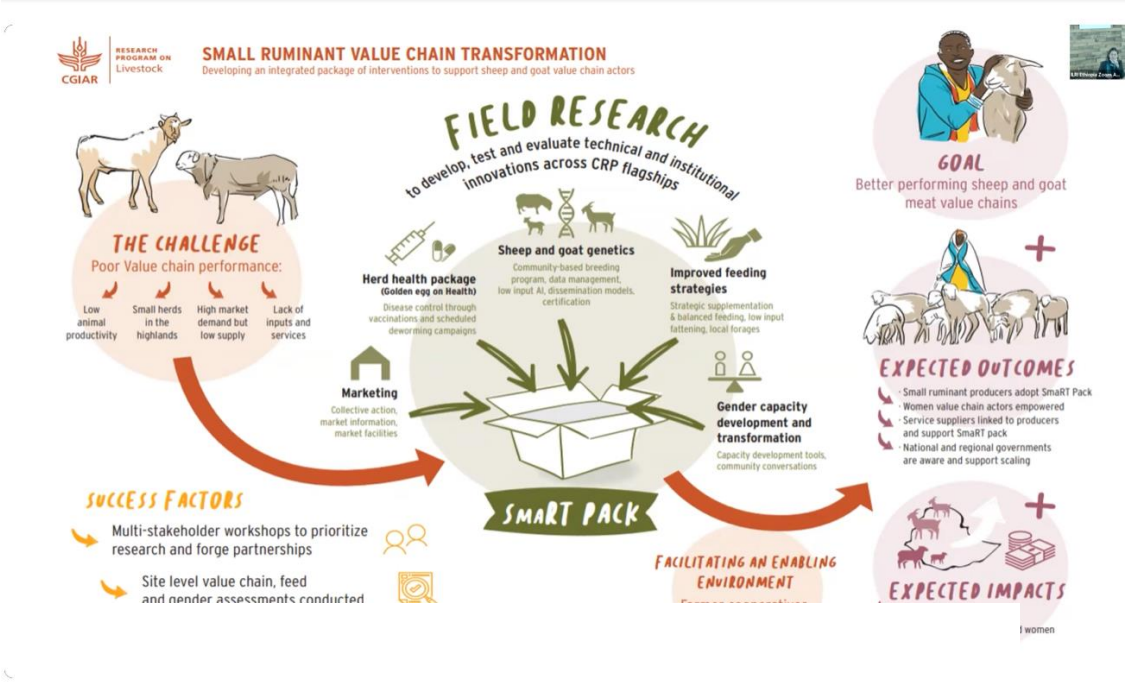
RESEARCH PROGRAM ON Livestock

More meat, milk and eggs by and for the poor

SmaRT Ethiopia stakeholder workshop: consolidating and capitalizing on experiences and going beyond

Addis Ababa

1-2 November 2021



ILRI INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE · ICARDA Science for Better Livelihoods in Dry Areas · CIAT · giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH · SLU

CGIAR is a global partnership that unites organizations engaged in research for a food-secure future. The CGIAR Research Program on Livestock provides research-based solutions to help smallholder farmers, pastoralists and agro-pastoralists transition to sustainable, resilient livelihoods and to productive enterprises that will help feed future generations. It aims to increase the productivity and profitability of livestock agri-food systems in sustainable ways, making meat, milk and eggs more available and affordable across the developing world. The Program brings together five core partners: the International Livestock Research Institute (ILRI) with a mandate on livestock; the International Center for Tropical Agriculture (CIAT), which works on forages; the International Center for Research in the Dry Areas (ICARDA), which works on small ruminants and dryland systems; the Swedish University of Agricultural Sciences (SLU) with expertise particularly in animal health and genetics and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) which connects research into development and innovation and scaling processes.

The Program thanks all donors and organizations who globally supported its work through their contributions to the **CGIAR system**

© 2021

This publication is licensed for use under the Creative Commons Attribution 4.0 International Licence. To view this licence, visit https://creativecommons.org/licenses/by/4.0.

Unless otherwise noted, you are free to share (copy and redistribute the material in any medium or format), adapt (remix, transform, and build upon the material) for any purpose, even commercially, under the following conditions:

ATTRIBUTION. The work must be attributed, but not in any way that suggests endorsement by the publisher or the author(s).

Table of Contents

Introduction 2

DAY 1: Meeting of SmaRT CGIAR and national teams 2

Profile and composition of participants 2

Introduction of participants 2

Setting the Scene with Presentation of SmaRT Achievements and Study findings 2

Overview of SmaRT Ethiopia achievements / innovations 2

New Innovation: Highland communal grassland management 3

Environmental assessment of SmaRT pack: results and achievements 4

Results from the Scaling scan 4

Theory of Change reflections 6

Group Work I: Reflection on the Theory of Change 6

Group Work 2: Revisiting the assumptions 8

Summary points from Group Work 9

Next steps and CGIAR Initiatives 10

Day 2: Meeting of SmaRT team and selected stakeholders 11

Profile and composition of participants 11

Welcome, objectives, introductions 11

Setting the scene (1): Day 1 recap 11

Group I – Women empowerment and youth inclusiveness by Mamusha Woldegiorgis 11

Group II - Genetics 12

Group III – Heard Health 14

Group IV Feed innovations 14

Setting the scene (2): Additional inputs to the discussions 15

Animal identification and data management systems at country level 15

New models of health service delivery 16

Challenges in livestock and livestock products marketing and proposed solutions 17

Group Exercise: Next steps required for the major interventions 18

Group I: Animal identification and database at the national level 18

Group II: Animal health: analytical capacity, drugs and vaccines availability and service delivery 18

Group III: Marketing of sheep and goats: matching supply and demand; market stratification 18

Group IV: Innovations in breeding and feeding including inputs and service delivery 19

Next steps 19

Annex 1. Workshop program 20
Annex 2. The workshop in photos 22

Introduction

The International Centre for Agricultural Research in the Dry Areas (ICARDA) organized stakeholders' workshop to consolidate and capitalize on experiences and going beyond for its SmaRT Ethiopia project. The workshop was carried out 1-2 November 2021 at the ILRI campus in Addis Ababa, Ethiopia.

This final workshop for the project is important to share the different experiences and lesson learnt to draw a road map to scale best bet innovations and decide on the future to transform small ruminant value chain by the Ministry of Agriculture (MoA).

Specific objectives of day 1 of the workshop included

- Reflect on our collective experiences, sharing key policy, investment and practice lessons and insights that can accelerate the development and uptake of SmaRT pack technologies.
- Capitalize on experiences gained to guide and inform the design and delivery of future R4D aiming at enhancing the small ruminant sector in Ethiopia.

DAY 1: Meeting of SmaRT CGIAR and national teams

Profile and composition of participants

A total of 10 participants (1 woman) from the regional and local agricultural research centers and five ICARDA and ILRI staff attended the meeting physically, and another 8 team members from ILRI, ICARDA and Alliance and one national partner participated virtually.

Introduction of participants

At the start, participants were asked to introduce their names, institutions they represent and how many years they have been with the project.

Setting the Scene with Presentation of SmaRT Achievements and Study findings

Overview of SmaRT Ethiopia achievements / innovations

Barbara Rischkowsky, SmaRT Ethiopia program leader, gave an overview of the last ten years of the project and its achievements. She specifically focussed on the innovations rrealted to Genetics, Feed & Forages, Health, Marketing, Gender and Capacity development (Presentation).

New Innovation: Highland communal grassland management

Jason Sircely, ecologist and conservation biologist at ILRI shared the results from a new participatory approach for communal grazing lands in Ethiopian highlands. The approach is implemented in *Menz* and *Abergelle* together with Bedasa Eba (ILRI). As these are communal grazing land there is a need for an integrated management system and for ownership and buy in among community members. Jason described the different steps of implementation: starting with 1) assessing and characterizing the management systems, followed by 2) prioritization of management objectives and looking at existing local management practices, 3) facilitating grazing land management planning and finally by 4) conducting action research trials and monitoring (Presentation)

Question, answers, and comments:

1. It is a very important project; do you consider the edible weeds in your activity?

Yes, it is always a mix and in Menz most of the species in the grass are useful despite some are of higher quality as some are of lower quality, but all are important for one or more animal types. In certain areas we have problem with the weeds as they are taking over and there will be no massive bush encroachment. Removing invasive weeds is not a solution to the root cause of the problem and grazing management is mainly of addressing the root cause of the problem. If the grazing land is managed well and maintain a healthy grass layer will the best protection against weeds and invasive species.

2. How about the health component of the animals? It is important to link the communal grazing management to animal health practices.

Answer: There is a lot of possibility to use a one health approach. There are some local practices in communal grazing lands, and the local authorities should be able to build a system/ approach. We do consider diseases are major constraints, but details are not incorporated into the plan.

3. Comment: The grazing land management to the highland is different from the low land system and due attention should be given to the differences. Most of the grazing lands are communal belonging to the communities, and there is a need for community conversation as to how to manage it. The more degraded grazing land is also directly contributed to high risk of internal parasite transmission (lung worm, haemonchus, other nematodes …).

Answer: Our approach in the pastoral / low land area is quite different from the highlands. For e.g., rotational grazing land is not placed as an option in the pastoral area.

Environmental assessment of SmaRT pack: results and achievements

Emmanuel Mwema, Researcher at Alliance Bioversity CIAT, made a presentation on the assessments of the environmental impacts of the SmaRT intervention packages applying CLEANED. CLEANED is a rapid environment assessment tool that enables users to explore multiple environmental impacts. The assessments were carried out in Bonga, Abergelle, Doyogena and Menz considering land requirements, water use, gas emissions and soil health. Two environmental footprints assessment were carried out before (baseline) and after the application of SmaRT pack interventions. The study began with the characterization of the small ruminant production systems in the four study sites in terms of management system, breed types, type and number of animals and feed type. Two intervention scenarios were formulated and assessed for each site: Scenario 1: Improved productivity through herd health and genetics and Scenario 2: Scenario 1 + improved feeding baskets.

- The integrated intervention packages promoted by SmaRT pack show synergies as there are overall environmental efficiency gains In general, the interventions in the Doyogena systems have the highest environmental gains Significant increase in meat production for all intervention packages(Presentation)

Question, answers, and comments:

1. Comment: crop residue is one of the major feed resources next to grazing. Treatment of residue should be considered instead of substitution. There is a possibility for to improve the digestibility and nutritional content during the treatment process.

Answer: the presenter agreed with the statement

2. Outcome from Scenario 1 is an increase in productivity which should not have affected land and water use. However, the result presented is different from the expected and came as a surprise. What was the reason for the other impacts come along?

Answer: Scenario 1 increases soil erosion, absolute water requirements and absolute greenhouse gas emissions which are . With a bit if improvement with the feed basket.

Results from the Scaling scan

Edwin Kangethe made a presentation on the results from scaling scan workshops. The scaling was conducted to appreciate the multiple dimensions of scaling, develop a realistic scaling ambition for the project to continuously monitor, role that non-technical factors play in scaling, identify bottlenecks for scaling and recommendations to mitigate and develop a scaling mind-set.

Figure 1. Scaling process and key outputs

The scaling scan approach has three steps including constructing the scaling ambition, checking the 10 scaling ingredients and identify key strength and challenges in reaching the scaling ambition. It has both synchronized and asynchronized processes.

An assessment has been conducted on scaling ingredients to identify opportunities and bottlenecks. Technology, knowledge, and skills are seen as opportunities whereas finance is found to be a bottleneck. The study gave recommendations to solve bottlenecks such as finance. These included:

- finding partners in the microfinance institutions, relevant NGOs, and government on financial accessibility
- Commit to and execute a producer- centric relationship program
- Improving business climate through a sustained focus on organization

This study has limitations as it is driven primarily by expert opinion, the ingredient scaling survey noted by all stakeholders assumes a similar level of awareness on all the innovation components by all participants and this scan is limited to the light track of the ILRI scaling framework (Presentation).

Questions, answers, and comments

1. Comment: (1) the issue of finance and public sector governance are very important to scale technologies in Ethiopia. This has not been addressed in this study. Ethiopian farmers have not able to take up promising technologies due to poor financing and public service governance. This point should be seen carefully based on the Ethiopian context, needs to do revision prior to publishing the study results. (2) Finance and value chains should not be put on equal footing as it has been shown in slide 4 of the

presentation. Finance is a function within the value chain, and the framework needs to be revisited.

Answer: This comment has confirmed our finding from the study which has found that finance and public sector governance as a bottle neck for the scaling ambition that the project and stakeholders defined and validated. (2) the value chain and finance diagram are not supposed to show that these two are linked rather they are two distinct elements.

2. Question**:** my issue is when describing our scaling the how and when can have a synergetic effect within a given project lifetime. Would you please share us your experience?

Answer: It is a valid question, and the ambition runs the risk of being limited to a project's lifetime, but our approach ensures that this is not the case hence the persistence on key actors and their roles so that the innovation scaling is progressed by other stakeholders e.g., government beyond the project's timeline. That is why the scan is a consultative process involving all possible and relevant actors.

Theory of Change reflections

In the afternoon session of the workshop, KIT has facilitated a reflection on the Theory of change of the project. The ToC listed out the group of actors that the project would like to change including producers, input /service providers, policy makers, and changes in relation to gender to empower and involve more women.

The reflection questions were:

1. Which are the most critical/ strategic interventions that still needed to achieve changes?
2. How did the partners contribute to outputs/outcomes? Any issues to address?
3. How have contextual factors (such as COVID) influenced the outcome?
4. What is more needed to achieve long term outcomes/impacts? To SCALE?

Group Work I: Reflection on the Theory of Change

Group 1: Producers:

(Output 1) Change in knowledge, skills, and attitude towards SmaRT pack

Yes, there is knowledge, skill and attitude developed towards SmaRT pack and this is due to our intervention. Farmers have realized the importance of gender issues.

Farmers' have shown change in animal breeding management, selection and use of sires, participation in AI and animal fattening.

(Output 2) change in knowledge and skills in small ruminant practices among male and female producers

Yes, there is change as more men are sharing activities in animal husbandry practices including barn cleaning, feeding animals and milking of goats. Community conversations have played an important role to lesson the burden of women.

(Output 3) Sustained value addition through fattening, milking, and other products processing

There is a change of attitude of farmers towards sustained fattening of small ruminants. There is an increased availability of forages and improved use of locally available feeds and forage.

Adoption of the SmaRT pack intervention have started at different level.

Group 2: Input/service providers:

(Output 4) DAs and input/service have the knowledge skills and tools to promote and support the implementation of SmaRT pack.

Yes, there are changes on the ground as the project has been closely working with researchers and DAs to improve the knowledge skills of input/service providers.

(Output 5) New and current private input/ service providers take up identified opportunities for market-oriented services and inputs.

We are not able to achieve this output. The private sector in Ethiopia is not matured yet and it was difficult to engage the private sector into animal health service provision, feed supply and so forth. We have to support farmers to be business-oriented so that they are willing to pay for the services they used, and it is a key to sustain our interventions. With the provision of incentives, the extension system can help farmers.

(Output 6) MFIs are taking interest in support SmaRT Pack investments

The MFIs have availed credit but the interest should come from users and the challenge is from the demand side.

(Early outcome 3) DAs etc use extension methods and support implementation of SmaRT pack

Yes, it is fully achieved, and DAs have owned activities and implementing as planned.

(Early outcome 4) New and current private input / service providers are running successful business.

This one is not achieved as the private sector remains weak.

Group 3: Gender:

(Output 7) Improved knowledge and change towards attitude harmful practices by female and male producers, service providers and cooperative leaders.

Changes observed at the producers' level: Yes, there are changes and we have observed increased number of women being involved in the CBBP due to the stakeholder's capacity development, introduction of new cooperative bylaws, introduction of gender sensitive membership selection criteria by the CBBP and some women are in the leadership position of the cooperatives.

At the household level, women's ability to make decision has improved in a male headed household. The male members of the households are now giving better recognition to the role played by women. We have observed better adoption of these integrated packages in these households.

Changes observed at the service providers' level:

Service provides have now started developing gender equity strategies to adopt gender transformative approaches such as involving more women in their activities.

As a result of the community conversations many governmental offices have come together to develop gender equity objectives and able to implement.

Group Work 2: Revisiting the assumptions

Group 1: Gender

The existing cultural norms can be positively influenced in the target communities to encourage equitable access. Yes, the cultural norms are influenced positively. For eg. Now men are accepting women leaders in the coops. However, staff turn over has become a challenge.

The extension system and community leaders are willing to change

Group II – Producers

Relevant issues have been identified

Yes, relevant issues have been identified. Price fluctuation still discourages farmers from taking part in animal fattening / value addition.

Interventions can be identified in a project timeframe that are able to tackle the relevant issues

There will be delays in some sites because of conflict in some parts of the country.

Farmer priorities can be addressed by the interventions the project is able to offer

Most of the priorities are addressed as planned. However, some activities such as collective marketing needs attention. Market information dissemination and market facilitation need improvement.

SmaRT pack is providing tangible benefits to producers'
benefits are visible and farmers and regional policy makers acknowledge SmaRT project.

Small ruminant producers are positive about the combined and packaged technologies

producers have positive attitude towards combined technologies, but some farmers prefer single technologies.

Group III – Service providers

DAs have the required capacity to apply and provide trainings
for some activities such as health services and forage DAs have the capacity.
However, in some cases they have less capacity for AI and ability to cascade downwards.

Business owners and other service providers and farmers appreciate the need for coordination of inputs/services
there is appreciation for the interdependence of service providers, farmers, and development partners.

There is a convincing business case for the SmaRT pack
yes, we have data as an evidence

DAs use new methods and promote SmaRT pack, they find it useful and are motivated, not in conflict with other training priorities
Yes, it still holds and need clarity on DAs priorities.

Summary points from Group Work

- Most of the group discussions on ToC showed that we are close to the intermediate outcome
- Some assumptions need revisiting, and some new assumptions are included such as the need to conduct market research.
- The questions that have been raised today especially in relation to scaling will be the basis for tomorrow's discussion

Next steps and CGIAR Initiatives

As CRP Livestock is ending, there are two major pathways of how the work on SmaRT pack will continue:

Pathway 1. The innovations should be taken-up by other partners such as the government. There is a window of opportunity as the Livestock State Minister showed an interest in the results from our workshop, and we have a chance to provide some recommendation on what could be done in the next 100 days and beyond for the small ruminant sector. Inputs to this policy discussion will be given to members of a committee that was established by the ministry, and there will be more deliberation by the committee members after this meeting. The public sector needs to be more active to create an enabling environment related to input supply, service provision and extension. There is also a need to further strengthen the capacity to address gender issues and to engage more youth in the sector.

Pathway 2. The second pathway is through the reorganized OneCGIAR system. The new structure is expected to be more effective and less costly and is expected to help us to generate more funding from donors. This will be a mix of bilateral (between the donor and one centre) and pooled funding (the new CGIAR research fund). Pooled funding will support continuity of some activities and has a longer term perspective unlike the bilateral funding. Under pooled funding 33 new initiatives grouped under different science areas/categories have been proposed. Three are livestock initiatives that have already been submitted to an independent science review for evaluation. Ethiopia is a target country for all three initiatives. Under the Sustainable Animal Productivity for Livelihoods Nutrition and gender inclusion (SAPLING) some of the SmART activities will continue.

Day 2: Meeting of SmaRT team and selected stakeholders

Profile and composition of participants

The participants of the first day were joined by six additional participants (all men) from the Ministry of Agriculture, The National Animal Genetic Improvement Institute, Ethiopian Institute of Agricultural Research, Hawassa University and Agricultural Transformation agency.

Welcome, objectives, introductions

Barbara Rischkowsky, program director of ICARDA's resilient agricultural livelihood systems research program, welcomed participants and introduced the objectives for the second day of the workshop that included:

- Discuss critical success factors and delivery services for uptake of SmaRT pack technologies
- Design a road map for integrating SmaRT pack technologies into the national red meat sector development plans.

Setting the scene (1): Day 1 recap

In this section, the champions from the different groups from session one presented their insights and reflections on key lessons learnt, scaling requirements and quick -win actions.

Group I – Women empowerment and youth inclusiveness by Mamusha Woldegiorgis

Key lessons learnt:

- Gender and youth inclusiveness are important for equitable development and social transformation, and are key determinants for adoption of solutions and higher productivity
- Collaborative engagement process empowers women
- Women empowerment and youth inclusiveness require long term strategic interventions and funding

Still need to scale:

- Improving leadership and decision-making power among women and the youth.
- Creating innovative business model for youth employment
- Develop individual and collective agency of women and the youth
- Promote and celebrate youth and women
- Create innovative business incubation and youth emperorship development

Quick-win actions

- Innovative financial services for the youth
- Continuous backstopping and coaching support
- Market linkage facilitation support
- Capacity development for inclusive engagement
- Monitor and mitigate unintended impacts on women and
- Create knowledge and technology driven livestock enterprises

Group II - Genetics

Key lessons learnt

- Communities have benefited from the CBBPs i.e., increased demand for sires
- CBBPs are considered as an alternative cheaper approach for small ruminant breed improvement
- Long term investment pays as genetic improvement requires longer time
- The government and other development partners have given more focus to sheep and goat
- Establishment and increased role of breeder cooperatives
- CBBP villages are serving as a learning site
- Genetic resources identified and characterized
- Roles of digital genetic platform appreciated
- Low cost and mobile field solution for AI developed and the technology appreciated by the community

What is still needed?

- Follow up and solving technical challenges
- Strengthening animal identification and digital database system
- Partners engagement
- Strengthening cooperatives on some sites
- Strengthening input supply and market linkages

Quick wins

- Optimizing CBBP
- Develop upscaling technology
- Develop national animal identification system
- Strengthen digital database system
- Sire certification
- National institutions to be strengthened to lead national breeding programs
- Understanding genome composition

Question and answer

1. What are the major technical and non-technical challenges for breed improvement? The challenges are both technical and administrative. For the technical part, we need to integrate the genomic selection approach within the general selection scheme that exists. This will help us to have an accurate information at the birth level / early

age of the animal and we will be able to advice farmers which one to keep and which one to market.

Group III – Heard Health

Key lesson learnt

- Heard health interventions were motivators for farmers to engage in other interventions such as genetic
- Integration of activities
- Calendar-based heard health interventions

What is needed to go to scale

- Financial support for inputs
- Involvement of the private sector
- Establish strong partnership with all stakeholders
- Business oriented farmers

Quick wins

- Heard health should be seen as an entry point for other interventions
- Respiratory disease and gastro-intestinal parasites control activities show results in short time
- Some heard health activities such as interventions for reproductive heard health management can show changes in the medium term

Question and answer

1. What is the technical definition that you use for heard health?
   There are several scholarly definitions for heard health. The one I use is that herd health is a holistic approach, and it is not only concerned about the health but also the animal production is given due attention.

Group IV Feed innovations

Key lessons learnt

- Evaluation and selection of indigenous forages and locally available feed resources was important o increase feed access, reduce production cost and promote provision of quality feed
- Capacity development programs enable ease of adoption and implementation of improved feeding and fattening system
- Collecting sheep fattening through youth coop has helped to promote farmers business-oriented approaches
- CoPs created the space for engagement and collaboration

Quick wins

- Training and capacity development programs for existing feed balancing tools
- Create linkage and engage with the private sector
- Strengthen existing CoPs.

What is still needed to scale?

- Further evaluation, identification, and standardization of indigenous local feed resources
- Sustain adoption and application of feed balancing

- Improve access to inputs to develop forage development
- Active engagement with cross cutting issues such as gender

Comment:
There is a need for farmers to adopt a business-oriented attitude to seed forage. It is important to create a demand and supply relation and farmers should pay for the see. It should not be considered as a handout from NGOs.

Setting the scene (2): Additional inputs to the discussions

Animal identification and data management systems at country level

Bruno Santos from abacusbio made a presentation on animal identification and how it can be used to leverage data management systems at a country level. The major aim of the system is to link all the components within the value chain that is important to add value. In Ethiopia, there is limited capability to track animal, their performance and health related issue.

Enumerators play an important role in collecting data and information at the household and village level. The data collected at this level is crucial to track animal movement and aggregate the data to do research to some level. The researcher at the regional level can use the data / information at the country level for statistics, supply chain information and to analyse compounded impact which intern helps the households for decision making.

Animal tagging is very important that animal information is the basis for the system to work. Farmers benefit from tagging as it helps them to detect unproductive animals, predict available animal for sale, and monitor liveweight gains.

For the system to work:

- Animals should be identified permanently and uniquely
- The numbers should be electronically captured and transferred to a database
- Commercialization through more secure and efficient channels

There are challenges to animal identification which include establishing a data base structure, cost of high-quality tags, defining an identification strategy across multiple scenarios and distribution of standard tags across the entire population.

Question

(1) Is this system/ technology for both large and small ruminants?

In Ethiopia, we are applying this technology only for small ruminants since it is our focus for now. In other countries, the system has been used for larger animals such as cattle and pig. The system follows the same principle for both types of animals.

(2) Does this system work in extensive livestock management system?

Yes, it works. In the extensive livestock system once, the animal is back to the household, it is the farmer who takes care of it in a better way than large scale commercial farms. This system is expensive to develop, but ones they are developed and scaled, it is affordable to run.

New models of health service delivery

Solomon Gizaw, research coordinator for ILRI, made a presentation on the public-private partnership for the delivery of animal health services in Ethiopia which is one of the activities of the Health of Animals for Rural Development (HEARD) project of ILRI.

In Ethiopia, the animal health service delivery is mainly provided by the public sector such as the provision of vaccines. The HEARD project is piloting novel models for veterinary service delivery involving PPP in three regions including Somali, Amhara, and Oromia.

Prior to designing the alternative models, a series of workshops have been organized and identified sites and partners. Three regional PPP taskforces were established and developed 8 alternative models. They were developed based on types of services, partners involved and their roles (private, public, farmer, public labs, and taskforce).

Thus far, models I, II, and III which only involves vaccination have been implemented in five woredas. It is a very important step that the private sector has started given the vaccines which was controlled by the public sector.

Next steps:

- Serology test on pre-intervention samples
- Post -intervention sampling and serology test
- Evaluation of ppp models and documentation
- Data collection
- Stakeholder workshop

Question and answer

(1) Is the task force composition as it should be? Or do you have any actor that is missing and need to be included?
We have included all the appropriate actors in the task force.

(2) The models are very important. The public sector does not want the private sector to provide vaccination. What will be the very reason?
It remains difficult for the public sector to allow the private sector to provide vaccines. We have been negotiating with the public sector and the directors of regional animal health services of the livestock are members of the task forces. In

some cases, the public sector has willingness to involve the private sector in animal health service delivery for e.g., in the Amhara region there is a plan that 35% of the services are to be provided by the private sector.

(3) What are some of the indicators that you use to evaluate your models? And do you have any indicator that is related to gender?
There are to indicators which are the satisfaction by the users and the public sector and profitability or the viability of the private business. We know that the private sector is not yet profitable as the public service is highly subsidized from the government.

(4) Why were you having negotiations with the government / the public sector? Did you not involve the government from the start of the project?
The government is one of the partners for the HEARD project but there was no understanding of this activity at the district level, and they were strictly following the existing rule which allows vaccines to be given only by the public sector. Therefore, it needed negotiations to get waivers for the private businesses to get involved into the animal health service delivery. Most of the private businesses are drug shops and are not clinics and they are not able to administer vaccines, and this has required negotiations.

Challenges in livestock and livestock products marketing and proposed solutions

Girma T. Kassie, principal agricultural market economist for ICARDA, made a presentation on the challenges in and proposed solutions for livestock and livestock products in Ethiopia.

Small ruminants are key means of livelihoods for the rural Ethiopia; however, it remains underexploited as there is no adequate given to livestock marketing. There are several challenges to livestock marketing that includes erratic supply, limited access to road, poorly equipped markets and marketing systems, lack of market information system, lack of collective action, erratic taxation of livestock, lack of financial services, limited supply for the export market and unhealthy macro-economy.

To address these challenges there is a need to:

- Have the right mind-set for the importance of the livestock marketing
- Reorient the livestock marketing system
- Creating institutional capacity in agricultural marketing extension
- Coordinating road constructions with livestock / market development
- Investing in livestock market facilities
- Revise the taxation of animals brough to the market
- Livestock markets need to be under the auspices of MoA

Group Exercise: Next steps required for the major interventions

In this section of the workshop, participants are divided into four groups to address the following questions:

- What critical hurdles do we need to overcome to implement this intervention?
- Which actors / institutions need to take the led and get involved to facilitate and implement?
- What processes and actions need to be put in place to get to impact at the larger scales?
- What could be some quick actions that could show some results /changes in the first 100 days?

Group I: Animal identification and database at the national level

1. Legal issues on the tag and tagging system across different livestock system in the country, understanding clear benefit and resistance from farmers, availability of suppliers for different types of tagging, integration among the different partners
2. MoA will lead this. Other actors will be NAGII, LITAW, breeder coops, farmers, financial institutions, universities, insurances, farmers, and NGOs
3. Willingness / commitment from the different actors, developing strategic document, consultation and awareness creation and piloting,
4. Assess available initiatives and legislation, consolidation of the system and piloting

Group II: Animal health: analytical capacity, drugs and vaccines availability and service delivery

1. Sustainability of the interventions, communication and linkage with the district level, lack of clear role model and lack of production based clinical service delivery and lack of control of services
2. HEARD project and the task force should lead
3. Providing solid evidence form the project to partners, building the national capacity to deliver vaccines on time
4. Linkage and communication from the national to the district, clear vaccine production plan, regulate vaccine import, control illegal movement of drugs and animals.

Group III: Marketing of sheep and goats: matching supply and demand; market stratification

1. Market extension issue, less attention to small ruminant marketing and lack of clear market model, lack of advocacy and promotion of breeds and lack of market information system
2. MoA and other actors including the private sector and NGOs
3. There should be actions to create ownership and accountability

Group IV: Innovations in breeding and feeding including inputs and service delivery

1. Establishing partnership and giving ownership to the extension system and stakeholders, strengthening the private sector, getting accurate data on breeding, and feeding and documenting and sharing best practices.
2. There will be several actors including MoA, National veterinary institute, NAGII, National research system, cooperatives, private sector, farmers, and pastoralists. The MoA will be leading the scaling.
3. Bringing together stakeholders and conducting inventory on existing technologies / innovations, sharing responsibilities and roles, preparing framework for scaling and capacity building of stakeholders.
4. Preparing road map which includes identification of partners and funding, awareness creation,

Next steps

Aynalem Haile, senior scientist at ICARDA, made a closing remark. The workshop agenda which was to discuss and package interventions have been successfully met. The SmART Ethiopia project has been testing and collecting evidence for more than 28 innovations that need to be scaled and used by the government and different partners. There are innovations that have gone to scale including CBBP, fattening, marketing and so on. However, it requires a concerted effort by all partners to further scale all the innovations / technologies. There is an ongoing discussion with the State ministry for the MOA to prepare a document that will initiate further discussion at the ministry level. A committee will put together the outcome of this discussion to be presented to the minister.

CRP livestock is concluding by the end of December, and a new initiative is to launch under the OneCGIAR and Ethiopia is among the target countries. The field activities will continue under this new initiative, and there will be an inception workshop early January 2022.

Annex 1. Workshop program

Day 1, November 1, 2021

Time	What	How	Who
09:00	Welcome, objectives, introductions		Facilitator
09:10	Overview of Ethiopia SmaRT achievements/innovations	Presentation	Barbara Rischkowsky, ICARDA
09:30	Improved highland communal grassland management systems	Presentation	Jason Sircely
09:50	Assessing the environmental impacts of the SmaRT intervention packages	Presentation	Emmanuel Mwema, (Consultant - Alliance Bioversity-CIAT)
10:10	Results from Scaling Scan Workshops	Presentation	Edwin Kangethe (ILRI)
10:30	**BREAK**		
11:00	Innovations – documenting insights	Group exercise	All
13:00	**LUNCH**		
14:00	Impacts: ToC reflection	VIRTUAL SESSION	KIT Royal Tropical Institute
15:30	**BREAK**		
16:00	Impacts: ToC reflection	VIRTUAL SESSION	KIT Royal Tropical Institute
1630	Next steps and CGIAR Initiatives	Plenary discussion	Barbara Rischkowsky, ICARDA Aynalem Haile, ICARDA
17:00	Close		

Day 2, November 2, 2021

2 November – in-person meeting in Addis			
Time	**What**	**How**	**Who**
09: 00	Welcome, objectives, introductions		Facilitator
09: 10	Setting the scene: Day 1 recap	Presentation	Champions
09:35	New models of health service delivery	Presentation	Solomon Gizaw, ILRI

09:50	Challenges in livestock and livestock products marketing and proposed solutions	Presentation	Girma Kassie, ICARDA
10:05	Animal identification and data management systems at country level	Presentation	Bruno Santos, AbacusBio
10:20	Plenary discussion		
10:40	**Break**		
11:00	Group exercise		All
12:20	Report back	Plenary discussion	All
12:50	Next steps and Close		Barbara/ Aynalem Asrat Tera, NAGII
13:00	LUNCH		

Annex 2. The workshop in photos