

# CGIAR 2020 Annual Reporting Template

## Ethiopia Priority Country Program

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## **Livestock CRP Ethiopia 2020 Annual Report**

The Livestock CRP partners and ILRI programs have agreed to take responsibility for implementing the CRP agenda and have aligned certain bilateral project activities and/or have been provided W1/W2 funding to support that work. The Livestock CRP priority countries are intended to serve as the CRP 'field laboratories' where the flagships can test their products and take them to scale and contribute to designing integrated livestock interventions. The priority country projects have been allocated W1/W2 funding both from the PMU and from flagships to conduct their activities.

The purpose of this report is twofold:

- (i) To ensure Flagship Leaders are aware of the progress achieved by the partner /program/priority country project and individual staff so it can be appropriately reflected in the flagship reports; and
- (ii) To provide a record of accountability for the funding allocated to the partner/program/priority country project. The focus is on capturing achievements in the reporting year and their significance rather than describing ongoing activities and future intentions.

The report has 3 parts:

- (i) Part A provides an overview of progress made by the partner/program/country project in terms of both implementing flagship activities and advancing the CRP's engagement with partners/programs.
- (ii) Part B follows the overall CGIAR Annual Reporting Template and gathers any relevant achievements or issues from partners/programs/country projects related to each section that could be highlighted in the flagship and overall CRP reports.
- (iii) Part C is a traffic light report on the 2020 POWB deliverables that the partner institution or program committed to achieve as the basis for the Program Partner Agreement (PPA), or the deliverables that the priority country team committed to in their Activity Sheets.

There is some duplication between Part B and Part C, but it is important to provide a record of achievement against the partner's contractual commitment and to make this readily available to the flagship leaders.

**Please complete all boxes in the template, indicating N/A if there is nothing to report**

**Write in clear language that is understandable to a non-specialist reader with no prior knowledge of the CRP and explain all acronyms**

**Country: Ethiopia****Project Name: SmarT-Ethiopia****Country Coordinator Name: Barbara Rischkowsky and Aynalem Haile****List of W1/W2 funded CRP staff (and location) by flagship**

*Please include all staff members with 5% or more of their time allocated to the CRP. If the staff member is involved in priority country project work, indicate the country or countries in the last column*

<b>Staff name</b>	<b>Institution</b> (CIAT/ILRI/ ICARDA/SLU)	<b>Job title</b>	<b>Duty station</b> (country)	<b>Flagship affiliation</b> (Genetics/Health/ Feeds & Forages/ Environment/LLAFS)	<b>Priority country involvement</b> (Ethiopia/ Tanzania/ Uganda/ Vietnam)
Aynalem Haile	ICARDA	SR Breeding & Genetics/Co-coordinator	Ethiopia	Genetics (focal person)	Ethiopia
Joram Mwacharo	ICARDA	SR Geneticist	Ethiopia	Genetics/Health	Ethiopia
Mourad Rekik	ICARDA	SR Production	Ethiopia	Genetics/Health (focal person)	Ethiopia
Tesfaye Getachew Mengistu	ICARDA	Coordinator Genetics	Ethiopia	Genetics	Ethiopia
Barbara Rischkowsky	ICARDA	Director, Resilient Agricultural Livelihood Systems	Ethiopia	Genetics/LLAFS (focal person)	Ethiopia
Jane Wamatu	ICARDA	Animal Nutritionist	Ethiopia	Feeds & Forages (focal person)	Ethiopia
Girma Tesfahun Kassie	ICARDA	Agricultural Market Economist	Morocco	LLFAS	Ethiopia
Wole Kinati (NRS)	ICARDA	Research Associate - Gender	Ethiopia	LLFAS	Ethiopia
Woinishet Asnake (NRS)	ICARDA	Research Officer-Economics	Ethiopia	LLFAS	Ethiopia
Abiro Tigabie (NRS)	ICARDA	Research Officer-Economics	Ethiopia	LLFAS	Ethiopia
Barbara Wieland	ILRI	Principal Scientist - Herd health	Ethiopia	Health	Ethiopia
Mesfin Mekonnen	ILRI	Research Associate	Ethiopia	Health	Ethiopia
Melkamu Derseh	ILRI	Scientist - Animal Nutrition	Ethiopia	Feed & Forages	Ethiopia

## AR2020 CRP Livestock Template - Partners/Programs/Countries

An Notenbaert	CIAT	Tropical Forages	Kenya	Environment	Ethiopia
Jessica Mukiri	CIAT	Research Associate – Tropical Forages	Kenya	Environment	Ethiopia
Jason Sircely	ILRI	Scientist - Ecosystem Ecologist	Kenya	Environment	Ethiopia
Bedasa Eba	ILRI	Research Officer- Pastoralism and Rangelands	Ethiopia	Environment	Ethiopia
Mamusha Lemma Woldegiorgis	ILRI	Research Officer - Capacity Development	Ethiopia	LLAFS/Cap dev	Ethiopia
Abdi Etafa	ILRI	Capacity Development Associate	Ethiopia	LLAFS/Cap dev	Ethiopia

## **PART A: Country Annual Progress**

### **A.1 Achievements**

*Provide an overview of 2020 achievements in advancing the CRP Livestock research agenda towards its targeted outcomes, by flagship and in the priority countries (500 words max.)*

Under **Genetics**, for efficient dissemination of improved genetics and its sustainability in CBBPs, establishment of breeder cooperatives has been identified as the institutional set up to be followed. A [progress report](#) highlights the process followed in establishment of breeder cooperatives in the project sites. Discussions with our partners regarding the certification of sires selected in the framework of CBBPs culminated this year in the kick-off of the certification in 3 sheep sites (Bonga, Doyogena, Menz) and 1 goat site (Abergelle/Sekota) at a pilot scale. An online meeting was organized with partners in all the sites during which field implementation of all the certification steps were agreed. [Templates for the examination and the certificates](#) were discussed and finalized. These are now being routinely used in the target sites and sires are certified on requirements for physical examination, semen assessment, mating ability and libido and all sires are vaccinated for Foot Mouth Disease, Sheep Pox, Peste des Petits Ruminants and Enterotoxaemia. ICARDA was also approached by high-level staff of the livestock sector in Amhara region who put together a regional program for the upscaling of artificial insemination to disseminate improved Menz sheep and Abergelle goat to new villages. The program targeted a total of 5,900 AIs (4,200 Menz sheep; 1,700 Abergelle goats) between June and December 2020. [Champion protocols](#) that were developed by ICARDA preceded by a careful screening of pregnant females prior to synchronization using ultrasonography were discussed and were adopted for use in this scaling initiative. Regarding the applications of ultrasound-pregnancy diagnosis as a service delivery to enhance reproductive performance in the different CBBP sites, a meeting was organized on 5<sup>th</sup> October 2020 with the technical teams in all sites and a protocol was suggested, amended and adopted for use in all sites. To maintain close contact with our CBBP partners in Ethiopia and mitigate the travel restrictions imposed by the COVID-19 pandemic, an e-learning

module on [Essential Knowledge for Effective Improvement and Dissemination of Genetics in Sheep and Goats](#) was delivered over 3 days for an average daily number of 45 participants.

Under **Health**, the implementation of herd health packages continued in Ethiopia as much as possible, albeit with less on-site support from CG partners due to Covid-19 restrictions. In total 46,000 vaccine doses to prevent pasteurellosis in sheep and goats and PPR in goats were administered and 28,000 sheep were treated against GI parasites and lungworms in CRP intervention sites. Coenurosis control through systematic deworming of dogs was continued in Bonga through registration and deworming of 264 dogs. It is planned to expand this intervention to Menz site in 2021.

Relevant to interventions remained capacity development and a [paper on the tested community conversations](#) highlighted the importance of involving communities in defining acceptable solutions. A new app was developed and tested to support herd health farm level data collection over time and ILRI scientists supported SLU in validating a [herd health management framework](#) to be rolled out in Ethiopia and Uganda through CRP and bilateral projects.

**Under Feed & Forages**, a [survey](#) on forage options and perceptions of forage utilization revealed that farmers select forages based on biomass yield and acceptability by animals. One multi-purpose forage identified with immense potential for feed, food and soil fertility maintenance in Doyogena, Ethiopia was sweet lupin. The relatively neglected crop was identified by farmers as adaptable, high yielding, with the cheapest grain on the market. The grain is used as animal feed only after processing. This forage was selected for on-farm participatory feeding trials. Results revealed [varying effects of different processing procedures](#) of the alkaloid-laden sweet lupin grain on ram fattening. The participant farmers were later champions in the demonstration and promotion of processing techniques of sweet lupin grain prior to supplementation to enhance performance of Doyogena rams in a [farmer exposure and learning field day](#). The event emphasized that peer to peer learning generates more interest and participation by farmers. Meanwhile youth members continue to undertake sheep fattening ([dataset](#)). The [Entrepreneurial Skills Development training manual](#) was translated to two local languages, [Amharic](#) and [Keficho](#) for use across rural areas. The community of Practice (CoP) have been very instrumental in getting the youth groups formally registered. Doyogena and Bonga have each successfully registered 2 youth groups. The [annual CoP workshop](#) laid ground rules to restructure and redefine their role in promoting the SF youth groups agenda. Meanwhile, Youth groups in Bonga got a boon after a visit from the Regional State Governor. He honored his word during his visit to facilitate market linkages by sending leading Ethiopian ram exporters to visit the Bonga youth groups days after his visit.

Under **L&E**, the CLEANED Ethiopia report was postponed to 2021 due to delays resulting from (i) the Ethiopian participants finished the virtual CLEANED training later than expected due to Internet connection problems, (ii) local partners have been delayed in the collection of technical input and parameter data, due to difficulties in communication and limits to travel.

Highland communal grassland management was initiated in Menz in late 2019 and Abergelle in early 2020 resulted in a [quantitative grassland condition baseline](#) for tracking change and experiments, complete [socio-ecological characterization of influences on grassland management](#), prioritization of community management objectives, a manual on characterizing grassland management, and a [manual on management planning](#) for highland communal grasslands (as field work was delayed due to the COVID-19 pandemic, pushing to 2021 restoration trial protocols and a field guide/manual that will be produced as a portion of an implementation manual), key steps toward providing the Ethiopian government and civil society with practical, effective tools for

filling a major gap in policy and practice: improving the governance and management of highland communal grasslands.

**LLAFS**, Health, F&F and Cap Dev teams worked together on community conversations related to Health, Feed and Collective Action which were delayed to the last quarter of 2020 due to Covid. A first version of a [training manual](#) on collective action for agricultural marketing which is based on the experience with smart marketing was completed but will be further refined. No progress was made on marketing models and on willingness to pay for certification due to restrictions on international travel. The Ethiopia Smart Program received IREC clearance for the full program and the baseline. The baseline for the Smart Pack in four target sites was completed in two sites in 2020.

Under **shared activities**, the implementation calendar for SmarT pack interventions was reviewed and adjusted and [an implementation calendar for 2021](#) prepared. Initially it was planned to develop a more interactive calendar under MS teams but this was postponed due to the difficulties some team members faced with connectivity in home office.

## A.2 External partnerships and engagement

*Describe any significant changes in external partnerships of the partner/program/country project contributing to CRP work, and any achievements in strengthening stakeholder engagement (200 words max.)*

The **Genetics FP** has established a new partnership with USDA through funding of a goat CBBP upscale in Konso. We have also established a new partnership with local universities, Injibara and Haromaya, in which we partner on upscale of Washara sheep and Harerghe goat CBBPs. Our partnership is also extended to the animal production regional divisions (including animal health services) in Bonga, Doyogena, Menz and Sekota for the certification of improved rams and bucks.

**Under F&F FP**, CoP members got more active in 2020. The cooperative office facilitated registration of a total of 5 youth groups, Microfinance Institutions conducted financial literacy awareness to groups in Bonga and Menz. New entrants to the CoPs are government officers from the Communication and Media office. They will be instrumental in enhancing visibility of the youth groups.

**Under L&E**, the grassland management team engaged national Ethiopian researchers from Debre Birhan Research Center in Menz, and Abergelle Research Center and Sekota Research Center in Abergelle, and trained researchers to (i) conduct rangeland monitoring and upload the data to the open-access online Land PKS repository (<https://landpotential.org/>); and (ii) facilitate management discussions with representatives of community user groups, whom we also consider to be our partners in the work, numbering approximately 500 representatives across 20 grasslands of area 2-200 ha in Menz and 15-300 ha in Abergelle (woreda and kebele level government were also engaged, e.g., to identify grasslands).

**LLAFS FP**: we started a collaboration with Debre Markos University on developing project proposals around trade-off analysis, collective actions, commercialization in livestock production which are based on CRP livestock experiences.

### A.3 Internal partnership progress

Describe any significant changes during 2020 that have affected the role of the partner/program/country project in the CRP, its expectations, its commitment and its capacity to contribute. Highlight any emerging issues in the relationship with the CRP and how they are being addressed (200 words max.)

There have not been any significant changes in the role of partners in the Ethiopia SmaRT program.

## PART B: Contributions to CRP annual report

Please highlight any achievements relevant to each section, using bullet points that can be extracted straight into the flagship reports. This is important as part of the justification for future W1/2 allocation to support CRP work by the partner/program/priority country. Refer to the Tables where relevant.

### 1. Key Results

#### 1.1 Progress Towards SDGs and SLOs (sphere of interest, with research results frequently predating the CRP)

a) overall contribution of CRP towards the SRF targets, based on rigorous adoption and/or impact data. Please complete Table 1: Evidence on Progress towards SRF targets (Sphere of interest) and refer to this in the text (150 words max.)

**SLO target: 100 million more farm households have adopted improved varieties, breeds, trees, and/or management practices**

In the Ethiopian SR VC pilot sites about 1000 male- and 150 female-headed households apply at least one or more best-bet interventions developed under the umbrella of the Ethiopian SR VCT. About 300 new households are involved in the uptake of SmaRT pack in 4 new villages. In 2019 5124 households were engaged in community-based breeding programs (CBBP) in Ethiopia in the VC and new sites. Through the Livestock and Fisheries sector development project of the Ethiopian government, we were able to upscale CBBPs to more than 1000 additional households in 2020.

The figure of beneficiary smallholder farmers in Ethiopia (at least 2000) that have taken up improved sheep fattening practices has not changed in 2020.

b) any areas of learning from impact assessments which have influenced the direction of the program(100 words max.)

The analysis of the household observations from the two quantitative VC assessments conducted under LLAFS (panel data) was used to estimate the impact of participatory health services and improved breeding practices on small ruminant fertility, offtake, return per head of animal, and gross income per adult equivalent. The analysis revealed that access to small ruminant health services has increased offtake, return per head of sheep/goat, and gross income per adult equivalent. Participants in community based small ruminant breeding have also higher offtake and gross income per capita compared to those who are not taking part (paper forthcoming). This confirms the importance of these interventions as components in the SmaRT pack.

## 1.2 CRP Progress towards Outputs and Outcomes (spheres of control and influence)

### 1.2.1 Overall progress

*Provide a brief summary narrative about how the CRP progressed towards the agreed program outcomes, highlighting (i) major pieces of work, (ii) major course corrections (200 words max.)*

See 1.2.2

#### 1.2.2.a. Progress by flagships

*Please provide brief summary narratives about how each individual CRP Flagship progressed towards the agreed 'Program outcomes', introducing Table 5 (Milestones) to the reader, highlighting: (i) major pieces of work and innovations, (ii) any major course corrections (100 words max. per flagship).*

**Genetics FP:** The Ministry of agriculture of Ethiopia through its Livestock and Fisheries sector development project is upscaling CBBPs in four regions of Ethiopia (Amhara, Oromia, South and Tigray) with more than 10,000 households to participate until 2023. This is progressing very well and we have now covered all regions and major sheep and goat populations with more than 5000 households already involved. Although we do not yet have a full report on the certification for improved rams and bucks, our partners have started certification following our guidelines in two sites which will further improve competitiveness of CBBPs.

**Health FP:** In Ethiopia the rolling out of 8 different public-private partnership models was initiated which will help to identify sustainable delivery models to provide veterinary product and services to livestock keepers. Regional public-private partnership taskforces provided a platform for public and private sector partners to interact and to define suitable service delivery models. In addition, the scope of One Health Units in pastoralist communities was defined and the first One Health units operationalized.

Under **F&F**, the Communities of Practice are instrumental in the sustainability of market-oriented sheep fattening. The NARS researchers handed over the baton to the members from governmental offices. They will now oversee planning for and coordinating meetings. Registration of 4 youth groups and other registrations in the pipeline, including a women-only group in Bonga, is progress towards social inclusion and equity.

Under **L&E**, three Ethiopian partners were trained in the use of the CLEANED model. They have demonstrated that they gained the skills to run the model, through defining the different systems

that will be modelled and by starting to input characterization data and parameters. The application of CLEANED will be done through these local partners with some support from the program team. Building local expertise is expected to enable technology developers to take environmental issues into account in research priority setting in Ethiopia.

The piloting of highland communal grassland management in Ethiopia marks a major step forward and comprises a significant innovation in livestock and environmental research and development for Ethiopian smallholder farming communities (see also Table 5). Since highland communal grasslands have been neglected by both researchers and development actors, the ILRI approach of Participatory Rangeland Management (PRM) served as essential inspiration for the principles and methodologies underlying the highland communal grassland management approach, in which government and civil society are trained to conduct community facilitation and technical backstopping to help users of the grasslands to improve upon their management. This work has contributed significantly to pushing highland communal grassland management toward greater attention in national research (F4 Outcome 4.1, 2020 Milestone 4.1.4), grassland monitoring and experimental action research trials to enable targeting of management options (F4 Outcome 4.2, 2020 Milestone 4.2.4), and has resulted in the creation of two manuals for supporting the highland communal grassland pilot process (F4 Outcome 4.3, 2020 Milestone 4.3.4). Through our close working relationship with Amhara Bureau of Agriculture and Ethiopian National Research Centers, expected uptake is likely to be significant for the highland communal grassland management process and tools for its implementation.

**LLAFS FP:** In Ethiopia the SmART program contributed to the 2020 milestone “Livestock communities across 2 countries (Ethiopia and Kenya) apply tested technologies and management strategies based on CRP related research” given that in old and new target villages households are taking up best-bet interventions and the SmART pack. We also contributed to “Development partners, private sector and government agencies in 2 priority countries apply innovative institutional arrangements to raise competitiveness and inclusiveness” by demonstrating that market facilities are beneficial to framers and that they are willing to pay for it so that it could be an investment opportunity.

*Where relevant, indicate cross-flagship linkages and how one Flagship built on or worked with another to get results.*

*Please complete the following tables and refer to them in the text, as appropriate:*

*Table 2: Condensed list of policy contributions*

*Table 3: List of Outcome/Impact Case Reports from this reporting year (Sphere of Influence)*

*Table 4: Condensed list of innovations by stage for this reporting year*

*Table 5: Summary of status of Planned Outcomes and Milestones (Sphere of Influence-Control)*

#### **1.2.2.b. Relevance to Covid-19 by flagship (max. 300 words/flagship)**

*Please provide a brief summary about how each flagship has adapted their research owing to Covid19, highlighting: major incorporation of Covid-19 analyses into existing studies or (ii) new Covid-19 studies. Please do not report on research funded by the new CGIAR Covid-19 Hub. The Hub will report separately to the CGIAR System Organization.*

For the **Genetics FP** the COVID-19 situation partly restricted travel to the field. Therefore, some deliverables, which required extensive travels were postponed.

For the **Health FP** it was more difficult to get timely data related to the herd health interventions from the researchers in the field work due to Covid-19, and hence the analysis planned for 2020 is lagging behind. To avoid delays in 2021, Health FP budgeted for a consultant for 6 months to support Mesfin in data analysis and to help gathering data for an impact assessment and synthesis.

Under **FP FF**, the activities related to ewe and ram nutritional flushing could not be conducted in 2020 due to COVID-19. Farmers and animals had been selected in spring 2020 but then field travel was hardly possible till autumn when the animals were no longer available. The planned trainings of trainers for at least 60 development workers and 40 youth group leaders on the use of Entrepreneurship and Business Skills manuals had to be also postponed.

Under **L&E**, the CLEANED Ethiopia report was postponed to 2021 because the local partners were delayed in the collection of technical input and parameter data, due to difficulties in communication and limits to travel. The field work of the highland communal grassland management was delayed due to the COVID-19 pandemic, pushing restoration trial protocols and a field guide/manual that will be produced as a portion of an implementation manual to 2021), key steps toward providing the Ethiopian government and civil society with practical, effective tools for filling a major gap in policy and practice: improving the governance and management of highland communal grasslands.

Under **LLAFS FP**, the restrictions on international travel delayed the start of the baseline for SmART pack. However, we used the opportunity to add a module on Covid-19 impact to the baseline. Covid-19 prevented progress on the marketing models which required workshops at the intervention sites with producers and traders and the willingness to pay for certification study which required travel of our IRS based in Morocco to the sites.

Under **shared activities**, we could not pursue the action plan related to enhance partnerships at national levels. However, partnerships at local level were intensified which still needs to be documented. Progress was made on forming community of practices for different themes at community level but more formalized Multi-stakeholder platforms (MSP) could not be pursued due to limited opportunities for meetings.

### 1.2.3 Variance from Planned Program for this year

*(a) Have any promising research areas been significantly **expanded**? If so, for each example, please explain clearly where the demand came from (e.g. promising research results, demand from partners) and where the money for expansion has come from? (100 words max.)*

No research areas were expanded.

*(b) Have any research lines been dropped or significantly **cut back** (note that cutting research lines which do not seem to be delivering is seen by Funders and the System Organization as a sign of good management, not of failure). If so, please give specific examples and brief reasons, and if funding was reallocated to other work, explain where the money went (100 words max.)*

No research lines were cut back.

*(c) Have any Flagships or specific research areas **changed direction**? If so, please describe how and why (100 words max.)*

No.

#### 1.2.4 Altmetric and Publication highlights

Please provide a short narrative about the nature of your CRP's Altmetric scores. For example, are there any unique news or policy document mentions? Are there an inordinate number of Tweets or blog posts for any one publication or topic? Why? Please highlight non-peer reviewed publications wherever possible. (200 words max.)

Some significant knowledge products from the country program (with a focus on social media):

##### **Genetics FP**

Blogs on Outcome stories:

1. Farmers at the forefront: Community-based breeding program transforms Ethiopian lives <https://livestock.cgiar.org/news/farmers-forefront-community-based-breeding-program-transforms-ethiopian-lives>
2. From the field to academia: Ethiopian livestock breeders advocate for reform of university curricula. <https://livestock.cgiar.org/news/field-academia-ethiopian-livestock-breeders-advocate-reform-university-curricula> (<https://bit.ly/2ELCl4l>)

Blogs:

How a small Ethiopian town grew the country's best sheep and an inspiring farmer cooperative <https://bit.ly/2PpG4Xr>

We also produced a [video](#): Community-based sheep breeding in Bonga, Ethiopia, 692 views

**Joint Health/LLAFS** (joint ILRI-ICARDA) publication:

Annet Abenakyo Mulema, Wole Kinati, Mamusha Lemma, Mesfin Mekonnen, Biruk G. Alemu, Belay Elias, Yifru Demeke, Hiwot Desta & Barbara Wieland. 2020. Clapping with Two Hands: Transforming Gender Relations and Zoonotic Disease Risks through Community Conversations in Rural Ethiopia. *Human Ecology*, 48: 651–663. <https://hdl.handle.net/10568/110213>. <https://doi.org/10.1007/s10745-020-00184-y>. Open access

Related blog:

Facilitating collaborative learning and action in animal health management. [Facilitating collaborative learning and action in animal health management | CGIAR Research Program on Livestock](#)

##### **F&F FP:**

Blogs:

Sheep fattening is creating entrepreneurial opportunities for youth in Ethiopia.

<https://livestock.cgiar.org/news/sheep-fattening-creating-entrepreneurial-opportunities-youth-ethiopia>

We also completed the F&F FP videos in Ethiopia:

Rischkowsky B and J Wamatu. 2020. Feed & Forages in Ethiopia, Long film.

<https://hdl.handle.net/20.500.11766/12416>

Rischkowsky B and J Wamatu. 2020. Feed & Forages in Ethiopia, Short film.

<https://hdl.handle.net/20.500.11766/12417>

Under **LLAFS FP** we provided scientific evidence of market sheds: Would Market Sheds Improve Market Participation and Earnings of Small Ruminant Keepers? Evidence from Ethiopia. Journal of Agricultural Economics. (<https://hdl.handle.net/20.500.11766/10792>, <https://dx.doi.org/10.1111/1477-9552.12411>); we also disseminated the findings through a blog: Market Sheds in Ethiopian Livestock Markets boost Farmers' Participation and Income <https://www.icarda.org/media/drywire/market-sheds-ethiopian-livestock-markets-boost-farmers-participation-and-income>

### 1.3 Cross-cutting dimensions (at CRP level)

#### 1.3.1 Gender

a) *Using concise bullet points, list any important CRP research findings, methods, tools, capacity development, policy changes or outcomes in 2020 related to gender issues (150 words max.)*

The [report on gender capacity assessment](#) (GCA) of research and development partners at Ethiopia project sites was published. Feedback sessions on major findings will be integrated into the training of research and development partners planned for first quarter 2021.

The planned field work for a PhD on positive deviant cases of women empowerment in the four intervention sites had to be postponed due to restrictions on international travel.

b) *Mention any important gender findings that have influenced the direction of the CRP's work, and how things have changed (100 words max.)*

None

c) *Have any problems arisen in relation to gender issues or integrating gender into the CRP's research? (100 words max.)*

None

#### 1.3.2 Youth and other aspects of Social inclusion / "Leaving No-one Behind"

a) *Using concise bullet points, list any important CRP research findings, methods, tools, capacity development, policy changes or outcomes in 2020 related to issues of youth, social inclusion, and "leaving no-one behind", for example with the poorest groups, indigenous peoples, or disabled people, and intersectional analysis (150 words max.)*

The [ESD training manual](#) was completed and translated into two languages, [Amharic](#) and [Keficho](#). Unfortunately, the planned training of trainers could not take place and was postponed to 2021.

b) *Mention any important youth and social inclusion findings that have influenced the direction of the CRP's work, and how things have changed (100 words max.)*

Three (3) youth groups and One (1) women-only group received full registration and legalization in 2020. Formal registration is important, as it brings in the advantage of increased trust and confidence in collective action which is a key prerequisite for success in collective marketing and credit access.

The demand by youth to join the legalized cooperatives was overwhelming; In Doyogena, youth numbers increased from 120 to over 300 and in Bonga the legalized Women's only group attracted 85 new members.

c) *Have any problems arisen in relation to youth and social inclusion issues or integrating youth into the CRP's research? (100 words max.)*

- The legalization of youth groups has been the key limiting factor. Legalization hiccups have been due to the small number of members in the groups which does not constitute the minimum 50 as stipulated by Ethiopian cooperative by-laws: This is been gradually solved by merging our youth groups to form larger groups so that in Menz, 18 youth groups have merged into 4, which are now pending registration; In Doyogena, 12 have merged to become 5, of which 3 are already legalized; In Bonga 14 have merged to become 6 of which one is fully legalized.
- Mergers having taken place, the slow process for legalization in 2020 was due to 1. budgetary constraints on the part of the Cooperative Offices 2. partially due to COVID lockdown 3. Duplication of naming, i.e in some areas, within a single Kebele, there are existing cooperatives bearing the word "fattening" in their naming. This is itself has put legalization of our groups on hold as lengthy discussions, spanning months are made by the Cooperative and Local Administration Offices on how to resolve that problem.
- Numbers of rams fattened per youth remain low. They are now averaging at 1-2 rams. The youth express high interest to fatten more, but they are constrained by feed resources. Most of them rely on family land, which is too limited for them to derive adequate quantities of crop residues and/or cultivate forages. There is urgent need for innovative ways to avail additional feed supply e.g through agro-industrial products and exploitation of indigenous forages.

### 1.3.3 Capacity Development

*Summarize key achievements and learning points in Capacity Development in 2020, cross-referencing to other data in this report (e.g. results tagged as principal for CapDev) where relevant (200 words max.)*

#### **Short term trainings**

**Under Genetics:** two virtual short-term training took place: 1) TOT on certification of improved sires for 20 researchers and ministry livestock experts (Virtual); and 2) TOT on ultrasonography in sheep and goat for 23 researchers and ministry livestock experts and one e-learning module on Essential Knowledge for [Effective Improvement and Dissemination of Genetics in Sheep and Goats](#) was organized over 3 days with an average daily number of participants of 45

Under **Health**: Some sites such as Bonga delivered trainings of farmers on prevention and control of small ruminant diseases even though trainings did not go according to the annual plan due to COVID-19 pandemic. A total of 70 farmers were trained on small ruminant GI parasite control and coenurosis control, namely 38 men and 32 women.

Under **F&F**: A [Community of Practice \(CoP\)](#) workshop took place on 25-26 December 2020 (30 participants (28 male/2 female; 3 resource persons). NARS researchers in Menz, Bonga and Doyogena continued to offer trainings to youth groups on business oriented short-term fattening, feed utilization and husbandry. Community of Practice members were very active; In Bonga the gender office highly targeted the women's only group on women's empowerment and attitude change issues. In Bonga, the zonal Market development office linked up with local livestock merchants to train youth groups on collective marketing, while in Menz the TVET (Technical and vocational Education & Training) linked up with Micro Finance Institutions in the area to give trainings to youth groups on financial literacy.

Under **L&E**:

- The CLEANED virtual training for Ethiopia took place from 24-28 August 2020 with 5 Ethiopian Participants: two ICARDA staff and three NARS researchers from SARI, Holetta and Gondar Agricultural Research centers, all male.
- The highland communal grassland management team engaged national Ethiopian researchers from Debre Birhan Research Center in Menz, and Abergelle Research Center and Sekota Research Center in Abergelle, and trained researchers to (i) conduct rangeland monitoring and upload the data to the open-access online Land PKS repository (<https://landpotential.org/>); and (ii) facilitate management discussions with representatives of community user groups.

**Long-term trainings completed:**

**Genetics FP:**

One PhD and three MSc studies were completed.

PhD thesis: Phenotypic, Genomic and Physiological Basis of Fecundity Traits in Bonga Sheep of Ethiopia. Asrat Tera, Hawassa University, Ethiopia

MSc theses:

- Evaluation of the genetic progress and changes in genome structure of sheep under community-based breeding programs in Ethiopia. Emna Rekik, the Polytechnic University of Valencia, Spain
- Estimates of Genetic Parameters and Genetic Trends for Productive and Reproductive traits of Doyogena Sheep in Southern Ethiopia. Kebede Habtegiorgis, Jimma University, Ethiopia.
- Evaluation of selection response of growth and reproduction traits in different out scaled Bonga sheep community-based breeding programs in Kaffa zone, Ethiopia. Ebadu Areb, Jimma University, Ethiopia.

### 1.3.4 Climate Change

*Summarize key achievements and learning points in terms of your contributions to addressing climate change issues (200 words max.)*

Highland communal grassland management in Ethiopia will fill a significant gap in enabling climate-smart development of mixed farming systems. Highland grasslands are often a key source of feed, and enhancing this feed base will play significant roles in regulating landscape-level ecosystem services from emissions mitigation to runoff reduction.

## **2. Effectiveness and Efficiency**

### **2.1 Management and governance**

*Describe any major changes to management, governance arrangements and practices, if any. Describe any key top-level program management challenges, if any, and how they were addressed (200 words max.)*

No changes were made to management and governance structures established in 2019. Under the Covid-19 restrictions the coordination function of Abiro Tigabie was less effective , and high level engagement with the Ethiopian government to be led by Siboniso Moyo could not be rolled out as planned in the action plan developed through partnership landscaping for Ethiopia.

### **2.2 Partnerships**

#### **2.2.1. Highlights of External Partnerships (300 words)**

*Summarize any interesting highlights, value added and points to improve/ learning points from 2020 and refer where appropriate to*

**Table 8: Key external** partnerships (200 words max.)

No new partnerships were established with the exception of **L&E FP** team which collaborated with a new set of partners: Communal grassland management engaged national Ethiopian researchers from Debre Birhan Research Center in Menz, and Abergelle Research Center and Sekota Research Center in Abergelle, and representatives of community user groups, whom we also consider to be our partners in the work, numbering approximately 500 representatives across 20 grasslands of area 2-200 ha in Menz and 15-300 ha in Abergelle (woreda and kebele level government were also engaged, e.g., to identify grasslands).

### 2.2.2. Cross-CGIAR Partnerships (300 words)

Summarize general points on highlights, value added and points to improve/ learning points from 2020 and refer where appropriate to

**Table 9: Internal Cross-CGIAR** Collaborations. Any points you can include on added value of Platforms and integrating CRPs would be very useful (200 words max.)

No new cross CGIAR partnerships in addition to what was reported in 2019.

### 2.3. Intellectual Assets

(a) Have any intellectual assets been strategically managed by the CRP (together with the relevant Center) this year? E.g. taking out intellectual property rights, licensing, new innovative practices. Note that strategic management implies involvement of PMU, flagship or cluster leaders in decision making, in furtherance of the CRP Theory of Change (50 words max.)

N/A

(b) Indicate any published patents and/or plant variety right applications (or equivalent) associated with intellectual assets developed in the CRP and filed by Centers and/or partners involved in the CRP, giving a name or number or link to identify them (100 words max.)

N/A

(c) List any critical issues or challenges encountered in the management of intellectual assets in the context of the CRP (50 words max.)

N/A
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## 2.4 Monitoring, Evaluation, Impact Assessment and Learning (MELIA)

a) Complete

b) and add a short narrative here to introduce the table and highlight any key points of interest (max. 50 words)

<p>The planned baseline in the four SmARt pack intervention sites could only be started late November 2020 due to Covid and was completed in January 2021.</p>
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<p>The report on gender capacity assessment of our research and development partners in three sites was published in 2020 but the respective training had to be postponed to 2021.</p>
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<p>The gender/cap dev team developed a survey tool for assessing changes in Knowledge, Attitude and Practices (KAP) for evaluating the effect of community conversations related to animal health, feeding and collective action.</p>
---

c) Complete Table 11: Update on Actions Taken in Response to Relevant Evaluations

No actions to be reported .

## 2.5 Efficiency

Describe any examples of efficiency gains and successes in 2020 and points to improve in future, providing numbers where possible. For previous examples, see 2017 CGIAR performance report, p. 45 (100 words max.)

<p>As reported in 2019, efficient implementation of the program requires close collaboration and joint planning of the teams. Just when we had achieved clear processes and structures, such as more timely responses to the coordinator and good exchange between team members, Covid 19 hit Ethiopia and the home office situation coupled in the beginning with connectivity issues severely hampered the coordination again. In 2020, the teams worked individually on implementation using windows of opportunities for field trips and meetings but did not coordinate and interact much with each other.</p>
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## 2.6 Management of Risks to Your CRP

Summarize any encountered risks and mitigation measures taken under the three following headings: programmatic, contextual and institutional risks (for more information see the CGIAR Risk Management Guidelines (100 words max.)

<b>Programmatic:</b> no risk to be reported
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**Contextual:** The Covid 19 situation in Ethiopia led to postponement of field activities, group trainings and community meetings.

In the last quarter of 2020, some group trainings which did not require physical presence for practical sessions were held virtually. Community meetings were resumed with smaller number of participants and strict hygiene measures.

**Institutional:** No risk to be reported

## 2.7 Use of W1-2 Funding

Complete

**Table 12: Examples of W1/2 Use in this reporting period (2019)**, and briefly elaborate below on any particularly interesting points on your use of W1/2: e.g. any important achievements and/or cross-cutting work made possible (100 words max.)

**Genetics:** W1/2 funds were used to ensure that CBBPs can be still sustainably implemented when external funding is withdrawn. Actions taken to ensure this happens included: 1) establishment of legal breeder cooperatives as institutional set up to lead and implement CBBPs over longer period; 2) purchase of candidate sires to be used in the community and ultimately as revolving fund; and 3) Capacity development of partners at various stages.

**Health:** W1/2 funds were used to supply partners with vaccines and drugs for implementing the herd health interventions.

**F&F:** W1/2 funds covered laboratory analysis to determine nutritional potential of indigenous and unexploited forages currently used by sheep farmers in 3 different agroecological zones in SW Ethiopia and Amhara regions. In addition, capacities of forty-four (44) sheep fattening youth groups and of three (3) Community of Practice platforms were strengthened.

**L&E:** The Alliance funded training on CLEANED and subsequent consultancies to fund the application in Ethiopia were funded. ILRI supported trainings and community meetings related to improving highland communal grassland management in Menz and Abergelle

**Shared funding** was used for employing our field coordinator and skilled enumerators in the new SmaRT pack villages.

## Annual Report Tables

### Table 1: Evidence on Progress towards SRF targets (Sphere of interest)

*Complete this table with any available high-quality evidence on progress that was published or made available in 2020. Do not hesitate to state, “no new evidence available this year”, in column 2 if appropriate. For examples of how this information can be phrased and referenced, please see Annex Table A [here](#) in the 2017 CGIAR Annual Performance Report.*

*If the adoption or impact data comes from a relevant innovation or contribution of the CGIAR prior to the CRP start-up (e.g. varieties released before the CRP start-up, which for most CRPs would be approximately 2012), then please support statements with published references, as shown in the 2017 Annual Report Annex Table A above. Nearly all adoption or impact studies fall into the above category. There are a few cases in which the estimated figures for at-scale adoption or impact result from an innovation released within the current CRP period. If this is the case, then the statement must be supported by a link to an Outcome/ Impact Case Report **Maturity Level 3**.*

SLO Target (2022)	Brief summary of new evidence of CGIAR contribution  <i>[Put N/A if the specific SRF target is not applicable to your CRP. Put "No new evidence in 2020" if the target is potentially relevant, but there is no new evidence available. Spell out all acronyms.]</i>  <i>Max. 150 words</i>	Expected additional contribution before end of 2022 (if not already fully covered).  <i>[Optional narrative. Evidence not required.]</i>  <i>Max. 100 words</i>	Geographical scope (with location)  Global, Regional (e.g. West Africa), Multi-national, National (e.g. Philippines), Sub-national  Required.
1.1. 100 million more farm households have adopted improved varieties, breeds, trees, and/or management practices	Through the Livestock and Fisheries sector development project of the Ethiopian government, we were able to upscale community-based breeding program to more than 1000 additional households t	We plan to cover more than 5000 households by the end of 2021.	National, Ethiopia
1.2. 30 million people, of which 50% are women, assisted to exit poverty			
2.1. Improve the rate of yield increase for major food staples from current <1% to 1.2-1.5% per year			
2.2. 30 million more people, of which 50% are women, meeting minimum dietary energy requirements			
2.3. 150 million more people, of which 50% are women, without deficiencies in one or more essential micronutrients			

3.1. 5% increase in water and nutrient efficiency in agroecosystems			
3.2. Reduction in 'agriculturally'-related greenhouse gas emissions by 5%			
3.3. 55 M ha degraded land area restored			
3.4. 2.5 M ha forest saved from deforestation			

**Table 2: Condensed list of policy contributions in this reporting year (Sphere of Influence)**

Please list policy contributions here, for example any contributions to national breeding or data policies. Please see the indicator guidance for indicator #11 number of policies which also includes an explanation of what is covered under the term 'policy'. Full supporting information should be submitted through the MIS system.

Title of policy, legal instrument, investment or curriculum to which CGIAR contributed (max 30 words)  <i>Spell out acronyms in every row</i>	Description of policy, legal instrument, investment or curriculum to which CGIAR contributed (max 30 words).	Level of Maturity	Link to sub-IDs (max. 2)	CGIAR cross-cutting marker scores				Link to OICR (obligatory if Level of Maturity is 2 or 3) or link to evidence
				Gender	Youth	Capdev	Climate Change	
None to be reported								

**Table 3: List of Outcome/Impact Case Reports from this reporting year (Sphere of Influence)**

List any Outcome/ Impact Case Reports (OICR) generated in this reporting year. The report can be for a new Outcome/ Impact Case or one previously reported that has progressed to a new level of maturity or has been updated but is at the same level of maturity. Please note that you have to use the common CGIAR outcome/impact case report template. The levels of maturity (column 2) are described in the OICR template, with examples.

Title of Outcome/ Impact Case Report (OICR)	Maturity level: 1, 2, or 3
No outcome stories	

**Table 4: Condensed list of innovations by stage for this reporting year**

Please see [indicator guidance](#) for details of innovation descriptions, types, stages.

All innovations are reported under the flagships, there are no specific innovations from the country program.

Title of innovation (with link if possible)	Innovation Type	Stage of innovation	Geographic scope (with location)

**Table 5: Summary of status of Planned Outcomes and Milestones (Sphere of Influence-Control)**

For each outcome, outline highlights of progress, setbacks and changes of direction this year, and briefly explain how the set of milestones have contributed to current progress/direction (100 words max.). Indicate the status of milestones and include links or references for supporting evidence where appropriate.

Flagship	Outcome	Summary narrative on progress against outcome in 2020	Milestone	2020 milestone status (complete, extended, cancelled, or changed)	Evidence for completed milestones or explanation for extended, cancelled or changed Max 200 words
F1	Outcome 1.1: Data on livestock diversity and systems, including from a gendered lens, used to develop or refine genetic improvement and / or conservation strategies by policymakers, national research and development partners, and the private sector, in 5 CRP priority countries and other locations.		2020 - 1.1.6 Baseline genome characterization information of existing small ruminant populations including genome sequencing available for Ethiopia, Sudan, Tanzania		
			2020 - 1.1.8 Identification of genomic regions strongly associated with tolerance to <i>Theileria parva</i> infection in cattle		

F1	Outcome 1.2 Genetic improvement strategies for improved livestock genetics implemented by national research and development partners, and the private sector in 6 CRP priority countries and other locations.		2020 - 1.2.5 Breeding strategies for pastoral production systems established in Ethiopia and Sudan		
F1			2020 - 1.2.7 National genetic improvement strategy for pigs in Uganda endorsed by stakeholders		
F1	F1 Outcome: Outcome 1.3 Business models for multiplication and delivery of improved livestock genetics, to resource poor women and men livestock keepers, implemented by national research and development partners, and the private sector in five CRP priority countries and other locations.		2020 - 1.3.5 First indigenous ecotype recovered from cryopreserved primordial germ-cells (PGC)		
			2020 - 1.3.6 First transgenic trypanoresistant calf born at ILRI facility		
F1	F1 Outcome: Outcome 1.4 Women and men resource poor livestock keepers sustainably utilizing improved		2020 - 1.4.2 Community-based breeding program upscaled in four regions of Ethiopia (Amhara, Oromia,	Completed in the sense that we have started the upscale, but the	<a href="https://hdl.handle.net/20.500.11766/12547">https://hdl.handle.net/20.500.11766/12547</a> This is a project that will run for 3 more years and we expect to achieve the target number by 2023.

	livestock genetics, both productive and adapted, in 3 priority countries and other locations.		South and Tigray) with more than 10,000 households participating	number will be reached in 2023.	
F2	Outcome 2.1 Assessment tools for significance of animal diseases and risk maps for emergence of animal diseases are used by 100 local and national and 50 international research partners and donors to prioritise research and development interventions to reduce livestock disease risks for livestock keepers.		2020 - 2.1.2 The findings from the use of assessment tools for significance of animal diseases and risk maps for emergence of animal diseases are used by 75 national and 25 international research partners and major donors, in both priority countries and other locations, to prioritise research and development interventions		
			2020 - 2.1.8 Harmonised data collection for gender sensitive modelling for <i>peste des petits ruminants</i> (PPR) control in high risk transboundary areas implemented in Kenya, Uganda, Tanzania, Ethiopia, Senegal, Mali and Burkina Faso		

			2020 - 2.1.9 Tick distribution in North and East Africa mapped		
F2	Outcome 2.2 Context specific herd health management packages adopted by farmers, extension and animal health workers in priority countries and other locations.		2020 - 2.2.5 Herd health services in pigs used and evaluated in Uganda		
			2020 - 2.2.6 Integrated herd health interventions in small ruminants in Ethiopia implemented	Completed	Vaccination and deworming at community level, combined with capacity development through community conversations are being implemented. (Monitoring is ongoing, some evidence published on early community conversation modules).
F2	F2 Outcome: Outcome 2.3 Livestock keepers have necessary knowledge of anti-microbial resistance (AMR) and anti-parasitic resistance (APR) to change their practices accordingly, piloted in two priority countries (Uganda and Vietnam).		2020 - 2.3.2 Interventions towards more responsible use of antibiotics being implemented in 2 countries	completed	Trainings on responsible use of AMR were run through community conversations in Ethiopia in 2019, and the trainings will continue in other CRP sites in 2021 through the priority country program. This also allows to then monitor change in attitudes and practice. In addition, SLU works on an online training on responsible use for vets and other animal health service providers.

F2	Outcome 2.4 National and international research partners, government agencies and the private sector use 2 novel diagnostic assays and vaccines for control of ASF, CBPP, CCPP, ECF and PPR in at least 6 priority countries.		2020 - 2.4.3 A novel challenge method for contagious bovine pleuropneumonia (CBPP) tested at ILRI Nairobi		
			2020 - 2.4.10 Production of recombinant viral vectors expressing 8 African swine fever virus (ASFV) antigens for testing in pigs		
			2020 - 2.4.11 Several African swine fever virus (ASFV) vaccine candidates produced, with 30 tested for attenuation in pigs and at least 2 tested in protection experiments		
			2020 - 2.4.12 Improved <i>in-vitro</i> assays systems to measure correlates for East Coast fever (ECF)		
F2	Outcome 2.5 Improved access to livestock-related health services and products for female and male		2020 - 2.5.3 Government, development and private sector actors use tested sustainable delivery		

	livestock keepers in 4 priority countries		models to provide products and services to livestock keepers in 4 priority countries		
F3	Outcome 3.1 - Local, national and international research and development partners, the private sector, decision-makers and livestock producers are able to diagnose feed constraints and opportunities and to effectively prioritize and target feed and forage interventions, resulting in: a 10% improvement in utilization of feeds and forages, a 20% increase in animal production using improved feed and forage technologies, a 10% accuracy increase for biomass and quality estimation and at least 250,000 annual visitors to global databases, repositories, interactive tools and maps and the Tropical Grasslands/Forrajes Tropicales journal website.		2020 – 3.1.13 Feed Assessment Tool (FEAST) and Gendered Feed Assessment Tool (G-FEAST) are applied by non-CGIAR researchers in at least 1 priority country (Vietnam) and 2 other countries (Burkina Faso and Rwanda)		
F3			2020 – 3.1.14 2 Updated Selection of Forages for the Tropics (SoFT) and Animal Feed Analysis Web Application (AFAWA) tools being used by at least 100,000 users globally		

F3	Outcome 3.3 - National and international research and development partners and the private sector are using CRP developed forage and rangeland resources (with enhanced traits), in 30 countries and reaching producers who plant over 2 million ha, to increase the rate of genetic gain and exploit the genetic diversity of forages and rangeland species to enhance stress-tolerance, biomass productivity and nutritive value.		*2020 – 3.3.10 Already available forage hybrids scaled with private sector partner in at least 15 countries on 100,000 additional hectares (calculated based on seed sales). Total area of hybrids scaled will have reached 1,100,000 hectares		
F3			2020 – 3.3.11 10 Barley genotypes with higher biomass, higher grain yield, better tolerance to biotic and abiotic stresses validated by NARS partners in field stations in Morocco and Ethiopia.		
F3	Outcome 3.4 - New forage and crop cultivars, superior to local (based on food, feed and fodder traits weighted according to target domains), made available by development partners, government agencies and the private sector and applied by		2020 – 3.4.5 Identified dual-purpose crops (food and feed), superior to local feeds, are made available by development partners, government agencies and the private sector and applied by 150,000 farmers in at least one country and at least one		

	farmers in 7 priority counties and other locations.		new additional dual purpose cultivar will be released and 3 new promising cultivars tested in 3 new countries		
F3	Outcome 3.5 - National and international development partners, government agencies and extension services, the private sector and community-based organisations in 3 priority countries are using CRP-related research outputs for better utilization of existing and novel feed and forage resources. This will be through (a) scalable processing technologies, (b) management strategies to conserve and rehabilitate rangelands and (c) diet formulation that increases productivity while reducing overall feed and forage costs and environment impacts.		2020 - 3.5.6 Training and feed certification system piloted and monitored in Uganda and one least-cost diet designed and tested including aflatoxin binder inhibition effects with private sector and regulatory organs in Ethiopia		
F3			2020 - 3.5.7 Commercial least-cost diet for intensified small ruminant fattening in India developed and branded and one pilot treatment unit/plant established in India		
F3	Outcome 3.6 - Livestock producers in 3 priority countries: apply management strategies to conserve and		2020 - 3.6.4 Agronomic practices for selected forage accessions developed and made		

	rehabilitate rangelands and pastures while ensuring ongoing ability to produce, preserve and store feed biomass and use diets that increase productivity while reducing overall feed and forage costs and environmental impacts (with the environment and livelihoods flagships).		available for Lebanon and Morocco		
F3	Outcome 3.8 - Increased delivery and uptake of feed and forage resources through proof-of-concept scaling, business model development and value-chain approaches by development partners, the private sector (feed and forage traders, feed processors) and (1 million by 2022) farmers across diverse environments in priority countries and other		2020 - 3.8.15 ICARDA, ILRI and CIAT in collaboration with national and international development partners and other value chain actors pilot test and evaluate at least four extension approaches using new media (e.g. apps, SMS, e-learning) in at least 1 priority country and 2 other countries		

F3	locations in Latin America, North and East Africa and South and Southeast Asia.		2020 - 3.8.16 At least 2 inclusive business models for forage seed production and conservation identified in Uganda, Kenya and Colombia, and 1 existing seed business model evaluated and 1 seed processing business model developed for Tunisia		
F3			2020 - 3.8.17 Technical basis for the Colombian Policy on Sustainable Bovine Livestock submitted to the policy makers in Colombia		
F3			2020 - 3.8.18 At least 3 regional multi-stakeholder feeds and forages platforms established in Kenya and at least 10 regional livestock roundtables functioning on their own in Colombia		

F4	4.1 Environmental concerns are considered in decision making across at least 10 priority countries and other locations, by national and international development partners, government agencies and extension systems, including technology developers seeking to improve cattle, small ruminant and pig production.	Engagement of Ethiopian National Research Centers in communal grassland management helps to bring these lands to the forefront of development and research on sustainable production systems.	2020 - 4.1.4 Technology developers take environmental issues into account in research priority setting in 5 countries	delayed	Three Ethiopian partners were trained in the use of the CLEANED model. They have demonstrated that they gained the skills to run the model, through defining the different systems that will be modelled and by starting to input characterization data and parameters. The application of CLEANED will be done through these local partners with some support from the program team.
F4	4.2 Targeted solutions are used by research and development partners, across at least 10 priority countries and other locations, to increase the productivity of cattle, small ruminants and pigs in the face of ongoing environmental changes.	A quantitative grassland condition baseline for Ethiopian highland communal grasslands was created to track change and experimental treatments for management recommendations.	2020 - 4.2.4 Quantification of environmental impacts guides development/ selection of productivity enhancing options in five countries	Complete	
F4	4.5 National government agencies across at least 5 priority countries design and implement key policies to improve the environmental management of livestock systems	Policy for Ethiopian highland communal grasslands is being informed by piloting a process and creating tools for communal grassland management,	2020 - 4.5.6 Tools, frameworks and processes for improved rangeland governance and management available in two countries	Complete	Two manuals produced and pilot initiated for improved management of Ethiopian highland communal grasslands.

		for which significant ultimate uptake can be expected.			
F5	F5 Outcome: 5.1 National and international research partners and policymakers use analyses of livestock-sector dynamics, investment and ex-ante impact assessments to guide priority setting, investment and policy development for the livestock sector in 5 priority countries and within the Livestock CRP		2020 - 5.1.6 National and international research partners use analyses of livestock sector dynamics, investment and ex-ante impact assessments to guide priority setting for the livestock sector in 2 priority countries		
F5			2020 - 5.1.7 National partners and their donors participate in new Livestock Master Plan development in 2 priority countries, based on bilateral support		
F5	5.2 International researchers and agencies use improved livestock system modelling tools and apply them to new problems based on their mandate areas		2020 - 5.2.2 Improved data protocols, impact indicators and new model structures developed and documented		
F5			2020 - 5.2.3 Livestock system modelling tools		

			and databases improved with national and international partners to fit needs in 3 priority countries		
F5	5.5 Local and national development actors, government agencies, and the private sector invest in and adopt the most successful approaches for enhancing livestock-mediated nutritional impact, including institutional arrangements and behavioural change, in 3 priority countries.		2020 - 5.5.4 Local and national development actors and government agencies adopt tailored options for nutritional impact through livestock development, including cost-effective institutional arrangements and behavioural approaches, within communities in Kenya		
F5	5.7 Development partners, private sector and government agencies across 4 priority countries apply innovative institutional arrangements to enhance competitiveness and inclusiveness		2020 - 5.7.3 Development partners, private sector and government agencies in 2 priority countries apply innovative institutional arrangements to raise competitiveness and inclusiveness	Complete for Ethiopia	In Ethiopia we demonstrated that market facilities are beneficial to farmers and that they are willing to pay for it so that it could be an investment opportunity.

**Table 8: Key external partnerships**

List up to five important partnerships for 2020

Lead FP	Brief description of partnership aims (30 words)	List of key partners in partnership. Do not use acronyms.	Main area of partnership (may choose multiple), Research/Delivery/Policy/Capacity Development/Other, please specify _____
L&E	Training national researchers on grassland management, monitoring, and experimentation with community grassland user groups	Debre Birhan Research Center, Abergelle Research Center, Sekota Research Center	Research and Development
F&F	Training national researchers on identification of unexploited indigenous forage resources	South Agricultural Research Institute; Amhara Regional Agricultural Research Institute	Research and development

**Table 9: Internal Cross-CGIAR Collaborations**

Include collaborations with one or more CRPs or Platforms – or with other Centers, if these are not already core partners for your CRP

Brief description of the collaboration	Name(s) of collaborating CRP(s), Platform(s) or Center(s)	Optional: Value added, in a few words e.g. scientific or efficiency benefits
No new collaborations in 2020		

**Table 10: Monitoring, Evaluation, Learning and Impact Assessment (MELIA)**

*Indicate the Status of Evaluations, Impact Assessments etc. conducted in 2020 – contact Nils Teufel or Caroline Kanyuuru for guidance on types/descriptions if necessary.*

Studies/learning exercises planned for this year (from POWB)	Type of study or activity 1. EPIA (Ex-post Impact Assessment) 2. Ex-post adoption study 3. Program/project adoption or impact assessment 4. Correlates of adoption / impact study 5. Qualitative Outcome Study (mainly to substantiate contribution to policy or similar) 6. Program/project evaluation or review 7. Synthesis (secondary) study) 8. Ex-ante, baseline and/or foresight study 9. Other MELIA activity (please specify)	Description of activity / study	Links to MELIA publications

Baseline for EPIA in the four SmaRT pack intervention sites in Ethiopia	EPIA	Impact assessment of SmaRT pack intervention for Ethiopia country Program	Data will be curated in 2021
Gender capacity assessment of research and development partners in three intervention sites in Ethiopia	Other: Cap dev assessment	Assessment of current gender capacities of partners at Bonga, Menz and Abergelle intervention sites using the tool developed by LLAFS	<a href="https://hdl.handle.net/10568/110132">https://hdl.handle.net/10568/110132</a>
Survey tool for assessing changes in Knowledge, Attitude and Skills (KAP) for evaluating the effect of community conversations related to animal health, feeding and collective action.	Other: qualitative KAP assessment	Community conversations on animal health, feeding and collective action were started in all sites end 2020	Results will be reported in 2021 (Related material: guideline on CC: <a href="https://hdl.handle.net/10568/109673">https://hdl.handle.net/10568/109673</a> )

**Table 11: Update on Actions Taken in Response to Relevant Evaluations**

Name of the evaluation	Recommendation number (from evaluation)	Text of recommendation (can be shortened)	Status of response to this recommendation: Completed/ Ongoing	Concrete actions taken for this recommendation (one row per action)	By whom (per action)	When (per action)	Link to evidence
Nothing to report							

**Table 12: Examples of W1/2 Use in this reporting period (2019)**

*The objective of this table is to self-report key activities and deliverables that were funded through W1/2 in the past year.*

<p><b>Please give specific examples, one per row (including through set aside strategic research funds or partner funds)</b></p> <p>Max 50 words/example, but aim for 30</p>	<p><b>Broad area of use of W1/2: Research / Delivery / Partnerships / Capacity Development / Other cross-cutting / Policy / Pre-startup / Contingency or Emergency / MELIA / Other (specify)</b></p>
Genetics: Establishment of legal breeder cooperatives an institutional set up to lead and implement CBBPs	Capacity Development
Genetics: Purchase of candidate sires to be used in the community and ultimately as revolving fund	Delivery
Genetics: Capacity development of partners for implementing CBBPs	Capacity Development
Health: Supply of vaccines and drugs to partners for implementing herd health interventions	Research
F&F: Laboratory analysis to determine nutritional potential of indigenous and unexploited forages currently used by sheep farmers in 3 different agroecological zones in SW Ethiopia and Amhara regions.	Research
F&F: Strengthening capacities of forty-four (44) sheep fattening youth groups and capacities of three (3) Community of Practice platforms	Capacity Development
L&E: Cleaned training and consultancies for CLEANED application	Capacity Development
L&E: Trainings and community meetings related to highland communal grassland management in Menz and Abergelle	Capacity Development
LLAFS: Community conversations on animal health, feeding and collective actions	Capacity Development /Gender
Shared: Employing field coordinator and skilled enumerators in the new SmarT pack villages	MELIA

## Part C: 2020 Deliverables

Please insert a table with the agreed deliverables in your PPA/program agreement/priority country project, indicating the status of each: complete (providing evidence link), extended (giving year), or cancelled (giving reason).

Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
<a href="#">D18413</a>	completed	<a href="https://hdl.handle.net/20.500.11766/12629">https://hdl.handle.net/20.500.11766/12629</a>	(LLAFS) Training module for collective action targeting producers	Module is being developed based on the tested best bet on Smart Marketing (Led by LLAFS-ICARDA)	F5	Girma	
<a href="#">D18416</a>	extended	-	(LLAFS) Report on training of collective action for 4 sites	Training on collective action will be conducted in 4 VC sites (Led by LLAFS-ICARDA)	F5	Girma	
<a href="#">D18417</a>	extended		(LLAFS) Report on feedback and gender capacity need/priority areas of development	Feedback sessions on the results of the gender capacity development (GCD) of research & development partners in Bonga, Menz & Abergelle	F5	Mamusha	The assessment report was completed; it is planned to integrate feedback sessions into the training of research and development partners planned for first quarter 2021
<del><a href="#">D18418</a></del>	cancelled (duplicate of D18417)	=	(LLAFS) Report on feedback and gender capacity need/priority areas of development	Feedback sessions on the results of the gender capacity development (GCD) of research & development partners in Bonga, Menz & Abergelle	F5	Barbara	
<a href="#">D18419</a>	Completed	<a href="https://hdl.handle.net/10568/107957">https://hdl.handle.net/10568/107957</a>	(LLAFS) (Health) Report on training of local facilitators for	Train local CC facilitators on the guide who will in turn implement the CCs	F5,F2	Mamusha	

## AR2020 CRP Livestock Template - Partners/Programs/Countries

Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
			community conversations in 4 VC sites	(2019-2020) (Led by Health ILRI)			
<a href="#">D18420</a>	<a href="#">extended</a>	-	(LLAFS) Report on marketing models for 4 SR VC sites	Proposed marketing models based on meeting and workshops with main actors (collectors, traders, producers) involved in live animal marketing in 4 VC sites	F5	Girma	
<a href="#">D18421</a>	<a href="#">extended</a>	-	(LLAFS) Report on discussion of marketing models at national level	Initiation of implementation of marketing models with a workshop at national level in Addis (last quarter of 2020)	F1, F2, F3, F4, F5	Girma	
<a href="#">D18422</a>	<a href="#">extended</a>	-	(Shared) Community and district level MSP activity reports in 4 selected VC sites (Doyogena, Bonga, Abergele and Menz)	Reports on multi-stakeholder platform activities at community and district level in 4 VC sites (Shared)	F1, F2, F3, F4, F5	Abiro	
<a href="#">D18423</a>	<a href="#">completed and reported in MARLO</a>	<a href="https://hdl.handle.net/20.500.11766/12558">https://hdl.handle.net/20.500.11766/12558</a>	(Shared) Intervention calendar for 2021 (refined version from 2019), in the form of a word document and online calendar	A calendar that clearly outlines timing of the different interventions at community level	F1, F2, F3, F4, F5	Barbara & Abiro	

## AR2020 CRP Livestock Template - Partners/Programs/Countries

Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
<a href="#">D18424</a>	<a href="#">extended</a>		(Shared) Brief report on follow-up on partnership landscaping	Reports describes activities related to the action plan defined in the partnership landscaping report from 2019	F1, F2, F3, F4, F5	Barbara	
<a href="#">D18442</a>	<a href="#">will be completed</a>	<a href="#">link when fully completed</a>	(Shared) Ethiopia priority country annual report 2020	Annual report to CRP Livestock	F1, F2, F3, F4, F5	Barbara	
<a href="#">D18577</a>	<a href="#">extended</a>		(F&F) Guidelines on nutritional flushing for breeding ewes & rams in Menz	(F&F) Guidelines on nutritional flushing for breeding ewes & rams in Menz	F3	Jane	Ram, ewe and farmer selection had been already undertaken, however, project activities involving direct consultation and participation were prohibited by local authorities due to COVID 19. Towards the end of 2020, with relaxation of the lockdown, most farmers either had sold their rams and/or ewes and could no longer participate. This activity is currently ongoing.
<a href="#">D18578</a>	<a href="#">extended</a>		(F&F) Reports on supplementation of adaptable forages for sheep fattening in Doyogena and Bonga	(F&F) Reports on supplementation of adaptable forages for sheep fattening in Doyogena and Bonga	F3	Jane	The master theses were not completed in time due to delays in field work. But new deliverables were prepared with information on sweet lupin for Doyogena: <a href="https://hdl.handle.net/20.500.11766/12541">https://hdl.handle.net/20.500.11766/12541</a> ; <a href="https://hdl.handle.net/20.500.11766/12540">https://hdl.handle.net/20.500.11766/12540</a>

## AR2020 CRP Livestock Template - Partners/Programs/Countries

Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
<a href="#">D18579</a>	<a href="#">extended</a>		(F&F) Report on training of trainers for at least 60 development workers and 40 youth group leaders on the use of ESD manuals	(F&F) Report on training of trainers for at least 60 development workers and 40 youth group leaders on the use of ESD manuals	F3	Jane	Training of trainers could not be carried out in 2020 due to Covid restrictions but the Entrepreneurship and Business Skills Development Training Manual was completed in English (New: <a href="https://hdl.handle.net/10568/110595">https://hdl.handle.net/10568/110595</a> ), and for 2021 in Amharic ( <a href="https://hdl.handle.net/20.500.11766/12543">https://hdl.handle.net/20.500.11766/12543</a> ) and Keficho ( <a href="https://hdl.handle.net/20.500.11766/12544">https://hdl.handle.net/20.500.11766/12544</a> ).
<a href="#">D18580</a>	<a href="#">extended</a>	development will be undertaken in 2021.	(F&F) Manual for Business development service packages (e.g. Financial literacy, Marketing & operational manuals for sheep fattening youth groups)	(F&F) Manual for Business development service packages (e.g. Financial literacy, Marketing & operational manuals for sheep fattening youth groups)	F3	Jane	Development of this manual required basic data that needed to be collected from on-site visits planned in 2020. This was not possible due to the COVID-19 lockdown. The consultant contracted COVID towards the end of the year, when the lockdown was lifted, and was unable to undertake the task.
<a href="#">D18581</a>	<a href="#">extended</a>		(F&F) Report on identified and rolled-out profitable and youth friendly business models for sheep fattening youth groups in Doyogena, Bonga and Menz	(F&F) Report on identified and rolled-out profitable and youth friendly business models for sheep fattening youth groups in Doyogena, Bonga and Menz	F3	Jane	

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Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
<a href="#">D18582</a>	Will be completed	<a href="#">Link awaited by 15 March</a>	(F&F) Report on strengthening gender capacities of youth groups	(F&F) Report on strengthening gender capacities of youth groups	F3	Jane	
<a href="#">D18623</a>	extended		(GENETICS) Report on field implementation of certification of improved rams and bucks in Menz and Bonga	In 2019, the focus would be on insitutionalization of the certification process. In 2020-21, the certification for genetic worth, breeding soundness and health would be done routinely with clear benefit to the community	F1	Aynalem	
<a href="#">D18624</a>	completed and reported in MARLO	<a href="https://hdl.handle.net/20.500.11766/12546">https://hdl.handle.net/20.500.11766/12546</a>	(GENETICS) Report on establishment of small breeders' cooperatives in new villages in the 4 selected VC sites (Doyogena, Bonga, Abergele and Menz)	Interested community members would be organized in to smaller 'Breeders cooperatives' where data recording system would be established and closely monitored. The smaller group would be ultimately encouraged to produce improved sires for the whole community as business opportunity	F1	Aynalem	
<a href="#">D18625</a>	extended	-	(GENETICS) Report on business opportunities for ultrasonography in community flocks for 4 selected VC sites (Doyogena,	The cooperatives would be capacitated (material and skills) to take up ultrasonography as business opportunity. Different options for its functionality as business would be explored	F1	Aynalem	

## AR2020 CRP Livestock Template - Partners/Programs/Countries

Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
			Bonga, Abergele and Menz)				
<a href="#">D16686 (from 2019)</a>	<a href="#">completed</a>	<a href="https://hdl.handle.net/10568/109673">https://hdl.handle.net/10568/109673</a>	Community Conversations facilitation guideline in local language for Ethiopia	The facilitation guideline for community conversations adapted and translated into local language	F5	Mamusha	
<a href="#">D16683 (from 2019)</a>	<a href="#">completed and reported in MARLO</a>	<a href="https://hdl.handle.net/10568/110132">https://hdl.handle.net/10568/110132</a>	Report on gender capacity assessment (GCA) of research and development partners at Ethiopia project sites	Assessment of current gender capacities of partners at Bonga, Menz & Abergelle (both Amhara & Tigray) sites	F5	Barbara, Abiro, Mamusha	
<a href="#">D16664 (from 2019)</a>	<a href="#">completed</a>	<a href="https://hdl.handle.net/20.500.11766/12591">https://hdl.handle.net/20.500.11766/12591</a>	Report on context specific cultivated forages and utilization options for value chain sites in Ethiopia	Report on context specific cultivated forages and utilization options for 3 sites	F3	Jane	

## AR2020 CRP Livestock Template - Partners/Programs/Countries

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<a href="#">D16653</a> (from <a href="#">2019</a> )	cancelled (only one report in 2021 due to delays)		Report on use of ultrasonography to monitor reproduction in sheep and goats	The use of ultrasonography here is for managing reproduction in sheep and goat to follow females and avoid reproductive wastage resulting from longer dry periods. If an animal is dry for prolonged periods then either mating can be arranged or, if found unfit for reproduction, the animal can be culled.	F1	Mourad	A preliminary report will be delivered in 2020 and the activity needs to be extended to 2021 in order to collect more data to be the basis of a more comprehensive analysis
<a href="#">D16661</a> (from <a href="#">2019</a> )	will be completed	link by 15 March	Comprehensive feeding and management calendar for Ethiopian value chain sites	Calendar for feeding and management interventions in 3 sites: Bonga, Menz and Doyogena	F3	Jane	
<a href="#">D18272</a>	extended		(ENVIRONMENT) Restoration and grazing trial protocols	Research protocols for restoration and/or grazing management trials (1-3, depending on number of trials) (Led LLAFS)	F4	*Sircely, Jason (ILRI);	Re-design due to disruption in field work in progress
<a href="#">D18642</a>	extended		(ENVIRONMENT) Baseline environmental footprints Ethiopian livestock production systems	CLEANED application in the framework of the priority country activities	F4	*Notenbaert, An (CIAT);	-

## AR2020 CRP Livestock Template - Partners/Programs/Countries

Deliverable ID	Status	Link if completed	Deliverable Title	Deliverable Description	Flagship(s)	Individual(s) responsible	Explanation if needs to be cancelled/extended
<a href="#">D18797</a>	cancelled		(HEALTH) Project report on all animal health interventions in the 4 selected value chain sites in Ethiopia	Annual project report on all animal health interventions in the 4 selected value chain sites (Doyogena, Bonga, Abergele and Menz) focusing on uptake and impact	F2	*Mekonnen, Mesfin (ILRI);	Initially one report on the health interventions was planned for each year, it was now decided to compile all information in two reports in 2021 (D25781 and 25783) because the data from the sites were received too late for a formal report in 2020.
<a href="#">D18798</a>	Duplicate from 2019: Completed in 2019 under D16658	<a href="https://hdl.handle.net/10568/107025">https://hdl.handle.net/10568/107025</a>	(HEALTH) Training of trainers training module	Detailed educational material to train extension agents and local veterinarians in applying community conversation as a gender-transformative approach	F2	*Mekonnen, Mesfin (ILRI);	-
<a href="#">D18799</a>	cancelled		(HEALTH) Livestock health treatment calendar (refined from 2019)	A calendar that clearly outlines timing of the different animal health interventions at community level	F2	*Mekonnen, Mesfin (ILRI);	Treatment calendar including 2020 was published in 2019 ( <a href="https://cgspace.cgiar.org/handle/10568/107144">https://cgspace.cgiar.org/handle/10568/107144</a> ) which covers 2020, calendar for 2021 is integrated with interventions of other flagships (D18423)
<a href="#">D16660 extended from 2019</a>	cancelled	-	Project report on all health interventions in Ethiopia	Project report on all health interventions focusing on uptake and impact	F2	Barbara Wieland	One report will be prepared in 2020 including 2019 data.
<a href="#">D16676 extended from 2019</a>	Completed and reported in MARLO	<a href="https://hdl.handle.net/10568/110595">https://hdl.handle.net/10568/110595</a>	Grassland management characterisation manual for Ethiopian highlands	Methodology for assessment of highland grassland community characteristics and priorities in Ethiopia	F4	*Sircely, Jason (ILRI);	
<a href="#">D16679 extended from 2019</a>	Completed and reported in MARLO	<a href="https://hdl.handle.net/10568/110666">https://hdl.handle.net/10568/110666</a>	Grassland baseline report for Ethiopia	Baseline data from 6 grasslands in 2 sites, summarized in a report	F4	*Sircely, Jason (ILRI);	

## AR2020 CRP Livestock Template - Partners/Programs/Countries

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<a href="#">D16669 extended from 2019</a>	Completed and reported in MARLO	<a href="https://hdl.handle.net/10568/109721">https://hdl.handle.net/10568/109721</a>	Grassland management characterization report	Report on grassland uses, rights, managers, legal status, decision-making	F4	*Sircely, Jason (ILRI);	
<a href="#">D16649 extended from 2019</a>	cancelled		Baseline database for Bonga new target and control village	Data from the baseline survey collected from 75-100 households each in the new target and the control village in Bonga sheep value chain site	F5	Girma	-
<a href="#">New</a>	completed and reported in MARLO	<a href="https://hdl.handle.net/20.500.11766/12542">https://hdl.handle.net/20.500.11766/12542</a>	Entrepreneurship and Business Skills Development Training Manual.	Training material for farmers and youth groups involved in sheep fattening	F3	Jane	-
<a href="#">New</a>	completed and reported in MARLO	<a href="https://hdl.handle.net/20.500.11766/12541">https://hdl.handle.net/20.500.11766/12541</a>	Report on Farmers Field Day on Sweet Lupin in Doyogena, Ethiopia.	This farmer field day relates to options for supplementation of adaptable forages for sheep fattening in Doyogena and Bonga	F3	Jane	
<a href="#">New</a>	completed and reported in MARLO	<a href="https://hdl.handle.net/20.500.11766/12540">https://hdl.handle.net/20.500.11766/12540</a>	A Technical Note on Sweet Lupin Grain as Livestock Feed.	This fact sheet relates to options for supplementation of adaptable forages for sheep fattening in Doyogena and Bonga	F3	Jane	