION OF AN NGO

Non-Governmental Organization is established according to the principles and rules mentioned in the Mongolian law on NGOs (dated 01.31.1977) and according to these statutes. The registration date is: DD/MM/YY.

#### ARTICLE 2: GOALS

The goal of the NGO is to improve animal health and animal productions in the department of XXXX, commune of YYYY, province of Arkhangai, through the establishment and management of a fund by the farmers of this department. The initial goal

of this animal health fund is the organization of the payment by farmers for veterinary services (deworming, vaccination, other services). The secondary goal of this fund is the implementation of other activities related to health and/or animal productions in the department, in line with the needs identified by the farmers.

(...)

#### ARTICLE 6: FINANCIAL RESOURCES

The NGO's financial resources are as follows:

- Membership dues
- Members' contributions aimed at covering the remuneration of the veterinary services (vaccination, deworming, other services) and implementation of other activities.
- Subsidies or public and private donations, from Mongolia or foreign sources, including NGO donations.
- Savings and interests made on the annual budget of the NGO.

The NGO will address a yearly financial report to the Ministry of Finance, as indicated in the Mongolian law governing NGOs.

#### ARTICLE 7: REGULATION

##### 7.1 Members

NGO members are farmers of department XXX, volunteers to participate in the NGO's activities. They contribute an annual due of 1000 Mongolian Tügrig to the NGO and pay a contribution covering payment for veterinary services (...)

## 2.2 The Community Workers' Associations

The community workers are rapidly faced with important cash problems: lack of any revolving funds; thus they encounter the greatest difficulties given the insolvency of their clients, and they cannot assure any replenishment of their stocks of medicines and materials.

This situation is often aggravated by the existence of deregulated drug markets sometimes in the hands of unscrupulous brokers weighing both on the quality and price of the medicine.

Without setting up a supply chain which would enable community workers to make a small profit, the economic viability of the activity is at risk and the community service comes to a halt.

A solution to this problem resides in the grouping of community workers into associations. Gathered into associations, the community workers may contract directly with a wholesaler residing in the capital city or in a close medium size town, negotiate prices, make some benefits and obtain special terms of payment. They can also set up a common fund from which they will manage a form of internal credit, helping each one of them achieve the minimum investment necessary for their activity.

However, the ideal situation remains channeling community workers' supplies through the private veterinarian if he has set up practice in the area: this has actually had the merit of guaranteeing the quality of veterinary products utilized and has also developed a veterinarian – community worker relation which would ensure quality services.

We will therefore help the community workers' associations by ensuring the provision of veterinary products only in those areas without veterinarians in order to avoid competition against veterinarians who are already in place. However, this provision function could jeopardize the future practice by private veterinarians.

In addition, community workers' associations help their members:

- Maintain skills through networking,
- Achieve economies of scale (collective purchase of material, organization of continuing training sessions, etc.),
- Resolution of problems and conflicts (a group is stronger than an individual).

#### 4. Community workers' associations: the example of Guatemala

Guatemala, in the 1990's, is coming out of a guerilla and a structural adjustment policy, both of which have harmed services to farmers. VSF intervenes in this "post-crisis" context with the implementation of the "Huehuetenango" project, located in two municipalities (Nenton and Barillas) and pursuing two major goals: on the one hand improving the livelihoods of farmers thanks to increased consumption of animal proteins and livestock income, and on the other hand contributing to the reorganization of a rural area destroyed by armed conflict in the 1980's.

Under this project, VSF supports training and consolidation of two livestock workers' associations on the relevant model of associations of a similar nature previously supported by VSF in the country.

We tally this example on the Association of Livestock Auxiliaries at Nenton, the APPN. The APPN has two major missions: i) ensure the sustainability of the network of livestock auxiliaries and of the veterinary pharmacy and i) establish a forum of expression and exchange helping structure the farming

civil society in Guatemala. The APPN includes 72 livestock auxiliaries, a board of directors and an annual general assembly; and it employs wage earners: one officer and 3 employees of the livestock station, a pharmacist, an extension worker, and a credit officer: it also sets up a commission in charge of studies and a training commission. The training commission comprises auxiliaries who have received pedagogic techniques and who are tasked with future trainings for new auxiliaries. The OPPN activities are described below:

**Veterinary pharmacy:** it is funded with the profits made on the sale of veterinary products, and products are only sold to auxiliaries. A specialized auxiliary is in charge. He is regularly supervised by the APPN treasurer. His balance is positive and the volume of sales is steadily increasing.

**Livestock station:** it helps supply farmers with animals and breeders and is also intended to play the role of a demonstration and training center. This structure had a deficit at the end of the project.

**Credit program:** for this program, the APPN endorses a local development role. A commission allocates credit in kind (animals) to the poorer farmers: reimbursement is made in cash or in kind depending on the type of farm.

**Scholarships:** a commission composed of 2 auxiliaries, 3 professors and one VSF employee, allocates student loans in order to help children pursue their studies. The program has been highly successful.

These community workers' associations are sustainable but they still do require some external support, be it methodological, technical, or financial. Such associations must be connected with the Government (at least its decentralized structures), NGOs and the private sector, 6 community workers' associations got together for a joint training program funded by NGOs.

Finally, these associations are evolving in a context of nascent democratization

and reorganization of a civil society traumatized by decades of authoritarian rule and violence. The very existence of these groupings, certainly centered on a technical theme, is considerable progress in the Guatemala socio-political landscape. On the other hand, the trend towards reducing government services goes with the opening of new discussion forums and a certain decentralization that emerging local powers are beginning to benefit from. The new competences within municipalities are special interlocutors for community workers' associations, which could thus position themselves as intermediaries between farming communities and renovated local power structures, in order to contribute to the latter's action corresponding with community aspirations.

The community workers' associations also help ensure sustainability of the community animal health services. They can play a major role in structuring the rural civil society, by positioning themselves as intermediaries between farmers and the State in order to defend farmers' interests. The following example illustrates this point among others:

##### *5. Community workers' association: the case of the provinces of Takeo and Prey Vneq, Cambodia*

The Cambodian experience is interesting on more than one count. It has helped validate the concept of livestock auxiliary in an extremely different context from that of Central America, but it raises numerous questions about the sustainability of actions in a transitional context in which civil servants manage the provision of veterinary products but run the risk of disappearing with structural adjustment policies. If, in the course of the training, auxiliaries do receive a kit composed of material and medicines to carry out their activity, after a few months practice, they must renew their stock while they are located for the most part in isolated areas without any equipped pharmacies. Thus, they are put together in order to find a solution to this problem of medical supplies.

The workers ask AVSF to create and ma-

nage a pharmacy. Maieutics is necessary in order to get auxiliaries to take care of the pharmacy themselves.

The management of the pharmacy by a single auxiliary is the solution proposed, but AVSF requires human and financial participation by interested agents, in order to have collective interest. To support this proposal, the auxiliaries visit a pharmacy managed by other livestock agents grouped in an association.

This is an opportunity for the new livestock agents to discuss with the former ones about their organization and structure. The notions inherent to the cooperative structure are addressed, including members' shares, the board of directors, the general assembly. The auxiliaries discuss the advantages and drawbacks of such organization, in such a way as to put forth

the implementation difficulties. Among other things, the association helps all auxiliaries acquire quality medicine albeit managed through stringent rules: limited purchase on credit, responsibility of all members, etc. This visit is coupled with a debriefing meeting to enable auxiliaries to voice their opinion and develop their project. They will define their structure through writing the by-laws. Working groups are formed to reflect on these two documents, subsequently the content is discussed by sharing. This animation technique presents numerous advantages, notably the facilitation of individual participation within small groups, identifying leaders and triggering debate between thematic groups. A subsequent meeting is dedicated to document validation, project membership and election of the board of directors. Then the pharmacy is built in the location provided for by the internal regulation.

Each auxiliary member comes from a village. Within the associations, communal representatives are elected and are members of the board of directors. This network of auxiliaries therefore represents a communication tool for themselves and for the farmers.

The pharmacies managed by auxiliaries who are members of the association are meant to provide agents with quality medicine, for better services. The "pharmacist" is an auxiliary who has received additional training on the products sold and on

stock management. He is able to advise other auxiliaries, sometimes farmers, on the choice of medicine. Thanks to his regular procurement visits to Phnom Penh, he can keep himself informed about new pharmaceuticals. The expiration dates are verified against the sale of common stocks and the vaccines are stored in a refrigerated box.

This activity is time consuming for the administrative advisers, who are responsible for controlling the pharmacy's handling by the manager (another ACSA, volunteer to be pharmacy paid worker). The chairman, the treasurer, the secretary are present in monthly meetings and verify the adequate management of the medicine. They are remunerated for their work.

The rules of management of the pharmacy were developed by all members and the manager, a paid worker of the association, must apply them scrupulously. The pharmacy may be a part-time activity of the association if the drug sales services develop in the area. Nevertheless, the advantage for auxiliaries and farmers resides in the fact that the products sold by the association have a safe origin and are stored in adequate conditions.

In those areas where private veterinarians operate, auxiliaries' associations may be connected to one or several veterinarians. In the example from Madagascar's Lake Alaotra, the private veterinarians take advantage of auxiliaries becoming an association to facilitate organization of their continuing training. In this context, auxiliaries' associations do not have any role to play on the provision of veterinary drugs.

If the area of activity does have (a) private veterinarian(s), we will systematically seek to connect auxiliaries' associations to veterinarians and we will see to it that the supply of inputs not become one of the association's activities. As a matter of fact, an association with such activity would be competing against the veterinarian, and could jeopardize the quality of the animal health service by destabilizing the veterinarian's activity.

Moreover, in the absence of a veterinarian, an auxiliaries' association mana-

ging its supply of veterinary drugs might become a hindrance to the future installation, in the area, of a private veterinarian. At the same time, a network of auxiliaries guarantees a wide coverage of the area and therefore an optimized animal health market, a situation which, this time, is a benefit for the installation of a private veterinarian.

However, the French system comprises Sanitary Defense Groups whereby farmers may purchase veterinary products without going through a private veterinarian. We then have a situation where the farmers are competent in basic animal health, where a group of farmers hires a veterinary counselor and enables its members to manage basic animal health and where, consequently, the veterinarian is a specialist who intervenes only as such (when the farmer is faced with a difficult case or needs the intervention of a veterinarian as a Government health accreditation holder).

→ **An auxiliaries' association must be perceived as a group of farmers managing basic animal health (such as a GDS French style). It helps:**

- **Establish a link with the health authority,**
- **Represent farmers' interests vis-à-vis public and political institutions,**
- **To facilitate auxiliary monitoring,**
- **Organize auxiliaries' continuing training,**
- **Promote establishment of a private veterinarian provided it no longer manages the provision of drugs from the moment the veterinarian has been established.**

**In the implementation of auxiliaries' trainings, one will therefore reflect on all these parameters before initiating the creation of an association and particularly those activities which it would implement.**

## **2.3. A special case: transhumant livestock**

The pastoral areas of extensive transhumance do present certain characteristics which make problematic the proximity of services and farmers: how to ensure the availability of an auxiliary when farmers and herds cover long distances to exploit fodder resources? Dispersion and farmers' mobility has made them particularly autonomous vis-à-vis animal health issues. This professionalism that pastoralists enjoy must be acknowledged and translated into a mass training approach, coupled or not with the existence of auxiliaries on the major transhumance routes.

In North-eastern Niger, auxiliaries trained by AVSF are moving with the herds during transhumance.



#### 6. Example of para-veterinary auxiliaries in a pastoral area in Northern Niger, Zinder region.

In North-eastern Niger, an area where there were no farmers' associations, AVSF has delivered mass trainings aimed at sensitizing pastoral communities on the role of auxiliaries. These mass trainings have helped involve farmers in the adoption of selection criteria and designation of future auxiliaries. After their training and equipment with a veterinary kit, they assure, in a landlocked pastoral area which lacks basic social services, community animal health services resting essentially on the treatment of dromedaries and small ruminants (the cattle that need to drink every day, do not survive at this latitude), and on sensitizing farmers on hygiene and vaccination practices around pastoral wells or during naming or wed-

ding ceremonies. Thus, by this fact, they act as bridges between farmers, private veterinary agents and veterinary technical services, from whom they get supplies and whom they inform in case of disease outbreaks (Pasteurellosis and Sheep-pox declared by auxiliaries at Kassatchia and Mato).

Each auxiliary provides his services in his action unit (grouping 2 to 5 camps sharing the same pastoral resources, notably the pastoral well) and generally moves with farmers in the course of the small and great transhumance.

Their activity improves significantly the sanitary situation thanks to better accessibility to treatments for recurrent diseases (internal and external parasitoses).

In Chad, it is the mass training of farmers which was chosen...

#### 7. Example of mass training in Chad

In certain transhumant or nomadic systems, the social groups vary quantitatively and qualitatively according to seasonal movements. What is therefore involved is getting to know whether there are "transhumance units" including an adequate number of families and herds to justify the activity of a livestock auxiliary. This question very clearly arises in the context of the ASETO project in Eastern Chad, where mass training was chosen.

The approach applied in Kanem differs by the inclusion of specificities in terms of conduct of livestock and pathological issues encountered.

The objectives of the mass training can be summarized in 3 points:

##### 1. Promote farmers' indigenous animal health knowledge (comprehension of the diseases, traditional and modern care).

■ First Observation: traditional veterinary care practices do exist among farmers. Among those, immunizations, surgical care and obstetrical care, and mineral supplementation are frequently practiced, and are important to take into account in an approach of animal health

training of farmers.

■ Second Observation: the interventions practiced on animals are diverse and their qualities are not easily appreciable: they deserve to be discussed and appreciated by the individuals concerned in a technical framework of openness and exchange; the judgment of users in the face of potential solutions could be facilitated.

##### 2. Bring information on the region's pathologies, existing treatments and services available:

The choice of training themes on cattle diseases rests on information collected from project surveys, previous epidemiological survey work, clinical observations of veterinary posts. In the field, it is necessary to take into account beneficiaries' concerns: the surveys conducted under the project from 1999 to 2000 show that farmers' training demand is strong. It is directed towards getting knowledge about diseases, their causes and treatments. However, it is necessary to study the relevance of the type of training to provide to ensure that:

- Pathological problems easily controllable and having a real impact on production (endo and ectoparasitoses, deficiencies) receive particular focus from the training team.
- Endemic rapidly evolving diseases against which there are effective and available vaccines at affordable prices must be prevented; there are plans to integrate them into the information component; the implementation of such prevention actually requires the intervention of veterinarians (limitation by the legal framework in force)
- It is necessary to direct users towards places where services are available.

### **3. Initiate reflection on the additional needs and the modes of access to veterinary drugs and to basic care:**

Mass training includes in its objectives a

control by users of the quality of services and inputs, as well as improved access terms. A discussion stage on these aspects is important in order to address the opportunity to extend the session with other more narrowly targeted training efforts, which are usually carried out within the groups. Such an approach necessarily fits into the identification of players (in terms of who does what type of work) and the appreciation of the group's pastoral activities. It will normally lead to specific choices related to the organization of the interested parties and special trainings within formal or informal organizations (livestock auxiliaries and environmental workers, officials and managers within groups or management committees...). An animation procedure is useful in order to speed up the process.

Farmers are the first animal health stakeholders and the best epidemiosurveillance auxiliaries; they do possess real know-how in terms of diagnosis and care. Such traditional knowledge cannot be ignored and training is an excellent means to enhance it, channel it, and avoid possible drifts. In this framework, farmers could become effective basic animal health stakeholders and remedy the deficit of service provision in this field.

Finally, training and informing farmers cannot be considered a simple alternative to training livestock auxiliaries. As a matter of fact, turning farmers informed consumers of animal health services can be considered as a priority objective, whatever the nature of the arrangement in place.

"All services to pastoralists (provision of inputs, services, counseling) can be successful only if there is concurrent training. Mass training does have significant social and technical implications. It is more likely to help disseminate information in the different categories comprising society, notably information on normal dosages in an environment where farmers all treat their cattle by themselves. As a matter of fact, information networks are complex and operational chains are not always controlled by a single individual. In certain cases, technical control can be assured by the shepherd, while the boss controls the socio-economic aspect of livestock." Study on the pastoral sciences in Chad.2002.

Knowledge of transhumant systems conditions both the methods and possible levels of intervention. For a local animal health service, what intervention method should be chosen? If there are nomadic units adequately stable and significant, the adaptation of a grouping and auxiliary system to a group may be relevant. If, on the other hand these groupings turn out to be quite variable and limited, the trainings extended to a large number of farmers (mass training and training of free auxiliaries) have a strong logic.

- Mass training of farmers in a pastoral environment helps improve the impact of farmers' practices on animal health and turns farmers into informed consumers of the existing animal health services. The mass training is the opportunity to inform actors on the national prophylactic campaigns, the role and situation of veterinary posts, etc.

Finally, it is possible to train auxiliaries connected to the transhumance units. They will help, in addition to service provision, as bridges between these extremely isolated farmers and the local health authority.



## Third section: Quality

What do we mean by quality when dealing with an animal health service for farmers?

Three components can be distinguished:

- Technical quality
- Regulatory quality
- Communal quality

### 2.1. Technical quality

The first quality for an animal health service provider is his professional skill: he must be able to diagnose the major diseases present in the area, know how to prevent and treat them, and be capable of conducting a certain number of basic operations (castration, dressing on wounds,...) These professional skills depend on countries and livestock contexts: the number of animal species involved is variable.

This skill is acquired during initial training and is maintained through practice and continuing training: it is consolidated through access to training, exchange of experiences with peers, supervision and technical advice. It must be validated by a professional authority.

Of course, this auxiliary's skill, acquired in a few weeks' training, is such that these auxiliaries are not veterinarians.

#### 2.1.1. The initial training

According to the AVSF's experience, one can observe great heterogeneity in the competence of auxiliaries. Albeit such heterogeneity may be acceptable from one country to another depending on the specific needs of individual contexts, it is much more questionable within a single country where it stems only from multiple structures which are at the basis of the training. It would be rational to get to establish, for every country, and in close collaboration with government services, a single referential of competences which would comprise the country's regional specificities. This is the case in Togo, where the administration has adopted legislation on auxiliaries' activity.

## 8. Process of legislating on auxiliaries' activity in Togo.

In Togo, AVSF has been working on training auxiliaries since the end of the 1990's. Its experience in the field and a study on the social role of auxiliaries conducted by a consultancy in Burkina Faso, the CEFRAP, have helped advocate the setting up of a regulation on auxiliaries' activities, an advocacy which has been listened to by the Togolese administration. Thus, in September 2004, the administration shifted from an attitude of tolerance of auxiliaries to another one of wanting to institute legislative supervision.

The mechanism which led to development of the legislation must be underscored : a commission composed of people from various origins (7 members including 2 from the Directorate of Livestock and Fishing, 1 from the order of veterinarians, 1 from the Institute of Counseling and Technical Support, 1 from the Grouping of Private Veterinarians installed in Rural Practice and 2 auxiliaries ; the work was steered by AVSF) has produced a draft document based on the experiences in the field passed around by auxiliaries in activity and farmers. The latter document was validated by all actors in the course of a seminar organized by AVSF. At the conclusion of this process, a ministerial order of September 2004 sets henceforth the auxiliary's activities:

The order includes an inseparable annex titled « book of specifications of the AVE<sup>1</sup> » which provides details about the auxiliary's tasks but also the skills he must acquire in order to carry out such tasks. The order is shown in Annex L, and here are a few excerpts concerning initial training:

### Article 8 :

The competences of the AVE are specified in the book of specifications attached to this order. They essentially deal with the acquisition, possession, and administration of veterinary drugs, the sensitization, information, and warning. **Such competences are exercised strictly in the area of activity of the AVE, which is in principle the location of the community which he originates from.**

### Article 9 :

Structures and institutions are tasked with the training of the AVE. They intervene at different levels of the training process, notably in the following activities:

- organisation and training: the extension bodies, the NGOs, the local communities ...;
- training and follow-up : the professional organizations intervening in rural areas such as private veterinarians
- training, coordination, and control: the DRAEP's/DCV's.

### Article 10 :

Before conducting the training, the structure initiating the training proceeds, in collaboration with the veterinarians and other structures operating in the same area of activity, to identification of villages where an AVE must be set up ; the organization and holding of sensitization meetings for the choice of future AVEs ; the establishment of the list of future AVE's. It then addresses to the regional directors of agriculture, livestock and fishing, a motivated request and specifies, among other things (...) the last and first names of the trainers ; their profession, adult training experience, and their pedagogic abilities in accordance with the stipulations of article 14 below, etc., the content of the training, the follow-up program envisaged (...)

### Article 11 :

**The theme of basic training of AVE's comprises the following items :**

- status, profile, area of competence of the AVE ;
- poultry vaccination;
- use of anti-parasitics and antibiotics (...);
- major diseases in poultry, ruminants, and pigs;
- notions on feeding, housing, and reproduction (...);
- notions on special livestock (rabbits, 'aulacodes', etc.) ;
- the AVE's roles in early warning about contagious diseases;
- participation in vaccination campaigns;
- agricultural extensions (...);
- cooperative organisation;
- mechanism of establishment and management of a village veterinary pharmacy fund.

<sup>1</sup> AVE : Auxiliaire Villageois d'Elevage

**Article 12 :****The formation of the AVE must take place following a standard program approved by the relevant authority.** The program

itself must include deux (2) components:  
 - essential knowledge and abilities required for all AVEs irrespective of their geographic location ;

- specific knowledge and skills of the region according to the priority needs of the ecological zones of the livestock systems.

The formation of AVE's is assessed according to the standard methods and evaluation indicators defined beforehand by the relevant authority.

The differences observed, in terms of content, time allocated to training, pedagogic methodology, are accounted for most of the time by the absence of reflection upstream on what the pedagogic referential should be for this training: very specifically, one must define, prior to beginning any activity; the skills expected and deduct from those the pedagogic objectives. This is what the following example illustrates:

*9. Referential of ACSA Competences: Example of Madagascar*

**The following work was conducted in Madagascar by two project teams and the support of an AVSF director. It involves establishment of a referential of skills adapted to the situation of Madagascar and comprising, conceivable according to the regional specificities of livestock and sanitary constraints.**

**1. Vaccination function****Vaccination function for cattle**

The mandatory vaccination of cattle being attributed to the only mandate holder veterinarian, the latter is the one who should decide if he wishes to involve his ACSA's in the vaccination campaign.

Competences:

1. Organize and animate a sensitization meeting with farmers about vaccination of cattle.
2. Organize the vaccination session.
3. Conduct vaccination by observing the rules of use of the vaccine and monitor the evolution of the vaccinations carried out in his area
4. Assure the post-campaign monitoring of vaccination.

**Poultry vaccination function (Cholera and Newcastle)**Competences:

1. Organize and animate a sensitization

**2. Warning and surveillance function.**

For the Lake Alaotra region, the list of diseases deemed priority diseases by the veterinary services is: rabies (all mammals), classical Swine Fever and African Swine Fever, anthrax and bacteridian anthrax (ruminants), coudriose (sheep), avian cholera (geese).

Compétences

meeting with farmers about poultry vaccination

2. Organize implementation of periodic vaccination campaigns
3. Conduct vaccination by observing the rules of use of the vaccine and monitor the evolution of the vaccinations carried out in his area
4. Assure the post-campaign monitoring of vaccination.

**Vaccination function upon request (avian pox, Teschen's disease, classical swine fever)**Competences

Conduct vaccinations by observing the rules of use of the vaccine and monitor the evolution of the number of vaccinations carried out in his area. Organize and animate a meeting with farmers on the organization of the animal health arrangement and the reporting of suspicions

1. Hold and animate a meeting with farmers on the organization, the animal health arrangement and the reporting of suspicious cases
2. Collect sanitary information on diseases under surveillance
3. Sound the alarm for any case of suspicion

- of newly introduced contagious diseases
4. Advise the territorial authorities for setting up initial emergency measures in case of disease outbreak

### 3. Function of management and development of activities

#### Competences

1. Manage a stock of veterinary products while observing regulation
2. Hold simple accounting related to his activity
3. Monitor and analyse the evolution of his activities in order to develop them in observance of the established rules.
4. Maintain and renew his material

### 4. Function of sensitization of farmers

#### Competences

1. Organize and animate sensitization meetings with farmers, bring individual advice on:
  - Vaccinations and prevention of the main pathologies
  - Organization of the animal health arrangement and its role
  - Good practices to master by farmers
  - Reporting suspicions of diseases under surveillance
  - Zootechnical improvements (feed, housing, conduct of livestock)

### 5. Function of prevention and treatment of the principal pathologies

#### Curative and preventive function for poultry and palmipeds

##### Competences

1. Diagnose diseases which could be handled by the ACSA (*Newcastle's disease, Avian cholera, Small pox, Internal parasitism, external parasitism*)
2. Apply the corresponding treatment
3. Give advice to the farmer
4. Organize preventive joint actions
4. Give advice to the farmer
5. Organize preventive joint actions

#### Curative and preventive function for the cattle and sheep

##### Competences

1. Diagnose diseases which must be handled by the ACSA (*meteorization, wintry diarrhea, anthrax, fluke, intestinal parasitism, nodular skin disease, + rabies and tuberculosis on their zoonotic aspect*)
2. Apply the corresponding treatment
3. Carry out simple zootechnical interventions
4. Give advice to the farmer
5. Organize preventive joint actions

#### Curative and preventive function for pigs

##### Competences

1. Diagnose diseases which should be treated by the ACSA (*cysticercosis, pig pest, Teschen's disease, internal parasitism, external parasitism*)
2. Apply corresponding treatment
3. Carry out simple zootechnical interven-

This referential of competences is then divided into pedagogic references: each competence is defined according to the pedagogic objectives necessary to its acquisition. The auxiliaries' pedagogic referential developed by the AVSF at Madagascar is presented in Annex II.

Once the pedagogic referential defined, we need to plan and implement the training course. We will particularly take into account the agricultural calendar: the auxiliaries being agriculturalists, the trainings should not hamper their activities on the farm. Besides, we will try, to the extent possible, to have a homogenous group of trained people, i.e. with a similar educational background, in order to facilitate the trainer's job and increase the efficiency of the training for all participants.

## 10. Example of implementation of the initial training: AVSF Lake Alaotra, Madagascar, 2004-2006.

The training is conducted by 2 technicians from Madagascar who had received previous training on the pedagogic techniques required and training content. Training manuals were designed for the ACSAs as tools for them to use in the field. The manuals are designed by type of livestock (ruminants, poultry, pigs) and also cover for individual species: the prophylaxis, the main pathologies (diagnostic and treatment), improved livestock techniques (housing, feed, breeding, advice for improved village traditional livestock). An additional manual is designed like a dictionary of veterinary drugs: for the products listed in the area, the indications, dosages and precautions of use are translated into Malagasy language.

The training takes place in two steps with a weeklong training out of two, standard evaluation at the end of each week and final examination validating knowledge acquisition. The training periods correspond to the lesser agricultural work period. The total duration of the training is 270 hours, at a proportion of 6 hours per day and 5 days a week, i.e., over a period of 9 weeks.

The decision was made to begin training with basic notions of health (the different pathogens, the principle of vaccination, antibiotics, anti-parasitic drugs, transmissibility of pathogens, contagion, etc., and good veterinary practices (cleaning-disinfection, observance of dosages and expiration dates, cold chain, etc.). After these basic notions, the first actual module concerns poultry vaccination. The ACSAs would then organize alone, in their area, the vaccination campaign after having done farmer sensitization. They are equipped with aids intended to animate sensitization meetings. This first campaign represents a real challenge given that farmers are not used to vaccinating poultry, that advance payment is required and that the campaign takes place during the hungry stop-gap period. The good results of this initial practical exercise are very

encouraging.

In addition to the technical facility of poultry vaccination, this strategic choice has been made for two other reasons:

- a start up of ACSA/farmer relations on low economic value animals, which helps farmers test the ACSA on a small animal and helps the ACSA build confidence.
- the rapid and easy benefit for veterinary health officials (for the first campaign, the vaccine stocks were given by AVSF, the veterinarians having paid only those vaccines which were sold off).

The first operation has helped place all partners, actors and beneficiaries, in a confidence relation by starting with a capital livestock in the area of cash but with animals having only low economic value.

The practical works (injections, bolus administration to cattle, castration of cattle and pig) were carried out among volunteer farmers (the farmer gets parasites removed from his herd free of charge but agrees to the AVSA "practicing" on his animals).

At the conclusion of the training, the ACSAs are submitted to an examination over the entire skills to be acquired. Of the 42 trainees, 40 passed the exam, and 2 of them failed.

### Training costs

42 ACSAs were trained, divided into 2 groups: a group of 24 and a group of 18. Each group receives 272 hours of training spread out over 9 weeks; The trainings are given by 2 technicians:

The following costs are covered:

- Transport by local bus of the ACSA (from their place of residence to the training venue).
- lunch (0.64 euros per person and per meal).
- breakfasts and dinner (in addition to lunch) for 10 ACSAs accommodated locally (accommodation is free of



charge).  
- local bus rental for travel to the field (Practicum)  
- Equipment for ACSAs who have succeeded in their final veterinary exam and initial stock of veterinary products.  
The costs covered enable each trainee to avoid spending money for his training and therefore avoids selecting future ACSAs on their financial capacities. The initial

stock of veterinary products enables them to start their activity without micro-credit and without the veterinarian in charge having to give them credit.

The following table recapitulates the training costs per type of expenditure as well as the fees for equipping ACSAs with veterinary material and initial stock of veterinary products:

ACSA training costs

TRAINING/LOGISTICS COSTS	AMOUNT
1. Travel costs for ACSAs	1 071 €
2. Meals for ACSAs	1 607 €
3. Training rooms rental	331 €
4. Accommodation of training technicians	417 €
5. Meals for training technicians	374 €
6. Miscellaneous expenses (chalk, veterinary products for Practice, etc.)	685 €
LOGISTICS SUB-TOTAL	4 485 €
TRAINING COSTS/ OUTSIDE ACTORS	96 €
PROVISION OF ACSAs WITH MATERIAL AND VETERINARY PRODUCTS	5 996 €
SWEARING IN CEREMONY OF THE ACSAs*	762 €
* Invitation of regional and communal authorities and farmers, i.e., a cocktail for 700 persons: coverage of journalists of the ministry for television, press, and radio. NB: a basic meal in a cheap restaurant costs 0.64 euros	
TOTAL TRAINING ACSA TRAINING COSTS	11 340 €
<b>I.E. COSTS/ACSA</b>	<b>270 €</b>
<b>Including provision of equipments</b>	<b>150 €</b>

These costs here do not include the salaries of the other project employees (secretary, driver, project officer, guard) and the office rentals (rent, utilities, fuel, etc.). Nor are expenditures related to preparatory work for setting up animal health service taken into account; diagnostic surveys, information meetings, design of training and teaching aids, etc.  
The ceremony marking the conclusion of the ACSA training and the formal beginning of their activities helps introduce this

new animal health actor to the greatest number of individuals and provides an opportunity to revitalize the operation of the animal health network (AVSA under the responsibility of a veterinarian, exercising his functions in a well defined area).

The full list of equipment which was made available to ACSAs is provided in Annex III.

## 2.1.2. The evaluation of the initial training

The training is certified by the evaluation which can lead to "failing" a candidate in order to guarantee the quality of the upcoming service. Such evaluation must be integrated into the training program since its design stage.

### 11. Auxiliaries' evaluation: Lake Alaotra, Madagascar 2004-2005

#### ■ Continuing evaluation in the course of the module:

- Objectives: evaluate auxiliaries individually; readapt rapidly the program is necessary; correct various problems (logistical organization, behaviors...).
- Modes: Every weekend, a QCM is submitted to all auxiliaries and tests the week's teaching objectives. This helps assess the level of individual auxiliaries and identify the messages or topics which are poorly understood in order to clarify them at the beginning of the following week.

On the other hand, every morning, the auxiliaries turn in a certain number of anonymous questions on the office of the trainer (items of the course which are poorly

understood: practical problems...); this could help start the day with answers to anonymous questions and initiate discussions.

#### ■ Normative evaluation of end of session:

- Objectives: ensure that the necessary skills have been acquired in the course of the training process and establish auxiliary credibility in the eyes of the communities, local authorities, livestock services and private veterinarians.
- Modes: QCM. Involvement of Livestock Services and private veterinarians.

QROC (Open Ended and Short Answer Questions) for auxiliaries' final exam:

NAME:

Commune:

First Name:

Fokontany:

- 1 - What is the gestation period of the sow: (months, weeks, days)
- 2 - Why separate one month old chickens from hens?
- 3 - What should one do in case of suspicion of bacteridian anthrax or anthrax?  
If the animal is alive                      If the animal is dead?
- 4 - What amount (in ml) of LIMOXIN 200 LA should we administer to a 8 month old zebu?
- 5 - What amount (in ml) of CALIERMISOL 10% should we administer to a 2 year old ovine?
- 6 - List the causes of vaccine failure
- 7 - List the 5 rules of vaccination
- 8 - List the rule of use of an antibiotic
- 9 - Antiparasitical drugs kill \_\_\_\_\_; Antibiotics kill \_\_\_\_\_
- 10 - How do we kill a virus?
- 11 - Cite 4 poultry diseases
- 12 - Cite 4 pig diseases
- 13 - How is rabies transmitted?
- 14 - Diagnostic approach. Fill in the dots:



**Notes of experiences, analysis, lessons learnt and recommendations**

- 15 - What is babesiosis or piroplasmosis?
- 16 - Draw the parasitical cycle of the fluke
- 17 - List 5 diseases causing nervous disorders in cattle
- 18 - Give 3 names of vaccines protecting against pseudo avian pest
- 19 - Which one of these diseases hits the duck: pseudo pest, smallpox, cholera.
- 20 - Enumerate the 6 measures of prevention of foot rot for a herd of ovines
- 21 - Fill in the dots.

Disease	Vaccine	Use of vaccine
Clibacillosis (cattle)		Dosage: ..... Mode of use: .....
Teschen disease (pigs)		Dosage: ..... Mode of use: ..... Administration frequency: .....

22 - A sick pig presents diarrhea streaky with blood, stiff walk, shivering, fever with the presence of red skin stains, conjunctivitis. What disease would you suspect?

23 - Fill in the table

Veterinary Product	Presentation	Unit price	Retail price	Quantity Purchased	Stock value
Penstrep400LA	flask 100ml	35 000 Fmg		4	
Ditavet	flask 50ml	34 000 Fmg		6	
Albenol 600	bolus	1 500 Fmg		50	
Introvit A+	bag 100g	7 500 Fmg		3	

24 - How much ml of product would be necessary to prepare 15 liters of a solution of Enilconazol at 0.2%

The completion of this training may be formalized in the form of a certificate. It may be attributed in the course of a ceremony which is an excellent opportunity to disseminate the project achievements to authorities and partners: we will try as much as possible to institute a certain type of recognition of the training delivered in order to avoid that other structures claim to train auxiliaries if the quality of the training is not adequate. This is also an opportunity to specify and disseminate information concerning the areas of competence and the prerogatives of auxiliaries.

In Togo, legislation positioning the activity of auxiliaries provides for an assessment of the training "based on standard methods and assessment indicators defined beforehand by the relevant authority" as well as the issuing of a professional card. It is fortunate that the normative evaluation of auxiliaries be homogenous throughout the national territory and should therefore be validated by the relevant authority.

### 2.1.3. Continuing training

The skills acquired in the course of the initial training would rapidly wear away if the training were not extended throughout the auxiliary's exercising by periodic continuing training and upgrading sessions.

We are hinting here at a limit of the cooperation intervention per project which, by definition, is bound to stop and can therefore not ensure such an arrangement for a long time in the future.

Who can therefore assure this continuing training?

The best placed in terms of technical competence are the veterinary doctors present in the country. This leads us to advocate the establishment of contractual arrangements between auxiliaries and veterinarians instituting a win-win relation. The simplest thing is to link each auxiliary to the closest veterinarian to demonstrate the interest of such association for both parties:

- For the veterinarian: coverage of a larger area, increased sales of medicines, better knowledge of the area, better coverage of the area, etc.
- For the auxiliary: technical assistance, counsel, training, quality veterinary products, etc.

If such a contractual relation of a network of auxiliaries with a veterinarian is not possible (and this is unfortunately often the case because of the absence of veterinarians or lack of interest by the parties), another solution is to entrust the continuing training to the association of auxiliaries: so it is jointly that auxiliaries will have to determine their training needs, identify stakeholders, decide on modes of this continuing training and its certification. In addition, the discussions between auxiliaries turn out to be very positive and sometimes help resolve several common problems.

Here again, the natural counterpart for technical supervision issues will be the veterinary profession.

In Northern Togo, the auxiliaries trained by AVSF and who are in activity do remunerate the private veterinarian of the area for regular continuing training sessions.

On the other hand, the continuing training may be an opportunity to broaden the initially acquired skills: zotechnical counseling, breeder management for genetic improvement, agriculture and livestock integration, etc.

It may seem paradoxical, in the framework of an arrangement intended to remedy the lack of veterinarians in the field, to get to the conclusion of a necessary articulation between this arrangement and the veterinary profession; but this demonstrates that the examination of necessary conditions to a sound operation of such an arrangement leads us to **define it not as a substitute, but as a local relay helping joint redeployment of the animal health service.**

- **The technical quality of the service provided by auxiliaries directly depends on the quality of the initial and continuing trainings. A normative evaluation should permit certification that the auxiliary has well acquired the necessary skills. The training is based for that matter on the auxiliary's fields of competence. On the other hand, it is absolutely necessary to have a homogenous level of training at the national level and provide for the continuing training arrangement. These latter two points run contrary to the per project intervention and require supervision by the veterinary service and the Government services.**

## 2.2. The regulatory quality: Veterinary Public Health

The Auxiliaries are not simply service providers to farmers: they may also represent an essential link in the epidemiosurveillance and veterinary public health network of a country. As a matter of fact, when they are directly in touch with farmers, the auxiliaries are often the first to be informed about the appearance of a regulated disease and are on the front line for the early warning of the sanitary authority and eventually the participation in the establishment of sanitary policy measures decided by the sanitary authority. Epidemiosurveillance is a formal function of the States, and is therefore carried out, when they exist on a right scale, by the veterinary services. Thus, the local networks formed by auxiliaries are in reality informal local epidemiosurveillance networks but which turn out to be often extremely effective.

One must then articulate this community based animal health arrangement and the country's public veterinary services. Here again, the exercise is often difficult: in most countries where AVSF intervenes, the public veterinary services often lack human and material resources, which make difficult effective collaboration. When the will to include auxiliaries in the arrangement exists, the latter are often considered only as assistant vaccinators tasked with a certain number of activities and not as partners. The temptation is thus high for auxiliaries to disengage from operations which they poorly control. Particularly s two critical aspects are generally poorly taken into account to integrate auxiliaries into epidemiosurveillance networks: compensation for the work of auxiliaries in the form of remuneration or other (formation) and the downloading of sanitary information on the field so that the auxiliaries have a return on declared suspicions.

Nevertheless, the AVSF projects have systematically tried to fit the establishment of a community animal health arrangement in its regulatory environment. In the absence of any private veterinarian in the area, it is imperative to create a link between the auxiliaries' association and the veterinary or livestock public services. Thus, it is necessary that auxiliaries or their association be under the supervision of a veterinary authority.

In Madagascar, where legislation does not take into account the livestock auxiliaries, a convention was written locally in order to turn this animal health actor a know agent, unlike other actors practicing veterinary consultations in an illegal manner.

## 12. Sanitary Veterinary Tripartite Convention, Local authority and livestock auxiliary in Madagascar

### **Tripartite collaborative convention between the commune, the ACSA, and the veterinary health officer**

I, Doctor, ....., Veterinary Health Officer at ..... undersigned, accept responsibility as Community Animal Health Worker practicing at .....

I pledge to:

- Advise him in his ACSA activities and to monitor him regularly in the field (on a quarterly basis)
- Support him in case of professional difficulty so as to ensure his continuing training
- Provide him as much as possible with quality veterinary products at special prices
- Examine the activities recorded in his notebook in the course of each one of our meetings

I, undersigned ....., ACSA living in .....  
Pledge to:

- Get my supplies of veterinary products only from Dr .....
- Put myself under his authority as part of my ACSA activities
- Follow Dr ..... 's advice
- Request his support when a clinical case is beyond my competences.

This contract will be terminated should any of the following occur:

- Any commission of a serious professional offence by ACSA
- Non observance of a point of the present contract by either party.

The mayor acts as moderator in case of dispute/conflict between ACSA and VS.

This contract is valid for a period of one (1) year renewable.

Done in three copies, in ....., on .....

Dr ..... ACSA ..... Mayor of the commune .....

This regulatory quality therefore imposes contracting between the Sanitary Authority (i.e., the health veterinarian mandated by the State, if any) and the auxiliary:

## 13. Rights and obligations of the auxiliaries in Mali

### COMMITMENT AND FRAMEWORK OF EVOLUTION OF THE PASTORAL AUXILIARY

The auxiliary commits himself to:

- declaring as rapidly as possible any suspicion of legally contagious disease after advice of the village council,
- bring first aid to sick or injured animals which are brought to him,
- Refer all cases going over his competence to the closest chief veterinary post officer.
- Bring a favorable reply to any call by the livestock services for animal health operations concerning the community and promote its unfolding.
- Renew the medicine stock in his kit from the Timbuktu pharmacy whenever the need is felt;
- Participate in refresher courses.

The auxiliary acknowledges that these rights are inalienable.

The chief veterinary post officer acknowledges to the auxiliary the right to:

- bring first aid to sick or injured animals which are referred to him.
- prescribe and deliver medicine from his kit.

He pledges to:

- use with the auxiliary the dangerous drugs stored at his level as needed and is not entitled to use them without the auxiliary.
- deliver the injectable drugs to the auxiliary if he cannot intervene directly.
- get the auxiliary to participate in animal health operations.

The auxiliary

The chief veterinary post officer

The livestock service

The fraction chief

The livestock auxiliaries have a unanimously acknowledged role in the effectiveness of epidemiosurveillance networks and controlling contagious diseases to give a rapid warning and set up emergency measures. These actors must therefore be recognized for this essential function, which ultimately stems from a bridge position between farmers and veterinarians and/or sanitary authority. However, these actors remain qualified farmers and must be considered as such. They cannot substitute to a veterinary authority, be it public (deconcentrated government service) or private (private veterinary practitioner) and must even be placed under the technical and professional supervision of a private veterinary doctor or state agent. The credibility of veterinary services of the country at the international level depends on it. The auxiliary must therefore be considered as **a farmer, assuring the link between his peers and the veterinarian, and delivering a basic animal health service to his community**. His legal obligation is therefore not that of a veterinarian; however, it could rather be assured by an association of farmers, auxiliaries, a sanitary defense group, etc.

- In the absence of regulations covering the prerogatives and competences of auxiliaries and when the latter are covered by veterinarians, the veterinarian (or health authority) endorses then a technical responsibility toward those auxiliaries whom he supervises. In this situation, the community to whom the auxiliary delivers a service plays the role of a safeguard and controls his auxiliaries' good practices. That is the reason why mass training of farmers turns out to be essential, even when auxiliaries are trained.
- In Vietnam, people talk about para-veterinarians, actors with livestock technician level and who have received some additional training in order to be capable of providing basic animal health services. These para-veterinarians are designated by the deconcentrated veterinary services of the Government: sometimes they even receive compensation for their epidemiosurveillance activity. In this case, their legitimacy will be more easily recognized at the international level as they are sufficiently trained, legal actors, and they must report to the health authority.
- In Cambodia and in Togo, the Government formally recognizes the auxiliaries whose activity is governed by decrees.

Finally, the regulatory quality presumes that the activities of the auxiliaries be controlled by veterinary services so that, for example, an auxiliary whose competences are inadequate or who provides adulterated products be banned from practice. In practice, the veterinary services in general do not have the means of exercising this control. The control may then be delegated to private veterinarians present in the field.

- **The regulatory situations are extremely varied from one country to another. One therefore needs to adapt to the existing situation in order to provide basic animal health service while obeying the health authority and the good practices in the area of veterinary public health. One needs comply with legislation when there is one and to set safeguards where there is none, and particularly provide for the real control of auxiliaries' activity so that the latter not be an obstacle to meeting international standards in the area of veterinary services.**

## 2.3. Community Quality

Farmers, as they have elected the auxiliary, are now in a position to exercise moral control over him. For this moral control to be relevant, we will organize awareness raising session for farmers so that they become informed and critical consumers of animal health services. Community quality is therefore understood as the match between the service proposed by auxiliaries with the social demand.

Two levels can be distinguished:

- A productive level, which may be gauged by the socio-economic indicators related to demanding the service (the auxiliary's turnover).
- A policy level which will translate the auxiliary's capacity to represent his community.

### 2.3.1. Estimation of the quality of the service provided

The first outcome of the perception of the quality of service is economic the monitoring of the auxiliary's activities helps gauge their attractiveness (cf. Annex I).

But a direct request to farmers is also enlightening, be it qualitative or quantitative, on their perception and their satisfaction of the community animal health service proposed by the auxiliary.



14. Measure of farmers' satisfaction: AVSF Lake Alaotra, Madagascar

A survey was conducted among farmers, veterinarians, auxiliaries and communal authorities in order to determine the level of users' satisfaction about the community animal health service. Here are the main results.

Among the farmers surveyed, only 4% do not know the auxiliary in their area, and less than 5% of farmers surveyed are not satisfied with the service provided by the auxiliary. All other farmers surveyed know him and are satisfied with his service; they consider that he is competent and would call on him again. The average number of visits made by an ACSA to a single farmer is 3; this indicates satisfaction.

The auxiliary is solicited both for a given pathology and for a prophylactic action.

The farmers are satisfied with the new animal health arrangement because

ACSA	VS	Assistant to the VS	Retired agent, illegal vaccinator
90%	71%	8%	43%

The great majority of farmers surveyed call on an auxiliary and a health veterinarian. In addition, 22% of the farmers practice self-medication, either to administer anti-

it is a community and quality service for respectively 56% and 17% of the survey population and the auxiliary is placed under the technical supervision of a health veterinarian (39% of the people surveyed).

Among the farmers surveyed, 56% find that the auxiliary's rate is "affordable" or "normal" and 4% find it too expensive.

Quantitative survey

Various actors propose their service in the area of animal health: some of those are legal, and others, not. The following table shows the percentage of farmers surveyed who appeal to these various actors. It is normal that the sum of percentages exceed 100 given that a farmer may call on several animal health actors.

parasitological drugs, or to apply traditional treatments. They get supplies of veterinary products from veterinarians (79% of them) or wholesalers (37%).

The most objective estimate of the quality of service provided definitely goes through the assessment of the impact of the auxiliary's activities: if he does his job correctly, the impact should be felt on livestock performances (reduced mortality, improved fertility, improved production, work performances, etc.).

The impact indicators can be of variable nature and measure zootechnical performances, mortality rates, animal treatment rates (be it preventive or curative) and behavioral changes in animal health investments, changes in the supply of services. The actual impact is extremely variable according to the country, the animal density, the importance of diseases, the region involved, the legislation...

15. Measurement of indicators of the community animal health service impact: AVSF Lake Alaotra, Madagascar

As part of the satisfaction survey conducted among farmers, veterinarians, auxiliaries and communal authorities and cited in the preceding example, list of impact

indicators has been attempted in order to measure the incidence of the community animal health service set up at lake Alaotra.

We are giving here a brief outline of these impact indicators as they were measured after one year of activity of the ACSAs of Lake Alaotra. The impacts observable after one year of activity are observable only on short cycle livestock species. As a matter of fact, the impacts on long cycle species will be visible only after several years of ACSA practice.

The first obvious impact (cited by all actors, partners and beneficiaries of the animal health service) is the reduced mortality in poultry, divided by 2. This outcome is already visible in farmers who have a more significant poultry population than in 2003 and who henceforth invest in poultry health.

The average flock of hens in 2003 comprised 19 heads: it comprises 29 heads nowadays. The farmer has therefore earned 10 heads of poultry by vaccinating his animals, i.e., a net financial gain of 10 euros. Now, the ACSA's have reached about 8,000 farmers for poultry vaccination; by extrapolating, one can therefore estimate that the community animal health service, by the sheer vaccination of hens, has helped increase the animal capital by about 80,000 euros in the area.

The impacts on cattle herds are not easily measurable over such a short timeframe, except that the labor force has increased since 2003 and that a team of 4 heads of cattle would spend 6 hours less to plough a hectare. One cannot claim that this labor force gain be strictly related to deworming but this is quite possible (the harnessing and ploughing material has not changed, the soils have remained the same). This therefore represents precious time saved for the farmer, at a time when the agricultural chores are numerous and too time-consuming. In terms of financial surplus, this would mean a gain of about 6.80 euros (depending on the tariff of

rental of a harness to plough 1 hectare), which would pay for deworming harnessing animals.

In 2003, the mortality rate of poultry was about 40% and 20% were vaccinating their poultry. The proportion of farmers vaccinating the hens has more than doubled. 35% of the farmers vaccinate their geese against less than 6% in 2003, and the average number per farmer has significantly increased since 2003. 50% of the farmers vaccinate their ducks, against 0% in 2003.

In 2003, more than one third of farmers did not deworm enough cattle or did not deworm them at all. Nowadays, this proportion has decreased by 15%. One can presume that the sensitization campaigns about deworming prophylaxis conducted by the ACSA's have borne fruit.

The number of animal health actors that a farmer can call upon has significantly increased since 2003: it has increased from 1 to 2. The animal health actor is called on both for an occasional disease and for antiparasitical or vaccinal prophylaxis. The average period of intervention is 11 hours while in 2003, the average period of intervention was 2 days. The period of intervention has thus very significantly decreased.

The average number of visits by an animal health actor for the year 2006 is 7: it was 3.4 in 2003: a farmer receives twice as many visits of an animal health actor in 2006 than in 2003.

The average annual expenditure per farmer is significantly higher since the establishment of the community animal health service. The annual animal health expenditure for one head of cattle has significantly increased since 2003 as it has been increased threefold.

We have previously discussed the difficulty to control auxiliaries by the veterinary services. But the first level of control which is exerted on the auxiliaries happens well to be community control, supported by the fact that the auxiliaries are chosen by their community. What is involved therefore is strengthening this community control, notably through the mass training of farmers in order to turn them into informed and critical animal health service consumers.

We can involve at this level the local communities. In case of a problem, the service users and/or local communes will be able to seize the veterinary authority.

On the other hand, there is a relevant indicator to measure the cost/benefit ratio of such an arrangement; here one needs to estimate the benefit brought by a community animal health service over the investment necessary for setting up such service. Such a ratio is difficult to estimate for several reasons. Among other things, over what time frame is the benefit estimated? Should the benefit take into account only the additional monetary incomes or also the less easily measurable benefits such as better protein intake of the family or greater amounts of manure available for crop fertilization?

After having mentioned these difficulties, let us make a simple computation of such cost/benefit ratio on the Lake Alaotra example and the elements provided in the related examples.

- Cost: Train 40 auxiliaries at a tariff of 270 euros per auxiliary, i.e., a cost of 10,800 euros.
- Benefit bearing simply on the number of hens which would have possibly died of Newcastle's diseases if they had not been vaccinated: 40% mortality avoided over 100,000 hens vaccinated in 18 months at a price of 1 euro per hen, i.e., a benefit of 40,000 euros.
- Cost/benefit ratio of 10,800/40,000, i.e., about  $\frac{1}{4}$ .

Once again, this estimation is far from taking into account all the realities of the benefits, and the costs would comprise only those of the training per se, without preliminary surveys and others. This nevertheless helps demonstrate that the impact may be huge by the simple fact of the advent of a poultry vaccination service.

## 2.3.2. The representation function

In his professional contacts with the other animal health sectors, the auxiliary is in a special position to make his voice heard among farmers.

16. *Farmers' representation: opinion of M.Ould Taleb, Mauritanian farmer (Conference on Privatisation of services to farmers, Bamako, 1994).*

M.Ould Taleb, farmer, stresses the importance of insertion, in his environment, of the livestock auxiliary: *"I am going to voice another opinion on the auxiliaries; I will tell you about the opinion of farmers. As far as we are concerned, the best veterinarian is the auxiliary, because he is not above us. He is at our disposal. We don't need to go find him a fork and a spoon to make him eat; and he provides the best work. He puts himself in the same conditions as the rest of us and he does take measures. We farmers, are also auxiliaries because we bring first aid."*

The auxiliary enjoys farmers' trust because he is a farmer: this has a positive impact on the recovery of sanitary information and can also be used to federate farmers in a reflection on livestock policies and to recover claims justified at the policy makers' level.

However, the auxiliaries' associations are often limited to diffusing information and relaying rural communities' needs but they would hardly get to truly represent rural communities which selected them.

*17. Farmers' representation: relative failure of the association of auxiliaries in Guatemala*

In Guatemala, the professional organization which has emerged from the Ixcan project is operational on a technical and service standpoint but it is not a grassroots organization representative of farmers in the area for all their problems. As a matter of fact, the secondary objective which was aimed at turning auxiliaries into local development agents, has never been operational.

Nevertheless, ten years later, and this despite an inevitable erosion (less than 50% of the qualified auxiliaries are active), this structure is still functional. It has been able to maintain and develop its

activity by establishing partnerships with private organizations: technical support structures (Association of Legal Services – SERJUS-, Technical Services for Popular Organizations – STOP-), funding institutions (Diakonia Sueden, PRODERE-UN...) and private and public enterprises: Veterinary services (DIGESEPE), Veterinary faculty, Agricultural research institute (ICTA)...

The Ixcan auxiliaries' association has actually become a development project operator recognized for its proposal and implementing capacity.

In Cambodia, the NGO GERES has used the Trankak auxiliaries' network to identify the potential benefits of their biogas technological innovation. The auxiliaries often become "relay farmers" for the innovation.

One can then note that the auxiliaries associations are therefore a bridge between the rural populations and the public sector and NGOs' stakeholders, a special negotiating partner for needs identification in rural areas and the diffusion of information and techniques.

- ➔ **The strong anchorage of auxiliaries in their community helps achieve a primary control of the auxiliary's activities by service users. This control is all the more relevant that the farmers are sensitized about animal health and that the local communities are involved. In addition, the auxiliaries are excellent representatives of their community and turn out to be an interesting link in the structuring of the farming world.**



## What cooperation for a community and quality animal health arrangement?

The strategy of setting up auxiliaries for the reinforcement of a community and quality animal health service must be adapted to the intervention context and will vary notably according to whether or not there is legislation regulating the activity of auxiliaries, according to whether or not there are private veterinarians in the field and according to the sanitary and livestock environment. There is no ready made model for setting up such actors; it is a matter of adapting to extremely variable contexts and therefore to adapt functions, trainings and auxiliaries' statute in order to propose community-based, quality, and sustainable animal health service.

If one or more private veterinarians are present in the field, they will be involved as early as possible in the process so that they can supervise the work of auxiliaries and provide them with quality veterinary medicines, ensure a portion of their continuing training, etc. If there are no veterinarians in the field, we will then prefer a strong professional organization such as the Sanitary Defense Group or an auxiliaries' association. We will do what needs to be done in order to incite and support one or more veterinarians to be established in the area.

If there is legislation, of course such legislation will be observed. If there is none, we will do our utmost to position the activity of the auxiliaries and turn them into known or even well-known actors, using conventions with the sanitary authority and the local communities, for example. One can then, in this type of context, support the reflection of central veterinary services on the roles and statute of auxiliaries. Such reflection will be able to bring to take or not measures for the recognition of auxiliaries. What is essential here is to guarantee control of their activity homogeneity over the national territory (homogeneity in the functions exercised, the level of training, access to veterinary products, etc.).

This recognition of auxiliaries by central veterinary services, or even the legislation on auxiliaries, rouses debates. As a matter of fact, the recognition allows the necessary control of these animal health actors but raises the question of veterinary public health and qualification of actors on whom it rests. The State must be able to control animal health actors in order to guarantee the quality of their service and in so doing veterinary public health. A State will particularly prefer not to recognize legally the auxiliaries in order not to base its animal health service on these agents, but rather on veterinary doctors already established or who will be established (as is the case at Madagascar where a new veterinary teaching should provide veterinary doctors trained and able to deliver veterinary public health).

Then comes the issue of services to small farmers and the epidemiosurveillance of animal diseases. The State must strive to have its farmers access quality and community based service, which goes through several arrange-

ments, ranging from the arrangement resting on Government civil servants to the arrangement resting on private veterinarians. One can very often observe that in the developing countries, the means for delivering this animal health service are inadequate. Then the auxiliary may turn out to be a relay between farmers and veterinarians, limiting himself ultimately to a farmer's status and therefore having access only to a limited list of veterinary products and exercising functions which are not those of a veterinarian. He will organize for example prophylactic campaigns carried out by the veterinarian, will ensure sanitary information recovery and will refer to the veterinarian for any pathology requiring a refined diagnosis or antibiotic treatment.

On the other hand, if it is unanimously recognized nowadays that the small farmers have a predominant role in the epidemiosurveillance of animal diseases and that the auxiliaries are a major link of the epidemiosurveillance networks, it still remains that epidemiosurveillance is a public health mission management by the State, who may delegate it to private veterinarians by giving them a mandate to that effect.

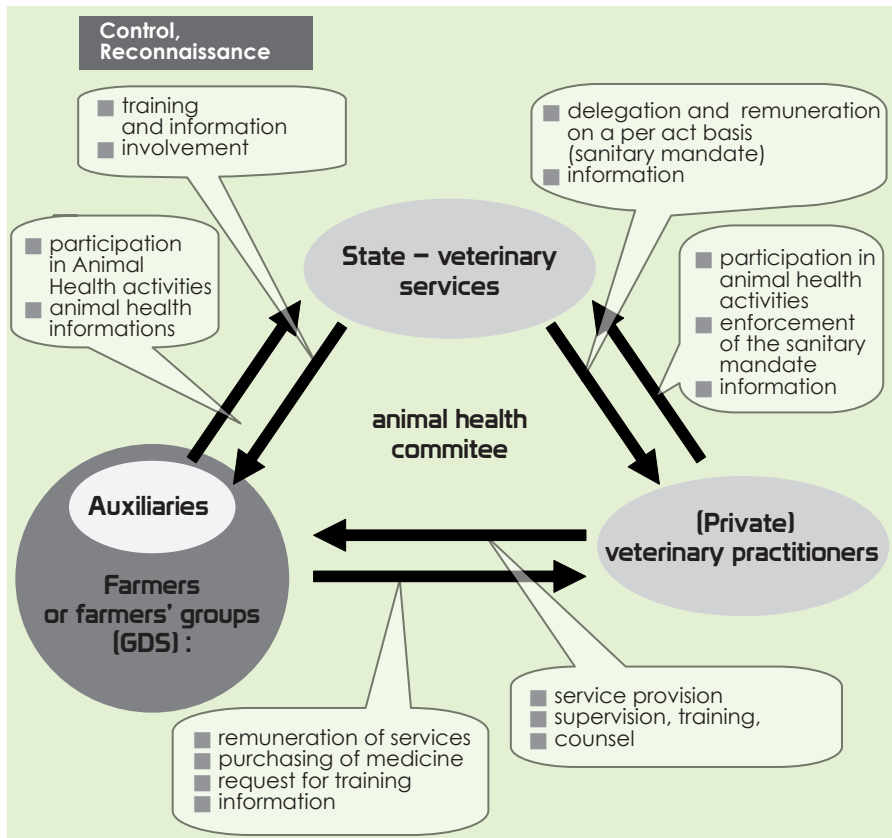
Finally, we have talked about control of auxiliaries allowed by their recognition, but then we must determine who controls the auxiliaries, how, and with what resources. Very often, the State and its decentralized services do not have the material, human, and financial resources in order to really control these auxiliaries. The private veterinarians are more apt to do it, under reserve that they be present, available, and conscientious.

The auxiliary, defined as a farmer who has acquired a certain number of basic skills in medicine and small surgery, and who has been initiated in collective sanitary management, will be brought, in the course of his practice, to entertain relations with:

- The farmers of his community, who are not only his clients, but also those from whom he draws his legitimacy.
- The veterinary practitioners who are his technical reference.
- The public veterinary services with whom he will engage a collaborative venture to contribute to veterinary public health.

Thus, we have seen in the course of this review of the consequences of community based and quality research an arrangement looming gradually and which is not limited to simple "technical" training, but which takes into account all animal health actors in a country as well as their inter-relations.

Such arrangement may be schematized according to the following tripod:



As this arrangement turns out to be multi-actor, and as one knows the degree of collaboration necessary between these actors in order to reach the community and quality goals, there arises the issue of the organization of the support to bring.

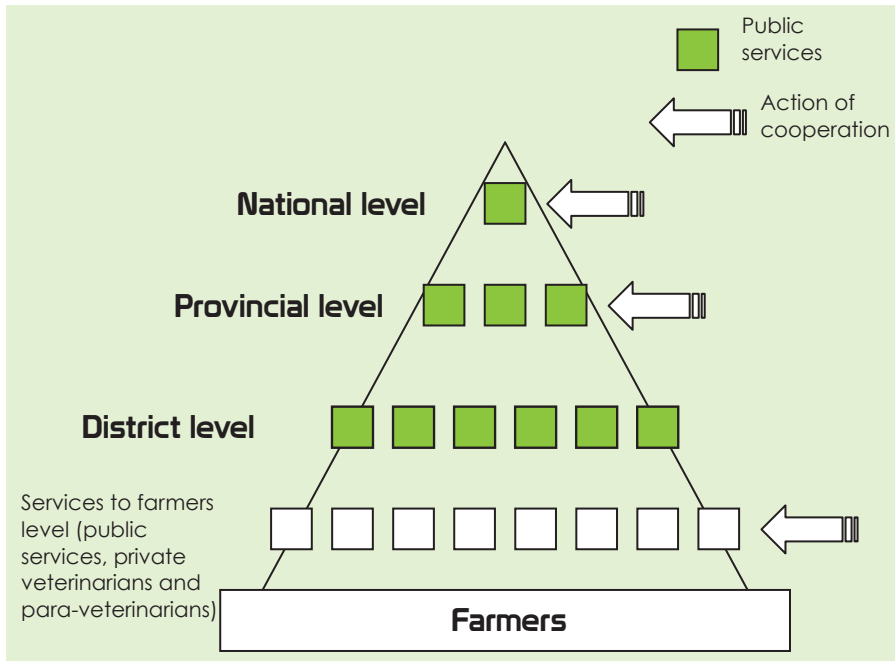
In fact, if NGOs like AVSF, given their knowledge of the field, their professionalism and militancy, have acquired a strong legitimacy in working with farmers and their field actors, other structures have also been empowered to work with the other actors of the arrangement: international institutions (OIE, FAO...), training and/or research institute, bilateral technical cooperation, professional and ordinal bodies; each one may contribute to improving the arrangement.

But, in numerous countries, it can be observed that the technical cooperation in support to animal health services<sup>2</sup>, although technically adapted and qua-

<sup>2</sup> By animal health services, we refer to the entire set of services to farmers, be they from the private sector or the public sector.



lity services, runs into difficulties reaching satisfactory results at the national level. This often results from a lack of consultation between various stakeholders. As a matter of fact, it can be observed that the different development actors working on this theme focus their efforts, each according to his competences, on one layer of the system.



In practice, we will be able to note, for example, that a bilateral cooperation will work on strengthening central services, while NGOs will train livestock auxiliaries for farmers.

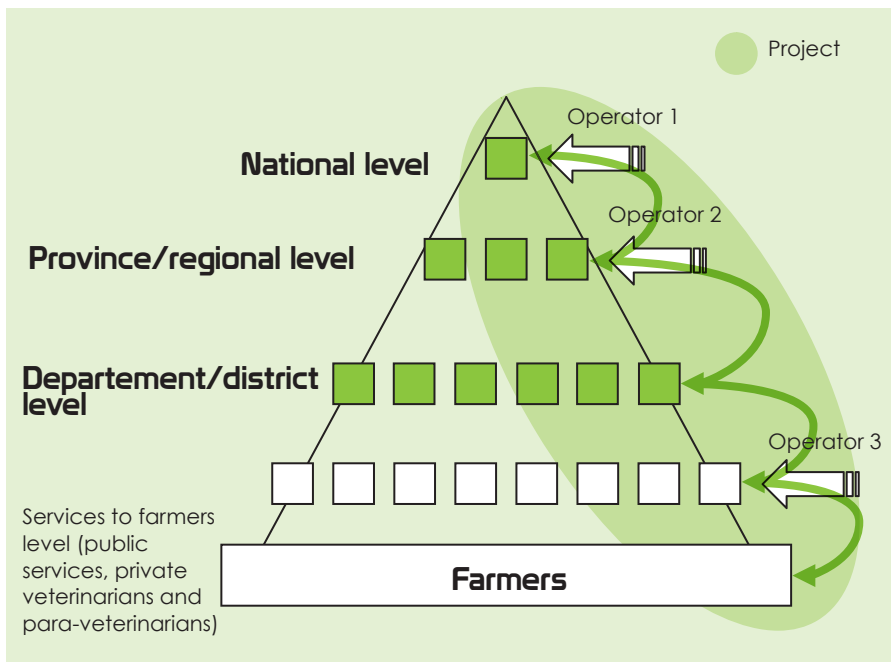
Between these two actors, there is often no formalized consultation helping achieve an (integrated) vision of all the supports to the animal health system.

In fact, compartmentalized interventions cannot help remedy the system operational shortcomings, i.e., defect, even interruption of the epidemiological information between the different levels, and defect, or even break of the command chain in case of disease outbreak, problem with supply of veterinary products, lack of continuing training, etc.

AVSF estimates therefore that it is necessary to act all levels simultaneously: to that end, one may set the following objectives:

- Direct activities towards a reinforcement of the relation between the different steps of the animal health system.

- Reinforce the dialogue and coordination between the different external stakeholders by bringing together all the supports in a single project, by including these stakeholders in a single project team
- Communication of results and effects on system quality.

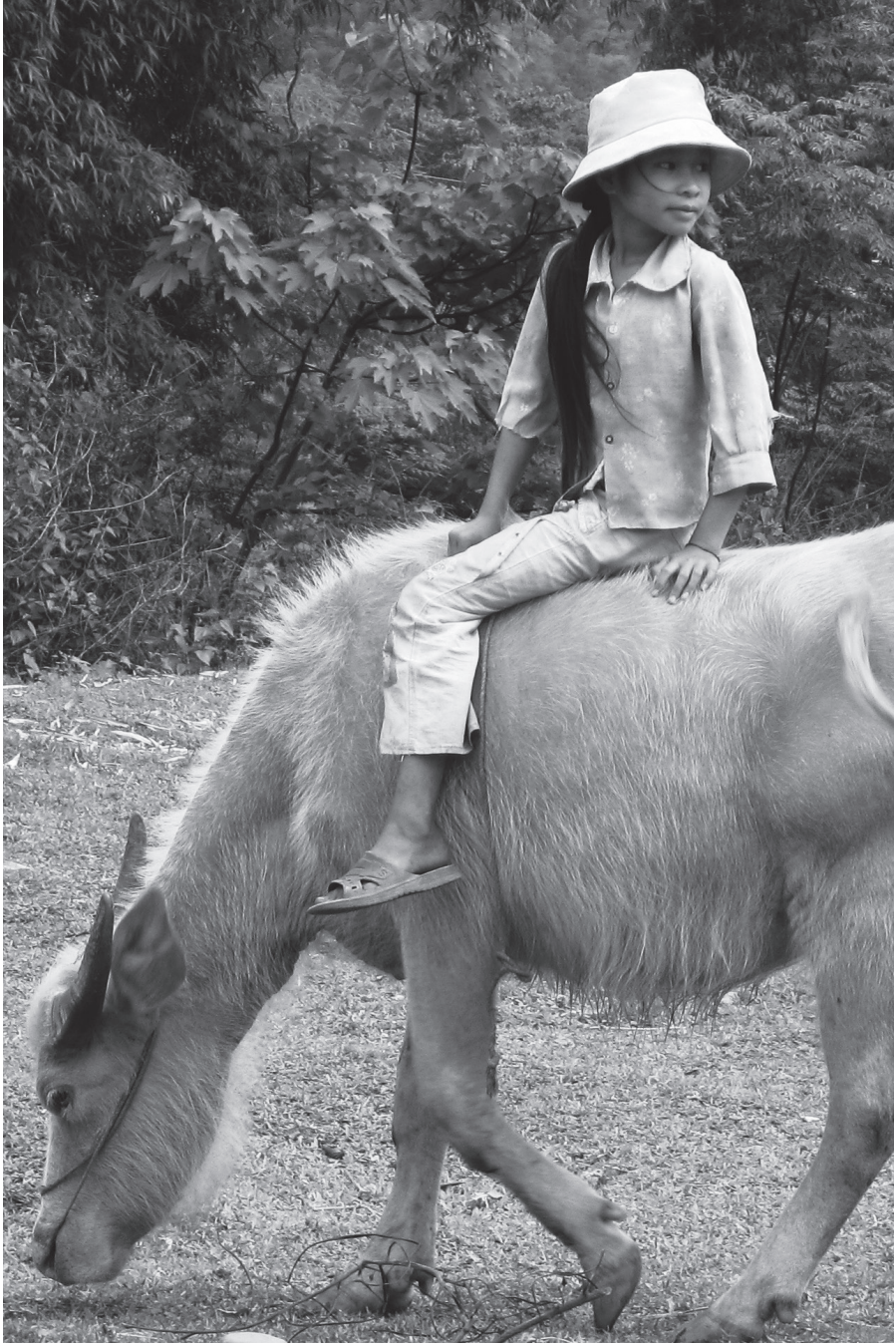


The cooperation for a quality and community-based animal health arrangement can meet the goals set: manage the sanitary risks and effectively accompany livestock development.



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# Appendix I: Order setting the regulatory framework of the village livestock auxiliary's activity in Togo

**MINISTRY OF AGRICULTURE, REPUBLIC OF TOGO**  
**LIVESTOCK AND FISHING** Work, Freedom, Homeland

## GENERAL SECRETARIAT

### OFFICE OF LIVESTOCK AND FISHING

#### ORDER N°-----/MAEP/SG/DE

Bearing regulation of the activity of village livestock auxiliary

### THE MINISTER OF AGRICULTURE, LIVESTOCK AND FISHING

In view of law no.98-019 of December 23, 1998, relative to the practice of the veterinary profession;

In view of decree no. 97-108/PR of July 23, 1997, bearing attributions and organization of the ministry of agriculture, livestock, and fishing;

In view of decree no.2003-229/PR of July 29, 2003, modified by decree no. 2003-232/PR of August 03, 2003, bearing composition of the Government of the Republic of Togo;

In view of order no. 18/MAEP/CAB/SG of August 03, 1998, bearing application of decree no.97-108/PR above referred to.

## ORDERS:

### CHAPTER I – OF GENERAL ARRANGEMENTS

#### Article 1:

This order sets the regulatory framework of the village livestock auxiliary activity and defines the necessary support to be provided to the latter in order to build its capacities of intervention in the field.

#### Article 2:

As per the present order:

1. "AVE" designates the Village Livestock Auxiliary;
2. "Competent authority" designates the Office of Livestock and Fishing (DEP) represented by its Director;
3. "CPVV" designates the Village Veterinary Pharmacy Fund;
4. "CVD" designates the Village Development Committees;
5. "DCV" designates the Veterinary Control Divisions (in the DRAEP);
6. "DRAEP" designates the Regional Directorates of Agriculture, Livestock, and Fishing;
7. "ICAT" designates the Institute of Counseling and Technical Support;

8. "MAEP" designates the Ministry of Agriculture, Livestock and Fishing;
9. "ONMV" designates the National Association of Veterinary Doctors of Togo;
10. "NGO" designates Non-Governmental Organizations.

### **Article 3:**

Without prejudice to the previous arrangements in force in the livestock field, particularly those of the law no.98-019 of December 23, 1998, relative to the practice of the veterinary profession and other related legislations, this order establishes the recognition of the AVE and confines it in the specific roles which are assigned to it in accordance with the different functions which it fulfills within the village community.

### **Article 4:**

One will find attached to this order, the book of specifications of the AVE. They all form an inseparable whole.

## **CHAPTER II – ON DEFINING THE AVE AND REQUIREMENTS FOR THE PRACTICE OF THE ACTIVITY**

### **Article 5:**

Subject to the requirements prescribed below, the AVE is an actor approved by the village community from which it comes, formed through short and intensive sessions and trainings, in charge of delivering veterinary care and basic zotechnical actions, to use and manage a stock of veterinary products considered as non-hazardous and remunerated by the beneficiaries.

### **Article 6:**

As defined above at article 5, the AVE must meet the requirements set below:

- have a healthy mind and enjoy all one's physical and mental faculties;
- have a good knowledge and a mastery of the language of one's environment;
- how how to read and write in French: the AVE must have a level of education higher or equal to the 6<sup>nd</sup> year of basic education (CM2);
- be a model farmer, living permanently in the village and available to bring one's technical support and advice to the promotion of livestock in one's grassroots community;
- preferably be married or be a good household head,
- be a good, motivated, and sociable communicator;
- enjoy the esteem and respect of one's grassroots community;
- be a product of the village community and be selected by consensus. This choice is validated by the relevant authority.

## CHAPTER III – ON THE ROLES AND COMPETENCES OF THE AVE

### Article 7:

The AVE, on account of its strategic role in the farming environment, carries out a series of activities clustered in four (4) essential functions.

**A technical,** preventive and curative function:

- poultry vaccination and participation in vaccination campaigns of other animal species on request of the relevant authority;
- delivery of basic animal health care, notably concerning the most frequent animal pathologies and simple zootechnical interventions.

**A warning function** in case of outbreak of contagious animal diseases:

- the recognition of signs helping suspect major contagious animal diseases;
- the participation in the implementation of appropriate measures in case of outbreak of epizootic diseases.

**A sensitization function** at the collective level (meetings) and at the individual level (individual contacts);

- active participation in extension and sensitization actions;
- relaying messages transmitted by agricultural advisers and specialized technicians of livestock, extension, and counseling;
- counseling farmers of his village community for the prevention of major diseases;
- organization of collective actions in the area of animal health.

**A management function:**

- the management of veterinary drug stocks;
- the management of the CPVV when it exists.

### Article 8:

The AVE's competences are specified in the book of specifications attached to this order. They essentially deal with acquisition, holding and administration of veterinary drugs, sensitization, information, and warning. These skills are exercised scrupulously in the area of intervention of the AVE which is in principle the location of the community that he comes from.

## CHAPTER IV – ON TRAINING AND RETRAINING THE AVE

### SECTION I – TRAINING

#### Article 9:

There are structures and institutions in charge of training the AVE. They intervene at different levels of the training process, particularly in the following activities:



- organization and training: extension structures such as ICAT, the NGOs, development projects, local communes...;
- training and follow-up: the professional organizations intervening in rural environments such as private veterinarians;
- training, coordination, and control: the DRAEP/DCP.

### **Article 10:**

Before implementation of the training, the structure initiating the training carries out, in collaboration with the veterinarians and other structures evolving in the same area of activity, in an initial stage, the following activities:

- identification of villages where it is necessary to establish an AVE;
- organization and holding sensitization meetings for the choice of future AVEs in the villages identified;
- establishment of the list of future AVEs per village, canton, and prefecture.

It then addresses the regional directors of agriculture, livestock, and fishing a motivated request and specifies, among other things:

- the standards and first names of future AVEs as well as their level of schooling;
- the geographic location of future AVE's (prefecture, canton, and village);
- the list and designation of the already AVE's existing or residing in the village(s) designated;
- information on the terms of the choice of future AVEs by bringing evidence that these choices are very well the expression of the will of a community;
- the surnames and names of trainers: their profession, adult training experience, and their pedagogic aptitudes, in accordance with the provisions of article 14 below and.;
- the venue and date of the training;
- the content of the training;
- the monitoring program envisaged (venue; people ensuring the periodic monitoring, etc...).

### **Article 11:**

**The theme of the basic training of AVEs is composed of the following items:**

- status, profile, field of competence of the AVE;
- poultry vaccination;
- use of anti-parasitical and antibiotics orally and externally on poultry, sheep, goats, cattle, and pigs;
- major diseases in poultry, ruminants, and pigs;
- notions on feed, housing, and breeding of poultry and small ruminants and pigs;
- notions on special livestock (rabbits, ayla codes, etc.);
- roles of the AVE in the early warning on contagious diseases;
- participation in vaccination campaigns;
- agricultural extension: sensitization meetings, participatory diagnosis, development of a provisional campaign plan;
- cooperative organization;

- mechanism of establishment and management of a CPVV from micro-credit.

#### **Article 12:**

**The training of the AVE must be conducted following a standard program approved by the relevant authority. The program itself should comprise two (2) components:**

- essential knowledge and aptitudes required for all AVE's regardless of their geographic location;
- region specific knowledge and aptitudes according to priority needs of the ecological zones and livestock systems.

**The AVE training is assessed on the basis of standard methods and assessment indicators defined beforehand by the relevant authority.**

### **SECTION II – ON RETRAINING**

#### **Article 13:**

In accordance with article 17 below, the AVE retraining is done periodically by the structures involved in the monitoring and control activities. It consists in deepening with the AVE's the complex or new themes. The retraining concerns generally speaking all AVEs and particularly the low technical performance ones or those deemed defective in the field and identified as such in the framework of monitoring and control activities.

### **SECTION III – ON FUNDING THE AVE TRAINING**

#### **Article 14:**

The funding of AVE training is assured by all support structures empowered to manage the AVE:

- The state through the relevant authority;
- all support structures empowered to manage the AVE's (rural development support structures, NGOs, religious based organizations, development projects and other institutions contributing to the promotion of animal production in rural areas);
- the AVE taken as a major beneficiary and/or his grassroots community;
- the private veterinarian.

## CHAPTER V – ON THE MONITORING AND CONTROL OF AVE ACTIVITIES

### SECTION I – ON THE CONSISTENCE AND THE TERMS OF THE MONITORING AND CONTROL

#### Article 15:

- The monitoring of AVE activities consists in:
  - carrying out activities really implemented by appreciating the quality of services rendered to farmers and the level of performance;
  - identifying gaps, weaknesses and constraints to remedy them in a timely manner;
  - ensure availability within its grassroots community (permanent residence).
- The control of AVE activities helps monitor and verify that the latter are implemented in accordance with the regulation in force and the prescriptions of the book of specifications.

#### Article 16:

As described under article 15 above, the monitoring and control of AVE activities are carried out through:

- field visits in the course of field trips;
- periodic meetings at the level of monitoring points known to the relevant authority would enable:
  - i. each AVE to make a complete presentation of activities carried out and problems encountered;
  - ii. AVEs and structures involved in monitoring and control, to discuss together those problems encountered and find appropriate solutions;
  - iii. The structures involved in monitoring and control, to either examine more thoroughly a complex theme, or animate a new theme for the benefit of the AVEs
  - iv. AVEs to follow various communications and select in agreement with the monitoring and control structures a date for the next meeting.

### SECTION II – ON STRUCTURES IN CHARGE OF MONITORING AND CONTROL

#### Article 17:

**The structures involved in the monitoring and control of AVEs are:**

- the SG/MAEP, through the DRAEP/DCV/;
- the professional organizations represented by private veterinarians;
- the structures of extension and counseling, projects and NGOs represented by specialized livestock technicians, agricultural advisers or rural animators;
- the village communities represented by village development committees (CVD) or other organized local structure

## **CHAPTER VI – OFFENCES AND SANCTIONS**

### **Article 18:**

The infringements against the provisions of articles 7 and 8 of this order can bring about disciplinary sanctions for the AVE as follows:

- warning,
- temporary suspension with withdrawal of the AVE card for a period of six (06) to twelve (12) months;
- permanent suspension.

### **Article 19:**

At the conclusion of the above mentioned temporary suspension and in case the EVE expresses the desire to resume his activities, he will have to make a request, to be approved beforehand by his community, to the relevant authority who pronounces a related decision. If the decision by the relevant authority is favorable, the AVE is obligated, prior to resumption of his activities, to follow a refresher course according to the provisions under article 13 of the present order.

## **CHAPTER VII – SPECIAL AND TRANSITIONAL ARRANGEMENTS**

### **Article 20:**

In order to guarantee the sustainability of missions entrusted to the AVEs, all stakeholders (projects, NGOs...) often useful in the initial establishment of such systems but who, unable to ensure sustainability, must integrate from the beginning the passage of relays to DRAEPs in their strategy.

### **Article 21:**

The relevant authority establishes a system of issuance of the AVE card. On the basis of this system, the relevant authority is empowered to issue the AVE card for the practice of AVE activities after having determined that the latter meets the requirements as per this order.

### **Article 22:**

The AVEs currently in practice must meet the obligations which are incumbent on them in a period of one (1) year from the date of entry in force of the ministerial order.

## CHAPTER VIII – ON FINAL PROVISIONS

### Article 23:

The Secretary General of the Ministry of Agriculture, Livestock, and Fishing is tasked with the implementation of the present order which goes into effect from the date of its signature and will be published in the Official Journal of the Republic of Togo.

**LOME, the date of,**

#### **Certified copies**

CAB/PR for CR

CAB/PM for CR

All Ministries 26

CAB/MAEP

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Central Offices/MAEP

DRAEP

DG/ICAT

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National Association of Veterinary Doctors

Chamber of Agriculture

VSF TOGO

JORT

#### **SIGNED**

**BAMNANTE Komikpime**

**For certified true copy**

**The Cabinet Attaché KONLANI K.Dindioque**

**MINISTRY OF AGRICULTURE REPUBLIC OF TOGO**  
**LIVESTOCK AND FISHING** Work Freedom Homeland

**GENERAL SECRETARIAT**

**DIRECTORATE OF LIVESTOCK AND FISHING**

**BOOK OF SPECIFICATIONS OF THE AVE**

This book of specifications specifies the mission and skills of the Village Livestock Auxiliary (AVE). It fits into the framework of the national policy of disengagement of the state which liberalizes the delivery of veterinary advice, care and inputs. In this context, the AVE is bound to provide basic quality animal health services in order to meet the goals of improved animal health; he will have in addition to comply with the provisions contained in the order regulating his activities in Togo. This order is appended to the present Book of Specifications.

**1. Goals**

In accordance with his status, the AVE will do everything possible to contribute to the satisfaction of the general and specific goals of the liberalization of veterinary services, notably:

For the general objectives:

- improve the farmer's income level;
- preserve the veterinary public health;

The specific objectives are as follows:

- improved coverage and sanitary surveillance of livestock and availability of quality veterinary service accessible to all farmers;
- improved technical and economic outcomes of livestock;
- increased productivity of short cycle animal farms through improved sanitary coverage and promotion of improved livestock techniques;
- reinforced and secured network of veterinary services and support services to farmers; this network is composed of AVEs, private and public veterinary services;
- supporting initiatives of farmers' organizations for a better access to veterinary services and better enhancement of animal productions..

**2. AVE Area of Activity**

The area of activity of the AVE is limited to the location of the community which has chosen him. However, on account of various specific characteristics, the AVE could, in agreement with his community, bring his assistance to neighboring communities, thus sustaining the extension of the availability of the veterinary service in the areas which do not have it.

### 3. Competences or areas of activity of the AVE

The AVE's competences are in direct relation with the training that he has received. They involve counseling and basic veterinary care. Such competences also concern participation in the collection and dissemination of animal health information as well as techniques of improvement of livestock conditions of short cycle animal species.

### 4. Management of village veterinary pharmacies (acquisition, holding, administration of veterinary drugs)

#### 4.1 Acquisition of veterinary drugs

The AVE is entitled to acquire veterinary drugs. Such acquisition will only take place from a private veterinary firm of his area of activity, against delivery of a receipt bearing the firm's heading.

**The list of veterinary drugs accessible to the AVEs is set by the Directorate of Livestock and Fishing.** It can be consulted near private veterinary firms and public veterinary services.

#### 4.2 Holding and control of veterinary drugs

The AVE is authorized to hold, according to the manufacturer's recommendations, in maximum safety conditions, a depot of veterinary drugs for his activity. The AVE must purchase all veterinary drugs from a private veterinarian retailer. All veterinary products purchased by the AVE must be listed in a register held updated and available for control. The conditions of safety and holding of this depot will be subject to regular controls by the veterinary administration.

#### 4.3 Administration of veterinary drugs

In relation with the skills which he receives through his training and under the authority of the veterinary administration, the AVE is authorized to administer veterinary drugs according to the following conditions:

Vaccination:

The AVE's intervention in this field of vaccination consists only in administering orally and parenterally to poultry, vaccines killed or inactivated. However, the AVE may participate under the exclusive supervision of the veterinary administration in the vaccination campaign against the Small Ruminants Pest.

Other Treatments:

- The AVE may administer orally only to any animal species, any veterinary drug, notably: internal anti-parasitics, vitamins, antibiotics, and mineral and vitamin supplements, animal feed;
- The use of an external anti-parasitical drug is authorized only for poultry;
- The AVE may utilize antibiotics externally on any animal species.

## **5. Sensitization, information collection and warning**

### *5.1 Information collection and alarm*

For any animal species, the AVE plays an alarm role in case of disease, in relation with the local authorities, the public or private veterinary services, the NGOs, the development projects, the farmers' organizations.

He must report in the shortest time possible to the closest local authority and/or livestock agent, any suspicion of animal disease outbreak. He may also contact the private veterinarian for possible care to administer on sick animals.

### *5.2 The diffusion of information*

The AVE is perhaps called on by veterinary services and counseling and support structures for the sensitization of farmers during periods of vaccination and collective treatment of all animal species. In this case, he will carry out information and sensitization activities in order to promote preventive practices. Beforehand, the AVE will have been sensitized on the conditions and the content of the message to be delivered.

## **6. Improved livestock techniques**

The AVE may bring, in his geographic area of activity, his support to the construction and maintenance and management of hen houses, sheepfolds and pigpens improved upon solicitation of supervision structures. Like basic animal health, he may be called on to help these structures in the collection and diffusion of information relative to these production units.

## **7. Meeting and organization of the monitoring of AVE activity**

The AVE must regularly attend monitoring meetings planned and organized in his area of activity. In the course of these meetings, the AVE will provide all information relative to his activity since the last meeting. His prolonged and unexplained absence from meetings will be sufficient evidence for the veterinary administration, upon proposal of the veterinary officer of the monitoring area, to withdraw him from the list of AVE's recognized by the latter.

## **8. AVEs' relations with their partners**

In carrying out their activities, the AVE maintains relations with his community, farmers, the private veterinarian, the relevant authority, the extension structures and the counseling structures and the national association of veterinary doctors.

### *8.1 The AVE's relations with his community:*

The AVE's relations with his community may be classified into three categories:

- the technical relations;
- the commercial relations;



- the social relations.

These relations are marked with rights and obligations.

Technically, the AVE is obligated to bring the necessary know-how in order to contribute to the resolution of livestock problems of the members of his community. In return, he must benefit from the good collaboration of his community for all activities that he undertakes for the promotion of small livestock in the area regarding selection criteria as stipulated in the ministerial order bearing regulation of the AVE activity as per article 6.

Commercially, in addition to the remunerations received on account of his services, the AVE perceives an additional remuneration on account of his contribution to improving the private veterinarian's turnover.

The AVE is bound to observe the levels of prices of veterinary products sold to farmers and the amounts of the fees received for the services. He must avoid any attempt at swindling his clients, particularly when the remuneration is paid in kind.

Socially, the AVE must prove to be irreproachable from a moral standpoint by providing without any discrimination his services to his community and by making himself available to them.

### 8.2 *The AVE's relations with the farmers*

The farmers and farmers' groups of the community that the AVE is a member of receive from him the counseling support necessary for the promotion of livestock and services in terms of veterinary care remunerated by the latter. As principal beneficiaries, they are obligated to accept payment of products as well as the services provided to them by the AVE.

The AVE must keep the farmer abreast of any change which is likely to affect his activity, notably:

- the conduct of livestock;
- the vaccination schedule;
- a disease outbreak;
- a shortage of veterinary products stocks;
- price changes on drugs and services;
- visits by the DCV, the private veterinarian, or extension structures and support and counseling structures.

### 8.3 *AVE's relations with the private veterinarian*

**The AVE, within his village community, would be tasked with a series of activities which are normally under the competence of the private veterinarian. These activities must, in principle, be strictly supervised by the private veterinarian.** They include the following:

- the holding of medicines;
- the delivery of care to animals;
- the advice given.

The AVE must hold a registry of all products that he will purchase exclusively

from a retailer private veterinarian. The private veterinarian must regularly visit his AVE in order to monitor his activities in the field. The AVE must prove himself available to receive the regular visits made by the private veterinarian in charge of monitoring.

#### *8.4 Relations between the AVE and the Relevant Authority.*

The relations of the AVE with the relevant authority take place at the decentralized level through the veterinary control division of the regional directorates of agriculture, livestock, and fishing (DRAEPP/DCV). The AVE is under the control of the DRAEP/CV who must see to it that the latter's competences be performed essentially under the prerogatives he gains as per his statute.

The AVE must be able to collect and disseminate information on animal disease surveillance, the quest for suspicions and early warning in the framework of epidemiosurveillance.

#### *8.5 Relations between the AVE and the extension and support services.*

The AVE may be tasked by the extension and support services with farmers' sensitization and mobilization as well as dissemination of new animal production techniques. On the other hand he must be available and agree to the follow-up of his activities by the extension and support services.

#### *8.6 Relations between the AVE and the National Association of Veterinary Doctors (ONMV)*

The relations between the AVE and the National Association of Veterinary Doctors are indirect ones. They are necessarily expressed through private and private veterinarians registered at the ONMV. The latter must see to it that the activities entrusted to the AVE be carried out according to the ethical rules of the veterinary profession and in accordance with the regulation in force.

## Appendix II : Frame of reference of competences and pedagogic objectives of community animal health workers developed<sup>3</sup> at Madagascar

Frame of reference of ACSA's competences and pedagogic objectives:  
Example of Madagascar

### 1. VACCINATION FUNCTION

The mandatory vaccination of cattle was to be handled by the only one veterinarian accredited; it would be up to him to determine whether he wants to involve ACSA's in the vaccination campaigns; in so much as the rate of cattle vaccination is quite good at lake Alaotra (90%).

#### Cattle vaccination function

Competences	Pedagogic objectives
Organize and animate a sensitization session with farmers about cattle vaccination	Ensure the logistical preparation of the meeting Animate a session by using the aids developed Explain to farmers the messages developed
Organize the vaccination session	Organize the implementation of the vaccination corridor Organize animal restraint (in case of vaccination with the farmer) Make appointments with farmers according to the schedule established with the veterinary authority (health veterinarian or post)
Carry out vaccinations by observing the rules of use of the vaccine and report on the evolution of the number of vaccinations carried out in the area	Recognize symptoms of anthrax and colibacillosis Cite the rules of use of the Bicharcoli Observe the cold chain during the vaccination campaign Perform a Ticharcoli injection on cattle Hold a book for registration of vaccinations carried out Maintain the injection material Apply the rules of hygiene and health precautions in conducting vaccination sessions
Ensure the post campaign monitoring of the vaccination	Monitor the aftermaths of the vaccination session Explain to farmers the possible vaccination failures Report incidents related to vaccination to the line veterinary authority

<sup>3</sup> This frame of reference has been developed at the request of veterinary services of Madagascar, by a veterinarian who is a training engineering specialist, Doctor Jerome THONNAT, with the field assistance of AVSF teams.

**Poultry vaccination function (Cholera and Newcastle)**

<b>Competences</b>	<b>Pedagogic Objectives</b>
Organize and animate a meeting of sensitization with farmers on poultry vaccination	Ensure the pedagogic preparation of the meeting Animate a meeting by using aids developed Explain messages developed to farmers
Organize implementation of periodic vaccination campaigns	Define the periodic implementation of the campaign in agreement with the producers and district chiefs Establish the list of farmers interested and the number of animals to be vaccinated Collect related payments Get vaccine supply from the line veterinary authority
Conduct vaccination by observing the rules of use of the vaccination and monitor the evolution of the number of vaccinations conducted in his area	Recognize signs of diseases which are vaccinated against Organize the vaccination session with the farmer Practice vaccination by observing the cold chain Fill a monitoring book Maintain the vaccination material Apply rules of hygiene and sanitary measures in the conduct of vaccination sessions
Ensure the post vaccination campaign monitoring	Follow-up on the aftermaths of the vaccination session Explain possible vaccination failures to farmers

**Vaccination function on request (fowl pox, Teschen's disease, classical swine fever)**

<b>Competences</b>	<b>Pedagogic objectives</b>
Conduct vaccination by observing the rules of the use of vaccine and following the evolution of the number of vaccinations conducted in the area.	Collect individual applications Get a supply of vaccines through observance of established rules Organize the vaccination session with the farmer Recognize the signs of diseases against which the vaccination is performed Practice vaccination by observing the cold chain Fill in the monitoring book Maintain the vaccination material Apply the rules of hygiene and the precautionary measures Prepare the possible booster.

## 2. ALARM AND SURVEILLANCE FUNCTION

For the Lake Alaotra region, diseases deemed priority diseases by the DSAPS are the following ones: rabbies (all mammals), classical and African swine fever, anthrax and bacteridian anthrax (ruminants), cowdriosis (sheep), avian cholera (geese);

### Alarm and surveillance function

Competences	Pedagogic Objectives
Organize and animate a meeting with farmers on the organization of the animal health arrangement and suspicious case reporting	Assure the logistical preparation of the meeting Animate a meeting by using the aids developed Explain the messages developed to the farmers
Collect health information on diseases under surveillance	Empower farmers about declaration of suspicious cases of disease under surveillance Describe the signs of suspicion for individual diseases under surveillance (cf. case definition in the surveillance protocol) Collect from producers information planned in the surveillance protocol Transmit to the line veterinary authority information in accordance with the planned deadline in the surveillance protocol
Sound the alert for any suspicious case of new contagious disease	Assess the gravity and contagiousness of a new disease. Collect initial information on the symptomatology observed and on the epidemiological characteristics of the disease Advise the line veterinary authority as well as the local authorities in the shortest possible times
Advise territorial authorities on setting up initial emergency measures in case of an outbreak	Describe the measures to set up in order to limit the spread of the focus (isolation, restriction of animal movements and gatherings...) Explain to local authorities and producers the necessity to set up these measures.

### 3. ACTIVITIES MANAGEMENT AND DEVELOPMENT FUNCTION

#### Management function of his activity

Competences	Pedagogic Objectives
Manage a stock of veterinary products by observing the regulation	<p>Assess medicine needs depending on the period of the year in order to avoid stock shortages</p> <p>Store medicines in satisfactory conditions</p> <p>Recognize an adulterated or out-of-date product</p> <p>Order one's products from the certified operator (ACSA association or health veterinarian to whom one is attached.</p>
Hold a simple accounting related to his activity	<p>Determine the amount to be saved for the renewal of the medicine stock</p> <p>Determine one's profit</p> <p>Record one' expenditures and returns</p> <p>Describe the determination of medicine prices in order to explain it to farmers</p>
Monitor and analyze the evolution of his activities in order to develop them under observance of established rules	<p>Hold a book of registration of one's activities</p> <p>Periodically analyze the evolution of one's activities</p> <p>Describe the regulatory and contractual framework of one's activities and the related obligations</p> <p>Describe the terms of development of one's activities to the producers</p>
Maintain and renew his material	<p>Maintain one's bicycle</p> <p>Maintain one's ice box</p> <p>Maintain one's injection material</p>

### 4. FARMERS SENSITIZATION FUNCTION

#### Sensitization function

Competences	Pedagogic Objectives
<p>Organize and animate sensitization meetings with farmers, bring individual advice on:</p> <ul style="list-style-type: none"> <li>■ Vaccinations and prevention of main pathologies</li> <li>■ Organization of the animal health arrangement and its role</li> <li>■ Good practices to be mastered by farmers</li> <li>■ Declaration of suspicions of diseases under surveillance</li> <li>■ Zootechnical improvements (food, housing, livestock conduct)</li> </ul>	<p>Ensure logistical preparation of the meeting</p> <p>Animate a meeting by using the aids developed (posters)</p> <p>Explain developed messages to farmers</p>

## 5. FUNCTION OF PREVENTION AND TREATMENT OF MAJOR PATHOLOGIES

### Curative and preventive function for poultry and palmipeds

Competences	Pedagogic Objectives
Diagnose diseases to be covered by the ACSA ( <i>Newcastle's disease, avian cholera, smallpox, internal parasitism, external parasitism</i> )	Recognize the 3 to 5 characteristic signs (symptoms, epidemiology) of every disease Carry out an autopsy of poultry and recognize characteristic lesions Formulate a prognosis for sick animal
Apply the relevant treatment	Cite the medicine corresponding to each one of these diseases Describe the rules of use of antibiotics and internal and external anti-parasitics Assess the weight of poultry Assess the dose to be administered Administer the treatment (oral route, SC and IM)
Give advice to the farmer	Explain to the farmer the preventive measures to be set up Explain to the farmer the costs/benefits of the treatment and the prevention of each one of the pathologies Bring some advice about feed, housing and conduct of livestock
Organize joint preventive actions	Organize information meetings with farmers on the schedule of prevention of poultry diseases ( <i>farmer's pedagogic tool box</i> ) Organize joint campaigns of deworming poultry.

### Curative and preventive function for pigs

Competences	Pedagogic Objectives
Diagnose diseases which can be covered by the ACSA ( <i>cysticercosis, swine pests, Teschen's disease, internal parasitism, external parasitism</i> )	Recognize the 3 to 5 characteristic signs (symptoms, epidemiology) of each disease. Formulate a prognosis for the sick animal
Apply the corresponding treatment	Cite the medicine corresponding to each of these diseases Assess the weight of a pig Ensure the restraint of a pig Assess the dose to be administered Administer the treatment (oral route, SC, and IM)
Carry out simple zotechnical interventions	Treat a wound Castrate a piglet

Give advice to the farmer	<p>Explain to the farmer the preventive measures to be set up</p> <p>Explain to the farmer the costs/benefits of the treatment and prevention of each one of the pathologies</p> <p>Bring some advice relative to feed, housing and conduct of livestock.</p>
Organize joint preventive actions	<p>Organize information meetings with farmers on the schedule of prevention of pig diseases (<i>farmer's pedagogic tool box</i>)</p> <p>Organize joint pig deworming campaigns</p>

### Curative and preventive function for cattle and sheep

Competences	Pedagogic Objectives
Diagnose pathologies to be taken into account by the ACSA ( <i>bloat, wintry diarrhea, fluke, intestinal parasitism, nodular skin disease, + rabies and tuberculosis on their zoonotic aspect</i> )	<p>Recognize the 3 to 5 characteristic signs (symptoms, epidemiology) of every disease.</p> <p>Formulate a prognosis for the sick animal</p>
Apply the corresponding treatment	<p>Cite the corresponding medicine for each of these diseases</p> <p>Assess the weight of a bovine and a sheep</p> <p>Ensure the restraint of a bovine and a sheep</p> <p>Determine the dose to be administered</p> <p>Administer the treatment (oral route, SC and IM)</p>
Carry out simple zootechnical interventions	<p>Treat a wound</p> <p>Castrate a bovine and a sheep with a Burdizzo clip</p> <p>Treat simple abscess</p>
Give advice to the farmer	<p>Explain to the farmer the preventive measures to be set up</p> <p>Explain to the farmer the costs/benefits of the treatment and prevention of individual pathologies</p> <p>Bring advice related to feed, housing and conduct of livestock</p>
Organize preventive joint actions	<p>Organize information meetings with farmers on the schedule of prevention of cattle diseases (<i>farmer's pedagogic tool box</i>)</p> <p>Organize joint cattle deworming campaigns.</p>



## Appendix III: List of equipments and products held by auxiliaries at the conclusion of the training by the AVSF at Madagascar

Equipment category	Quantity per ACSA
<b>Veterinary products</b>	
Alfacyclin 20 (100 g bag)	1
Diminasan (bag)	1
Proxidin 50 (250ml can)	1 pour 3
Oxytetracyclin 20% (100 ml bottle)	2
Albendazole 2500 (bolus)	48
Levamisole 10% (100 ml bottle)	1
Interfluke (100 ml bottle)	2
Blitzdip (1l can)	1
Polyvermyl (bolus)	18
Vatamins AD3E(100 ml bottle)	1
Multivit (bottle 100 ml)	2
Coccontrol 20% (100g bag)	1
<b>Veterinary equipment</b>	
Suture needle	1
Small stainless needle	3
Medium size stainless needle	3
Large size stainless needle	2
20ml plexi syringe	3
10 ml plexi syringe	3
Hemostatic clip	1
Ice box	1
Pharmacy box (wood)	1
Bicycle	1
<b>Administrative material</b>	
Notebooks	3
pad	1
Inker	1
Calculator	1
<b>Jointly owned equipment</b>	<b>Quantity for the 40 ACSA's</b>
Kerosine refrigerator (with a wick and a spare glass)	1
Castration clip	2

## Appendix IV: Monitoring of auxiliaries' activities in Madagascar

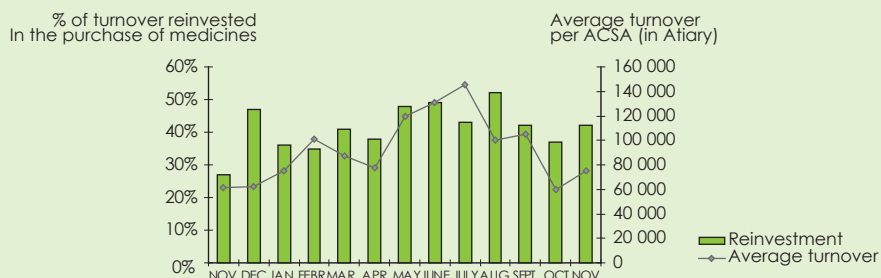
Follow-up on Auxiliaries' activity: AVSF Lake Alaotra, Madagascar

### Financial results of the ACSA's

It should be remembered that the distribution of ACSAs in the communes had been made to the effect that each ACSA would have a minimum animal population of 600 heads of cattle in his area and could make a profit of about 30,000 Ariary (12 euros) per month.

The following graph presents the average turnovers made by an ACSA and the percent reinvested for the renewal of the stock of veterinary products.

Graph 1: Average turnover and reinvestment in veterinary products



The turnover follows the peak corresponding to the activity peak during the harvest season (May through August). It is higher than 100,000 Ariary (40 euros) per month in good years and never goes down below 60,000 Ariary (24 euros) the rest of the year.

One can note that the percentage of the turnover reinvested follows approximately the evolution of the turnover and truly marks the peak. The ACSA's invest a portion which is all the more important for their turnover that the latter is important: this is perhaps related to a gain of confidence in the ACSA's activity.

The reinvested share is always higher than 20% and can reach 55% of the turnover.

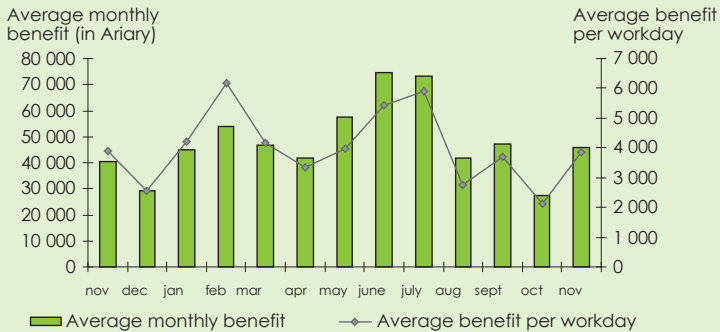
**The average monthly turnover** for the first year of activity is 92,500 Ariary (**37 euros**) with **41% reinvested**).

An ACSA devotes in the average 11 days per month for the animal health service.

The average monthly benefit for the first year of activity is 48,000 Ariary (19.2 euros) per ACSA. The average daily profit is 4000 Ariary (1,6 euro). The goal which was set at 12 euros per month is therefore largely exceeded.

The following graph represents the average net profit made by the ACSA's, per month and per workday.

Graph 2: average monthly and daily benefits of the ACSAs.



The average monthly benefit is very rarely under 30,000 Ariary (12 euros) and always above 25,000 Ariary (10 euros). The daily benefit is very rarely lower than 3,000 Ariary: its minimum level is 2,127 Ariary, so it remains higher than the salary of farm laborers.

In times of harvest, the average monthly benefit may get close to 75,000 Ariary (30 euros in June).

The peak of activities corresponds to a period when the ACSA's are available (end of the harvest) and need some cash to reimburse loans and prepare the next farming season. This strong seasonal activity is therefore a golden opportunity for the ACSAs, even if they complain about periods when activities are taking place at a slower pace

### Technical results

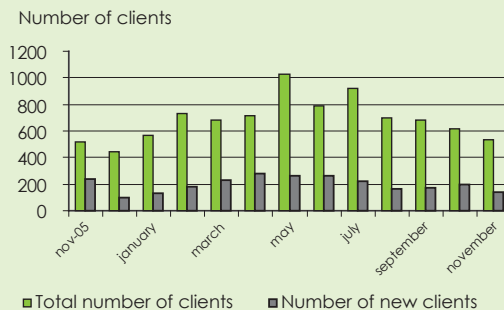
The following results are summarized from monthly reports turned in by the ACSAs. Various crosschecks make it possible to say that these reports reflect the reality of events and that they are reliable. On the other hand, all ACSAs have not participated in all meetings and certain data are missing. For all data concerning all ACSA activities (total number of clients per month, total number of poultry vaccinated...) we have added up all available data and figures given concerning only one portion of the ACSAs (on the average 33 ACSAs out of 40 in activity). For the average results per ACSA (average clientele of an ACSA, number of poultry vaccinated per ACSA and per month, average monthly benefit and turnover...), we have brought them to the number of data available and these are therefore true averages.

Finally, the results which are presented here cover a full year of activity given that they cover the data from November 2005 to November 2006, which is the first year of activity of the ACSAs. For easier reading of the text, we will call this period 2006.

### 5.3.2.1. Clientele

The following graph represents the number of new clients and the total number of clients visited every month by all ACSA's.

Graph 3: Size of the clientele of all ACSAs in the course of the year 2006.

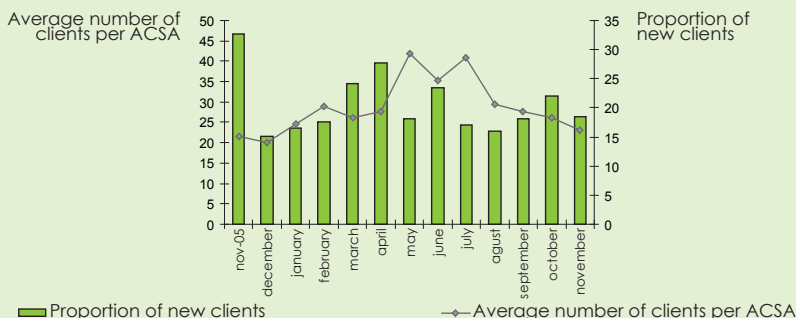


The size of the clientele for the ACSAs steadily increases from November 2005 to May 2006, then slowly decreases until November 2006. One must see in the initial ascending phase progressive installation of farmers' confidence in the new animal health actors then in the descending phase an increasingly marked entry in the hungry stop-gap period.

From March to October, the total number of clients does not fall below 600 per month. As far as the number of new clients is concerned, it stagnates at around 200 per month, but does not seem to diminish excessively. This seems to indicate that the ACSA's clientele is always in an ascending mode and that the overall size of their clientele will continue increasing during the second year of activity.

The following graph presents the average clientele of an ACSA in the course of its first year of activity.

Graph 4: Average clientele of an ACSA in the course of the year 2006.



Of course the evolution of graph 4 matches well that of graph 3. One can note the same peak of clientele during the harvest season, a peak corresponding to greater availability of funds for farmers. The average number of clients per ACSA reaches nearly thirty in time of harvest and decreases under the 20 mark in the hungry stop-gap period. The proportion of new clients approximately matches this evolution and

this ranges between 20 and 40% of the clientele if one excludes the first month of activity when evidently the great majority of clients are new clients.

For the year 2006, **the average monthly number of clients is 20 per ACSA with 30% new clients on the average.**

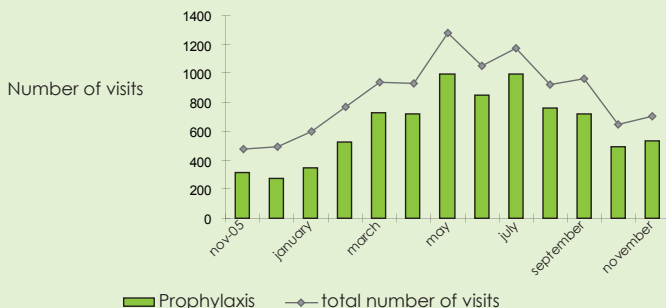
The overall clientele for all ACSA's is about 8000 farms: in other words, the community animal health service provided by the ACSA's reaches 8000 families.

### Number and types of visits made:

An ACSA performs an average of 25 visits per month, the majority of which are for prophylactic purposes.

Graph 5 represents the total number of visits performed in 2006 by all ACSA's.

Graph 5: Number of visits performed in 2006 by all ACSA's and number of prophylactic visits



This graph follows the same evolution as the previous ones with a more distinct ascension in the course of the first five months of activity and the peak always corresponding with the harvest season. The number of prophylactic visits matches quite regularly the total number of visits.

Nearly 11,000 visits were performed in 2006.

Over three quarters of the visits are prophylactic actions (vaccination, deworming, and administration of vitamins). The monitoring visits are very few with less than 10% and the visits for pathologies remain quite marginal with 15%. This may be accounted for by the fact that certain farmers and even communes believe that the role of the ACSA's is limited to prophylaxis.

Whatever the case, the prophylaxis is the first step which is absolutely necessary to the improvement of livestock and must enable alone to observe better performances of commercial livestock and livestock productivity.

### Poultry vaccination

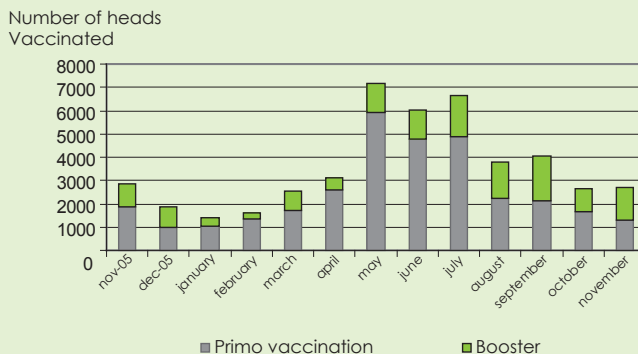
An ACSA vaccinates on the average 104 hens per month with a booster rate of 30%. This booster rate seems satisfactory because we must take into account those birds sold or slaughtered for household consumption.

Overall (since the first poultry vaccination campaign organized during their training in April 2005), the ACSA's vaccinated nearly 100,000 heads of poultry over a period of

18 months.

Graph 6 presents the number of heads of poultry vaccinated each month by all ACSAs, specifying the number of primo vaccinations and booster vaccinations

Graph 6: Total number of heads of poultry vaccinated for the year 2006.



Here again, one can note a peak of activity during the harvest season. This indicates that the farmers who have been sensitized take advantage of a period of availability of cash to have their animals vaccinated.

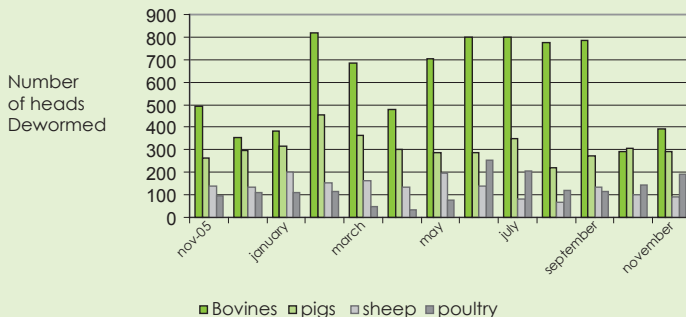
The number of vaccinated heads of poultry each month exceeds 6,000 during the harvest season and ranges from 2,000 to 4,000 the rest of the year. It is estimated that about one third of the poultry population is vaccinated by the ACSA's. This represents a clear improvement over the situation reported at the beginning of the project (the vaccination rate in 2003 was estimated at 10%).

#### 5.3.2.4. Internal Anti-parasitilal Prophylaxis

Internal deworming activities mostly involve large animals. On the average, an ACSA deworms 17 bovines, 9 pigs, 4 sheep, and 4 heads of poultry every month. The number of dewormed sheep may look low compared with other species but sheep breeding is still marginal in the area and the animal population is not very large.

The following graph summarizes the total number of dewormed animals by all ACSA's in the course of the year 2006, with a distinction between bovines, pigs, sheep, and poultry.

Graph 7: Number of animals dewormed in the course of the year 2006



The number of cattle dewormed remains most often higher than 300 heads per month throughout the year. One can note that the number of cattle dewormed is most significant during the vaccination period, i.e., from February through September, with over 700 heads per month.

The number of pigs and sheep dewormed varies much less in the course of the year, probably because these two animal species are not associated with a seasonal vaccinal prophylaxis (the vaccination rate of pigs is quasi null, given the context of PPA and the vaccination of sheep is not mandatory, contrary to that of bovines).

The number of dewormed heads of poultry becomes quite variable (ranging from 35 dewormed heads at the end of the hungry stop-gap period to 260 in time of harvest). Such variation is linked to the peak of poultry vaccination noted in the previous paragraph and which corresponds to a period when farmers have cash resources. Thus, the farmers practice anti-parasitilal prophylaxis concurrently with the vaccination prophylaxis of poultry.

In a single year, the ACSA performed deworming on the following:

- 7,800 heads of cattle
- 4,000 pigs
- 1,750 sheep
- 1,650 heads of poultry

The number of dewormed cattle could be much higher: this would require that the ACSAs renew farmer sensitization in order to present the costs/benefits of cattle deworming

The deworming rate of pigs is about 50% and that of sheep is about 25%.







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