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USAID - MASHAV – MoANR Ethiopia Joint Technical Cooperation Program

Smallholder Horticulture Program (SHP) IV

**Quarter I Report
May – July 2016**

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Executive Summary

The Smallholder Horticulture Program (SHP) IV is a joint USAID-MASHAV-MoANR Ethiopia program mainly implemented in six *woredas*, namely Mecha, Basona Worena, Guto Gida, Meskan, Boloso Sore and Raya Alamata *woredas* in four main regions of Ethiopia- Amhara, Tigray Oromia and SNNPR. The program was designed to be implemented between May 2016 and Septemebr 2019. The project's strategic objective is to promote economic growth in rural areas through strengthening commercialization of small farmers in horticulture production in areas with recognized market potential. The 4th phase of SHP's purpose is to develop a competitive and sustainable fruit development sector focusing on establishing a base for avocado export for Ethiopian farmers.

The project has performed intensive capacity building activities where an inception seminar was organized for about two weeks in Bahir Dar in May 2016. The participants were extension promoter, nursery managers, Heads of *woreda's* Agriculture and Natural Resource Office in the project intervention areas and the focal persons from Amhara, Oromia, Tigray and SNNP regions. Furthermore, a lot of works has been done to build up the capacity of the nursery and extension promoters to adopt GAP requirements so as to be ready for certification. To achieve its target, preparations were completed so as to collect and export avocado fruits from Amhara and SNNP regions in Ethiopia in August 2016. In addition, a total of 6 training days were organized for smallholder farmers between May and July 2016. About 199 smallholder farmers have been trained on improve orchard management, fruits collection and post-harvest techniques where 93% of the targets were achieved.

In order to strengthen extension activities, the following key activities were also performed during the reporting period:

- About 42,320 grafted avocado seedlings were made ready for planting while 97% of the targets were achieved. Altogether, a total of 35,686 (98% achievement) grafted avocado seedlings were distributed to the farmers in the project intervention areas. Majority (about 46%) of the seedlings were provided to the farmers by the Picolo nursery center.
- About 829 smallholder households were reported to benefit directly from the project and they were assisted to apply improved technologies or management practices for fruit production, collection and post-harvest handlings.
- A total of 15 smallholder farmers and youth clusters were established for improved avocado and deciduous fruits production and marketing purposes, whereby about 91 hectares of lands were put under improved avocado and deciduous fruit production in the targeted areas.
- About 829 (100% achievement) smallholder farmers were assisted to grow 23,730 grafted avocado seedlings. On average, a farmer planted 27 seedlings.

In general, the project has been focusing on avocado and deciduous fruit production and marketing, particularly targeting to improve the quality and volume of avocado fruits export from Ethiopia. Therefore, both the number of farmers growing HASS avocado variety and the area of land allocated for this crop are expected to increase along with fulfilling the Global GAP requirements and certification issues. However, shortages of grafted avocado seedlings and reduce purchasing power of smallholder farmers are currently among the implementation challenges so as to expand improved avocado plantation in some of the intervention areas.

1. Introduction

The Smallholder Horticulture Program (SHP) IV is a three year Joint Technical Cooperation Program of USAID-MASHAV- MoANR Ethiopia program that was launched on the 30th of May 2016. This SHP IV is mainly implemented in six *woredas*, namely in Mecha, Maskan, Boloso Sore, Guto Gida, Raya Alamata and Basona Worena *woredas* in Ethiopia. The SHP is designed to access new domestic and avocado export markets, as well as provide technical support to improve phytosanitary regulation for Ethiopian horticultural crops. By building a stronger, more productive commercial horticulture sector, SHP aims to increase smallholder farmers' income and foreign currency earnings while making these nutritious crops more available to Ethiopian consumers. This quarter report (May – July 2016) provides summary of achievements by the six project implementing *woredas* and nursery centers.

2. Program Performance Monitoring and Evaluation Plan

Program Performance Monitoring and Evaluation Plan is designed for the period of May 2016 to September 2019. Based on approved Smallholder Horticulture Program IV proposal, the result framework is developed which is used for planning, monitoring, evaluation and communication for this program (see Annex 1). In consultation with USAID, six of FTF indicators were identified and included into SHP's Indicators, and finally Program Performance Monitoring and Evaluation Plan was developed (see Annex 2) as well as supportive document- Indicators Reference Sheet- was Prepared. Altogether, the program Performance Monitoring and Evaluation Plan aims to monitor the activities implemented, and services delivered as well as evaluate outcomes achieved.

3. Capacity Building and related activities

3.1 Seminar

The project has conducted a seminar mainly on agricultural extension method-planning and implementation and so on, 16- 27 May 2016 in Bahir Dar. In the first week, training was provided to the project's extension promoters and nursery managers gathered from six intervention areas well as to the participants from Bahir Dar University by the Israeli experts. In the second week, the team was joined by the project *woredas* heads and regional focal persons. Field visits to Mecha *woreda* were also undertaken.

Furthermore, the participants informed and discussion was held on GAP requirement and so on for avocado exporting purpose. The presentation covered introduction of avocado nursery and MCG quality inspection protocol and methodology of its implementation to build up the capacity of the nursery and extension promoters to adopt GAP requirements and be ready for certification which is precondition to be involved in the sector. Besides, an exercise has been conducted in order to be sure of the understandings obtained by the project staff at grass root level during the seminar. Therefore, this issue is very important and due attention is given to it for the success of sustainable export of avocado fruits from Ethiopia.



Seminar Held in Bahir Dar in May 2016

3.2 Farmers training

Farmers' trainings were organized in Mecha, Basona Worena and Meskan *woredas*. A total of 6 training days were conducted for smallholder farmers where about 75% of the target was achieved since May 2016. The trainings were provided to 31 and 110 famers in Mecha and Meskan *woredas* respectively on avocado fruits production, collection and post-harvest handling techniques. Furthermore, training was organized on the preparation of Bokashi Fertilizer production for 58 farmers at Debre Berhan Nursery Center. The training was given by an expert from Japan International Cooperation Agency (JICA) to introduce proper method of identifying white rot disease in the apple nursery field. The use of Bokashi Fertilizer production was explained and preparation was demonstrated step by step at the nursery. In this quarter, in total 199 smallholder farmers were trained in the project's intervention *woredas* where 181 and 18 of the trainees were male and female households respectively (see Table 1).

Table 1. Trainings of farmers undertaken in the project *woredas* during the first quarter (May - July 2016)

Variable	Target	Achieved	% Met
Number of Training Days Conducted	8	6	75
Male smallholder farmers trained	193	181	94
Female smallholder households trained	22	18	82
Total number of smallholder farmers who have received training on orchard management, fruit harvesting and handling	215	199	93



Application and preparation of Bokashi Fertilizer is demonstrated to the farmers in Debre Berhan



Field visit and farmers on practicing pruning activities in Meskan woreda

4. Avocado export and other activities

4.1 Global GAP requirements

The project introduces export avocado development activities starting from this season. For this reasons, frequent visits were made to all the five project areas aimed at evaluation of avocado nursery, extension service activities (mainly 2016 plantation and land preparation) and recording system of both activities with an aim to ensure implementation of Global GAP requirements as well as to support the project staff at grass root level with technical and administrative advices.

4.2 Avocado export activities in 2016

The project has targeted to export around 10 metric tons of avocado fruits- HASS variety from Ethiopia to Europe markets in 2016. In July 2016, the project has undertaken facilitation works for exporting avocado fruits mainly from Mecha and Meskan woredas in Amhara and SNNPR respectively.

Furthermore, trainings were organized for the famers on avocado fruits harvesting and handling in Mecha and Meskan woredas. Avocado fruit harvesting and export will be undertaken in August 2016. To promote the sector, the project started working with or collaborating with various private and development organizations in the country like GIZ and the respective regional offices.



Field practicing of avocado fruits harvesting and handling for export markets at Mecha woreda

5. Nursery centers performance

5.1 Planting materials production

A total of five nursery centers have started focusing on production and supply of avocado seedlings particularly that of Hass (90%) and Ettinger (10%) varieties particularly since May 2016 so as to achieve the SHP targets. In the first quarter the performance of seedlings grafted and raised was 93% for avocado and 100 for deciduous seedling (table 2). A total of 15,466 avocado seedlings and 2000 deciduous fruit tree seedlings were grafted and raised.

Between May and July 2016, about 42,320 grafted avocado seedlings were made ready for planting, while it was 2000 seedling in case of apple. The achievement was 97 and 100% for avocado and apple seedlings respectively (see Table 2). More than 10,000 grafted avocado seedlings were availed by Butajira nursery center.

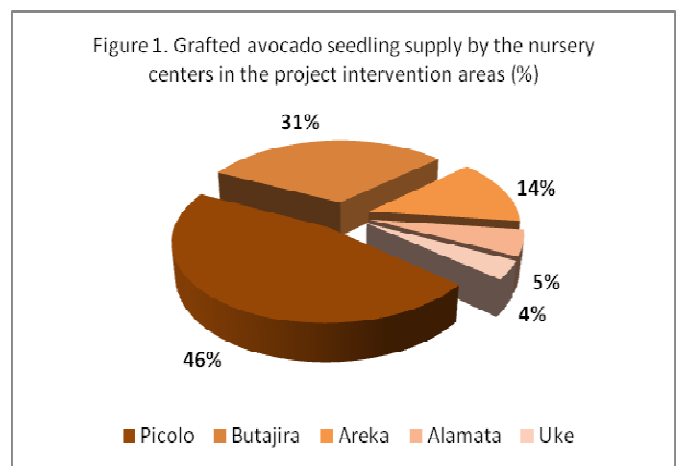
Furthermore, the project assists the sector in providing scions and supports the production sector at the same time particularly working on avocado plantation in Beshoftu, Kelamino in Tigray and Chagni in Amhara region and so on.

Table 2. Planting materials production and supply between May and July 2016

Indicators	Target	Achieved	% met
Grafted seedling production (number)			
Grafted avocado seedlings production	16,700	15,466	93
Apple or deciduous seedlings	2,000	2,000	100
Seedlings ready for planting (number)			
Grafted avocado seedlings ready for planting	43,500	42,320	97
Apple seedlings ready for planting	2,000	2,000	100

5.2 Seedling distribution

About 35,686 grafted avocado seedlings were distributed to the growers in the intervention areas between in this quarter. Altogether, about 98% of the targets were achieved. Majority (about 46%) of the seedlings were provided by the Picolo nursery center followed by Butajira (31%) and Areka (14%).





Seedling distribution and planting in Mecha *woreda*, Amhara National Regional State

6. Extension activity report

6.1 Extension services

A total of 829 (98% achievement) smallholder households were reported to benefit directly from the project and applied improved technologies or management practices for fruit production from May to July 2016. In this quarter, about 15 clusters of smallholder farmers and youths were involved in fruit production and about 91 hectares of land were put under improved fruit production- avocado and deciduous fruits (see Table 3). Furthermore, a field day was targeted and organized for smallholder farmers in Basona Worena *woreda*.

Table 3. Overall extension services and related activities between May and July 2016

Indicators	Target	Achieved	%Met
Number of hectares of land put under avocado and deciduous fruits production	117	91	78
Number of smallholder farmers who have applied improved technologies or management practices for fruits production	848	829	98
Number of smallholder farmers and youth clusters involved in fruit production	15	15	100
Number of rural households benefiting directly from SHP interventions	848	829	98
Number of field days organized for raising awareness on fruits production	1	1	100

6.2 Expansion of marketable avocado plantation

In the first quarter, about 829 farmers were supported to plant grafted avocado seedlings; 100% of the target was achieved (Table 4). Out of the total, about 68% of the farmers who have planted grafted seedling were from Mecha *woreda*, followed by Meskan *woreda* (17%). Likewise, more than 60% of the grafted seedlings were planted in Mecha *woreda* (see Figure 2 and 3). On average, a farmer planted about 29 grafted avocado

seedlings. Altogether, 23,730 grafted seedlings were planted by the smallholder famers between May and July 2016.

The poor purchasing power of majority the farmers were the limitation to expand improved avocado seedlings. Therefore, credit system support is underway to improve the capacity of the farmers to access grafted avocado seedlings, for instance as it was practiced in Guto Gida woreda.

Table 4. Number of planted grafted seedlings by smallholder farmers from May to July 2016

Indicator	Target	Achieved	% Met
Number of farmers who planted grafted avocado seedlings	829	829	100
Number of planted grafted avocado seedlings by smallholder farmers	26,165	23,730	91

Figure 2. Farmers who planted grafted avocado seedlings between May and July 2016 by woreda (%)

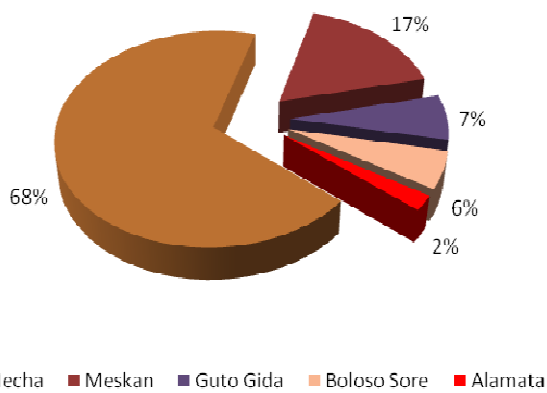
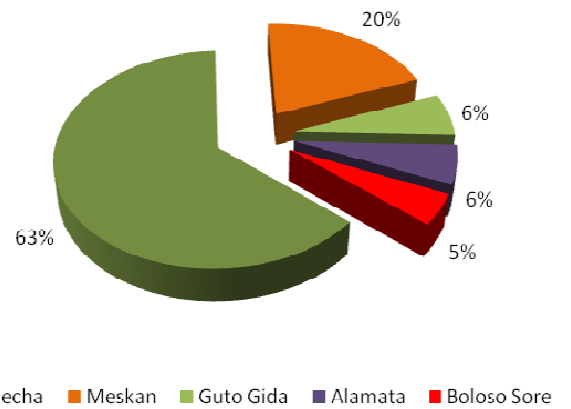


Figure 3. Grafted avocado seedlings planted by smallholder farmers between May and July 2016 by woreda (%)



Pits on different plots of farmers waiting for avocado seedlings in Guto Gida, June 2016

6.3 Other adopted technologies for avocado sector improvement

Top working of the old avocado trees and pruning are among the key management practices to improve the productivity of local fruit trees. Therefore the smallholder farmers were assisted on avocado top-working practices, whereby 80% of the targets were achieved in this quarter (Table 5). Besides, about 76 of the farmers were involved in compost preparation in this quarter. Altogether about 841 metric cub of compost was prepared while 61 of the farmers have applied compost on their fruit fields in this quarter (Table 6).

Table 5. Other management activities between May and July 2016

Indicators	Target	Achieved	%Met
Top-working			
Number of farmers with top-worked avocado trees	40	32	80
Number of top-worked avocado trees	140	97	69
Pruning			
Number of farmers with pruned avocado trees	20	18	90
Number of pruned avocado trees	106	98	92

Table 6. Other management activities between May and July 2016

Indicator	Target	Achieved	%met
Number of farmers involved in compost preparation	150	76	51
Volume of compost prepared (metric cub)	1125	841	75
Number of farmers who have applied compost	80	65	81
Area of land covered by compost for fruit production (ha)	18	9	49
Area of fruit tree plantation irrigated (ha)	7.6	5.6	74

7. Challenges encountered

Common challenges and limitations that were encountered during the last 3 months are listed below;

- Poor access to internet has affected and delayed communications with the extension promoters and nursery managers in some of the implementing *woredas*.
- Shortages of nursery equipment and quality materials in some of the nursery centers such as Areka, Uke, Debre Berhan and Alamata.
- Shortage of scions of *HASS* avocado variety for grafting purposes was challenging for some of the project nursery centers- Areka, Uke and Alamata.
- Reduced purchasing power of most of the smallholder farmers has limited access to adequate grafted avocado seedlings.

- Inadequate implementation the recommended nursery and MCG quality standards protocol and recording of the activities as per the dispatched formats and checklists necessary to cope up with GAP requirements for certificate;

8. Future activity

- Preparations, collection and export of avocado fruits from Ethiopia: In August 2016, the 2016's export activity will commence with collection of avocado fruits mainly from Mecha and Meskan *woredas* in Amhara and SNNP Regional States respectively.
- Capacity building activities: Farmers trainings will be conducted on improved orchard management in the project intervention *woredas*.
- To develop quality MCG and assist the sector in providing seeding root stocks and scions to the nursery centers as well as production of grafted seedling mainly HASS avocado variety.
- Distribution as well as planting of improved grafted seedlings by the smallholder farmers in the project *woredas*.
- Working to increase the number of beneficiary households and area of land allocated for avocado and deciduous fruits production.
- To involvement private sector and development partners for improvement of the sector as well as export of avocado fruits
- To continue building up of the capacity of the nursery and extension promoters to adopt GAP requirements and be ready for certification

9. Conclusions

The project has worked a lot to build up the capacity of the nursery and extension promoters to adopt GAP requirements and be ready for certification. Furthermore, preparations were completed so as to collect and export avocado fruits from Amhara and SNNP regions in Ethiopia in August 2016.

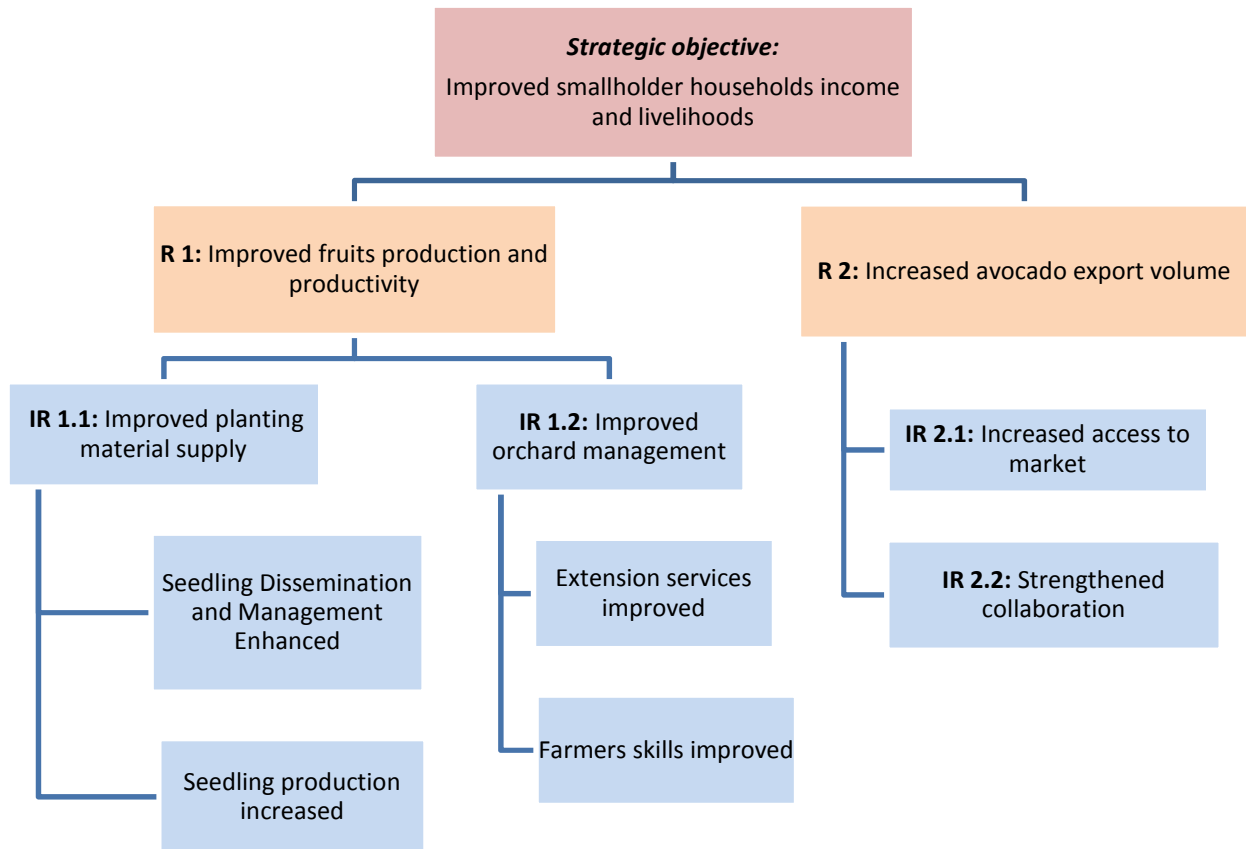
The project has performed well on supplying grafted seedlings and provision of technical supports to the smallholder farmers since May 2016. About 199 smallholder farmers were trained in the first quarter-from May to July 2016.

Regarding nursery centers, more than 35,000 grafted planting materials were distributed by the project's nursery centers. Furthermore, a total of 23,730 grafted avocado seedlings were planted by smallholder farmers in the project *woredas*. In general, 829 smallholder households were assisted to plant avocado and deciduous fruits where more than 90 hectares of land were covered.

Many of the farmers are reported unable to purchase as many grafted avocado seedlings as they required. Thus, the project should design means to reach these farmers so as to improve the area of land covered by the targeted fruits and volume of fruits supplied to the markets in the future from the intervention areas.

Annex

Annex I. Result Framework for SHP (May 2016 – September 2019)



Annex 2. USAID – MASHAV - MoANR Ethiopia - Performance Management Plan (PMP) Table

No.	Indicators title	Indicator Level	Data Source	Method of Data Collection	Frequency of Data Collection	Responsible Person	Data Analysis Technique	FtF Indicator
	Strategic objective: Improved smallholder households income and livelihoods							
1	Percent of SHP supported smallholder households with improved livelihoods as a result of SHP assistance	Impact	HH survey	HH survey	Annually	SHP	Descriptive analysis	
2	Percent of SHP supported smallholder households who have reported change in income or expenditure as a result of SHP assistance	Impact	HH survey	HH survey	Annually	SHP	Descriptive analysis	
R1	Improved fruits productivity							
1.1	Volume of avocado fruits produced as a result of SHP (metric tons)	Outcome	Records	Reports	Annually	SHP	Descriptive analysis	
1.2	Volume of deciduous fruits produced as a result of SHP (metric tons)	Outcome	Records	Reports	Annually	SHP	Descriptive analysis	
1.3	Percent of smallholder households who have reported improved dietary diversity as a result of SHP assistance	Outcome	HH survey	HH survey	Annually	SHP	Descriptive analysis	
4.5.2(2)	Number of hectares of land under improved technologies or management practices as a result of USG assistance	Outcome	Records	Records	Quarterly	SHP	Descriptive analysis	√
4.5.2(5)	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	Outcome	Records	Records	Quarterly	SHP	Descriptive analysis	√
4.5.2(7)	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	Output	Records	Reports	Quarterly	SHP	Descriptive analysis	√
4.5.2(11)	Number of food security private enterprises (for profit), producers organizations, water users associations, women’s groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	Outcome	Records	Reports	Quarterly	SHP	Descriptive analysis	√
4.5.2(13)	Number of rural households benefiting directly from USG interventions	Output	Records	Records	Quarterly	SHP	Descriptive analysis	√
IR 1.1	Improved planting materials supply							
1.1.1	Number of grafted seedlings being produced and ready for planting by the nursery centers	Output	Nursery records	Reports	Quarterly	Nursery Centers	Descriptive analysis	

Annex 2. Continued

No.	Indicators title	Indicator Level	Data Source	Method of Data Collection	Frequency of Data Collection	Responsible Person	Data Analysis Technique	FtF Indicator
IR 1.2	Improved orchard management							
1.2.1	Number of grafted fruit seedlings planted by the smallholder farmers and youths	Output	Records	Records	Quarterly	SHP	Descriptive analysis	
1.2.2	Number of field days organized for raising awareness on fruits production and marketing	Output	Records	Reports	Quarterly	SHP	Descriptive analysis	
1.2.3	Number of top-worked trees	Output	Records	Reports	Quarterly	SHP	Descriptive analysis	
R2	Increased avocado export volume							
4.5.2(36)	Value of exports of targeted agricultural commodities as a result of USG assistance (USD)	Outcome	Records	Records	Annually	SHP	Descriptive analysis	√
2.1	Average income generated from the sale of fruits per household, receiving SHP assistance (USD)	Outcome	HH survey	HH survey	Annually	SHP	Descriptive analysis	
IR 2.1	Increased access to market							
2.1.1	Total volume of avocado export (metric tons)	Output	Records	Reports	Annually	SHP	Descriptive analysis	
2.1.2	Percent of smallholder farmers linked with avocado exports	Output	Records	Reports	Quarterly	SHP	Descriptive analysis	
IR 2.2	Strengthened collaboration							
2.2.1	Number of alliances formed by SHP on avocado production and exports at local and national levels	Output	Records	Reports	Quarterly	SHP	Descriptive analysis	
2.2.2	Number of evidence-based documents or others generated and disseminated among project staff and key stakeholders	Output	Records	Reports	Annually	SHP	Descriptive analysis	