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Ministry of Agricultural Development

Agriculture and Food Security Project

(GAFSP TF 013719)

Implementation Completion Report

(April 1, 2013 - March 31, 2018)

April, 2018

Kathmandu, Nepal

FEW WORDS

Agriculture and Food Security Project (AFSP) was implemented by the Ministry of Agricultural Development (MoAD) in collaboration with Ministry of Livestock Development (MoLD) and Ministry of Ministry of Health (MoH). Currently MoAD, MoLD and Ministry of Land Management have merged and formed Ministry of Agriculture, Land Management and Cooperatives (MoALMC). The project was implemented in 19 hill and mountain districts of Mid-Western and Far-Western Development Region of the country. The project was implemented for five years period with funding support of Global Agriculture Food Security Programme (GAFSP- 46.5 M USD) through a competitive bidding process and Government of Nepal's own contribution (GoN-11.5 M USD). The World Bank (WB) was the designated Supervising Entity and the Food and Agriculture Organization (FAO) of the United Nations provid Technical Assistance for the project.

The overall objective of the project was to enhance food and nutrition security of targeted communities in selected locations of the project districts. The project was comprised of four components 1) Technology Development and Adaptation 2) Technology Dissemination and Adoption 3) Food and Nutrition Status Enhancement, and 4) Project Management. The project was implemented through Government structures/ entities. Component one was implemented by Nepal Agricultural Research Council (NARC) and its' regional/ crop and livestock commodity research stations located at various locations of the country. Component two was implemented by District Agriculture Development Offices (DADOs) and District Livestock Service Offices (DLSOs) located in the project districts under Department of Agriculture (DoA) and Department of Livestock Services (DLS) respectively. The Regional Directorate of Agriculture (RDA) and Regional Directorate of Livestock Services (RDLS) were responsible for coordinating, monitoring and reporting of project activities. The DFTQC under MoAD and Child Health Division (CHD) and District Public Health Offices (DPHO) under MoH implemented component 3 nutrition related activity.

This report presents synopsis of project interventions carried out during the entire project period (from April 2013 to March end 2018) along with the achievement on key results, lessons learnt and way forward. It gives me pleasure to mention that the project has been able to achieve outputs and outcomes, as set forth in the result framework of the project. Under component 1, NARC contributed by developing different new crop varieties, improved crop and livestock management technologies and also produced source seed of improved crop varieties. Similarly, FAO TA helped to import Boer and Saanen breed live goats, Boer and Saanen frozen semen and forage seed; and also developed Farmer Field School (FFS) manuals and FFS facilitators in targeted number to run FFS in the project districts. Under component2, DADOs of 19 project districts were able to conduct targeted number of FFS benefitting 47,000 farmers in crop sector and DLSOs of 19 districts were able to form and support 1,558 farmer groups benefitting 38,000 farmers (goat, dairy and poultry); as a result, the productivity of crop and livestock commodities was also increased as targeted (End line BRA survey 2018). Likewise, under component 3, DPHOs were able to support 2,159 mother groups (53,000 mothers) through various Behavioral Change Communication (BCC) interventions, trainings and Homestead Nutrition Garden (HNG); such that dietary diversity and three Infant Young Child Feding IYCF practices of children 6-24 months were also found to be increased as planned (End Line BRA survey, 2018).

I would like to highly acknowledge and express my sincere thanks to all the people of the project area for their cooperation and support which helped the project to make successful and to accomplish the project

within stipulated timeframe. Similarly, I would like to express my sincere thanks and appreciation to all staff of DADOs, DLSOs and DP/HOs for their cooperation and support in the implementation of the project activities. Likewise, I would like to thank all NGOs (Service Providers) for their efforts in the implementation of AFSP interventions at field level. I would also like to thank DPSUs and RPSUs team for their valuable contribution in coordinating, monitoring and reporting of the project interventions.

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Kanchan Raj Pandey
Project Director
April 2018

Executive Summary

The Government of Nepal (GoN) implemented the Agriculture and Food Security Project (AFSP), with funding support of Global Agriculture and Food Security Program (GAFSP) and GoN's own fund, from April 1, 2013 to March 31, 2018. The aim of the project was to enhance the food and nutrition security (FNS) of the targeted communities of selected locations in 19 districts. The project was jointly implemented by the Ministry of Agricultural Development (MoAD), the Ministry of Livestock Development (MoLD) and the Ministry of Health (MoH), with the technical assistance of the Food and Agriculture Organization (FAO) of the United Nations and the World Bank (WB) as the designated supervising entity.

The implementation was carried out under four components namely i. Technology development and adaptation support; ii. Technology dissemination and adoption support; iii. Nutritional status enhancement and iv. Project management support. A total of 93 cost centers were involved in the implementation. The first component was implemented by Nepal Agriculture Research Council (NARC) and its research stations; second component was implemented by District Agriculture Development Office (DADO) and District Livestock Service Office (DLSOs) of 19 project districts; the third component was implemented by Child Health Division (CHD), Department of Food Technology and Quality Control (DFTQC) and District Public/Health Office (DHO) of 19 project districts whereas the fourth component was implemented by PMU.

Technology development and Adaptation part was implemented by NARC and its' 23 Research Stations. During entire project period, with support of the project NARC developed 30 improved technologies for crop and livestock (against target of developing 29 technologies); released 17 improved crop varieties (against target of 17 crop varieties); produced 582 MT of foundation seed production of different crop varieties (against target of 540 MT) and conducted 6580 field trials (against target of 4000 field trials). Refer to heading B: Achievements of PDO and heading C.1.1 and C.1.2 and annex-1 for details.

A total of 225 Boer and Saanen goats imported, of which 177 goats (Boer-147, Saanen-30) were alive and stocked at different research stations, DLS farms and breeder groups at the time of report writing. Nucleus flock of Boer goat was established and maintained at GRS Bandipur, RARS Khajura and GDF Budhitola whereas the nucleus flock of Saanen goat was maintained in GRS Bandipur and GDF Chitlang. Similarly, multiplier herds of goat were established at 27 breeder groups of 8 districts. Similarly, 12497 doses of frozen semen (Boer-9997 dose, Saanen-2500 doses) were imported and used in the artificial insemination of goat.

From natural service and AI, a total of 7035 Boer kids (pure-320, crossbred-6715) kids were born, of which 6463 Boer kids (pure 220 and Crossbred-6243) were alive at the time of report

writing. Out of which 2123 bucks (crossbred-2089 and pure-34) were distributed to the various districts. This has helped in increasing the productivity of goat meat in the project area. Similarly, out of 217 Saanen kids alive, 56 Bucks and 102 hogget were distributed to other districts. Refer to annex-8.3 for detail.

Technology Dissemination and adoption support component crop part was implemented by DADOs of 19 districts. During the entire project period, a total of 1,932 farmer field schools (against target of 1995) were conducted benefitting 47,757 farmers (85% women, 77 % youth[1]). Different types of support activities such as adoption support, crop production demonstration, nutritious crop demonstration, small irrigation support, village model farm (VMF)/homestead nutrition garden (HNG) and small grant support program were conducted to help farmers to adopt improved crop technologies. Details of such activities are provided under heading C.2.1: technology dissemination and adoption support crop. These activities have contributed in increasing Seed Replacement Rate and productivity of crops. Refer to heading B: Achievements of PDOs and annex-1: progress against result frame for detail.

Technology Dissemination and adoption support component livestock part was implemented by DLSOs of 19 districts. During entire project period, a total of 1,558 farmer groups were supported under livestock (goat, poultry and dairy) program, benefitting 38,450 farmers (91% women, 72% youth). Different types of package programs such as Goat productivity enhancement program; Livelihoods improvement from goat program; goat breeding program; dairy goat promotion program; rural poultry production package program; dairy production package program; farmer field school and small grant support program were conducted. These programs helped farmers to enhance their knowledge and skill in improved technologies and also to adopt improved technologies. Details of activities are given under heading C.2.2: technology dissemination and adoption support livestock. These programs have helped to increase productivity of egg, milk and goat meat (weight of goats). Refer to heading B: Achievements of PDOs and annex-1: progress against result frame for detail.

Component 3 (Nutrition) was implemented by CHD and DFTQC at central level and DP/HOs of 19 districts implemented nutrition activities at district level. Different activities such as strengthening of laboratory of DFTQC, food safety analysis, recipe preparation, pro-nutrition training package development, MToT on pro-nutrition actions in agriculture, MToT in food preservation, processing and food based nutrition, preparation of project specific BCC strategy, BCC training manuals and print IEC material were carried out at central level.

At field level, a total of 2,159 mother groups were provided training on food preparation, processing and preservation (FPPP) training (against target of 1700) benefitting 51,137 women (PNW 23,806 (45%) and youth 43,118 (81%). Similarly 10,214 events of recipe demonstration were conducted involving 159,647 participants, of which 26067 were new PNW. Besides, various other activities

1. between age of 15 to 40 years considered as youth

were carried out at field level. Refer to C.3: Food and Nutrition status enhancement for detail. These nutrition activities along with crop and livestock support activities resulted in the increase of dietary diversity of pregnant and nursing women (particularly in the consumption of animal protein and fruits and vegetables) and also increasing Infant and Young Children Feeding (3 IYCF) practices of children between 6-24 months. Refer to heading 2 B and annex-1 for detail.

Under FAO technical assistance part, FAO accomplished the importation of livestock and forage seed; capacity-building for government staff and stakeholders; human resources management at central, regional and district level, and at sub-village development committee (VDC) level; and quality assurance. FAO developed 11 FFS manuals (crop-8, livestock-3) and 511 FFS facilitators (crop-357 and livestock-154). All these activities were accomplished in a timely manner within the allocated budget.

FAO TA also assisted AFSP to build the capacity of 139,324[2] beneficiaries (women 92 %, youth 77% youth) and stakeholders (e.g. service providers [SPs], government officials and local body representatives) in various technical and management aspects, which could be an asset for the continuity of project initiatives, and helped to maintain environment and social (ES) safeguard measures by building the capacity of government staff, field workers and farmers; in this regard, preliminary ES safeguard assessments were conducted and monitored to ensure environmental and social sustainability.

Field experience and NARC reports show that the crop and livestock technologies introduced by the project are technically and financially viable; and has attracted the interest of farmers.

In line with the new political scenario of provincial and local governance, the project organized orientation workshops for elected representatives of local bodies on AFSP initiatives and the way forward for continuing good practices (FAO part). These activities will help to sustain project initiatives in the project areas.

2 Includes crop FFS (47757), livestock group beneficiaries (38430) and mother group members (53137)

Acronyms

ABD	Animal Breeding Division
AI	Artificial Insemination
ARS	Agriculture Research Station
ASC	Agriculture Service Centre
AFSP	Agriculture and Food Security Project
BCC	Behaviour Change Communication
BGs	Beneficiary Groups
BRA	Beneficiary Results Assessment
CHD	Child Health Division
AT	Agriculture Technician
DADC	District Agriculture Development Committee
DADO	District Agriculture Development Office
DESMC	District Environmental and Social Management Committee
DFTQC	Department of Food Technology and Quality Control
DIME	Development Impact Evaluation
DLO	District Livestock Officer
DLS	Department of Livestock Services
DLSO	District Livestock Service Office
DoA	Department of Agriculture
DoHS	Department of Health Services
DPHO	District Public Health Office
DPSU	District Project Support Unit
DTO	District Technical Officer of FAO TA
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EPA	Environment Protection Act
FAO	Food and Agriculture Organization of United Nations
FCHV	Female Community Health Volunteer
FF	Farmer Facilitator
FFS	Farmer Field School
FFT	Farmer Field Trial

FGs	Farmer Groups
FSED	Food Security and Environment Division of MoAD
FWR	Far western Development Region
FY	Fiscal Year
GAFSP	Global Agriculture and Food Security Programme
GDF	Goat Development Farm
GoN	Government of Nepal
GRM	Grievance Redress Mechanism
HH	Household
HP	Heath Post
HNG	Homestead Nutrition Garden
ICT	Information and Communication Technology
IEE	Initial Environmental Examination
IYCF	Infant and Young Child Feeding
JT	Junior Technician
JTA	Junior Technical Assistant
LSC	Livestock Service Centre
LT	Livestock Technician
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MIYCN	Maternal Infant and Young Child Nutrition
MoAD	Ministry of Agricultural Development
MoALM&C	Ministry of Agricultural, Land Management and Cooperatives
MoH	Ministry of Health
MWR	Mid Western Develppment Region
MToT	Master Training of Trainers
NARC	Nepal Agricultural Research Council
NGLRP	National Grain Legumes Research Program
NS	Natural Service
NMRP	National Maize Research Program
NORP	National Oilseeds Research Program
NPC	National Planning Commission
PAD	Project Appraisal Document

PDO	Project Development Objective
PESMC	Project Environmental and Social Management Committee
PF	Project Facilitator
PFD	Pasture and Fodder Division
PHCC	Primary Health Care Centre
PIP	Project Implementation Plan
PMIS	Project Management Information System
PMU	Project Management Unit
PNW	Pregnant and Nursing Women
PSC	Project Steering Committee
PTCC	Project Technical Coordination Committee
PVS	Participatory Variety Selection
PVT	Participatory Varietal Trial
RARS	Regional Agriculture Research Station
RPCC	Regional Project Coordination Committee
RPSU	Regional Project Support Unit
SARP	Swine and Avian Research Program
SGSP	Small Grant Support Program of AFSP
SMF	Social Management Framework
SP	Service Provider
TA	Technical Assistance
ToF	Training of Facilitator
ToR	Terms of Reference
VDC	Village Development Committee
VMF	Village Model Farm
WB	World Bank

Contents

1. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. Context at Appraisal

Low food availability and poor nutrition status (particularly women and children below two years of age) in the mid and far western development regions of the country, were the key problems identified (PAD, AFSP). The Country Investment Plan (CIP) also comprehensively addressed agriculture and food security issues. The Government of Nepal (GoN) implemented Agriculture and Food Security Project (AFSP) to enhance food and nutrition security of the residents of selected location of 19 project districts of mid and far western region of Nepal. The project was funded by GAFSP with grant support of US $ 46.5 Million through competitive bidding and with contribution of US $ 11.5 million from GoN for 5 years' period (1st April 2013 to 31st March 2018). It was envisaged that food security would be realized through increased food availability, made possible by increased productivity of both crop and livestock whereas nutrition security would be realized through improved dietary intake, made possible by the promotion of diversified diets, and improved feeding and caring practices for pregnant and nursing women (PNW) and children below 2 years of age.

In order to achieve its objective, four components were provisioned in the project to address the inter-locking problems in the project area through coordinated interventions, including: (i) adaptation and release of relevant technologies for specific agro-ecologies to boost productivity and climate resilience of agriculture; (ii) enhancing local availability of improved crop variety and livestock breed; (iii) supporting farmers to adopt improved management and husbandry practices, use of modern inputs and market access; and (iv) improving household availability of nutritious foods through homestead production, promotion of diversified diets, increased nutrient intakes and improved feeding and caring practices for pregnant and nursing women and children up to 2 years of age.

The project was based on multi-sector approach; three different ministries were engaged in the implementation process, namely Ministry of Agricultural Development (MoAD), Ministry of Livestock Development (MoLD) and Ministry of Health (MoH) whereas the lead was taken by then MoAD currently Ministry of Agricultural, Land Management and Cooperatives (MoALM&C). The World Bank was the designated supervising entity for the project and the Food and Agriculture Organization of the United Nations (FAO) provided technical assistance to the project.

Nepal Agricultural Research Council (NARC) and Research stations under MoAD implemented the component one, MoAD/District Agricultural Development Office (DADO) and MoLD /

District Livestock Service Office (DLSO) in 19 project districts implemented the second component whereas the third component was implemented by Child Health Division (CHD), Department of Food Technology and Quality Control (DFTQC) and District Public Health Office (DPHO) of 19 districts. The fourth component (project management) was mainly managed by Project Management Unit (PMU) to support other 3 components.

B. Significant Changes during Implementation

No significant changes made in the project implementation during project period. However, targets of some activities such as Village Model Farm (VMF), Homestead Nutrition Garden (HNG), small irrigation schemes) were increased and one activities (community based seed processing and storage center) was added in the project implementation plan during MTR, as per the demand of community. The yearlong farmer field school (FFS) approach was changed to two crop FFS or one crop FFS due to agro-climatic conditions of the project districts.

Responsibility of conducting Master trainer of training (MTOT) and training of facilitator (TOF) for FFS facilitator was shifted to FAO TA from GoN during the inception of FAO TA. Similarly, the responsibility of preparation of BCC strategy, BCC training guidelines and material was also given to FAO TA from CHD during the world Banks' 4th implementation support mission and responsibility of pro nutrition IEC materials was shifted to FAO TA during the MTR. All these tasks were assigned to FAO TA within the framework of original contract budget by revising budget heads.

Technical assistance of FAO TA (central consultants, DTOs and 399 field based project staffs recruited by 19 service providers) was extended for additional period of 3 month from 1st January 2018 to 31st March 2018 with provision of additional budget (US$ 360,003).

2. OUTCOME

A. Relevance of PDOs

The PDO of Agriculture and Food Security Project (AFSP) was well aligned with the country need and government plan priorities. Agriculture Development Strategy (2015-2035), Country Investment Plan (CIP) and country programming framework has clearly pointed out the need of agriculture and food security comprehensively and has accorded high priority. Nepal multi-sectoral Food and Nutrition Plan MSNP (2013-2017 and new 2018-2022) also identified food and nutrition security as a key issue.

The response

The project has contributed towards the achievement of MSNP milestones, particularly in Output 6 (availability and consumption of appropriate foods in terms of quality, quantity, frequency and safety enhanced and women's workload reduced) and output 7 (Capacity of national and sub-national levels enhanced to provide appropriate support to improve maternal and child nutrition).

To enhance food and nutrition security of the selected households of the selected locations of the 19 project districts, the project envisaged in Increasing food availability through the enhancement of production and productivity of crop (Paddy, Wheat, Maize, Potato and neglected nutritious crop Finger millet, Buck wheat and Barley) and livestock (goat, poultry and dairy) through access to improved crop varieties and exotic livestock breeds (Boer and Saanen Goat) along with improved management technologies suitable for the project area.

Community Scorecard Assessment (CSA) study and End line Beneficiary Result Assessment (BRA) Survey reports, March 2018[1] show that the project was based on the actual need of the community and beneficiaries of the project area (Score 4 out of 4, CSA report, March 2018). The project has been able to contribute in the food and nutrition security of the targeted group of the project area by 30% increase in food self-sufficiency (average household food self-sufficiency increased from 5.65 months increased to 7.39 months, End line survey, March 2018). As per findings the End line survey conducted by DIME, the project has been able to increase the average household income by 18 % in comparison to that of the baseline period.

Therefore, the overall relevance of the project was evaluated as very good (A). Refer to annex C.5 for detail.

B. Achievement of the PDOs (Efficacy)

The effectiveness of the project was assessed based on the achievements made against the outputs and outcomes of the project as set forth in the result framework.

Results Achieved

Keeping in view the outcomes of AFSP result framework, NARC has been able to release 17 improved crop varieties during the project period (against the target of 17) with support of AFSP and these varieties and some other promising varieties were also used in the farmer field school (FFS) and seed production program under component 2. Similarly, NARC also developed 30 improved technologies (crop-22, livestock-8) against the target of developing 29 improved technologies; these technologies were tested and validated in various agro-ecological and socio-economic conditions of the project locations. These technologies were found effective to overcome

1 The surveys were conducted by independent consulting firm called ERMC and Bright Future in Jan-Feb 2018

the specific crop and livestock problems/issues in the project area. Besides, NARC produced a total of 582 MT of source seed (foundation seed and breeder seed); of which 181 MT of seed was used in seed multiplication program under component 2 to produce certified seeds; a total of 4800 MT of seed produced in the districts. The seed cooperative/farmers informed that project VDCs of some districts (eg Surkhet and Rolpa district) became self-sufficient in seed and they have started to sell it to other districts as well.

A total of 47,757 farmers (against target of 40,000) were trained in season long crop FFS, which helped them in enhancing knowledge and skills in improved crop management; the farmers were also provided adoption support; which helped them to adopt improved technologies. As a result Seed Replacement Rate of the paddy increased from 7.2% to 39%; that of maize increased from 14.7% to 35.7%; that of wheat increased from 4.6% to 38 % and potato increased from 16% to 31.4%. This has helped to increase the productivity of these crops (Refer to annex-1 for detail). Similarly, a total of 363 livestock FFS (Goat 235 and Poultry 128) involving 9057 farmers (8567 women) were conducted to impart their intensive knowledge and skills in goat and poultry rearing; in conjunction with other livestock related cascade trainings to 1558 livestock groups involving 38430 farmers (against target of 32500 farmers) provided technical knowledge and skills on improved management technology on goat husbandry, poultry rearing and dairy production. Besides various other supports were provided to these group, which helped them to adopt improved technologies and increasing the livestock production and productivity (milk, meat and egg).

A total of 225 (Boer-175, Saanen-50) goats and 12497 doses of frozen semen (Boer-9997 and Saanen-2500) were imported and distributed to NARC stations, DLS farm and Breeder groups; of which 147 Boer and 30 Saanen pure goats were alive (Refer to annex-9.1). From NS and AI, a total of 7275 kids (Boer-7035 and Saanen-240) were born, of which 6680 Kids (Boer- 6463 and Saanen-217) were alive. And a total of 2133 Boer kids (pure-34 and crossbred-2089) were distributed to the various districts against the target of distributing 2000 kids. Refer to annex-9.2 and 9.3 for detail.

Village model Farm (VMF) and Homestead Nutrition garden (HNG) activities were particularly targeted to pregnant and nursing mothers and children below 2 years of age to increase dietary diversity and to increase consumption of green vegetables and animal protein. Women were provided training on vegetable cultivation, poultry and nutrition. This has helped them to increase their knowledge on vegetable cultivation, poultry rearing and nutrition messages whereas the HNG helped them to get access to such foods.

The end line BRA survey report March 2018 shows that the consumption of animal protein by PNW has increased by 33% against of increasing 15% (from 56% to 89.9%) and that of fruits and vegetable has increased by 31% against target of 15% (from 57% to 78.9%). Similarly, 3 Infant

Young Child Feeding (3 IYCF) practices of children from 6 months to 24 months have been increased by 38% against target of 30% (from 42.3 % to 72.3%). Various nutrition related training and Recipe demonstration, BCC program along with HNG, and livestock program contributed for such increase.

Similarly, the productivity of livestock weight of goat (all breed) at the age of 12 month increased by 64.5% against target of 75% (from 19.18 kg to 31.6 kg) whereas that of Boer cross increased by 87% (from 19.18 kg to 36 kg; Boer cross). This reveals that the project intervened Boer has proven successful at project conditions to increase productivity of goat meat. Similarly, egg production/hen per year increased by 353 % against target of 15% (from 22 to 93) and the milk production per dairy animal (cow/buffalo) per year increased by 95% against target of 75% (from 478 liter to 934 liter) End line BRA survey, March 2018 report can be accessed through www.afsp.gov.np

The project targeted to provide project developed BCC message to 45000 pregnant and nursing women (PNW) and the project has delivered BCC message to 49 873 PNW.

Keeping in view the all these facts and figure, the effectiveness of the project is rated as good (B). Refer to section C.5 for detail criteria of evaluation.

C. Implementation of work plan and budget (Efficiency)

The efficiency of the project was assessed based on whether the activities were conducted as in a planned manner in terms of timeliness and within budget and overall rating and criteria is given in section C.5. The component-wise budget and total incurred expenditure is given in Annex 2. The following section gives a detail of activities carried out under different components during entire project.

C.1.1: Technology Development and Adaptation: Component 1 crop

Under component 1: crop, the activities were conducted by Nepal agriculture Research Council, Khumaltar and its 23 commodity research stations and Regional agriculture research stations. Various trials (on station trials and on farm trials) were carried out on these stations to develop issue based crop management technologies and source seed production (breeder seed and foundation seed). Synopsis of key activities carried out under this component is described below:

Table-1: Progress against and total Target: component1-crop sector

Activities	Unit	Total Target	Total progress	Remarks
Technology development/ adaptation (varieties)	**No.**	**22 (17)**	**22 (17)**	

Activities	Unit	Total Target	Total progress	Remarks
Field Trials of Improved Technologies (on crops)	**No**	**4000**	**6580**	
Introduction and on station testing of promising varieties	*No*		*306*	
On farm validation of promising varieties	*No*		*5057*	
On farm validation of IPM/IDM technologies	*No*		*566*	
On farm validation of ICM technologies	*No*		*651*	
Economic analysis of research trials	**No.**	**4**	**4**	
Packaging of proven varietal technologies	**No.**	**28**	**28**	
Total source seed production	**MT**	**540**	**582.8**	
Foundation Seed Production	*MT*		*533.4*	
Potato basic seed Production	*MT*		*16.9*	
Breeder seed production	*MT*		*32.5*	
Potato pre-basic seed production	**No.**		**97000**	
Seed production of pre-released varieties	**MT**		**5.6**	

Source: NARC progress report,

Development of improved crop management technologies

A total of 22 improved crop management technologies (against target of 22) were developed by NARC during the entire project, which include integrated crop management (ICM), integrated disease management (IDM) and Integrated pest management (IPM) technologies in various crops such as maize, wheat, lentil, rice, bean, potatoes based on specific issues/problems. These technologies were trialed at NARC stations and validated in out-reach sites in the course of technology development and finally disseminated to the farmer level. These technologies were found effective technically and financially (NARC report 2017). In addition, some technologies were related to agri. engineering also developed, which were useful in reducing women drudgery and labor. Refer to annex 7.1 and 7.2 for detail.

Development/Release of improved crop varieties

A total of 17 improved varieties of various crops like buckwheat, Finger-millet, Rice, Maize and wheat were developed/released by NARC during entire project period (against target of developing/releasing 17 crop varieties). Out of 17 varieties, it include 3 varieties of wheat (Danfe, Swargadwari, and chyakhura); 2 varieties of Buckwheat (Tite phaphar and Mithe phaphar); 5

varieties of rice (Lekali dhan-1, Lekali dhan-3, Sukkha dhan-3, Sukkha dhan-4, Sukkha dhan-5 and Sukkha dhan-6); 2 varieties of finger-millet (Kabhre kodo and Sailunge kodo); 2 varieties of Potato (Khumal ujjwal and Khumal Upahar) and 3 varieties of Maize (Arun-4, Arun-6 and Arun-3). These varieties were disseminated to the project farmers through FFS, demonstrations, seed producer groups/cooperatives, adoption support program and agro vets. Seed multiplication program helped a lot to farmers for getting access to these improved crop varieties. Refer to annex-7.3 & 7.4 details.

On farm and on station validation of trials

A total of 6580 field trials were conducted against the total target of 4000 trials; the conducted trials include 308 on stations trials, which were conducted at various NARC stations for introduction and testing of promising varieties; 5057 trials were carried out at farmers' level for validation of promising varieties appropriate for project locations; and 566 trials were carried out for on farm validation of IPM/IDM technologies and 651 trials were carried out for on farm validation of ICM technologies on various crops on specific issues. These trials were carried out to develop and validate crop management technologies as mentioned above. The results and recommendations of such trials were disseminated to the extension workers and farmers; to sort-out the specific issues whereas some trials were continued for further validation and refinements. Refer to annex-7.2.1 and 7.2.2 for details of trials.

Source Seed Production

A total of 582.8 MT of source seed was produced (against the target of 540 MT) in various NARC stations and at farmers' field, of which 550.3 MT was foundation seed, and 32.5 MT of breeder seed and distributed to the project districts for seed multiplication program, FFS and demonstrations. These source seed produced in the NRAC stations include various crops like Paddy (174.4 MT), Maize (135.6 MT), wheat (214.4 MT), Barley (.2.0 MT), Bean (5.0 MT), black gram (0.3 MT), Buckwheat (0.7 MT), Finger millet (4.0 MT), Lentil (7.9 MT), Pea (0.3 MT), Potato basic seed (25.3 MT), Soybean (7.8 MT), mustard (2.5 MT) and vegetables (2.5 MT). These source seeds were used in the AFSP seed multiplication program, FFS, demonstrations and other DADO programs. Refer to annex-7.5 and 7.5.1 for detail of source seed produced.

The introduction of improved crop varieties and seed multiplication program has helped in increasing seed replacement rate and productivity of paddy, maize; wheat and potato as set out in the result frame work (refer to annex- 1: progress against result frame work)

Seed Multiplication of Pipeline Varieties

The project also supported Seed Quality Control Centre (SQCC) under MoAD, in preparing an operational guideline on August 5, 2016; for seed multiplication of pipeline varieties (pre-released varieties) for quicker dissemination of such varieties. AFSP conducted workshops to

promote seed multiplication of pre-released variety involving various GoN stakeholders, farmers and private sector. Seed multiplication of pipeline varieties of Rice, Maize and other crops was carried out at various research stations and a total of 56 MT of seeds of pre-released varieties was produced and distributed to the project farmers. In addition, paper titled "Strengthening collaboration between research and extension in AFSP" was prepared and shared with concerned stakeholders for strengthening the collaboration between research and extension in AFSP. Refer to annex-7.5.2 for details of pre-released varieties.

C.1.2: Technology Development and Adaptation: Component 1 Livestock

Table 2: Progress against total target under component 1: Livestock

Activities	Unit	Total Target	Progress
Development of improved livestock technologies	No.	7	8
Establishment and maintenance of Goat nucleus breeding scheme	No.	5	5
Development of Breeders farmer/ Multiplier herd of goat (support goat breeding programme)	Districts	6	8
Develop feeding package for stall feeding goat	No.	1	1
Develop goat genetic improvement scheme	No.	12	13
Develop appropriate silvi- pasture model for three agro ecological zone	No.	1	1
Develop Improved health management technologies, document poisonous plant and ethno veterinary practice	No. times	1	1
Develop locally available feed resources and maintain forage germplasm	Times	4	5
Maintenance of poultry nucleus stock at Khumaltar	Times	2	3
Development of low cost feeding technology of poultry	No.	1	1
Develop feeding package for different physiology stage of buffalo	No.	1	1
Performance evaluation of Boer and Saanen goat	Times	1	1

Source: NARC progress reports

- **Development of improved technologies**

A total of 8 improved livestock technologies were developed on livestock sector against the target of developing 7 technologies. These technologies include appropriate silvi-pasture model for three ecological zones, comfrey-multiuse grass and cultivation practices, ND 1-2 thermo-

stable vaccine against Ranikhet and Urea Molasses mineral block for mineral supplementation to milking animal, feeding package for different physiological state of buffalo, improved health management technologies, and feeding package for poultry/goats. Detail of these technologies is presented in annex-7.6.

- **Establishment and Maintenance of goat breeding scheme (nucleus Flock) of Boer and Saanen Goat**

The 50 imported Saanen goats (30-Does, 20-bucks) from USA were imported by FAO TA and delivered to NARC stations, DLS farm and farmer breeder group at Dadeldhura. Nucleus herds of Saanen goats were established and maintained at GRS Bandipur and GDF Chitlang. Out of 50, 30 Saanen goats (Doe-17, Buck-13) were alive at the time of final reporting. The higher mortality was found in GDF Chitlang (67%) followed by GRS, Bandipur (32%) and breeder groups (29%). The main reasons for such deaths were due to the diseases and inadequate management. Refer to annex-8 for initial stock and final stock at the time of preparation of this final report. Similarly, 2500 doses of frozen semen were imported and used in the artificial insemination. As a result of natural service and AI, a total of 19 pure and 198 crossbred of Saanen kids were born and being/ distributed to the districts. Refer to annex-8.1 and 8.2 for detail of Saanen Kids born.

In case of Boer goat, out of total import of 175 goats (Doe-100 and Buck-75) from Australia, both bucks and does were delivered at the farm/station (GRS Bandipur, RARS Surkhet and GDF Bandipur) to maintain the nucleus herd whereas the some bucks were delivered to the breeder groups of various districts to produce the crossbred Boer goats. Besides, some bucks were delivered to NLBC Pokhara for collection of semen. Till date, a total of 147 Boer goats (buck-59, doe-88) were stocked at various stations/farms and at breeder groups. The number of goats stationed at initial period and the present stock of various farms/stations and at breeder districts is presented in annex-8. Similarly, 9997 dose of frozen semen of Boer goat was imported and used in the districts to produce crossbred Boer kids.

- **Development of Breeders farmer/ Multiplier herd of Boer goat**

Altogether 27 breeder farmer groups/multiplier herds of goat were established in the districts of Rukum, Rolpa, Salyan, Pyutahn, Dadeldhura, Doti, Surkhet and Dailekh. Pure Boer bucks were provided to Surkhet (16), Dailekh (13), Salyan (5), Doti (13), Rukum (5) and Dadeldhura (3) in the breeder farmer groups/multiplier herds of said districts. Similarly, pure bucks were also distributed to Rolpa (11) and Pyuthan (12) from the production of nucleus herd for establishing multiplier herd. These farmers group were provided goat husbandry training, provided support in improvement of shed, vaccination, drenching, fodder and forage seeds, sets and saplings, training on insurance. The support was provided for three consecutive years.

Results of Boer and Saanen

A total of 7035 Boer kids (pure-320, crossbred-6715) kids were born, of which 6463 Boer kids

(Crossbred-6243 and pure 220) were alive at the time of report writing. Out of which 2123 bucks (crossbred-2089 and pure-34) were distributed to the various districts. This has helped in increasing the productivity of goat meat in the project area. Similarly, out of 217 Saanen kids alive, 56 Bucks and 102 hogget were distributed to other districts. Refer to annex-8.3 for detail.

Develop feeding package for stall feeding of goat

Different trials were carried out at Sheep and Goat Research Program, Jumla to develop feeding package for stall feeding goat. Maximum weight gain (53.2g/day) was obtained from feeding oat hay with concentrate @ 1% of BW. And this feeding package was found more profitable than feeding native hay with concentrate @ 1% of BW and grazing with concentrate @ 1% of BW. This technology has been promoted in high hill areas.

Develop appropriate silvi- pasture model for three agro ecological zone

A total of 6 different set of silvi pastoral treatment combinations were tested for three different ago-ecologies. Among which, alley cropping of banana and berseem was found effective in terai and Banana-cowpea alley cropping was found effective in low hill condition.

Different forage species under apple and apricot orchard in high mountain and silvi pastoral system (fodder tree and forage under coverage) was evaluated in different location of low to mid hill condition. Compared to other fodder grass species, Mulato grass gave the highest dry matter production on medium shade and light shade (5.38 ± 2.88 ton/ha and 9.89 ± 5.86 ton/ha respectively). Plant establishment was found lowest on heavy shade, amongst them, forage peanut has highest plant establishment (40%). These silvi-pasture models were promoted in the project districts and being popular gradually.

Details of activities carried out under component 1: livestock are presented in annex-7.6.1.

C.2.1: Technology dissemination and adoption support: Crop

District Agriculture Development Office (DADO) and District Livestock Service Office (DLSO) of 19 districts implemented this component with the technical assistance of FAO. District Technical Officers, Field Technicians (Agriculture and Livestock) and project facilitators supported concern offices in the implementation of AFSP intervention in the field.

Farmer Field School in crop was made the entry point for AFSP support for crop beneficiaries. FFS was found very effective to provide intensive knowledge and skill on crop production; as farmers' got opportunity to learn each and every stage of crop production cycle and able to make decision based on their learnings and the comparative trials carried out in the FFS (improved practice and their own existing practice). After FFS, the farmers were provided adoption support in the following year and also carried out demonstrations to demonstrate other farmers in the area about the improved crop technology. The progress made under technology dissemination and

adoption support on crop component during project period is presented in table 3:

Table-3: Status of progress during entire project period: Component 2 Crop

Activities	Unit	Total target	Total progress	Remarks
FFS crop	**No.**	**1995**	1932	
Crop Production FFS	No.	1900	1862	
Seed Production FFS	No	95	70	
Adoption Support	**Group**	**1995**	**1540**	
Small Irrigation support program	**Scheme**	**380**	**1351**	
Small irrigation construction and rehab support	Scheme	190	1099	
Small irrigation scheme support based on cooperative	Scheme	190	252	
Demonstration (crop and nutritious crop)	**No.**	**5700**	**5348**	
Crop Production Demonstration	No.	3800	3701	
Nutritious Crop Demonstration	No	3800	1647	
Village model farm establishment	**No.**	**775**	**794**	
Homestead Nutrition Garden	**Groups.**	**1450**	**1114**	
Seed production program	**Ha**		**2335**	
Mini kit distribution of pre-released variety	**No.**		**16719**	
Community Seed Processing and storage center establishment	**Units**	**10**	**10**	
small grant	**sub project**		**1507**	
District Environment and Social Management Committee meeting	**No.**	**80**	**73**	

Source: Progress report of DADOs/AFSP database

- **Farmers' Field School on crop production**

A total of 1932 crop FFS were conducted in 19 project districts during the entire project period. *Altogether* 47,757 farmers *(85%, 40,769 women)* were trained in these FFS. Analyzing the ethnic composition of beneficiaries, 17% were dalits, 10% were indigenous nationalities, and 73% were from Brahmin/chhetry/Thakuri and other communities. Similarly, analyzing the age of beneficiaries, 16% were of age (15-24 year), 61% were of age (25-40 year), 22% were of age (above 40 year) and 1% not reported.

FFS were conducted in *Barley (2 districts, 7 FFS, Variety: Local); Bean (2 districts, 7 FFS, variety: local, PB001, chaumase);* Maize *(18 districts, 317 FFS, Variety: Arun-2, Arun-1, Deuti, Manakamana-1, Manakamana-3, Manakamana-6, Gansh-2, Rampur composite, Posilo-1, Thulo makai); Millet (2 districts, 4 FFS, variety: Dalle, Local, Okhle); Paddy (18 districts, 182 FFS, variety: lumle2, Sukkha dhan-1, Sukkha dhan-3, Sukkha dhan-4, Sukkha dhan-5, Sukkah-6, Khumal-4, Radha-4, Chainpur, Chaite-2, Chandannath-1, Hardinath-1, Khumal-10, Khumal-11, lekali-3, Radha-4, Radha-7, Ramdhan);* Potato *(18 districts, 541 FFS, variety: Cardinal, Desiree, Janakdev, Khumal seto, Kufrijyoti, Lal gulab, TPS HPs 767*); Wheat *(19 districts, 817 FFS, variety: Annapurna-3, Danfe, WK- 1204, Dhaulagiri, Gautam, Vijaya, Bhrikuti, Bikad, Gaura, NL 1064, Swargadwari, Chyakhura); and Buckwheat (3 districts, 57 FFS, variety: local, Sweet buckwheat, bitter buckwheat).*

Keeping in view the source of seeds used, out of 1932 FFS, 876 FFS (45%) used seed from NARC-stations, and 600 FFS (31%) from Seed Producer farmer group/cooperative, 278 FFS (14%) from agro-vets, 116 FFS (6%) from seed companies and 62 (3%) from GoN (DoA) farms. This shows that all FFS has used seeds from reliable sources; mainly from Cooperatives & NARC stations followed by seed producer groups/cooperatives.

The average productivity of rice in FFS was 4.00 MT/ha in improved practice in comparison to 3.14 MT/ha in farmers' practice and the average productivity of barley was 1.9 MT/ha in improved practice in comparison to 1.1 MT/ha in farmers' practice. Similarly, the average productivity of maize was 3.95 MT/ha in improved practice in comparison to 2.97 MT/ha in farmers' practice whereas the average productivity of finger millet was 2.95 MT/ha in improved practice in comparison to 1.73 MT/ha in farmers' practice. The average yield of paddy was 3.99 MT/ha in improved practice in comparison to 3.04 MT/ha in farmer's practice and that potato was 16.01 MT/ha under improved practice and 12.77 MT/ha in farmer's practice. Similarly, the average yield of wheat was 4.33 MT/ha under improved practice and that of under farmers' practice was 3.22 MT/ha. FFS results showed that yield of crops in improved practice are higher in comparison to the farmers' practice and helped farmers to adopt improved technologies. Refer to annex-9, 9.1 and 9.2 for detail. Annex-9.2 is an object file and contains 11 tables, which gives nitty-gritty of FFS.

- **Adoption Support Activities**

Adoption support was provided to farmers in the following year of the FFS completion. Different kinds of grain/seed storage materials, source seed and agriculture tools and equipment were supported under this program to help in adopting improved crop management technologies. During the project period, adoption support was provided 1,540 FFS group benefitting 38,053 farmers (31,778 women) of 19 districts, to help them for adopting the technologies that they learnt from the FFS.

Under adoption support, 184 MT of source seed of different improved crop varieties were provided to the farmer; super bags were provided to 24,872 farmers (82,263 super bags) and agricultural tools/materials to 17,573 farmers. The agricultural tools support includes metal bin, power tiller, thresher and tarpaulin sheet and furrow. Refer to annex- 10, 10.1 and 10.2 for detail. Annex-10.2 is an object file, which contain 4 tables and gives further details of adoption support activities by districts.

It is found that the adoption support has helped to reduce women drudgery in various agricultural operations; to save grain and seeds from rats and insects during storage; enabled farmers to get access to improved varieties and seeds, which helped farmers to adopt the improved technologies.

- **Demonstrations**

Crop production demonstration

Altogether crop production demonstrations were carried out in 3,701 groups (5,726 plots) during entire project period benefitting 61,462 farmers. Demonstrations were carried out on barley, buckwheat, bean, maize, millet, paddy, potato, soybean, foxtail millet, and wheat crop. The total area covered by the demonstrations was 19,718 ropani (986 ha, 1 ha=20 ropani). The size of demonstration plot was varied from 3-9 ropani, depending on the agro-ecological belt (hill & high hills). The varieties used in the demonstrations were local variety for barley. Kentuki-wonder and local (marpha, nantics) varieties were used for bean whereas the local variety, bitter buck wheat, Sweet buck wheat were used in buckwheat crop demonstration. Likewise, *Arun-2, Arun-3, Manakamana-3, Manakamana-4, Manakamana-5, Manakamana-6* varieties were used for maize; whereas *Chandannath-3, Hardinath-1, Khumal-10, Khumal-11, Radha-4, Ramdhan, Sukkha Dhan-3, Sukkha Dhan-4, Sukkha Dhan-5, Sukkha Dhan-6 and Lumle-2* varieties were used for paddy. Similarly, *Desiree, Cardinal, Khumal Seto, Janak dev, TPS and Kufri Jyoti varieties were used* for potato. In wheat crop varieties namely *WK-1204, Gautam, Vijaya, Danfe, Bhrikuti, NL-971 and Dhaulagiri* were used. The estimated average yield of barley was 0.97 MT/ha and that of wheat crop was 3.0 MT/ha in the crop production demonstrations. The average yield of maize was 2.75 MT/ha and that of paddy crop was 3.03 MT/ha. Detail of yield for crop by varieties is provided in the annex 5.2. Refer to annex- 11, 11.1 & 11.2 for detail. Annex 11.2 is an object file that includes further details of crop production demonstration.

- **Nutritious crop demonstration**

The main objective was to demonstrate and promote locally available neglected nutritious crop (NNC) for increasing nutrient value in their food utilization. During the entire project period, nutritious crop demonstrations were carried out in 1,647 groups benefitting 23,305 farmers of 19 districts. Nutritious crop demonstrations were carried out in barley (*Bonus, local*), bean (*Chaumase, KBL 2, Prakash, Sikkim local and four season local*), lentil *(Simal)*, pea *(Sikkim local, chick pea (Trishul and Koseli)*, Oat *(local)*, soybean *(local),* Rajma *(local),* Sunflower *(F1 hybrid)*

and foxtail millet *(local, kabhre Kodo)* for which 17.MT of seeds were distributed. The total area covered under nutritious crop demonstration was 8,797 ropani (439 ha, 1 ha=20 rop) from all 19 districts. The estimated average productivity of nutritious crops is presented in annex-12.3 Refer to annex-12, 12.1, 12.2 & 12.3 for details of nutritious crop demonstration. Annex 12.3 is an object file and contains further detail information on nutrition crop demonstration.

- **Seed production program**

Seed production program was implemented in 17 project districts (except Dolpa and Jumla district); to contribute in increasing Seed Replacement Rate (SRR) and productivity of selected crops (Rice, Wheat, Maize) in the districts. Foundations seeds from NARC stations or GoN farms or from reliable source (at least truthful level seed) were used for seed production program. The seed production program was started from FY 2015/16; as this was not explicitly mentioned in the project document. During the entire project period, Seed Production Program was carried out in 812 groups involving 11,439 farmers of 17 districts. Seed multiplication was conducted in maize crop in 840 ha of land, wheat in 1,174 ha and rice in 315 ha; for which a total of 181 MT source seed was provided to the farmers along with technical support. The estimated total seed production is 4,832 MT and 1,971 MT of seeds of above-mentioned crops were sold to the farmers. Refer annex-13, 13.1 & 13.2 for detail. Annex-13.2 is an object file and contains further detail information on seed production program at community level.

- **Mini kit distribution of recently released/pre-released variety**

In order to quicker dissemination of recently released or pre released crop varieties at farmer level, this activity was started from the fiscal year 2015/16. A total of 16,719 mini kits was distributed were distributed to 13,939 farmers of 17 districts. It included various crop varieties such as barley *(local)*, Bean *(local)*, maize *(Arun-2, Deuti, Manakamana-3, Posilo-1, Rampur composite)*; rice *(chandannath-3, Khumal-10, Sukkha dhan-10, Sukkha dhan-3, Sukkha dhan-4, Sukkha dhan-5, Sukkha dhan-6)*; and wheat *(Bhrikuti, Chyakhure, Danfe, Dhaulagiri, Gautam, Munal, WK-1204).* The sources of seed were NARC stations, cooperatives and National Seed Company. Though the objective of the program was to introduce recently/pre released crop varieties from NARC; seeds from other reliable source were used in the program as it was difficult to get seed of recently released / pre released varieties from NARC. Refer to annex-13.3 and 13.3.1 for detail. Annex-13.3.1 is an object file and contains several detail information about mini kit distribution program.

- **Small scale irrigation support program**

In order to implement small irrigation program, a notice was published from each DADO for the submission of proposal to eligible and interested farmers' groups/cooperative. After the submission of proposals at districts, respective DADOs carried out necessary works such as compilation and processing of proposals, field verification, decision from District Agriculture Development Committee (DADC), awarding, contracting with beneficiaries and release of fund

was done on installment basis. There were two types of small irrigation supports- first type was for farmer groups in which support was provided up to NPR 150,000 (USD 1,500) and second type was for cooperatives, which covered support up to NPR 300,000 (USD 3,000). As the support was of nominal amount; and require group for applying, rich people were debarred to apply for this type of support; so most of the support has gone to the needy farmers.

A total of 1,351 irrigation schemes (1099-group irrigation schemes, 252 cooperative irrigation schemes) were supported during entire project period against the target of 380 schemes. A total of 153 million NPR (1.53 Million USD, @ 1 USD=100) was supported from the project for the construction/repair/maintenance/rehabilitation of these schemes. A total of 33,295 farmers (14,619 women) were benefited from these irrigation schemes and has covered 3,942 ha of land with irrigation (of which 881 ha additional irrigated area). Preliminary ES assessments were carried through environment and social screenings in 1249 scheme to assess the potential negative effects in the social and environmental aspects. It was found from the assessment that these schemes had no adverse effect on ES aspects. Besides, ES compliance monitoring was also carried out by ES consultant and independent consultant. Refer to table-3.1 and annex-14 (an object file) for details of irrigation schemes supported.

Table-3.1: Synopsis of small irrigation schemes supported in FY 2016/17

District	Type of Scheme					Beneficiaries			Environment Screening conducted	Irrigated Area		Scheme budget(NRs)		
	I	II	Total	New	Rehab	Total	Male	Female		Total (Ha)	Additional/ new (ha)	Total cost	Program contribution	Community Contribution
Total	1099	252	1351	611	740	33295	16295	14619	1249	3,942	881	187,042,301	153,348,562	33,693,739

Source: DADOs reports/AFSP database * I indicate Group Irrigation, II indicates Cooperative Irrigation

- **Other key tasks carried out at central level**

Implementation of "guidelines for the production of seeds of pre-released crop varieties for quicker dissemination and adoption, 2073"

AFSP supported the Seed Quality Control Centre (SQCC) for preparing guidelines for production of seeds of pre-released varieties, which was approved by GoN on August 5, 2016. A total of three workshops (two regional level workshops and a central level workshop) were organized by PMU to promote the quicker dissemination of pre released crop varieties to the farmer level. The objective of the workshop was to develop common understanding on the seed multiplication mechanism of pre released crop varieties, and to build confidence and ownership of various stakeholders for the multiplication of pre released varieties. It was experienced that the workshop has helped the stakeholders to understand various aspects of pre-released crop varieties and has encouraged them, particularly private sector to get involved in the production of seeds of pre-released crop varieties and will help in quicker dissemination of new crop varieties to farmers'

level. As result, the quicker release of varieties has also been made possible by curtailing the time to generate required database for official release of the variety.

Crop inspector and seed samplers' training

Improved/certified seed production at community level and making seed available to farmer groups is very vital to increase the Seed Replacement Rate (SRR) and increasing the crop productivity. Quality control aspect is very important in seed production program so that quality standard at field level and at post-harvest level can be maintained, and quality seeds can be supplied to the target communities. Realizing the need for strengthening of the seed quality control mechanism in the remote areas, SQCC has taken the strategy of developing Crop Inspectors and Seed Samplers in the districts by providing training to one of the officers of DADO.

In line with this, AFSP supported SQCC to organize a 4-days' long intensive training to district officials during 21-24 March at Pipari, Banke to develop crop inspector and seed samplers in the districts in DADO. Total participants in the training were 20, of which 13 were from AFSP project districts.

Technical backstopping and field monitoring:

On the spot field monitoring and technical backstopping to DTOs and field staff was carried out in in all districts by central team. Various emerging technical issues were discussed and sorted out in such field visits.

Orientation Training/Workshop on FFS Approach and Modality:

An orientation cum training on crucial aspects crop production FFS was conducted to DTOs of all 19 districts in Nepalginj during 12-14 February, 2017 to enhance their technical capability in FFS. Refresher trainings were also conducted to FFS facilitators as a part of technical backstopping and sharing FFS implementation experiences and issues to overcome the problems that they faced in the field.

C.2.2: Technology Dissemination and Adoption Support: Livestock

This component was implemented by DLSOs of 19 project districts; DLSOs were technical assisted by DTO Livestock and livestock technicians as well as project facilitators from Service provider. Goat, Poultry and Dairy were the areas on which AFSP provided support in livestock. The progress made under component 2 Livestock during the project period is presented in the following table:

Table: 4: Cumulative progress of entire project period: Component 2 Livestock

Activities	Unit	Total Target	Total progress	remarks
Goat Productivity improvement program (existing groups)	**Number**	**672**	709	
Follow up support goat productivity improvement program second year			709	
Livelihood enhancement through goat	**Number**	**288**	285	
Follow up support goat livelihoods improvement through goat second year			285	
Meat Goat Breeding Package (Open Nucleus Herd jointly run by NARC and DLSO)	**Number**	**18**	27	
Follow up meat goat breeding packaging second and third year			36	
Dairy goat Breeding Package	**Number**	**2**	2	
Follow up dairy goat breeding package second and third year	Number		2	
Dairy goat promotion program	**Number**		17	
Rural poultry promotion package program First year	**Number**	**240**	398	
Follow up Support to Rural Poultry groups second year	Number		390	
Follow up Support to Rural poultry third year	Number		317	
Dairy production package	**Number**	**100**	120	
Dairy production package second year	Group		93	
Livestock FFS	Number		363	goat:235, poltry-128
Small grant	sub projects		1508	
Conduct District Environment and Social Management Committee meeting	No.	72	70	

Source: Progress reports of DLSOs/AFSP database

Altogether 1,558 farmer groups were supported in livestock sector benefiting 38,450 farmers (34,903, 91%). Out of 1,558 groups, 709 groups (17,467 farmers, 15,810 women) were supported under goat productivity enhancement program; 285 groups (7,036 farmers, 6,342 women) were supported under Livelihoods improvement through goat program; 398 groups (9,936 farmers, 9,559 women) were supported under rural poultry production program and 17 groups (281 farmers, 264 women) were supported under Dairy goat promotion program. Similarly, 120 groups (2,995 farmers, 2,433 women) were supported under Dairy Production Program and 27 groups were supported under meat goat breeding benefitting (670 farmers, 458 women) and 2 groups were

supported under dairy goat promotion program benefitting (45 farmers, 37 women). Summary of beneficiary details by ethnicity and age is given in table-4.1. Similarly 363 FFS (goat FFS-235 and poultry FFS-128) were conducted benefiting 9,057 farmers (8,567 women). Details of FFS provided in table 4.2 and annex-16. Summary of livestock groups supported is presented in the following table:

Table 4.1: Summary of livestock groups supported during entire project

Name of Program	No. of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity					Beneficiaries by age Group				
		Total	Male	Female	Dalit	Ind. Nat	BC	Other	NA	Below 15	15 to 24 yr	25 to 40 yr	41 yr +	NA
Goat Productivity Enhancement	709	17467	1657	15810	3315	2648	11222	282		6	2265	9493	5703	
Livelihood Improvement through Goat	285	7036	694	6342	1899	831	4113	133	60	13	990	4107	1866	60
Dairy Goat Breeding	2	45	8	37	13		32					29	16	
Meat Goat Breeding	27	670	212	458	37	142	439	52			44	431	195	
Dairy Goat Promotion	17	281	17	264	44	31	204	2			54	181	46	
Rural Poultry	398	9936	377	9559	2636	386	6819	95			2304	5850	1035	747
Dairy Promotion	120	2995	562	2433	241	207	2502	45			243	1746	1006	
Grand Total	**1558**	**38430**	**3527**	**34903**	**8185**	**4245**	**25331**	**609**	**60**	**19**	**5900**	**21837**	**9867**	**807**
Percentage (out of total beneficiaries)		**100**	**9**	**91**	**21**	**11**	**66**	**2**	**0**	**0**	**15**	**57**	**26**	**2**

Source: Annual Progress reports of DLSOs, NA-not available

Support was also extended to the groups in line with the livestock program operational guideline. A detail of support provided to livestock groups under different livestock programs is described below:

- **Support service provided under goat productivity enhancement through goat program**

During the entire project period, altogether 709 groups were supported under goat productivity enhancement program. The support services provided under this program was comprised of subsidy for the improvement of model goat shed, forage seeds, fodder saplings, medicine fund, training on goat husbandry, vaccination, and medicine against ecto and endo parasite control. Under this program, a total 17,547 farmers were provided improved goat raising training at service center level and 7,158 persons provided goat raising training at district level, 73,952 goats vaccinated, and 108,687 goats provided anthelmintic treatment. Likewise, cash support was also provided to group for establishing veterinary medical fund and construction of improved animal shed. Refer to annex- 15.2 for detail.

Further, All 709 groups were also provided follow up support. The support comprised of distribution of 50% cross-bred Boer buck to the groups (1,024 bucks), vaccination (68,623

goats), and anthelmintic treatment (92,423 goats) and community level training (15,580 farmers). Refer to annex- 15.3 for details of districts. Other detail information on goat productivity support program is given in annex-15.4 (object file).

- **Support service provided under livelihoods improvement through goat program**

A total of 285 groups were supported under livelihoods improvement through goat program benefitting 7,036 farmers (6,342 women). The support service provided to these groups was comprised of training on goat husbandry, model shed construction support all groups (NPR 1,425,000); vaccination (37,576 goats), anthelmintic medicine against ecto and endo parasite control (37818 goats), weighing balance, fodder (196,987 saplings) of various species, which covered 996 ropani (49.8 ha) of land. Beneficiary details and supports provided to various groups can be seen from annex-16.1, 16.2 & 16.3.

Similarly, follow up support was provided to 285 groups in the following year. The support was comprised of subsidy for the distribution of 2 hogget to each member and 1 buck to each group in addition to training, vaccination and anthelmintic treatments. All 285 groups were provided crossbred Boer goats (348 bucks), each member of groups provided 2 hoggets and 4696 farmers provided improved goat raising training. Refer to annex-16.3 for details. Other nitty-gritty of support provided under this program is given in Annex-16.4 (object file).

- **Support service provided under meat and dairy goat breeding program**

Under goat breeding program, support was provided to 27 meat goat breeding groups & 2 dairy goat breeding groups. Community level training for dairy goat breeding (267 persons), training on animal insurance (300 persons), Vaccination (174 goats), anthelmintic treatment (1,112 goats), distribution of fodder (2,000 saplings) and forage seed (150 kg) of various species. The detail of support is given in annex-17 and details of follow up support provided to dairy goat breeding group is provided in annex-17.2 (object file).

In addition, technical support was provided to breeder groups and also for updating the record of 50% crossbred Boer/Saanen kids. Support was also provided to make arrangements for the distribution of crossbred bucks to other districts. A total of 6,680 crossbred kids (Boer and Saanen) were alive (born) from imported goats (NS) and frozen semen (AI) at the time of report writing; of which 2123 Boer bucks (Crossbred 2089 & Pure 34) and 158 Saanen (56 Bucks and 102 Hogget) were distributed to other districts. Details of goat breeding (kids born from imported goats and frozen semen) are presented in annex-8.1 and 8.2.

- **Dairy goat promotion program**

This program was initiated from fiscal year 2016/17 in order to promote goat milk in the project area for nutritional enhancement, particularly for children. A total of 17 groups were supported under this program benefitting 670 farmers (458 women). The program includes various supports

such as training, vaccination and anthelmintic treatment for goats, support for construction of model goat shed, distribution of fodder and forage seed, FAMACHA card distribution, distribution of crossbred Saanen buck and female hogget. Refer to annex-17.1 for details of beneficiary supported and other support provided to the groups during the entire project period.

- **Dairy production program**

Under dairy production program, a total of 120 new groups were formed and supported benefitting 2,995 farmers (2,433 women). Farmers were supported for the promotion of buffalo and cow (cattle) milk and milk products. Farmer groups were provided training on animal husbandry and dairy management; milk can for groups, vaccination, shed construction, fodder saplings, and forage seed. Refer to annex-19.1, 19.2 and 19.3 for details of farmer groups supported this year.

The result of these programs was assessed through an output survey (Beneficiary Results Assessment Survey) conducted by AFSP in February 2018 and it was found that the milk production per dairy animal (cattle/buffalo) has increased by 95 % (output survey value: 934 litre/cattle/year; this include weightage average of 40% of cow milk and 60% of buffalo milk) in comparison to baseline estimates. Refer to End line BRA survey report, AFSP, March 2018 conducted by Bright Future Consultancy for detail in the AFSP website: www.afsp.gov.np.

- **Support service provided under rural poultry program**

Altogether 398 farmers groups were formed and supported under Rural Poultry Production Program during entire project period benefiting 9,939 farmers (9,559 women, 96.2 %) of 8 districts namely Bajhang, Bajura, Dolpa, Humla, Jajarkot, Jumla, Mugu and Kalikot. Under rural poultry programme, the project supported poultry chicks (of 8 weeks brooded) to individual farmers, cash contribution to each member of the groups for the construction of poultry pen, training on poultry rearing, vaccination and essential medicines. Refer to annex-18.1 for details of groups and beneficiaries supported under rural poultry program during the reporting period.

In addition to above, follow up support was also provided in consecutive two years of the group formation. In line with, livestock implementation guideline, the follow up support was comprised of refresher training on poultry rearing, forage distribution and vaccination in the second year whereas poultry chicks, vaccination, insurance and refresher training in third year. Details can be seen from annex-18.2 and 18.3. Other details nitty gritty is given in annex-18.4 (object file).

The end line Beneficiary Result Assessment Survey, March 2018 showed that the egg production has increased significantly more than 300% (BRA value for egg production: 93/hen/year). End line BRA survey report, March 2018 can be accessed in AFSP website: www.afsp.gov.np.

- **Livestock Farmer Field School (FFS)**

During the project period, a total of 363 FFS were initiated benefitting 9057 farmers (8367 women, 96%). Out of 363 FFS, 235 FFS were conducted in goat raising FFS and 128 FFS were

conducted in poultry. Whilst conducting FFS, the participant farmers organized three preparatory meetings to discuss and set plan and developed growth calander for FFS conduction. During the session, they discuss about their learning and share experiences about goat and poultry husbandry practice under improved management practices and local practices. The goat FFS goes for a total period of 15 months whereas the poultry FFS goes for 22 sessions over the period of 9 months. Refer to annex -20 (object file) for details of beneficiaries of FFS, supports provided to FFS and live weights of goats under improved and local practices. Table-4.2 gives the synopsis of FFS initiated in this reporting period.

Table 4.2: Summary of Livestock FFS conducted during entire project project

Number of FFS			Beneficiaries by Sex			Beneficiaries by Ethnicity				Beneficiaries by age Group		
Total	Goat	Poultry	**Total**	**Male**	**Female**	**Dalit**	**Ind. Nat**	**BC**	**Other**	**15 to 24 yr**	**25 to 40 yf**	**41+ yr**
363	**235**	**128**	**9057**	**490**	**8567**	**1756**	**1079**	**6046**	**176**	**1541**	**5723**	**1793**

Source: Progress report of DLSOs/AFSP database

C.2.3: Village Model Farm (VMF) and Homestead Nutrition garden (HNG)

A total of 794 Village Model Farm was implemented benefiting 26,405 women of 1,114 mother's group. Table 4.3 gives the synopsis of VMF and HNG conducted during the project period.

Group mobilization for establishing VMF, training on vegetable cultivation, vegetable seed distributions, training on backyard poultry & chicks distribution activities were carried out in the course of VMF implementation. Backyard poultry rearing was basically planned to increase animal protein intake from poultry meat and egg consumption at household level. Similarly, nutrition session provided knowledge on the importance of various yellow and green leafy vegetables, poultry meat, egg and recommended method of consumption for enhancing nutritional status, particularly for pregnant and nursing women. Details of mother groups involved in VMF and Homestead nutrition garden is presented in annex-21.

During entire project period, a total 26,405 mothers of 1,114 groups were provided Home nutrition garden (HNG) support. These groups were trained on VMF and provided vegetable seeds (sachet comprising of 10 types vegetables such as Tomato, Cauliflower, Radish, Cabbage, carrot, green vegetables, etc) to cultivate on their homestead nutrition garden to cover all seasons and 4 chicks for individual members. A detail of groups supported under VMF and HNG is presented in annex-21.

The end line BRA survey has showed that VMF and HNG activity helped significantly to increase the dietary diversity and meal frequency among Women and children. Refer to End line BRA survey report for detail (www.afsp.gov.np).

Table 4.3: Summary of VMF and HNG supported during entire project period

District	VMF	HNG	Total Beneficiaries	Beneficiaries by Ethnicity (no.)				Beneficiaries by Age Group (No.)				
			Female	Dalit	Ind. Nat.	BC	Other	Below 15 yr	15 to 24 yr	25 to 40 yr	41+ yr	NA
Grand Total	794	1114	26405	5630	3424	16945	406	13	7091	15597	2603	1101

Source: Reports of DADO & DLSOs/AFSP datbase

C.2.4: Small grant support programme

In order to implement small grant support program, to expedite the process, PMU publishes a notice for submission of proposal to respective District Offices (DADO, DLSO and DHO) from all eligible interested farmers' groups/cooperative/mother groups of all projects districts. After the submission of proposals at districts, respective district office carry necessary works such as compilation & processing of proposals, field verification, approval from District Agriculture Development Committee (DADC), awarding, contracting with beneficiaries.

A total of 4,066 small grant sub projects were supported benefitting 101,848 persons (83099 women) during entire project period. The project has made financial contribution worth of 1156 million rupees (11.2 M USD, @ 1USD=NPR 103) for these sub projects and community contribution is 266 million rupees (2.6 M USD) and contribution of other stakeholder is 3.03 million rupees (0.39 M USD).

Out of 4,066 sub projects, 1,507 sub-projects (35,623 people, 25,574 women) were supported in crop sector, 1,508 sub projects (37,145 people, 29,970 women) in livestock sector and 1,051 sub projects (29,080 people, 27,555 women) in Nutrition sector. Environment and social screening could not be carried out in all sub projects in the first year (FY 2015/16) as the small grant guideline was approved at the end of the fiscal year so the time was very limited; however from the following year, ES screening carried out in all sub projects as mandatory and monitored strictly. Preliminary environmental and social assessment was carried out in 3,600 subprojects (89%) using screening checklist. The following table 5.1 and 5.2 gives the summary of support provided under small grant program.

Table-5.1: Synopsis of Small Grant support provided in the districts during entire project period

Group	Beneficiaries		Scheme cost and Contribution(NRs)			
	Total	Female	Project	Community	Other	Total
4066	101848	83099	1156,348,296	266,389,791	39,669,260	1462,407,347

Source: progress reports of DADO, DLSO, DHO& AFSP database

Table-5.2: Summary of Small Grant sub projects supported in different components in the FY 2016/17

Small Grant Crop				Small Grant Livestock				Small Grant Nutrition			
Sub Project		Beneficiaries		Sub Project		Beneficiaries		Sub Project		Beneficiaries	
Group (N)	Budget(NRs)	Total	Female	Group (N)	Budget(NRs)	Total	Female	Group (N)	Budget(NRs)	Total	Female
1507	507,733,533	35,623	25574	1508	545,243,388	37145	29970	1051	409,430,426	29080	27555

Source: progress reports of DADO, DLSO, DHO& AFSP database

The small grant supports in crop sector were mainly provided in vegetable cultivation in plastic tunnels, vegetable processing/solar dryer, Cereal seed production, Mechanization/thresher machine, Power tiller, community grain bank, Shed improvement and farm yard manure, supports in agriculture tools, Bee keeping, Fish pond construction/repair, Rustic store construction, Fruit processing, Solar dryer, cardamom cultivation, Grain seed storage, etc. Similarly, shed construction/ improvement, Dipping tank construction, improved goat farming, milk processing and marketing utensil and equipment, nursery establishment, pig farming, poultry farming, hatchery, small feed industry, private para-vet service establishment , chaff cutter/forage production etc. were supported in livestock sector.

Likewise, hand tractor, improved cooking stove, bio gas, grinding and hulling mill, super fine flour and mixing equipment, nettle powder, pickle making, incense stick, Clean home, corn Sheller and nutrition friendly kitchen, Oil expeller, improved water mill, vegetable and fruit dryer etc. were supported under small grant nutrition sector. Refer to annex-22 for detail. It is an object file and contains 7 tables providing information on different types of sub projects supported in crop, livestock and nutrition; and details of groups received small grant by district and VDC and so on.

These small grant sub projects helped in adopting the improved technologies and helped in reducing women drudgery, saving time and earning some additional income.

C.3: Food and Nutrition Status Enhancement: Component 3 Nutrition

The activities related to component 3 were implemented by CHD and DFTQC at central level. All the nutrition related activities at the district level were carried out by the District Public/Health Office. As agreed on MTR of the project, one Nutrition Officer was recruited by the PMU and deputed at CHD for enhancing coordination and day-to-day operation for nutrition activities.

The table below shows progress on key activities under the component 3.

Table-6: Progress against Total Target: component 3

Activities	Unit	Total Target	Total progress	Remarks
Study for development of recipes	No.	1	1	Report attached in annex

Activities	Unit	Total Target	Total progress	Remarks
Organize Nutrition Task Force Meeting	Times		9	
Organize BCC Task Force Meeting	Times		6	
Pro-nutrition action training for agri technicians (central & regional level training)	No.	3	3	
Pro-nutrition action training for technicians (district level training)	No.	12	12	
TOT for food preparation, processing and preservation	Number	3	3	
Orientation on home food preparation, processing and preservation to mother group	**Groups**	**1700**	**2159**	
Orientation on home food preparation, processing and preservation to mother group	events	3400	3308	
Recipe demonstration in mother's group meeting	Number	10715	10214	
Conduct Illaka Level Training for health workers on BCC	**event**	**68**	**68**	
Conduct Ward Level Training on BCC	event	340	331	
Conduct Ward Level Training on BCC (refresher)	event	331	325	
District Level Advocacy meeting	No.	34	31	
Dissemination of BCC through TV	No.		5	
Dissemination of BCC through radio	times		106	
Formation of Nutrition Coordination Committee and training			607	
Golden 1000 days mother identification and counselling	no.		362	
Celebration of events important from nutrition point of view	no.		4734	
Celebration of days important from nutrition point of view	no.		582	
Advocacy program on BCC nutrition to stakeholders	event	35	35	
Interaction with mother groups provided nutrition training	event		586	
Small Grant	sub project		936	
Support on Established food preparation, processing unit	number		1293	

Source: Progress report of DHO/AFSP database

Note: Details of these activities provided in annex-23.3, which a object file and separate tables are given to describe details of each activity)

- **Strengthening of DFTQC laboratory**

For the strengthening of DFTQC laboratory, various equipment such as HPLC for vitamin analyzer, chemicals, Procurement and installation of Protein Digestion Set, Crude Fiber Analyzer, Digital Balance were procured and used.

- **Food safety Situation Analysis study**

DFTQC conducted nutritive value analysis of local foods from project districts. Samples of different food categories such as milk, meat, poultry, maize, peanuts, spices, and drinking-water, cereal & pulses, vegetable, salt were collected and tested to analyze the food safety situation of the project encompassed districts. The hygienic quality and Veterinary Drug residues were investigated in milk, meat and poultry samples, total aflatoxin concentration level were estimated in the maize, peanuts and spices samples; hygienic quality was examined in the leftover food, acid value, iodine value, peroxide value, and saponification value were investigated in the fats and oils samples; pesticide residues were investigated in the vegetable samples; pesticide residues and heavy metal concentration were examined in the cereals and pulses; iodine concentration was identified in the salt samples and various physical, chemical and microbiological parameters test was performed in drinking water. Detail report is attached in annex-23.

- **Recipe preparation**

Different ten types of recipes from locally available foods were prepared and provided training to project workers to cascade it to field level training and recipe demonstration. These recipes were developed based on the fulfillment of requirement of nutrients and taste particularly for 1000 days mother and children below 2 years as complementary feeding.

- **Development of Pro-Nutrition Training Package**

Curriculum and training package on Pro-Nutrition Actions in Agriculture (Nutrition Sensitive Agriculture) was developed by the team of consultants hired by the PMU. The work was shared and validated in a Central Level Workshop attended by the Joint Secretary, experts and other stakeholders working in the area. FAO TA provided the technical assistance to the team in terms of review, making available resources and providing feedback at each stage of the process.

- **MToT on Pro-Nutrition Actions in Agriculture (Nutrition Sensitive Agriculture)**

Three events of Master Training of Trainers (MToT; one event at central level and two events at regional level) was conducted on Pro-Nutrition Actions in Agriculture (Nutrition Sensitive Agriculture) involving a total 77 persons. District Nutrition Focal Persons, District Technical Officers (DTOs) for Agriculture, Livestock and Nutrition and other government participants from department of agriculture and livestock, health training centers from mid and Far Western regions participated on the training. These trained people were used to conduct training to field staff at district level.

- **MToT on Food Preservation, Processing and Food Based Nutrition**

Department of Food Technology and Quality Control (DFTQC) has conducted the two batch of MToT on food processing, preservation and food based nutrition involving 3 focal persons from each implementing offices from 19 districts and DTO-Nutrition from those districts.

- **Preparation, design and development of Project specific BCC strategy, BCC training guidelines and print-IEC materials**

As per the understanding during the Mid Term Review of the project, this work was given to the FAO considering the project-specific BCC strategy and BCC materials were not developed on timely manner. In close coordination CHD and BCC task force, BCC strategy and BCC training guidelines was prepared by FAO TA team and endorsed by BCC task force; eventually used in field for training of healthe workers and mother groups.

Accordingly, FAO TA recruited a consulting firm named "Business Promotion and Research Centre (BPRC)" to do this work. The firm prepared all the materials in mid-March after rounds of sharing meetings of the Nutrition Task Force and BCC coordination at Project Management Unit and Child Health Division respectively. All the developed materials were reviewed by the technical experts from CHD, DFTQC, and members of both committees. Eventually, the deliverables such as advocacy package, Facilitator guide, Recipe book, Flip chart, Reference books for facilitators, Reference books for farmers and Food cards were prepared and shared in the Central Workshop comprising of all relevant government and non-government stakeholders. All these materials were printed and distributed by CHD and PMU.

- **Printing of Training Manuals and BCC Materials**

Project Management Unit and Child Health Division prepared, printed and distributed 19 different types BCC and IEC materials in required numbers. It includes TOT training manual on Home food preparation, processing and preservation (3 for MToT, DTOT and community training); Reading material for participants on FPPP (1), Different posters on home food preparation (1), Booklet on complementary feeding for child and family nutrition (1), food cards, Nutrition education booklet for farmers (1), different posters and pamphlets on nutritional elements in different food items (1), flex on food availability chart and food analysis chart (2); Nutrition sensitive agriculture advocacy material (4 types), Booklet on home food preparation, preservation and processing (1); Reading material for participants on FPPP (1); training manual on nutrition sensitive agriculture (1); Booklet on FPPP on traditional food items (1); Booklet on food and nutrition pictorial book-(1).These materials were distributed to districts and concern stakeholders and used in the AFSP activities. However, these materials were printed towards the end of project (2017), which delayed in the implementation project activities in field. However, the project adopted strategy to use draft version and sent the draft version to field to conduct training and other activities. As these training/demonstrations were conducted in VDC, it would be nice to see the impact separately in

coming days.

- **Broadcasting of BCC Messages through Radio and TV**

Child Health Division contracted with the public and private electronic media (TV and FM) at the central levels in February to broadcast the project specific audio and video messages related to nutrition, dietary diversity, food hygiene and safety and promotion of animal source foods. These messages are currently being aired by the 5 private TV channels and 2 central level FM stations with wider reach to the project districts.

Similarly, 10 audio materials and 5 visual materials (available in www.afsp.gov.np) were prepared in 2016 and endorsed by BCC task force meeting and distributed to districts for broadcasting. These materials were aired/broadcasted through national TV and local FM stations. The FAO TA team worked closely with the recruited firms to ensure the quality of the A/V materials.

- **Nutrition Task Force meetings**

Nutrition task force meetings were held to share the progress made in nutrition component regularly. Individual consultants, with technical support from FAO TA, developed more than 100 illustrations and a flip chart to be used in many BCC materials.

- **District level activities**

Mother group's orientation on food preparation, processing and preservation, recipe demonstration, existing mother group reformation and revitalization, Household counselling, BCC disseminations through various means were of some the key activities conducted at field level. The main purpose of these activities were to make aware communities about the requirement various nutrition in food to increase dietary diversity and feeding and caring practices of 1000 days mothers and children 6 months to 2 years; which was complemented by Homestead Nutrition garden program and backyard poultry program.

FPPP training and recipe demonstrations were carried out in each mother in the project area, which was an appropriate platform for dissemination BCC messages along with practical exercise. Recipes developed by the project (made up of locally available foods) were demonstrated and trained, which was found very effective at community level. (Community score card assessment, 2018 and end line BRA survey, 2018) .

A total of 2159 mother groups were provided orientation training on Food preparation, processing and preservation in 19 project districts[such orientation trainings benefitted 51137 women, of which 23806 were 1000 days' mother and 25726 mothers' were youth (age 25-40 years). Refer to Annex-23.1 and 23.3 for detail.

Likewise, a total of 10214 events of recipe demonstration were carried out in the mother groups benefitting 159647 women of which 26067 were new mother/members (annex- 23.2 & 23.2). In

regards to establishment of food preparation, preservation and processing (FPPP) demo centers, a total of 1293 FPPP centers were established. Refer to annex-23.3, which is an object file and contains 12 tables; which gives detail of activities conducted under nutrition component.

A total of 77 batches of Ilaka level training on BCC Nutrition were conducted benefitting 1,823 staff and health workers of all 19 districts (annex-23.1, table-5, 5.2). Refresher Ilaka level training on BCC nutrition was conducted in all districts. Likewise, 381 batch of ward level training (involving 9,865 staff/health workers) and same no. of refresher training were also conducted on the on BCC Nutrition. Refer to annex-23.3, table-6, 6.1 for detail of ward level training. Likewise, 12 events of district level Pro-nutrition was conducted involving 505 health staff. (Refer to annex-23.2 (object file, table-3, 3.1). Similarly, 31 events of advocacy meetings were conducted benefitting 2820 nutrition focal persons, DTOs and other stakeholders to advocate AFSP nutrition program and to harmonize programs with other stakeholders' program. Refer to Annex-23.3, table-4 & 4.1 for detail.

BCC message were disseminated in 19 districts through local radios (29 times for a period of one week to one month, three times a day), (annex-23.3, table-11). Identification of households with golden 1000 day's was also carried out in 60,728 households and flagged on their house. This was found effective in providing counseling and promoting 1000 days' mother. Refer to annex-23.3, table 10 &10.1 for detail.

Similarly, Days' celebrations on key life events were also carried out (4,348 events) in all districts to encourage mother groups whilst counseling households on nutrition activities. Refer to annex-23.3, table 9 &9.1. Likewise, Important days for 1000 days mother such as such as rice feeding day, vaccination day, celebration etc. were celebrated 865 events in all project districts (refer to annex-23.3, table-8 &8.1). Important days celebration also includes Iodine day, Breastfeeding day, family planning day etc, related to Nutrition (865 events) were also celebrated in all districts.

C.4.Component Four: Project Management

C.4.1 Monitoring and Evaluation

The project developed M&E Strategy of the project and based on it, M&E system was established and applied in practice. Day to Day monitoring of the project interventions at field was carried out by the project through concern officials of DADO, DLSO and DHO and the 57 District technical officers (crop, livestock and nutrition) recruited under FAO technical assistance and 399 field staff recruited under Service providers (agriculture technicians-95, livestock technicians-95 and project facilitators-190, focal persons-19), who collected the necessary data and submitted to concerned DADO, DLSO and DHO through DTOs. Monitoring and technical backstopping was also carried by the concern central level subject matter specialists, regional M&E officers following the M&E

plan. Data collection forms were developed for data collection and reporting for all components.

Following the aide memoire of the World bank and M&E strategy, XLS database reporting system was used for monitoring and reporting of project inputs delivery and to record outputs (until PMIS developed). Web-based MIS software (PMIS) was developed by a consulting firm called Total Management Support (TMS) to report the project progress both physical and financial progress. In line with the WB mission aide memoire, PMIS consulting firm transferred the XLS database of past years progress into PMIS software. However, the internet access was limited in the most of project area, on line reporting could not be materialized. However, all progress data were processed and analyzed on timely manner, using XLS Pivot and uploaded to the PMIS. It can be accessed through www.afsp.gov.np.

The concern staffs (57 DTOs, 57 GON M&E officers, NARC staff) were trained in the PMIS operation & data collection and reporting of information. Similarly, 399 project field staffs were provided training on data collection and reporting and refreshed them each year to solve the technical issues.

Three Beneficiary Results Assessment Surveys (Nov, 2015, Nov 2017 and Jan 2018) were carried out to assess the results of project interventions at beneficiary level. Similarly, two community score card assessment were carried out to assess the quality of service delivery and outcomes at the community level. These reports were shared with the concern stakeholders and used to carry out the mid-term review of the project and to update the progress against result-framework and project progress reports. These reports can be accessed through http://afsp.gov.np/ne/downloads.php

Baseline survey, mid line survey and end-line survey was carried out by the Development Impact Evaluation (DIME) of the World Bank as a part of external evaluation.

C.4.2 Technical and Coordination Support Activities for the implementation of field activities

Support in production of seeds of pre-released crop varieties for quicker dissemination

The project provided support to SQCC to develop a guideline for quicker dissemination of pre released variety (pipe line variety) of NARC. Similarly, two regional level workshops and central level workshop was organized on by PMU in 2017 to support in the production of seeds of pre-released varieties for quicker dissemination and adoption involving government stakeholders, farmers and private sector. Following this, NARC started producing seed of pre-released variety at its outreach locations.

Support in seed production program

AFSP and SQCC jointly organized a 4-day's long intensive Crop inspector and seed samplers'

training for district officials during 21-24 March at Pipari, Banke to support in quality control aspects of seed production program conducted in the project districts. This has helped in the quality control in seed multiplication program carried in different districts.

Workshop for finalization of Pro Nutrition Actions training package

PMU coordinated all concern stakeholders to organize a sharing workshop for the finalization of curriculum and training package on Pro-Nutrition Actions in Agriculture prepared by consultants hired by PMU, in January 2017. And the curriculum and training package was finalized from the workshop.

MToT/ToT on Pro Nutrition Actions

PMU organized three events (one central level and two events at regional level) of MToT on Pro Nutrition Actions in Agriculture (nutrition sensitive Agriculture) for district nutrition focal persons, district technical officers for crop, livestock and nutrition and GoN officials from DoA, DLS, health training centers of Mid and far western development regions.

Field visit missions

The project provided support to conduct the various technical Support Missions of World Bank (during different interval of time from 2013 to 2018) and field visits were carried out in different locations of the project districts. The project also organized a joint monitoring visit by PMU officials and Peasant Coalition representatives in Salyan and Rukum districts during 6-10 January 2017.

The project supported to organize field missions of GAFSP personnel in 2017 in Dailekh and Surkhet districts. Besides, the project also supported to conduct evaluation mission from GAFSP in Feb 2017.

C.4.3 Progress on status of Agreed Actions of the MTR Mission

The World Bank implementation Support Missions was carried out 9 missions during different intervals of time between the periods of June 2013 to March 2018. The missions observed the project interventions at field and discussed with concerned stakeholders and pointed out the status of project progress along with agreed actions to be completed. All the agreed actions were accomplished and reported in project's periodic implementation progress report and presented during following World Bank's mission.

C.4.4: Progress on procurement

During the project period, the WB has rolled out the project from SEPA to for the use of Systematic Tracking of Exchanges in Procurement (STEP); being a new concept, the project faced problems to use the system in the beginning but finally the project managed to use follow STEP with the

help of WB Procurement team in Kathmandu. Key tasks carried out during the entire period are given below:

Procurement of Goods, Works and Consulting Services:

The total expenditure under goods, works and consulting service is NPR 411 million. The procurement was done by NRAC, DFTQC, DADO, DLSO and DHO. Synopsis of procurement made by project during entire project period is given below:

Goods and Works

NARC, CHD, DADO, DLSO, DFTQC and PMU procured different types of goods, equipment, vehicles, materials under goods and carried out constructions like small irrigation schemes, service centers, training halls, ponds ect. under works, as per the approved procurement plan. The total procurement was made worth of 411. 18 Million NPR during entire project period. Refer to annex-26 (it is an object file; table-1, 2, 3 and 4) for detail.

Under component 1, NARC procured different types of goods like equipment, tractor with seed box, server, sprayer, weighing machine, Disk harrow, solar hatchery, hot air oven, sheaving net etc were procured; which was worth of NPR 20.9 Million. Procurement of Lab equipment for DFTQC was also procured for the strengthening of DFTQC central and regional laboratories worth of NPR 13.2 million.

Under component 2, DADOs procured furniture, furnishing materials for newly constructed training halls and service centers, small irrigation schemes, seeds and inputs, construction of new Agriculture Service entre, furniture worth of NPR 104 Million. Refer to annex-26 (it is an object file; table-1,2,3 and 4) for detail. Similarly, DLSOs procured furniture, furnishing, construction of training hall, livestock service centers, refurbishment of LSC etc. worth of 27.5 million NPR.

Under component 3, CHD procured Rug sacks, BCC training materials worth of 3.5 Million NPR. Under component 4, PMU procured vehicles, motorbikes, Lap tops and Soil testing Van, Hormone and CIDR were to be procured along with Printing of promotional, Training manuals etc. worth of 265 million NPR. Refer to annex-26 (it is an object file; table-1,2,3 and 4) for detail.

Procurement of Consulting Services:

The total expenditure under consulting service is NPR 63.79 million. Synopsis of procurement of consulting service is given below:

Component -3

DFTQC procured consulting services for food safety analysis, which was worth of 7.9 Million rupees

.

Component -4

PMU procured services of different consultants (PMIS, Pro-nutrition document team, FANSEP document preparation consulting firm, End line BRA and CSA consulting service) etc.. The service of environment and social specialist, nutrition officer and financial management specialist was also procured and deputed to respective duty stations. The total cost of procurement of consulting service under PMU was worth of Rs. 55.8 Million NPR. Details of procurement is given in annex-26 (object file; table-1, 2, 3 and 4).

C.4.5: Environmental and Social safeguard

Within the framework of government existing laws, Environmental Management Plan (EMP) for Importation of Boer and Saanen Goat was prepared with technical assistance of FAO and approved by GoN. Based on this EMP, Importation exotic goat germplasm was accomplished and used for upgrading goat breeds in the project area.

Environmental and social operational guidelines were prepared and applied in the field for ES safeguard assessment of the project interventions. ES safeguard training guideline was prepared and used in the training of GoN district officials, DTOs and field staff. A total of 114 persons from GoN, 57 DTOs and 399 field staff were trained on ES social safe guard aspects.

Preliminary Assessment of Environmental and social safeguard aspects was made mandatory for the implementation of AFSP activities. Environmental, Social Screening checklist were used to assess all small irrigation schemes, small grant support sub project and Seed processing and storage centers. ECoPs were also prepared and implemented in such activities. Refer to 25 for detail status report on ES safeguards.

Besides, in addition to regular compliance monitoring by district staff, compliance monitoring missions were also carried out by ES specialist, AFSP central team, DTOs and the World Bank team during different interval of project period. ES compliance monitoring from central level was carried out in sample basis; during the entire project period, ongoing and post compliance ES monitoring was carried out in Rolpa, Pyuthan, Rukum, Surkhet, Dailekh, Salyan, Dadeldhura, Doti, Bajura. It was found that all small grant sub projects and small irrigation support program has fully followed the ES operational guidelines; checklist and ECoPEs were prepared at the starting phase of the subprojects. During field assessment, it was also found that ECOPs were fully followed in all sub projects.

An independent assessment mission was carried out by a firm called Intensive Study and Research Centre Pvt. Ltd., Nepal in three project districts namely Dadeldhura, Salyan and Jajarkot in February 2018. The mission carried out assess the awareness and knowledge of community on ES safeguards, process of ES screening, and ES safeguard compliances in AFSP interventions. The report shows that ES orientation was provided to all members of subprojects, which helped in raising awareness of community on ES safeguard management. The farmers were also trained

in integrated pest management technique and other various subjects; which helped them to control pest using local materials and using pesticides and fertilizer properly. In the course of assessment, various aspects regarding ES such as soil erosion, water pollution, impact on forest etc. were also assessed. The report also reveals that necessary procedures were followed in line with project's ES safeguard operational guidelines whilst conducting ES screening and the project has fulfilled environmental and social safeguard compliance. Refer to annex-25.1 for detail report.

District environment and social management committee (DESMC) meetings were conducted to in all 19 districts in line with ES operational guideline. The DESMC meetings were conducted as per plan (based on the analysis of DESMC minutes of visited districts by ES consultant). In these meetings, basically various issues regarding environmental and social aspects were discussed and necessary actions were taken. Altogether 143 such meetings were held during total project against target of 152.

Besides, Project environment and social management committee (PESMC) was provisioned at central level under chairpersonship of project director to discuss the progress and issue regarding ES safeguard aspects. PESMC meetings were held in regular basis as planned.

C.5: Financial Progress Status

The following table-7.1, 7.2 and 7.3 gives the description of expenditure of the project of FY 2017/18; cumulative expenditure of projective till end of project; and commitment and expenditure by funding source respectively:

Table-7.1: Financial Progress Status of FY 2017/18 (July 16, 2017 to March 31, 2018)

Description	Currency	Annual (July 16, 2017 to March 31, 2018)
Approved Budget	**In USD**	**14 655,644**
	In NPR (@1:104)	1,524,187,000
Total Expenditure	**In USD**	**13,228,018**
	In NPR (@1:104)	1,375,713,916
% of Expenditure		**90.26**

Source: PMU

Table 7.2: Cumulative Financial Progress till March 31, 2018 (PROVISIONAL)

Project's Total Budget		Cumulative Expenditure March 31, 2018	
In Million USD	**In million NPR (US$ 1= NPR 85)**	**In Million USD**	**In Million NPR**
58	**4,930**	**51.05**	**5135.46**
% of Expenditure		**88.0**	

Source: PMU

Table-5.3: Commitments and Expenditure till the March 31, 2018 by source of funding (PROVISIONAL)

Description	Allocation Amount (in $m)	Expenditure till March 31, 2018 (in $m)	% of Expenditure	Remarks
Total Cost	**58.00**	**51.05**	**88.02**	
GAFSP	**46.50**	**40.71**	**87.55**	
GoN	**11.50**	**10.34**	**89.91**	

Source: PMU

The table-7.1 shows that the financial progress of FY 2017/18 is 90.26% against the allocated budget of FY 2017/18.

The table 7.2 shows that the cumulative financial progress of the project is 51.04 Million USD against the total project budget of 58 M USD, which is 88 % of the total budget. The difference in the expenditure percentage in Nepalese rupee and US dollar was due to the conversion rate at the time of fund deposit.

Table 7.3 gives the status of commitments and expenditure in the IDA portion and GoN portion, the expenditure in IDA portion is 87.55% against total commitment whereas the expenditure in GoN portion is 89.91%.

C.5: Progress on FAO Technical Assistance

Within the framework of the agreement between FAO and GoN and in line with the agreed actions of Aide-memoires of the WB implementation support missions, the FAO TA provided technical backstopping/assistance at central, district and village level for the implementation of project activities related to crop, livestock, nutrition, environmental and social safeguard screening and compliance, monitoring and reporting and support services. The description of key progress made by the FAO TA in the during entire contract period is presented below:

Progress on Output 1:

Supply of genetic materials (livestock) and assistance to NARC to develop improved crop and livestock technology in the selected locations of targeted districts

A total of 225 (Boer-175 and Saanen-50) goats were imported and delivered to NARC/stations and Breeder farmer groups during the different interval of time (Nov 2014 to Jan 2016), of which a total of 177 goats were alive at various NARC stations and at breeder farmer groups till March 2018.

Technical assistance was provided to breeder farmer groups of 8 districts namely Doti, Dadeldhura, Dailekh, Surkhet, Salyan, Rolpa, Pyuthan and Rukum for the breeding and management of imported goats through field staff. Regular monitoring/back-stopping missions were also carried out by central team to determine the performance of imported goats at research stations and breeder farmers. A total of 6680 cross bred Boer kids and 217 crossbred Saanen kids were born from these genetic materials (NS and AI). Refer to annex-8. 8.1, 8.2 for detail. Out of these born kids, 2123 Boer bucks and 56 Saanen bucks were distributed to other districts. Refer to annex-8.3 & 8.4.

Progress on Output 2:

Enhanced knowledge and skill base of targeted beneficiaries to adopt improved technologies and management practices for crop and livestock in selected locations of targeted districts

Capacity building

A total of 22 FFS facilitation documents (11 implementation guidelines: crop-8, livestock-3; and 11 FFS extension materials such as diary, posters, flex) prepared. Besides, various other operational guidelines manuals/documents such as ES safeguard operational guideline, ES safeguard training manual, social mobilization operational guidelines and leaflets were also prepared to ensure technical and ES safeguard aspects in the implementation of AFSP interventions. Similarly, FAO provided technical assistance to

develop M&E strategy, M&E training guidelines, Beneficiary Results assessment survey guidelines, community score assessment guidelines, guide for performance evaluation of Service providers for effective and efficient monitoring, evaluation and reporting of the project. All these documents were used in the field for implementation and monitoring of AFSP interventions. Refer to appendix-5.2 for detail of documents prepared.

A total of twenty-seven events of Farmer field school training of facilitators (FFS MToT and ToF) including supplementary ToF and Refresher ToF were conducted for GoN officials, FFS graduated farmer and project field technicians involving a total of 662 participants, from which a total of 511 FFS facilitators (crop-357, livestock-154) were developed. In regards to Livestock FFS ToF for technicians, the ToF module was designed in such a way that participant require attending training in two batches (basic FFS ToF and supplementary FFS ToF) to accomplish MTOT. These facilitators were used to conduct FFS in the districts. Refer to appendix-24 for detail.

Training and workshops were also conducted in various other aspects, to enhance the skill base and knowledge of Government officials, DTOs, project field technician and project facilitators hired through service providers. These trainings include technical and operational aspects on crop, livestock and nutrition, ES safeguard, monitoring, evaluation and reporting, gender and social inclusion aspects. Review workshops were conducted to discuss issues and challenges of the field and provided intensive technical backstopping training to all 57 DTOs to overcome the problems each year. Likewise, All 380 field technicians and project facilitators were provided five days long intensive training in each district each year to sort the technical and operational issues and challenges that they faced. Refer to appendix 24.1 for detail of other training workshop conducted by FAO TA.

Quality assurance of FFS

To address the practical problems of the field, FFS curriculums were designed through various consultation workshops and finalization was done based on the learnings of the FFS farmers.

A standard FFS monitoring checklist was prepared and used for FFS monitoring. All 57 DTOs carried out on the spot monitoring of FFS during the three critical stages of crop production (at planting, mid-crop stage and at or near harvesting) and provided technical support to FFS facilitators and field staffs. Compulsion was made to monitor FFS registers and FFS Facilitator's Diary while visiting FFS by DTOs. On the spot monitoring of FFS also carried out by the members of central team and provided technical backstopping to DTOs and FFS facilitators.

Assistance in the implementation of AFSP capacity building activities at central level

The FAO TA team provided technical assistance to AFSP and other project stakeholders in conducting training and workshops on various thematic areas such as seed production of pre-released varieties, environment and social safeguards, monitoring, evaluation and reporting, nutrition sensitive agriculture etc. Refer to appendix 24.1 for detail.

Technical assistance at field level

Thirty-eight DTOs (crop and Livestock) and 380 project field staff (from SP) provided technical assistance to DADOs and DLSOs in the implementation of AFSP activities. The agriculture DTOs supported DADOs in developing monthly work plan and inline with approved work plan, selecting the appropriate FFS sites, crop varieties, and demonstration sites and designing the supportive trials in FFS. Assistance was also provided for the processing and selection of proposals for awarding small irrigation and small grant support as well as establishing seed processing and storage units. Notably, DTOs and field staff assisted DADOs to conduct, monitor and reporting of 1932 crop FFS, benefitting 47757 farmers (85% women), 5348 crop production and nutritious crop demonstrations, providing adoption support to 1540 groups benefitting 38062 farmers (31778 women), 1099 small irrigation schemes benefitting 33295 (14619 women) and small grant support to implement 1507 sub-projects (benefitting 35623 farmers, 25574 women) (source: AFSP database 2018).

Similarly, Livestock DTOs supported 19 DLSOs in the implementation of various livestock programs (goat, dairy and poultry), 1558 farmer groups benefitting 38430 persons (34902 women). It includes goat productivity enhancement program benefitting 709 groups (benefiting 17467 farmers, 15810 women), livelihoods improvement through goat program -285 groups (7036 farmers, 6342 women), meat goat breeding program -27 groups (670 farmers, 458 women), dairy goat breeding -2 groups (benefitting 45 farmers, 37 women), dairy goat promotion program -17 groups (281 farmers, 263 women), dairy production program -120 groups (2995 farmers, 2433 women) and rural poultry programs -398 groups (9936 farmers, 9559 women). In regards to goat program, provided technical assistance in the formation of farmer groups, trainings, artificial insemination of goats, management and distribution of bucks, hogget, distribution of fodder sapling and forage seed, vaccination, anthelmintic treatments, managing medicine fund, etc. Similarly in rural poultry, assistance was provided to set up farmer groups, providing trainings, distribution of 8 week aged dual purpose chicks, construction of pen, vaccination, etc. Likewise, in dairy production program support was provided in the formation of groups,

milk containers, trainings, fodder and forage, construction of improved shed, AI etc. (source: AFSP database, March 2018)

Similarly, 19 DLSOs were assisted in conducting a total of 363 livestock FFS (goat FFS-235, poultry FFS-128) benefitting 9057 farmers (8567 women). Goat raising FFS were conducted to provide in-depth knowledge of goat raising and poultry rearing from the of kid to kid in case of goat raising FFS and egg to egg in case of poultry FFS. Also provided technical assistance to DLSOs in implementing a total of 1508 small grant sub projects, benefitting 37145 beneficiaries (22277 women) to adopt the technologies intervene by the project. (source: AFSP database, March 2018)

Technical assistance from FAO expatriate

FAO RAP, Head-quarter and FAO-NP experts conducted field missions of the project districts and provided desktop and distant support to finalize technical matters and materials, especially on the finalization of FFS manual, BCC guidelines/IEC materials and preparation of AFSP proposal fourth call and during Pre-appraisal and during the World banks' implementation support mission.

Progress on Output 3:

Increased adoption of appropriate feeding practices by pregnant and nursing mothers and children between 6-24 months' age in the selected locations of targeted districts

- **Behavior Change Communication strategy and BCC training materials**

As per the understanding during the 4th Implementation support Mission of WB, this work was given to the FAO considering the project-specific BCC strategy and BCC materials were not developed on timely manner. In close coordination CHD and BCC task force, BCC strategy and BCC training guidelines was prepared by FAO TA team and endorsed by BCC task force (2015) and used in the field. Three batches BCC MTOT events were technically supported which were conducted for Health Focal persons and Nutrition DTOs using the above mentioned training materials and also supported in the conduction of district and Ilaka level DTOT and TOT respectively for concerned stakeholders.

- **Preparation, design and development of Project specific Behavior Change Communication guidelines, training manuals and print-IEC materials**

Upon the request of GoN, FAO TA recruited a consulting firm named "Business Promotion and Research Centre (BPRC)" to do this work. The firm prepared all the materials to the FAO TA

after rounds of sharing meetings of the Technical Task Force at Project Management Unit and Child Health Division. Eventually, the deliverables such as advocacy package, Facilitator guide, Recipe book, Flip chart, Reference books for facilitators, Reference books farmers were prepared and shared in the Central Workshop comprising of all relevant government and non-government stakeholders.

- **Development of Pro-Nutrition Training Package**

Provided technical assistance to PMU hired consultant team to prepare training package on Pro-Nutrition Actions in Agriculture (Nutrition Sensitive Agriculture) in terms of Concept note, TOR for consultancy, technical review of draft report, making available DTO resources and providing feedback at each stage of the process. The documents were prepared and printed by PMU and CHD and used in the field.

- **MToT on Pro-Nutrition Actions in Agriculture (Nutrition Sensitive Agriculture)**

Technical assistance was provided to conduct Master Training of Trainers (MToT) on Pro-Nutrition Actions in Agriculture (Nutrition Sensitive Agriculture) for district nutrition focal persons, DTOs and other GoN officials at central and regional level.

- **Technical assistance at field level**

FAO TA provided technical assistance at district level and field level through DTO Nutrition, field technicians and project facilitators to implement and monitor the Nutrition activities. Technical assistance was provided to conduct orientation training to mother groups on Food preparation and preservation (2159 mother groups), Recipe demonstration in mother groups (10214 times), establishment of FPPP centers (1293 centers), Ilaka level training (77 events), ward level training (381 events), pro-nutrition action training at district level (19 districts), district level advocacy meetings (14 events), BCC message dissemination through FM (19 districts, 29 times), Important Days celebration for 1000 days mother (865 events), Identification and counseling to thousand days mother (60728 HHs), Key life event celebration (4348 events) and Interaction with mother groups (586 groups) Refer to annex-23.1, 23.2, 23.3 (23.3 contains an object file which include Tables-1,1.1, 2, 2.1, 3, 3.1, 4,4.1, 5, 5.1, 6,6.1, 7, 7.1, 8,8.1, 9, 9.1, 10, 10.1, 11 and 12) for detail of activities carried out in nutrition at field level.

Progress on Output 4:

Efficient and Effective monitoring and quality assurance system established and operationalized for tracking results of project intervention

4.1 Environmental and Social Safeguards

Provided technical assistance to prepare the Environment and Social Safeguard operational guidelines, which were endorsed by PESMC meeting. The guidelines were sent to the districts and

are used in the district to assess the environment and social safe guard aspects of AFSP activities.

Assistance was also provided to prepare EMP for the import of Boer and Saanen goats, which was endorsed by GoN and using this EMP the goats were imported. ES safe guard training materials were also prepared and assisted PMU to conduct ES training for GoN focal persons and DTOs. Similarly all 380 field staffs were provided training on ES safe guard assessment, monitoring and compliances.

Assistance was also provided to carry out preliminary assessment on environmental and social safeguard aspects (screening/compliance) of regular activities, particularly in small grant support program (4066 sub projects), small irrigation schemes (1099 irrigation schemes) and livestock activities and reported the status accordingly.

4.2 Monitoring, Evaluation and reporting

- **Preparation of M&E strategy and establishment M&E system**

In close consultation and coordination the World Bank, Concerned GoN stakeholders and PMU, M&E strategy of the project was developed; and based on which AFSP M&E system was established and brought in practice for monitoring and reporting of AFSP interventions from all cost centers.

- **Preparation of Data collection forms**

Assisted PMU to prepare PMIS data collection forms for collection of necessary data from field. The forms were prepared after several rounds of meetings with concern stakeholders. Besides, field monitoring forms were also prepared for monitoring of specific activities such as crop FFS, livestock FFS, small grant, general field monitoring and used in the field for monitoring the progress.

- **Assistance to develop PMIS**

Following the aide memoire of the World, XLS database reporting system was used for monitoring and reporting of project inputs delivery and to record outputs (until PMIS developed). Technical assistance was provided to PMIS consulting firm called Total Management Support (TMS) to prepare Web-based MIS software (PMIS). PMIS was prepared to monitor and report both physical and financial progress. In line with the WB mission aide memoire, PMIS consulting firm transferred the XLS database of past years progress into PMIS software. However, the internet was limited in the most of project areas; on line reporting could not be materialized. However, all progress data were processed using XLS Pivot and uploaded to the PMIS. It can be accessed through www.afsp.gov.np.

- **Training on PMIS operation and data collection and reporting**

Assisted PMU to train concern staffs (57 DTOs, 57 GON M&E officers, NARC staff) in the PMIS operation & data collection and reporting. Similarly, 399 field staffs were also provided training on data collection and reporting each year.

- **BRA and Community score card assessment survey**

Assisted PMU to design and conduct three Beneficiary Results Assessment Surveys (Nov, 2015, Nov 2017 and Jan 2018) were carried out to assess the results of project interventions at beneficiary level. The first two were conducted by PMU using field staff and data processing, analysis and report writing was also done by FAO TA whereas the third one was conducted by third party and FAO TA provided technical support for completing the task in time. The reports were shared with the concern stakeholders and used to carry out the mid-term review and completion review/ evaluation of the project.

- **BRA and Community score card assessment survey**

Assisted PMU to design and conduct two community score card assessment to assess the quality of service delivery and outcomes at the community level (Nov-Dec 2015, Feb 2018). The first one carried out by the PMU and FAO carried out data processing, analysis and report writing. The reports were shared with the concern stakeholders and used to carry out the mid-term review and completion review/evaluation of the project.

- **Preparation of progress reports and database**

During the entire project period, FAO TA assisted the PMU to update AFSP the XLS database of crop, livestock, Nutrition related interventions of all districts and also in the preparation of monthly progress reports for submission to GoN and the AFSP narrative progress reports (trimester progress reports, annual report) for the submission to WB.

- **Monitoring of field activities**

Monitoring of field activities were carried out by TA central experts, regional M&E officers and DTOs in various districts and provided technical support accordingly.

4.3 Technical Assistance Management

- **Staffing at district level and VDC level**

A total of 71 FAO TA consultants (7 central level consultants, 2 Regional M&E officers, 57 DTOs, 3 drivers and two admin and Finance staff) were recruited, trained and deployed concern duty stations. A details of staff recruited is given in annex-24.2.

A total of 399 field staffs (95 AT, 95 LT, 190 PF, 1 focal persons) were mobilized through 19 service providers in close coordination with DPSU and under technical guidance of DTOs and respective DADO, DLSO and DHOs to support in the implementation of AFSP activities at field level. A list of service provider is given in annex-24.3.

FAO TA provided technical assistance to GoN to develop the proposal for GAFSP 4th Round of Call; and GoN was awarded funding support of 22.5 M for next GAFSP project and which was in design phase.

Similarly, Technical Support Missions were also carried out by the technical experts from FAO RAP and FAO HQ in line with the TSS plan to support in the World Bank Implementation Support missions or as per need basis. Besides the FAO RAP and FAO HQ experts also provided distant technical support through email and skype.

Performance evaluation of Service provider was assessed by a team of DPSU chief, heads of Concerned Office, DTO, and Service provider through a set of criteria and provided advice to concern Service providers to take necessary action.

- **Capacity building of newly elected local Bodies and executives on AFSP modality**

Under exit strategy of the project, 19 events of two days participatory learning workshops in each district were completed during March 2018 to mainstream the best practices and learning of AFSP activities in to coming fiscal year budget and program planning of 113 Palikas (rural municipalities). As per their commitment, most of the AFSP activities were incorporated in to the Palikas budget program to upscale the best practices and also to ensure the after project sustainability.

C.5 Justification of Overall Outcome Rating

Criteria	Sub criteria	Rating of sub-criterion (A-D)	Overall rating of criteria
Relevance	Relevance of the project to the problem identified at project identification and formulation	A	The Agriculture and Food Security Project (AFSP) was well aligned with country need and government plan and priorities. Country Investment Plan (CIP) and country programming framework has well pointed out agriculture and food security issues comprehensively and kept in high priority. Nepal multi-sectoral Food and Nutrition Plan MSNP (2013-2017) has also identified food and nutrition security as a key issue and the project has been able to contribute towards the objective of MSNP, particularly in Output 6 (availability and consumption of appropriate foods in terms of quality, quantity, frequency and safety) enhanced and women's workload reduced) and output 7 (capacity of national and sub-national levels enhanced to provide appropriate support to improve maternal and child nutrition). To enhance food and nutrition security of the selected households of the selected locations of the 19 project districts, the project envisaged in Increasing food availability through the enhancement of production and productivity of crop (Paddy, wheat, maize, potato and neglected nutritious crop finger millet, buck wheat) and livestock (goat, poultry and dairy) through access to improved crop varieties and livestock breeds along with improved management technologies suitable for the project area. Community scorecard assessment study and End line Beneficiary survey conducted by independent party in February 2018 shows that the project was based on the need of the community (Score 4 out of 4) and people of the project area. The project has been able to contribute in the food and nutrition security of the targeted group of the project area by 30% increase in food self-sufficiency (av household food self-sufficiency increased from 5.65 months increased to 7.39 months, end line survey, Feb 2018). The project has been able to increase the household income by 18 % in comparison to that of the baseline period. Overall rating A (see chap A for detail)
	Alignment and strategic fit 1	A	

Criteria	Sub criteria	Rating of sub-criterion (A-D)	Overall rating of criteria
Efficacy Achievement of Results	Contribution to impact	B	NARC/Research stations implemented the technology development/adaptation (component 1), DADOs and DLSOs implemented the technology dissemination and adoption support (component 2), and the Nutrition (component 3) was implemented by CHD/DPHO and DFTQC whilst the project management support (component 4) was mainly managed by PMU to support these components. And FAO provided technical assistance to all components. Keeping in view the outcomes, NARC has developed and released 17 crop varieties (against the target of 17) with support of AFSP and these varieties were used in the FFS and seed production program under component 2. Similarly, NARC also developed 30 improved crop and livestock management technologies (crop-22, livestock-8) against the target of 29; which were trialed on the similar climatic condition of the project locations. These technologies were found effective to overcome the targeted specific problems/issues. Besides, NARC has produced 582 MT of source seed; of which 181 MT seed in seed multiplication program under component 2 to produce certified seeds, from a total of 4800 MT of seed produced in the districts. The seed cooperative/farmers informed that in closing workshop that some districts (eg Surkhet) became self-sufficient in seed and they can sell it to other districts. FFS has provided intensive knowledge and skill to the farmers (47757 farmers against target of 40000) and also provided them adoption support; which helped them to adopt improved technologies; as a result Seed Replacement Rate of the paddy (7.2 to 39%), maize (14.7 to 35.7%), wheat (4.6 to 38 %) and potato (16 to 31.4%) has been increased drastically and also increased in the productivity of these crops. Refer to annex-1 for detail. Similarly, 1558 livestock groups involving 38430 farmers (against target of 32500 farmers) provided technical knowledge on goat husbandry, poultry rearing and dairy production along with support and introduction Boer goats; which helped in increasing the livestock (milk, goat and egg) production and productivity.
	Achievement of outcome	B	
	Achievement of outputs	A	

Criteria	Sub criteria	Rating of sub-criterion (A-D)	Overall rating of criteria
			Village model Farm and Homestead Nutrition garden was particularly targeted to women in order to increase the dietary diversity and particularly to increase consumption of green vegetables and animal protein. Women are provided training on vegetable cultivation, poultry and nutrition. This has helped women to increase knowledge and get access to such food items through their homestead garden. The end line BRA survey shows that the consumption of animal protein and fruits and vegetable increased by 33% and 31% respectively. Similarly, 3IYCF practices of children from 6 months to 24 months have been increased by 38%. FPPP training and Recipe demonstration (BCC message) along with HNG, support in the livestock program could be the reasons for this. Similarly, the productivity of livestock weight of goat at 12 month of age has been increased from 19.18 kg to 36 kg (Boer cross); egg production/ hen per year increased from 22 to 93 and the milk production per cattle per year increased from 478 to 934 liter. (end line BRA survey, 2018) The project has targeted to provide project developed BCC message to 45000 pregnant and nursing women (PNW) and the project has been able to provide BCC message to 49873 PNW. Overall rating B (See Section B: Efficacy for detail)

Criteria	Sub criteria	Rating of sub-criterion (A-D)	Overall rating of criteria
Efficiency Implementation of work plan and budget	Timely implementation of activities	A	All the activities under NARC, technology development (30), development of new improved crop variety (17), source seed production (582 MT), and adaptation trials (6584) were conducted within budget and in timely manner. Under technical assistance part, FAO TA developed 511 FFS facilitators from GoN officials, field technicians and farmer's facilitators against target of 525; As planned FAO trained and mobilized central subject specific consultants, 57 DTOs and 399 field staff throughout the project period to support in the conduction of various trainings and implementation of AFSP interventions in field. Under component 2, DADO, DLSO and DHO implemented the planned activities within stipulated time frame and within budget. The key activities carried out were FFS (1932), Demonstration (1862 groups), Adoption support (1540 groups), small irrigation (1351 schemes), seed production (2300 ha), Support to livestock groups (398 Poultry groups, 120 Dairy groups and 1040 goat groups), import of Boer and Saanen goats (225), Boer and Saanen frozen semen (12497 dose) were carried out in timely manner within budget. Similarly, a total of 2159 mother groups (53137 women) were trained on Food preparation, processing and preservation, recipe demonstration in mother groups (10214 times), ToT for FPPP (3 events), FPPP centre (1293 units) were conducted under DHO. 4066 Small grant support sub project were supported to 101,848 farmers. Overall rating; A (Section D: implementation of work plan and budget for detail)
	Implementation of activities within planned budget	A	
	Application of risk management strategy	B	

Criteria	Sub criteria	Rating of sub-criterion (A-D)	Overall rating of criteria
Sustainability	Capacity development	A	The project has capacitated farmer groups, cooperatives and local stakeholders (Service providers) in technical and management aspects and trained beneficiaries and stakeholders on concerned technical and management aspects as well as created awareness on social, environmental and economic aspects and getting access to other resources. (Section D: implementation of work plan and budget for detail)
	Environmental sustainability	B	
	Gender equality	A	
	HRBA	---	
	- Right to Food	B	
	- Decent Work	B	
	Technical sustainability	B	
	Economic sustainability	B	The project adopted strategy to empower women by involving at least 50% in crop activities and 90% in livestock activities and 100% in nutrition activities; this target has been achieved by project and more than fairly large portion of women (83%) were found to be involved in planning and monitoring of the project activities (CSC assessment, Feb 2015). Project initiated crop livestock technologies are technically and economically feasible and project has made arrangements to continue to support in implement these interventions after the closure of the project Overall rating-B (See Section E: sustainability)

D. Other Outcomes and Impacts (if any)

- Self- employment to
- Contributed in the reduction of Migration in Boer goat-Surkhet, Doti, Dailekh, Salyan due to Boer goat farming and that of in Bajhang, Salyan, Surkhet, Dailekh due to vegetable production in plastic tunnel initiated with support of project's technology (based on the interaction with farmer groups' and cooperatives during field visit

3. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. Key Factors during Preparation

- No such big issues encountered during the preparation. Some issues raised during different period were resolved by adopting alternative options.

B. Key Factors during Implementation

- The April 2015 severe earthquake killed nearly 9,000 people and injured nearly 22,000; hampered in the implementation of project implementation for few months.
- India enforced border blockade September 2015, severely affected Nepal and its economy and also delayed in project implementation for some months.
- Floods and landslide occurred in project area in 2014 also delayed in the implementation and resulted in the reduction of production of agriculture commodities.
- The three levels of elections (central, local and provincial level) in 2017 also delayed in the project implementation.
- FAO TA was made on board in the project in January 2014, while AFSP began in April 2013. The provision of technical assistance to implementation was thus delayed.

4. M&E QUALITY, PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. Quality of Monitoring and Evaluation (M&E)

Monitoring and Evaluation of the project outputs and outcomes was carried out in line with M&E Strategy of the project. Day to Day monitoring of the project interventions at field was carried out by the project through concern officials of DADO, DLSO and DHO and the 57 District technical officers (crop, livestock and nutrition) recruited under FAO technical assistance and 399 field staff recruited under Service providers (agriculture technicians-95, livestock technicians-95 and project facilitators-190). Monitoring and technical backstopping was also carried by the concern central level subject matter specialists, regional M&E officers following the M&E plan.

Following the aide memoire of the World bank and M&E strategy, XLS database reporting system was used for monitoring and reporting of project inputs delivery and to record outputs (until PMIS developed). Web-based MIS software (PMIS) was developed to report the project progress. The concern staffs were trained in the collection and reporting of information. Data collection forms were developed for data collection and reporting for all components. As the

internet was limited, on line reporting could not be materialized. However, all progress data were processed using XLS Pivot and uploaded to the PMIS. It can be accessed through www.afsp.gov.np (http://202.45.147.12/pmis/)

Three Beneficiary Results Assessment Surveys (Nov, 2015, Nov 2017 and Jan 2018) were carried out to assess the results of project interventions at beneficiary level. Similarly, two community score card assessment were carried out to assess the quality of service delivery and outcomes at the community level. These reports were shared with the concern stakeholders and used to carry out the mid-term review of the project and to update the progress against result-framework and project progress reports.

Baseline survey, mid line survey and end-line survey was carried out by the Development Impact Evaluation (DIME) of the World Bank as a part of external evaluation.

B. Environmental, Social, and Fiduciary Compliance

Environmental and Social safe guard assessment guidelines were prepared in line with the government and world bank measures and concern government focal persons, DTOs and field staff of all 19 districts were trained on ES safeguard assessment. Preliminary environmental and social safeguard assessments were carried out for project interventions using ES screening checklist and reported through periodic project implementation progress reports. Environmental code of practice (ECoPs) were prepared and implemented for each small grant subprojects. Besides, ES compliance monitoring was also carried out by ES specialist and reported accordingly. It was found that ES assessment was carried out in small grant and small irrigation sub projects and complied in line with ES safeguard measures.

Operational guidelines were prepared to maintain quality and uniformity in the implementation.

PMU officers along with financial consultants carried out monitoring of the financial aspects in different districts and to assess the fiduciary compliances in different interval of project period; which shows that the district cost centers have fulfilled the requirements in line with financial regulations.

Similarly, internal audit and external audits were carried out in timely manner in each district by district comptroller office and office of auditor generals' office respectively; the audit reports show that financial records of expenditures were in line with the financing agreement and financial rule and regulations of Government of Nepal.

The Unaudited financial statements/Financial Monitoring Reports (FMR) and Audited Financial Statements (Project Account) were submitted to the World Bank within stipulated time frame and there is no overdue of unaudited and audited reports to submit.

C. Performance of Government Institutions and departments, Non-Government Entities, the principal TA provider, the Supervising Entity involved in the project

The government institutions particularly NARC, district agriculture development office, district livestock service office and district/public health office started implementation of AFSP intervention from July 16, 2013. The delivery of service from these government offices was found efficient and effective in their respective field (overall outputs and outcome of the project, End line BRA survey, March 2018) and the presence of government staff in the field was also found satisfactory above median value (community score card assessment report, March 2018).

In line with the agreement made between GoN and FAO; FAO TA to AFSP on board all 9 subject matter specialists and 57 DTOs between the period of March, 2014 to September 2014 and started providing technical assistance at all central, regional and district level. Similarly, FAO TA contracted 19 local NGOs, one in each district, as service providers to mobilize 399 field staff to assist DADO, DLSO and DHOs in the implementation of AFSP at the VDC level. Keeping in view the overall outputs and outcomes of the project (End line BRA survey, March 2018), the delivery of service from FAO TA and the associated NGOs (service providers) was efficient and effective. In the mid part of FY 2017/18, the then projects VDCs were transformed to Palikas (Urban and rural municipalities) and all GoN staffs (except chief and account) were deputed to the Palikas, which created a gap in the service delivery of the project. In the absence of GoN machinery at grass root level, the DTOs and project field staffs from Service providers supported chiefs of DADO, DLSO and DHOs to implement remaining project activities successfully. The community score card assessment report, March 2018 shows that the performance of DTOs of FAO technical assistance and the local NGOs was found effective and efficient in the field. Presence of field staff (AT, LT and PF) was very good (score 4 out of 4) in each assessment locations and has helped a lot (score 3.96 out of 4) to the community in conducting the project activities (Community score card Assessment report, March 2018).

The World Bank (supervising entity) conducted nine implementation support missions during the entire project period and also carried out MTR of the project. In each mission, the World Bank assessed the progress of the project and provided necessary suggestions/guidance to achieve the goal of the project through agreed actions in the aide memoire. Keeping view the effective and efficient implementation and overall achievement of the project, the performance of supervising entity was effective.

D. Risks to Development Outcome

During the course of implementation of the projects, no direct risks identified/faced to project. Some operational challenges were encountered but these were handled properly to ensure timely and effective delivery. Risk logs were prepared and assessed in every six months. The risks that

could hurdle in the timely implementation were identified and possible measures were taken to overcome those risks/constraints. Grievances redressal mechanism prepared and used to address the grievances of the beneficiaries; this was aligned with GoN grievance mechanism to harmonize with GoN system. Public hearings were carried out involving stakeholders, communities, journalist, politicians, and farmers association in each district on annual basis, to maintain transparency and provide clarifications to stakeholders.

In regards to ES Safeguard risks, environmental management plan (EMP) was prepared for the importation of livestock genetic materials and approved by GoN concerned authorities. In line with ES operational guideline, preliminary assessment of AFSP interventions was carried out to identify the potential ES risks through ES screening and preparing Environmental Code of Practices (ECoPs) and also conducted ES safeguard compliance monitoring. Capacity building of beneficiaries and project stakeholders, and women's empowerment, internalization of project interventions (good practices) in palikas' (rural/municipalities) regular program was focused for the sustainability of project initiatives.

Nucleus herds of imported Boer and Saanen goats were established at GRS Bandipur, GDF Chitlang, RARS Khajura and GDF Budhitola for maintenance and continuous supply of these breed. The Multiplier herds were established in the eight project districts and developed as resource center for the supply of 50 % cross Boer and Saanen goats. These arrangements will help continuous supply of the required breed in the project districts. Arrangements have also been made to supply the improved seeds through NARC stations based on the demand, as agreed in the regional planning workshop.

Weather and natural hazards such as droughts, flood affected in the disruption of access as well as production and productivity of crops, which were addressed with some alternatives. Stresses such as cold, disease were addressed by using plastic tunnels, stress torrent varieties.

GoN (MoAD, MoLD and MoH) implemented the project interventions, which were fully owned by GoN entities and internalized under the government regular program. However, as the country has recently shifted to a provincial and local governance system and all government offices would work within the framework of local body (municipality and rural municipality), the FAO TA has conducted the workshops on "mainstreaming of crop, livestock and nutrition initiatives in local government planning" for local body elected representatives and their executives of all project VDCs to make them aware of AFSP interventions and good practices. It has been reported that each municipality and rural municipality prepared their work-plan by including AFSP good practices (Final Report on Mainstreaming AFSP learning and good practices in to local level planning of Next FY).

5. LESSONS AND RECOMMENDATIONS

- FAO TA was onboard in the project in Jan 2014, whereas the project implementation was started from April 2013. This has delayed in providing technical assistance in the implementation. Therefore, it is recommended that technical assistance should be made on board in timely manner. It would be nice to have the technical assistance team (key personnel) on board at least 3 months prior to the implementation of project to ensure all frameworks, guidelines M&E system and human resources are in place for the smooth implementation of the project from the beginning. This can be done through the provision of an implementation preparation phase.
- The phase wise VDC coverage in the implementation implied less time available for lately covered VDCs. Therefore, project interventions should be implemented in all rural municipalities from the beginning of the project.
- Uniform program activities (including number and cost) in 19 project districts were not able to cater local needs and program effectiveness. Therefore, the program activities should be planned based on local needs and agro-climatic condition. Further, it would be nice to give flexibility in revising the activities based on the changing time context and demand but to fulfill the set objective of the project.
- As CHD could not prepare BCC strategy, BCC training materials, BCC materials and food based nutrition IEC material on timely manner; the responsibility was shifted to FAO TA (Before for BCC and during MTR) and finally FAO TA prepared these materials. The reason behind this was due to mismatched procurement process, which resulted in the delay in the implementation of nutrition activities in the field (BCC, IEC). Therefore, it would be nice to provide such responsibility to technical assistance part.
- Procurement of especially vehicle and equipment to be completed in the beginning phase of the project for the effective implementation

Good Practices

- **Women empowerment:** Strong focus on women farmers contributed to their empowerment, positive results in income growth, productivity increase in selected commodities, and access to crop and livestock products as well as reduction in women drudgery**.**
- **Boer goat is found to be technically and financially viable in the project areas** and liked by the project farmers. Therefore, it should be promoted to other similar areas.
- **FFS approach well accepted by the farmers groups as a powerful tool for disseminating and adopting technology and enhancing farmer's knowledge and**

skill. Technical knowledge, timely delivery of improved agriculture inputs and proper management has resulted increase in crop and livestock (goat, poultry, dairy) production and productivity. **Involvement of FAO TA proved to be crucial to ensure the success of this approach**; particularly developing FFS facilitators, providing technical assistance for FFS at field and integrating nutrition modules in FFS was a promising innovation. Therefore, this should be promoted as a key tool for delivering skill and knowledge.

- **Crop variety and breed improvement activities were successful:** due to establishment of private seed and breed multiplier farmers who produced a majority of the improved seeds and breeds for distribution. Scope for upscaling this approach nationwide should be explored.
- **Seed multiplication of pre-released crop varieties** helped the quicker dissemination of new crop varieties at farmer level. Therefore, such activities should be continued under regular program in coordination with NARC.
- **Small irrigation support helped farmers to repair the irrigation schemes and also to carry out new irrigation schemes**, which ultimately increased the production and productivity of crops and vegetables.
- **Small -grant support program helped farmers to adopt the improved technologies** and also to carry out vegetable, goat and poultry farming in a micro-commercial way, which is, handled within a family. Provision of small grant support should be continued under GoN program and similar projects.
- The **small grant support program** helped **to reduce the workload of women drastically through labor-saving technologies** (improved water mill, hulling and grinding mill, corn Sheller, improved cooking stove, bio-gas, thresher machine etc.); providing them extra time to feed and care of their children.

6. ICR ANNEXES

Annex 1. Results Framework and Key Outputs

Project Indicator	Unit	Baseline	Cumulative Achievement as of March 2018	Data source	End-of-Project Target
Project Development Objective (PDO) Indicators					
1. Improved technologies (crop and livestock) developed/released for project area farmers	Number	0	30 (17)[5]	AFSP database/ NARC progress reports	29
2 (a) Increased productivity of crops:					
Paddy	Tons/ha	2.9	4.46	End line BRA survey, March 2018, ERMC and BF Consultancy	3.77
Wheat		1.4	2.27		1.82
Maize		1.9	3.03		2.47
Potato		4.8	7.00		6.24
2 (b) Increased productivity of livestock products:					
Goat meat	Kg per 12 month old goat	19.18	All breeds 31.6 Boer Cross 36.6	End line BRA survey, March 2018, ERMC and BF Consultancy	35
Eggs	Number per year	20.5	93		35.8
Milk (cow & buffalo)	Liters per lactation	478.8	934[6]		837.9
3. Farmers (women farmers) with increased productivity in:					
Crops	Numbers	0 (0)	47757 (40769)	AFSP database	40,000 (20,000)
Livestock	Numbers	0 (0)	38430 (34785)	AFSP database	27,000 (24,000)
4 (a) Improved dietary intake for: Pregnant and nursing women					
Animal protein	% over BL	56	89.9	End line BRA survey, March 2018, ERMC and BF Consultancy `	71
Fruits & vegetables		57	78.9[7]		72

5. It includes 22 improved crop management technologies and 8 livestock management technologies (annex-7.1, 7.2, 7.6 & 7.6.1) ; the figures in parenthesis gives the total no. of crop varieties developed by NARC under support of AFSP details given in annex-7.4
6. Includes weighted average of 60% of Buffalo milk (1076 litre) and 40% of cow milk (698 litre)
7. These figures may vary to some extent from season to season, as consumption is directly linked to production/ availability of vegetables and fruits

Project Indicator	Unit	Baseline	Cumulative Achievement as of March 2018	Data source	End-of-Project Target
4 (b) Improved dietary intake for Children between 6-24 months	% over BL	42.3	80.4	End line BRA survey, March 2018, ERMC and BF Consultancy	72.3
Intermediate Indicators					
Component One: Technology Development and Adaptation					
5. Field Trials of Improved Technologies	Number	0	6580	AFSP database	4000
6. Source Seed Production	MT	0	582.7	AFSP database	540
Component Two: Technology Dissemination and Adoption					
7. Producer Groups supported in:					
Crops	Number	0	1932	AFSP database	2000
Livestock		0	1558		1300
Homestead production		0	1114		1450
8. Seed Replacement Rate (BL: 6%)					
Paddy	% over baseline	7.2	39	End line BRA survey, March 2018, ERMC and BF Consultancy	17.2
Wheat		4.6	38		14.6
Maize		14.7	35.7		24.7
Potato		16	31.4		26
Component Three: Food and Nutrition Security Enhancement					
9. Women's groups trained in preparation of nutritious foods	Number	0	2159	AFSP database/DHO report	1700
10. Households with Pregnant and Nursing Mothers receiving project-supported BCC	Number	0	49873	AFSP database/DHO report	45000

Annex 2. Project Costs by Component

The total project planned budget and incurred actual expenses is presented in the following table:

Table A: Original budget and actual expenditure till March 31, 2018 (provisional)

Description	Original Budget (USD) (A)	Actual Expenditure (USD) (B)	Percentage (B)/(A)*100
Component 1	7.739	5.709	73.77
Component 2	26.812	29.734	110.90
Component 3	8.940	9.395	105.09
Component 4	5.624	6.506	115.68
Physical Contingencies	2.456		
Price Contingencies	6.429		
Total	58	51.344	88.52

Note: Actual Expenditure amount could slightly vary at final settlement of disbursement due to-exchange rate variation and Advance amount return from FAO.

The higher percentage of expenditures in component II and III is due to gain due to exchange rate.

Annex 3. Efficiency Analysis

FINANCIAL ANALYSIS[1]

AFSP benefitted 47,757 households through crop technology interventions; 38,430 households through livestock improvements; and 26,405 mothers through nutritional support including homestead gardening & village model farming in 19 districts of mid- and far-western regions with an estimated investment of USD 58 million of which approximately 42 million was invested at end line survey timeline. Financial analysis of the project was performed for 10 years from 2013 to 2022. Five years during the project and another five years at post-project period.

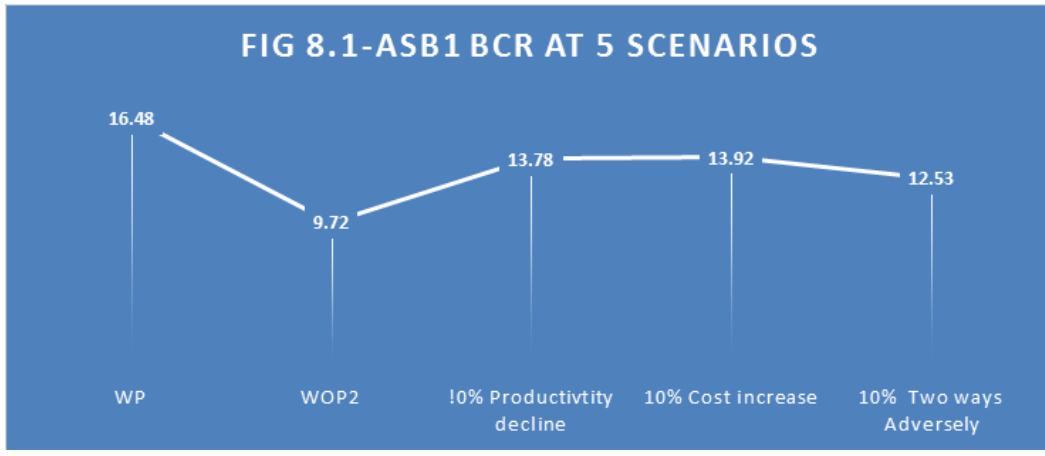
Benefit streams of the project were based on production of crops (Paddy, wheat, maize & potato); milk production (Cow and buffalo milk); meat production (Goat meat estimated on live weight); and poultry production (Especially egg production). The benefit stream for nutrition was estimated based on production and consumption of vegetables at household level. While the cost streams include annual project investment with an assumption that the government' contribution

1 Based on end line BRA survey, March 2018, conducted by ERMC and Bright Future Pvt. Ltd

of funding will continue beyond the AFSP project cycle too.

BENEFIT COST RATIO (BCR)

Analysis of the project's benefit cost ratio disclosed that the project in profitable to the farmers. BCR was performed at five different scenarios i.e. With Project (WP), and Without Project-Control Group (WOP2). Likewise, sensitivity analysis was performed at plus minus 10% i.e. 10% decline in productivity & production revenue, 10% increment on cost streams, and both ways, 10% decline in revenue-base and 10% increase on cost streams. Analysis revealed that the project treatment group (With Project) is highly rewarding agro-enterprise for the farm households gaining a benefit cost ratio (BCR) of 16.48 while without project BCR dropped to 9.72 but still profitable. Similarly, sensitivity of plus minus 10% on either side also seems profitable but at lower rates (Fig-ASB1)



QUALIFICATION OF PROJECT BENEFITS

AFSP has demonstrated agriculture-led growth model that the productivity growth is attainable with technological adoption reinforced by supported mechanism to small landholder farmers inclusive of Dalits, Janjatis and the rest even in hilly and mountainous districts, which in fact is a challenging terrain. Overcoming all challenges, the AFSP has made notable impacts to productivity growth of mentioned crops in comparison to control group. There is also a net increment in productivity growth contributed by the project in terms of all other listed crops, goat meat, cow and buffalo milk and egg productivity.

End-line survey disclosed that the productivity of selected enterprises stimulated by AFSP project interventions has remarkably increased as against baseline status as well as the contemporary control group. Refer to End line BRA survey report attached in annex-27.1 for detail.

NET PRESENT VALUE (NPV)

Cash-flow analysis of the treatment group during end-line survey was performed to compute net present value using discounted approach for a 10 year period. The discounted NPV of the project for the duration as mentioned above at 9% which appeared to be Nepalese Rupees NRs. 3043.4 million (USD, 35.8 million @1=85 NRs). Originally, the AFSP project has estimated a NPV of USD 19.1 Million at 19% for a five-year project period.

INTERNAL RATE OF RETURN (IRR)

Financial analysis for the 10-year project revealed an IRR of 21.30%, which is slightly higher by 1% as compared to original project appraisal IRR of 20.4%. That means the AFSP project is financially viable even the funds available at 21.30 rate of annual interest.

Refer to annex-27.1 (object file), chapter 8 financial analysis for detail.

Annex 4. Governments', Co-Financiers' and Other Partners/Stakeholders' Comments

- Two Regional Completion workshops were conducted in Dhangadhi and Nepalgunj on 21 March 2018 and 22 March 2018 respectively. Chiefs of all District Project Support Unit, District technical officers, and farmer representatives, cooperative representatives and mother groups' representative participated on the workshop. Presentations were made on crop, livestock and nutrition specific interventions along with an overall status of project. Farmer's representatives expressed their views that the project has capacitated them technically and supported to adopt the improved technologies and willing to continue the intervention on their own. Peasant Coalition representatives monitoring Visit at Rukum and Salyan district during 6-10 Jan 2017 also illustrates that interventions were carried out efficiently in effective manner as in a planned way. The arrangement for supply of seeds and breeds after AFSP from nucleus herd and NARC centers; initiatives for incorporating AFSP good practices in local planning will help farmers to continue project initiatives.
- Similarly, a central level project completion workshop was conducted in Kathmandu on 27 March 2018. State minister of MoALM&C, officials from concern Ministries, NPC, NARC, Departments, Beneficiaries, FAO, Nepal farmers' Association, Donor community, projects working in similar area participated on the workshop. An overview project status of project was presented by project and FAO TA whereas farmers' representatives, and other stakeholders' presented their view and shared their experiences about AFSP. Discussion and clarification session was also conducted to clarify the queries. After discussion, the secretary of MoALM&C remarked that the project has been able to achieve the objective and interventions were implemented effectively and efficiently, as a result Food and Nutrition Security project

has been awarded by GAFSP and GoN is also funding on it.

- A project completion mission (including all stakeholders, MoAD officials, the World Bank team, National planning Commission representative, FAO technical assistance, the district implementing agencies, DIME) was commissioned from 23 to 25 March in Rolpa and Pyuthan district. The mission also found that the project interventions were effective and implemented efficiently in timely manner and within budget (mission presentation at MoALM&C on 27 March 2018).

Annex 5. Supporting Documents

Annex-5.1 Publications published by NARC under AFSP

SN	Title of the publication	Type	No of copies	Institution
1	Major diseases and insects of tomato and its abiotic stresses	Booklet	500	RARS, Khajura
2	Late blight of potato and its management	Booklet	500	RARS, Khajura
3	Improved Tori production technologies	Booklet	500	RARS, Khajura
4	Boer goat: A brief introduction	Booklet	500	RARS, Khajura
5	Sweet potato production technologies	leaflet	1000	RARS, Khajura
6	Stylo grass and its production technologies	leaflet	1000	RARS, Khajura
7	Winterbean production technologies	leaflet	1000	RARS, Khajura
8	Weevil in wheat storage and its management	leaflet	1000	GRP, Salyan
9	Weevil in maize storage and its management	leaflet	1000	GRP, Salyan
10	Potato production technologies	Booklet	500	HRS, Dailekh
11	Sweet potato production technologies	Booklet	500	HRS, Dailekh
12	Plant nutrients, their symptoms under low and over doses	Booklet	1000	ARS, Jumla
13	Integrated bean cultivation in Jumla	Leaflet	1000	ARS, Jumla
14	Blast disease in rice and its control	Leaflet	1000	ARS, Jumla
15	Pipeline bean varieties	Poster	1000	ARS, Jumla
16	Integrated crop management in maize	Leaflet	1000	RARS, Doti
17	Tomato cultivation in plastic tunnel	Leaflet	1000	RARS, Doti
18	Red ant management in potato	Leaflet	1000	RARS, Doti
19	Symptoms of PPR disease in sheep and goat and its management	Leaflet	1000	RARS, Doti
20	Improved seed production technologies in maize	Booklet	500	Coordinator's office, Component-1, NARC

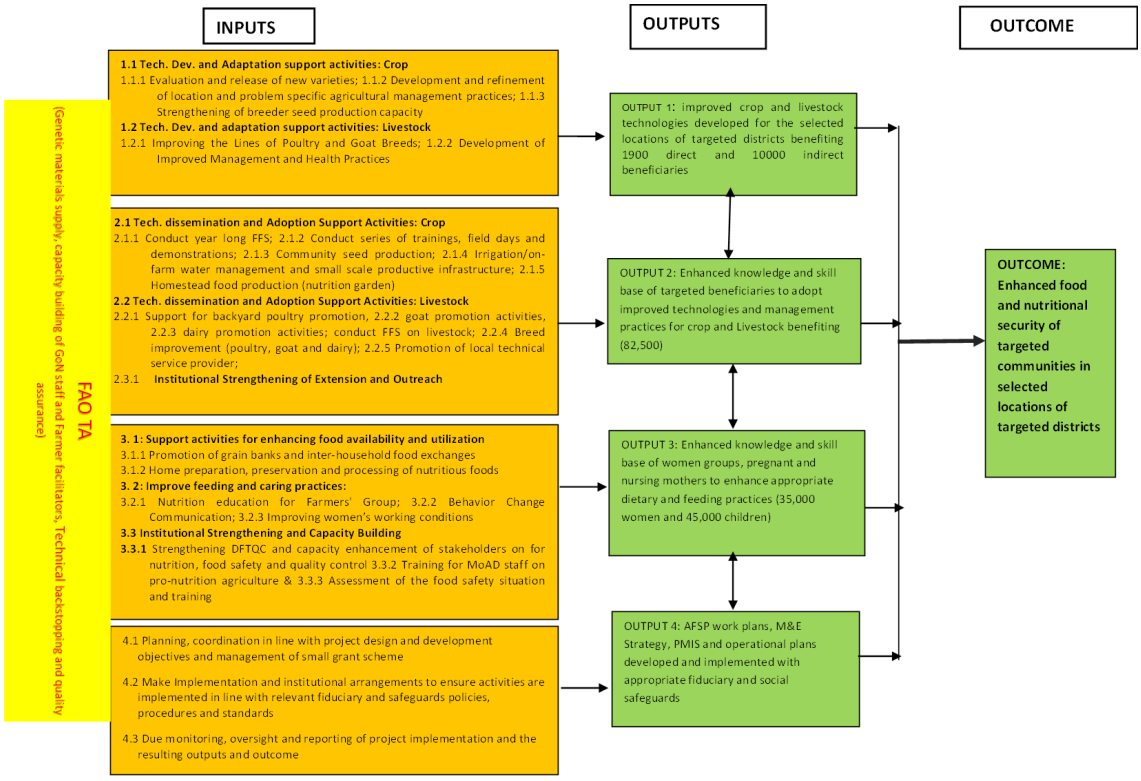
Annex-5.2 List of nutrition related documents prepared under FAO TA

Document name	Type	Date	Author
Crop			
Implementation procedure Guide for Crop FFS (Rice, Maize, Wheat and Potato) in English- 4, 2015	Implementation guideline (4)	Feb 2015	*
Implementation procedure for Seed Production FFS (Maize) in English- 1, 2015	Implementation guideline (1)	June 2015	*
Poster of FFS Implementation Steps (Rice and Maize) in Nepali- 2	Poster	June 2015	*
FFS implementation Process Guide (published)	Implementation guideline (1)	Oct 2015	*
Flex poster for Agro ecosystem Analysis in FFS (3 types)	Flex Poster	Nov 2015	*
Implementation Guideline and curriculum matrix for Buckwheat	Implementation guideline(1)	March 2016	*
Implementation Guideline and curriculum matrix for Barley	Implementation guideline (1)	Jan 2016	*
Facilitator's Diary for Crop FFS (Published)	Dairy	july 2016	*
Technical note on nutritional deficiencies on human body and their corrections through vegetable consumption (*Nepali version, handout for our field staffs and leader farmers*)	Hand out	May 2017	*
Livestock			*
Implementation procedure for Livestock FFS (integrated goat management) in Nepali -1, 2014	Implementation guideline (1)	Jan 2015	*
Implementation manual for Poultry rearing FFS (in Nepali, published)	Implementation guideline (1)	Jan 2015	*
Implementation manual for Dairy FFS (in Nepali)	Implementation guideline(1)	Jan-2017	*
Leaflet on improved goat shed construction, Oct 2016	Leaflet	Oct-2016	*
Nutrition			*
Behavior Change Communication Strategy document	Strategy paper	Apr-2015	*
BCC training manual	Manual	Apr-2015	*
Five Nutrition modules focusing on food availability and dietary practice analysis, healthy diets, food storage, safety and hygiene, home food processing and cooking demonstration of recipes	Session Module	Aug 2015	*
Advocacy Packages (Nutrition)	Hand- Book	Jan 2017	**
Facilitator guide on MToT on Food processing, preparation and preservation	Facilitator guide	Jan 2017	**
Facilitator guide for DToT on Food processing, preparation and preservation	Facilitator guide	Jan 2017	**
Facilitator guide for MToT on Food Based Nutrition	Facilitator guide	Jan 2017	**

Document name	Type	Date	Author
Facilitator guide for ToT on Food Based Nutrition	Facilitator guide	Jan 2017	**
Facilitator guide for Nutrition Education to Farmers	Facilitator guide	Jan 2017	**
Recipe book	Hand book	Jan 2017	**
Nutrition Flip chart	Flip chart	Jan 2017	**
Reference book (Food processing, preparation and preservation and Food Based Nutrition)	Handbook	Jan 2017	**
Reference book (Nutrition Education to Farmers)	Handbook	Jan 2017	**
Safeguards			
Environment and Social safeguard operational guideline	Operational guideline	June-2015	***
Environmental and Social Screening training Manual, December 2014	Training Manual	Jan 2015	***
Environment Management Plan for importation of genetic materials	EMP	Jan 2015	***
Leaflets on social and environment safeguard	Leaflet	Dec 2015	***
Environmental and social safeguard related technical guideline (final draft), Jan 2016	Implementation guideline	Jan 2016	***
Monitoring and Evaluation			***
Monitoring and Evaluation Strategy of AFSP, Jan 2015	Strategy paper/manual	Jan-2015	***
Concept note, design and guidelines for conduction of Community Score Card Assessment of AFSP, Oct 2015	Implementation Guideline	Dec-2015	*
Concept Note, design and guideline for conduction of Beneficiary Results Assessment Survey of AFSP, October 2015	Implementation Guideline	Dec-2015	*
Community Score Card Assessment Report, February 2016	Assessment Report	Feb-2016	***
Beneficiary Results Assessment Survey Report of AFSP, February 2016	Survey Report	Feb-2016	***
Training guidelines for progress data collection and reporting for DTOs and field staff, May 2015	Implementation Guideline	May-2015	***
Beneficiary Results Assessment Survey Report of AFSP, Dec 2017	Survey Report	Dec-2017	***
Operational Management			
Inception workshop report, May 2014	Report	Jun-2014	*
Inception report of FAO TA to AFSP (UTF/ NEP/073/073)	Inception Plan	Feb-2015	*
Guideline for Periodic Performance Assessment of Service providers	Implementation Guidelines	Jul-2015	*
Status of Agriculture Food Security Project/FAO TA to AFSP- a two pager bulletin (2)	Two pager bulletin	Jul-2016 & March 2018	*
Project Completion report of FAO TA to AFSP	PCR	Mar-2018	*
Implementation Completion Report of AFSP	ICR	March 2018	***

*** Prepared by FAO TA consultants;**
**** Prepared by FAO TA hired consulting firm called BPRC;**
***** Prepared by PMU with technical assistance of FAO TA consultants**

Appendix 6: AFSP Results Chain



Annex 7.1: Synopsis of Crop Management Technologies developed by NARC

Project year	Type of management Technology	Name of technology	Total
2	**ICM**	Intercropping of maize and Cowpea to increase the productivity and farm income of the farmers	1
		ICM of Lentil	1
		Weed Management Trial on Wheat	1
	IDM	Effect of line sowing with seed treatment of improved variety Swargadwari over farmer's practice on black smut disease in wheat	1
		IDM on Bean	1
		IDM on Wheat	1
		Late Blight Management of Potato	1
	IPM	Storage Trial on Maize & Wheat	1
Year 2 Total			**8**
3	**ICM**	Comparative studies on weed management in wheat by using herbicide and farmers practice	1

		Effect of spacing on productivity of rice (planting geometry)	1
		Effectiveness testing of Jab seeder	1
		Efficiency testing of various models of Corn Sheller	1
		Improved crop management practices for increased productivity on Rajma	1
		Improved iron plough from NARC	1
		ICM for increased productivity on Potato	1
		Integrated crop management in lentil	1
		Plant population manipulation for increased productivity on Maize (ICM)	1
	IDM	Integrated disease and pest management on Lentil and Rajma	1
		Powdery mildew management in wheat	1
	IPM	Storage Trial on Maize & Wheat (IPM in Wheat)	1
Year 3 Total			**12**
4	**ICM**	Effect of mulching and irrigation frequencies on the productivity of wheat	1
	IPM	Integrated pest management on increasing tomato productivity	1
Year 4 Total			**2**
Grand Total			**22**

Source: NARC progress report/AFSP database

Annex 7.2: Details of Crop Management Technologies

Details of crop technologies.doc

Annex- 7.2.1: Details of trials carried out during project period by stations

Row Labels	Sum of Introduction and on station testing/ maintenance of promising varieties	Sum of ICM Technology	Sum of IPM/IDM Technology	Sum of On farm validation of promising varieties (PVS/FFT/ FAT/IRD)	Sum of Total2
Agri-Botany Division, Khumaltar, Lalitpur	17	0	0	3	20
Agriculture Research Station, Dasarathapur, Surkhet	13	65	37	162	277

Agriculture Research Station, Vijaynagar, Jumla	10	122	49	108	289
Agri-Engineering Division, Khumaltar, Lalitpur	0	15	0	0	15
Agronomy Division, Khumaltar, Lalitpur	41	0	0	3	44
Fodder & Pasture Research Division, Khumaltar, Lalitpur	3	0	0	2	5
Grain Legume Research Program, Khajura, Banke	15	114	140	404	673
Hill Crops Research Program, Kabre, Dolakha	22	0	7	96	125
Horticulture Research Station, Kimugaun, Dailekh	24	61	39	96	220
Horticulture Research Station, Rajikot, Jumla	9	0	5	62	76
National Ginger Research Program, Kapurkot, Salyan	8	69	62	756	895
National Maize Research Program, Rampur, Chitwan	8	0	0	1	9
National Oilseed Research Program, Nawalpur, Sarlahi	5	0	0	1	6
National Potato Research Program, Khumaltar, Lalitpur	11	0	0	47	58
National Rice Research Program, Hardinath, Dhanusha	14	0	0	6	20
National Wheat Research Program, Bhairahawa, Rupandehi	3	0	0	1	4
Regional Agricultural Research Station, Bhagetada, Doti	24	158	200	2853	3235
Regional Agricultural Research Station, Khajura, Banke	79	47	27	456	609
Grand Total	**306**	**651**	**566**	**5057**	**6580**

Source: NARC progress report/AFSP database

Annex- 7.2.2: Synopsis of trials carried out during project period

Description of Key trials carried out by NARC

Annex- 7.3: Details of Crop varieties developed by crop, varieties and domain

Developed Year	Crop	Varieties	Domain/altitude	Maturity Day	Total
1	**Potato**	Khumal Ujjwal	**Terai to 4400masl**	100-120	1
	Wheat	Danfe	**Upto 2400 masl**	163-170	1
1 Total					**2**
2	**Potato**	Khumal Upahar	**All regions**	100-120	1
2 Total					**1**
3	**Buckwheat**	Mithe Phapar 1	**Midhills (900-1700masl)**	72	1
	Fingermillet	Kabre Kodo 2	**1000-2000masl**	152	1
		Sailunge kodo 1	**1300-2200masl**	152	1
	Maize	Arun-4	**Terai, Inner Terai and Foothills**	100-115	1
		Arun-6	**Terai, Inner Terai and Foothills**	90	1
		Arun-3	**Terai, Inner Terai and Foothills**	80-100	1
	Rice	Lekali dhan -1	**High hills (1700m-2600m)**	158	1
		Lekali dhan -3	**High hills (1700m-2600m)**	152	1
		Sukha dhan-4	**Upto 700masl**	118-125	1
		Sukha dhan-5	**Upto 700masl**	125-128	1
		Sukha dhan-6	**Upto 700masl**	120-125	1
	Wheat	Sworgadwari	**Mid -high hills**	163	1
3 Total					**12**
4	**Buckwheat**	Tite-phapar 1	**Mid -high hills**	68	1
	Wheat	Chyakhura	**Riverbasin-Mid hills (upto 1500m)**	158	1
4 Total					**2**
Total					**17**

Source: NARC progress report/AFSP database

Annex- 7.4: Details of Crop varieties developed by crop, varieties and domain

Annex 7.4-Details of Crop varieties develop

Annex- 7.5: Details of Source Seed produced by crop (MT)

Crops	Breeder Seed	Foundation seed	Total
Barley	0.2	1.8	2.0

Bean	0.0	5.0	5.0
Blackgram	0.2	0.1	0.3
Buckwheat	0.2	0.5	0.7
Fingermillet	0.8	3.3	4.0
Lentil	3.2	4.7	7.9
Maize	11.3	124.2	135.6
Mustard	0.2	2.3	2.5
Pea		0.3	0.3
Potato Basic Seed		25.3	25.3
Rice	5.6	168.8	174.4
Soybean	3.4	4.4	7.8
Vegetables	0.1	2.4	2.5
Wheat	7.2	207.2	214.4
Grand Total	**32.5**	**550.3**	**582.8**

Source: NARC progress report/AFSP database

Annex- 7.5.1: Details of Source Seed produced

Total source Seed Production under NARC

Annex- 7.5.2: Synopsis of seed production of recently/pre released crop varieties

Crop	Station	Total
Finger millet	HCRP, Kabre, Dolakha	0.04
Finger millet Total		**0.04**
Lentil	NGLRP, Khajura, Banke	2.425
Lentil Total		**2.425**
Maize	NMRP, Rampur, Chitwan	0.6
Maize Total		**0.6**
Potato	ARS, Dasharathpur, Surkhet	0.3
	NPRP, Khumaltar, Lalitpur	0.1
Potato Total		**0.4**
Rice	Agri-botany Division, Khumaltar, Lalitpur	0.05
	Agronomy Division, Khumaltar, Lalitpur	1
	NRRP, Hardinath, Dhanusa	0.1
	RARS, Khajura, Banke	1

Rice Total		**2.15**
Wheat	Agri-botany Division, Khumaltar, Lalitpur	0.05
	NWRP, Bhairahawa, Rupandehi	0.135
Wheat Total		**0.185**
Grand Total		**5.8**

Source: Progress report of NARC/AFSP database

Annex 7.6: Description of technology developed in livestock sector

Project Year	Technologies	Total
3	Appropriate Goat farming model in mid-hills of Nepal	**1**
	Develop feeding package for stall feeding of goat	**1**
	Development of low cost feeding technology of poultry	**1**
	Fodder and forage farming in Apple Orchard	**1**
3 Total		**4**
4	Comfrey: A multiuse grass and its cultivation practices	**1**
	Develop appropriate silvi- pasture model for three agro ecological zone	**1**
	ND 1-2 thermostable vaccine against Ranikhet (poultry)	**1**
	Urea molasses mineral block for milking animals (buffalo and cow)	**1**
4 Total		**4**
Grand Total		**8**

Source: Progress report of NARC/AFSP database

Annex 7.6.1: Description of technology developed in livestock sector

S.N.	Sector	Title of Technologies	Description of the technologies	Status
1	Fodder and forage	Fodder and forage farming in Apple Orchard (C)	Production trial of grasses like cocksfoot, clover and rye were done in Guthichour, Jumla. In the test, evaluation of production of these grasses in different combination was done. The mixed farming of Cocksfoot, rye and clover gave the highest grass yield. Rye grass can't be produced for long time once seeded. But, other two can give yield for longer time. Moreover, clover is legumes and other two are non-legumes. So mixed farming of clover and cocksfoot is recommended.	Being practiced in mid hills-Jumla

2	Goat farming models	Appropriate Goat farming model in mid-hills of Nepal (c)	Area required for different stall feeding goat, Forage production in various silvi-pastural model, Feed required for different goat model along with area required for different goat models of 10, 25 and 40 goat number were experimented. Goat research program, Bandipur concluded the highest economic benefit of Rs. 3,83,000.00 from 40 goat model.	
3	Goat stall feeding	Develop feeding package for stall feeding of goat (C)	Different Models (based on herd size) for stall feeding of goats that encompasses land requirement, fodder and forage cultivation and production and supplementary nutrition have been developed. The details have been published in bulletin compilation of Technogies.	
4	Poultry feed	Development of low cost feeding technology of poultry (c)	Different feed resources of Jajarkot, Jumla and Bajhang were evaluated for their suitability in poultry feeding. A nutritionally amicable feeding combination was evaluated at SARP, Khumaltar which indicated the best production performance of feed collected from Jumla. Field verification of this package is in progress in the districts.	
			In addition, the technology NARC has already developed to add upto 20% comfrey in poultry diet has been scaled up in Jumla, Jajarkot, Kalikot and Bajhang by distributing a total of 2900 seed material of Comfrey.	

5	Silvi-Pasture	Develop appropriate silvi- pasture model for three agro ecological zone	A total of 6 different sets of silvipastoral treatment combinations were tested for three different ago-ecologies. Different Silvi-pasture and horti-pasture model have been studied. Alley cropping of banana and berseem has been found effective in terai, Banana-cowpea alley cropping was found effective in low hill condition. Different forage species under apple and apricot orchard in high mountain and silvi pastoral system (fodder tree and forage under coverage) was evaluated in different location of low to mid hill condition. Compared to other fodder grass species, Mulato grass has the highest dry matter production on medium shade and light shade (5.38 ± 2.88 ton/ha and 9.89 ± 5.86 ton/ha respectively). Plant establishment was found lowest on heavy shade, amongst them, forage peanut has highest plant establishment (40%)	It's initial stage of promotion and being popular in three different ecologies
6	Grass	Comfrey: A multiuse grass and its cultivation practices	Protein: 25.33%, 242 kilo calorie per 100 gram of dry weight, 3 % calcium and 0.7% phosphorus, Can be used as feed for animals and poultry. (Khumaltar, Lalitpur)	Being adopted in the mid hills
7	Poultry	ND 1-2 thermostable vaccine against Ranikhet (poultry)	The immunogenicity shown by the I-2 vaccine as a potential vaccine under free-range poultry management conditions was quite encouraging. The immunity extends up to 4 months in fowl. (Nepalgunj, Banke)	It can heavily control the losses due to Ranikhet disease, however, this require further extension to farmers; as it is made available to limited areas

8	Cow and Buffalo	Urea molasses mineral block for milching animals (buffalo and cow)	Inorder to make the UMB palatable and productive, green grass (28 kg) + straw (7 kg) + cons (1.5 kg) + 300 g UMMB were mixed up and fed to the milch animals hence increased the milk yield by 28 % compared to initial milk yield. Location-Dadeldhura (Jokbuda), Surkhet (Karaikhola) UMMB (300 gm) mixing with green grass (20 Kg), straw (7 kg) and concentration 1.5 kg is suitable for small scale farmers for increased milk yield with reduced cost. Milk increased by 1.7 litre/day/animal	Initial stage of adoption among the buffalo raising farmers of MWR and FWR.

Source: Progress report of NARC/AFSP database

Annex 8: Distribution and Present Status of Imported Boer and Saanen Goat

Govt.farm/breeder districts	Number of Imported goats distributed			No. of goats died			Status of goats alive (no.)			mortality %
	Doe	Buck	total	Doe	Buck	Total	Doe	Buck	Total	
A. Saanen Goats										
GRS, Bandipur	20	5	25	7	1	8	13	4	17	32.00
GDF, Chitlang	10	5	15	6	4	10	4	1	5	66.67
NLBC, Pokhara	0	3	3	0	0	0	0	3	3	-
Dadeldhura (Breeder groups)	0	7	7	0	2	2	0	5	5	28.57
Saanen Total	**30**	**20**	**50**	**13**	**7**	**20**	**17**	**13**	**30**	**40.00**
B. Boer Goats						0	0	0	0	
GRS, Bandipur	50	7	57	4	1	5	46	6	52	8.77
RARS, Khajura	25	4	29	5	2	7	20	2	22	24.13
GDF, Buditola	25	4	29	3	1	4	22	3	25	13.79
NLBC, Pokhara	0	5	5	0	2	2	0	3	3	40.00
Surkhet	0	16	16	0	2	2	0	14	14	12.50
Dailekh	0	13	13	0	4	4	0	9	9	30.77
Salyan	0	5	5	0	0	0	0	5	5	-
Rukum	0	5	5		2	2	0	3	3	40.00
Doti	0	13	13	0	2	2	0	11	11	15.38
Dadeldhura	0	3	3	0	0	0	0	3	3	-
Boer Total	**100**	**75**	**175**	**12**	**16**	**28**	**88**	**59**	**147**	**16.00**

Source: AFSP Progress reports/AFSP database

Annex-8.1: Status of Boer and Saanen kids born by breeds (till March, 2018)

Breeds	No. of Kids born from				No. of kids died		Total Kids alive		
	AI Male	AI Female	NS Male	NS Female	Male	Female	Male	Female	Total Kids
Cross bred kids Saanen			80	137	6	13	74	124	198
Cross bred kids-Boer	335	318	3277	2785	236	236	3376	2867	6243
Cross bred total	335	318	3357	2922	242	249	3450	2991	6441
Pure kids- Boer			155	165	61	39	94	126	220
Pure kids-Saanen			15	8	2	2	13	6	19
Pure Kids total			170	173	63	41	107	132	239
Grand Total	335	318	3527	3095	305	290	3557	3123	6680

Source: AFSP Progress reports/AFSP database

Annex-8.2: Status of Boer and Saanen kids born in the districts and NARC stations (till March, 2018)

	No. of Kids born from				No. of kids died		Kids alive		
Breeds/Locations	**AI Male**	**AI Female**	**NS Male**	**NS Female**	**Male**	**Female**	**Male**	**Female**	**Total Kids**
Cross bred kids Saanen			80	137	6	13	74	124	198
DLSO Dadeldhura			70	128	5	11	65	117	182
GRS Bandipur			10	9	1	2	9	7	16
Pure kids-Saanen			15	8	2	2	13	6	19
GRS Bandipur			15	8	2	2	13	6	19
Cross bred kids-Boer	335	318	3277	2785	236	236	3376	2867	6243
DLSO Dadeldhura	45	27	70	64	10	7	105	84	189
DLSO Dailekh	56	60	1032	745	76	59	1012	746	1758
DLSO Doti	24	18	642	630	25	17	641	631	1272
DLSO Pyuthan	29	33	29	35	1	2	57	66	123
DLSO Rolpa	20	25	39	32	1	4	58	53	111
DLSO Rukum	37	67	88	73	26	21	99	119	218
DLSO Salyan	107	62	66	35	18	10	155	87	242
DLSO Surkhet	17	23	1125	940	32	23	1110	940	2050
GDF Budhitola		3	7	17	0	0	7	20	27
GRS Bandipur			140	166	33	72	107	94	201
RARS Nepalgunj			39	48	14	21	25	27	52
Pure kids- Boer			155	165	61	39	94	126	220
GDF Budhitola			33	35	16	12	17	23	40
GRS Bandipur			69	80	24	16	45	64	109
RARS Nepalgunj			53	50	21	11	32	39	71
Grand Total	335	318	3527	3095	305	290	3557	3123	6680

Source: AFSP Progress reports/AFSP database

Annex-8.3: Status of distribution of crossbred and Pure Boer Bucks to the districts

Source districts/ Farms	Name of districts to which Boer bucks distributed												Total
	Jajarkot	Salyan	Rukum	Rolpa	Pyuthan	Dadeldhura	Surkhet	Darchula	Baitadi	Doti	Achham	Dailekh	
A. Crossbred Boer buck													
Surkhet	50	24	66	170	164	158	183	0	0	0	115	0	930
Dailekh	120	69	43	8	0	0		0	25	0	80	179	524
Doti								173	82	172	20	0	447
Salyan		70											70
Dadeldhura						33		10					43
Pyuthan													0
Rolpa				6									6
Rukum			16										16
GRS Bandipur		8		12	15							3	38
RARS Khajura				15									15
Sub Total	**170**	**171**	**125**	**211**	**179**	**191**	**183**	**183**	**107**	**172**	**215**	**182**	**2089**
B. Pure Boer buck													
GRS Bandipur		6		5	3								14
RARS Khajura				6	9		2			1		2	20
Sub Total		**6**		**11**	**12**		**2**			**1**		**2**	**34**
Grand Total	**170**	**177**	**125**	**222**	**191**	**191**	**185**	**183**	**107**	**173**	**215**	**184**	**2123**

Source: AFSP Progress reports/AFSP database

Annex-8.4: Status of distribution of crossbred Saanen Bucks and hoggets to the districts, March 15, 2018

S.N	District	FY 2015/16		FY 2016/17		2017/18-First Trimester		Total	
		Bucks	Hoggets	Bucks	Hoggets	Bucks	Hoggets	Bucks	Hoggets
1	Rolpa	8	4	2	10			10	14
2	Baitadi	8	0	1	1			9	1
3	Dadeldhura	8	4	2	10			10	14
4	Achhaam	6	12					6	12
5	Doti	8	0	2	10			10	10
6	Syangjha	1	1					1	1
7	Pyuthan			2	10			2	10
8	Jajarkot			2	10			2	10
9	Surkhet			4	20			4	20
10	Dailekh			2	10			2	10
	Total	**39**	**21**	**17**	**81**			**56**	**102**

Source: AFSP Progress reports/AFSP database

Annex-9: Description of FFS conducted in various districts during entire project period

Total Number of FFS	Beneficiaries by Sex			Beneficiaries by Ethnicity				Beneficiaries by age Group				
	Total	Male	Female	Dalit	Ind. Nat	BCT	Other	Below 15 yr	15 to 24 yr	25 to 40 yr	41+ yr	NA
1932	47757	6988	40769	8177	4916	34079	585	40	7480	29199	10692	346
% out of total bene.	100	15	85	17	10	71	1	0	16	61	22	1

Source: DADO Progress reports/AFSP database, BCT-brahmin/chhetry/Thakuri

Annex-9.1: Details of FFS supported by crop during entire project period

FFS by various crops (no. of FFS)								
Barley	Bean	Buckwheat	Maize	Millet	Paddy	Potato	Wheat	Grand Total
7	7	57	317	4	182	541	817	1932

Source: AFSP Progress reports/AFSP database

Annex-9.2: Details of FFS supported by crop during entire project period

FFS_deatils_report_final.doc

Annex-10: Synopsis of adoption support provided in AFSP during entire project period

Group received support	Beneficiaries			Improved Seed received (KG)	Super bag received		Agro tools received	
	Total	Female	Male		Number of Farmer	Number of Bags	Number of Farmer	Number of agro tools
1540	38053	31778	19621	184958	24872	82263	17573	18147

Annex-10.1: Details of Seed provided under Adoption support

Quantity of Seed by crop variety (KG)							
Barley	Bean	Maize	Paddy	Potato	soybean	Wheat	Grand Total
1075	4438	19586	7287	60266	250	92056	184958

Source: DADO Progress reports/AFSP database

Annex-10.2: Details of Adoption support provided by the project for crop farmers

Technology Adoption_final_repor

Annex-11: summary of crop production demonstrations carried by project during entire project period

Number of Group	Beneficiaries (N)		Number of Plots	Area under Demo (Rop)	Quantity of Seed provided(KG)
	Observer	Participants			
3701	79036	61462	5726	19718.56	167150.25

Source: DADO Progress reports/AFSP database

Annex 11.1: Synopsis of Crop demonstrations carried out by crop in various districts

Crop by Variety	District																		Grand Total
	Achham	Baitadi	Bajhang	Bajura	Dadeldhura	Dailekh	Darchula	Dolpa	Doti	Humla	Jajarkot	Jumla	Kalikot	Mugu	Pyuthan	Rolpa	Rukum	Salyan	Surkhet	
Barley												10		21						31
Bean			2									2							29	33
Buckwheat								47				50								97
Maize	2	46	38	65	17	86	68	40	41	91	101	8	68	13	71	66	86	59	40	1,006
Millet			1																	1
Paddy	82	27	34	71	24	34	28		24	41	23	21	4	30	48	1	20	43	48	603
Potato		20	44	4	52	20	24	40	38		6	42	26	57		59	4	34	20	490
Soybean			12								2									14
Uwa														5						5
Wheat	111	96	66	60	52	68	79	62	102	62	68	33	128	83	90	18	100	72	71	1,421
Grand Total	**195**	**189**	**197**	**200**	**145**	**208**	**199**	**189**	**205**	**194**	**200**	**166**	**226**	**209**	**209**	**144**	**210**	**208**	**208**	**3,701**

Source: DADO Progress reports/AFSP database

Annex 11.2: Detail of Crop demonstrations carried out by project during entire project period

Crop production Demonstration-Final

Annex 12: Summary of nutritious crop demonstrations carried out by project during entire project period

Number of Group	Area (Ropani)	Beneficiaries	Estimated Observer	Number of Plot	Quantity of Seed provided(KG)
1647	8797	23305	32978	1647	17401.2

Source: DADO Progress reports/AFSP database

Annex-12.1: Synopsis of Nutritious Crop demonstrations carried out by crops and districts

Crops and variety	Districts																		
	Achham	Baitadi	Bajhang	Bajura	Dadeldhura	Dailekh	Darchula	Dolpa	Doti	Humla	Jajarkot	Jumla	Kalikot	Mugu	Pyuthan	Rolpa	Rukum	Salyan	Surkhet	Grand Total
Barley			64	28		7	46	33	7	65	26	10	34	52						372
Bean	100			7	46	50	4		37	15	40	14	9	7	80	82	11	89	84	675
Chick Pea						31									7					38
Lentil		63				19	10		16						10					118
Millet			10	13			2					28						2		55
Mustard							4				4						29		3	40
Oat									13							10				23
Pea		7	24	14	51			16	21		32				18		18			201
Soybean							5										13			18
Sunflower																4				4
Foxtail millet			1					1												2
Naked barley								18				1		5						24
Green Vegetables		2																	1	3
Cow Pea								2							3					5
Wheat												5								5
Buckwheat				10				19												29
Kidney Bean							1						28							29
Proso millet (Chino)								6												6
Grand Total	100	72	99	72	97	107	72	95	94	80	102	58	71	64	118	96	71	91	88	1647

Source: DADO Progress reports/AFSP database

Annex 12.3: Summary of nutritious crop demonstrations carried out by project during entire project period

Nutritious Crop Demonstration_Final_

Annex-13: Summary of seed Production program supported during entire project period

District	Number of Group	Beneficiaries(N)	Quantity of Seed Provided (KG)	Area (Ropani)	Seed Produced (KG)	Source of Seed			
						NARC	Agro-vet	Cooperatives	NSC/Other
Grand Total	812	11439	181,650	46,730	4,832,377	659	39	63	51

Source: DADO Progress reports/AFSP database

Annex-13.1: Details of Seed Production program by crop supported entire project period

Crop by Variety	Number of Group	Area (ha)	Status of Produced seed		
			Seed Produced(MT)	Productivity (MT/Ha)	Sold Seed(MT)
Maize	**208**	**840**	**2,191**	**2.91**	**865**
Paddy	**120**	**315**	**1,027**	**3.21**	**360**
Potato	**11**	**7**	**149**		**137**
Wheat	**473**	**1,174**	**1,466**	**2.87**	**609**
Grand Total	**812**	**2,337**	**4,832**	**2.93**	**1,971**

Source: DADO Progress reports/AFSP database

Annex-13.2: Details of Seed Production program supported by crop variety and source of seed

Seed production program_final_report

Annex-13.3: Synopsis of Mini Kit distribution of recently released /Pre-released variety during entire project period

District	Number of Group	Beneficiaries	Area (Rop)	Quantity of Seed Provided	Number of Kits Provided	Source of Seed			
						NARC	Agro-vet	Cooperative	NSC/ Other
Grand Total	695	13939	5816.876	19104.4	16719	341	152	77	125

Source: DADO Progress reports/AFSP database

Annex-13.3.1: Details of mini kits distribution program of pre/recently released crop varieties

Minikit_final_report.doc

Annex-14: Details of Small Irrigation supports provided during entire project period

Small Irrigation_final_repor

Annex-15.1: Details of Goat Productivity enhancement program throughout project period

Goat Productivity Program by district	Number of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity				Beneficiaries by age Group			
		Total	Male	Female	Dalit	Ind. Nat	BC	Other	Below 15	15 to 24	25 to 40	41+
Total	709	17467	1657	15810	3315	2648	11222	282	6	2265	9493	5703

Source: DLSO reports/ AFSP database

Annex-15.2: Support provided under Goat Productivity program

Goat Productivity Program by district	Number of Group	Farmer received training		Cash Support received (NRs)		Support received on forage and fodder			Number of Goat treatment	
		Service center level	district level	Shed construction	Medicine fund establishment	Forage (KG)	Fodder (N)	Area covered (rop)	Vaccinated	Parasitic
Grand Total	**709**	**17457**	**7158**	**3490000**	**12384000**	**85224**	**564342**	**5935.95**	**73952**	**108687**

Source: DLSO reports/ AFSP database

Annex-15.3: Description of second year follow up support provided under Goat Productivity program

Goat Productivity Program by district	Number of Group	Treatment of Goats (no.)		Farmer received	
		Vaccination	Parasite	Field Level training (no.)	Buck (no.)
Grand Total	**709**	**68623**	**92423**	**15580**	**1024**

Source: DLSO reports/ AFSP database

Annex-15.4: Details of supports provided under goat productivity enhancement program

Goat Productivity Enhancement Program

Annex-16.1: Synopsis of supports provided under livelihoods improvement through goat program

Livelihood Improvement through Goat Program by District	Number of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity					Beneficiaries by age Group				
		Total	Male	Female	Dalit	Ind. Nat	BC	Other	NA	Below 15	15 to 24	25 to 40	41+	NA
Grand Total	285	7036	694	6342	1899	831	4113	133	60	13	990	4107	1866	60

Source: DLSO reports/ AFSP database

Annex-16.2: Different support provided under Livelihood Improvement through Goat program

Livelihood Improvement through Goat Program by District	Number of Group	Received Cash for Shed construction	Fodder support received		Medicine fund received(NRs)	Number of Goat treated with	
			Fodder (N)	Area (Rop)		vaccination	Parasite
Grand Total	**285**	**1425000**	**196987**	**996.75**	**4698000**	**37576**	**37818**

Source: DLSO reports/ AFSP database

Annex-16.3: Different support provided in second year under Livelihood Improvement through Goat program

Livelihood Improvement through Goat Program by District	Number of Group	Number of Cattle received		Number of Farmer received training
		Buck	Doe	
Grand Total	**285**	**346**	**13692**	**4696**

Source: DLSO reports/ AFSP database

Annex-16.4: Details of supports provided under livelihoods improvement through goat program

Livelihood improvement through goat

Annex-17: Synopsis of meat and dairy goat breeding program supported during entire project period

Name of Program	Number of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity					Beneficiaries by age Group				
		Total	Male	Female	Dalit	Ind. Nat	BC	Other	NA	Below 15	15 to 24	25 to 40	41+	NA
Dairy Goat Breeding	2	45	8	37	13		32					29	16	
Meat Goat Breeding	27	670	212	458	37	142	439	52			44	431	195	

Source: DLSO reports/ AFSP database

Annex-17.1: Summary of Groups supported under Dairy Goat Promotion program

Program by district	Number of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity				Beneficiaries by age Group		
		Total	Male	Female	Dalit	Ind. Nat	BC	Other	15 to 24	25 to 40	41+
Grand Total	17	281	17	264	44	31	204	2	53	181	47

Source: DLSO reports/ AFSP database

Annex-17.2: Details of supports provided under meat and dairy goat breeding and goat promotion program

Meat goat breeding.DOCX

Annex-18.1: Summary of Groups supported under Rural Poultry program

Name of Program	Number of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity					Beneficiaries by age Group				
		Total	Male	Female	Dalit	Ind. Nat	BC	Other	NA	Below 15	15 to 24	25 to 40	41+	NA
Rural Poultry	398	9936	377	9559	2636	386	6819	95			2304	5850	1035	747

Source: DLSO reports/ AFSP database

Annex-18.2: Different support provided Rural Poultry Program during entire project period

Rural Poultry Program by district	Number of group, Pen and chicks supported			Cash support for (NRs)		Forage and Fodder support
	Group	Chicks	Pen	Pen construction	Medicine fund	Forage seed (KG)
Grand Total	398	59736	9698	39080000	1600000	814

Source: DLSO reports/ AFSP database

Annex-18.3: Different support provided in second year under Rural Poultry Program

Rural Poultry Program by district	Number of Group	Number of Chicks vaccinated	Farmers trained on Poultry Rearing
Grand Total	398	27885	8048

Source: DLSO reports/ AFSP database

Annex-18.4: Different support provided in Third year under Rural Poultry Program from 2070/71 to 2074/75 by district

Rural Poultry Program by district	Number of Group	Number of Chicks	
		vaccinated	Provided
Grand Total	398	21848	29064

Annex-18.4: Details of supports provided under rural poultry program

Rural Poultry_final_report.

Annex-19.1: Details of supports provided under dairy production program

Name of Program	Number of Group	Beneficiaries by Sex			Beneficiaries by Ethnicity					Beneficiaries by age Group				
		Total	Male	Female	Dalit	Ind. Nat	BCT	Other	NA	Below 15	15 to 24 yr	25 to 40 yr	41+	NA
Dairy Promotion	120	2995	562	2433	241	207	2502	45			243	1746	1006	

Annex-19.2: Different support provided under Dairy Production Program

Number of Group	Support for Shed construction(NRs)	Farmer received			
		Forage (KG)	Fodder (N)	Castrator machine (N)	Milk Can(N)
120	15000000	7485	238200	250	1413

Source: DLSO reports/ AFSP database

Annex-19.3: Details of supports provided under dairy production program

Dairy Promotion Program_final_report

Annex-20: Synopsis of support provided under Livestock FFS

Livestock FFS_final_report.doc

Annex-21: Synopsis of support provided under Village Model Farm and Homestead Nutrition garden

VMF and HNG._final_report.doc

Annex-22: Synopsis of small grant support provided during entire project period

Small Grant_final_report.doc

Annex-23: Report of food safety analysis

FOOD SAFETY SITUATION ANALYSI

Annex-23.1: Detail of mother groups' orientation training on food preparation, processing and preservation during entire project period

No. of groups	No. of benefi ciaries	Beneficiary by ethnicity (no.)				Beneficiary by age in year (no.)					No. of 1000 days mothers
		Dalit	Ind. nationalities	BC	Others	Below 15	15-24	25-40	40+	NA	
2159	53137	11303	6782	33801	12501	55	17392	25726	3882	6082	23806

Source: Progress report of DHOs and AFSP database

Annex-23.2. Detail of Food Recipe Demonstration carried out in mother groups during entire project period

Total no. of events	Total no. of participants	Dalit (no.)	Ind. Nationalities	Brahmin chhetry (no.)	Madheshi (no.)	No. Other	Total 1000 days women participants	New 1000 days mothers
10214	159647	36816	18456	96718	359	7472	98347	26067

Source: Progress report of DHOs and AFSP database

Annex-23.3. Detail of Nutrition activities carried out in mother groups during entire project period

Nutrition Activities_Final_repor

Annex-24: FFS Facilitators' training conducted by FAO during entire project period

Total Participant	Study[5]	Location	Start date	End date	Participant type
25	MTOT JT/JTA (Crop FFS)	Dadheldhura	8/9/2014	17/12/2014	JT/JTA
27	MTOT JT/JTA (Crop FFS)	Surkhet	19/9/2014	28/12/2014	JT/JTA
28	TOF, PAT Crop FFS	Birendranagar	8/8/2016	29/08/2016	AT
26	ToF, PAT (Crop)	Birendranagar	27/04/2016	17/05/2016	AT
30	ToF, Farmer (Crop FFS)	Birendranagar	16/09/2016	3/10/2016	Farmer
25	ToF, Farmer (Crop FFS)	Sundarpur	5/12/2016	23/12/2016	Farmer
25	ToF, PAT (crop FFS)	Birendranagar	30/12/2016	19/01/2017	AT
23	ToF, Farmer (Crop FFS)	Pipari	3/1/2017	20/01/2017	Farmer
26	TOF-Farmer (Crop FFS)	Surkhet	1/1/2016	19/1/2016	Farmer
27	TOF-Farmer (Crop FFS)	Pipari	3/4/2015	17/4/2015	Farmer
21	TOF-Farmer (Crop FFS)	Pipari	30/5/2015	16/6/2015	Farmer
25	TOF-Farmer (Crop FFS)	Dadeldhura	2/11/2014	16/11/2014	Farmer
25	TOF-Farmer (Crop FFS)	Dhangadi	30/5/2015	16/6/2015	Farmer
24	TOF-Farmer (Crop FFS)	Surkhet	2/11/2014	16/11/2014	Farmer
357	***Crop Basic FFS training total***				
24	MTOT JT/JTA (Goat FFS)	Bandipur	31/08/2014	23/09/2014	JT/JTA

Total Participant	Study[5]	Location	Start date	End date	Participant type
24	MTOT JT/JTA (Poultry FFS)	Bardiya	5/2/2015	28/2/2015	JT/JTA
25	ToF Livestock PLT, Poultry FFS	Nepalgunj	12/9/2016	3/10/2016	LT
28	ToF PLT (Goat FFS)	Birendranagar	18/04/2016	12/5/2016	LT
17	***MTOT on Dairy Farmer FFS***		***21/01/2018***	***13/02/2018***	***Officers***
118	***Livestock Basic training for technicians/JT/JTAs***				
24	ToF Farmer-Goat FFS	Birendranagar	19/02/2017	9/3/2017	Farmer
22	ToF Farmer-Poultry FFS	Birendranagar	17/01/2017	4/2/2017	Farmer
46	***Livestock FFS farmer training***				
63	***Livestock Basic training Total***				
504	**Basic FFS Training total**				
24	Refresher Crop FFS, M ToT JT JTAs	Birendranagar	22/05/2016	30/05/2016	JT/JTA
26	Refresher MTOT JT/JTA (Crop FFS)	Birendranagar	18/12/2015	28/12/2015	JT/JTA
50	***Crop refresher Total***				
22	FToT PLT-Supplementary-Goat FFS	Birendranagar	30/05/2017	9/6/2017	LT
22	FToT PLT-Supplementary-Poultry FFS	Birendranagar	30/05/2017	9/6/2017	LT
24	Supplementary MTOT for Goat Husbandry FFS Facilitation	Birendra Nagar Surkhet	1/3/2016	1/15/2016	JT/JTA
23	Supplementary MToT (JT/JTAs)-poultry	Nepalgunj	22/2/2016	5/3/2016	JT/JTA
91	***Livetsock refresher Total***				
141	**Refresher training total**				
662	**FFS training Grand Total**				

Source: FAO TA progress reports/AFSP database

Note: A total of 511 FFS facilitators developed (crop-357, livestock-154)

Livestock FFS facilitator for technician require to attend two level of trainings; so out of 101 JT/JTA/ LT participated on basic FFS ToF, only 91 completed on supplementary training

Annex-24.1: Details of trainings conducted by PMU and FAO during entire project period

Training FFS-Other training_PMU training

Annex-24.2: Details of consultants recruited by FAO during entire project period

List of consultants recruited under FAO

Annex-24.3: List of Service providers hired by FAO during entire project period

List of Service Providers hired by FAO

Annex-24.4: Details of Technical Support Service Missions carried out by FAO experts

TSS mission-Final-Report.doc

Annex-25: Status report on Environment and social safeguard aspects

E S monitoring report March 2018.doc

Annex-25.1: ES compliance monitoring report by third party

Independent E S Monitoring report (fir

Annex-26: Progress on procurement

Procurement Report_Final Used in

Annex-27.1: End line Beneficiary Results Assessment Survey Report, March 2018

Final Report BRA
AFSP 30 MARCH 201

Annex-27.1: Community Score card Assessment Survey Report, March 2018

Final Report CSC
AFSP 30 MARCH 201