

More meat, milk and eggs by and for the poor

Celebrating 10 years of Community-Based Breeding Program in Ethiopia

Compiled by Beamlak Tesfaye, Aynalem Haile and Apollo Habtamu

ICARDA











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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.

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Introduction

The International Center for Agricultural Research in the Dry Areas (ICARDA), the International Livestock Research Institute (ILRI) and South Agricultural Research Institute organized a two-day event in Bonga and Jimma from 11-12 October 2021 with the objective to:

- celebrate the success in community-based sheep and goat breeding programs with farmers and partners
- discuss and plan the way forward for technological packages that have been tested in the last 10 years

The event included:

- a panel discussion with farmers' representatives
- a market place
- an animal show and award
- a one-day workshop to discuss on sheep and goat intervention packages

Welcome speech

Ashebir Ekalo, Kefa Zone deputy administrator, welcomed participants. He said that the Keffa zone is suitable for livestock development and agriculture, and more than 90% of its inhabitants depend on the agriculture sector for their livelihood. Furthermore, he acknowledged ICARDA and partners for supporting communities to organize and efficiently exploit their livestock resources in the area for the past 10 years.

He said that the goats and sheep breeding is generating income and creating employment opportunity for women and the youth. Therefore, he pledged for ICARDA and partners to make sustained support to the communities engaged in goats and sheep breeding.

Bonga sheep breed is being disseminated to neighboring districts. These need to be supported by the introduction of modern technologies including Artificial Insemination (AI).

Official Opening

Eyasu Terefe, Deputy head of bureau of Agriculture South Nation Nationality and Peoples Region, welcomed participants. He mentioned that the area is endowed with large number of livestock and other natural resources. The livestock resources are significant for improving the food security situation and provide inputs for agro-industrial sector. The Community-Based Breeding Program (CBBP) is important for attaining food security. Goats and sheep breeding is important for poverty reduction. At the end, he acknowledged ICARDA, National Animal Genetic Improvement Institute (NAGII) and other research institutes.

CBBP: activities and achievements

Tesfaye Getachew, research management coordinator for ICARDA, spoke about the CBBP activities and achievements within the last 10 years. Small ruminants are important in arid and semi-arid areas. However, the government and development partners did not give sufficient attention to goat and sheep breeding and the delivery of genetic gains.

Traditional breeding methods cause high mortality rate among goats and sheep, and low birth rate among sheep as there are limited number of breeding rams. Since the 1940s there have been efforts to improve sheep and goat productivity by importing improved breeds.

Many of the genetic improvement efforts by research centers were not effective as they were not participatory and inclusive to smallholder livestock keepers. The inefficiency of the attempts by the national research system have led to establishing of community-based breeding program (CBBP).

Ten years ago, design and implementation of CBBP began with 4 sheep breeds representing different production systems. The three-years project was funded by the Austrian government, and it was led by ILRI, ICARDA and Austrian university (BOKU).

The project stated working on three breeds including *Afar, Menz, Horro* and *Bonga* in eight villages with around 500 households. Currently there are more than 70 cooperatives carrying out community-based breeding programs. Other research institutes including

Biodiversity, universities and research institutes have also started establishing CBBPs with several sheep and goat populations. Several experts and organizations from different countries are visiting *Bonga* area to learn about CBBP.

CBBPs have made substantial progress since their establishment 10 years ago as reflected by measurable genetic gains attained and socioeconomic impacts on the communities engaged in CBBPs.

Discussion with farmers representatives

Discussion with selected members of community-based breeding associations from Menz (Sintayehu Bashager), Horro (Kuma), Doyogena (Wondimu Mussie) and Bonga (Almayehu Haile).

Question 1: When was the cooperative established? What have you benefited from the CBBP?

Answer (Bonga): Our group was established in 2003. Our sheep genetics have improved within the last 10 years with the continuous effort of ICARDA and community members (farmers). On average the weight of ewes has increased from 20 -25 kgs to 40 -50 kgs, and rams weight has increased from 25 -30 Kgs to 65 -70 kg. Farmers' income has improved, and we have managed to build our houses and purchase agricultural inputs.

Answer (Doyogena): Before we organized in CBBP, we had problem to market our sheep due to brokers in the local markets. Because of the technical support from ICARDA and partners we have learnt how to prepare balanced feed to produce improved sheep. We also sell excess rams with an increased price of 130 ETB/kg from 70 – 80 ETB / kg. We have established good market linkages to sell our improved sheep.

Answer (Horro): CBBP was established in 2003. We have been trained on improved breeding technics so we can minimize inbreeding. We have manged to establish market linkages to get good prices for our animals. We have vets that follow the health situation of our sheep. Now we have capital to expand our work.

Answer (Menz): Our livelihood depended on sheep breeding. We have now improved our breeds and gained improved income and employment.

Question 2: What are your plans going forward and what challenges do you have now?

Answer (Bonga): We have plan to move to a union status, improve our saving and include more farmers into our groups.

Answer (Horo): We want to strengthen the market linkage. In Horro area, we have communal grazing area which is swampy, and this has created a health problem to our sheep.

Answer (Menz): We want to have improved market linkages

Introduction to marketplace - pitches

There were seven marketplaces established by participant institutes and partners from Horro, Doyogena, Menz, Arbaminch, Abergelle, Bonga and Meta-wolkite. The marketplaces demonstrated genetic improvements of breeds in size and weight and their respective specific activities to deliver genetic gains.

Animal show and award

Animal show and award ceremony has been organized as part of the two-days event. A committee has been established comprising of representatives from Doyogena, Bonga, Menz and Horro to rank the best three improved sheep from three category of animals.

The categories included:

Pre-selection category: which includes young male sheep with the age of 3 – 4
 months

Table 1. list of animals 3 - 4 months

	Weight	Birth type	Age (in months)	location
1.	28 kgs	single	3	Not specified
2.	22 kgs	single	Note specified	Shuta
3.	Not mentioned	single	Note specified	Borka
4.	28 kgs	Not specified	4	Not specified
5.	27 kgs	Not specified	3	Borka
6.	26 kgs	twins	4	Alargeta
7.	26 kgs	Twins	4	Alargeta
8.	26 kgs	Single	3	Alargeta
9.	26 kgs	Twin	3	Shuta
10	27 kgs	Not specified	4	Not specified

Committee moved around and evaluate the lambs ranked the animals.

2. Candidate ram's category: within the age group of 6-7 months

Table 2. list of animals 6 – 7 months

	Weight (kg)	Birth type	Age (in months)	СВВР
1.	33	Single	6	Borka
2.	33	Not specified	6.5	Borka
3.	31	single	6	Borka
4.	30	Single	6	Shuta
5.	35	Single	6	Meduka
6.	31	Twin	6	Not specified

7.	24	Twin	5.5	Buta
8.	26	Twin	5.5	Buta
9.	30	Single	6.5	Buta
10.	36	Not specified	7	shuta
11.	40	Single	7	Not specified

Committee members moved around and evaluated the candidate rams and ranked them Breeding rams

Table 3. list of animals for show under the 3rd category (breeding rams)

	Weight (kg)	Birth type	Age (in year)	СВВР	status
1.	61	Single	2	Buta	certified
2.	55	Single		Buta	certified
3.	58	Twin		Buta	certified
4.	62	Twin	Not specified	Shuta	certified
5.	57	Not specified	1.5	shuta	certified
6.	Not specified	Single	Not specified	shuta	certified
7.	63	Not specified	1.3	Not specified	certified
8.	66	Not specified	Not specified	Alergata	certified
9.	72	Not specified	1.8	Borka	certified
10.	68	Not specified	Not specified	Alergeta	certified
11.	77	Not specified	Not specified	Buta	certified
12.	55	Not specified	Not specified	Medruta	certified

Committee members moved around and evaluated the rams and ranked

Results / Ranks (CBBP site and animal ID)

Category 1.	3. Alargeta 10721 2. Shuta 23621 1. Borka 30921
Category 2.	3. Shuta 144212. Boka 175211. Meduta 18721
Category 3.	3. Buta CBBP with estimated breeding value of 5.82. Shuta CBBP with estimated breeding value of 3.61. Not specified with estimated breeding value of 6

At the end of the process, Okeyo Mwai, Principal Scientist in the ILRI's Global Livestock Genetics- Live Gene Research Program, presented awards to winners.

In addition, certificates have been awarded to persons that have contributed for the success of the CBBP.

Setting the scene

Barbara Rischkowsky, program director for ICARDA's resilient agricultural livelihood systems research program, made a presentation to give a general overview of the Small Ruminant Value Chain Transformation (SmaRT) project.

The program began in June 2012 under CGIAR Research Program (CRP) Livestock and Fish and continued as priority country program under CRP Livestock (2017-2021). It was chosen as one of the 8 target value chains in CRP L&F due to large population of sheep and goats, high market demand (local and export) for sheep and goat meat, high potential for poverty alleviation, large productivity gap and poor performance of value chains.

The program has the objective to improve the performance of sheep and goat meat value chains in Ethiopia, and envisions Ethiopia to benefit from equitable, sustainable, and efficient sheep and goat value chains by 2021.

The success factors for the achievement of the program include:

- Ownership of the project by regional and local research center
- Strong commitment of local actors
- Targeted capacity development
- Good coordination of research and development at the sites
- Joint learning leading to local solutions

Achieving small ruminant genetic gain and its delivery in low input systems

Mourad Rekik, Principal Scientist at ICARDA, made a presentation on activities carried out to improve the delivery of genetic gains in the CBBP sites. According to Mourad, there are several evidences in all the CBBP sites that the delivery of genetic gains has improved, and live weight has increased.

There is no focus on birth weight for Bonga sheep as it is a large sized animal. An attempt to increase the size will potentially create a problem of dystocia. Therefore, there is no genetic

trend at birth weight for Bonga sheep, and the focus remains on keeping the genetic gains trend of live weight at six months and the litter size.

The bonga breed is both meat type and prolific, and it is important to continue to focus and progress on the live weight and the litter size of the sheep. It is also important to support smallholders to remain committed to the CBBP which is an alternative to the conventional centrally managed and top-down breeding programs.

The CBBP approach considers the constraints within the low input systems, and in Ethiopia it has reached a stage of maturity and are being adopted by the government as the main strategy for genetic improvement.

There is readiness to further scale out, and there is a need to establish new CBBPs and increase the membership of households into the existing CBBPs. It is also important to adopt reproductive technologies and platforms to expand the dissemination of the genetic gain.

Since 2014, ICARDA started working on the delivery platform / reproductive tools to disseminate the genetic gains by engaging through several steps including reviewing earlier relevant studies on sheep and goats. Research gaps such as absence of data on the use of simple and low-cost synchronization protocols have been also identified.

Studies have been conducted on the synchronization and artificial insemination protocol on the field and the station in *Menz* and validated the protocol as innovative, simple, affordable, and accessible. It was a co-investment between ICARDA and its national partners, and currently there are seven mobile labs across the country

Using a synchronization protocol of 2 injections of prostaglandin 11 days apart:

- Increases fertility up to 89% in natural mating,
- Allows fixed time artificial insemination with a conception rate of 61% in sheep and >
 65% in goats.
- Saves on the cost: US\$ 1.3 vs. US\$ 8.5 for the conventional protocol,
- Locally available products to support delivery system.

Core teams have been situated in each site that have been providing trainings and supporting the synchronization protocols. It is important to certify rams which move from CBBP to the base population to be used by the farmers in the communities. The certification has different modules and will be carried out by the regional animal production authorities at 12 months.

It is also important to use the ultrasound tool for pregnancy diagnosis for farmers to make informed decisions such as discarding pregnant females from synchronization.

DTREO - A digital genetic platform

Tesfaye Getachew, Research management coordinator at ICARDA, made a presentation on a new digital genetic platform that is being used by communities organized under the CBBP.

Breed improvement requires continuous genetic evaluations and the ranking of animals based on genetic merit. Pedigree and performance recording is crucial and is an important component of genetic evaluation. In Ethiopia, the data collection was carried out manually in herd books that do not offer an effective means of providing quick and reliable feedback to communities.

DTREO is a cloud-based genetic data base platform that has been developed by AbacusBio from New Zealand. ICARDA and national partners have agreed with the firm to use the platform.

The platform is flexible and easy to use, that allows users to capture and save data offline, data is uploaded to the database once an internet connection has been established. It also helps to avail more accurate estimated breeding values (EBVs), to provide quick feedback to communities, provide EBVs with higher accuracy, and build reports, provide analysis, and create graphics.

So far, the database has been developed and tested in Ethiopia (Bonga, Horro. Doyogena, Menz and Abergelle and Konso CBBPs) and in Tanzania. Data collectors in CBBPs have been trained, equipped with tablets, and started data capturing from 2019. All the historic

Ethiopian data since 2009 has been uploaded into the digital database. Data collections is ongoing in 27 CBBP sites across Ethiopia and Tanzania

To provide a more accurate picture of the genetic evaluation of small ruminants in the country, the database reach would need to be expanded to include more CBBP sites.

Therefore, all sheep and goat data in the national system needs to be moved to the central database system and a national institution needs to take the role of coordination and ownership of the database system.

Improved sheep fattening technology and practices in the Ethiopian highlands

Muluken Zeleke made a presentation on improved sheep fattening technologies and practices in the highlands of Ethiopia. He mentioned that traditional sheep fattening practice (which are commercial, urban, pre urban and smallholders/cooperatives) in Ethiopia did not offer much of income to farmers.

ICARDA and the national research systems are trying to work together to introduce improved fattening technologies that are more productive. Adoption of technologies and improved practices are important for the success of fattening sheep which includes using unselected rams from the CBBP.

An innovative approach has been introduced with components including:

- Better feeds and nutrition: this include sustainable availability of feed resources and a sheep ration balancing tool.
- Market orientation: this includes collective entrepreneurship via formation of sheep fattening youth groups and cooperatives; entrepreneurial skills development training as well as sharing, co-generation, and knowledge transfer of good practices; Public and private sector engagement co-opted through coordination committees (Community of Practice Platforms) to improve vertical and lateral engagements.

Thus far, 838 youth (578 male:310 female) are members of 44 sheep fattening youth groups; eight youth groups are currently fully legalized as cooperatives; Business models for

sheep fattening developed and piloting scaling of improved and market-oriented sheep fattening practices through radio programming.

Herd health packages

Mesfin Mekonnen ILRI's Animal health research associate made a presentation on herd health packages. Animal health is one of the basic components of animal production and it can be one of the main constraints of animal production.

SmaRT pack Ethiopia carried out participatory epidemiological survey which is the basis for all animal health-related interventions. The survey helped to identify major diseases of small ruminants, describe impact of diseases in small ruminants of Ethiopia in a much more detail and prioritization of diseases.

Herd health packages are developed in an iterative, participatory process and comprise different interventions and include technical interventions, capacity development, institutional intervention, and gender sensitivity within all interventions.

Development of vaccination and treatment calendar for targeted SR diseases was a priority as it is the basis for all other interventions. Respiratory diseases are the most common diseases in CBBP sites. The herd health approach is developed with the principle of prevention.

Implementation of integrated herd health approach to reduce the impact of respiratory diseases requires:

- Training for farmers and enumerators/development agents
- Setup effective vaccination and preventive treatment practice for major respiratory diseases
- Longitudinal investigation of respiratory disease cases
- Laboratory investigation of respiratory diseases

Expanding opportunities for women

Mamusha Lemma, capacity development and innovation expert at ILRI, made a presentation on gender inclusive capacity development approaches in small ruminant value chain development. The gender gap in agriculture productivity is 24 % as per the World Bank study. This shows female headed households have less access to market information and extension services. Women in male headed households have more constraints than women in the female headed households. Reducing gender gaps will increase yield by 30 %.

Participatory engagement and gender capacity development approaches including community conversations, gender capacity development of partners and gender integration in small ruminant value chains have played an important role including:

- shifted mindset and strengthened gender capacity of community organizations and partners for inclusive engagement
- improved community attitudes towards unequal gender division of labor
- initiated changes within intra-household gender relations and decision-making
- community voices informed gender-responsive integrated intervention planning and implementation.
- gender strategy development and increased gender-responsiveness of partners in their work
- increased participation, empowerment, and decision-making of women in breeding cooperatives

However, there are challenges for these new innovative approaches. These include limited community members' exposure to and experience in open dialogues and producing solutions; poor agency of women to engage and voice their issues and concerns in community discussions; conventional mindset, limited engagement and collaborative learning culture and capacity of local partners; partners' staff turnover affecting knowledge retention and transition.

Are we doing the right thing to develop livestock marketing?

Girma T. Kasse of ICARDA made a presentation to share lesson learnt from ICARDA's experience on livestock marketing in Ethiopia.

Ethiopia is endowed with a huge livestock resource that contributes nearly 11 % of all formal export earnings. Small ruminants are the major means of livelihoods in rural Ethiopia, and among livestock keepers surveyed in 2013/14, 47.4% and 34.9% of them owned sheep and goats, respectively.

However, the country has not managed to effectively use this resource due to several reasons including shortage of inputs, lack of public investment on livestock marketing and absence of appropriate policies and institutions.

There are several problems that are hindering the livestock marketing.

These include dependance of supply on subsistence-oriented production system; poor investment in markets and marketing; poor road network limiting access to market - mainly to farmers; Lack of collective action at community level and low bargaining power.

ICARDA's achievements and lessons include:

- Policy induced distortions were separated form market inefficiencies through use of data on access costs throughout the value chain
- The empowerment of the private sector and clear guidelines on the development of livestock markets need to be given due attention by the Government of Ethiopia.
- The development of the market facilities needs to be accompanied by investments in road networks by the government and the local community.
- Land ownership issues need to be redefined to empower local level administrators to make decisions that encourage investment in the development of the livestock markets.

Panel discussion

Panelists: Fekadu Mitiku, Kelifa Hussien, Yoseph Mekasha (ATA), Lulseged Yosef **Question:** What are the challenges to have a sustained quality meat? And what will be the possible solution?

Kelifa Hussien (Manager, Allana slaughterhouse):

- An Indian based company with more than 56 years' experience in the sector
- One of the world's largest meat exporting companies, and in Ethiopia we have two slaughterhouses with 100 million USD capital
- We have the capacity to slaughter 9000 sheep and goats and 3000 cattle per day
 only in one of our facilities, and we are not working to our capacity. We are working
 at 10 % of the capacity
- One of the main challenges has to do with marketing our products. Farmers should breed their small ruminants in accordance to the market requirements in terms of quality, quantity and price range.
- The meat export is operating in lose as we are buying in a very high price from farmers and selling with a small margin of profit

Question: What should be done to solve these challenges? And what are the conducive policies that are available?

Yoseph Mekasha:

- Ethiopian policies are among the challenges that are contributing to marketing related challenges
- The government need to commit to create an enabling environment
- Development partners need to come with evidence and provide support to the government
- The government has revised the rural development policy however it has not fully addressed the challenges as it is partly a high-level policy framework.
- There are follow up efforts to develop policies and strategies on specific commodities like marketing small ruminants

Question: How can we use digital technologies to address some of these issues?

Lulseged Yosef:

- As per the marketing survey that we have conducted domestic customers in major cities and towns needs changes in the marketing system of live animals
- We are devising website marketing to bring together all the marketing actors into one platform

• We will be working with the CBBP

Question: Listening to the previous discussion what will be the major research questions and the priorities for your university?

Dr Fekadu Mitiku:

- Marketing challenge needs a multidisciplinary approach to solve / address it
- One research area could be demand and supply and do really consumers know what they prefer? Consumption is pivotal for production
- There are a lot of areas that we can consider for research and analysis such as why farmers are subsistence? Why farmers are not business oriented? Why slaughterhouses are not able to get sufficient quantity and quality products? why project achieves do not sustain after project phases out?

how to move from 'selling' to 'marketing' i.e., strengthening market linkages

In this session, a 'fishbowl' format was used to selected discussants from different institutions including government agencies, research center, university and CBBP project. Key points raised during the discussion are summarized below:

1. Export market

- Exporters pay on carcass weight it would help if they changed to payment on liveweight
- Export market should focus more on regional market (rather than mainly on middle east)
- Need to produce products that meet export market standards, as this market is expanding

2. Local market

This is also a large market in Ethiopia and needs to be focused on (not just the
export market). The export market is subject to non-tariff restrictions (not based
on economics, but e.g., political) and thus not always stable.

3. Local and export market

- Establishment of co-operatives for bulking and transport to more lucrative markets
- Collective action (e.g., cooperative) have been tried with varied success, and thus farmers are cautious of these
- Market demand needs to be better understood by farmers
- Differentiation of products to different markets (to meet market needs).
 Examples of export, hotels/restaurants, local consumers
- Margins at different 'marketing nodes' are these fair? (Example of brokers, processors having higher margins).
- An information gap on market price is leading to middlemen profiting. If there
 could be a policy change on communication technologies (phones) so that
 farmers can receive marketing information by phone, this could be alleviated.
- Need for more favorable policies (including on taxation) to reduce production costs
- Scientific evidence generated on marketing needs to be shared with the decision makers (politicians)
- Need to share recommendations on marketing to the officials needs packaging.
 Aynalem named a dedicated team to do this, and Michael offered the services of CKM to support.

4. Market – general / unspecific

- Need to establish value-chains
- Strengthen the supply side (increase quantity)
- Markets require strengthening
- Investments are needed to promote the market

5. Non-market issues

- Need to strengthen the extension system
- Additional communication to private sector actors on CBBP achievements are required

 Government needs to invest in extension and in incentives for farmers to improve the productivity of their animals

6. Involvement of private sector

- Strength of draft policy is inclusion of private sector, including on incentive systems for their involvement. NB – from Girma, policy being referred to not named
- Private sector should be supported for all value chain nodes (not just production)
- National policies are more actively considering the private sector, but these
 policies still need to be implemented. Different models need to be considered in
 this e.g., PPP, subsidies.

Conclusion

The two-days event was organized to celebrate the success of the CBBP with farmers and partners and to discuss the way forward for the innovations / technologies that have been piloted and proven over the last 10 years.

Some of the key messages that resonated during the event include but not limited to:

- There is a need to establish new CBBPs and increase the membership of households into the existing CBBPs to further scale out the program.
- It is also important to adopt reproductive technologies and platforms to expand the dissemination of the delivery of genetic gains.
- To provide a more accurate picture of the genetic evaluation of small ruminants in the country, the DTREO database reach would need to be expanded to include more CBBP sites.
- All sheep and goat data in the national system needs to be moved to the central database system and a national institution needs to take the role of coordination and ownership of the database system.
- New innovative approaches such as community conversation are important to close the gender gap in agricultural productivity
- The government need to commit to create an enabling policy environment to address policy related livestock marketing constraints
- Livestock marketing challenge need multidisciplinary approach to solve / address it
- The local livestock market should be given the needed attention

Annex 1: Agenda

Celebrating 10 years of CBBP in Ethiopia

Day 1 , 11 October 2021		
Time	Session	
8:00 am	Arrival to Bonga	
9:00 am	Registration	
09:30 am	Traditional music	
09:40 am	Blessing from the community elders	
09:50 am	Welcome, objectives and agenda	
10:00 am	Opening remarks (Government)	
10:10 am	Overview of CBBP - Presentation	
10:20	Discussion with farmers representatives	
10:50 am	Introduction to Market place	
11:30 am	Animal show and Award	
12:30 pm	Closing remark	
13:00 pm	Lunch break	

Day 2 , 12 October 2021

Day 2, 12 October 202	21
Time	Session
08:30 am	Registration
09:00 am	Welcome, Objectives and Agenda
09:10 am	Opening Remarks
09:20 am	MOA – presentation1 Q&A
09:35 am	MOA – presentation2 Q&A

09:50 am	MOA – presentation3 Q&A
10:05am	Panel discussion
10:30 am	CBBP achievements presentation 1
09:40 am	CBBP achievements presentation 2
09:50 am	CBBP achievements presentation 3
11:00 am	Q&A
11:10 am	Coffee break
11:40 am	CBBP achievements presentation 4
11:50 am	CBBP achievements presentation 5
12:00 pm	CBBP achievements presentation 6
12:10 pm	Q&A
12:30 pm	Lunch break
13:30 pm	Check in and after noon energizer
13:40 pm	Way forward / scaling option discussion
14:40 pm	Next steps
14:50 pm	Closing speech
15:00 pm	Close

Annex 2: The celebration in photos











