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Evaluation of the project "Increasing smallholder productivity and profitability"

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Abstract

This report presents the findings of the evaluation of FAO's "Increasing smallholder productivity and profitability" (ISPP) project. The project was fully funded by the United States Agency for International Development (USAID) and implemented by the Food and Agriculture Organization of the United Nations (FAO) in Kenya from 2017 to 2019. The evaluation was implemented by the FAO Office of Evaluation (OED) between January and December 2020.

The evaluation assessed the relevance of the project and the achievement and sustainability of project results among other dimensions. The assessment focused on i) establishing the contribution of the project to enable farmers to produce their own consumption and to sell their produce at market; ii) understanding how the collaboration, learning and adaptation aspect of the project worked and how/how much the partnership has contributed to the results; iii) identifying whether and how the holistic approach (production + nutrition) has worked and whether this approach can bring insights for future projects; and iv) investigating how farmers and their families are changing dietary habits per influence of the project.

The methodology undertook a results-focused qualitative approach, triangulated, when appropriate and feasible, by quantitative evidence directly gathered by project team, including surveys and periodic progress reports. Qualitative data-collection targeted three counties: Tharaka Nithi, Kitui and Taita Taveta. Limited data collection was conducted in Makueni and Machakos counties. Content analysis was used to identify, analyze and interpret evaluation findings and data analysis was done through thematic analysis and digitally using Nvivo. This evaluation analysis and reporting happened during the COVID-19 pandemic.

With regards to the improvement of productive capacity, the evaluation found that most sampled farmers showed confidence in technical capacity for water use management but expressed significant financial limitations to apply the knowledge. On improving farmer's capacity for high nutritious farming, farmers have increased access to more and different types of fruits and vegetables such as berries, passion fruits, leafy vegetables, tomatoes and leaks at household level. Anecdotal evidence shows results on change of dietary habits, but the scope and scale of the achievement could not be established. Some farmers were also trained on contract farming and negotiation skills including marketing strategies, financial access and market information. However, access to markets remained a significant challenge for most farmers across all value chains promoted. Aiming to improved agribusiness management equitably, the project trained stakeholders on agro-entrepreneurship skills. However, equitability of support services could not be established and it was unbalanced among groups. The evaluation also established that the ISPP project was implemented at the same time period as the "Increased productivity and profitability of smallholder farmers through promotion and up-scaling of good agricultural practices" (IPP-GAP) project, and that both projects had a potential for significant complementarities to reinforce impact on beneficiaries.

The evaluation recommends establishing a fit-for-purpose monitoring and evaluation (M&E) system and utilization and consistency of baseline, mid-line and endline studies for projects of similar size. Establish a community-based collaboration platform to foster long-term sustainability of project results. Enhance operational transparency, community accountability and adaptive management of projects. For project managers and designers, recommends establishing operational framework and implementation guidelines for gender mainstreaming. Future projects should ensure that evaluability of project achievements and outcomes is maintained throughout the project lifetime. Ensure project design have a well-documented exit strategy with desired sustainability action plans and support for access to markets is comprehensive and deep enough to address systemic barriers. Finally, for the donors the evaluation recommends ensuring that

accountability reporting requirements and introduction of new indicators benefit project monitoring, learning and evaluability.

The main audience of this evaluation includes: the FAO Kenya office; members of the Project Task Force at FAO headquarters and regional office and technical divisions; the donor (USAID); the Government of Kenya, and specifically the Ministry of Agriculture, Livestock and Fisheries (primary national partner); and other organizations supporting or implementing initiatives in the agricultural, food and nutrition sector in Kenya or in other countries.

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The evaluation also benefited from the inputs of many other stakeholders, including United States Agency for International Development (USAID) representatives and government officers, farmers' organizations, beneficiaries and ISPP project partners from Tharaka Nithi, Kitui, Taita Taveta, Makueni and Machakos counties, whose contributions were critical to the evaluation and are deeply appreciated. Special thanks also for their willingness to give their time to the evaluation team so generously.

The evaluation team was composed of Dr Joseph Toindepi, Evaluation team leader, Ms Susan Mugwe, Senior Evaluation team member, Dr Silvia Kaufmann, Senior Evaluation team member – nutrition specialist, Faith Kiboro, Evaluation team member and Jean Kambuni, Evaluation team member. The Evaluation Manager from the FAO Office of Evaluation (OED) was Emilia Bretan.

Abbreviations and acronyms

CPO	County project officer
FAO	Food and Agriculture Organization of the United Nations
GAP	Good agricultural practice
IPP-GAP	Increased productivity and profitability of smallholder farmers through promotion and up-scaling of good agricultural practices
ISPP	Increasing smallholder productivity and profitability
M&E	Monitoring and evaluation
NGO	Non-governmental organization
TIPs	Trials of improved practices

Map of Kenya

Map No. 4187 Rev. 3 UNITED NATIONS
December 2011

Department of Field Support
Cartographic Section

Source: UN. 2020. Map No. 4187, Rev. 3.

Executive summary

Introduction

1. This report presents the findings of the evaluation of the Food and Agriculture Organization of the United Nations (FAO) "Increasing smallholder productivity and profitability (ISPP)" project. The project was fully funded by the United States Agency for International Development (USAID) and implemented by FAO in Kenya. The evaluation was managed by the FAO Office of Evaluation (OED) and conducted by an independent evaluation team between January and December 2020, with data collection in February 2020.

2. The evaluation purpose was: to assess project relevance and determine whether the projects efforts were efficient to achieve planned outputs and the main project outcome of 'improved livelihoods through enhanced productivity, market linkages and better nutrition' as well as assessing sustainability and documenting lessons learned and recommendations.

3. The evaluation focused on: i) assessing the contribution of the project to enable farmers to produce their own consumption and to sell their produce at market (and, in some cases, invest in a larger scale production); ii) understanding how the collaboration, learning and adaptation aspect of the project worked and how/how much has the partnership contributed to the results; iii) identifying whether and how the holistic approach (production and nutrition) has worked and whether this approach can bring insights for future implementation and formulation; and iv) investigating how farmers and their families are changing dietary habits per project influence.

4. The evaluation covered the whole implementation period (2017–2020) which includes a no-cost extension period and targeted three counties for comprehensive data collection: Tharaka Nithi, Kitui and Taita Taveta. Limited data collection was conducted in Makueni and Machakos counties.

Methodology

5. The evaluation adhered to the United Nations Evaluation Group (UNEG) Norms and Standards and sought to be in line with the OED Manual and methodological guidelines and practices. The evaluation adopted a consultative and transparent approach with internal and external stakeholders throughout the evaluation process.

6. The evaluation adopted a results-focused qualitative approach, triangulated, when appropriate and feasible, by quantitative evidence directly gathered by project team at different points of time, including surveys and periodic progress reports. Please review the methods section for more details. Qualitative data collection methods (e.g. key informant and in-depth interviews (KII), focus group discussions and field observations) and content analysis were used to identify, analyse and interpret evaluation findings. Contextual challenges and other limitations out of control of the project team were also considered. Data analysis was done through thematic analysis and digitally using NVivo.

7. The evaluation respondents were purposeful samples from among the over 80 000 beneficiaries involved in the project. The sampling considered i) location: project locations with most interventions and reaching most targeted farmers; ii) representativeness: balance of representativeness of both locations and individuals/groups within locations to provide a fair chance of exploring issues likely to be relevant to the whole project or shed light on

any variations; and iii) relevant insight: among project beneficiaries and stakeholders, the evaluation considered key individuals with specific insight into the project issues based on their role and interaction with the project. A range of stakeholders was interviewed including FAO personnel, county project officers (CPOs) and ISPP project management team, stakeholders within the Government of Kenya, project steering committee (PSC) members, stakeholders in private sector, stakeholders at community-based organizations/community level, and direct project participants and beneficiaries.

8. The evaluation paid special attention to FAO's four Gender Equality Objectives of: i) equal decision-making; ii) equal access to productive resources; iii) equal access to goods and services for agricultural development, and markets; and iv) reduction of women's work burden. The evaluation team also assessed how gender concerns were considered in project design and during implementation.

Summary of evaluation findings

9. The ISPP project was implemented by FAO in the five counties of Kitui, Tharaka Nithi, Machakos, Makueni and Taita Taveta at the same time period as the Increased productivity and profitability of smallholder farmers through promotion and up-scaling of good agricultural practices (IPP-GAP) project which was also implemented by FAO to the same beneficiaries in the same counties, with the exception of Taita Taveta. The evaluation established that both projects, although funded by different donors, had a potential for significant complementarities to reinforce impact on beneficiaries if interventions and activities are delivered to complement each other.

10. **Output 1** sought to improve productive capacity of smallholder farmers in agronomy and water use and management. The evaluation established that most sampled farmers showed confidence in technical capacity for water use management but expressed significant limitations in financial resources to apply that knowledge, particularly hardware maintenance and expanding water storage as well purchasing necessary inputs for good agricultural practices.

11. **Output 2** focused on improving farmer's capacity to establish diverse, high nutritional crop gardens and small livestock, mainly goats and chickens, for household consumption. The project also trained male and female farmers on production of high nutritional value crops, small livestock and vegetables and food safety, preparation, preservation and storage practices. Sampled farmers reported increased access to more and different types of fruits and vegetables such as berries, passion fruits, leafy vegetables, tomatoes and leaks at household level.

12. **Output 3** focused on improving access by women and children to diverse and quality foods through promoting establishment of kitchen gardens and capacity to grow different food crops and vegetables. Also, the piloted trials of improved practices (TIPs) intervention in one county focusing complimentary feeding recipes children under two years though for a very small number of beneficiaries and also for a short period of three months towards the end of the project. Although anecdotal evidence shows encouraging results on change of dietary habits, the project did not track a minimum dietary diversity (MDD) score among project beneficiaries in progress reports, therefore the scope and scale of the achievement could not be established.

13. **Output 4** sought to improve trade and market linkages across all value chains. Some farmers were also trained on contract farming and negotiation skills including marketing strategies, financial access and market information. However, access to markets remained a significant challenge for most farmers across all value chains promoted. While improving scale was not a main objective of the project, this output was not sufficiently resourced to provide enough scale for sustainable market access.

14. **Output 5** sought to improve smallholder farmer capacity on agribusiness management equitably. The project identified and trained trainers, including private and public extension service providers, on agro-entrepreneurship skills to train farmer groups. Some producer groups, particularly youth, were also mentored and coached to access business development services. However, equitability of support services could not be established, some groups received less while others received more and some not at all. Please review effectiveness section for additional details.

15. The project worked with multiple stakeholders and partners. At strategic level, collaboration with the Government of Kenya and respective county governments in the five counties worked well with representatives of the Ministry of Agriculture, Livestock and Fisheries and the Ministry of Water and Irrigation. However, at non-governmental organization (NGO) level, other potential partners and projects operating in same areas did not seem to have a clear or intentional direct collaboration strategy. At implementation level, the project engaged with stakeholders through county steering committee meetings where representatives participated in regular meetings. Collaboration at beneficiary levels among water user associations and self-help groups was not evident. Most private partners only focused on their allocated areas of deliverables with little evidence of engagement with other partners on areas not directly linked to their assignments.

16. The project intended to integrate production interventions and activities with nutrition activities to enable greater and deeper impact on beneficiaries. The analysis of project context and background reveals that this intention was commendable as the anecdotal evaluation evidence shows a strong positive connection between combined improved production and nutrition knowledge on nutrition uptake by smallholder farmers. Some farmer groups indicated they were able to consume different types of nutritious foods (vegetables, legumes, watermelons, sweet potatoes, cereals, etc.) as a result of knowledge of the nutritional benefits of certain types of foods as well as technical skills to optimize production of such food stuffs gained from training. However, the evaluation found no evidence of a systematic framework or strategy at project level to deliver holistic interventions. Also, interventions seemed to have been rolled out in isolation with no integration, coordination of activities and/or intentional complementarity of interventions at household level.

Recommendations

17. The recommendations suggest improvement for future initiatives.

Recommendations to FAO project managers

Recommendation 1. Establish fit-for-purpose monitoring and evaluation (M&E) system. Ensure utilization and consistency of baseline, mid-line and endline studies for projects of similar size, with progress monitoring building on from baseline results. Although this project carried out such studies, its utilization in ongoing project implementation and monitoring could not be clearly established.

Recommendation 2. Establish community-based collaboration platform to foster long-term sustainability of project results. The evaluation recommends the creation of a collaboration framework covering NGOs, private sector, community-based organizations and communities at sub-county and ward levels as part of any project implementation structure, to allow optimization of synergies at local level and coordinated response by all players working with the same communities and households. This would enable FAO to leverage on its national and local footprint to create lasting collaboration and partnerships beyond project life cycle.

Recommendation 3. Enhance operational transparency and community accountability within and across projects operating in same areas - The programme management can maximize project impact by ensuring that all projects operating in the same communities and serving similar beneficiaries during the same time periods have added value, complementarities and differences well-articulated to enable appropriate apportionment of resources and contribution to outcomes or change. The evaluation found some difficulties in apportioning achievements or contributions to improvements in the lives of beneficiaries where more than one project had active operations with same group of households within the same time periods. Future projects that intend to build on the gains of earlier projects should have a clear demarcation of their starting points, differentiation of beneficiaries and/or interventions as well as being explicit about relationship between the different projects.

Recommendation 4. Ensure adaptive management of projects is encouraged and applied where necessary. Test operational assumptions and make necessary adjustments early on to avoid compromised implementation quality. This should include guaranteeing the necessary equipment to coordinate delivery of project interventions according to the number of beneficiaries.

Recommendations to FAO project designers and managers

Recommendation 5. Establish operational framework and implementation guidelines for gender mainstreaming – consider a gender mainstreaming framework that covers design, implementation and monitoring of activities and measurable milestones to ensure specific gender-related outputs and outcomes can be achieved and demonstrated as well.

Recommendation 6. Ensure project evaluability is maintained throughout the project lifetime - future projects should ensure evaluability of project achievements and outcomes is maintained throughout the project lifetime, regardless of whether new indicators or benchmarks are introduced. Although the project baseline was done, subsequent progress reports and other monitoring data used different indicators, data points and methods, thereby negatively affecting the evaluability of the project.

Recommendation 7. Ensure project design have a well-documented exit strategy with desired sustainability action plans - ensure exit strategy includes a sustainability plan endorsed by local actors and stakeholders with a clear and actionable commitment to support sustainability of the project benefits. Although the project phase-out was well understood by all stakeholders, the responsibility for ongoing sustainability of project benefits to beneficiaries was unclear.

Recommendation 8. Ensure support for access to markets is comprehensive and deep enough to address systemic barriers - interventions on market accesses should go beyond referrals and linkages to include facilitation of technical support to establish lasting collaboration and partnership building with all key players in selected value chains. This should cover farmers, input suppliers, logistics suppliers and agro-dealers, microfinance providers and commodity brokers or buyers.

Recommendation to donor

Recommendation 9. Ensure that accountability reporting requirements and introduction of new indicators does not significantly affect project monitoring, learning and evaluability - demonstration of project learning and adaptations in periodic project progress reports should be elevated to be a priority accountability reporting requirement as well as fiduciary requirements to avoid project teams focus more on donor reporting requirements than the project's own learning and adaptation needs (as was the case with ISPP).

1. Introduction

1.1 Purpose of the evaluation

1. This report presents the findings and interpretation of the evaluation of the project "Increasing smallholder productivity and profitability (ISPP)" project, hereafter referred to as "the project" or "ISPP". It was funded by the United States Agency for International Development (USAID) for a total budget of USD 6 146 477. The Food and Agriculture Organization of the United Nations (FAO) in Kenya was the project implementer, whose intervention sites were Kitui, Tharaka Nithi, Taita Taveta, Makueni and Machakos counties. An independent final evaluation led by the FAO Office of Evaluation (OED) was foreseen because the project met the threshold of USD 4 million as required by FAO Governing Bodies. Hence, the evaluation was conducted by an external independent team and managed by OED between January and October 2020. The purpose of the evaluation was to:

provide evidence on how the project resources were used and the main results achieved;

document lessons, best practices and innovative approaches from the design and implementation that would inform future actions with similar approaches; and

present strategic recommendations to maximize the institutionalization and appropriation of the project's results by stakeholders.

1.2 Intended users

2. There are four primary intended users of this evaluation:

i. FAO Kenya office, project management team, members of the Project Task Force at FAO headquarters and regional office and technical divisions. The findings and lessons from the evaluation will help the formulation and implementation of similar projects at the national and global levels.

ii. Donor stakeholders; the donor (USAID) will find the evaluation results useful for accountability purposes and drawing lessons for funding of similar initiatives in the future.

iii. Government of Kenya, and specifically the Ministry of Agriculture, Livestock and Fisheries as the primary national partner in the intervention can use the findings and lessons learned in the continuation of the work initiated under the project.

iv. Other organizations supporting or implementing initiatives in the food and nutrition sector in Kenya or in other countries.

1.3 Scope and objectives of the evaluation

3. The evaluation scope covered the whole period of the ISPP project implementation (from September 2016 to December 2019) and all the five counties where the ISPP project was implemented.

4. The ISPP project covered five counties working with county governments under the devolved system, meaning each county has its own strategic approach. The evaluation explored what mechanisms were employed at project level to harmonize the roll-out of

project objectives in a devolved county system in such a way that targets, progress and achievements could be aggregated and disaggregated by intervention and county, to allow both county and nation-wide consistence in project learning capturing, sharing and presentations.

5. The specific objectives of the were to:

   i. assess project contribution to enable farmers to produce their own consumption and to sell their produce at the market (and, in some cases, invest in a larger scale production);
   ii. understand how the collaboration, learning and adaptation aspect of the project worked and how/how much the partnership has contributed to the results;
   iii. identify whether and how the holistic approach (production and nutrition) has worked and whether this approach can bring insights for future implementation and formulation; and
   iv. investigate how farmers and their families are changing dietary habits per influence of the project.

6. The key evaluation questions as required in the evaluation terms of reference (TOR) are:

   i. Was the project design appropriate for delivering the expected outcome of "Improved livelihoods through enhanced productivity, market linkages and better nutrition"?
   ii. To what extent did the project contribute to "Improved livelihoods through enhanced productivity, market linkages and better nutrition"?
   iii. To what extent were management arrangements appropriate to deliver the programme efficiently?
   iv. To what extent are the results achieved by the project sustainable?
   v. To what extent has the project contributed to the overall goal of reducing rural poverty and food and nutrition insecurity of smallholders in the arid and semi-arid lands (ASALs)?

1.4 Methodology

7. The evaluation adhered to the United Nations Evaluation Group (UNEG) Norms and Standards and sought to be in line with the OED Manual and methodological guidelines and practices. A consultative and transparent approach was adopted, with internal and external stakeholders throughout the evaluation process.

8. The evaluation employed results-focused qualitative methodologies, triangulated by quantitative evidence from baseline, mid- and endline assessments and periodic progress reports when feasible and appropriate. As reported in detail in section 1.5 on Limitations, the quantitative data had challenges that limited the use of the data for triangulation by the evaluation team. Qualitative data collection methods and content analysis were used to identify, analyse and interpret evaluation findings. Contextual challenges and other limitations out of control of the project team were considered during assessment, in particular, effectiveness and efficiency. The evaluation paid special attention to FAO's four Gender Equality Objectives of: i) equal decision-making; ii) equal access to productive

resources; iii) equal access to goods and services for agricultural development and markets; and iv) reduction of women's work burden. The evaluation also assessed how gender concerns such as gender roles and responsibilities, access to and management of strategic resources, differentiated power relations and socio-economic status were considered in project design and implementation. In addition, the evaluation used FAO's OED Capacity Development Evaluation Framework to meet the minimum requirements as expressed in the framework for coherence of evaluation objectives covering key themes to be explored, guiding questions and methods of extraction. This was guided by an iterative process as illustrated in Figure 1.

Figure 1. Evaluation steps taken

Source: designed by the ISPP 2020 Final Evaluation Team.

Data collection and analysis

9. The evaluation targeted three counties for comprehensive data collection: Tharaka Nithi, Kitui and Taita Taveta. Limited data collection was conducted in Makueni and Machakos counties. The respondents were purposefully sampled from among the 85 000 beneficiaries involved in the project.

10. The evaluation used the following methods of data extraction:

    i. key informant interviews (KII);
    ii. in-depth interviews, (IDI);
    iii. focus group discussions (FGD);
    iv. stakeholder workshop;
    v. case documentation of significant change stories; and
    vi. field observations.

11. The sampling of respondents was considered based on three factors:

    i. Location. The evaluation considered project locations with most interventions and reaching most targeted farmers and the following specific considerations as selection criteria.

- County selection. The evaluation selected one county with nutrition interventions; one county considered very successful according to available monitoring data, and one county considered least successful, again based on available monitoring data.
- Ward selection. Wards with easy access and most or all project components were selected or wards offered something of significant interest, such as standing out either in progress or lack of it based on project monitoring data but in close proximity to other selected evaluation sites.

Representativeness. The evaluation also considered a balance of representativeness of both locations and individuals/groups within locations to provide a fair chance of exploring issues likely to be relevant to the whole project or shed light on any variations.

- Key informant interviews and in-depth interviews were selected participants in the evaluation based on role they played in the project with the objective of asking in-depth questions that stimulate discussions rather than elicit binary or one sentence responses.
- Participation in focus group discussions was based on specific connection with interventions, for example trails on improved practices (TIPs), agronomy, water use, diverse, high nutritional value crop gardens; access and consumption of diverse and quality foods, and agribusiness and access to markets. Data was collected from intervention-based groups where questions and issues most relevant to the group's interaction with a particular intervention would be explored.
- Stakeholder workshops - county government officials, members of project steering committee (PSC), project partners, master trainers, trainer of farmers and beneficiary representatives were purposefully selected to participate in county-wide stakeholder workshops to explore various project issues.
- County-wide water user association representatives from across all areas of the wards in each county were purposefully identified by the project team and assisted to travel to a central place for a comprehensive exploration of project support, opportunities and challenges.
- Case documentation study - project participants with significant change story not profiled in any previous study or project publication were purposefully identified by the project team in each county for interviewing and case documentation.

Relevant insight. Among project beneficiaries and stakeholders, the evaluation considered key individuals with specific insight into the project issues based on their role and interaction with the project.

12. A total of 66 data sources were analysed and disaggregated as illustrated in Table 1. The respondents interviewed included stakeholders within FAO programme support, county project officers (CPOs) and ISPP project management team, stakeholder within the Government of Kenya, project steering committee members, stakeholders in the private sector, stakeholders at community-based organizations/community level and direct project participants and beneficiaries.

Table 1. Respondents' summary by location

Respondents	KII	IDI	Stakeholder workshop	FGDs	Change story	Total
Tharaka Nithi county	2	4	1	14	5	**26**
Kitui county	2	2	1	4	2	**11**
Taita Taveta county	1	5	0	12	0	**18**
Project staff	9	0	0	0	0	**9**
Other stakeholders & donors (USAID and Government of Kenya)	2	0	0	0	0	**2**
Total	**16**	**11**	**2**	**30**	**7**	**66**

Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team.

13. Data analysis was done thematically using NVivo qualitative data analysis software. This significantly reduced researcher bias in results interpretation and allowed reliable and verifiable deduction of results and conclusions. This process produced an audit trail for data analysis with (four) data set milestones by question and theme, namely i) raw data set; ii) cleaned data sets; iii) cleaned and summarized data sets; and iv) analysed data sets. The broad predetermined themes based on the evaluation indicators informed the systematic auto-coding of responses for analysis. The team used pre-formatted templates for transcription in order to perform auto-coding of qualitative responses using NVivo software for qualitative analysis.

14. The evaluators transcribed responses from daily interview sessions into pre-formatted electronic questionnaire tools. The lead evaluator then checked the responses for quality and provided feedback. Electronic files were later sorted into folders by tool and uploaded into the NVivo software. The framework in Figure 2 guided the analysis process which involved pre-sorting of main themes and use of auto coding techniques for comprehensive and systematic tracking and management of responses against questions and themes by various respondent types.

Figure 2. Analysis framework

Evaluation Theme		Main Questions		Sub Questions	
01	RELEVANCE	a	Was the project design appropriate for delivering the expected outcome of "Improved livelihoods through enhanced productivity, market linkages and better nutrition"?	01a	All – Level 3 format
02	PROGRAMATIC EFFECTIVENESS	b	To what extent did the project contribute to "Improved livelihoods through enhanced productivity, market linkages and better nutrition"?	02b	All – Level 3 format
03	COST EFFECTIVENESS	c	What cost saving mechanisms were employed and to what extent were these effective in reducing the overall project costs?	03c	All – Level 3 format
04	EFFICIENCY	d	To what extent were the management arrangements appropriate to deliver efficiently on the programme?	04d	All – Level 3 format
05	SUSTAINABILITY	e	To what extent did the project contribute to "Improved livelihoods through enhanced productivity, market linkages and better nutrition"	05e	All – Level 3 format
06	GENDER MAINSTREAMING	f	To what extent did women participate equally with men as decision-makers in rural institutions and in shaping laws, policies and programmes ?	06f	All – Level 3 format
07	OED CAPACITY DEVELOPMENT EVALUATION	g	To what extent has the project responded to identified capacity needs across the three CD dimensions, and how have they capitalized on existing capacities?	07g	All – Level 3 format
08	PROJECT CONTRIBUTION TO INCREASED PRODUCTION	h	To what extent has the project contributed to enable farmers increase production for consumption and markets?	08h	All – Level 3 format
09	IMPACT OF HOLISTIC APPROACH	i	How has the holistic approach (production + nutrition) worked?	09i	All – Level 3 format
		j	Can this approach bring insights for future implementation and formulation?	09j	All – Level 3 format
10	CHANGE IN DIETARY HABBITS	k	To what extent has farmers and their families changed dietary habits due to project influence?	10k	All – Level 3 format
11	LEARNING AND DOCUMENTATION	l	Which lessons have been documented and packaged to inform future programming?	11i	All – Level 3 format
		m	How has the collaboration, learning and adaptation aspect of the project worked?	11m	All – Level 3 format
		n	How much has the partnership contributed to the results?	11n	All – Level 3 format
12	PROGRAM GAPS FOR FUTURE CONSIDERATION	o	What programmatic challenges could have been avoided during planning and implementation pf project activities?	12o	All – Level 3 format

Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team.

1.5 Limitations

15. The evaluators experienced five major evaluation limitations.

i. Limited time. The space of time in which the data was collected was limited given the large scope and the number of beneficiaries reported by the project. Hence, the evaluators were only able to sample a snapshot of the total beneficiaries reached.

ii. Overlapping events. There were significant events which overlapped with the scheduled data collection. The project had planned a national close down conference the same week of data collection with all key personnel, and most stakeholders earmarked as evaluation respondents were required to attend the conference held in Nairobi. The evaluation team adapted the data collection plan and sought out the respondents thus conducting interviews after hours and during break-out sessions.

iii. Competing priorities. During the same period, the country was experiencing a locust outbreak and invasion. FAO in Kenya and specifically the ISPP project team, was heavily invested in the national locust outbreak response. This overstretched their availability for the evaluation's interviews.

iv. COVID-19. The global outbreak and the subsequent attendant global lockdown, which was a part of the mitigation and containment strategy for infection, slowed down the processing of results, finalization of the evaluation report, and review of the evaluation products because the evaluation personnel were domestically overburdened with the consequences of the lockdown measures.

v. Data incompatibility for comparison with baseline. The external evaluation did not conduct quantitative data collection, though the evaluation adopted a mixed methods approach. The evaluation design worked on the assumption that quantitative data from the project baseline, mid-term and end-term project monitoring reports would be used alongside the qualitative data for triangulation. It later emerged during the analysis process that the format and nature of the project's quantitative data in these reports and methodologies used was not compatible for analytical comparisons due to the following reasons:

- The mid-term and end-term ISPP project reports did not report progress on the same indicators captured at baseline, making progress tracking and assessment on outputs and outcomes using this data impossible. Table 2 provides an illustrative comparison between baseline and endline reported indicators.
- The monitoring data on project achievements could not provide necessary data disaggregation and audit trail to allow external validation; for example, disaggregation of achievements by intervention, year, county and ward could not be established.

16. Given the inconsistences in quantitative data collected between baseline evaluation, mid-term and end-term progress reports, the evaluation results are mainly based on qualitative

analysis while drawing on quantitative data as necessary. Full triangulation with quantitative data was not possible.

Table 2. Baseline and end-term FY3 report measurement comparison

Baseline measurement (April 2018)	End-term FY3 quantitative measurements (October 2019)
i. productive system used for various crops in the five counties (show N value for each system); ii. crop average yields for October, November and December and for March, April and May seasons by county; iii. percentage of households choosing various crop varieties; iv. acreage under improved crop technologies; v. area under various crop attributes; vi. percentage of households using crop management practices; vii. area under crop management practices; viii. adoption of crop pests and diseases technologies and management practices; ix. area under crop pests and diseases technologies and management practices; x. adoption of soil-related fertility and conservation technologies and management practices; xi. area under soil-related fertility and conservation technologies and management practices; xii. adoption of irrigation and water management technologies/practices; xiii. area under irrigation and water management technologies/practices; xiv. adoption of climate change technologies and management practices; xv. area under management practices to tackle climate change challenges; xvi. diet diversification per county; xvii. number of types of foods consumed by household females aged 15-49 years in the last 24 hours; xviii. access to credit by sampled farmers; xix. family members accessing market information; xx. satisfaction with marketing information system (MIS) services; and xxi. capacity needs requirement by sampled smallholder farmers.	i. number of individuals who have received short-term agricultural training (EG.3.2-1) and benefited directly from USG assistance (EG.3-1); ii. number of hectares of land under improved technologies or management practices with USD assistance (EG.3.2-18); iii. commodity gross margins (EG.3-6,-7,-8); iv. total quantity of targeted nutrient-rich value chain commodities produced that are set aside for home consumption (EG.3.3-11); v. percent of female participants of USG nutrition-sensitive agriculture activities consuming a diet of minimum diversity (EG.3.3-10); vi. number of children under two (0-23 months) reached with community-level nutrition interventions through USG-supported programmes (HL.9-2); vii. value of smallholder incremental sales generated with USG assistance (EG.3.2-19); viii. value of new private sector capital investment leveraged by Feed the Future implementation (EG.3.2-22); ix. number of micro, small and medium enterprises (MSMEs) receiving agricultural-related credit as a result of USG assistance (EG.3.2-3) and value of agricultural and rural loans as a result of USG assistance (EG.3.2-6); and x. individual farmers and others who have applied improved technologies or management practices (EG.3.2-17) and hectares of land affected (EG.3.2-18).

Sources: ISPP Baseline Report 2018 and ISPP END-TERM FY3 Report.

1.6 Structure of the report

17. Following this introduction which provides an overview of the evaluation purpose, objectives, intended users, evaluation scope and approach, methodology and limitation, section 2 presents the background and context of the project which covers project context, objectives, theory of change (TOC), implementation strategy, assumptions and project budget. Section 3 is dedicated to evaluation results covering nine sub-sections starting with exploration of project achievements - presenting findings on each of the four project objectives - followed by the results from the five ISPP project output areas. The subsequent

five sub-sections cover results on relevance, effectiveness, impact, efficiency and sustainability. Section 4 covers cross-cutting issues including gender mainstreaming, collaboration and capacity development. Section 5 presents the conclusions and recommendations while Sections 6 highlights some key learnings.

2. Project background

2.1 Context of the project

18. The ISPP project was designed to improve smallholder farmers' capacity for agricultural production, water management and farming as a business, in the Kenyan semi-arid counties of Kitui, Machakos, Makueni, Taita Taveta and Tharaka Nithi.[1] The project targeted these counties for two reasons: i) they are largely classified as arid and semi-arid lands; and ii) they are characterized as food and nutrition insecure. It was anticipated that through the project, farmer organizations would improve their capacity to fulfil contract farming obligations and build long-term business relationships with buyers of their produce by taking advantage of the investments by county governments and development partners in water harvesting structures.[2]

Objective of ISPP

19. The project outcome was "improved livelihoods through enhanced productivity, market linkages and better nutrition". To achieve this outcome, the project had three main objectives:

    i. improved agricultural productivity through access and efficient management of water for irrigation, good agricultural practices (GAP) and climate-resilient agricultural practices;

    ii. improved nutritional status, especially of women and children; and

    iii. facilitation of the transition of smallholder farmers from subsistence to commercial farming through promoting agribusiness, improving post-production management and supporting market linkages and trade for targeted value chains (green grams, pigeon peas, soya, sunflower, beans and sorghum).

Beneficiaries and target group

20. In total, the project aimed to reach 85 000 smallholder farmers whose livelihoods revolve around cereals, pulses and tree crops agricultural production. The project directly intended that 40 percent of beneficiaries would be women.[3] Specifically, the project aimed to support: 25 000 farming households, including female-headed, to improve their access to water for production, 20 000 male- and female-headed households with children under two years of age to improve complementary feeding and overall family feeding, 40 000 male- and female-headed farming households to build their capacity in farming as a business, and the linkages of 20 000 (out of the 40 000 farmers mentioned above) farming households, including female-headed households, to markets. Through a value chain approach, the ISPP project also planned to reach a range of other agro-service providers and agro-input suppliers, including financial and insurance, equipment and related suppliers, public and private extension providers, private farming contractors, transporters and traders, processors and agricultural college students.

[1] TOR for the ISPP project, pg. 7.

[2] Reviewed ISPP Project Document, pg. 3.

[3] Reviewed ISPP Project Document, pg. 16.

Implementation strategy

21. FAO was the main implementer of the ISPP project. An implementation unit was set up in Nairobi at the FAO Kenya Office, under the supervision of the FAO Representative in Kenya. Eight national experts with expertise in agronomy (good agricultural practices and conservation agriculture – CA), agribusiness, irrigation engineering; agriculture policy, gender, nutrition, monitoring and evaluation formed the national implementing unit. Agriculture is a fully devolved function for the counties in Kenya. At county level, County Steering Committees, chaired by the County Director of Agriculture, provided strategic guidance to programme implementation. They convened relevant county level stakeholders from ministries, the private sector and farmer organizations, quarterly. At the county level, a County Programme Officer represented FAO and was responsible for the overall management of the project at county level and served as liaison between FAO and the respective county.

22. A cascading model approach was used to roll-out five training modules covering: agri-nutrition vegetable gardening; good agricultural practices and conservation agriculture; agro-entrepreneurial development; sheep, goats and poultry; and irrigation and water management.

23. FAO trained master trainers selected from county council agriculture extension officers mostly. The master trainers are expected to go on and train a specified number of farmer trainers (FTs) who will also go on to identify and train a certain number of farmers in allocated communities. In this way, FAO intended to reach all the project target farmers with interventions and monitoring activities. An average of 20 master trainers were trained in each county. These master trainers then lead a training programme targeting at least 20 trainers of famers. The trainer of famers each targeted 50 farmers to train them through 15 sessions every season for five seasons during the project life cycle. Through this training package it was expected that all 85 000 farmers will be sensitized.

Project monitoring and evaluation

24. The project planned to monitor project performance and progress on outputs and outcomes. Baseline information formed the basis for assessing project progress and the extent to which the intended results were achieved.

25. The project planned to evaluate contribution to impact and outcome using 13 impact and 7 outcome indicators as shown in Table 3.

Table 3. Impact and outcome indicators

Impact indicators	Outcome indicators
i. percentage change in income; ii. stunting in children under two years of age; iii. household dietary diversity score; iv. minimum dietary diversity for women of reproductive age (MDD-W); v. minimum acceptable diet for children aged 6-23 months; vi. a more conducive enabling policy and investment environment; vii. number of people pulled out of poverty; viii. number of people reached by nutrition interventions; ix. value of percentage increase in production and sales; x. volume of percentage increase in production and sales; xi. gross margin increase; xii. number of people applying new technologies; and xiii. employment opportunities created for women and youth.	i. percentage increase in volume of agricultural produce for targeted households; ii. percentage of households engaged in diversified agro-enterprises; iii. percentage of farmers, including women and youth, using improved technologies; iv. minimum dietary diversity for children aged 6-23 months; v. minimum dietary diversity for women of reproductive age; vi. percentage change in volume traded in metric tonnes; and vii. percentage change in household income of the target beneficiaries.

Source: ISPP Project Document and Monitoring Plan.

26. FAO anticipated but did not carry out mid-term evaluation (MTE) and end-term evaluations which would have been of great use in guiding and measuring project achievements. Instead, mid-term and end-term progress reports were produced in October 2018 and 2019 respectively. Additionally, a qualitative evaluation and supplementary panel data analysis were carried out by the project in end-2019 and early-2020 respectively. The project planned to monitor progress based on key monitoring indicators as outlined in Table 4.

Table 4. Output indicators

Output	Output indicators
Output 1. Improved and inclusive smallholder productive capacity on agronomy, water use and management.	i. number of hectares under irrigation using water efficient methods; ii. number of men and women farmers trained on efficient water management methods, gender equality and governance; iii. number of improved soil and water conservation technologies or management practices established; iv. number of men and women farmers trained on diversified production systems; and v. number of households trained on good agricultural practices, post-harvest handling, food safety and quality management.
Output 2. Improved and inclusive farmers' capacity to establish diverse, high nutritional value crop gardens.	i. number of smallholder households (including female-headed) with established vegetable gardens and small livestock; ii. number of farmers (both men and women) trained on food safety, preparation, preservation and storage practices; and iii. number of male and female farmers with access to diverse, drought-tolerant traditional seeds,
Output 3. Improved access by women and children to diverse and quality foods.	i. feasible, affordable, culturally acceptable, local complementary feeding recipes developed for one county; ii. number of households that know and apply food safety practices: reheating, use of clean water, and washing hands; iii. number of mothers/caregivers that regularly prepare one or more improved complementary feeding recipes; and iv. number of households with improved dietary diversity.
Output 4. Improved trade and market linkages that integrate gender considerations.	i. number of men and women in farmer associations engaged in collective marketing of agricultural produce; ii. number of contractual agreements between men and women farmers in associations and buyers; iii. number of men and women in associations with bankable business plans; iv. number of men and women in farmer associations selling market value added products; and v. number of women and youth farmers participating in trade and markets.
Output 5. Improved and equitable smallholder capacity on agribusiness management.	i. number of extension service providers trained on farm business planning, gender equality, governance and management; ii. number of men and women farmers trained by extension service providers on farm business, planning, gender equality, governance and management; and iii. number of producer groups, including women producer groups, and micro, small and medium enterprises accessing business development products and services.

Source: ISPP Project Document and Monitoring Plan.

Relationship and influence between the IPP-GAP and ISPP projects and repercussions in this evaluation

27. The evaluation established that although ISPP and Increased productivity and profitability of smallholder farmers through promotion and up-scaling of good agricultural practices (IPP-GAP) were funded by different donors, they had the potential to significantly complement and reinforce outcomes and impact on beneficiaries, if interventions and activities were layered appropriately.

28. The ISPP project was implemented by FAO in the five counties of Kitui, Tharaka Nithi, Machakos, Makueni and Taita Taveta at the same time period as the IPP-GAP project, which was also implemented by FAO to the same beneficiaries with the exception of Taita Taveta. The IPP-GAP project was meant to have ended in 2017. However, delays in activity roll-out

resulted in the IPP-GAP project given a no-cost extension until 2019. This resulted in an overlap between the two projects over a two-year period (2017–2019). As both projects were implemented through the same structures, partners and personnel, and using the same delivery model, while at the same time lacking a clear outline of areas of complementarities, synergies, collaboration and demarcation of output and outcome coverage, the evaluation found significant overlaps. This made it difficult for the evaluation to draw the line between achievements of ISPP and those of IPP-GAP, particularly in terms of number of beneficiaries reached with specific interventions and their outputs. Similar achievements reported in the IPP-GAP end-term evaluation report[4] (September 2019) are covered in the ISPP end-term report for the five counties.

29. In terms of intervention focus, Figure 3 indicates that the IPP-GAP allocated 75 percent of the budget to agronomy, 14 percent to stakeholder capacity building and only 2 percent to market linkages. The IPP-GAP final evaluation report showed commendable success on the agronomy efforts with a significant proportion of farmers reporting improved agricultural practices and recommended more investment and focus on the market linkages, citing it as the least successful area of achievement.

Figure 3. IPP-GAP Intervention focus and budget allocation

Output	Descriptions	Total costs (EUR)	Proportion
Output 1 and Output 2	Improved conservation agriculture (CA) and good agricultural practices (GAP) knowledge among farmers and farmers groups and functional e-agriculture platform	7 105 237	75%
Output 2	Institutionalized CA and GAP support capacity of government, private sector and non-governmental organization (NGO) extension workers as a result of conventional training, on-the-job-training, and policy development	1 307 202	14%
Output 3	Market linkages developed for GAP/CA farmers Project management	153 061 934 500	2% 10%
Total		**9 500 000**	

Note: in attempt to round off the figures, the total in the project document ends up as 101%.

Source: IPP-GAP project evaluation report, 2019.

30. Figure 4 shows that ISPP project's main agronomy and agribusiness was 26 percent of budget allocation while market linkage had 11 percent budget allocation and 6 percent on nutrition interventions. The remaining 57 percent of the budget was split between personnel, coordination and head office support costs. This therefore indicates that both IPP-GAP and ISPP projects focused more on agronomy to the same beneficiaries during the implementation period of 2017–2019, which is almost the entire period for ISPP project. According to the ISPP project document, the success of the predecessor project IPP-GAP provided a solid base for achieving the ISPP project objectives. The ISPP project was designed to work with the same organized beneficiaries of IPP-GAP in the five counties of Tharaka Nithi, Machakos, Kitui, Makueni and Taita Taveta (62 692) with breakdown in Figure 4, making 75 percent of the ISPP outreach target of 85 000 beneficiaries.

Figure 4. Farmers trained on IPP-GAP by June 2019

From statistics provided by FAO and triangulated with data from counties, a total of 118 651 farmers were trained from 2014 to 2019, as evident in the table below:

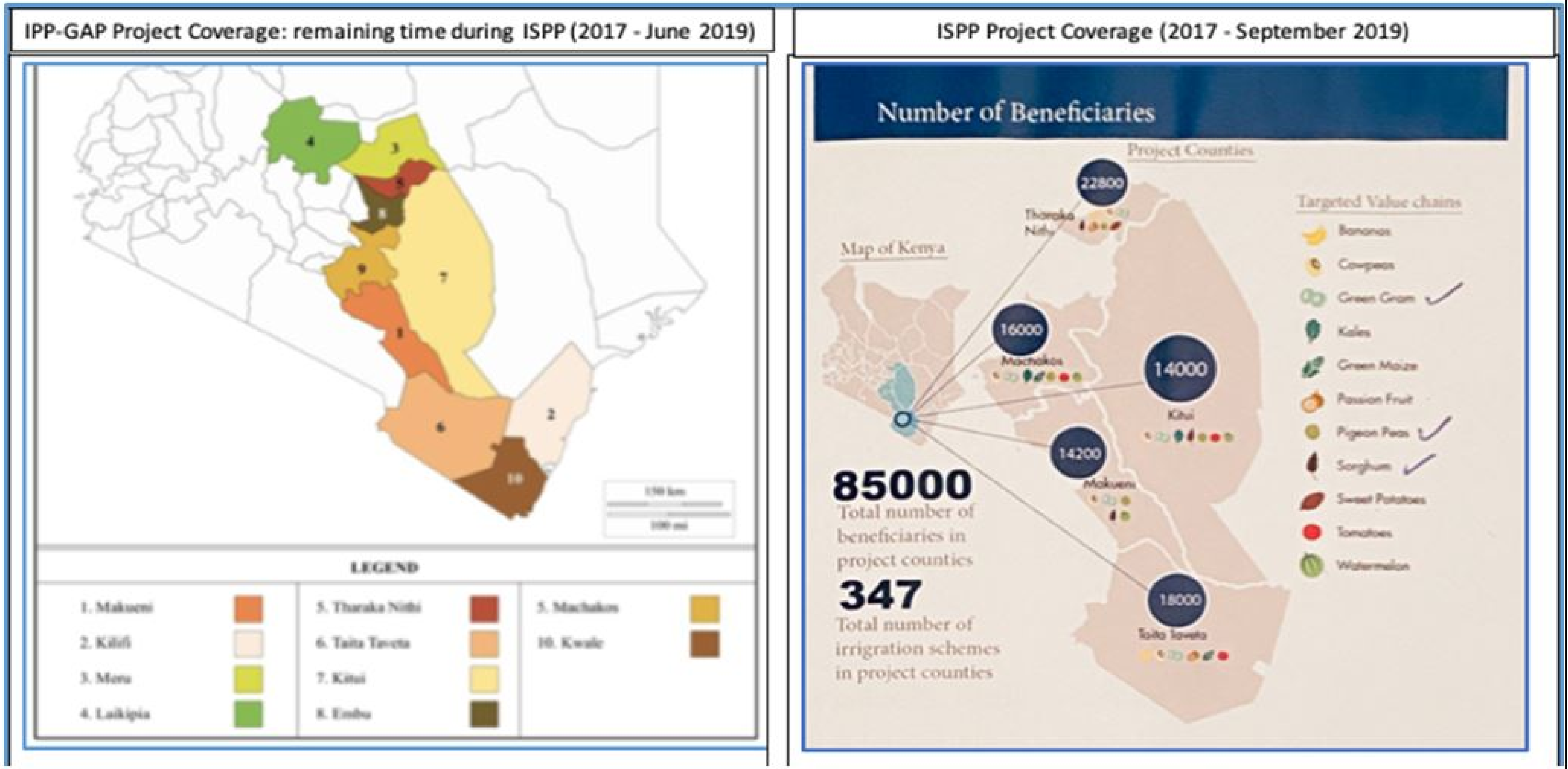
Embu	Tharaka Nithi	Meru	Kiui	Machakos	Makueni	Laikipia	Kilifi	Kwale	Taita Taveta	Total	Men	Women
9 832	14 064	18 613	13 104	16 801	12 610	7 600	11 658	8 256	6 113	118 651	34 120	84 531
Percentage men		~29% (34 120 out of 118 651)										
Percentage women		~71% (84 531 out of 118 651)										

Source: IPP-GAP project evaluation report, 2019.

[4] IPP-GAP project evaluation report (September 2019).

31. Figure 5 shows overlap of IPP-GAP and ISPP projects for the period 2017 to 2019 in three main areas: i) geographical areas covered; ii) target beneficiaries; and iii) key interventions and budget allocations. This suggests that the same individuals and communities benefitted from the two projects both directly and indirectly.

Figure 5. IPP-GAP and ISPP project overlap and budget allocation comparison



Counties and Beneficiaries	
Tharaka Nithi	14 064
Machokos	16 801
Kitui	13 104
Makueni	12 610
Taita Taveta	6 113
Total	**65 692**

Budget Calculation	
Total IPP-GAP beneficiaries	118 651
Total budget (2017-2019)	3 666 636
Budget Proportion	1 943 317
Total Budget	**1 943 317**
Agronomy	75%
Stakeholder capacity	14%

Counties and beneficiaries	
Tharaka Nithi	22 800
Machokos	16 000
Kitui	14 000
Makueni	14 200
Taita Taveta	18 000
Total	**85 000**

Budget calculation	
Total budget (2017–2019)	**6 146 477**
Agronomy & agri-business	26%
Market linkage	11%
Nutrition	6%
Coordination & operations	6%
Personnel	32%

Source: IPP-GAP Final Evaluation Report 2019 and ISPP Final Evaluation 2020. Maps conform to UN. 2011. Map No. 4187, Rev. 3.

32. Figure 5 provides a comparison of both IPP-GAP and ISPP in terms of areas covered, period of implementation, number of target beneficiaries in shared counties, nature of interventions and budget allocation. It also indicates that a total USD 1 943 317 IPP-GAP project budget, equivalent to 32 percent of the ISPP budget, was spent on the five counties and beneficiaries of ISPP project between 2017 and 2019.

33. Figure 6 shows that the IPP-GAP continued to work with the same beneficiaries for nearly two and half years into ISPP project implementation period.

Figure 6. IPP-GAP implementation period overlap with ISPP

> This is the final evaluation of a project titled **"Increased Productivity and Profitability of Smallholder Farmers through promotion and Up-scaling of Good Agricultural Practices (GAP) and Conservation Agriculture (CA) in productive semi-arid areas of Kenya" (IPP-GAP),** implemented by FAO in Kenya for five years (2014 - 2019). It was initially planned to run for four years (June 2014 to June 2018), but was given a no-cost extension of one year (July 2018-June 2019).

Source: IPP-GAP project evaluation report, 2019.

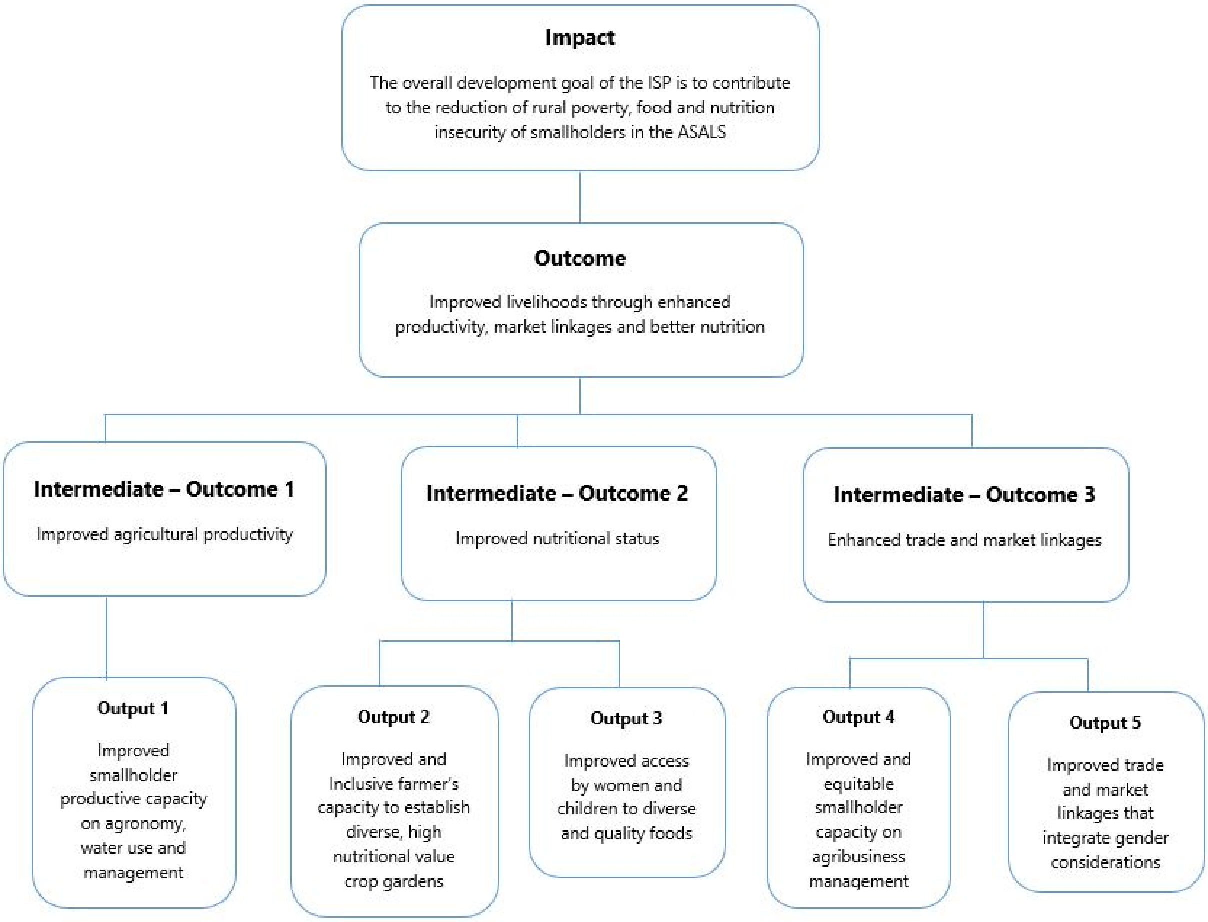
34. For the reasons above, achievements reported in this evaluation may be a result of joint contributions from both the ISPP and IPP-GAP projects, and it was not possible, in this evaluation, to properly isolate the contributions of each of the initiatives.

2.2 Project theory of change

35. Through the three-year interventions of the ISPP project, it was expected that 85 000 men and women farmers would improve their productivity, food security, nutrition and access to markets. The overall development goal of the ISPP was to contribute to the reduction of rural poverty and food and nutrition insecurity of smallholders in the arid and semi-arid lands by developing their production capacity and improving their economic potential in the five selected counties.

36. A special focus was to be on women-headed households and youth, given the constraints they face in accessing agricultural services and inputs. Among all the targeted beneficiaries, 40 percent should be comprised of women and youth. Figure 7 is an extrapolation of the evaluation team's understanding of the project theory of change (TOC) based on its logframe (Appendix 2). The evaluation identified (three) intermediate outcomes that link the five project outputs and the project outcome. Although each project output has a direct link with the specific intermediate outcome, as illustrated in Figure 7, they also contribute to all intermediate outcomes though with varied degrees. Up to six project assumptions and dependencies were identified and these include trickle-down effect expected on skills and capacity development, market information and sample-based targeting of interventions, rather than reaching the entire project population. Therefore, although the project targets to reach 85 000 households, not all were expected to receive support in all project interventions. It was assumed that by reaching a selected target number, the rest of the project population would be reached through trickle-down effect and influence from other project beneficiaries. It is important to note that a clear pathway of how this will reach the unique project target beneficiaries could not be established from project documentation.

Figure 7. Theory of change



- existing groups represent readily available project beneficiary target
- community targeting for activity delivery will impact individual households through ripple effect
- implementation through local government structures will lead to sustainability of results
- knowledge and skills will lead to improved practice and production
- linking farmers groups to established buyers will improve trade and lead to systematic change in the market
- individual farmers will be inspired by linked farmer group to enter the market

Source: ISPP Evaluation 2020.

3. Evaluation results

3.1 Extent to which project contributed to towards impact

EQ 1. Was the project design appropriate for delivering the expected outcome of "Improved livelihoods through enhanced productivity, market linkages and better nutrition"?

Finding 1. ISPP project's contribution towards the goal of reduction of rural poverty, food and nutrition insecurity of smallholders in the arid and semi-arid lands and outcome of improved livelihoods through enhanced productivity, market linkages and better nutrition could not be established due to significant overlaps of ISPP and IPP-GAP project also implemented is same locations during same time period. There was lack of clarity and articulation at Government and FAO project level in identifying and coordinating the distribution of project locations and beneficiaries between the two projects (ISPP and IPP-GAP). No clear market linkage strategy or evidence of process could be established. Farmers who sold products did so on their own and without coordinated marketing, which indicates a missing link in the value chain. Anecdotal evidence suggests improvements in beneficiary capacity to increase agricultural production and access to diverse nutritious foods in sample project sites due to activities and interventions by both ISPP and IPP-GAP.

Extent to which planned outputs were achieved on time

37. The timely delivery of outputs was affected by the political challenges of 2017 which impacted both national and county level government stakeholders and later hampered by the procurement issues discussed in section 3.4. However, a no-cost extension was granted to allow the project to meet the set targets. These challenges limited the project's effectiveness as some farmers and newly formed groups had not fully established. Such concerns were raised in Tharaka Nithi where several self-help groups were still in their infancy by the time of the evaluation. This is particularly important as the project's target achievement record shows an overachievement in beneficiaries reached and most of these farmers came from Tharaka Nithi after the county targets were revised for the last time. The project organized farmers to form new groups and before their operating structures were fully established and management committees trained, the project ended. Also, about three major water projects in Tharaka Nithi county which were meant to play a big part in project output delivery only started six months prior to the end of the project. All outputs were affected by the delayed start of the project activities across all project sites. The project contributed to enabling farmers to produce their own consumption and to sell their produce at the market.

Figure 8. Results framework for Objective 1

Objective 1: Increased Production (Consumption + Markets)
To what extent has the project contributed to enable farmers increase production for consumption and markets?

Output 1:	Output 4:	Output 5:
Improved small holder productive capacity on agronomy, water use and management	Improved trade and market linkages	Improved and equitable smallholder capacity on agribusiness management

Source: ISPP Final Evaluation 2020.

38. Despite the climatic limitations, the evaluation found evidence of improved productive capacity among smallholder farmers in project areas. Focus group discussions and stakeholder workshops with farmer groups and water user associations indicated that most farmers experienced an increase in their ability to harvest more from their gardens and agricultural fields compared to previous years. The increase in production involved mainly consumption crops such as maize, beans, cowpeas and other cereals. Although some farmers were able to engage in production for the markets, particularly small grains on contract farming with East African Breweries, the evaluation found that such instances were small in scale both in number of farmers involved and volumes produced.

39. Although it was beyond the scope of this evaluation to quantitatively verify profitability, the project's own quantitative monitoring data suggests a small increase in profit margins in all value chains. The ISPP end-term FY3 report indicated that owing to the support of the project, 45 814 producers (21 954 women,; 23 860 men) had applied improved technologies or other management practices on their various crops such as use of improved pest management techniques. The GAP training covered good soil management, water resources management, crop husbandry, crop protection, animal production, animal health and welfare, harvest and post-harvest, energy and waste management, human welfare, health and safety and environmental management practices.

40. The evaluation explored the extent to which farmers prioritized food security over income generation. Interviews with both farmer focus group discussions and in-depth interviews indicated food security was a top priority in FAO training. Famers were encouraged to prioritize food production for their own consumption before selling. The farmers demonstrated awareness for importance of balancing between production of cash crops and consumption crops. Most farmers interviewed proudly affirmed that they would only consider selling when they have surplus produce.

41. A further exploration of nature, types and diversity of crops farmers grow was done. The results show that FAO introduced farmers to grow a variety of food crops, fruits and vegetables (lentils, soya, beans, peas, green grams, black beans and groundnuts, among others) to grow, although it was not clear which project was responsible for the introduction of diverse crops, as both IPP-GAP and ISPP promoted the same crop combination in various communities and were, both, by and large, working in the same communities with the same beneficiaries during the same time period. Farmers also received training on new technology in food production, particularly kitchen gardens covering (compost basket, sunken beds, mobile sack, multi storey garden, nylon mulched beds, bottle drip, mandala bed and key hole garden) and a variety of easy and sustainable production methods, including innovative food crop production methods accessible to most beneficiaries.

42. Limited market opportunities was reported by over 80 percent of respondents as the biggest challenge. Around one-third of target farmers were trained on farming as a business, including skills and knowledge transfer on market agricultural driven production. Farmers who had connections with buyers, such as banana and sorghum farmers in Tharaka Nithi were asked how they got in contact with buyers. It was clear that both Twiga foods - who buys banana from farmers - and East African Breweries - who buys sorghum from farmer groups on contract farming - were identified and contacted by buyers themselves with no known FAO or project support. Smallholder farmers require support and guidance to connect with buyers, particularly on contractual matters and optimizing business

opportunities, while on the other hand buyers require support in organizing farmers and the production process. This is a key role for FAO to play in promoting access to markets; buyers' own efforts are driven by commercial aspirations only and cannot address the traditional market constraints smallholder farmers often face. This finding was not surprising given that only 11 percent of the budget was allocated to market linkages for all five counties. No clear market linkage strategy or evidence of process could be established both from interviews with personnel and farmers themselves. Farmers who sold products did so on their own and without coordinated marketing at project or community level, hence indicating a missing link in the value chain. The finding on market challenges is more clearly substantiated by results of the IPP-GAP evaluation report carried out around the same time as the ISPP end-term FY3 report, both done in late 2019. The IPP-GAP final evaluation reported a total of 2 282 farmers (1 655 women, 627 men) who managed to sell through market linkages in all ten counties including the five counties under ISPP. This represents less than 15 percent of smallholder farmers involved in value chain production under ISPP project.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Output 1. Improved smallholder productivity capacity on agronomy, water use and management

Finding 2. Smallholder farmers received training in agronomy and water use and management from ISPP project. However, evidence shows that most of the project beneficiaries were already practicing GAP and water use management techniques before the ISPP project started as shown on baseline results (Table 5, Table 6 and Table 7). Further evaluation evidence suggests that although most project beneficiaries exhibit knowledge of good water use and management, poor infrastructure in most water sources, compounded by limited and/or lack of access to irrigation water sources by more than 60 percent of project beneficiaries, resulted in a small progress in improving productive capacity of project beneficiaries.

43. The project developed training modules on agronomy, water use and management. These training modules helped the trainers of farmers to deliver training and capacity building sessions to project beneficiaries thereby improving smallholder productive capacity. The farmer trainers were paid by the project based on number of training sessions done and signed for by the trained farmers. The training included use of indigenous resources like chili as an organic pesticide, whereby you mix the chilli with milk and you could cover tomatoes as a homemade pesticide and other relevant farming practices.

44. Evidence points that both IPP-GAP and ISPP projects invested significant efforts to contribute to smallholder farmers' productive capacity on agronomy, and these efforts were largely successful as smallholder farmers increased their knowledge and capacity to apply good agricultural practices leading to increased productivity of indigenous value chains, scaled-up indigenous pest management methods and input subsidy. The project also supported farmers with farming inputs.

"*FAO provided us with various things – 50 kg fertilizer, variety of seeds such as terere, green grams and cowpea. This has helped us grow more things…Productivity per unit area has increased, hence profitability.*" (Kitui smallholder farmer)

45. The ISPP baseline findings established a generally good adoption of irrigation and water management technologies and practices. This included use of climate resilient crop varieties, *in situ* water harvesting structures and canal irrigation, which accounted for over 75 percent of the technologies or management practices the households used for irrigation and water management, as shown in Table 5. Despite the projects efforts in training irrigation water users committees and training farmers on effective water use, outcomes on water use and management were largely not successful, mostly due to the concerted drought spell, inadequate supply of water implements and the lack of capacity to manage drought shocks. Most large water facilities needed significant repairs and the majority of farmers in cooperatives did not have access to water.

"*There is still a need to direct water to the dams when it rains, rain water harvesting needs to be stored in a tank which is what most farmers are working on… Not all the farmers have access to water. Most of the farmers are using rainfall and it is not always consistent. Sometimes the rains fail and this affects our yield. The farmers in the irrigation schemes do better.*" (Taita Taveta smallholder farmer)

Table 5. Adoption of irrigation and water management technologies/practices

Technology/management practice	Counties (% of households)				
	Kitui	Tharaka Nithi	Makueni	Machakos	Taita Taveta
Use of climate resilient crop varieties	18.2	68.0	47.8	15.4	39.0
In situ water harvesting structures	52.3	-	37.0	31.9	35.2
Canal irrigation	-	2.0		11.0	3.8
Can/bucket/horse pipe irrigation	-	2.0	9.8	9.9	12.4
Ex situ water harvesting structures	6.8	-	-	19.8	9.5
Sprinkler irrigation	-	14.0	-	2.2	-
Sub-soiling and ripping	-	2.0	1.1	8.8	-
Application of conservation agriculture principles	18.2	-	-	-	-
Mulching (crop residues)	2.3	8.0	1.1	-	-

Source: Adapted from ISPP Baseline Report 2018.

46. The ISPP baseline findings indicated that different households were already using different irrigation and water management strategies in all project sites as indicated in Table 5 and Table 6. At the county level, *in situ* water harvesting structures included zai pits, pitting, ridge and furrow, stone bunds, bench terracing, fanya juu/chini, strip cropping, contour farming, trash-lines and deep tillage. The *ex situ* water harvesting structures included cut-off-drains, water pans, micro-catchment, roof catchment and road-runoff.

47. Most of the households in Kitui (52.3 percent) practiced *in situ* water harvesting methods with an average acreage of 2.38 under this technology, while in Tharaka Nithi most

households (68 percent) used climate resilient crops as a water management strategy with an average acreage of 1.06.

48. Existing water structures and practices were observed with most farmers indicating they have been using the same technologies prior to the ISPP project, as shown in Table 7, making it difficult to judge the contribution of the ISPP project on achievements of this output without comparable quantitative data from both mid-term and end-term progress reports. Table 7 shows indicators tracked at baseline against those used in progress reports. At mid-term and end-term reports, baseline figures were either not used, or indicators used at baseline dropped or changed. Interviews with personnel revealed that the project introduced or changed some indicators halfway through the project implementation due to request from donor partners but project could still have used baseline indicators and figures alongside the new indicators. However, some farmers acknowledged that FAO training helped them to acquire more skills and knowledge to better their use of improved technologies but it was evident the practice may have begun prior to the start of ISPP project. This finding is compounded by the overlaps between ISPP and IPP-GAP as outlined earlier.

Table 6. Percentage of households using crop management practices

Technology/management practice	Counties (% of households)				
	Kitui	Tharaka Nithi	Makueni	Machakos	Taita Taveta
Timely weeding	82.1	52.9	40.0	43.0	51.4
Appropriate spacing	17.9	39.2	33.3	20.6	29.9
Appropriate plant population	-	-	20.0	29.9	14.0
Seedling production and transplantation	-	-	6.7	2.8	4.7
Mulching	-	-	-	3.7	-
Mulching (weed control)	-	7.8	-	-	-

Source: Adapted from ISPP Baseline Report 2018.

Output 4. Improved trade, market linkages and capacity on agribusiness management

Finding 3. Access to markets remains a significant challenge and constraint for most smallholder farmers among the project beneficiaries. Linkages with buyers was not successful on a scale that benefits a large number of farmers. Only a small proportion of beneficiaries managed to sell value chain products. The project's approach to market development was insufficient as it relied on the private sector to leverage on project efforts without a facilitation strategy for the same. Lack of coordinated storage facilities led to farmers selling their produce at low prices to brokers to avoid complete losses. The Government has subsidized input scheme for fertilizers, but farmers found the process to be very difficult and time consuming.

49. The project had intended to link farmers with markets to sell their produce. However, many farmers had small pieces of land, limiting their ability to meet the necessary scale for competitive market access. Where economies of scale were possible, for instance in Taita Taveta - where farmers have larger tracts of land that have been set aside for irrigation and farming - the attempts at market linkages were affected by production quality issues, i.e., farmers growing different varieties making it difficult to aggregate for bulk selling. The demonstration sites and greenhouse visited in Tharaka Nithi had good tomato produce and other vegetables but not at the scale viable for sustainable markets, and individual farmers could not produce in a coordinated manner to achieve economies of scale through produce aggregation. The agribusiness training was not comprehensive enough to deal with end-to-end market access issues of the value chains. In particular, considerations for value creation, addition and preservation were not covered alongside coordinated farming input supplies and other necessary logistics.

50. Lack of access to financial resources for inputs and logistics (such as transportation of crop produce) also negatively affected the farmers' ability to access markets. The ability to scale up is largely determined by whether the farmer can afford to buy inputs or not. Part of the ISPP's objectives was to link farmers to financial institutions such as banks or savings and credit cooperatives (SACCO). However, there was no evidence that this was successful, partly due to farmers' reluctance to borrowing but also due to loan terms and conditions not tailored enough to address eligibility constraints of most farmers. Access to inputs was the biggest issue raised by most farmers, citing transport costs and availability issues.

51. Private stakeholders played a crucial role in supporting various aspects of the value chain, although evidence suggested limited coordination with other players in the area or sector of interest. The finance providers engaged with the target community although only at limited areas of interest, leading to most farmers being excluded or still lacking access to loans and borrowing services. Market development partners - mostly individual buyers and

researcher partners - operated by and large in solitary mode, focused only on their own areas on interest to meet targets for donor needs.

52. Mindset transformation is one of the key effects observed among project beneficiaries, although this can't be ascribed to activities of ISPP project given overlaps with IPP-GAP. Key mindsets that were successfully transformed include the general perception to farming as a business and a viable income source, and the benefits for collective group-production and marketing. However, due to some beliefs and literacy problems, certain agriculture business practices were not reported to have significantly changed as a result of the project, especially record management, business management concepts and value chains. Mindset transformation for farmers to understand farming as a business was a slow process.

...." *Before the project, farmers believed 'ukulima ni hasara'. This means that farming was not profitable. Nevertheless, after a while, the farmers now call it farming business. They view it as a viable source of livelihood.*" (Community facilitator)

..."*We planted French beans and we sold them as a group and it had worked well.... We were told that if we produce enough collectively then we could be connected to a buyer.*" (Smallholder farmer)

53. Evidence from interviews with smallholder farmers and different stakeholders shows that ISPP integrated capacity development in all of its activities, affecting the three dimensions of capacity: enabling environment, organizations and individuals. The project helped smallholder farmers and stakeholders to strengthen capacity within their government departments and organizations by training individuals in related commercialization and food security capacities. Among key capacities reflected strongly was the general agricultural production management, agri-entrepreneurship and financial management.

54. The most relevant components of capacity building support in Taita Taveta included a strong focus on market linkages which was to both local and export markets, strengthening group formation and farmer collaboration, though this does not seem to be a shared experience across all project sites, particularly farmer experiences in Tharaka Nithi where buyers reached farmers directly.

"*Project linked us farmers with buyers (Twiga Foods & Sweet and Dried) who were buying bananas and fruits.... changed our perception from trading as individuals to aggregating our produce (banana, cereals and horticultural [karera & chilli] so that we can negotiate better as a group.... facilitated us to get global certification to export hot chilli, tomatoes, mangoes, eggplant and indigenous vegetables.*" (Smallholder farmer - Taita Taveta)

55. Despite the strong capacity strengthening drive of the project, respondents indicated challenges in meeting volume and quality of produces for buyers. Challenges ranged from limited and/or lack of access to irrigation water, inadequate land for scalable production, and limited or lack of irrigation implements and storage facilities (especially for perishable growers). Training was not supplemented by accompaniment support to establish inclusive and comprehensives trade and market linkages covering most promoted value chains and all farmers trained. Capacity development did not include mentorship or strategic systematic support covering all aspects of the value chain.

56. Though the trainings provided were contextualized, wide in scope (including productivity management, storage techniques, integrated pest management and group dynamics) adequately resourced and decentralized, respondent feedback pointed that training

content did not include specific market-based post-harvest handling and value-addition such as bulking and optimum storage options, both of which are very important for market success. Furthermore, the input support for post-harvest handling was not considered for farmers.

"*Despite the training they received, when I visited the farm, there were dozens of rotten mangoes all over the farm, on the compound and on the footpaths that had fallen from the mango trees. It was evident that there was no knowledge transfer on how to manage post-harvest losses, storage or processing.*" (Private sector key informant interview)

57. The market component was not broad and far enough for most farmers to transition from self-reliance to commercial. There was an assumption that once the beneficiaries had been trained, they would be able to scale-up on their own, but there was no apparent model in the design of the project or its implementation for scaling-up. This was evident through one youth group that was processing passion juice. Their passion for passion juice production was evident, but they attempted to do the full value chain from production to marketing, with limited knowledge of what the full value chain entails in addition to limited capital, thereby spreading themselves too thinly. For example, the group was growing passion fruit themselves but have not yet reached optimum production, so they contracted out community farmers in various places which required coordination work and additional costs for harvest and transportation. On the other hand, the group did not have marketing strategy and production equipment alongside other support services to achieve economies of scale that matches the level of passion fruit production they were promoting. The group was also involved in research for the passion juice quality and preservation as well as stockfeed production and distribution. Furthermore, the product was still under development and a long way from certification and licensing, which meant that marketing uncertified products was not only unadvisable but could cause problems both on the legal and health fronts. The group had not mapped all that was necessary to prioritize the workflow step-by step ensuring they cover all aspects of the value chain.

58. Evidence suggests that observed changes could be better described as instrumental (more of an end in themselves) than transformational. The farmers and partners engaged in the project because of external inputs such as technical support and allowances or allocated budget items in the project. This included seeds for the farmers and allowances for the government officers, and activity budgets for private partners. The changes observed are output-based, such as adoption of GAP where visits and support by trainers of facilitators and county officers were provided. To permanently transform production practices, it would be necessary to promote other drivers, such as the markets and sustainable input supply chain. The lack of transformation of mindsets from subsistence farming to commercial was also observed among most farmers. In many cases, when the farmer groups sold their produce as a group, they immediately shared out the money rather than re-invested it back to scale-up the production. When asked what they used the money on, most in all three counties indicated consumables and general expenses such as kitchen utensils, clothes and school fees. Farming inputs or preparation for next season was never cited in all the groups interviewed. The notion of farming as a business could not come out in several instances.

59. The majority of the market was from large buyers from Nairobi and other national markets, and most farmers could not meet either the quantities or quality requirements. A few farmers were linked to Twiga Foods and East African Breweries with varied experiences

depending on value chains and location. In Tharaka Nithi anecdotal evidence suggests fairly successful market linkages with banana famers, while in Taita Taveta some farmers had their tomatoes go to waste. In some cases, even contract growers had buyers not turning up to collect produce at harvest time.

Assessing impact of holistic approach (production and nutrition) and change in dietary habits

Finding 4. The evaluation found no evidence of a systematic framework or strategy at project level to deliver holistic interventions. Different interventions were rolled out in isolation with no integration, coordination and/or complementarity of activities at household level. Furthermore, at project design, different interventions were targeted at completely different unique households.

60. Assessing change in dietary habits was one of the objectives of this evaluation. Two main outputs (Output 2 and Output 3) provided the pathways for achieving this as shown in Figure 9 but also drawing from Output 1 which focused on increasing capacity for productivity.

Figure 9. Results framework for Objective 4

Objective 4: Change in Dietary Habits
To what extent has farmers and their families changed dietary habits due to project influence?

Output 2:
Improved farmer's capacity to establish diverse, high nutritional crop gardens and small livestock

Output 3:
Improved access by women and children to diverse and quality foods

Source: Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team.

61. The evaluation explored the efficacy of ISPP project's intended holistic approach combining production and nutrition interventions, what worked and how. A total of 107 instances were recorded for questions exploring the impact of holistic approach across all tools and all respondent types.

62. The project's intent to combine production, nutrition and markets was evident in the field throughout all counties. The training materials covering production, agribusiness, post-harvest handling and promotion of 'healthy diets' – that is, to promote the consumption of healthy foods – were developed and administered to various project beneficiaries. Farmers were observed to have benefitted from increased production due to training in agronomic skills and practicing of kitchen gardens through demonstrations and support. However, fragmentation of implementation was noted to have undermined the benefits. The interventions on the ground could be described as "multiple" but not "holistic". The holistic nature of the project was observed to be more at project planning level only and not at implementation and individual farmer level. Not all farmers received support for production and nutrition at the same time; for those who did, there was no evidence of activities intentionally planned for layering or sequencing for complementarities.

63. Where farmers were exposed to more than one intervention, these would be unintentionally or coincidently through participating at community nutrition promotion sessions. Targeting and delivering of training of various interventions was observed to be fragmented with no particular sequence, order or minimum package and with different

trainers targeting different communities and groups at different times. Beneficiaries received a a record of which interventions and at what sequence or layering could not be produced both at community field level (ward, sub-county and county) and at national programme level. This therefore means that both production and nutrition training and capacity building may not have been delivered in the same community or village and most beneficiaries are likely to have received only one component.

64. The cascading model involves passing on the knowledge button from master trainer, trainers of trainers, farmer trainers and to famers themselves. The farmer trainers were responsible for recruiting and training farmers on the modules they would have been trained on and have a target of 50 farmers per farmer trainers. There was no coordination of farmer trainers at community level, they all reported back to the FAO CPO at county office. For example, to deliver production interventions and nutrition in a holistic manner, a coordination mechanism would have been necessary to target a minimum set of trainings and support to the same farmers in a systematic way.

65. The ISPP baseline results for dietary diversification for the five counties as shown in Table 7 indicates that more than 75 percent of project beneficiaries were already eating at least five different nutritious food types before the ISPP project started, hence, were able to consume an adequately diversified diet.

Table 7. Household dietary diversity per county

Food category	Foods consumed in each county – baseline					
	Kitui	Tharaka Nithi	Makueni	Machakos	Taita Taveta	Total
	%	%	%	%	%	%
Grain	97.8	98.1	99.7	98.0	98.4	**98.4**
Pulses	85.7	86.7	85.3	71.0	57.6	**78.4**
Nuts and seeds	1.8	4.2	1.3	1.4	1.4	**2.2**
Dairy	74.0	87.9	65.3	93.8	84.6	**81.1**
Poultry meat	10.6	22.1	15.4	23.7	16.8	**17.7**
Eggs	10.4	19.2	15.9	14.1	11.6	**14.5**
Dark green vegetables	71.7	82.1	52.4	84.8	87.0	**75.7**
Other vegetables	95.8	91.7	87.9	96.3	90.0	**92.4**
Fruits	11.9	37.3	23.7	47.0	30.0	**29.6**

Source: ISPP Baseline Report 2018.

66. Anecdotal evidence suggests that some farmers are knowledgeable about the types of high value nutritional foods and importance of having a balanced diet. In the absence of quantitative data at both mid-term and end-term reports on household dietary diversity, the ISPP project achievements in influencing change in dietary habits could not be established.

67. The trials on improved practices complementary feeding initiative, implemented among 100 households of children aged 6 to 24 months, and piloted in Mwingi, Kitui county was touted as successful by most community respondents in the project area. The evaluation noted that changes in complementary feeding practices for children targeted under the TIPs pilot may have also influenced a wider a change in household diets among stakeholders and households beyond TIPs beneficiaries.

68. Mothers learned and practiced new ways of food preparation, such as, when peeling bananas to only remove the thin outer layer of the peel leaving the parts with minerals such as zinc to be consumed. Anecdotal evidence suggests that beyond TIPs project target group, most other smallholder farmers who attended the nutrition component of the intervention increased their consumption of vegetables, especially because they learned how to dry and preserve them for dry seasons. Beneficiaries of the TIPs project reported continuing with regular monitoring of growth of children with some observing they had fewer instances of their children falling sick and needing to visit clinics.

69. The kitchen gardens introduced diverse vegetables and fruits to project beneficiaries. Innovation in kitchen gardens also allowed significant access to nutritious vegetables by the majority of the households that even those with less access to water could still grow the vegetables. Most respondents indicated they didn’t know the importance of having a balanced diet until they attended training sessions. They gave examples of beans, green grams, legumes, vegetables and their contribution to a balanced diet.

Output 2. Improved farmers ‘capacity to establish diverse, high nutritional value gardens

Finding 5. The majority of project beneficiaries established kitchen gardens where they grow different types of fruits and vegetables. Anecdotal evidence suggests good connection between improved productivity and nutrition knowledge among project beneficiaries. Some group farmers indicated that they were able to consume different types of nutritious foods (vegetables, legumes, watermelons, sweet potatoes, cereals, etc.) because through the project they gained knowledge of the nutritional benefits of certain types of foods as well as technical skills to optimize production of such food stuffs thereby increasing access to those food types.

70. The evaluation explored the project's inclusive capacity building interventions and strategies for farmers to establish diverse, high nutritious crop gardens. Three main drivers were necessary to achieve this output: i) inclusive access to irrigation water resources; ii) improved capacity to management and equitable distribution of irrigation water resources; and iii) improved knowledge, skills and access to diverse crop seed varieties and inputs. At baseline, the project's irrigation water access distribution was as shown in Table 8.

Table 8. Irrigation water access for garden crops in the five counties – baseline

	County	**Kitui**	**Tharaka Nithi**	**Makueni**	**Machakos**	**Taita Taveta**
Crop	**Production system**	**%**	**%**	**%**	**%**	**%**
Beans and pulses	Rain-fed	100.0	91.5	100.0	81.7	77.3
	Irrigated	-	1.7	-	8.6	6.1
Passion fruits	Rain-fed	100.0	100.0	100.0	100.0	100.0
	Irrigated	-	-	-	-	-
Sweet potatoes	Rain-fed	-	83.3	100.0	28.6	83.3
	Irrigated	-	0.0	-	42.9	
Bananas	Rain-fed	-	-	100.0	50.0	-
	Irrigated	-	-	-	50.0	-
Tomatoes	Rain-fed	-	16.7	27.3	9.1	15.4
	Irrigated	-	66.7	54.5	72.7	7.7
Cow peas	Rain-fed	100.0	94.4	100.0	92.4	97.6
	Irrigated	-	-	-	3.0	-
Sukuma wiki	Rain-fed	-	45.5	33.3	25.0	28.6
	Irrigated	-	45.5	40.0	50.0	23.8
Watermelon	Rain-fed	-	-	-	-	100.0
	Irrigated	-	-	100.0	-	-
Maize	Rain-fed	100.0	83.7	93.8	77.3	76.3
	Irrigated	-	4.1	1.6	11.7	10.4
Sorghum	Rain-fed	100.0	98.4	100.0	100.0	88.9

Source: Adapted from ISPP Baseline Report 2018.

71. The evaluation results showed improved capacity by water user associations to manage water sources as well as increased knowledge and capacity to grow diverse garden crops by beneficiaries with existing access to water for irrigation. The results for access to irrigation water were no different to the baseline findings shown above. The project failed to establish mechanisms for inclusive capacity building, particularly inclusive access to irrigation water resource. The majority of individuals with access to irrigation water had both the land size and water resources underutilized. The project could have coordinated and promoted shared use of such resources for inclusive capacity to benefit those who lacked access. In each group visited in all counties, at least 60 percent of group members did not have irrigation water access, while 40 percent had not been operating at optimal capacity.

72. However, evidence shows that the result of the FAO project's training on agriculture for improving nutrition skills transformed the mindsets of some smallholder farmers, especially on the value of crop diversity and adoption of essential farming implements to enhance productivity.

> "*Through capacity building and farm inputs dissemination – many farmers have planted and even have gone on to buy their own new types of seeds. Fertilizer use was encouraged by FAO and now farmers see the value in buying fertilizers for themselves…Farmers were sensitized on new crops but were a bit resistant. But in Mwatate they embraced crop diversity -such as introducing Irish Potato.*" (Master trainer key informant interview)

Output 3. Improved access by women and children to diverse and quality foods

Finding 6. The approach linking agriculture and nutrition was an effective way of promoting food and nutrition security in the longer-term. The respondents in all three counties suggested that most households are now able to set aside up to 150 kg of the targeted ten nutrition-rich foods (mainly the grains) for household consumption per season. Male and female farmers were trained on production of high nutritional value crops, small livestock and vegetables and food safety, preparation, preservation and storage practices. This was complemented by the TIPs pilot intervention conducted in Kitui county (complimentary feeding for children under the age of two in 100 selected target households).

73. The approach linking agriculture and nutrition applied in this project has proven to be an effective way of promoting food and nutrition security in the longer-term. The respondents in all three counties suggested that most households are now able to set aside up to 150 kg of the ten targeted nutrition-rich foods (mainly the grains) for household consumption per season. The majority of these respondents were from Tharaka Nithi county, in Kitui farmers and groups seemed less organized. The findings suggest that personnel changes in the county may have had a negative impact on project coordination. In addition to farmers prioritizing food security, evidence also suggests the knowledge of preparing food and meals helped some households adopt growing nutritious foods in their farms.

> "*On a learning visit to 'Tharaka-Nithi', we learned that you could make porridge out of millet, now we plant millet using irrigation as well as making porridge from banana powder… The project taught us how to preserve vegetables so that we can eat during drought periods… For my children I can see changes, the project taught me which foods were good for our bodies such as avocado, fish.*" (Smallholder farmer)

74. The project conducted TIPs in one county and developed complementary feeding recipes. The project trained agriculture extension personnel, home economists and community health personnel to conduct nutrition education sessions and deliver participatory cooking sessions to groups of caregivers with children aged 6 to 24 months, including mothers, grandmothers, older siblings, fathers and community leaders, to improve young child and family feeding. The TIPs pilot happened in only one location within Kitui county. TIPs went to the two wards in Kitui county (Kivou ward and central ward) that had not been well targeted by other interventions/donors with priority given to households with malnourished children (see Table 10 below).

Table 9. Proportion of children affected before and after TIPs intervention

# of children participated in TIPs by age		# of children affected by .... before TIPs intervention			After TIPs intervention		
		Poor diet	Low feeding frequency	Poor hygiene	Poor diet	Low feeding frequency	Poor hygiene
0-5	20	0	0	5	0	-	5
6-8	27	18	10	15	0	1	11
9-11	32	25	13	15	0	0	14
12-24	21	21	14	10	0	0	9
Total	**100**	**64**	**37**	**45**	**0**	**1**	**39**

Recommended frequency of feeding by age: Recommended feeding practices include at least four food groups in child's diet and continue with breastfeeding. Caregivers were encouraged to add legumes, eggs, dairy, seasonal and wild fruits, dark green leafy vegetables and other animal source foods to starchy foods.
6 to 8 months: Start with two times a day and increase to three times a day as child approaches 7 months.
9 to 11 months: Four times a day (three meals, one healthy snack).
12 to 24 months: Five times a day (three meals and two healthy snacks).

Source: Adapted from ISPP END-TERM FY3 Report.

75. The targeted 100 children aged 6 to 24 months were selected based on their nutritional status (taking anthropometric measurements including their weight, height and mid-upper arm circumference) as shown in Table 10. Collaboration with Ministry of Health and Agriculture was key in making sure the beneficiaries picked were not already part of other programmes.

Table 10. Prevalence of underweight based on weight-for-age z-scores by sex and period

Period	**Initial assessment (May 2019)**			**Post-intervention assessment (October 2019)**		
Category	All	Boys	Girls	All	Boys	Girls
Sample	n = 92	n = 47	n = 45	n = 92	n = 47	n = 45
Prevalence of underweight (<-2 z-score)	(13) 14.1 %	(9) 19.1 %	(4) 8.9 %	(10) 10.9 %	(6) 12.8 %	(4) 8.9 %
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(10) 10.9 %	(6) 12.8 %	(4) 8.9 %	(8) 8.7 %	(4) 8.5 %	(4) 8.9 %
Prevalence of severe underweight (<-3 z-score)	(3) 3.3 %	(3) 6.4 %	(0) 0.0 %	(2) 2.2 %	(2) 4.3 %	(0) 0.0 %

Source: Adapted from ISPP END-TERM FY3 Report.

76. Results from the TIPs area were overall positive as shown in Table 10 and Table 11 above. Infant and young child feeding practices improved considerably. Consumption of nutritious snacks (mixed fruits and nuts), small meals between main meals, became more common. Frequency of feeding children increased an average of two times to a minimum of three times a day (breakfast, lunch and dinner) with snacks in between.

77. Overall, Kitui was the right place to trial TIPs, as it was one of the counties with the highest rates of stunting in the country accounting for 46 percent county wide. TIPs worked at the individual/household level, which proved to be effective. Nineteen trainers/nutritionists covered the 100 households. The nutritionists worked with farmer trainers in order to build capacity of beneficiaries in producing nutritious food through kitchen gardens. The farming component was vital in improving access to food, making complementary feeding practice of the TIPs more sustainable. Some information arising of field reports suggest that farmers and stakeholders not only learned about the benefits of nutritious foods to children's heath but observed how TIPs helped to reduce stunted growth in children.

78. Furthermore, evidence points that the decentralization drive from facilities such as schools or community centres to household-based promotion approaches, as applied by the TIPs project component, had the potential of efficiently scaling-up and transferring knowledge, and improving practices to other locations, as well as promoting understanding at a broader scale. The knowledge transfer aspect of TIPs is likely to continue beyond the project life. TIPs trainers and implementers in Kitui created a WhatsApp group to stay connected. It has been reported as being useful for sharing information and advice, often they also exchange what other donors are doing in the area, so as to improve practices. So even if they cannot physically meet, the exchange of information will continue. As a result of the TIPs intervention, the prevalence of underweight (weight for age) among the target children, 6 to 24 months old, reduced from 14 percent (May 2019) to 10 percent (October 2019).

79. The recorded success of TIPs was in part because training and support happened at household level, where practical recommendations could be tested among beneficiaries and mentorship support provided as necessary.

> "*The trials for improved practices (TIPs) offer recommendations in people's homes. It would normally have happened at clinic level. At this clinic level, assessing practicability is not necessarily done. You can tell them the recommendations but there is no way of testing practicability.*" (Community facilitator)

80. However, the TIPs pilot project appears to have been implemented late (the last three months of project implementation) and there were no opportunities to transfer and embed lessons across the implementation area, as the ISPP project was already closing down at the time the TIPs pilot ended. Anecdotal evidence suggests that the short duration of the links between the TIPs pilot and the broader ISSP components of agricultural production, linkages to markets and even to the nutrition promotion and kitchen gardening component have not been leveraged, hence, missing the opportunity to utilize its full potential. The nutrition component, and also TIPs, were not in sync with the harvesting period where generally food stuffs will be abundant, thereby negatively affecting the complementary feeding sessions.

81. The evaluation also explored the extent to which women and children demonstrated improved access to diverse and quality foods. Project participants alluded to the high rates of stunting in their community, which they believed were mostly due to inability by households to access sufficient and diverse foods to ensure a healthy diet, and how the project had made significant efforts to raise awareness of the importance of balanced diets and food preservation practices. Respondents pointed that the project trained some farmers with children under two how to establish kitchen gardens and growing different fruits and vegetables, thereby increasing their access to quality foods.

> "*The rates for child stunting in this county are very high, I think it is 46 percent. Families did not know the importance of having a balanced diet like eating beans, green grams and legumes and vegetables for a balanced diet. The project helped to increase this knowledge. The training of preservation of foods also helped. Some groups are even preserving not just for self-consumption but to sell on field/market days.*" (Master trainer key informant interviews)

82. The project had a clear target on supporting women and children to have access to diverse and quality foods. The promotion of kitchen gardens and demonstration plots and the

various technologies used to increase production of nutritious vegetables and fruits (berries, sukuma wiki, beans, green grams, tomatoes, carrot and other leafy vegetables) at household level was one of the main strategies to increase access to quality foods. As part of strengthening community awareness on consumption of diversified food, the project also made significant efforts to introduce communities to new food varieties including mhogo, sweet potatoes, arrow roots and green grams. The promotion and establishment of kitchen gardens is arguably the most successful driver for improving access to diverse and quality foods by women and children due to the simplicity of the technology used and optimum space utilization at homestead.

83. It was encouraging to see that farmers had been trained on food preservation and diversification, particularly in areas where serious drought occurs. Some of the techniques taught to the women were drying and processing of crops such as cow peas into powder leaves. However, anecdotal evidence shows that some women had issues with the time and labour burden it took to dry and grind into powder these vegetables.

3.2 Project effectiveness in improving livelihoods

EQ 2. To what extent did the project contribute to "Improved livelihoods through enhanced productivity, market linkages and better nutrition"?

84. The new Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) Network on Development Evaluation (2019) clarifies that effectiveness should analyse progress towards objectives along the results chain/causal pathway. In contrast to impact, which looks at higher-order effects and broader changes to which an intervention may be contributing, effectiveness is concerned with more closely attributable results to the project inputs in pursuit of the project objectives. The evaluation explored the project's progress towards objective of improved livelihoods through enhanced productivity, market linkages and better nutrition for project beneficiaries. The project intended to enhance farmers' productivity capacity through layering of interventions. The evaluation explored how this intent was implemented and the results could not show any attempt at implementation level for layering of activities.

Finding 7. Project effectiveness was affected by implementation challenges and a poor M&E system. The monitoring of the project was built on the assumption that county systems would be efficient enough to provide required monitoring services and data. When trying to ascertain the project beneficiary numbers, the evaluation noted that the beneficiaries had no unique identifier and therefore could not be verified with regard to participation in various training programmes and interventions. The project could not disaggregate number of beneficiaries, intervention, county and ward. There was no way to determine whether a farmer had been trained on all the modules or not.

85. In addition, the project intended to increase value chain stakeholders' accesses to loan and credit through increased profitability. This could have been partly achieved through the kitchen and sack gardens designed for nutritious crops mainly for nutritional purposes and households' own consumption. This valuable approach was widely adopted throughout the project area as the sack gardens were touted to be very labour-, time- and input-saving and increased access to diverse foods; however, the production was not possible on a scale to transition farmers from relief to self-reliance. This was also observed in some of the project beneficiaries who were better off economically.

86. The end-term FY3 report stated an increase in the distribution of inputs, while the evaluation established that the distribution of inputs left some gaps in both scope and scale. It was clear that some groups did not receive the same inputs from the ISPP project. Some groups received more in terms of fertilizer, seeds and even value addition training, while others did not.

87. Some of the farmers and farmer groups engaged in a value chain individually or in small groups. They produced seeds, planted, harvested, processed (in some cases) and sold to the market. However, this spread them out too thin to be really efficient in any one of those value chain activities and lost the economies of scale needed to attract more profitable markets. Although some farmers indicated experiencing an increase in income generated from the sale of agricultural produce owing to their own individual efforts and circumstances, the majority of farmers struggled to access reliable markets for their products at sustainable and significant scale. Triangulating our findings with the ISPP end-term FY3 report, we found some differences. The end-term FY3 report indicated that there was an increase in profitability by a gross margin of over 100 percent throughout the project time frame, however anecdotal evidence shows that most farmers could not access the necessary financial services to engage in ongoing agro-business activities, in spite of having received training.

88. The evaluation noted a challenge in training attendance by farmers. Most farmers counted as trained would have failed to attend the full number of required days. Evidence showed that some farmers dropped off and others joined in at different times during the training week. A number of factors were observed from the evaluation causing this erratic attendance. The first factor was the training venue and distance travelled by some farmers. Training was delivered to self-help groups at their request but membership in those groups was not based on geographic proximity to each other but rather mutual trust and willingness to work together. Group members will attend their own meetings once a week or fortnightly so members from far distances can manage well.

89. Also, if the training took place during planting or harvesting season, there was bound to be an attrition of attendances as well and training only focused on aspects of agronomy applicable to that particular time of the planting season. For instance, if the farmers had already planted, then the training was centred on weeding, spraying and harvesting. These would be counted as trained, and the remaining topics would not be delivered as that would have required another visit back to the group at another time for further training. Therefore, evidence suggests that project beneficiaries were not all trained in the same way or on the full and complete modules. Furthermore, the project design did not incorporate principles of adult learning methods. The farmer trainers and master trainers were trained on how to deliver the technical content but not on the considerations of training adults.

Effectiveness of monitoring mechanism to identify challenges and solutions

90. Evidence revealed a likelihood of double counting of beneficiaries, with the potential to overstate the number of beneficiaries reached. For instance, a farmer could belong to multiple groups (water user, mother group or table banking), because trainings were targeted to groups and individuals with no unique tracking, which means the same farmer would be counted in each of the three groups without the project knowing it. Furthermore, since the farmer trainers were trained on specific interventions, where farmers needed to be trained on more than one intervention a different FT would be deployed. Without a unique identifier, this scenario led to double counting as well. Figure 10 shows the project

data requested by the project team from the monitoring system which would have allayed the evaluation team's fears for double counting; unfortunately, this level of data disaggregation could not be provided.

Figure 10. Example of project beneficiary distribution list

Project support target	Target	County	Ward	No of beneficiaries
Support 25 000 farming households, including female-headed, to improve their access to water for production.	25 000 farmers	Tharaka Nithi		
		Kitui		
		Taita Taveta		
		Makueni		
		Machakos		
Support 20 000 male and female-headed households with children under two years of age to improve complementary feeding and overall family feeding.	20 000 farmers	Tharaka Nithi		
		Kitui		
		Taita Taveta		
		Makueni		
		Machakos		

Source: ISPP Final Evaluation 2020. Elaborated by the evaluation team.

91. The IPP-GAP end of project evaluation found similar challenges with the M&E systems, pointing to a weak capturing of smallholder farmer records. The project relied too much on short-term data collection interns and project personnel to provide monitoring data on achievements and targets, with no dedicated M&E personnel on the ground. In addition, no mid-term evaluation or review (conducted by external consultants) was performed, which could have highlighted these issues earlier in the ISPP initiative, allowing for corrections in the route.

Key issues affecting effectiveness

92. Key aspects mostly believed by respondents to have negatively affected effectiveness of the project included:

i. limited supervision at individual farmer level as some of the farms were far apart and making it difficult for farmer trainers to monitor application of practices at individual levels;

ii. lack of access and timely inputs also impacted on farmers' ability to consistently apply the knowledge learned on their individual farms; and

iii. limited conceptual guidance by FAO's management to field personnel for linking the support to increase production and market linkages to also impact nutritional outcomes, as intended by the project.

3.3 Project design appropriateness

EQ 3. To what extent were management arrangements appropriate to deliver the programme efficiently?

93. The evaluation explored the appropriateness of the project design to achieve the intended project outcomes. A total of 499 question instances were recorded across all the tools and respondent types. Focus group discussions and in-depth interviews contributed the most, meaning the most voices came from the project beneficiaries and implementing partners.

Finding 8. The project was largely relevant to the livelihoods, food and security, nutrition, agribusiness, smart agriculture and income security priorities of Kenya. The majority of respondents largely concurred that the project activities and support provided by the project were very well aligned to the needs of the beneficiaries. However, gender equity and social inclusion considerations were not fully incorporated in the project design.

Relevance of the design to the country context

94. The evaluation explored the extent to which the technical support provided by FAO was relevant to Kenya, considering the countries' capacities and needs. The evaluation found that the project was implemented in line with the FAO Country Programming Framework (CPF), as evidenced by the approach to stakeholder engagement, scale-up and implementation planning. The ISPP project implemented a nutrition component aligned to Kenya's national nutrition action plan 2019–2023, which focused on children below two years of age as per the national priorities.

95. The project used a multi-stakeholder approach to delivering interventions, involving especially the Government, the private sector and other non-governmental organizations (NGOs) though not at household level. The different government departments included the Ministry of Agriculture and Livestock, Cooperatives, Trade, Public Health and Nutrition. The private sector was mainly composed of various finance stakeholders and these included universal traders, such as SACCO, Equity Bank, Kenya Commercial Bank, Agriculture Finance Corporation, etc. These provided financial literacy training and access to micro finance but not formally contracted for delivery. Partner collaboration further strengthened project relevance through leveraging on already existing competences in local areas where other partners had a significant footprint.

> "*FAO already had expertise on the ground. The farmer training structures already in place and existing and farmer trainers could train nutritionists. In partnership with Nutrition and Health Program plus (NHP plus) and Kenya Crops and Dairy Market Systems Activity (KCDMS).*" (County government key informant interview)

96. In-depth interviews with agricultural extension officers also pointed to strong alignment with USAID programme strategies and priorities. This was mostly evident through support programmes working with smallholder farmers on food security and sustainable development. The engagement with FAO was mostly reinforced through the dual support to deliver expertise in agricultural development and sustainability.

> "*It was aligned well with the country's Agricultural Sector Development Strategy (ASDS) 2010–2020 based on Vision 2030. ASDS' overall objective is to achieve an agricultural growth rate of 7 percent per year and to reduce food insecurity by 30 percent by promoting*

an innovative, commercially oriented and climate-smart modern agriculture." (Government stakeholder key informant interview)

Relevance of the project to the needs of the counties

97. The focus of the project to deliver agricultural training and capacity building to the counties frontline personnel in a decentralized manner was commendable. Stakeholders cited a special case in Tharaka-Nithi county where the FAO project trained 45 county government officers in good agronomic practices, 3 from county level executives, 6 at sub-county level, 15 at ward level and 21 at sub-location level reaching local frontline officers. This covered almost all county officers at the various levels in coordinating agricultural activities in the county, ensuring capacity building is delivered to the whole county officials in relevant ministries.

"*The approach and the programme itself were very relevant to the needs of the beneficiaries. Kitui is an* arid and semi-arid land *area and the principles of conservation agriculture worked well to conserve moisture in the soil. We could see results after two or three seasons. By results I mean the yield of the crops increased especially when the rains failed, the farmers were still getting good yields.*"

"*Some families received training and capacity building on nutritious food and healthy diets. All these activities are very important and relevant to the priorities of the county government and the needs of project beneficiaries.*" (County government official)

Relevance of the design to gender equity and social inclusion

98. Although the project had made efforts to consider gender issues into the design and also involve many women, the evaluation found that this was not intentional from project planning and inception stage, as evidenced by most groups that were reported not to have gender balance (a special case of the leadership of the water users' associations who comprised of men only); in addition, master trainers and farmer trainers were not trained on gender equity in project activity delivery.

"*In this county, the household structure is such that women are the ones involved in farming activities. This is because farming is subsistence and does not generate income, so men gravitate to other activities.*" (Extension officer)

99. The leadership of the water users' associations comprised only of men. When probed on why this was the case, they explained that women were averse to the politics of managing the associations and thus tended to shy away from elective leadership positions. It was not very clear whether the project had a strategy of implementation framework to achieve specific gender outcomes. Although both men and women are free to participate in all project activities, while some trainings specifically targeted women to participate, specific project considerations to ensure gender sensitivity would have been helpful to guide implementers.

100. The evaluation observed that the cultural context consisted of a strongly patriarchal society where only men are allowed to own and control economic means of production and make essential economic decisions. The project engaged mostly with women as they are the main project participants but these women are not considered as owners of land so have to refer all decision-making requirements to their husbands, including how financial proceeds from the farm are to be used.

"*Women do not equally participate in planning and rolling out of project activities. Men in the society do not allow women equal decision-making. Men own the farms while women do the planting. The men then sell the produce without consulting the women/youth who do the manual work.*" (Trainer of farmers)

"*The norm/pattern is that it is usually men who make the final decision about what the farm will plant. Nonetheless, women mainly attended the trainings. It would have been important to have men as part of the training so that there can be 'buy-in' from earlier on. Eventually most men saw the importance of what the women were trying to do, and the women were allowed to plant, first on a trial period, then eventually they got full autonomy.*" (Smallholder farmer)

Relevance of the design to the changing context

101. The evaluation explored adaptations made by the project to tailor interventions to the changing contexts in different counties and communities. The evaluation noted that implementation areas (Kitui, Taita Taveta and Tharaka Nithi) all had an approach, though beneficiaries were at different levels of need and ability. The training packages and manuals did not include adaptation to context. The same module, same trainers and same approach was used everywhere and to all groups and all value chains regardless of group composition, geographical scope and core business of the group. For example:

i. some of the farmer trainers could not read or write and so had to be accompanied by others who were not farmer trainers to deliver the training; this definitely increased the time it took to complete a training;

ii. in other cases, the groups were so widely spread out that some farmer trainers decried that the distances *vis-à-vis* the allowances provided compromised the frequency of trainings offered to those groups; and

iii. some groups' challenge was neither production nor productivity but market consistency and assurance.

102. Overall, the nutritional situation, indicated by relatively high levels of malnutrition, showed that the nutrition component of the project (Objective 2) is highly relevant within the given context. However, the baseline survey indicated a fairly high dietary diversity already at the beginning of the project, hence, requesting additional strong efforts or targeted approach focusing on priority and nutritionally vulnerable groups. Most local level county extension officers strongly felt that the project could have made better efforts in ensuring their involvement right from inception through to project exit, which could have added value in prioritization of local project content and focus.

"*I was not part of the project design but attended a stakeholder meeting steered by FAO. I do not remember if there was a full stakeholder mapping or profiling of all irrigation schemes in the sub-county. Considering that I am the sub-county agricultural officer and my role involves working with all irrigation schemes and infrastructure, my role in the design of the project - particularly advising on where the greatest needs are around irrigation, the status, etc. - would have helped the project to plan and target better.*" (Agricultural extension officer)

103. The evaluation could not find a clear targeting criterion for identifying and selecting beneficiaries, neither for the agriculture production, for the market linkages nor for the nutrition-related interventions. However, the project documents and personnel interview submissions indicate that the project inherited most if not all of the 63 000 IPP-GAP project

beneficiaries in the five project counties. The remainder was adopted from other existing groups either referred by county government or recruited by trainer of farmers. Although no apparent beneficiary targeting criteria was evident, beneficiaries had to be in groups, whether new or existing.

"*The main criteria used to target beneficiaries was that they had to be an existing group in Kitui county. We had some criteria that was used to identify the beneficiaries. The focus was on groups doing agriculture or agricultural production with a focus on women and youth groups. In this area, women do agriculture along the Tana River belt.*" (Trainer of farmers)

104. The evaluation noted that the high membership of women happened by default due to gender composition of several existing self-help groups. Most groups started as self-help groups doing table banking and recruitment pattern seem to follow these variables:

i. responsiveness as a group
ii. representative of the county (from different wards)
iii. demographics (e.g., youth)
iv. vulnerability (elderly, widows, orphans)

105. This targeting criteria or lack thereof resulted in a mix of beneficiaries ranging from the poor and most vulnerable to the well-established and politically connected fairly wealthy households. Although poverty is relative, some of the farmers targeted cannot be described as poor or nutritionally vulnerable when compared with the poverty levels observed. This was not an isolated case, but several private owners of water infrastructures were direct beneficiaries of various government donations, politically connected and leading members of many existing groups. Also, county-specific outreach targets were not informed by any defined targeting criteria or needs for distribution, but by arbitrary allocation and re-allocation based on a county's demonstrated capacity to recruit project beneficiaries.

3.4 Management efficiency in programme delivery

EQ 4. To what extent are the results achieved by the project sustainable?

106. Efficiency analysis considers the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way. "Economic" aspects consider the conversion of inputs (funds, expertise, natural resources, time, etc.) into outputs, outcomes and impacts, in the most cost-effective way possible, as compared to feasible alternatives in the context. The "timely" aspect considers that the delivery is within the intended time frame, or a time frame reasonably adjusted to the demands of the evolving context. This may include assessing operational efficiency (how well the intervention was managed).

Finding 9. The management arrangements and decentralizations of the project implementation plan helped to deliver project activities. The county and sub-county structures were involved in the implementation aspects, but not in the planning. The targeting approach to use existing groups from previous projects such as IPP-GAP and existing groups from the county's own local structures was very successful in meeting the project target numbers. In all three counties visited, the stakeholders attested to smooth coordination of project activities by FAO CPOs. Training of trainers of facilitators and county officers was also successful. However, the targeting approach, though good in meeting the target numbers, did not result in needs-based interventions. Furthermore, evidence suggests poor procurement planning may have negatively affected implementation efficiency, while further evidence suggests cost ineffectiveness around staffing, overheads cost allocation, operational and logistical support.

Project management and coordination

107. High staff movement or turnover in Kitui, Machakos and Taita Taveta had a significant impact on the quality of project delivery, as new relationships had to be developed with the county government and other stakeholders. The evaluation noted that CPOs in these sites had only been with the project for around 12 months. For example, in Machakos, FAO county coordinator changed more than three times within a three-year project implementation period.

108. The FAO county project operations were managed by a single staff member, the CPO, responsible for all day to day operations including office etiquettes and field coordination. Staff were visibly overwhelmed with a wide range of coordinating requirements due to high number of stakeholders and paperwork involved. Staff responded differently to this pressure with some being better able to cope than others. As a result, in one or two counties, the field and technical support needs suffered, as staff had to limit field visits. The evaluation team on more than one occasion were scheduled to interview groups which were never part of the ISPP project and had never heard of the project. This suggests that the offices had in their possessions a database of various groups which they never visited or oriented into the project.

109. The other compounding factor was the lack of the project's own vehicle, which limited the CPO's ability to travel, as they had to borrow the vehicle from other projects when available. The evaluation observed from the evidence that this had a significant impact on the project's ability to coordinate and deliver on the outputs. It would have been prudent for the project to plan and budget for a contracted or vehicle hire. Interviews with staff showed that all counties considered this a major challenge but were expected to manage. However, the management team was of the view that the workload was manageable as currently designed.

110. The staffing challenges and work overload which characterized all county offices were also an issue at the FAO Nairobi office. Personnel supported multiple projects and were overstretched. Although some positions were fully budgeted for 100 percent personnel time, the evaluation found that in practice they had multiple other responsibilities added. This had an observable negative impact on project oversight and procurement efficiencies. Most personnel interviewed both in the counties and national office reported excessive work overload. These challenges appear to be systemic in FAO Kenya and not limited to the ISPP project.

Procurement system efficiency

111. Evidence shows that poor procurement planning may have negatively affected implementation efficiency. Challenges ranged from limited capacity by some personnel to forecast and prepare requisitions on time to delays and problems in logistics and transport. Table 11 shows procurements pending for the implementing year 2018. It was not clear whether these orders were still pending at the time of the evaluation or were eventually cancelled.

Table 11. Procurements pending in 2018

Tender No		Awarded price (USD)	Variance in USD	Status
2018/473	CPF launch	16 313.69	6 313.69	PENDING PAYMENT
2018/131	Visibility materials		(16 670.00)	PENDING DELIVERY
2018/138	Training manuals		(7 834.00)	PENDING DELIVERY
2018/313	Vehicle hire	926.30	14.30	PENDING DELIVERY
2018/519	Orthopaedic chair	965.35	165.35	PENDING DELIVERY
2018/371	Visibility materials	6 308.00	1 328.00	PENDING DELIVERY
2018/353	Visibility materials	194.22	(245.78)	PENDING DELIVERY
2018/280	Security services	12 297.03	58.03	PENDING DELIVERY
2018/330	Android tablets	27 974.09	12 974.09	PENDING DELIVERY

Source: ISPP Final Evaluation documents - Project Procurement Reports.

112. In some cases, procured inputs (seeds and fertilizers) could not be delivered to farmers on time for the growing season owing to warehousing and transport logistics and also where beneficiaries could not be easily identified, again suggesting poor planning.

> "*There is need to harmonize project implementation planning and procurement requests timelines so that for goods that take longer, the procurement process can start early. There are a number of issues that affect the procurement process, first, the requirements are diverse and also the project was very heavy on service delivery such as regular monthly data monitoring which required use of short-term personnel on a regular basis. The project does not have its own support and admin unit, there are only three M&E officers, five CPOs. It also didn't have vehicles.*" (Staff key informant interview respondent)

Cost effectiveness

113. The evaluation explored the extent to which the project intentionally applied cost-saving mechanisms. The response came from key informant interviews and in-depth interviews, mainly project personnel and partners.

114. In-depth interviews with project personnel showed that the ISPP employed some cost-saving mechanism which included:

i. deploying capacity building training through the group model;

ii. facilitating exchange visits in nearby areas to save on transportation costs;

iii. the project also did not budget for vehicles and had to use vehicles from other projects, that is leveraging resources; and

iv. using existing local structures such as extension officers who acted as trainers of facilitators to increase the reach of the project to the whole county; the trainers of facilitators were paid a stipend but the grassroots training of participants had no cost implication. This is reported to have reduced costs on employing more personnel.

Table 12. Approved ISPP project budget (2017–2019)

	BUDGET SUMMARY								
	All amounts in USD								
		Year 1	**Year 1 quarterly budget**				**Year 2**	**Year 3**	**Total**
	ITEM	USAID	Q1	Q2	Q3	Q4	USAID	USAID	USAID
a	Personnel	730 800	31 500	300 200	247 800	151 300	735 800	740 800	2 207 400
b	Fringe benefits	-	-	-	-	-	-	-	-
c	Travel and transport	468 768	1 200	183 628	195 100	88 840	425 976	241 769	1 136 513
d	Equipment	10 250	-	10 250	-	-	-	-	10 250
e	Supplies	200 040	-	71 870	112 160	16 010	219 230	148 270	567 540
f	Contractual	50 000	-	25 000	25 000	-	100 000	100 000	250 000
g	Other direct costs	752 531	-	182 840	338 356	231 336	775 874	494 498	2 022 903
h	Total direct charges	2 212 389	32 700	773 788	918 416	487 486	2 256 880	1 725 337	6 194 606
i	Indirect charges	287 611	4 251	100 592	119 394	63 373	293 394	224 294	805 299
j	TOTAL	2 500 000	36 951	874 381	1 037 810	550 859	2 550 275	1 949 630	6 999 905

Source: ISPP Project Document.

115. The project's total spent budget was USD 6 146 477 over a three-year implementation period, running from 2017 to 2019 as shown in Table 13. The project spent 26 percent of the budget on agronomy and agribusiness farmer training and support, 6 percent on nutrition activities and another 6 percent on operational and coordination costs for project delivery. This makes a total of 49 percent budget spent directly on project beneficiaries and operations. Nearly as much, 32 percent was spent on personnel costs alone with an additional 19 percent spent on national office (Nairobi) overheads making a total of 51 percent on personnel and overheads costs.

Table 13. Budget analysis

Total budget (2017–2019)	**USD 6 146 477**	
Agronomy and agribusiness	26%	49%
Market linkage	11%	
Nutrition	6%	
Coordination and operations	6%	
Personnel	32%	51%
Overheads	19%	
Total	**100%**	

Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team based in project documents.

116. The personnel costs were further broken down to comparison between full-time and part-time personnel costs. The project spent 55 percent of the personnel budget on full-time personnel covering five CPOs, three M&E officers, an administrative assistant and a project manager. The remaining 45 percent was spent on part-time personnel, including data collection enumerators who happened to be the same individuals engaged regularly on short-term assignments. The evaluation found that although a significant portion of the budget was spent on personnel costs, this did not result in an increased capacity to deliver project activities efficiently, particularly the monitoring function.

117. The results show significant capacity gaps and understaffed county operations. The rationale for relying on part-time personnel and recruiting adequate county operation

support personnel is not explained in the project design. This was neither cost-effective nor an efficient way of delivering project interventions. Reducing head count did not translate into reduction in personnel costs. Also, not budgeting for adequate operating requirements such as project vehicles did not translate into cost-saving for beneficiaries.

118. Table 14 shows the distribution of operating and support costs by county against number of beneficiaries served. It also compares costs per beneficiary per county target against achieved. Owing to lack of data disaggregation on beneficiary numbers by intervention, output and county, it is not possible to calculate cost per beneficiary by output or intervention.

Table 14. Project cost distribution by county

County	Target	Achieved	Direct costs (USD)	Support costs (USD)	Total costs (USD)	Cost/ farmer target (USD)	Cost/ farmer achieved (USD)
Kitui	14 000	40 966	712 268	78 464	790 732	56	19
Machakos	16 000	17 266	530 744	31 798	562 542	35	33
Makueni	14 200	12 744	492 886	62 229	555 115	39	44
Taita Taveta	18 000	14 188	399 623	44 668	444 291	25	31
Tharaka Nithi	22 800	24 416	950 771	86 734	1 037 505	46	42
TOTAL	**85 000**	**109 580**	**3 086 292**	**303 893**	**3 390 185**	**40**	**31**

Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team based in project documents.

119. The county with the highest percentage share of the budget was Tharaka Nithi with 31 percent, followed by Kitui with 23 percent and Machakos with 17 percent. Makueni and Taita Taveta had 16 percent and 13 percent respectively. Table 15 compares county beneficiary proportion against cost. The cost allocation shows that some counties carried the heaviest beneficiary target burden with the least budget allocation as in the case of Taita Taveta county which had a target of USD 18 000 representing 21 percent of the total project target while at the same time the budget allocation was only 13 percent. On the other hand, Kitui county, which had 16 percent of the project beneficiary target, was allocated 23 percent of the project operational budget.

Table 15. Beneficiary target vs cost

County	(%) of target beneficiaries	(%) of budget/cost
Kitui	16	23
Machakos	19	17
Makueni	17	16
Taita Taveta	21	13
Tharaka Nithi	27	31
Total	**100.00**	**100.00**

Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team based in project documents.

120. The evaluation could not verify the beneficiaries achieved for the purposes of calculating cost per beneficiary but noted that a 293 percent over-achievement for Kitui as shown in Table 15 highlights challenges with monitoring and risks of beneficiary double counting. Therefore, the evidence suggests that the project was not cost-effective on a number of fronts including: staffing and overheads cost allocation, operational and logistical support

at county level, beneficiary and cost allocation per county and full-time personnel vs part-time personnel capacity arrangement.

121. When considering project achievements on farmer training, Table 16 shows potentially the same beneficiaries counted at both ISPP end-term report and IPP-GAP end-term report. It is not clear whether the farmers were re-trained on good agricultural practices and conservation agriculture as part of ISPP intervention rollout or were simply counted as having been trained. Either way, since the activity was budgeted for on both the IPP-GAP and ISPP projects separately and the number of trained farmers not having increased, it shows the cost effectiveness may be questionable.

Table 16. Farmer training achievements for IPP-GAP and ISPP in the same counties

County	IPP-GAP end-term report (USD)	ISPP end-term report (USD)	Net
Kitui	13 104	40 966 (?)	46 888 (?)
Machakos	16 801	17 266	465
Makueni	12 610	12 744	134
Taita Taveta	6 113	14 188	8 075
Tharaka Nithi	14 064	24 416	10 352
TOTAL	**62 692**	**109 580**	**46 888**

Source: ISPP Final Evaluation 2020. Elaborated by the Evaluation Team based in IPP-GAP and ISPP end-term reports.

3.5 Sustainability of achieved project results

EQ 5. To what extent has the project contributed to the overall goal of reducing rural poverty and food and nutrition insecurity of smallholders in the arid and semi-arid lands (ASALs)?

122. Sustainability can be defined as the extent to which the net benefits of the intervention continue or are likely to continue. This included an examination of the financial, economic, social, environmental and institutional capacities of the systems needed to sustain net benefits over time. In assessing sustainability, the evaluation explored how the ISPP project helped to link farmers in the broader value chain to ensure farmers capacity is strengthened to sustain agricultural productivity at scale, linkages to profitable markets and adequate financial inclusion.

Finding 10. The project delivered training to farmers through government partnerships while services such as financing and market links were delivered through encouraging private players, including microfinance providers and commodity buyers, to work with farmers. No partnership agreement or memorandum of understanding was ever signed with any of these partners spelling out how FAO's interests and those of each partner as well as farmer groups' interests were to be safeguarded and promoted for equal benefit and sustainability of partnership. This had a negative impact on sustainability of the different networks and relationships created during project implementation as no intentional plans, systems or commitments were made to understand and nature these important relationships within farmer groups, between farmers and buyers and between farmers and other service providers.

123. The project relied too much on the county government structures for capacity delivery and monitoring support to project beneficiaries with the assumption that this would be good for longer-term sustainability. However, these government structures and personnel (agricultural extension officers) who were trained as master trainers and farmer trainers were very much under-resourced and often faced competing priorities from other NGOs and partners who come to the area. The master trainers and farmer trainers, most of whom

were permanent government officers (agriculturalist or extension officers) were financially supported directly by the project in all aspects of their interaction and training of farmers. When asked whether they will be able to continue supporting farmers after the project's completion, they all asked how this would be financed, as the county government did not have a budget for such and often worked with several organizations as long as they had the budget for them to facilitate the work. They could not see how they could continue supporting the interventions although important and aligned to the county's own priorities without a budget.

124. The project promoted a range of environmentally sustainable agricultural practices while demonstrating economic benefits through increased production and, in some cases such as the kitchen gardens, less labour-intensive. Due to the obvious benefits, the farmers are going to continue practicing the techniques. Overall, the project's approach was environmentally sustainable. The beneficiaries are likely to continue practicing use of simple technologies which are less costly and easy to adopt at household level. These include kitchen gardens and GAPs and water saving techniques such as conservation agriculture.

125. FAO project personnel had made significant efforts to bring both stakeholders and community awareness of transition planning and of when the project would likely come to an end through the delivery of county-level 'close-out' conferences. However, there was no evidence of a clear exit strategy in terms of processes of phasing out activities. For example, which activities were designated as part of the phase down,[5] phase out[6] and phase over.[7] In many cases, individual farmers offered portions of their private land to set-up a demonstration plot for the project such as a greenhouse or irrigation kits. The community's continued use of such project assets will likely be problematic due to conflict of interest and lack of community-based structures to manage the ongoing operations of these project initiatives.

126. The achievements on access to finance and markets, though they accounted for a small portion of project beneficiaries, are likely to be sustainable in the long-term. The project team's approach was to encourage private partners, finance providers and buyers to work with farmers. These, in turn, through own initiatives, reached out to farmers; however, the usual barriers associated with smallholder farmers meant they could only work with a few. Therefore, the gains made in improving access to markets and access to finance, though to fewer farmers, are very likely to be sustainable because of direct link created between farmers and service providers. Furthermore, the success recorded under the TIPs initiative with 100 households improving the feeding habits for children will continue as this was based on households' own food resources and knowledge in food preparation requirements for nutritious meals.

[5] Gradual reduction of project activities and reduced deployment of resources in the final year of implementation.

[6] Withdrawal of project inputs without explicit arrangements for the inputs or activities to be continued by any other entity because the project will have realized the changes that are likely to be sustainable without further inputs from these activities.

[7] The transfer of responsibility for activities aimed at accomplishing project objectives to other entities who will take up the continued delivery and sustenance of project benefits.

4. Cross-cutting issues

4.1 Collaboration, learning and adaptation

Finding 11. The project demonstrated clear intentions to promote collaboration by various stakeholders and partners, as well as continuous learning among stakeholders. However, these intentions as demonstrated in the project design were not followed-up with an implementation strategy that ensures systematic delivery of collaboration promotion activities, coordinated learning and feedback across all levels (community, county and national) in order to inform project adaptations where necessary. The project devoted significant amount of time and resources in developing promotional materials with stakeholder meetings dominated by quantitative review of project targets and meeting donor commitments in terms of promised numbers. This meant that the actual learnings on quality of project delivery such as which training modules require tailoring for what contexts, or which interventions require special attention or how the coordination of activities is progressing at sub-county and ward level etc. did not receive as much attention.

127. The evaluation explored how the project documented and packaged the learning to inform future programming. This included questions on how various stakeholders collaborated and agreed on necessary project adaptations needed. The questions and sub-questions on learning and documentation appeared 149 times in all tools across all respondent types.

128. The concept of documenting learning was not well understood by most respondents. At community level most focus group discussions, key informant interviews and in-depth interviews and stakeholder workshops respondents showed no awareness of any form of learning sharing, particularly feedback between farmers and project personnel on implementation issues and or challenges. Non-staff key informant interviews also struggled to answers the questions including members of the project steering committee. Most referred to county monthly and stakeholder meetings or workshops as learning events, but the focus of such events was widely reported as mainly for reviewing project targets.

129. However, though not fully documented, analysis of project design and adaptation points showed that the project made efforts to learn and adapt during implementation. Special instances reported were that in the beginning, the project focus was on irrigation, agronomy and agribusiness. This was adapted during project implementation to focus on agro-nutrition halfway through the project.

> "*We narrowed down our focus to kitchen gardens and small livestock. This was based on a study conducted in Kitui in 2016 (SMART Survey). This survey identified that Kitui had a problem with nutrition and that children were most affected*". (Staff key informant interviews respondent)

130. This intentional focus to learn-and-adapt was also pointed by a trainer who talked about how there was a questionnaire administered by county nutritionists to further identify the areas that should be prioritized, those that were malnourished. However, although efforts to adapt were pointed out, not prioritizing nutrition issues at the beginning and aligning the income generation component to also increase access to the healthy foods suggests the project management did not fully conceptualize the importance of strategic integration and linkages of complementary components.

131. County stakeholders exhibited significant levels of respect, trust and confidence in working with FAO – as the main implementing partner. The alignment of project approach and

county government priorities was commendable, and this may have underscored the demonstrated confidence and sense of shared ownership observed among county government stakeholders and project team.

132. At community level, the ISPP project included a good intent to build a 'learning' culture through frequent trainings and exchange visits, which strongly built a fabric of 'horizontal-learning'. During farmer trainers trainings and exchange visits, farmers would share their experiences in order to seek solutions to problems they were facing or to share their success stories. The exchange visits included CPOs.

"*We do biannual meetings for all CPOs and each CPO present an update. Resolutions are agreed concerning the targets and this is where also the county targets are reviewed. We also do review meetings to take stock of developments and this involves M&E officers from all counties. Other than these meetings, we sometimes do exchange visits for CPOs to learn from others, but these are not planned systematically; CPOs can liaise with other CPOs of their choice*". (Staff key informant interview respondent)

133. However, evidence for project-wide learning involving all stakeholders including country implementing partners could not be established.

"*I am not aware of wider learning planned for the project where all stakeholders including CPOs are involved in a way that goes beyond the targets although county level stakeholder meetings do happen but mainly the focus is to take stock of developments and targets.*" (Key informant interview, trainer of trainers)

134. Although the stakeholders conducted quarterly meetings, these mainly focused on project progress in terms of targets. At county level, stakeholders also operated in solitary mode keeping their learning to themselves. The project did not provide a platform or mechanism for stakeholders to review and learn intervention-based project progress. The broader evidence also suggests that the project did not employ a deliberate and clear strategy to capture and document project learning other than tracking project targets and achievements. Learning related with, for example, which modules are working, whether the training of farmers is effective or not, what are emerging issues in the community, were not planned for at project level.

135. The project steering committee was established in all counties, but its role defaulted to a monitoring function for project targets on training rollout and activity implementation. In terms of visible learning, the project evaluation revealed that peer learning among personnel was limited to a few exchange visits for some personnel members but not regular learning framework with feedback loops both vertically and horizontally. Learning and collaboration within teams, sectors and across project and departments seems to have also suffered. Expertise and knowledge seem to rest more with individuals than the institution.

136. Evidence arising from field level observations and interviews suggested that at FAO project management and operational level, the culture of sharing and learning between colleagues, departments and projects does not exist. Evidence showed personnel operate mostly in silos with limited learning and sharing between departments or other projects.

"*People are very territorial; information, knowledge and expertise around here is not with FAO as an organization but with individuals, and they protect it. It is difficult to know what the other department or project is doing.*" (Staff key informant interview respondent)

137. At local level, farmer groups, cooperatives, community-based organizations, civil society organizations, etc., also operated in isolation with other similar groups as well. The project did not facilitate the formation of a collaboration framework to ensure small self-help groups and cooperatives self-coordination for collective bargaining and marketing purposes. Large cooperatives and water user associations' functions did not go beyond the operations of such cooperatives or associations to collaborate with other similar groups. Although farmer field schools or exchange visits were arranged for certain groups, this was however, limited to individual groups and not a systematic local level structure for ongoing learning and collaboration. It would have been good for the project to develop a strategy for widely sharing the learning out of the TIP trials. The evaluation could not find evidence of approaches to collaborate, learn or adapt for better promotion of integrated nutrition, improve production and consumption patterns with the wider stakeholders for scaling-up.

4.2 Capacity development

Finding 12. The project's main pathway to achieving the set goal of contributing to reducing poverty, was capacity development for all key stakeholders (project personnel, county government staff, private partners, community-based organizations, farmer organizations, such as water user associations and farmer groups, and individual farmers). However, the project did not conduct a capacity assessment for the target stakeholders to identify specific capacity needs. The project baseline attempted to collect training needs for farmers though not comprehensive enough to cover other stakeholders, but it does not appear like the results of this assessment informed the prioritization and development of farmer training materials. As a result, in the absence of a comprehensive capacity development assessment and implementation framework, the project's capacity development activities were patchy and inconclusive.

138. The capacity building component of the project was largely effective in influencing behaviour and attitude changes amongst community groups and smallholder farmers, especially in i) enhancing consumption support at household level; ii) selling the surplus produce; iii) active use and adoption of improved seeds; and iv) practicing good agricultural techniques. Community facilitators pointed out they witnessed many components of their training being practiced within communities, especially relating to simple hygiene, such as hand washing after using the toilet.

139. The project allowed CPO personnel to arrange exchange visits to other project sites for peer-learning, although some personnel indicated that more could have been done. In addition, personnel attended project coordinated workshops, but by and large capacity development for personnel was mostly done through one-on-one support from line managers. Capacity around administration and procurement management for CPOs was an apparent gap, which resulted in procurement issues pointed out earlier in this report. The main stakeholders for the project involved county government officers and the private sector. The project did not carry out a specific capacity assessment to identify capacity needs for efficient project delivery and capacity gaps. However, the project delivered intervention-based training to CPOs aimed at building capacity in agronomy, agribusiness and other targeted interventions.

140. At farmer level, the project trained farmers in ecological methods of crop production and pest control. They were also trained in best practice climate-sensitive and conservation farming techniques including soil preparation, ground water preservation, etc. Demonstration sites and coaching were used to provide for skills transfer in good

agronomic practices and improved production. However, at community level, there was no specific capacity building or training initiative for community-based organizations and other community-based structures that support development at local level. Member-based community institutions such as water user associations had their capacity built to manage their own groups only, but not to support other groups. Linking nutrition and agriculture is a very important matter, but it requires strategic as well as technical capacity building, personnel as well as institutional capacities.

4.3 Gender mainstreaming

Finding 13. The project made an expressed commitment for gender considerations in the project design but the pathway to realizing gender mainstreaming across all aspects of project interventions was missing. Project beneficiary targeting, activity delivery and other project processes such as value chain selection which require systematic gender sensitivity to ensure meaningful equal participation by women, including in such issues as participation in decision-making both at household and community level, were largely done based on traditional norms. This saw for example women attending most trainings as men send their wives, while back at their homes the same men take full charge and control of what to grow, where and when as well as decisions about selling and participation in markets.

141. Evidence shows that the project did not establish a clear system, process and framework that ensures relevant gender issues were considered in all stages of project implementation and that personnel, partners and stakeholders have access to tools and support to implement gender-sensitive activities. Women form the biggest share of the agricultural labour force; hence, by default, they are the beneficiaries and participants in the farmer groups, but culturally they do not own productive assets.

142. The project was not explicit on how to ensure both men and women are engaged on meaningful and equal participation in all aspects of the project, including important decisions about money and spending. Women participation in leadership positions was very limited to women-only groups or in groups which were 90 percent constituted by women. In most cases, where the group was evenly composed, women did not hold substantive leadership positions. Several women respondents said they always had to retrain their husbands after each training session and encourage them to implement the knowledge passed on. This was mostly because men would send their wives to join the project and attend trainings but retained most decision-making powers with regards to production and other important aspects of household decisions.

5. Conclusions and recommendations

5.1 Conclusions

Conclusion 1. The ISPP project design was relevant to the context and needs of both the beneficiaries and county government priorities.

143. Overall, the ISPP project was very relevant to the country context, FAO priorities and beneficiary needs. Interventions had potential to address the capacity constraints faced by smallholder farmers and help improve agricultural production and household incomes for target beneficiaries if implemented well.

Conclusion 2. The project contributed to increasing capacity of farmers to increase production through training in agronomy and supporting better use and management of water resources.

144. This was achieved through development of training manuals, training stakeholders and cascading the delivery of the same training in all five counties. Farmers were trained on contract farming and negotiation skills including marketing strategies, financial access and market information. The project identified and trained trainers, including private and public extension service providers, on technical and managerial agro-entrepreneurship skills to train farmer groups. Producer groups were mentored and coached to access business development services.

Conclusion 3. Good connection between improved productivity and nutrition knowledge among project beneficiaries was observed.

145. The project intended to integrate production interventions with nutrition activities to enable greater and deeper impact on beneficiaries. The analysis of the project context and background reveals this intention was commendable as the anecdotal evaluation evidence shows a strong positive connection between combined improved production and nutrition knowledge on nutrition uptake by smallholder farmers.

Conclusion 4. A significant proportion of project beneficiaries grew different types of vegetables and fruits at their homes through the kitchen garden innovation, thereby increasing access to diverse nutritious food to women and children.

146. The project sought to improve access by women and children to different quality foods. Male and female farmers were trained on production of high nutritional value crops, small livestock and vegetables and food safety, preparation, preservation and storage practices. All the visited households had a kitchen garden with a variety of fruits and vegetables. This was complemented by the TIPs pilot intervention trialled in Kitui county (complimentary feeding for children under the age of two in 100 selected target households). However, lessons of the TIPs trial did not inform or were not incorporated into the ISSP across all the five counties.

Conclusion 5. The market links and improving access to markets for smallholder farmers was largely unsuccessful with only a few farmers able to sell or have supply contracts with reliable buyers.

147. In spite of the project's efforts to link farmers with buyers and good markets, smallholders farmers still struggle to access reliable and profitable markets due to poor road network

and market infrastructure such as collective production, bulking centres and collective selling.

Conclusion 6. The project's intended holistic approach could not be realized in practice.

148. At implementation level, a framework for layering and/or sequencing of interventions and/or activities was not available and neither was there a monitoring system designed to track such layering and sequencing of activities. In addition, the project did not stipulate a minimum package of activities to be delivered to all project participants covering both production and nutrition aspects to ensure the holistic nature is achieved at household level.

Conclusion 7. The ISPP project had significant overlaps with IPP-GAP project, making ascribing of achievements to ISPP project impossible.

149. The ISPP project was implemented by FAO in the five counties of Kitui, Tharaka Nithi, Machakos, Makueni and Taita Taveta at the same time period as the IPP-GAP project to the same beneficiaries. Evidence shows that the IPP-GAP project was meant to have completed in 2017 giving ISPP a strong foundation to build on. However, delays in activity roll-out resulted in the IPP-GAP project given a no-cost extension until 2019, thereby coinciding with the ISPP implementation period running from 2017 to 2019. This overlap means that it is difficult to ascribe the achievements observed to ISPP without robust monitoring data able to disaggregate by intervention, timeframe, location and funding source. The project design could have been more tailored to more explicitly complement IPP-GAP in location, interventions and beneficiaries.

Conclusion 8. Gender mainstreaming strategy was not explicit in project design and also not delivered effectively.

150. The project did not consider a framework for gender mainstreaming in project design and implementation across all aspects of project interventions. Project beneficiary targeting, activity delivery and other project processes such as value chain selection (etc.) which require systematic gender sensitivity were largely done and influenced by traditional norms. The project's influence on gender integration and social inclusion was not evident in project implementation processes and procedures both at county and field level (sub-county, ward and individual household).

Conclusion 9. The project M&E system was not fit for purpose.

151. The project monitoring could have captured consistently indicator progress starting with baseline values where baseline figures exist in a comprehensive manner and disaggregated by intervention, gender, county and ward to help inform ongoing implementation. The implementation could also have benefitted from FAO supervised mid-term and end-term evaluations to course correct implementation shortcomings.

5.2 Recommendations

Recommendation 1. To FAO project managers. Establishing a fit-for-purpose M&E system.

152. The project monitoring data could not answer basic questions such as number of beneficiaries per intervention per county. It also could not show annual disaggregation of achieved targets while the key learning on effectiveness of process and progress on

outputs and outcomes were not evaluated both at mid-term and end-term. This was a missed opportunity for the project to address most of the issues highlighted in this report. The evaluation recommends that FAO requires all projects of similar size to ensure utilization and consistency of baseline, mid-line and endline studies for projects of similar size, with progress monitoring building on from baseline results. Although this project carried out such studies, its utilization in ongoing project implementation and monitoring could not be clearly established.

Recommendation 2. To FAO project managers. Establishing a community-based collaboration platform to foster long-term sustainability of project results.

153. FAO can leverage on its national and local footprint to create lasting collaboration and partnerships beyond the project life cycle. Farmer groups and other community-based organizations can collaborate better if there is a common platform that coordinates the interaction of various groups at local level. The evaluation recommends that FAO create a collaboration framework covering NGOs, the private sector, community-based organizations and communities at sub-county and ward levels as part of any project implementation structure to allow optimization of synergies at local level and coordinated response by all players working with the same communities and households. This would enable the projects to engage different implementing partners by leveraging their expertise, experience and continued presence on the ground to support in the implementation even beyond project lifetime.

Recommendation 3. To FAO project managers. Enhancing operational transparency and community accountability within and across projects operating in same areas.

154. The programme management can maximize project impact by ensuring that all projects operating in the same communities and serving similar beneficiaries during the same time periods have value added, complementarities and differences well-articulated to enable appropriate apportionment of resources and contribution to outcomes or change. The evaluation found some difficulties in apportioning achievements or contribution to improvements in the lives of beneficiaries where more than one project had active operations with the same group of households within same time periods. Future projects that intend to build on the gains of earlier projects should have a clear demarcation of their starting points, differentiation of beneficiaries and/or interventions as well as being explicit about the relationship between the different projects.

Recommendation 4. To FAO project managers. Ensure adaptive management of projects is encouraged and applied where necessary.

155. The project implementation approach assumed that CPOs would be able to coordinate delivery of project interventions covering over 17 000 unique households on average per county without assured access to projects' own dedicated vehicle and dedicated office admin support services. Evaluation evidence showed that all CPOs in the five project sites were overwhelmed and this impacted on the project negatively. The project management should test operational assumptions and make necessary adjustments early on to avoid compromised implementation quality.

Recommendation 5. To FAO project designers and managers. Establishment of an operational framework and implementation guidelines for gender mainstreaming.

156. The project design did not clearly articulate how gender mainstreaming was to be carried out and as a result, operations and activity implementation was gender blind. Future projects should consider a gender mainstreaming framework that covers design, implementation and monitoring of activities and measurable milestones to ensure specific gender-related outputs and outcomes can be achieved and demonstrated as well.

Recommendation 6. To FAO project designers and managers. Ensure project evaluability is maintained throughout the project's lifetime.

157. The project conducted a baseline study but did not use baseline results as the benchmark for progress monitoring, introduced new indicators but did not keep a data trail that ties the baseline and progress reports. Although the project baseline was done, subsequent (mid-term and end-term progress reports) and other monitoring data used different indicators, data points and methods, thereby negatively affecting the evaluability of the project. Future projects should ensure evaluability of project achievements and outcomes is maintained throughout the project lifetime, regardless of whether new indicators or benchmarks are introduced.

Recommendation 7. To FAO project designers and managers. Ensure project designs have a well-documented exit strategy with desired sustainability action plans.

158. Although the project phase-out was well understood by all stakeholders, the responsibility for ongoing sustainability of project benefits to beneficiaries was unclear. Future projects should ensure that the exit strategy includes a sustainability plan endorsed by local actors and stakeholders with a clear and actionable commitment to support sustainability of the project benefits.

Recommendation 8. To FAO project designers and managers. Ensure support for access to markets is comprehensive and deep enough to address systemic barriers.

159. The evaluation recommends interventions on market accesses to go beyond referrals and linkages to include facilitation of technical support to establish lasting collaboration and partnership building with all key players in selected value chains covering farmers, input suppliers, logistics suppliers and agro-dealers, microfinance providers and commodity brokers or buyers.

Recommendation 9. To the project donor USAID. Ensure that accountability reporting requirements and introduction of new indicators does not significantly affect the project monitoring, learning and evaluability.

160. Project progress reports are an important part of accountability tools but also help project teams to succinctly review project implementation achievements and challenges to inform adaptations where necessary. Combining accountability and fiduciary requirements with project learning and implementation progress review in project reports helps donor partners to maintain oversight on projects, especially where large portfolios are involved. However, the downside is that, often project teams focus more on donor reporting requirements than the project's own learning and adaptation needs and so was the case with ISPP periodic progress reporting. The evaluation recommends that, demonstration of project learning and adaptations in periodic project progress reports be elevated to be a priority accountability reporting requirement as well.

6. Lessons learned

Lesson 1. Funding and resource management can be optimized to amplify outcomes.

161. The project was successful to mobilize resources for complementary and continuation from the predecessor project IPP-GAP. This is ideal to reach the high-level ambitious targets, such as improved diets. This opportunity was not well-leveraged since it requires a transparent approach and careful sequencing and criteria to be efficient to meet the objectives and respond to the donors well. As a result, achievements specifically by ISPP were difficult to attribute to the project because of the project's overlap with its predecessor.

Lesson 2. A poor M&E system can cost both FAO and communities.

162. The M&E system applied by the ISPP project does not meet minimum requirements for good practice and quality expectations of an organization such as FAO. FAO should consider swift improvements, seeking technical assistance support and mobilizing additional resources to support projects systematically, at the design stage, and for the start-up, to establish such a simple but meaningful reporting and monitoring system that responds to the needs to verify and justify the use of resources and demonstrate progress consistently. That will also help to showcase lessons learned, which urgently requires to feed into the policy dialogue. The lessons of the TIPs are good examples, and as not being taken up by the project, at least its sharing in global space is important and might help to ensure an uptake in the global nutrition knowledge management. Furthermore, an independent mid-term review would have helped to course correct most of the implementation challenges observed.

Lesson 3. To achieve nutrition outcomes at scale, FAO senior management commitment to nutrition-sensitive agriculture is necessary.

163. The studied project was in a fortunate situation to plan and have resources for an integrated approach. However, while this approach was intended and visible to some extent at the planning framework, the links were not visible in the field. Both tiers - agriculture and nutrition - were acting more in silos than utilizing the opportunity. This is a systemic issue and FAO's recent efforts to promote integrated approach requires a cultural shift to promote personnel collaboration and intervention integration, rather than simple transactional technical assistance while departments, projects and personnel continue to work in silos. It is important to expand global expertise to support country teams in that regard, with hands-on support, transferring lessons and success between countries or stakeholders. Seeking and mobilizing those resources is also a country management responsibility, which often fails at questions related to nutrition. It is important to guide country senior management and get their commitments, which will trigger bold decisions to support the nutrition agenda in the country. Senior management should make a commitment to linking agriculture with nutrition to achieve nutritional outcomes in all agricultural projects.

Lesson 4. Holistic approach to agricultural development at household level to establish sustainable livelihoods for smallholder farmers is very important.

164. The project promoted i) nutrition, ii) agronomy and iii) access to markets while targeting 85 000 households. All smallholder farmers will require at least two components (nutrition and agronomy) as this will be important for food security, and some among these will then need support in accessing markets for farming as a business. FAO should ensure a clear targeting of packaged interventions at household level in order to achieve the holistic benefits upon the livelihoods of targeted beneficiaries. Also, the market development should be approached from an end-to-end point of view, covering all aspects (from production requirements, capital and funding requirements, transport and logistics, value addition, storage and warehousing, collective bargains, etc.). Linkages alone leaves most farmers vulnerable to market forces, examples of which are farmers who were left with crops when the buyer failed to turn up on a contract growing agreement in one of the counties.

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Appendix 1. People interviewed

FAO personnel and donors

Last name	First name	Institution/agency	Role
Abidih	Mbatha	FAO – Kenya Office	Taita Taveta County Project Officer
Cai	Tian	FAO – Kenya Office	Programme Officer
Kimani	Irene	FAO – Kenya Office	Nutritionist
Kinya	Anne	FAO – Kenya Office	Finance and Administration Assistant
Mathabi	Mark Jared	FAO – Kenya Office	Machakos County Project Officer
Mukima	Jackline	FAO – Kenya Office	Project Operations Assistant
Mulevu	Mercy	FAO – Kenya Office	Kitui County Project Officer
Ngetich	Ambrose	FAO – Kenya Office	Tharaka Nithi County Project Officer
Okoba	Barrack	FAO – Kenya Office	Program Manager
Opio	James	FAO – Kenya Office	Makueni County Project Officer
Oyuga	Joseph	USAID – Kenya Office	Donor Representative
Toel	Otundo	FAO – Kenya Office	M&E Specialist

Last name	First name	Institution/Agency	Role
Baraka	Agnes	Msichoke Youth Group Taita Taveta	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Chedodo	Parmela	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
Fredrick	Mititu Njau	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Gatwiri	Yuvita	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Igoki	Agliviene	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Ithima	Elestaria	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Kabura	Frank	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Kaburu	David	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Kagendo	Matrice	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Kajuju	Betty	Kibugua Mother to Mother Support Group, Tharaka Nithi	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs
Kanana	Harriet	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Kanini	Elosy	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Kanjiru	Jucyline	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Karani	Robert	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Karimi	Tabitha	County Government, Tharaka Nithi	Master Trainer
Karimi	Purity	Farmer, Tharaka Nithi	Beneficiary, Significant Change

Last name	First name	Institution/Agency	Role
Karimi	Ann	Kibugua Mother to Mother Support Group, Tharaka Nithi	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs
Kariuki	Sylvester	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Karugi	Norah	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Kasumuni	Rehema	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
Katee	Wamae	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Katee	Kimonyi	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Kawira	Tarrin	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Kimeai	Ciriaka	Kibugua Mother to Mother Support Group, Tharaka Nithi	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs
Kimonyi	Jemimah	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Kimonyi	William	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Kinyua	Wilfred	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Kiongeru	John	Msichoke Youth GroupTaita Taveta	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Kirongo	Riziki	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
Kyalo	Wayua	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Lendisi	Rispah	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
M'njeru	Bide	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
M'nkoroi	Julius	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Makanga	Jasper	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Matuku	Katuta	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mbae	Regina	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Mbaka	Samuel	Thamani SACCO Society	Private Sector Partner Offering Credit
Mbere	Margaret	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mbindiya	Vivi	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mbindya	Emily	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens

Last name	First name	Institution/Agency	Role
Mjeni	Rehema	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
Mpandi	Laurencia	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mshari	Lucy Zaina	Farmer, Taita Taveta	Beneficiary, Significant Change
Muema	Syovinya	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mugai	Emily	Kibugua Mother to Mother Support Group, Tharaka Nithi	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs
Mugero	Agnes	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Mugero	Agnes	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Muindi	Harriet	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mukima	Jackline	FAO	ISPP Project Operations Assistant
Mukugi	Doreen	Kibugua Mother to Mother Support Group	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs
Mukwaiti	Lydia	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Mulaka	Mwanamisi	Msichoke Youth Group - Taita Taveta	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Mulangia	Mutisya	ADSE, Kitui	Monitoring and Implementation
Mumu	Lenet	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Murungi	Loyd	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Musau	Patrice	County Government, Kitui	Master Trainer
Mwachale	Peter	Msichoke Youth GroupTaita Taveta	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Mwandeja	Alex	Msichoke Youth Group - Taita Taveta	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Mwangangi	Katheke	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mwangangi	Peninah	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Mwangangi	Monicah	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
Mwasi	Patience	County Government, Taita Taveta	Master Trainer
Mwavula	Boniface	County Government, Taita Taveta	County Executive Officer
Mwende	Francline	Kiriguni ISPP, Tharaka Nithi	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Mwende	Shirley	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Ndege	Alice	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Njage	Rodah	Kibugua Mother to Mother Support Group, Tharaka Nithi	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs

Last name	First name	Institution/Agency	Role
Njagi	Sarah	Kandungu Widows SHG, Tharaka Nithi	FGD – Women Only: Access and Consumption of Diverse and Quality Foods
Ukima	Adelina	Weru SHG, Tharaka Nithi	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens
Waiwa	Josphia	Msichoke Youth GroupTaita Taveta	FGD – Mixed Gender: Productive Capacity on Agronomy, Water Use and Management
Wamathai	Simon	County Government, Kitui	Master Trainer
Waoa	Aileen	Kibugua Mother to Mother Support Group, Tharaka Nithi	FGD- Capacity to Access and Consume High Nutritional Value Food Stuffs
Yohona	Ruth	Taughi CA Farmers Group, Taita Taveta	FGD – Women Only FGD: Access and Consumption of Diverse Foods and Agribusiness and Access to Markets
Zakayo	Zipporah	Kyanika Adults Group, Kitui	FGD – Mixed Gender: Capacity to Establish Diverse, High Nutritional Value Crop Gardens

Muiru Agritech – Nutrition FGD (13/2/2020)
Edith Nkinga
Rose Gatakaa
Jellyfrent Mukwanjeru
Flora Rucha
Esther M'nairobi
Ruth Njeru
Grace Karimi
Hellen Mukwamugo
Janet M'Rithaa
Margaret Gilbert
Beatrice Kanjiru
Kangutu Self Help Group (13/2/2020)
Jane Wanja
Susan Gaceri
Mercy Miriti
Tabitha Njeri
Christine Gatwiri
Dainer Kaingu
Kellen Muthoni
Joyce Karimi
Lucy Wanjiru
Stella Kangai
Idah Kaari
Phineas Mwandiki
TIPs FGD Kitui (14/2/2020)
Christine Kasyoka Kilonzi – TOF TIPs
Mwende Muthui
Rolyn Rose Mwinzi
Ruth Kivivya
Beatrice Mutinda
Winfred Mueni Mutie
Mary Gitau
Kitui Group FGD (15/02/2019)
Mwende Self Help Group
Ukiakianyo wa Aka SHG
Mutethya Kalulini Women Group

Tausi Poultry Farmers
Ilika PHLWAS Self Help Group
Tamika Horticulture Farmers - nutrition and irrigation
Masinga Women's group
Maviani Horticulture farmers
Tiva environmental youth group
Nthongoni Horticultural farmers
Maito Self Help Group
Nguuni Mother to Mother support group (15/2/2020)
Fransicar Mumo
Esther Alex
Janet Mumbe
Nancy Mwende
Glaudys Paul
Erastus Nyamai Kiema
Msichoke Youth Group (17/02/2020)
Granton Samora
Charles Mwawunghanga
Joshua Njumwa
Josphat Mjove
Jimson Kambale
Handerson Mwhisama
Edson Mwakati
Walter Mvale
Clarah Kilinda
Landi Taughi Self Help Group (18/02/2020)
Rose Mjomba
Ronald Mwakughu
Martha Daniel
Decima Manyani
Alice Kilinda
Diana Masabo
Eunice Mzee
Prudence Ngoso
Joseph Righa
Patrick Muysoka
Benedictor Mzae
Ostine
Eunice Ngwatu
Mlechi Network
Hunningtone Nyali
Priscillah Nganga
Martha Macharo
Winnie Munyamuwezi
Mary Mwaite
Julitan Majala
Saru Hunnington Nyali
Tharaka Nithi (FGD)
Shirley Lynn Mwende
Justina Mkwonyaga
Silibester Karimi Kariuki – Chair
Sarah Mtue Njagi – Secretary
Alice Ndege
Agnes Mugero
Norah Karugi

Lydia Mukwaiti
Julius M'Mkoroi
Elestaria Ithima
Robert Karani
Lenet Mumu
Bide M'Njeru
Kiriguni FGD
David Kaburu
Loyd Murungi
Jasper Makanga
Winfred Kinyua
Regina Mbue
Silvister Thigaa
Frank Kabura
Fredrick Miriti Njau
Harriet Kanana
Jucyline Kanjiru
F. Mwende
Elosy Kashivu
Ndoria FGD
Angeline Mkala
Victor Makau
Chidodo Muweye
Margret Mbeyu
Wailikoki Ngukulai
Susan Muthoni
Nashoki Sikoki
Alex Kiongeru
Esther Yohana
Baraka Namnyark
Janet Kiserian
Upendo Oloi
Naha Kiloiya
Baraka Ngukulai
Neyesu Landei
Margaret Wairimu
Nanoto Lengu
Elizabeth Siara
Ngokonya Ngukula
Nembris Mikol
Teresia Lendisi
Rebecca Mandila
Rahel Timotheo
Elizabeth Mbaloi
Sadah Ngombo
Janet Kasumuni
Rejina Kiserian
Esther Joshua
Rejeki Naeki
Helena Peter
Miriamu Nyinyo
Magdalen Solomon
Miriam Selenoi
Yandi Sikoki
Mary Naeli

Sarah Kiringoli
Metoji Milia
Neema Leenjat
Peter Uhuru
Matilda Mwangondi
Mary Nasimiyu
Nancy Njeri
Salome Wangari
Mary Tughunya
Individuals (KII/IDI? significant change)
Beatrice Mathenge -extension officer
Irene Mwendandu – Farmer trainer (12/2/2020)
Lawrence- Significant Change Story
Janet Musau – Extension Officer
Anthony Kariku – Extension Officer
Luisa Muindu- Extension Officer
Jospeh Ivuso – Significant Change (19/2/2020)
Irene Kimani – Nutritionist FAO

Appendix 2. ISPP project log frame

Results chain	Key performance indicators	Means of verification	Assumptions/risks
Impact			
The overall development goal of the ISPP is to contribute to the reduction of rural poverty, food and nutrition insecurity of smallholders in the arid and semi-arid lands.	- Percentage change in productivity, income and trade. - Stunting in children under two years of age. - Household dietary diversity score. - Minimum dietary diversity for women of reproductive age (MDD-W). - Minimum acceptable diet for children aged 6-23 months. - Increase in employment opportunities created for women and youth. - A more conducive enabling policy and investment environment. - Number of people pulled out of poverty. - Number of people reached by nutrition interventions. - Value of percentage increase in production and sales. - Volume of percentage increase in production and sales. - Gross margin increase. - Number of people applying new technologies. - Employment opportunities created for women and youth.	- Kenya Integrated Household Budget Survey 2005–06. - Kenya Demographic and Health Survey. - FAO outcome evaluation.	- political stability during the implementation period- - Goodwill of national and county governments to legislate on improved policy environment.
Outcomes			
Improved livelihoods through enhanced productivity, market linkages and better nutrition.	- Percentage increase in volume of agricultural produce for targeted households. - Percentage of households engaged in diversified agro-enterprises. - Percentage of farmers including women and youth using improved technologies or GAPs in diversified enterprises. - Minimum dietary diversity for children aged 6-23 months. - Minimum dietary diversity for women of reproductive age (MDD-W). - Percentage change in volume traded in metric tonnes. - Percentage change in household income of the target beneficiaries.	- Household survey, FAO. - Government of Kenya monitoring and SMART survey reports. - FAO monitoring data.	- Enabling environment that supports trade development. - Support from community leaders or policy makers to influence change in cultural and traditional beliefs. The overall development goal of the ISPP is to contribute to the reduction of rural poverty, food and nutrition insecurity of smallholders in the arid and semi-arid lands.

Results chain	Key performance indicators	Means of verification	Assumptions/risks
			- Improved livelihoods through enhanced productivity, market linkages and better nutrition. - Beliefs.
Outputs			
Output 1.2.2.1: Improved smallholder productive capacity on agronomy, water use and management.	- Number of hectares under irrigation using water efficient methods. - Number of men and women farmers trained on efficient water management methods. - Number of men and women farmers trained on diversified production systems. - Number of households trained on GAP, post-harvest handling, food safety and quality management. - Number of improved soil and water conservation technologies or management practices established.	- Project reports, FAO.	- Effective support and willingness from the County Governments. - Community commitment to improve on farming and trade practices.
Output 1.2.2.2: Improved farmer's capacity to establish high nutritional value crop gardens.	- Number of smallholder households with established vegetable gardens and small livestock. - Number of farmers (both men and women) trained on food safety, preparation, preservation and storage practices. - Number of male and female farmers with access to diverse, drought tolerant traditional seeds.	- Project reports, FAO.	- Effective support and willingness from the County Governments. - Community commitment to improve on farming practices.
Output 1.2.2.3: Improved access by women and children to diverse and quality foods.	- Feasible, affordable, culturally acceptable, local complementary feeding recipes developed for one county. - Number of households that know and apply food safety practices: Reheating; use of clean water; and washing hands. - Number of mothers/caregivers that regularly prepare one or more improved complementary feeding recipes. - Number of households with improved dietary diversity.	- Project reports, FAO.	- Effective support and willingness from the County Governments. - Community commitment to improve on farming practices and eating habits.

Results chain	Key performance indicators	Means of verification	Assumptions/risks
Output 1.2.2.4: Improved trade and market linkages.	- Number of farmer associations engaged in collective marketing of agricultural produce. - Number of contractual agreements between farmer associations and buyers. - Number of associations with bankable business plans. - Number of farmer associations selling market value added products.	- Project reports, FAO.	- Stable trade and market environment conditions.
Output 1.2.2.5: Improved and equitable smallholder capacity on agribusiness management.	- Number of extension service providers trained on farm business planning and management. - Number of male and female farmers trained by extension service providers on farm business planning and management. - Number of producer groups and MSMEs accessing business development products and services.	- Project reports, FAO.	- Cooperation and support from County government.
Output 1.2.2.6: Project management and coordination.	- Number of counties sensitized on smallholder supplemental irrigation opportunities. - Number of county level stakeholders sensitized on smallholder supplemental irrigation opportunities. - Quantity of communication materials developed.	- Project reports, FAO.	- Project funding assured.
Output 1.2.2.1: Improved smallholder productive capacity on agronomy, water use and management			
Activities: 1.2.2.1.1 Support formation of water users' associations	Number of water user associations formed and supported to register.	- Project reports. - Water Users Associations registry.	- Effective local government cooperation and active participation.
1.2.2.1.2 Train irrigation water user's association committees on efficient management of micro-irrigation systems and water harvesting structures	Number of water user association committees trained.	- Project reports. - List of participants	
1.2.2.1.3 Promote use of GAP, post-harvest handling, food safety and quality management	Number of farmers trained. Number of training modules developed and applied.	- Project reports. - List of beneficiary and training modules.	
Output 1.2.2.2.: Improved farmer's capacity to establish diverse, high nutritional value crop gardens			
1.2.2.2.1 Train men and women farmers on production of high nutritional value crops and small livestock and vegetable gardens	Number of farmers trained.	- List of beneficiary farmers. - Project report.	

Results chain	Key performance indicators	Means of verification	Assumptions/risks
1.2.2.2.2 Train male and female farmers on food safety, preparation, preservation and storage practices	Number of households trained.	- Gender disaggregated list. - Project report.	
Output 1.2.2.3: Improved access by women and children to diverse and quality foods			
Activities 1.2.2.3.1 Trials for improved practices (TIPs) in one county and development of complementary feeding recipes	Number of households recruited into the study. Number of households who participate in the study.	- Analysis report. - Project report.	- Effective local government cooperation and active participation.
1.2.2.3.2 Training of agriculture and health extension on improved complementary feeding practices	- Number of staff trainings on nutrition education and training strategy. - Number of recipe books of complementary food and family meals developed and distributed. - Number of posters and other publicity documents developed on feeding/health extension. - Number of government extension agents in agriculture and health sectors trained. - Number of sensitization meetings held with community leaders. - Number of food preparation demonstrations conducted.	- List of beneficiaries. - Workshop reports. - Project reports.	
Output 1.2.2.4: Improved trade and market linkages			
Activities: 1.2.2.4.1 Strengthen farmer associations for inclusive collective actions in marketing	Number of farmer associations identified and strengthened.	- Project report.	- Effective local government cooperation and active participation.
1.2.2.4.2 Train farmers on contract farming and negotiation skills	Number of farmers identified and trained.	- Project report.	
1.2.2.4.3 Train farmers on marketing strategies, financial and marketing information access	Number of farmers trained.	- Project report.	
Output 1.2.2.5: Improved and equitable smallholder capacity on agribusiness management			

Results chain	Key performance indicators	Means of verification	Assumptions/risks
Activities: 1.2.2.5.1 Identify and train trainers, including private and public extension service providers on technical and managerial agro-entrepreneurship skills	Number of trainers trained.	Project report.	- Effective local Government cooperation and active participation.
1.2.2.5.2 Mentor and coach producer groups and MSMEs to access business development services	Number of producer groups coached and mentored.	- Project report.	
Output 1.2.2.6: Project Management and Coordination			
1.2.2.6.1 Establish project Steering Committee (PSC)	Number of functional PSCs established.	- List of Project Steering Committees by representative organizations.	
1.2.2.6.2 Conduct project inception meeting	Number of stakeholder workshops held.	- List of stakeholder organizations. - Project report.	- Funding for the project and support from county governments is assured.
1.2.2.6.3 Conduct gender sensitive baseline and needs assessment surveys	Number of baseline surveys conducted. Number of needs assessments conducted.	- Project report.	
1.2.2.6.4 Development of communication materials	Quantity of communication materials developed.	- Project report.	

Appendix 3. Data collection schedule

County and wards	Dates	Required respondents	Identified and confirmed respondents *(names of groups or individuals)*				
			Name	**Location**	**09.00 – 10.30**	**11.00 – 12.30**	**13.30 – 15.00**
Nairobi HQ	10 Feb	**Debrief meeting and mission preparation** - *(introductions, field logistics confirmation and tools testing and training of evaluators)*					
Tharaka Nithi county	11 February	**Travel to Tharaka Nithi county**					
		2 x County level - KIIs – PSC *(county executive officers, county directors of agriculture & fisheries)*	**Hon. Njue Njagi**	**Katwana**			**x**
			David Mululu	**Kathwana**			**x**
		6 x In-depth interviews with project implementors - *2 x extension officers*	**David M`Arimi**	**Kajuki**			**x**
			Irine Mwendandu	**Chuka**			**x**
	12 February	*2 x master trainers*	**Beatrice Mathenge**	**Marima**	**x**		
			Eric Kirimi	**Kaanwa**			**x**
		1 x private sector partners offering credit lines	**Thamani SACCO**	**Chuka**		**x**	
		1 x partner	**NHPplus**			**x**	
		1 x stakeholder workshop *(county ISPP Project Steering Committees) – 1 x county director of agriculture; 4 x county-level stakeholders from ministries; 4 x private sector players; 5 x farmer organizations; 3 x project beneficiaries and 1 x FAO focal person = 18 participants – NB: Venue needed*		**Chuka**	**x**	**x**	
		3 x most significant change stories from project beneficiaries					
		1 x agribusiness capacity and access to markets	**Purity Karimi**	**Itugururu**			**x**
		1 x capacity to access and consume high nutritional value food stuffs	**Kibugua support**	**Kibugua**			**x**
		1 x capacity to increase production and sustainably manage water resource	**Lawrence Kirimi**	**Kaanwa**			**x**
		1 x FGDs for farmers associations and water user associations; CSO and community-based organizations *- (including women and youth farmer associations)*	**Mwithiga B SHG**	**Kiriribu**	**x**		
	13 February	**9 x project beneficiary of FGDs – farmers (male, female, young people)**					
		2 x mixed gender FGD – (productive capacity on agronomy, water use and management)	**Kiriguni ISPP**	**Kiriguni**	**x**		
			Tungu Kabiru	**Kiriribu**	**x**		

County and wards	**Dates**	**Required respondents**	**Identified and confirmed respondents** *(names of groups or individuals)*				
			Name	**Location**	**09.00 – 10.30**	**11.00 – 12.30**	**13.30 – 15.00**
		2 x mixed gender FGD (capacity to establish diverse, high nutritional value crop gardens)	**Muiru Agritech**	**Chogoria**	**x**		
			Weru SHG	**Mugwe**	**x**		
		2 x women only FGD – (access and consumption of diverse and quality foods)	**Kandungu Window SHG**	**Muthambi**		**x**	
			Kangutu Women SHG	**Marima**		**x**	
		2 x mixed gender FGD – (capacity to increase production and agribusiness and access to markets)	**Tushikane Women SHG**	**Chuka**		**x**	
			Gakurungu	**Gakurungu**		**x**	
		1 x youth only FGD					
		Travel to Kitui county at 13.00					
Kitui county	14 February	**2 x county level - KIIs – PSC** *(county executive officers, county directors of agriculture & fisheries)*	**Emanuel Kisangau**	**Kitui Town**	**x**		
			Francis Kitoo	**Kitui Town**	**x**		
		1 x stakeholder workshop *(county ISPP project steering committees) – 1 x county director of agriculture; 4 x county-level stakeholders from ministries; 4 x private sector players; 5 x farmer organizations; 3 x project beneficiaries and 1 x FAO focal person = 18 participants – <u>NB: Venue needed</u>*		**Henry Murage Kitui Town**	**x**	**x**	
		6 x In-depth interviews with project implementors					
		2 x extension officers	**Janet Musau**	**Kiusyani**		**x**	
			Simon Wamathai	**Nuu, Mwingi**		**x**	
		1 x partner	**Urbanus Mutua - ADSE**				**x**
		2 x master trainers	**Joy Ochieng**	**Mwingi Town**			**x**
			Masau Mangeli	**Migwani**			**x**
		1 x private sector partners offering credit lines	**Hand-in-Hand**				**x**
	15 February	**3 x most significant change stories (case documentation)**					
		1 x agribusiness capacity and access to markets	**Elizabeth Kyalo**	**Kwa Ngindu**	**x**		
		1 x capacity to access and consume high nutritional value food stuffs	**Eunice Wango Manga**	**Migwani**	**x**		
		1 x capacity to increase production and sustainably manage water resource	**Francisca Loko**	**Ndumoni**	**x**		

County and wards	**Dates**	**Required respondents**	**Identified and confirmed respondents** *(names of groups or individuals)*				
			Name	**Location**	**09.00 – 10.30**	**11.00 – 12.30**	**13.30 – 15.00**
		1 x FGDs for farmers associations and water user associations; CSO and community-based organizations- *(including women and youth farmer associations)*	**Musekavo WRUA**	**Museve**	**x**		
		9 x project beneficiary of FGDs – farmers (male, female, young people)					
		2 x mixed gender FGD – (productive capacity on agronomy, water use and management)	**Katumbu Horticulture Clusture**	**Katumbu**		**x**	
		2 x women only FGD – (access and consumption of diverse and quality foods)	**Nguuni Mother to Mother Support group**	**Katumbu**		**x**	
		2 x mixed gender FGD – (capacity to increase production and agribusiness and access to markets)	**Utoooni Gurdian**	**Ithiani**			**x**
							x
		2 x mixed gender FGD (capacity to establish diverse, high nutritional value crop gardens)	**Kyanika Adults Class**	**Kyanika**			**x**
							x
		1 x youth only FGD	**Ecofarm Youth Group**	**Musengo**			
Taita Taveta county	16 February	**Travel to Taita Taveta (evaluation team) all members**					
	17 February	**2 x county level - KIIs – PSC** *(county executive officers, county directors of agriculture & fisheries)* (Taita Taveta county)	**Hon. Davis Mwangoma**	**Wundanyi**	**x**		
			Dorris Kiia	**Wundanyi**	**x**		
		6 x in-depth interviews with project implementors					
		2 x extension officers	**Luisa Muindu**	**Mwatate**		**x**	
			Antony Kariku	**Wundanyi**		**x**	
		1 x partner	**KCDMS**				**x**
		2 x master trainers	**Patience Mwasi**	**Wundanyi**			**x**
			Shendrack Juma	**Werugha**	**x**		
	18 February	**Joseph travels back to Nairobi** **Susan, Jean and Faith remain in Taita Taveta**					
		1 x private sector partners offering credit lines	**Qwetu SACCO**	**Wundanyi**	**x**		
		3 x most significant change stories from project beneficiaries					
		1 x Agribusiness capacity and access to markets	**Ghazel Hassan**	**Wundanyi**		**x**	
		1 x capacity to increase production and sustainably manage water resource	**Francis Samson**	**Voi/Ghazi**		**x**	

County and wards	Dates	Required respondents	Identified and confirmed respondents *(names of groups or individuals)*				
			Name	**Location**	**09.00 – 10.30**	**11.00 – 12.30**	**13.30 – 15.00**
		1 x capacity to access and consume high nutritional value food stuffs	**Derius Kituri**	**Wundanyi**			**x**
		1 x FGDs for farmers associations and water user associations; CSO and community-based organizations - *(including women and youth farmer associations)*	**Charisonyi Farmers Group**	**Werugha**			**x**
		9 x project beneficiary of FGDs – farmers (male, female, young people)					
		2 x mixed gender FGD – (productive capacity on agronomy, water use and management)	**Green Rock**	**Wundanyi**	**x**		
			Msichoke	**Wundanyi**	**x**		
	19 February	*2 x mixed gender FGD (capacity to establish diverse, high nutritional value crop gardens)*	**Wuchichi**	**Wundanyi Mbale**		**x**	
			Mlechi Network	**Wundanyi Mbale**		**x**	
		2 x women only FGD – (access and consumption of diverse foods and agribusiness and access to markets)	**TaUghi CA**	**Mwatate**			**x**
			Doria Women group	**Voi**			**x**
		2 x mixed gender FGD – (capacity to increase production and quality foods)	**Maradada**	**Mwatate**	**x**		
			TaUghi CA	**Mwatate**	**x**		
		1 x youth only FGD				**x**	
	20 February	**Susan, Jean and Faith travel back to Nairobi**					
	19 February	**Nairobi data collection (Joseph)**					
		1 x group interview with specialists *(agribusiness, irrigation engineering; agriculture policy, gender, nutrition and M&E)*			**x**		
		1 x KII with USAID representatives	**Joseph Oyuga**			**x**	
		1 x national - KIIs – PSC *(Ministry of Water and Irrigation)*			**x**		
						x	
		3 x national level KIIs with county stakeholders - *KCDMS project DMS project; the Agri-nutrition FTF Partners Technical Working Group; NHP plus*					**x**
							x
						x	

County and wards	**Dates**	**Required respondents**	**Identified and confirmed respondents** *(names of groups or individuals)*				
			Name	**Location**	**09.00 – 10.30**	**11.00 – 12.30**	**13.30 – 15.00**
	20 February					**x**	
							x
	21 February					**x**	
		5 x county project officers – FAO	**Tharaka Nithi CPO**				
			Kitui CPO				
			Taita Taveta CPO				
			Machakos CPO				
			Makueni CPO				
		3 x KIIs with direct project personnel *(M&E, project manager and other key personnel)*	**Barrack Okoba**			**x**	
			Anne				
			Tian Cai				**x**
	22 -23 February	**Data transcription, cleaning & analysis sorting**		**Nairobi**			
	24 February	**Mission feedback and preliminary findings presentation** (afternoon) NB USAID to be invited		**Nairobi**		**x**	

Annexes

Annex 1. Terms of reference

https://www.fao.org/3/cb6379en/cb6379en.pdf

Annex 2. Data analysis tables

https://www.fao.org/3/cb6380en/cb6380en.pdf

Annex 3. Significant change story

https://www.fao.org/3/cb6381en/cb6381en.pdf

Annex 4. Evaluation matrix

https://www.fao.org/3/cb6382en/cb6382en.pdf

Annex 5. Data collection tools inventory

https://www.fao.org/3/cb6383en/cb6383en.pdf

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