

Six-month project progress update

Project Number	108872-001
Project Title	Improving Dietary and Health Data for Decision-Making in Agriculture and Nutrition Actions in Africa
Reporting period	September 1, 2020 - February 28, 2021

1. Project summary

The overall objective of this project is to develop an efficient solution to measure indicators that track nutrition and health outcomes and the progress at community and national levels. This report is covering activities related to the first specific objective, which is to “Develop and test cost-effective, scalable technologies to improve the collection of high-resolution (individual-level) dietary, nutrition, and health data”. During this period we continued pilot data collection through December 2020, and then successfully closed this down.

2. Progress towards Results/ Outcomes (up to a maximum of 10 bullet points)

- i) We successfully closed the pilot data collection activities in Samburu County, Kenya. The result of this work was over 60,000 submissions by caregivers and high participation from the CHVs. Our intention was to analyze the caregivers' data for accuracy by comparing it to the CHV data. Unfortunately, we have found some irregularities in the CHV data, which brings the value of such a comparison into question. Our revised approach has been to first run a preliminary assessment of the CVHs' and caregivers' data, using internal (within survey) consistency. Specifically, we are checking recorded MUAC measurements against the images of measurements submitted alongside each MUAC record. This is a manual process, but well worth the effort if it allows us to identify CHVs that performed poorly, which would result in inaccurate benchmark data. We have processed about 75% of the images as of writing and will then proceed with the analysis. In this analysis, we will also explore the correlation between other indicators, including Women's Dietary Diversity, and reported incidence of morbidity. Here the main idea is to determine if there are particular indicators that seem especially challenging for the caregivers to collect accurately. The issue of possibly questionable benchmark data has also led us to identify opportunities to include verification checks within the application to check for data-input errors. We hope to deploy those in our Post-pilot data collection.
- ii) Upon closing, we also performed feedback sessions and an endline survey with the 190 participant caregivers and 22 community health volunteers (CHVs). These feedback sessions provided recommendations on how to improve the tool. The caregivers most often liked the food groups, MUAC measurement and feedback sections. The CHVs seemed to also have the same preferences. There was little agreement on which sections were least liked. Participants—CHVs and caregivers—most often took 1-5 minutes but in some cases took longer. We will include a discussion on expected durations in future trainings and try to identify where participants might be getting slowed down. Finally, this endline also asked caregivers about control of and use of the rewards that they received for participating. Most (88%) of the caregivers reported that they had mostly controlled what the payments were used for, while 56% of the CHVs reported the same. Our research team had expected that the caregivers would have less control over how their rewards were spent than the CHVs, because for the CHVs the payments were salary generated as part of their professional position as CHVs, while the caregivers' rewards were more ad-hoc. In any case, it is heartening to know that the caregivers had control over how their rewards were spent. A large proportion of the participants, 91% of the caregivers and 72% of the CHVs, reported spending the incentive on purchase of food.
- iii) Created and released a project video on experiences of caregivers and CHVs during pilot data collection. ILRI posted the video on the Mbiotisho youtube site (<https://www.youtube.com/watch?v=cfBTUlbTRB8&t=13s>) and Jensen tweeted it to his network and tagged @ILRI, @FANRPAN and @IDRC_CRDI. We are using this video as an introduction to the work that we are doing. FANRPAN is in the process of launching the video on its website as well.
- iv) We are in the process of signing Terms of Reference (ToRs) with a PhD student, Joyce Marangu (joyce.marangu@gmail.com) that will be working with Dr Mark Tomlinson at the Department of Global Health, Stellenbosch University (South Africa). Marangu will be studying the impacts of a caregiver-focused informational/behavioral intervention developed under the Child Development in Marginalized Communities (CDMC) project implemented by Aga Khan University-Institute for Human Development, and the Alliance for

Human Development, Toronto. The research design will allow for testing the impacts of their implementation using digital messaging. This project will also include verification data collected by technicians, allowing for continued assessment of the caregiver-collected data.

3. Challenges encountered/ Actions taken

The COVID-19 pandemic created some challenges related to completing the pilot data collection but we were able to overcome them using several different approaches, mostly by reducing in-person activities as much as possible. A larger issue is that COVID-19 has created challenges for many of our potential partners, so that our options for the post-pilot data collection locations have been reduced. In addition, testing and quarantine requirements related to COVID-19 have made implementing outside of our home countries much more expensive and time consuming (because of quarantine and vehicle capacity policies) than it was pre-COVID. We are still working to identify good options on addressing this.

We have identified the following possible locations for the post pilot data collection:

- i) **Working with caregivers in informal settlements to track and improve health and nutrition.** This implementation would be in partnership with PhD student Joyce Marangu, who will lead the implementation of Mbiotisho (the smartphone app) as well as an intervention aimed at improving the nutritional status of children. This would take place in Nairobi.
- ii) **Complementing a surveillance network aimed at tracking the impacts of drought on pastoral households.** This work is in collaboration with ILRI's DIRISHA project, which is funded by FCDO (formerly DFID). This could take place in southern Ethiopia and/or Marsabit Kenya.
- iii) **Working with the WFP to track nutrition among an HIV-positive populations that are receiving ARVs.** The tracking is being done on behalf of National Aids and STDs Control Programme (NASCOP, <https://www.nascop.or.ke/>). We would implement in two locations, one rural and one urban. WFP, NASCOP and ILRI are working to develop a 2-pager to outline the proposed implementation.

Given that both (ii) and (iii) include options for multiple locations, we are unlikely to select them all.

Here we would like to reiterate that there are new cost considerations with working outside of Kenya. For ILRI staff, it is required that they quarantine for seven days upon arrival in Ethiopia and in Kenya. For our team to implement in Ethiopia would then cost an additional CAD 12,000 in room and board costs (2 staff taking 3 trips to the location, quarantining 7 days on both sides) and CAD 44,000 in extra staff time. We do not believe that the budget can absorb these additional expenses.

4. Strategic priorities for the next 6 months

The post pilot data collection was originally meant to be mainly focused on upscaling of the tool in up to three locations outside Kenya, following a successful pilot phase. However, due to challenges with data quality from both CHVs and caregivers (see Section 2 (i)), it has been decided to extend the tool testing period beyond the pilot data collection (see Section 3). Therefore, the priorities for the period March-August 2021 include the following:

- i) Conduct data analysis for pilot phase.
- ii) Complete agreements with the PhD student, Joyce Marangu.
- iii) Identify locations for the post pilot data collection and further testing in three more diverse locations in Kenya.
- iv) Update tools for specific application and launch post-pilot data collection locations.
- v) Complete data accuracy assessments from the pilot data collection.

5. Key numbers to be used for infographics

Those are cumulative numbers since the beginning of the project, please update only if the numbers have changed from the previous reporting period.

Number of farmers (women/men)	(190/0)
Number of innovations/solutions	1
Number of Masters and PhD students	1
Number of publications	1 peer reviewed
Other key numbers	0

ANNEX: Progress towards milestones

List the milestones given in your grant agreement for this reporting period and refer to the hard evidence in attached annexes (as needed). If applicable, explain why any are not achieved and how the project will readjust. Also include details on any unfinished milestones from the previous reporting period that were completed during this reporting period.

Milestone	Achievement (%)	Evidence/Indicator	Comment
Nutrition-targeted projects in Uganda and Ethiopia with which to partner identified and contracted	75	Collaborative research agreements between partner organizations (FANRPAN, ILRI and partner projects) executed	<ul style="list-style-type: none"> - Our original out-of-Kenya options are no longer viable because of COVID-related issues, especially the prohibitively high cost of international travel and related quarantine. - We have identified our 3 post-pilot locations in Kenya and are in the process of formalizing the partnerships.
Project review meeting by primary partners and stakeholders convened	100	Project review meeting report, with detailed workplan	<ul style="list-style-type: none"> - Pilot closing included feedback sessions with caregivers and CHVs. - The pilot data collection implementation was presented at the 2020 FANRPAN Annual Regional Policy Dialogue. - We have met with partners from 4 possible post pilot data collection locations and hope to move forward with 3 of them but are not yet at a place for workplans and meeting reports.
Ethics approval secured from ILRI's Research Ethics Board (IREC) and relevant national research review boards	25	- Signed approvals from review boards for Post-pilot locations (Pilot data collection completed)	- Review boards are aware of the coming request for amendments to the original approvals but the applications and approvals cannot be started until the locations are set and the tools are updated.
Tool modified and improved	50	- Modified tool to reflect new local languages and customs	- This will come once we have the post pilot data collection locations confirmed.
Post-pilot testing and improving	50	-	- Lessons learned from Pilot data collection phase are being used to improve the tool but this work is also conditional on the confirmation of Post-pilot phase locations and the needs of our new partners.
Candidate version of the tool released	25	- Refined prototype	- Updating is in progress but release will not take place until we have customized the tools with our partners for our Post-pilot phase locations.
Capacity to use tool developed at sub-national, national and regional levels (i.e., beyond pilot country).	50	Relevant stakeholders trained - Training materials and training workshop reports	- Presentations at the 2020 FANRPAN Annual Regional Policy Dialogue and at the Nutrition in a Digital World, UNSCN Webinar Series.
Dissemination and innovation workshops convened with the broader nutrition community	50	- Results on performance of released tool shared with community of practice	- Presentations at the 2020 FANRPAN Annual Regional Policy Dialogue and at the Nutrition in a Digital World, UNSCN Webinar Series.
Buy-in from the policy- and decision makers from the pilot country secured	50	- Letters of commitment and interest from key potential users (e.g. research and development organizations) and governments	- We are collaborating with WFP, FCDO, and NASCOP for our Post-pilot Phase locations. Letters of commitment will accompany those collaborations as appropriate.
Technical progress update (at 24 month point)	100	- Brief update on the key project achievements and status of milestones	- Submitted

Milestone	Achievement (%)	Evidence/Indicator	Comment
Annual monitoring and progress reports prepared	100	Technical and financial reports completed and submitted	- All reporting has been completed and submitted on time.

Outputs:

The following project outputs have been achieved during the reporting period:

Reports:

September 1, 2019 – August 31, 2020

- *September 1, 2019 – August 31, 2020: second interim report submitted September 2020*
- *September 2020 – February 2021: this six-month update report*

Websites:

- <https://www.drylandinnovations.com/healthandnutritiondata>

Mentions, blogs & videos:

September 1, 2020 – February 28, 2021

- Project video: <https://www.youtube.com/watch?v=cfBTUIbTRB8>

Presentations

- 2020. Nutrition in a Digital World, UNSCN Webinar Series. <https://www.unscn.org/en/news-events/upcoming-events?idnews=2121>
- 2020, FANRPAN Annual Regional Policy Dialogue. <https://www.youtube.com/watch?v=c2iivEiLC6I>

Peer reviewed articles:

- Jensen, Nathaniel, Vincent Alulu, Watson Lepariyo, Tshilidzi Madzivhandila, Bertha Mkandawire-Munthali, Simbarashe Sibanda. 2020. Improving nutrition and health data to and from remote regions. United Nations System Standing Committee on Nutrition (UNSCN)--Nutrition, 45, 96-102.