

LADA V. STRELKOVA

Operations Manager for Maldives, Nepal, and Sri Lanka South Asia Region

September 28, 2022

Dr. Govinda Prasad Sharma Secretary (Agriculture Development) Ministry of Agriculture and Livestock Development Singha Durbar, Kathmandu NEPAL

Dear Dr. Sharma:

Nepal: Food and Nutrition Security Enhancement Project (TF A8013) Sixth Implementation Review and Support August 16-31, 2022

I would like to take this opportunity to thank you for the courtesies and cooperation extended by the Government of Nepal to the World Bank team led by Ms. Karishma Wasti (Senior Agriculture Specialist) during the implementation review of the *Food and Nutrition Security Enhancement Project (FANSEP)* carried out during the period of August 16-31, 2022. The objectives of the review were to: (i) assess the overall implementation progress and (ii) discuss and agree on the key activities to be implemented for FY2022/23. The results of the implementation review are presented in the attached Aide Memoire.

I am pleased to note that the Project continues to make good physical and financial progress since the last review carried out in November 2021.

As discussed during the review, we would like to emphasize the need to retain the core project team both at the Project Management Unit and at the District Level Support Unit. I appreciate your kind attention to the following actions that were discussed and agreed:

- Share with the Bank your plan to use expected savings by **September 30, 2022.**
- Share the ToRs for Endline survey for the Bank's review by **November 15, 2022.**

I would be grateful if you could let us know if you have any comments to bring to our attention.

We thank you again for the fruitful and productive discussions during the consultation and look forward to continuing our collaboration in the coming months.

Sincerely,

Bigyan Pradhan Acting Operations Manager for Maldives, Nepal, and Sri Lanka cc: Honorable Member Dr. Dil Bahadur Gurung, National Planning Commission.

Dr. Deepak Kumar Kharal, Secretary (Livestock Development), Ministry of Agriculture and Livestock Development

Mr. Hari Prasad Mainali, Financial Comptroller General, Financial Comptroller General Office

Mr. Ishwori Prasad Aryal, Joint Secretary, IECCD, Ministry of Finance

Mr. Prakash Kumar Sanjel, Joint Secretary, Ministry of Agriculture and Livestock Development

Mr. Jagannath Tiwari, Project Director, Food and Nutrition Security Enhancement Project

Mr. Khim Bahadur Kunwar, Under Secretary, IECCD, Ministry of Finance

Mr. Narendra Prakash Pandey, Advisor to Executive Director for Nepal and South East Asia,

The World Bank

Food and Nutrition Security Enhancement Project (TFA8013) Sixth Implementation Review and Support August 16 to 31, 2022 Aide Memoire

I INTRODUCTION

1. A World Bank Team led by Ms. Karishma Wasti¹ (Sr. Agriculture Specialist; Task Team Leader) carried out the implementation review of the Food and Nutrition Security Enhancement Project (FANSEP) from August 16 to 31, 2022. The objectives of the review were to: (i) assess the overall implementation progress since the last mid-term review (MTR) in November 2021, and (ii) discuss and agree on key activities to be implemented in FY2022/23. This Aide Memoire (AM) summarizes the key discussions held and actions agreed between the World Bank task team (hereafter 'Bank team'), FANSEP Project Management Unit (PMU) team and at the wrap-up meeting held under the chairmanship of the Secretaries Dr. Govinda Prasad Sharma and Dr Deepak Prasad Kharal on August 30, 2022. List of people met are provided in Annex 1. As agreed during the wrap-up meeting, this AM will be classified as a public document as per the World Bank's Access to Information Policy.

II. OVERALL PROJECT PERFORMANCE

Project Data		Project Performance Ratings					
			Last	Now			
Board Approval	September 25, 2018	Achievement of PDO	MS	MS			
Effectiveness date	November 14, 2018	Implementation progress	MS	MS			
Original Closing date	June 30, 2023	Project Management	S	S			
Revised Closing Date	N/A	Procurement	S	MS			
Mid-Term Review Date	October 22, 2021	Financial Management	MS	MS			
Restructuring Date	May 11, 2022	Counterpart Funding	S	S			
Original Grant Amount	US\$22.7 million	Safeguards	S	S			
Cancellation Amount	-	M&E	MS	MS			
Amount Disbursed (as of August 31, 2022)	US\$ 14.31 (63%)						
Disbursement Projection for FY 23	US\$ 8.5 million						

B PROGRESS, RESULTS ACHIEVED, AND CHALLENGES FACED

2. **Implementation progress**: Of the nine agreed actions during the last review, the Project has completed eight. Implementation progress against the results indicators show that the Project has already met its target for (a) improved dietary intake by nursing mothers (24 percent over the baseline) and children under 6 and 24 months (31 percent over the baseline), (b) seed replacement rate for major cereals which now stands at 30 percent over the baseline value of 20 percent, (c) 20,630 people are now receiving improved nutrition services and products against the target of 21,000, and (d) validation of appropriate technology in the Project target area has been completed. Rest of the indicators such as (a) increased productivity of meat, milk, and vegetables, (b) improved household income, (c) construction of post-harvest facilities, (d) farmers adopting improved technology, (e) matching grant support, and (f) number of producer groups to be supported are on track to meet the target (Annex 2).

¹ The Bank team comprised Ms. Sangeeta Carol Pinto (Senior Operations Specialist), Ms. Annu Rajbhandari (Senior Environmental Specialist), Ms. Timila Shrestha (Senior Financial Management Specialist), Mr. Chandra Kishore Mishra (Procurement Specialist), Mr. Purna Chhetri (Consultant) Mr. Drona Pun (Social Safeguard Consultant), and Ms. Sunita Gurung (Program Assistant).

Progress during this reporting period.

Component A: Climate and Nutrient Smart Agricultural Technology Adaptation and Dissemination (US\$ 7 million).

- 3. Through the Nepal Agriculture Research Council (NARC) a total of 341 validation trials were conducted in this reporting period of which 251 were crops and 90 livestock. The varieties and technologies that are being validated are in the process of being recommended along with the required guidelines and package of practices². As part of seed replacement rate improvement (SRR) the Project distributed 92.68 metric tons of improved seeds of rice giving a cumulative total of 280.6 tons besides 33 tons of foundation seeds of rice, wheat, maize, finger millet, lentil, buckwheat, and beans since the Project began. The SRR in the Project district has been reported to be 30 percent, five percent over the national average thus comfortably reaching the target of covering 10 percent of the project area under improved cultivars of rice and wheat. For maize and potato, the Project needs to work further to improve the SRR. The coverage under maize and potato needs further. The Project has so far established and supported 31 seed producer groups to enhance availability of quality seeds locally.
- 4. In this reporting periods, nine artificial insemination units (13 in total), seven goat multiplier herds (15 in total) have been established in various Project rural municipalities in addition to implementing 260 promotional programs on goat, dairy, backyard poultry farming benefitting 533 livestock producer groups so far, Likewise, 224 farmer field schools (FFS) were established for crop and livestock (174 crop 50 livestock). To sustain the FFS the Project trained 147 FFS facilitators in this reporting period. Twenty-four metric tons of forage seed has been distributed to members of producer groups. As per the midline survey data, nearly 65 percent of the Project area farmers are now adopting at least one of the Project-promoted climate smart agricultural and livestock practices (CSA) in its target area. The technologies promoted by the Project are those recommended by the Nepal Agriculture Research Council and successful examples from other parts of the country and the region. In addition, the FFS curricula have been revised to include topics on climate change, training courses now include climate change, its impact and mitigation besides video documentaries on climate smart practices and dissemination of messages through the local radio.
- 5. The Project has supported 80 farmer groups to rehabilitate small-scale irrigation schemes covering an area of 196 ha. This is further complimented by provision of small-scale mechanization, irrigation schemes and equipment which include mini-tillers, thresher, corn shellers, and chaff cutter. In order to sustain operation and maintenance the project plans to train select members from the beneficiary groups and train them on simple maintenance and operations in addition to linking them to the service providers close to their home/village.

Recommendations

- 6. <u>Breakdown in seed supply chain</u>. It was learned that for maize, seed producers were unable to either use up the certified seed produced or sell the surplus seeds produced. There is a possibility that in the absence of a market as a result of farmers' preference for hybrid varieties which are high yielding the improved seeds provided by the Project were not fully utilized. The Project is advised to look into the maize seed production and supply chain and adopt a more demand-based seed production system and farmer preferences to ensure that certified seeds are not consumed but used for planting.
- 7. <u>Assessment of benefits of mechanization</u>. The Project is advised to do a quick assessment on investment in mechanization to identify their positive impacts in saving time and income generation. These activities are expected to contribute to building resilience and improve efficiency in farming practices.
- 8. <u>Improvement in reporting</u>. The progress reports are input focused. With the Project now into the fourth year of implementation, it is important to include the output and initial outcome of the interventions supported by the Project along with lessons learned and actions to sustain interventions.

² Project promoted CSA include minimum tillage, alternate wetting and drying irrigation techniques, inter and mixed cropping, drought tolerant variety of rice, livestock breed improvement through artificial insemination, feed and fodder management for feed efficiency to reduce enteric fermentation, animal health improvement.

9. <u>Findings of baseline and mid-line surveys for cereal productivity and validation:</u> The productivity for cereal during the mid-line survey was reported lower than the baseline survey although the regular monitoring data from the cluster offices and anecdotal evidence through field visits demonstrate an increase. The Project has been advised to further assess the discrepancy and report back to the Bank with updated data/information by November 2022.

Component B: Income Generation and Diversification (IGD) (US\$7 million)

10. Under the IGD program, the Project has supported 464 producer groups (PGs) bringing the cumulative total to 1,619 groups (878 crop based and 741 livestock based). The PGs were also provided training on various skills such as marketing, crop planning based on market demand, business numeracy, commodity costing and negotiation through 67 training events attended by 1,616 group members. As of today, 397 groups supported by the project has negotiated and formed an alliance with buyers for their produce. With this the cumulative achievement comes to 111 training events so far attended by 2,874 farmers, with 55 percent women participation. To facilitate and sustain productive partnerships the Project has supported stakeholder dialogue platforms at each palika and cluster levels. Eight model farm business schools, one in each district, and 16 regular farm business schools, two in each Rural Municipality were established to build business development skills and business numeracy. On the matching grant 241 farmer groups were provided with matching grant support bringing the total to 397 groups against end of the Project target of 710 groups. To strengthen the supply chain the Project financed construction/rehabilitation of eight market and twenty-two handling and processing facilities such as collection centers, milk processing plants, market centers, and agro-processing facilities (pickle and sweet making) in this reporting period. A robust operation and maintenance plan guidelines is in place to ensure sustainability and use of these structures.

Recommendations

- 11. <u>Internalization of stakeholder dialogue platform:</u> The stakeholder dialogue platforms can be sustained by the provincial or local governments. The Project has been advised to initiate the dialogue with the local authorities.
- 12. <u>Effectiveness of Productive Partnerships agreements:</u> The Bank team was pleased to understand the efforts made in the field to support the producer groups (PGs) with market linkages and FBS as per earlier recommendations. It has been advised to intensify the handholding support through the cluster-based value chain experts and service providers in the field primarily to help the weaker groups in poorer areas to establish and sustain productive partnership agreements with buyers and financial literacy.

Component C: Improving Nutrition Security (US\$ 5 million)

- 13. Progress on Component C of the Project has been encouraging since the MTR in October 2021, with almost 100 percent intensification in four Project interventions in the reporting period with (i) 168 groups receiving small grants on nutrition, (ii) formation of 460 nutrition groups, (iii) establishment of 440 home nutrition gardens, and (iv) operationalization of 64 nutrition field schools.
- 14. The beneficiaries receiving inputs as participants of the nutrition groups, home nutrition gardens, nutrition field schools and small grants were exclusively women. A five-day refresher training of 51 facilitators/trainers (17 males and 34 females) on nutrition was conducted in the reporting period. One-day trainings in optimal utilization of Project inputs under each of these interventions for improving nutrition practices and household diets (particularly for pregnant and nursing women and children <2 years of age) were conducted through trained facilitators/trainers (a mix of male and female) in all Project clusters. Cumulatively, over 5,915 kgs of seasonal vegetable seeds; 41,049 ducks and 47,416 poultry chicks; and 58,883 fruit saplings have been distributed to participating members of HNGs. Trainings of 209 schoolteachers and 71 students in improving diet diversity of households through HNG outputs was conducted in the reporting period.

Recommendations

- 15. <u>Small Grants</u>: The one-day technical training provided to small grantees is inadequate and needs to be supplemented with periodic refresher and additional skill-based trainings as required in managing inputs better. Demand for refresher and additional training particularly on duck farming was indicated by recipients.
- 16. <u>Nutrition Groups and Nutrition Home Gardens</u>: The enhanced variety and availability of vegetables and fruit at household level courtesy the HNGs, is supplemented with one-time food demonstration for improving dietary diversity at household level. This one-time engagement is inadequate given the variety of inputs now available to households, the use of which need to be optimized through implementable recipes to enhance consumption patterns.
- 17. <u>Growth monitoring and promotion:</u> While anthropometric data is being collected for children<2 years of age of females participating in Nutrition Field Schools, the lack of tools (growth monitoring charts) and skills to use the tools amongst Project facilitators puts to question the outcomes anticipated from the activity. The collected data may be shared with health workers from primary health centers to facilitate growth monitoring in line with protocols, supplemented with relevant interpersonal counseling for improving nutritional status of children conducted under the Project.
- 18. <u>Corelating/validating findings of baseline and mid-line survey findings of crop/livestock outcomes</u> with food security and food consumption outcomes: For comparability, a consistent methodology for calculating performance of indicators across panel of Project beneficiaries at similar instances in time over Project implementation is key. Factors influencing the findings over the life of the Project must be well-investigated before attributing outcomes to the Project interventions.

Component D: Project Management, Communication and M&E (US\$ 3.7 million)

19. Project Implementation manual including the Results Framework have been updated per MTR recommendations. Mid-line survey has also been completed. Project Management Information System (PMIS) is up and running. Project steering committees are held on time and progress review meetings with the cluster offices are held on time.

Recommendations

- 20. <u>End-line Survey and control villages.</u> To capture the economic impacts of winter harvest, it was advised to carry out the end-line survey between the months of February and April 2023. The Project was also strictly advised not to initiate any activities in the control (no-go) villages until the end-line survey is completed to avoid data contamination. Any interventions in these villages prior to the survey will be declared ineligible expenses by the Bank.
- 21. <u>Utilizing of TF funds savings</u>. To utilize the potential savings of around US\$ 4 million, the Project has been advised to share with the Bank a list of activities with justification and implementation plan by September 15 for no objection. It was advised during the mission to focus on sustainability plan for the groups created and capacity building of the government staff while preparing the list and request for an extension of implementation period if needed. The extension request will be considered provided the Bank considers the justification for new activities acceptable, the timeframe for implementation is realistic and the project has resources to implement the activities including continuation of technical assistance from FAO.

Financial Management

22. The timeliness of financial reports has continued to be maintained with no outstanding report. As agreed, Finance staff are now present in all cluster offices. The PMU has also initiated financial monitoring. Considering the risks involved in grant management, it was agreed with PMU to add specific important milestones for grant processing/payment in the monitoring checklist. Based on the findings of the financial monitoring along with additional findings of the implementation review, it has also been agreed to send instructions to cluster offices by September 2022 for institutionalizing required procedures. The Bank team

noted that the receipt confirmations from the rural municipalities are yet to be obtained for transfers of electronic mother bay weighing machines and child height and length measuring boards, which has been agreed to be obtained by October 2022. As internal audit report for FY22 has not been received, PMU has agreed to follow up. The external audit of FY21 has been received with unqualified opinion (Annex 4).

- 23. The total expenditures of NPR 860.4 million (83.9%) has been incurred against the budget of NPR 1,025.5 million. (Government NPR 185.5 mil. and TF NPR 840 mil.) for FY22. The remaining budget of FY22 could not be spent mainly due to the delay in grant processing and infrastructure construction work. As these activities picked up in the later part of the FY, the trainings could not be conducted then as technicians were engaged with those work. The budget for this FY23 of NPR 1061.1 million (Government NPR 194.5 million and TF NPR 866.6 million) is considered adequate including for the counterpart funding. As beneficiary selection process has already been initiated for this FY, the expenditures are expected to accelerate in this FY. As the Project is closing on June 30, 2023, the Bank team was reminded that only the goods and services procured, and grant payments made by that date will be eligible for Project financing.
- 24. Based on the overall performance, the FM performance rating is retained as "Moderately Satisfactory"

Disbursement

25. The total disbursement as of August 31, 2022, was USD 14.31 million, which is about 63% of the commitment of USD 22.7 million. This includes advance in Designated Account of USD 2 million. With utilization of USD 2 million advance, the additional disbursement Projection for the FY is around USD 4.3 million. With this disbursement, the Project may have unutilized balance of around USD 5 million at the Project closing, for which Bank team is discussing potential cancellation.

Procurement

26. The activity to revise the procurement section of the Project Implementation Manual (PIM), as agreed earlier, for uniformity with the procurement arrangement as stated in the PPSD, has been reported as completed. The PMU has agreed to send the revised PIM, to the Bank for information by September 30, 2022. The Bank team noted that the Systematic Tracking of Exchanges in Procurement (STEP) system is not up to date, for the post review category contracts. The procurement of (a) seasonal summer vegetable seeds in Gorkha district, (b) Child anthropometric Assessment Tool, (c) power back up system in PMU and (d) 22 pocket Projectors for PMU and PCU have been reported to be completed. The Bank team reminded the importance of uploading post review category contracts on an ongoing basis, so that (a) contracts are not awarded to debarred/suspended firms by the Bank, (b) post review to be carried out by the Bank, is not hampered/delayed due to incomplete documentation. The PMU informed that the procurement activities to be carried out by the cluster offices (PCUs) will be entered in STEP by the PMU and monitored. The PMU informed the Bank team that goods and works contract, managed by user committees through the grants are made available to the Bank through monthly progress reports. Considering the overall progress, the procurement performance rating is **Moderately Satisfactory**".

Environmental and Social Safeguards

- 27. The Bank team noted the steady progress of the environmental and social (E&S) safeguard management. The Project informed that the E&S screening of most of the sub-Projects, including the small matching grants, has been conducted, and ESMPs prepared, which was observed during the recent field visit. However, a recent field visit to Lahan, Saptari, cluster highlighted the need for additional environmental measures, particularly in the milk collection and processing unit, to properly manage solid waste (cow slurry) and wastewater discharge. The Bank team requested the Project to share the ESMPs on a sample basis along with the compliance monitoring reports of the implementation of the ESMPs.
- 28. The Bank team requested the Project to include a session on occupational health and Safety while delivering training on operation and maintenance of farm machineries /equipment to aware the farmers on the associated risks and prevent any mis happenings. The Bank drew the attention of the Project to be vigilant

towards the incidences of accidents related to Project activities and urged the Project to report any incident or accidents to the Bank in a prescribed format should they happen. It was also requested to integrate the findings of the independent audit report into the ongoing Project activities for better management of safeguard issues.

Citizen engagement

- 29. It was noted that the process of recording and redressal the grievances raised by the beneficiaries is functioning, though it needs strengthening in terms of documentation. It is good to note that multistakeholder dialogue forums are active across the sub-Projects and bring both the beneficiaries and the Project together to discuss issues related to the Project's objectives.
- 30. **Monitoring and evaluation**. The World Bank team noted the need to revisit the methodology for data collection and reporting to avoid inconsistencies in reporting. It was noted that the project impact in terms of productivity increase and adoption rate of Project promoted technologies was reported low during the mid-line survey despite intensive extension and outreach services and high impact from regular field reporting. An independent assessment is recommended to re-assess the adoption rate, productivity increase in addition to documenting key lessons.
- 31. Actions Agreed to in for the next reporting period are provided in Annex 3.

Next Review

32. A technical review is planned for November 2022 followed by implementation review in February 2023.

Annex 1

List of people consulted

Ministry of	Agriculture and	Livestock I	Development
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1.	Dr. Govinda Prasad Sharma	Secretary, (Agriculture Development)
2.	Dr. Deepak Kumar Kharal	Secretary (Livestock Development)
3.	Mr. Prakash Kumar Sanjel	Joint Secretary
4.	Dr. Rajendra Mishra	Joint Secretary
5.	Dr. Ram Nandan Tiwari	Joint Secretary
6.	Mr. Shanker Sapkota	Under Secretary
7.	Mr. Lal Kumar Shrestha	Senior M&E Officer
8.	Mr. Siris Pun	Senior Planning Officer
9.	Mr. Bisah Paudel	Agricultural Economist

Nepal Agriculture Research Council

10. Dr. Doj Raj Kharel Director, Livestock and Fisheries

Department of Agriculture

11. Dr. Rewati Raman Paudel Director General

FANSEI		
12.	Mr. Jaganath Tiwari	Project Director
13.	Mr Deepak Poudel	Senior Planning Officer
14.	Mr. Rudra Poudel	Senior M&E Officer
15.	Dr. Rakesh Prajapati	Senior Agriculture Officer
16.	Ms. Sharadha Pandey	Account Officer
17.	Mr. Tilak Raj BC	Planning Officer
18.	Mr. Sunil Joshi	Agriculture Officer
19.	Dr. Sanjiv Pandit	Agriculture Officer
20.	Ms. Kavita Adhikari	Agriculture Officer

Food and Agriculture Organization

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21.	Mr. Ken Shimizu	Country Representative
22.	Mr. Binod Sah	Assistant Country Representative
23.	Mr. Shrawan Adhikari	Program Specialist
24.	Dr. Keshav Prasad Premy	Team Leader
25.	Mr. Shyam Prasad Paudel	Livestock Production Specialist
26.	Mr. Ram Prasad Pulami	Agribusiness and Market Linkage Specialist
27.	Dr. Bishnu Prasad Dhital	Crop Production Specialist
28.	Mr. Parshuram Rimal	M&E Specialist
29.	Dr. Vrigu Rishi Duwadi	Capacity Development Specialist
30.	Mr. Shiva Prasad Acharya	Environment and Social Safeguard Specialist.
31.	Mr. Uttam Acharya	Nutrition and BCC Specialist

Dhading, Gajuri and Barapakh Rural Municipality

32.	Laxmi Gyam Magar	Nutrition Field School, Gajuri
33.	Bishnu Prasad Adhikari	Jare Bangaicha Krisham Samuha, Gajuri
34.	Surya Prasad Neupane	Safal Krishak Samuha, Gajuri
35.	Pida Poshan Samuha (Nutrition Group)	Gajuri
36.	Apsara Bhujel	Pragitishil Farmer Group, Gajuri
37.	Sarita Thapaliya	Kanyadevi Farmer Group, Dhading
38.	Bhumi Prasad Kandel	Lali Guran Farm Business School, Benighat

- 39. Ahika Gurung
- 40. Dhan Bahadur Gurung
- 41. Shanta Regmi

Mandre Farmer Grooup, Barapakh Khimp Gaun Farmer Group, Barapakh Ghyalchok, Gandaki

Updated Results Framework

PDO Level Results	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
Indicators				YR 1	YR 2	YR3	YR 4	YR5	
Indicator 1: Farmers adopting improved	Number	0	Target	0	6,000	16,000	28,000	31,800	This indicator measures the number of farmers who have adopted an improved production practice promoted by the project. 31,833
agricultural technologies (including CSA) of which female (CRI)			Actual	0	21,759	22,23 9	31,833		farmers have adopted an improved agricultural technologies promoted by the project under crop and livestock. Project promoted already identified improved agricultural technologies by MoALD. However, these technologies are quite new in the project area and based on the data from PMIS on the number of farmers using following technologies, table is updated assuming 80% adoption rate.
Of which female (%)	Percent	0	Target	0	65	65	65	65	
			Actual	0	43.6	69	69		
Of which female (number	number	0	Target	0	3,900	10,400	18,200	20,670	
			Actual	0	9,494	15,331	22,060		
Indicator 2: Increased crop and animal productivity by direct beneficiaries (disaggregated by crop and animal species)	Percent								
Crops (food grains)	Percent	0	Target	0	10	15	25	25	
		0	Actual	0			-14.8%		The baseline value for this indicator is 2.5 Mt / ha and the productivity of food grains as per midline is 2.13 Mt / ha. Productivity of cereals

PDO Level Results	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
Indicators				YR 1	YR 2	YR3	YR 4	YR5	
									has been decreased possibly due to unfavorable weather especially
									heavy rainfall during the winter season.
Crops (vegetables)	Percent	0	Target	0	15	20	30	30	
			Actual	0			19.18%		As per DIME, the revised baseline value for this indicator after removing 5 outliers in cucumber and ladyfinger yields is 7.3 Mt./ha and the productivity of vegetables as per the midline study is 8.7 Mt / ha. Crops Considered for calculating productivity of Vegetable by the Project are: Tomato, Cauliflower, Bitter-gourd, Cucumber, Long bean, Okra, French bean, Chilli, Cabbage, Garden pea, Radish, Carrot, Broad leaf mustard, Brinjal.
Livestock (meat)	Percent	0	Target	0	0	5	15	25	
			Actual						
		Propose	Revised			5	15	25	
		d	Target						
			Actual	0	0		12.03%		baseline value of goat productivity is 18.7 Kg /Animal (goat meat). The productivity of goat meat as per midline study is 21 Kg/animal (Goat)
Livestock (milk)	Percent	0	Target	0	10	20	30	35	
			Actual	0	0		30.74%		Baseline value of this indicator is 623.7 Ltr/Animal. Milk productivity as per the midline study is 815.4 Ltr / Animal.
Indicator 3: Increased household income (farm and off-farm) (GAFSP core		BL	Target	_	_	BL+10 %	_	BL+25 %	
indicator, gender disaggregated)		232,631	Actual				289,227 (BL + 24.45%)		Baseline income values were adjusted by DIME to more accurately measure wage income based on actual days and months worked at baseline. Household income is accounted in a production-based

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PDO Level Results	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
Indicators				YR 1	YR 2	YR3	YR 4	YR5	
									approach (i.e., revenue minus cost), and home-produced food that is not sold but consumed at home is valued as income.
Female headed households		BL	Target	_		BL+10 %	_	BL+25 %	
		213,500	Actual	_	_		287,296 (BL + 34.5%)		Baseline income values were adjusted by DIME to more accurately measure wage income based on actual days and months worked at baseline.
Indicator 4: Improved	Score	BL	Target	_	_	15	_	40	
Insecurity Experience Scale (FIES) by direct beneficiaries (gender disaggregated)		-8.6	Actual	_	_		-6.2		FIES at the time of baseline is - 8.6. FIES score during phone survey in July 2021 was -5, this means that the score of -6.2 is an improvement from one year ago.
Indicator 5: Improved dietary intake for	Percent over BL								
Pregnant and nursing women		BL	Target	_	_	BL+10 %	_	BL+20 %	
		45%	Actual	_	_		56% (BL + 24.44%)		Baseline value of minimum dietary diversity score for pregnant and nursing women is 45%. Dietary intake of nursing women as per midline is 56%, which is 24.44% increment over baseline value.
Children between 6 and 24 months		BL	Target	_	_	BL+10 %	_	BL+20 %	

PDO Level Results Indicators	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
muicators				YR 1	YR 2	YR3	YR 4	YR5	
		20%	Actual	_			31%		Baseline value of minimum dietary diversity score for children 6-24
							(BL + 55%)		months is 20%. The dietary intake of children between 6 and 24 months in the midline is x55% increment over the baseline value.
Intermediate Result (Compo	onent A) -Cl	imate and N	Nutrition Sn	nart Tecl	nnology Ad	aptation a	nd Dissemi	nation	
Number of promising technologies validated		0	Target	0	5	15	20	20	
through on-farm adaptation trials (including CSA and nutrition-sensitive technologies)			Actual	0	0	0			Through the Nepal Agriculture Research Council (NARC) a total of 404 validation trials (308 crops and 96 livestock) were conducted. The varieties and technologies that were validated are in the process of being recommended along with the required guidelines and package of practices.
Farmers accessing technology dissemination		0	Target	5,00 0	15,000	25,000	35,000	39,750	
services delivered by the project			Actual	0	6,524	19,03 2	36,583		
Of which female	Percent	0	Target	65	65	65	65	65	
			Actual	0	70	69.7	71		
Farmers reached with agricultural assets/ services, of which female	Number	0	Target	5,00 0	15,000	30,000	50,000	65,000	
services, or writer reflidle			Actual	0	21,344	23834			
	Revised		Target		15,000	20000	30000	45000	
			Actual	0	21,344	23834	35,946		
Of which female	Percent	0	Target	65	65	65	65	65	

PDO Level Results Indicators	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
Indicators				YR 1	YR 2	YR3	YR 4	YR5	
			Actual	0	45.2		71		
	(numbe r)		Target	3,25 0	9,750	19,500	32,500	42,250	
			Actual	0	9,665		25,555		
Improved seed replacement rate	Percent	BL 20%	Target	_	_	BL+12 %	_	BL+25 %	
	Improve ment over baseline		Actual	20%	_		30% (50% above baseline)		Average seed Replacement Rate of cereals in the project area as reported in the baseline was 20%. The seed Replacement Rate in the project area is 30% reported in the midline (50% improvement over the baseline value).
Improved seed		BL	Target	_	_	BL+12 %	_	BL+25 %	
replacement rate of Rice			Actual	29%	_		33%		The baseline value of rice SRR was 29% and reached 33% in the midline, which is 13.7% improvement over baseline.
Improved seed replacement rate of			Target	_	_	BL+12 %	_	BL+25 %	
Wheat			Actual	19%	_		32%		68 % improvement over baseline.
Improved seed replacement rate of Maize			Target	_	_	BL+12 %	_	BL+25 %	
replacement rate of ividize			Actual	16%	_		24%		50 % improvement over baseline.
Improved seed replacement rate of Potato			Target	_	_	BL+12 %	_	BL+25 %	

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PDO Level Results	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
Indicators				YR 1	YR 2	YR3	YR 4	YR5	
			Actual	11%	_		13%		18 % improvement over baseline.
	Number	0	Target					678	
Revised:			Actual				80		
Area under small irrigation supported by the project	Irrigate		Target					1250	
	d area (ha)		Actual				196		
Intermediate Result (Compo	nent B) - Ir	ncome Gene	eration and	Diversifi	cation		1	<u> </u>	
Number of producer- based organizations		0	Target	200	600	1,000	1,400	1,590	
supported (number)- GAFSP core indicator			Actual	0	824	1025	1516		
Number of postharvest		0	Target	20	80	140	184	184	
facilities constructed and/or rehabilitated			Actual	0	0	1			
(number)-GAFSP core indicator		Revised	Target			20	50	80	
		after MTR	Actual			2	32		There were 2 post-harvest facilities constructed until the last mission. Now, 32 post-harvest facilities are constructed by the project.
Number of subprojects		0	Target	_	100	250	400	448	
(business plans) financed by the project on a			Actual	0	0	146			
matching grant basis.		Revised	Target			250	406	710	
		after MTR	Actual			156	397		156 matching grants were supported until the last mission. Now, the project has financed 397 matching grants.
Intermediate Result (Compo	i onent C) - Ir	⊥ nproving Nu	ıtrition Sec	urity					

PDO Level Results	Unit	Baseline	Status	2019	2020	2021	2022	2023	Remarks
Indicators				VD 1	YR 2	YR3	YR 4	YR5	
				YR 1	YKZ	183	YK 4	YKS	
People receiving improved		0	Target	5,0	15000	30,00	50000	5750	
nutrition services and				00		0		0	
products, gender disaggregated, age			Actual	0	707	10,26	20,630		20,630 people received improved nutrition services and products and
disaggregated (number of					(Female	0			all of them are female. Only those receiving improved nutrition
people)-GAFSP core					:538,				services and products (from HNG) are included in this figure.
indicator					Male:16 9)				
]				
			Target	5000	15000	10000	17000	21000	
			Actual		707	10,260	20,630		
		Propose	Actual		(Female	10,260	20,630		
		d			:538,				
					Male:16				
					9)				
Household dietary		BL	Target	_	_	BL+10	_	BL+20	
diversity score including		6.9				%		%	
Adolescents, nursing mothers and children			Actual	_	_		7.4		The baseline value for household dietary diversity score including
under two years (1,000									nursing mothers and children under two years (1,000 days' mother
days mother target)									target) is 6.9. Household dietary diversity score including nursing
									mothers and children under two years (1,000 days' mother target) is 7.4 which is 7.25% increment than the baseline.
									, , , which is , , 2570 more ment than the baseline.
Proposed:			Target			100	300	580	
Number of subprojects			Actual			156	324		
(business plans) financed									

PDO Level Results Indicators	Unit	Baseline	Status	2019 YR 1	2020 YR 2	2021 YR3	2022 YR 4	2023 YR5	Remarks
				INI	IN Z	1173	1114	1113	
by the project on a small grant basis									
Intermediate Result (Component 4) - Project management, communication, and M&E									
Grievances registered addressed within the delay	Percent	0	Target	60	75	85	85	85	
set by the project GRM			Actual	0	0	100	100		The grievances registered by the project are addressed fully.
Periodic reports submitted on time	Number	0	Target	3(3)	2(5)	3(8)	2(10)	3 (13)	
on time			Actual	0	2(2)	3 (5)	2 (7)		

Indicator definition

PDO Level Results Indicators	Unit of Measure	Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
Indicator 1: Farmers adopting improved agricultural technologies (including CSA) of which female (CRI)	Number	Annual	Progress reports, annual report, household Survey, technical and economic	TA/PMU	This indicator measures the number of farmers who have adopted an improved production practice promoted by the project. It is expected that the baseline value for this
Of which female (number)	Percent		monitoring		indicator will be zero.
Indicator 2: Increased crop and animal productivity by direct beneficiaries (disaggregated by crop and animal species)	Percent		Progress reports, annual report, household survey, technical and economic monitoring	TA/PMU	The indicator measures improvements in production per ha or animal through the average increase in units of production (kg, MT, L per land area and/or animal, resulting from improvements in production practices through project inventions.
Crops (food grains)	Percent	Annual			
Crops (vegetables)	Percent				
Livestock (meat)	Percent				

Livestock (milk)	Percent				
Indicator 3: Increased household income (farm and off-farm) (GAFSP core indicator, gender disaggregated)		At start, midterm, and	Baseline, midline, and endline survey	DIME/TA/PMU	Income is measured through a production-based approach (revenues minus costs), and home-produced food that is
Female headed households		end of project	questionnaire		not sold but consumed at home is valued as income.
Indicator 4: Improved score on the Food Insecurity Experience Scale (FIES) by direct beneficiaries (gender disaggregated)	Percent improvement	At start, midterm, and	Baseline, midline, and endline FIES survey	External Survey Firm	The FIES is a measure of access to food at the level of individuals or households. It measures severity of food insecurity based on people's responses to specific
Of which female	Percent	end of project	questionnaire		questions about constraints on their ability to obtain adequate food.
Indicator 5: Improved dietary intake for					
Pregnant and nursing women	Percent over BL	At start, midterm, and end of project	Baseline, midline, and endline survey questionnaire	External survey firm	The Minimum Dietary Diversity for Women is a dichotomous indicator of whether or not women 15–49 years have consumed at least 5 out of 10 defined food groups the previous day or night. The proportion of women 15–49 years of age who reach this minimum in a population can be used as a proxy indicator for higher micronutrient adequacy, one important dimension of diet quality.
Children between 6 and 24 months					Measured by percentage of children 6–24 months old with minimum acceptable diet (MAD). The indicator measures both the minimum feeding frequency and minimum dietary diversity, as appropriate for various age groups.
Number of promising technologies validated through on-farm adaptation trials (including CSA and nutrition-sensitive technologies)		Annual	Progress reports, annual report, technical and economic monitoring	TA/PMU	The indicator measures the number of technologies (crop and livestock) validated on farm. Technology testing, adjusting, and validation of new technologies are a precondition for dissemination.
Farmers accessing technology dissemination services delivered by the project		Annual	Progress reports, annual report, household survey, technical and economic	TA/PMU	Technology dissemination services include on-farm demonstration, FFSs, field days, and training organized by
Of which female	Percent		monitoring		the project

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		$\overline{\mathbb{T}}$			This indicator measures the number of farmers who were
Farmers reached with agricultural assets/ services, of which female	Number	!	Progress reports, annual report, household survey, technical and economic monitoring		provided with agricultural assets or services. It is expected that the baseline value for this indicator will be 0.
Of which female	Percent (number)	Annual		TA/PMU	Assets include property, biological assets, farm and processing equipment, and so on. Services include research, extension, training, education, information and communication technologies (ICTs), production-related services (for example, soil testing, animal health/veterinary services), phyto-sanitary and food safety, agricultural marketing support services, access to farm and postharvest machinery and storage facilities, employment, irrigation and drainage, and finance.
Improved seed replacement rate		At start, mid- term, and end of project	Progress reports, annual report, household survey, technical and economic monitoring	TA/PMU	Seed replacement rate for each of the four major crops (paddy, maize, wheat, and potato)
Number of producer-based organizations supported (number) - GAFSP core indicator		Annual	Progress reports, annual report, household survey, technical and economic monitoring	TA/PMU	This indicator measures the number of producer-based organizations created or supported under the project. The baseline value of this indicator will be 0.
Number of postharvest facilities constructed and/or rehabilitated (number) - GAFSP core indicator		Annual	Progress reports, annual report, household Survey, technical and economic monitoring	TA/PMU	This indicator measures the number of facilities developed by the project that support activities such as improved storage/improved packaging house technologies, investments to comply with sanitary/phytosanitary, and other food safety standards.
Number of subprojects (business plans) financed by the project on a matching grant basis.		Annual	Progress reports, annual report, household survey, technical and economic monitoring	TA/PMU	This indicator measures the cumulative number of contracts signed and subprojects completed under the MG scheme.
People receiving improved nutrition services and products, gender disaggregated, age disaggregated (number of people) - GAFSP core indicator		Annual	Progress reports, annual report, household survey, technical and economic monitoring	TA/PMU	The indicator is calculated from the increase in the number of people with access to a defined basic package of nutrition services as a result of project investment.
Household dietary diversity score including nursing mothers and children under two years (1,000 days mother target)		At start, mid- term, and end of project	Dietary diversity questionnaire	TA/PMU	Dietary diversity is a qualitative measure of food consumption that reflects household access to a variety of foods and is also a proxy for nutrient adequacy of the diet of individuals.

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Grievances registered addressed within the delay set by the project GRM	Percent	Annual	Sample survey	TA/PMU	The indicator measures the proportion of grievances received by the GRM system, set up by the project, and addressed within the standard period set up by the GRM system.
Periodic reports submitted on time	Number (cumulative)	Semiannual and annual	Progress reports, annual report, baseline and impact reports	PMU	

Agreed Actions

S.N.	Actions	Responsibility	Deadline
1.	Review the data on crop productivity, adoption rate, no of farmers reached by the Project and insurance services.	FAO- TA/PMU/DIME	November 15, 2022
2.	Look into the reasons for non-use of seeds produced under community-based seed production program	PMU FAO-TA/	November 15, 2022
3.	Share third party monitoring report	PMU	November 15, 2022
4.	Share OHS training session module and provide OHS training to target groups	FAO-TA/PMU	November 7, 2022, for module and training to be done by end of December 2022.
5.	Upload post review completed contracts in STEP	PMU	November 15, 2022
6.	A recipe book for optimized use of HNG produce for improving diet diversity and nutritious value of food developed and used for additional nutrition demonstration sessions	FAO-TA /PCUs/PMU	November 30, 2022
7.	Develop protocol for conduct of growth monitoring and promotion under NFS to ensure consistency and share with Bank for review	FAO-TA/PMU	November 15, 2022
8.	Ensure compliance of growth monitoring and promotion protocol in NFS and advocate local health representative to use GM data generated in NFS	FAO-TA /PCU/PMU	November 15, 2022
9.	Share with the Bank, the plan to utilize the TF funds savings	PMU	November 15,2022
10.	Share the Tors and methodology for End-line survey with the Bank	PMU/DIME	November 15,2022
11.	The Project team will avoid carrying out any interventions in all control villages until after the end line survey has been completed in those areas.	PMU	Until end line survey is done.
12.	Independent assessment of Project impact on productivity, impact, and adoption rate.	PMU	November 15, 2022

Annex 4

IMPACT EVALUATION and FIELD FINDINGS

DIME participated in the meetings and responded to queries regarding midline data values, including calculating select indicators within certain parameters requested by the Bank team.

DIME received funding from the GAFSP for two rounds of comprehensive agricultural surveys for the purpose of evaluating the causal impact of smallholder support on income and food security. These surveys include the already conducted baseline, completed in March 2021, and the endline which is planned for the spring of 2023 ahead of the Project closing. DIME will also be conducting a phone survey in August/September 2022 to capture intervention monitoring data and Food insecurity Experience Scale (FIES) data to compare with the phone survey carried out during the same season in 2021. In addition to these activities, DIME provided technical assistance for the midline survey design, enumerator training, supervision, and reporting of indicators. The results were presented and discussed during this mission.

Need for Project Facilitator survey

DIME will be conducting a Facilitator survey in the impact evaluation villages to capture specific information about which groups were focusing on which topics. The field-level technicians for certain villages included in the IE will be approached via phone call for a short20-30-minute survey on implementation details, including number of meetings held, technologies and crops promoted, and inputs provided.

End-line Survey Plans + Preserving Control Villages

To have the strongest possible impact evaluation, DIME plans to conduct the endline survey as close to the end of the Project as possible but before any control villages receive interventions. Based on the total beneficiary listing carried out by the Project there are more than 61,000 eligible households (outside of the control villages in the IE sample). This means that it is possible for the Project to meet their targets without the need to cover the 40 control villages. This is the best-case scenario for the IE, as it will allow the strongest possible impact evaluation. It was agreed that this possibility will be further explored to see if the control villages can be preserved.

DIME plans to implement the end-line survey between the months of February and April 2023. The advantage of beginning the survey as late as possible is that it will capture the economic impacts of the winter harvest, and also provide more time for farmers to implement the inputs they are provided to through FANSEP groups and new practices they are taught, and measure how they translate into yields.

FIELD VISIT FINDINGS

1. Jay Krishna Biu Utpadak Krishak Samuha:

- **a.** The group has received financing to establish a seed processing unit, including raising of a shed on leased land, machinery (metal seed bin, seed grading and loading machines, seed treatment machine, and sewing machine etc.), foundation seeds as well as training in operation of the machines.
- **b.** The group confirmed that storage space continues to be constraint and wheat had to be stored in individual homes in sub-optimal conditions, which resulted in pest infestation and significant quantity of seed being used as cattle feed since it was unfit for sale or human consumption.
- c. The group at first did not recall receipt of any trainings and had to be reminded of the individual orientations they have received over life of Project. This informs the recommendation of subject-wise refresher trainings for the groups for knowledge retention and recall.

d. It appears only the owner of the land on which shed has been constructed operates the machinery procured through the Project. The group ownership and management and maintenance of assets accrued through the Project needs to be emphasized and established before the Project closure.

Kushwaha Gharaysi Poshan Bagaicha Samuha

- e. The model HNG set-up and operations were impressive.
- f. Group members confirmed being able to transfer skills learned to their own homestead gardens and of improved variety and yield of vegetables and fruits available for household consumption and sale in local markets.
- g. The decisions on how much of the yield should be consumed and how much should be sold appears to be the decision of the male head of the household.
- h. The Project has trained the group on use of bio-insecticide/pesticide using leaf litter, unused vegetables and cow urine. The scientific principles of use of cow-urine as an insecticide/pesticide is unclear.

Lokeshwari Pashupala Krishak Samuha (Farmer Group)

- i. The group has received several inputs to set up a milk processing plant, which is yet to be operationalized fully.
- **j.** Trainings have been provided in management of milking cattle for increased production and management of milk output.
- k. The SOP and protocols to follow for collection and quality processing of milk as well as management and maintenance of equipment was not available.
- l. Market linkages and capacitating the group members on negotiating rate for output needs strengthening.
- m. Group members indicated they take retain earnings from milk sale and take decisions associated with expending these earnings (largely on food, household and health expenses) demonstrating women's empowerment through Project interventions.

Dihibaar Gharbari Poshan Samuha

- n. The group was unaware of the processes entailed in re-registration of the group annually and costs involved in the same.
- o. The group strongly requested for additional trainings in duck farming and periodic trainings on an issue instead of a one-time training (indicating the quality of trainings needs improvement)
- p. One of the group members complained that she had not been provided inputs under program though her thumb print had been taken and that several group members had a similar complaint. However, FAO colleagues confirmed to her that the Bank team represented FANSEP and the Project she referred to was another Project active in the area. This raises issue of contamination of intervention group from an IE perspective.

Ganga Gharayasi Poshan Bagaicha Samuha

- q. Members from at least two HNGs were participating in the food demonstration session, which had likely been concluded by the time the mission members reached the venue
- r. The gathered women complied with hand-washing protocols before feeding children
- s. Pumpkin parantha, khichdi and kheer were served to mothers and children. The children in the group relished the pumpkin kheer the most.
- t. At NPR 50,000 per session and contribution of inputs by the community, the food demonstration provides a good opportunity to expand the recipe list shared with HNG members, with increased variety and produce from homestead gardens beyond use of pumpkins in diet.

Tulsi Model Nutrition Field School

- u. Anthropometric evaluation of children of NFS members was being undertaken and height, weight, MUAC measurement and protein intake of previous day was being recorded.
- v. The children were being rated based on measurement and counseling provided.
- w. There was no standardized growth monitoring being pursued for lack of tools and skills amongst Project facilitators. The child health cards too did not have the growth monitoring chart filled out. The counseling provided was generic to all mothers and not specific to the 'nutritional' status of a child.
- i. The correctness and appropriateness of the growth monitoring and promotion is questionable.

Maa Durga Gharayasi Poshan Bagaicha Aama Samuha

- x. 500 hatchlings of 3 weeks were supplied to the group, of which 160 perished due to E.coli infection. 40 eggs have hatched and at present the group has 400 ducks.
- y. Slightly less fragile hatchlings of 6-8 weeks should have been provided to the group.
- z. The 6-month-old ducks are mature enough to lay eggs, however, the egg production (quantity and size) is lower than anticipated due to breed and environmental factors.
- aa. The group has been selling the eggs as well as consuming them at household level.

Dhading and Gorkha

Dhading: The Bank team visited Milantar nutrition field school, Jaray Bangaica farmer group, Pida Poshan Group (nutrition home garden), Safal Farmer group and Pragatisheel Farmer Group (collection center).

Gorkha, The Bank team visited the following sub activities supported by the Project in Gorkha which include Khimpu Gaon Farmer Group, Dargaun Farmer Group and Mandre Farmer Group,

Key observations.

- a. Most of the groups visited were found to be very active and highly satisfied with Project support both in terms of goods and services.
- b. The higher number of female participation was found to be exemplary with over 65 percent.
- c. One major outcome of the Project support to female through groups is that women are now more organized and are able to raise their concerns
- d. Most of the groups reported that they are now keeping records of income and expenditure for the activities they have initiated, especially those groups that are engaged in vegetable farming. There was also a realization that the production of vegetable should be based on market demand. Otherwise, supply will exceed demand and the group may not get good market or price for their produce.
- e. It was not clear to what extent the record keeping is helping the groups in negotiation price with the buyers.
- f. Many groups asked the Project if they can be supported with provision of small vehicle to transport their produce to the nearby market on their own thus eliminating the middle and greater profit.
- g. Provision of farm equipment and tools such as tractors, mini tillers, thresher etc seems to be helping in increasing efficiency and reducing the problem of labor shortage. However, the Project needs to see how these equipment can be repaired or maintained by training the users on at least simple maintenance and operation. As of now, the equipment have to be transported to the nearest town for repair which is expensive for smallholder farmers such as these.
- h. In Barapakh, where the Bank team visited the vegetable growing FFS group, it was learned that until recently vegetables for their village were imported from far off places. With the establishment of FFS and promotion of vegetable farming in the area there is a slow reduction on the quantity of vegetables being imported. Barapakh being a mountain area and with water in abundance, the village is ideal for vegetable cultivation. The Project needs to intensify its support to the farmers in Barapakh.
- i. With the Project almost coming to an end, there is a need for the cluster offices to coordinate and engage the rural municipalities to ensure sustainability of the interventions supported by the Project. At the moment, the engagement of the local rural municipalities is still weak.
- j. The Project will also need to intensify its support on marketing aspect to help the producers access good market and secure a fair price for their produce.