

Country Name	Smallholder Horticulture Empowerment and Promotion Unit Project
Republic of Kenya	

I. Project Outline

Background	<p>In Kenya, horticulture had emerged as an important growing sub-sector. Small scale farmers contributed the majority of marketed horticultural production. JICA in partnership with the Ministry of Agriculture (MoA) and the Horticultural Crops Development Authority (HCDA) had implemented a technical cooperation project “Smallholder Horticulture Empowerment Project (SHEP)” from 2006 to 2009 and resulted in high growth of incomes of small-scale horticultural farmers through the training-based and market-oriented capacity development called the SHEP approach. To expand the SHEP approach-related activities to a national scale, the Government of Kenya (GOK) established the SHEP Unit in the Ministry of Agriculture, Livestock and Fisheries (MoALF, former MoA) and requested Japan to build the capacity of the SHEP Unit.</p>												
Objectives of the Project	<p>The Project (known as “SHEP UP”) aimed at establishing an effective support system for horticulture small holders in the implementing sub-counties through familiarization of the SHEP Unit members with the SHEP approach, implementation of the SHEP approach in the implementing sub-counties, and establishment of an information management and utilization system for SHEP approach promotion, thereby improving the livelihood of horticulture smallholders in the implementing sub-counties.</p> <ol style="list-style-type: none"> Overall Goal: Livelihood of horticulture smallholders in implementing sub-counties is improved. Project Purpose: Effective support system for horticulture smallholders nationwide is established. 												
Activities of the Project	<ol style="list-style-type: none"> Project Site: Sixty “implementing sub-counties” selected from 33 counties in (i) Batch 1 regions (Central and Rift Valley), (ii) Batch 2 regions (Nyanza and Western), and (iii) Batch 3 regions (Eastern and Coast)¹ Main activities: Design the SHEP approach for implementation; sensitize SHEP Unit staff and County/Sub-County stakeholders; conduct training programs for County Extension Staff and farmers in the implementing sub-counties; support the implementing sub-counties’ SHEP-related activities including linking of farmers with business service providers during Farm Business Linkage Stakeholder Forum (FABLIST); develop new information management system in the SHEP Unit; etc. Inputs (to carry out above activities) * The numbers are cumulative totals. <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Kenyan Side</td> </tr> <tr> <td>1) Experts: 13 persons</td> <td>1) Staff allocated: 24 persons</td> </tr> <tr> <td>2) Training in Japan: 10 persons</td> <td>2) Office space with facilities</td> </tr> <tr> <td>3) Equipment: Office equipment</td> <td>3) Cost of field activities</td> </tr> <tr> <td>4) Cost of field activities</td> <td></td> </tr> </table>			Japanese Side	Kenyan Side	1) Experts: 13 persons	1) Staff allocated: 24 persons	2) Training in Japan: 10 persons	2) Office space with facilities	3) Equipment: Office equipment	3) Cost of field activities	4) Cost of field activities	
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Project Period	March 2010 to March 2015	Project Cost	(ex-ante) 590 million yen, (actual) 577 million yen										
Implementing Agency	Ministry of Agriculture, Livestock and Fisheries (MoALF)*; Agriculture, Fisheries and Food Authority (AFFA)** * Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALF&I) at the time of ex-post evaluation. ** Agriculture and Food Authority (AFA) at the time of ex-post evaluation.												
Cooperation Agency in Japan	None												

II. Result of the Evaluation

<Constraints on Evaluation>

- The quantitative data to verify indicators of the Project Purpose and the Overall Goal as of the time of ex-post evaluation was not fully available. Therefore, we relied on some alternative quantitative information as well as qualitative information from the counties/sub-counties and farmers we visited² together with the county-level poverty rate data from the Kenya Integrated Household Budget Survey (KIHBS) in 2015/16.

< Special Perspectives Considered in the Ex-Post Evaluation >

- There are two Indicators set for the Project Purpose, namely, (i) Indicator 1 on the net-income increase from horticulture among Model Farmer Groups and the groups in the implementing sub-counties and (ii) Indicator 2 on continued implementation of the SHEP approach in the implementing sub-counties after the two-year project support to each sub-county. Since the project support for the Batch 3 regions took place until the end of the project period, the indicators for these regions could be fully measured only after project completion. However, as it was just two

¹ Ten (10) implementing sub-counties were selected from each of the six regions, covering 60 sub-counties in 33 counties in total. The target area was originally consisted of four batches, but Batch 4 (Nairobi County and North Eastern Region) was canceled at a Project Steering Committee (PSC) meeting in July 2013. The reasons were necessity of intensive monitoring of existing target Model Farmer Groups, low horticultural potential, presence of other projects, and insecurity in the North Eastern Region.

After this project, a succeeding JICA technical cooperation project titled “Smallholder Horticulture Empowerment and Promotion Project for Local and Up-scaling (SHEP PLUS)” (2015-2020) is being implemented. All the 18 SHEP PLUS implementing counties also implemented this project (SHEP UP) but in different sub-counties, i.e., no SHEP UP implementing sub-county was targeted by SHEP PLUS.

² We conducted the field survey from 4th to 11th December 2018 in Homa Bay, Kisumu, Bungoma, Uasin Gishu and Makueni Counties.

months after project completion that they were measured, we regard the measurement results as the data to indicate the status at the time of project completion.

- Regarding the Project Purpose Indicator 1, since the assessment under the project was on Model Farmer Groups only (i.e., not on “the groups in the implementing sub-counties”), we follow the same way and assess the achievement status at the time of project completion based on the data of Model Farmer Groups only. As for the achievement status at the time of ex-post evaluation, we approximate this indicator to the Overall Goal Indicator (increase in net-income from horticulture sales per household in the implementing sub-counties) due to limited data availability.

1 Relevance

<Consistency with the Development Policy of Kenya at the Time of Ex-Ante Evaluation and Project Completion>

The project was consistent with Kenya’s development policies at the times of both ex-ante evaluation and project completion - “Kenya’s Vision 2030” (2008-2030) identified agriculture as one of the key sectors to deliver the ten percent target of annual economic growth rate and emphasized a need for transforming smallholder agriculture from subsistence to an innovative, commercially oriented and modern agricultural sector; “Agricultural Sector Development Strategy 2010-2020” aimed at increasing productivity, commercialization and competitiveness of agriculture, and horticulture was one of the target subsectors for strengthening of research, extension, and training.

<Consistency with the Development Needs of Kenya at the Time of Ex-Ante Evaluation and Project Completion >

The project was consistent with the needs of smallholder horticulture farmers for more production and support system both at the time of ex-ante evaluation and project completion.

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with “Japan’s Country Assistance Program for Republic of Kenya” (2000), which set agriculture development, including the promotion of small-scale agriculture, as one of the priority areas.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was achieved by the time of project completion. The project delivered the SHEP approach to a total of 550 smallholder horticulture Model Farmer Groups or 13,809 farmers in the 60 implementing sub-counties in the 33 counties, at the initiative of the SHEP Unit in the first year and the initiative of the sub-county officials in the second year of the project support to each sub-county. As a result, the average net income of the Model Farmer Groups (Indicator 1) and the percentage of the implementing sub-counties that continued the SHEP approach after the project support (Indicator 2) both exceeded the target values.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have continued to the time of ex-post evaluation. According to the SHEP Unit, all of the implementing sub-counties implement the SHEP approach after being supported by this project. Interviews with farmers confirmed their satisfaction regarding the effects of the project and the continued support from the county governments. For example, five farmer groups (30 male and 33 female farmers) have been reached after this project in Suba Sub-county, Homa Bay County, Nyanza Region. The farmers have won tenders to supply fruits and vegetables (kales and tomatoes) to surrounding schools/health institutions as a result of the implementation of market surveys, tendering, record keeping, etc. they learned from the training with the SHEP approach.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been achieved by the time of ex-post evaluation. Although the designated quantitative Indicator could not be fully verifiable due to limited availability of data, horticultural incomes for the farmer groups visited have increased as evidenced by quantitative and qualitative information. For example, Kisaku farmers women group in Suba Sub-county, Kisumu County, increased gross sales of kales and tomatoes 46 times and 24 times, respectively. The group also purchased assets like land, water tanks for water harvesting, motorbikes for transportation, etc. using the profits from horticulture. Also, Tulwop Ngetuny farmer group in Kesses Sub-county, Uasin Gishu County, Rift Valley Region recently finished servicing a loan of Ksh 6 million used to construct a storage facility. The individual members of the famer group have constructed houses, paid school/university fees, which are indications of improved incomes. According to the farmer group, their incomes increased thanks to enhanced planning and marketing at the group level and family budgeting by husband, wife, and children together at the household level. Similar stories were heard from farmer groups in other counties visited. Such finding is consistent with the result of the KIHBS in 2015/16 that the poverty rate was reduced in all SHEP UP implementing sub-counties compared to 2005/06 (the overall poverty headcount rate decreased from 46.8% to 36.1%).

<Other Impacts at the time of Ex-post Evaluation>

The project has not had negative impacts on the natural and social environments. Regarding impacts on gender, positive impacts were observed in all the sub-counties visited. They include sharing of responsibilities at household and group levels. Hence increased incomes for households, reduced workloads especially for women, well-governed groups, improved relations at all levels, reduced or completed elimination of domestic violence, etc. A specific example is the SATEBU famer group whose members are from different ethnic communities living in Mt. Elgon Sub-county, Bungoma County, Western Region, and have previously had ethnic conflicts. Members confirmed that from the household level to the community, domestic conflicts have reduced as a result of improved incomes and fair distribution of the same. Further, positive impacts not expected at ex-ante evaluation include: alternative income generation activities like motorcycle business, the use of Donou (sand bag) technology to repair roads, construction of bridges etc. and adoption of the SHEP approach in other enterprises unrelated to horticulture, generating incomes and assets for instance the construction of rental houses (as observed in Mayenya Community Farmers Group in Kisumu County, Nyanza Region).

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose)	(Indicator 1)	Status of the Achievement: achieved (partially continued)
Effective support system	By the end of the project period,	(Project Completion)

<p>for horticulture smallholders nationwide is established.</p>	<p>individual members (men and women) of the smallholder horticulture Model Farmer Groups and the groups in the implementing sub-counties using the SHEP approach increase their net-income on average from 2.4% to 55.3%.</p>	<p>Increase rate of net horticultural income per household among Model Farmer Groups before and after the project support (average across sub-counties)</p> <table border="1" data-bbox="678 112 1476 369"> <thead> <tr> <th>Batch</th> <th>Region</th> <th>Target (region average)</th> <th>Actual 1st year groups (supported by SHEP Unit)</th> <th>Actual 2nd year groups (supported by sub-county officials)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Batch 1</td> <td>Central</td> <td>34.2%</td> <td>140.9%</td> <td>133.3%</td> </tr> <tr> <td>Rift Valley</td> <td>33.4%</td> <td>96.1%</td> <td>122.2%</td> </tr> <tr> <td rowspan="2">Batch 2</td> <td>Nyanza</td> <td>35.5%</td> <td>64.7%</td> <td>61.8%</td> </tr> <tr> <td>Western</td> <td>29.7%</td> <td>16.4%</td> <td>18.3%</td> </tr> <tr> <td rowspan="2">Batch 3</td> <td>Eastern</td> <td>29.5%</td> <td>43.3%</td> <td>-14.1%</td> </tr> <tr> <td>Coast</td> <td>29.2%</td> <td>9.8%</td> <td>53.9%</td> </tr> <tr> <td colspan="2">Average</td> <td>31.9%</td> <td>61.9%</td> <td>62.6%</td> </tr> </tbody> </table> <p>Note: (1) Data of the 2nd year groups of the Batch 3 regions was obtained in May 2015 under SHEP PLUS. (2) The decrease in net income in the 2nd year group of Eastern Region is not clear but possibly due to drought as Eastern region has been having water availability challenges over the years. (3) Gaps in net income between male and female farmer households reduced before and after the project support in five out of the six regions.</p> <p>(Ex-post Evaluation) * See Overall Goal Indicator and result.</p>	Batch	Region	Target (region average)	Actual 1st year groups (supported by SHEP Unit)	Actual 2nd year groups (supported by sub-county officials)	Batch 1	Central	34.2%	140.9%	133.3%	Rift Valley	33.4%	96.1%	122.2%	Batch 2	Nyanza	35.5%	64.7%	61.8%	Western	29.7%	16.4%	18.3%	Batch 3	Eastern	29.5%	43.3%	-14.1%	Coast	29.2%	9.8%	53.9%	Average		31.9%	61.9%	62.6%
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<p>(Overall Goal) Livelihood of horticulture smallholders in implementing sub-counties is improved.</p>	<p>(Indicator 2) By the end of the project period, 70% of implementing sub-counties continue to implement the SHEP approach after supported by the Project.</p> <p>(Indicator) Horticulture smallholders in implementing sub-counties increase their net-income from horticulture sales per household on average by 10% from the baseline data of the smallholder horticulture model farmer groups supported by the implementing sub-counties using their own resources.</p>	<p>Status of the Achievement: achieved (continued) (Project Completion) In the phone survey of the 40 implementing sub-counties of Batch 1 and Batch 2, 86% or 32 sub-counties introduced the SHEP approach to non-target farmers group of SHEP UP after the project support, five have not, and three did not respond. (Ex-post Evaluation) All of the 60 implementing sub-counties of Batches 1-3 implement the SHEP approach. (Ex-post Evaluation) partially achieved</p> <p>(1) Change in income (gross sales) from horticulture of Kisaku Farmers Women Group, Kisumu County</p> <table border="1" data-bbox="678 918 1540 1209"> <thead> <tr> <th>Crop</th> <th>Initial Production</th> <th>Current Production</th> </tr> </thead> <tbody> <tr> <td>Kales Marrow Stem</td> <td>Acreage: 5 acres Yield: 1 ton Price: 13 Ksh/kg Income: 13,000 Ksh</td> <td>Acreage: 20 acres Yield: 1.5 tons Price: 20 Ksh/kg Income: 600,000 Ksh</td> </tr> <tr> <td>Tomatoes Riogrande</td> <td>Acreage: 3 acres Yield: 1.5 tons Price: 25 Ksh/kg Income: 37,000 Ksh</td> <td>Acreage: 20 acres Yield: 30 tons Price: 30 Ksh/kg Income: 900,000 Ksh</td> </tr> </tbody> </table> <p>Note: The exact date of “Initial Production” and “Current Production” is not clear.</p> <p>(2) Although the before-after data was not available from other farmer groups, they said their income from horticulture increased. For example, the gross income from several horticultural crops is Ksh 1,830,000 Ksh (Kopondo-Kolouch Self Help Group with 22 members) and Ksh 149,375 (Jopur Nyalo Group with 16 members) in Kisumu County.</p>	Crop	Initial Production	Current Production	Kales Marrow Stem	Acreage: 5 acres Yield: 1 ton Price: 13 Ksh/kg Income: 13,000 Ksh	Acreage: 20 acres Yield: 1.5 tons Price: 20 Ksh/kg Income: 600,000 Ksh	Tomatoes Riogrande	Acreage: 3 acres Yield: 1.5 tons Price: 25 Ksh/kg Income: 37,000 Ksh	Acreage: 20 acres Yield: 30 tons Price: 30 Ksh/kg Income: 900,000 Ksh																												
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Source: Terminal Evaluation Report; JICA documents; interviews to county/sub-county officers and farmers in Homa Bay, Kisumu, Bungoma, Uasin Gishu and Makueni Counties; observations in the field in the mentioned counties.

3 Efficiency

Both the project cost and the project period were within the plan (ratio against the plan: 98% and 100%, respectively). The Outputs of the project were produced as planned. Therefore, the efficiency of the project is high.

4 Sustainability

<Policy Aspect>

“Kenya’s Vision 2030” (2008-2030) and “Agricultural Sector Development Strategy 2010-2020” are still effective at the time of ex-post evaluation. Also, at the county level, the SHEP approach is bound to receive greater uptake as confirmed by counties visited that have deliberately included the upscaling and promotion of the approach in their plans such as “County Integrated Development Plans” (2018-2022).

<Institutional Aspect>

Institutional set-up for the promotion of the SHEP approach – the SHEP Unit (20 staffs) at MoALF&I at the central level and county/sub-county agricultural offices (average two county officers and three sub-county officers) – have remained unchanged. The extension officers (average seven officers per sub-county) are under the county governments. At the counties visited, new extension officers have been recruited to support extension services. In this way, the personnel allocation is considered sufficient at the time of ex-post evaluation, although ideally as more farmer groups adopt/borrow the SHEP approach, more extension officers would be needed.

<Technical Aspect>

Many of the former counterpart personnel of this project continue to engage in promotion of the SHEP approach. They have utilized their skills to train other farmer groups that did not participate in the project. Trained county/sub-county officers are utilizing the materials developed by the project (e.g., market survey tool/questionnaire, Kamishibai, target crop selection sheet, crop calendar, booklets/leaflets,

farm family budgeting sheet, etc.) for the SHEP-related training as well as in other extension services, for example, the Potatoes project by GIZ in Mt. Elgon sub-county. At the same time, however, a lot of training is required for county officers, especially for the new staff.

<Financial Aspect>

Both at the central and county/sub-county levels, the budget has been allocated to support the promotion of the SHEP approach so far. On average, around Ksh 2,000,000 and Ksh 500,000 are currently allocated at the county and sub-county levels, respectively. It should be noted that such amounts would only facilitate the movement of officers and capacity development to provide technical support would require a lot more. Nevertheless, budget allocation is expected to increase at both central and especially county levels, in view of increased uptake of the SHEP approach by counties. In the “County Integrated Development Plans” (2018-2022) for Uasin Gishu, Makueni and Bungoma, there are proposals to fund extension service delivery for horticulture, construction of Horticultural cold storage facilities and promotion of agribusiness activities.

MoALF&I/GOK budget for promotion of the SHEP approach (Unit: Ksh)

	2015	2016	2017
Total budget approved (Plan)	22,500,000	25,000,000	10,000,000
Total budget allocated (Actual)	22,500,000	25,000,000	2,500,000
Total Expenditure (Actual)	22,483,840	24,562,797	1,810,000

Source: MoALF&I

Note: The decrease in the budget in 2017 is due to the general election, which is normal in election years.

<Evaluation Result>

Therefore, the sustainability of the effectiveness through the project is fair.

5 Summary of the Evaluation

The project achieved the Project Purpose of establishing the support system for horticulture smallholders through the SHEP approach by the time of project completion. The SHEP approach continued to be implemented after project completion, and the Overall Goal of improving livelihoods of the smallholder horticulture farmers is judged to have been achieved qualitatively although the indicator could not be verified quantitatively. Regarding the sustainability, some issues were found in the technical and financial aspects due to insufficient resources for capacity development of county/sub-county officers, while no major problems have been observed in the policy and institutional aspects.

Considering all of the above points, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

To further adopt and upscale the SHEP approach, more evidence at the county and sub-county level need to be provided to county decisions makers hence the need to create information management systems at the county level that would provide up to date information on the benefits of the approach and for sharing good practices. Therefore, county chief officers in charge of agriculture in all implementing counties are recommended to liaise with the SHEP Unit to plan, allocate budget and implement the information management systems within counties.

Lessons learned for JICA:

The county-level government plays a key role in the upscaling and promotion of the SHEP approach. Also, in every successful implementing counties or sub-counties visited, there was always a particular individual who stood out as a champion of SHEP - the individual who would have the passion and charisma to prioritize SHEP approach at whatever level he/she is in. This will have the effects to showcase the benefits of the approach to other relevant offices. Therefore, for a project to effectively facilitate an approach of agricultural extension in Kenya, JICA should continuously engage with the county at a decision-making level so that the counties would adopt and prioritize the approach as well as the much-needed champions to play an important role in entrenching and upscaling good practices would be identified and created.



Ms. Francisca Malenge, then project coordinator, SHEP UP with members of Mayenya Community Farmers Group in Kisumu county