Health of Ethiopian Animals for Rural Development (HEARD)

Public-private partnership (PPP) models for improved delivery of animal health services: Midterm evaluation report

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Abbreviations and acronyms

AHP Animal Health Posts

CAHW Community-based animal health workers

CCPP contagious caprine pleuropneumonia

ETB Ethiopian birr

EU European Union

FGD Focus group discussions

GoE Government of Ethiopia

HEARD Health of Ethiopian Animals for Rural Development

ILRI International Livestock Research Institute

KII key informant interviews

MoU memorandum of understanding

NCD non-communicable diseases

NGO non-governmental organization

PPP public-private partnership

SGP sheep and goat pox

TBD tick-borne diseases

1 Introduction

1.1 Project background

The Health of Ethiopian Animals for Rural Development (HEARD) is an EU-supported program to strengthen animal health services involving public and private sectors. The HEARD program aims to increase sustainable livestock productivity and improve the marketing of livestock products through enhancing quality and reliability of integrated public and private veterinary service delivery. Performance of the veterinary service will be strengthened to improve data gathering, analysis and strategic animal health interventions by both public and private sectors. Developing capacity for different stakeholders involved in animal health service delivery is at the heart of the program.

The HEARD program is organized into three result components. Under result 2, the activity 2.1 ('Piloting the veterinary service rationalization road map in Somali, Oromia and Amhara regions') is planned to be implemented through organizing five consultative meetings to establish guidelines for working relationships between public and private animal health service providers (subactivities 2.1.1), identifying traditional livestock movement corridors for inclusion in pilot PPPs (subactivities 2.1.2) and pilot novel models for veterinary service delivery involving public and private sector (subactivities 2.1.3).

1.2. Piloting novel models for veterinary service delivery

Eight PPP models were identified, detailed plans prepared and some of the models are being tested. Based on consultations under activity 2.1.1 (completed activity) and findings of activity 2.1.2 (ongoing activity), eight potential PPP models for the delivery of animal health services were defined and are being piloted. In October 2022, a midterm evaluation of the performance of the eight PPP models was conducted. This report presents the findings of evaluation.

1.3. Objectives:

- Evaluating performance of the eight PPP models
- Documenting experiences/lessons gained during the implementation period for improving/revising the PPP models
- · Identifying success and driving factors for the sustainability of the PPP models
- · Validating the evaluation findings through stakeholders' workshops for scaling up

1.4. Research questions

The evaluation aimed to answer the following research questions:

• Which are the most successful PPP models?

- What are the success and the driving factors?
- How do the different PPP models improve livestock keepers' satisfaction with veterinary services and the productivity of their herds/flocks?
- What enabling environment is needed for the operationalization and sustainability of the PPP models?
- What lessons can be learned from implementing the PPP models?

2 Evaluation methods

2.1 Evaluation protocol

The models were evaluated using three criteria: 1) the performance of the models, which was evaluated based on effectiveness of the partnerships established between the public and the private sectors, the efficiency of the models measured in terms of the service coverage and the effectiveness of the services measured as the quality of the services, 2) satisfaction of the targeted livestock keepers with the veterinary service and 3) the sustainability of the models.

Focus group discussions (FGDs) and key informant interviews (Klls) were held with the different partners (livestock keepers, private service providers and public offices at kebele, woreda and region level). Field observations were made to all implementation sites. Service records of the private service providers were also consulted.

2.2 PPP models and implementing status

Eight PPP models were designed by the regional PPP taskforces in the three project regions of Amhara, Oromia and Somali (see Table 1 and Annexe I for description of the PPP models). The PPP taskforces are the platforms for public—private sector dialogue and lead the design and implementation of the project PPP activity. They are led by the regional health service director and a private partner and are composed of private service providers (clinics, drug shops and veterinary input suppliers), livestock producers and public health service providers (veterinarians from regional and woreda offices including regional health service directors), laboratory and university representatives.

Six of the PPP models are implemented at least in one implementing site since March/April 2021 (Table 1). Implementing the others was delayed either due to drought or security issues. This evaluation is focused on the six models under implementation.

Table 1. PPP models, location services provided	d and implementing status
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Models	Regions	Woredas	Kebeles	Services provided	Implementing status
Model I	Amhara	Banja	Akena	Vaccination: Rabies, Anthrax, Black leg	Started
		Bahir Dar Zuria	Wingeta	Vaccination: Rabies	Started
		Bati		Vaccination: Ovine and bovine pasteurellosis	Not started
	Oromia	Dire Inchini	Nanno	Vaccination: Ovine and bovine pasteurellosis	Not started
			Kebele 2	Vaccination: Ovine and bovine pasteurellosis	Not started
		Negelle Arsi	Gambelto	Vaccination: Ovine pasteurellosis	Started
				Vaccination: Bovine pasteurellosis	Not started

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Model II	Somali	Deghabour	Bulale	Vaccination: Camel pox, O. pasteurellosis	Started
Model III	Somali	Hargelles	Oman	Vaccination: Camel pox, ovine and bovine pasteurellosis, SGP, CCPP	Started
Model IV	Oromia	Dire Inchini	Nanno	Clinical service, (PPP award), Nanno kebele	Started
			Kebele 2	Clinical service	Started
		Negelle Arsi	Gambelto	Negesso veterinary clinic	Started
Model V	Somali	Hargelle	Oman	Clinical service	Not started
Model VI	Amhara	Banja	Zufare	Vaccination: Noncommunicable diseases (NCD)	Started
		Banja	Akena	Vaccination: NCD	Started
Model VII	Somali	Deghabour	Bulale	Camel and shoat ectoparasite control	Not started?
	Oromia	Dire Inchini	Nanno	Cattle and sheep deworming service	Started
		Dire Inchini	Kebele 2	Cattle and sheep deworming	Started
		Negelle Arsi	Gambelto	Cattle and sheep deworming	Started
	Amhara	Banja	Akena	Cattle deworming	Started
				Sheep deworming	Started
Model VIII	Amhara			PPP in animal health posts (AHPs)	Started

¹ See Annexe I for description of the PPP models.

3 Evaluation findings

3.1 Performance of models

3.1.1. Effectiveness of operation of the partnership

Effective functioning of the partnerships among the PPP stakeholders/partners is a key indicator to performing the PPP models. Findings to the effectiveness and weak links of the partnerships, extracted from the KII and FGD, are highlighted below. In the discussion on the operation of the partnership arrangement for a specific PPP model, the PPP partners interviewed tend to relate the arrangements to the types of services provided (vaccination, community based deworming, mobile clinical services) and it was challenging in some cases to disaggregate the FGD and KII discussions by the PPP models. Yet, since the type of service was the main distinguishing feature of the PPP models, it was possible to disaggregate the discussion results by models.

Finding 3.1.1.1: In general, the partnership modality established for all the PPP models tested was found to be effective. Discussions (KIIs and FGDs) with the public offices at different levels, private service providers and the livestock keepers revealed that a strong partnership has been established among the parties.

Finding 3.1.1.2: The public offices have met their roles/responsibilities they pledged in the implementation plans and the Memorandum of Understandings (MoU). And this was consistent across the different administration levels, giving the impression that the public offices have a set policy towards involving the private sector in service delivery. The enabling environments created for and attitudes expressed towards the private sector by the public offices are highlighted below.

- The regional livestock public offices authorized participating the private sector in vaccination services, waiving the policy of the Government of Ethiopia (GoE), which reserves vaccination to the woreda and kebele animal health posts (AHPs).
- Offered waiver for private drug stores to practice clinic based and mobile clinical services for the PPP testing period.

 According to veterinary clinic licensing regulation, a clinic is expected to provide services only to the kebele it is licensed for.
- The woreda livestock/pastoral development offices and the kebele AHPs in all regions and woredas have willingly and effectively executed their stated roles and responsibilities—actively mobilized communities for vaccination and community based deworming services, monitored/supervised the private partners' services. In all the regions, woreda public services gave adequate orientation (information) for the kebele administration on the modality of the PPP implementation and not to interfere with the services of the private sector.
- The woreda offices delineated a kebele as a domain of the private sector ('private kebeles'). Vaccination services by the AHPs were suspended in the private kebele.
- The woreda livestock offices/pastoral development office and kebele AHPs indicated no conflict of interest in business or professional carrier with the private clinics.
- Positive attitudes towards partnering with the private sector (demonstrated by their active participation in the regional PPP taskforces).

• The public offices acknowledged the role of the private sector in service delivery, contributing to increased service coverage, better quality service, commencement of cost recovery.

Finding 3.1.1.3: Substantial public technical and mobilization support for the private sector is a positive move showing the supportive and cooperative relationship established. Yet, some public partners are concerned with the sustainability of the level of support provided, which they complain exhausts their resources.

Finding 3.1.1.4: Two variations of partnerships in implementing the sanitary mandate for vaccination services—region—woreda–kebele (Model III) and woreda–kebele (Model III) private sector linkages—were piloted in Somali region. The public partners identified relative advantages and disadvantages of the two models. While the woreda–kebele private sector linkage is accessible and provides timely services, it however lacks capacity. Partnering with regional private service provider was important for the woreda service provider.

Finding 3.1.1.5: The private service providers have effectively executed their roles and responsibilities.

- Most are happy with the operation of the partnership and the public sector support.
- Provided vaccination and deworming services at the service charges negotiated by the PPP taskforces.
- Some private sectors went beyond their responsibilities in the PPP arrangement. Some offered free services for List A vaccination (which is provided free by the public sector) to maintain smooth partnership with the public sector.

Finding 3.1.1.6: Very good communication among partners. However, the public offices stress the importance of regular communication, regulation and accountable follow up on implementing the PPP models.

Finding 3.1.1.7: Although most of the public offices have welcomed the PPP, there are some concerns and reservations towards the private sector. The widely and long held attitude towards the private sector—untrustworthiness, exploitative, motivated mainly by profit making, costly service—remains, albeit among very few experts and expressed subtly. Attitudes of the public offices towards the private sector have started to change. However, more needs to be done to maintain and build the trust for the PPP to be accepted fully.

Finding 3.1.1.8: The partnership modality for vaccine supply chain was that the public offices procure and deliver vaccines to the private service providers. Although this arrangement worked perfectly well for most of the PPP models, there are some concerns and misunderstandings:

- While some public offices confirmed their willingness to supply vaccines for the private service providers at subsidized rates, which the private partners prefer, some offices would like the private sector to procure their own vaccines.
- The concern by the public offices relates to the sustainability of the above vaccine supply arrangement. They are concerned that the partnership for the vaccine supply has created too much dependence of the private sector on the public offices. They would like the private service providers to take a more proactive role in the partnership.

Service coverage

The prevailing concern by some public sector partners that the private clinics may not deliver services delegated by the public sector efficiently and trustworthily is busted. The service coverage in the kebeles delineated for the private sector could be one means of evaluating their efficiency. The following are the salient findings:

Finding 3.1.2.1: Very high service coverage was achieved for all the services provided by the various PPP models (Table 2). Most of the livestock (70–100%) in the kebeles delineated for the private sector got vaccinated and dewormed and most of the community (85%) got access to mobile clinical services. The livestock keepers mentioned the following for the high service coverage:

- The service charges for most of the vaccination services were highly affordable. The services were provided at charges negotiated and determined by the PPP taskforce. Vaccinations that were provided for free such as NCD and at highly subsidized rates (e.g. Anthrax, black leg) by the public sector were provided at the same price or at very low cost, e.g. NCD at 1.00 Ethiopian birr (ETB) per chicken (USD 1.00 = ETB 53.6246 at 25 December 2022).
- The availability of clinical services during weekends and after office hours.
- Mobile clinic services are available on call basis. Mobile phone technology plays a great role.
- The availability of vaccination services (rabies and NCD) which have not or rarely been available previously in rural kebeles.

Finding 3.1.2.2: The role of the public sector is high in the high vaccination coverage (mobilize, transport in some cases, directly supporting in vaccination). One of the reasons cited by livestock keepers for the high vaccination coverage was the collaboration between the public and private sectors in which improved delivery of services occurred. The issue here is: Can the private do it alone at this level? Would this be sustainable?

Table 2. Service coverage by the different PPP models

Models	Regions	Woredas	No. vaccinated/dewormed	
Model I	Amhara	Banja	Rabies vaccination for 460 dogs; Anthrax, Black leg vaccination for 1,927 livestock (cattle/sheep and goats)	
		Bahir Dar zuria	Rabies vaccination for 751 dogs	
		Bati	None	
	Oromia	Dire Inchini	None	
			None	
		Negelle Arsi	Ovine pasteurellosis vaccination for 9,200 sheep/goats	
			Bovine pasteurellosis for none	
Model II	Somali	Deghabour	Ovine pasteurellosis, CCPP vaccination for 35,375 sheep/goats; Camel pox vaccination for 15,769 camels	
Model III	Somali	Hargelle	SGP vaccination for 20,800 sheep and goats; CCPP vaccination for 13,900 goats; pasteurellosis vaccination for 2,641 cattle; Camel p vaccination not given	
Model IV	Oromia	Dire Inchini		
		Negelle Arsi	Not started due to transportation problem (bike)	
Model V	Somali	Hargelle	None	
Model VI	Amhara	Banja (Zufare)	NCD vaccination for 835 chickens	
		Banja (Akena)	NCD vaccination for 2,600 chickens	
Model VII	Somali	Deghabour	None	
	Oromia	Dire Inchini (kebele1)	5,775 cattle and 7,220 sheep and goats dewormed	
		Kebele 2	12,200 cattle and 4,800 sheep (deworming); 1,850 cattle and 750 sheep (external parasite)	
		Negelle Arsi	674 cattle and sheep and goats dewormed	
	Amhara	Banja	461 cattle and sheep/goats dewormed	
			None	
Model VIII	Amhara			

Quality of service (technical effectiveness)

The quality of services provided by the PPP arrangement was evaluated by the livestock keepers' assessment of the herd/flock health status before and after the PPP intervention.

Finding 3.1.3.1: Diseases were rampant before the PPP intervention in all the kebeles surveyed.

Finding 3.1.3.2: All communities are convinced of the high quality of the private veterinarian services. They reported that disease incidence is declining. For instance, Akena and Wingeta kebeles communities reported that all vaccinated dogs are so far free of rabies which is ranked as the most important disease as it affects dogs, livestock and humans. Bulale kebele community reported that they have not yet notice clinical signs of diseases for which vaccination was provided or new disease outbreaks.

Finding 3.1.3.3: The top ranking diseases identified by the livestock keepers to affect livestock before the PPP intervention were not ranked as priority diseases after the intervention. For example, in Gambelto kebele pasteurellosis and endoparasite infection were among the top ranked health problems of small and large ruminants before the PPP intervention, whereas the priority diseases identified during this evaluation period were tick infestation and diarrhoea for small ruminants and bloat and tick infestation for large ruminants.

3.2 Satisfaction of partners

Satisfaction of the PPP partners was evaluated based on their assessment of the availability/accessibility, timeliness and affordability of the services provided by the new PPP arrangement. Their satisfaction/dissatisfaction with the services delivered before the PPP intervention and the reasons were also used to compare the effectiveness of the PPP models.

3.2.1. Livestock keepers

Finding 3.2.1.1: Livestock keepers were not satisfied with the services they used to get.

- Services were not available—There was one public AHP serving three kebeles in some cases. Farmers had to travel long distances (up to 8 km) to get service, incurring extra cost of transportation.
- Mobile services were not available and thus not timely.
- Services were in some cases not affordable because of extra costs incurred to access the nearest service provider and, in some cases, the AHP charging higher than set by the woreda office.

Finding 3.2.1.2: Livestock keepers are highly satisfied with the services provided by the PPP arrangement. Reasons mentioned include:

- New services were introduced (rabies vaccination in rural kebeles).
- The service charges for vaccination are affordable, being like the public services.
- Better drug supply in quantity and quality in the private than in the public clinic.
- More convenient door-to-door services of rabies and NCD vaccination, mobile clinic.

Finding 3.2.1.3: Livestock keepers' rating of satisfaction differs by gender (Table 3). For instance, for male Gambelto kebele farmers, the 1st best service was mobile clinic (Model IV) because of its timeliness, followed by vaccination (Model I) and community based deworming (Model VII). For females, the ranking was vaccination (because it is preventive), mobile clinic and deworming.

Finding 3.2.1.4: Concerns were expressed by public experts and farmers in some kebeles with the high service charges for some services (like deworming and clinical treatments) of the private service providers. Yet, the current high inflation rate may have contributed to the cost of the services.

Table 3. Satisfaction of livestock keepers with the different PPP models

Location	1 st most satisfactory	2 nd	3^{rd}	4 th
Oromia (females)	Vaccination (Model I)	Mobile clinic (Model IV)	Community based deworming (Model VII)	-
Oromia (males)	Mobile clinic (Model IV)	Vaccination (Model I)	Community based deworming (Model VII)	-
Amhara—Akena kebele	Community based deworming (Model VII)	Livestock vaccination (Model I)	Rabies dog vaccination (Model I)	Women community based NCD vaccinators (Model VI)
Amhara—Zufare kebele	NCD vaccination (Model I)	_	-	-
Amhara—Winjeta kebele	Rabies vaccination (Model I)	_	-	-
Somali	Vaccination (Model II)	_	_	_

3.2.2. Private partners

Finding 3.2.2.1: The private service providers participating in the PPP model testing are all fairly satisfied for the following reasons:

- Accessing new market opportunities (vaccination and community based deworming) which translates to more returns. In conventional clinic service farmers get deworming service only for animals destined for fattening and those showing clinical signs of worm infestation such as rough coat and thin body condition.
- Supporting from the public sector and the enabling environment created (see section 3.1.1).
- Accepting/trusting by the community and recognition by the public as partners in improving delivery of services to livestock keepers.
- Empowering platform (PPP taskforces) created, facilitating better interaction with the public sector and networking to expand business.

Finding 3.2.2.2: Free or highly subsidized services by the public sector is a threat for the private veterinary businesses

- The low service charge (especially for vaccination) and low market volume (being limited to one kebele, delineated for the private service providers, service being provided for free such as for NCD vaccination) resulting in too low income to sustain their business and livelihood.
- Farmers resistance to paid services for services provided by the public sector free of charge (especially for NCD vaccination).
- Vaccination service—quite a few types of services to provide, including providing vaccination for List A vaccines which are not included in the PPP plan and provided free of charge.
- Mobile clinical service—Highly subsidized public service: in the long run and if the enabling environment facilitated
 by the public offices (like deferring public service in the kebele delineated for the private service provider), both the
 public and private providers would be expected to operate in a competitive free market. This is a challenge for the
 private veterinarians because of the high subsidy for the public services.

Finding 3.2.2.3: High inflation rate, resulting in escalating drug costs and hence higher service cost, could result in farmers affording to get all sick animals treated and less income/business, especially for (mobile) clinical service.

3.2.3. Public partners

Finding 3.2.3.1: The public offices at different administration level expressed moderate to high satisfaction with the PPP.

- · The offices are satisfied with the private service providers in effectively executing the services they have delegated.
- They admit the private sector provides a timely, better quality, service and contribute to improving services to the livestock keeper.
- The PPP also introduced community ownership and cost sharing services, paving the way for a full cost recovery of public services.

Finding 3.2.3.2: The success of PPP and the trust for the private sector depends largely on the quality of the services they provide. Some of the public offices expressed dissatisfaction with the performance of the private service providers with low or less relevant qualification—e.g. community based animal health workers (CAHWs), non veterinarians and skills.

Finding 3.2.3.3: The public AHP's free/highly subsidized services may trigger the concern of some public servants regarding the higher service charges by the private vaccinators (a case in point could be rabies vaccination service charge of ETB 50/dog, compared to public rate of ETB 15–20). Yet, the service charge of ETB 50/dog was negotiated by the PPP taskforce as fairer than ETB 120 charged by private clinics previously.

3.3 Sustainability indicators

The objective of the alternative PPP model testing is to identify models feasible under different livestock production systems and geographic regions. And the goal is adopting the selected models by the public sector for a wider implantation. Thus, ensuring the sustainability of the PPP arrangements after the testing phase is the core aim of the HEARD project. From the discussions with the different partners participating in the testing of the PPP models, the following reassuring/positive indicators and weak links in the PPP arrangements were identified.

3.3.1 Positive indicators

3.1.1.1 Effective performance of PPP models

- The partnership modalities designed for private vaccination service (Model I), community based deworming services (Model IV) and mobile clinic service (Model III) are operating effectively in all locations surveyed.
- Among the models tested, the ones rated as the most satisfactory by both the livestock keepers and public offices—mobile clinical service (Model IV) and rabies vaccination (Model I)—have a greater chance of being sustainable.

3.1.1.2 Satisfaction of livestock keepers

- High satisfaction with the private veterinarians service—Rabies vaccination (Model I), mobile clinic (Model IV),
 community based deworming (Model VII) and vaccination service (Model II) in pastoral area. Livestock keepers in all
 surveyed kebeles are highly satisfied with the new service delivery approach, which helped introduce new services
 (rabies dog vaccination in rural areas, community based deworming, mobile clinical services) that were not available
 in most rural kebeles. The public offices are also convinced that most of the services of the PPP models are much better
 than the previous services.
- The livestock keepers expressed strong willingness to pay for full cost of service after the project subsidy is lifted.

3.1.1.3 Positive attitude of the public sector towards the private sector

• Recognizing the private sector as trustworthy partner and its contribution to improving the service delivery is a strong indicator for sustainability of the PPP arrangements being tested. The highly positive attitude of the public sector offices towards the private sector is beyond expectation.

Enabling environment created at all levels for the private service providers. The offices created very favourable
enabling environment for a meaningful participation of the private sector in service delivery, including services
exclusively reserved for the public sector (e.g. vaccination).

3.1.1.4 Performance and satisfaction of the private sector

- Satisfactory performance in executing the services delegated by the public sector. Almost all the private service providers have effectively executed their roles and responsibilities stated in the PPP arrangements and earned the trust of the offices and livestock keepers. Satisfied with trust earned from both the public sector and the livestock keepers.
- High to medium level of satisfaction by most with the new PPP business model. Most of the private clinics are happy with operating the partnership and the growth of their businesses.

3.3.2 Weak links/challenges to sustainability

3.3.2.1 Vaccine supply chain

According to the PPP arrangement and the MoU, procuring vaccines from the National Veterinary Institute and supplying to the private clinics is the responsibility of the public sector. This arrangement is working well in most cases. Yet, there are some concerns (listed below) that may threaten the sustainability of the PPP:

- First, unclear chain, especially for supplying rabies vaccines caused partly by the initial free supply of rabies vaccines by the project to the private vaccinators, has caused some misunderstanding among partners and resulted in discontinuation of the service, which is highly demanded by livestock keepers.
- Secondly, some of the public offices expressed their concerns regarding the continued supply of vaccines by their
 offices, their stand being that the private sector should procure their vaccines, especially rabies and NCD vaccines.
- The private service providers lack experience and capacity to procure their vaccines.
- Service charges for vaccination were determined by the PPP taskforce without consideration to the costs of vaccine procurement by the service providers and other costs like syringes (according to the service provider). This may significantly affect the private businesses' viability and continuation of the PPP.
- The sustainability of continued supply of vaccines by the public offices who currently promised to continue supplying vaccines at subsidized rates and in some cases for free (Model VII, women NCD vaccinators) remains to be seen.

3.3.2.2 Vaccination domains of the public and private sector

The vaccination policy of the GoE reserves delivery of vaccination services, particularly against so called List A diseases or Tick-borne Diseases (TBD) to the public sector. Through a waiver arrangement with the HEARD project, the regional governments allowed the private sector to participate in vaccination services. Yet, the evaluation findings of the PPP indicate that there are some reservations or backtracking by some offices:

- Some offices expressed their concerns regarding provision of List A vaccination by the private vaccinators. They would like to limit the private sector to rabies and NCD vaccination, mobile clinical and deworming services.
- The public offices delineated 'private kebeles' where the public sector defer its services, so the private vaccinators deliver the services at cost. The question remains if the public sector continues to defer its service in more kebeles, so the private businesses expand.
- Another concern—what would be the reaction to paid services of villagers in new kebeles where the public services, used to be provided for free (e.g. NCD vaccination) or at lower rates (e.g. rabies vaccination).
- The policy of the GoE on free/highly subsidized vaccination for List A (transboundary diseases), opinion still held by some public offices is a challenge for the private sector. Perceived concerns were expressed by some woreda public offices that the kebele public AHP may be concerned by the higher private service charge of ETB 50 for rabies vaccination compared to AHP charges of ETB 15/dog. However, the woreda is not sure of the readiness and motivation of the AHP staff to provide good service as the private veterinarians given the difficulty of handling and

vaccinating dogs as well as door-to-door service. The region office is also convinced that rabies vaccination be left to the private sector.

3.3.2.3 Business viability and performance of private service providers

- Model VI: Low income/business scale for women NCD vaccinators could affect their business viability.
- Model VII, IV: Farmers' and experts' concern regarding the service charge deemed too high for private clinics'
 treatment and deworming (high inflation rate is to blame or exacerbate the situation, may not be the service providers'
 inflated charges). These concerns of farmers and some kebele experts is a major challenge for the private veterinarians
 to compete with the highly subsidized services by the public AHPs.
- Model I: Low service charge: Blackleg and anthrax vaccination service charge is provided at the subsidized rate of the public service (ETB 1.00), which may not be profitable for the private businesses.

3.3.2.4 Performance/attitude of private sector partners

- The private partners are criticized for not being proactive in planning/organizing/mobilizing communities for community level services (vaccination, community based deworming services). Claims by some public offices that they bear much of the burden of the service is understandable and is a concern for effective and sustainable partnership.
- Dependency syndrome—the private partners are also evaluated as highly dependent on the public offices and the project support. This is a challenge in achieving self-reliance by the private service providers.

4 Conclusions

Based on the opinions/assessment of the operation of partnership and performance the PPP models expressed by most of the FGD and KII participants, field observations and records kept by the service providers, the following conclusions can be drawn. The key findings could be used to identify key strengths and weaknesses and define action points for improving performance of the PPP models.

- All the PPP models under testing are performing very well. Mobile clinic service (Model IV) and rabies vaccination (Model I) are evaluated as the most satisfactory arrangements.
- Sustainability of Model IV, Model I (rabies vaccination) and Model VI seems assured, especially from livestock keepers' end, considering their highly expressed satisfaction.
- New services that have not been provided by the public sector or the private sector alone were introduced because of the partnership between by the two sectors.
 - Rabies dog vaccination by both sectors was limited to urban areas. It has now been introduced to rural kebeles and highly received by farmers. AHPs used to provide services at fixed locations.
 - ° Following the waiver given by the public offices for the private veterinarians to practice mobile clinical services, more accessible and timely services were availed.
 - ° Similarly, farmers who used to get only fattening and sick animals dewormed, are now introduced to community based deworming services, which is more convenient and has implications in controlling worm loads.
- Some weak links were observed:
 - Model I (rabies vaccination)—There is vaccine supply chain failure and differing public vs. private service charge in rural kebeles for rabies vaccination.
 - ° Model VII (NCD vaccination)—Viability of some of the private veterinarian businesses is not ensured.
 - ° In general, the vaccine supply chain currently in place does not seem sustainable.
 - High inflation rate in the country and globally has resulted in higher cost of providing services, which in turn in higher service charge by the private veterinarians. This could lead to less trust in private sector and less effective PPP.
- Important lessons have been learned from the evaluation process:
 - ° Community mobilization by the public offices is a crucial element in a PPP arrangement without which private service providers cannot perform mass deworming and vaccination.
 - ° Effective participation of the private sector depends largely on the public sector's determination to create enabling environment. Example, 'private domain' kebele, free of free/highly subsidized public services. In this regard, the highly positive attitude of the public sector offices towards the private sector is beyond expectation. It is also important to explore options for alternative models for effective participation of the private alongside the public sector under a competitive free market but fair playground.

Personality (mindset, business orientation, social capital) of the private sector actors and public support (awareness creation, enabling environment, technical support/mentoring, monitoring/supervision, logistical support for the shorter term) were critical factors for the success of the PPP models in the pilot woredas/regions. Selection of private service providers for PPP should consider ethical service and commitment, besides other criteria, as learned from the success of the test period.

5 Recommendations

Recommendations are suggested to correct inappropriate or unsustainable practices and ensure successful completion of the model testing phase and deliver sustainable PPP arrangements by the end of the HEARD project.

- PPP taskforces need to be strengthened and take their leadership role:
 - ° Take the lead in guiding implementation of the activities.
 - ° They should remain as a platform for the public-private dialogue after the project phases out.
 - ° They should introduce improvements suggested/recommended by the partners' evaluation of the PPP activities.
- Mitigation measures (or revision of models if need be) to improve upon the weak links identified by the evaluation process and action plan for identified weak links are required. The mitigation measure may include:
 - Designing sustainable vaccine supply system (procuring, transporting, storing) involving the private and public partners.
 - Revisiting vaccination mandates for public and private sector for sustainable adoption of the PPP models (e.g. TBD vaccination for free by Negelle veterinary, not sustainable).
 - ° Revising service charges in view of escalating input costs due to high inflation rates.
 - Should the private service charges be negotiated (as in PPP test phase) or left to the invisible hand of the market to decide? Should the best option be adopted now during the test phase?
 - ° Speed up testing of PPP models not yet started (Model V and VII in Somali region).
- Strengthening the private service providers to be proactive in the PPP, developing skills to manage larger scale business (mass vaccination, community based deworming), logistics (e.g. procuring vaccines).
- The public sector to extend 'Private domain' kebeles beyond the current PPP kebeles for the effective and profitable participation of the private sector.
- Studies on 'livestock keepers' willingness to pay for service' in non-PPP kebeles to expand and sustain private businesses (e.g. community based women vaccinators).
- Government to lift free/highly subsidized services, except for vaccination considered of public good (public health).
- Piloting PPP in kebele AHPs (PPP model VIII). Feasibility and baseline are completed and validated by stakeholders. Piloting the PPP in three kebeles has been recommended.
- More data on services provided, costs and benefits of private service providers etc. need to be collected and analysed to better evaluate and recommend PPP models that are suitable for the different geographic regions and livestock systems and profitable for the private businesses.
- Experience sharing, linkages and capacity building/support system:
 - ° Organizing experience sharing and learning events among the PPP actors to share good practices and innovative arrangements for adapting and improving.

- ° Facilitating public–non-governmental organization (NGO)–private sector linkages.
- ° Strengthening capacity for public regulatory services.
- ° Legal framework for the private sector participation (including endorsing the veterinary rationalization road map).
- ^o Linking facilitation for sustainable supply of drugs and vaccines (strengthening the supply chain). Designing linkage mechanisms for private clinics with drug wholesalers for affordable quality services.

6 Annexes

Annex I. Describing the PPP models

Model I: Private vaccination service

This PPP model is a collaborative partnership between the public and the private sector. The planned and implemented procedure for operating partnership included authorization of vaccination service and roles of the different partners and stakeholder.

- The public sector (Regional livestock bureaus) would set enabling environment for the private sector including authorizing/certifying the service. Authorizing the service was required since vaccination has been exclusively the public domain.
- The public sector (woreda and kebele livestock offices) designated the private service providers to provide vaccination service for specific diseases and in specific geographic locations (kebeles).
- The public sector (woreda livestock offices) delivers vaccines to the private service providers and facilitate access to cold chain facilities by the private veterinarians.
- The public sector (kebele livestock offices) mobilizes communities for vaccination campaigns.
- The private sector provides the service to livestock producers at cost. Farmers/pastoralists share 30–50% of the cost of the service and the rest by the project (since full cost recovery is not feasible as some of the vaccines were provided for free by the public sector).
- The public sector monitors the operation and quality of the services.

Model II: Sanitary mandate with district private sector partners for vaccination service

Operating this model assumes transactional modality. Sanitary mandate model has been tested in a previous similar project.

- The public sector (regional livestock office) contracts the private sector at woreda level to provide vaccination service for specific diseases and in specific geographic locations (kebeles).
- The public sector pays for the services provided by the private sector. This is the arrangement in principle (as practiced in previous projects). However, in the current model the service cost is covered by HEARD project.
- Vaccines will be provided by the public sector (procured by the regional livestock office) delivered to woreda livestock office.
- The woreda office delivers vaccines to private clinics at the woreda, cold chain services provided to private clinics at both woreda and kebele levels.
- The woreda private clinic contracts/links with CAHWs at kebele level to provide the vaccination services.

- The pastoralists obtain the service at 30% of the cost, the rest being covered by the project. In previous projects, the services are provided free of charge.
- The public sector creates enabling environment for the private sector including authorizing/certifying the private
 partners vaccination service, facilitating access to facilities and input delivery as appropriate and monitoring and
 evaluating the services.

Model III: Sanitary mandate with linked regional-woreda-kebele private sector partners for vaccination service

Operating this model assumes transactional modality. Sanitary mandate model has been tested in a previous similar project:

- The public sector (regional livestock office) contracts a veterinary service and drug firm at regional level to coordinate vaccination service for specific diseases and in specific geographic locations (kebeles).
- Vaccines will be provided by the public sector (procured by the regional livestock office) to the regional private company.
- The regional veterinary service provider firm delivers vaccines to private clinics at the woreda level, cold chain services provided to private clinics at both woreda and kebele levels.
- The woreda private clinic contracts/links with CAHWs at kebele level to provide the vaccination services.
- The public sector pays for the services provided by the private sector. This is the arrangement in principle (as practiced in previous projects). However, in the current model the service cost is covered by HEARD project.
- The pastoralists obtain the service at 30% of the cost, the rest being covered by the project. In previous projects, the services are provided free of charge.
- The public sector creates enabling environment for the private sector including authorizing/certifying the private partners vaccination service, facilitating access to facilities and input delivery as appropriate and monitoring and evaluating the services.

Model IV: Mobile clinical service

The proposed mobile clinic service PPP model can be categorized as a transformative modality following World Organisation for Animal Health (OIE) PPP classification. This involves partnership between the public sector providing enabling environment and regulatory service, the private sector providing mobile clinical service to villages on request and the livestock producers paying for the full cost of the service. The model is planned to be piloted in Oromia region, Dire Inchini woreda.

- · The public livestock office defers clinical service in the kebele designated for the private service provider.
- The regional and woreda livestock offices will set an enabling environment. Facilitating and supporting the private
 service provider to obtain license for mobile clinical service (and drug sales) since the service providers in the pilot
 woredas are all licensed as drug shops. The other option would be to get a waiver from the woreda office for the drug
 shop to practice mobile clinical services.
- The woreda animal health unit will enforce implementation of regulation and quality control of services.

Model V: Clinical service by linked regional-woreda-kebele private clinics

- The operational arrangement for this model is purely a business partnership between regional veterinary service provider firm, private clinics at woreda level, CAHWs at kebele level and the public sector.
- The public sector facilitates operation of private service providers in designated kebeles, including recognition of their services in the kebeles designated to be covered by the private sector, deferring operation of public health service in designated kebeles.

- Regional veterinary service provider will serve as supplier of drugs and veterinary supplies to woreda clinics located in remote areas with less access to dug supplies.
- The woreda clinics provide service to pastoralists in collaboration with CAHWs at kebele level.
- Pastoralists pay for the full service charge.
- The public sector at woreda level will monitor quality of service.

Model VI: Community based women vaccinators for NCD control

- NCD vaccines are provided by woreda livestock office to private vaccinators.
- Trained women in NCD vaccination provide the service to villagers.
- Villagers pay for the full service cost.

Model VII: Strategic community based endo- and ectoparasite control by private service providers

The model involves partnership between the public livestock offices of Dire Inchini woreda in Oromia region and Deghabour woreda of Somali region with clinics/drug shops in the woreda towns to provide strategic community based deworming and spraying against external parasites. The public sector facilitates enabling environment and regulatory service.

- The regional and woreda livestock offices and regional PPP taskforce will set an enabling environment (facilitating and supporting the private service provider to obtain license for mobile clinical service—especially at Dire Inchini; waiver from the woreda office for the drug shop to practice mobile clinical services).
- Service providers provide service at community level (i.e. for the whole community following strategic deworming, spraying schedules).
- Farmers/pastoralists pay for the service partially (30–50%), the rest being covered by the project for the pilot period.
- The woreda animal health unit will control/monitor quality of services, including providing calendar for strategic deworming and spraying program.
- The kebele animal health posts mobilize farmers for deworming campaigns and collect deworming fees from farmers in advance.
- Regional laboratories will assess the effect of strategic deworming program on animal health and production. In addition, they will consult the kebele on strategic deworming calendar.

Model VIII: Leasing kebele public health posts to jobless veterinary graduates

Operational modality:

- Kebele public health posts that are underperforming (lacking staff, supplies) are leased to jobless veterinary graduates (preferably residing in the woreda) to run the clinics as a business.
- This requires high level lobbying and decision.
- The plan is to study the feasibility of the model and provide advice for the regional government.

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