

Kenya

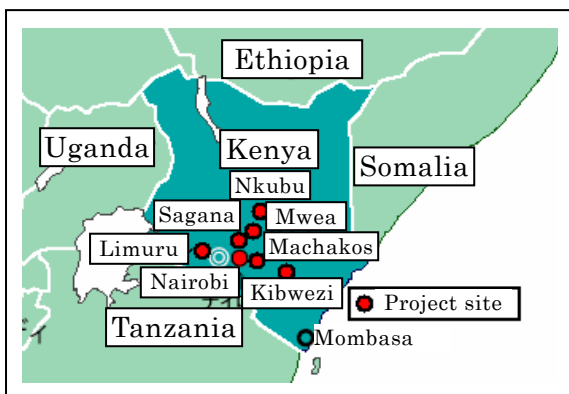
Ex-Post Monitoring Report for
Horticultural Produce Handling Facilities Project

External Evaluator: Ernst & Young SN Global Solution Co., Ltd.

Keisuke Nishikawa

Field Surveys: June and August 2009

1. Project Profile and Japan's ODA Loan



Project Location Map



Nairobi Horticultural Center

1.1 Objective

The objective of the project is to improve post-harvest processing of horticultural produce by constructing quality preservation facilities, thereby contributing to increase of incomes, poverty alleviation of small-scale horticultural farmers, as well as development of Kenya's foreign exchange earning capacity.

1.2 Outline of loan agreement

Loan Amount / Disbursed Amount	2,016 million yen / 2,016 million yen
Loan Agreement/ Loan Completion	October 1993 / July 2001
Ex-Post Evaluation Survey	FY2003
Executing Agency	Horticultural Crops Development Authority: HCDA
Main Contractors	Marubeni Corporation
Consulting Services	Sanyu Consultants Inc.

1.3 The Background and Reasons for conducting Ex-Post Monitoring Survey

In this project, pre-cooling and cold rooms were not utilized at all except Machakos

depot at the time of Ex-post Evaluation and there was a concern over the realization of project effectiveness. In the Ex-post Evaluation it was proposed that HCDA would continue to implement a number of recommendations proposed in the Special Assistance for Project Implementation (SAPI) and the Special Assistance for Project Sustainability (SAPS) surveys conducted by JBIC. Those recommendations are: to build trust with horticultural farmers and exporters, to lease the facilities out to the exporters for better utilization, to strengthen agricultural extension services, to improve the efficiency of finance / accounting, and so on. It was also recommended that JBIC (currently JICA) monitor implementation of the recommendations by HCDA.

Therefore, the project is subject to Ex-post Monitoring and the reviews based mainly on the results of the field surveys were conducted in accordance with the evaluation criteria, and the conclusion was led.

2. Monitoring Results

2.1 Effectiveness (Impact)

2.1.1 Utilization of Facilities

The facility utilization level varies from year to year, or seasonally, as the changes in the business environment and harvest conditions have substantial influences on it. The utilization of each facility at the time of the Ex-Post Monitoring (June and August 2009) is shown in Table 1 (p.5). The utilization of each facility is individually described as follows.¹

2.1.1.1 Pre-cooling and Cold Storage Rooms²

- Facilities utilized as planned: Nairobi, Limuru, Sagana, Kibwezi
- Facilities partially utilized as storage rooms (without utilization of cooling functions): Yatta, Machakos
- Facilities not utilized: Mwea, Nkubu

Nonetheless, Mwea and Nkubu depots, which were not utilized at the time of the Ex-post Evaluation, were already under lease agreements between HCDA and exporters and were to be used in late 2009, and the preparatory work, i.e. distribution of seeds to the farmers, was being conducted.

2.1.1.2 Weighing / Packing Spaces

- Facilities in which weighing and packing spaces were both utilized: Nairobi, Limuru, Yatta, Sagana, Kibwezi

¹This is not the change in the status of utilization during a certain range of time, but it is the utilization status at the time of the field surveys.

² In this project, cold storage rooms were introduced only into Nairobi Horticultural Center, and all other facilities with the cooling equipment installed are regarded as pre-cooling facilities.

- Facilities in which only the weighing space was utilized: Machakos
- Facilities in which neither the weighing nor the packing spaces were utilized: Mwea, Nkubu

The spaces at Mwea and Nkubu depots were to be utilized by exporters, as in the case of the pre-cooling facilities.

2.1.1.3 Office Space

- Facilities utilized by exporters: Limuru, Yatta, Machakos, Sagana, Kibwezi
- Facilities utilized by NGO: Machakos, Kibwezi
- Facilities not utilized by anyone: Mwea, Nkubu

Office spaces at Machakos and Kibwezi depots were leased out and utilized by NGOs, in order to promote the effective use of the facilities when the exporters or groups using other equipment are not utilizing the office spaces.

2.1.1.4 Insulated Trucks

- Facilities normally utilizing the trucks: Kibwezi, Nairobi, Limuru, Sagana
- Facilities not utilizing the trucks: Yatta, Machakos, Mwea, Nkubu

Facilities not utilizing the insulated trucks at the time of the field surveys also had some records of leasing them between 2008 and 2009. When the trucks were not in use by the private companies, the staff at each facility used them in some cases as one of the means of transportation to patrol for technical assistance. At Kibwezi, all the three 3-ton trucks that had been owned by the depot in 2008 were all transferred to Nairobi Horticultural Center. Instead, one 8-ton truck that had been stationed in Nairobi was transferred to Kibwezi for the exporter's use.

2.1.2 Changes since the Ex-post Evaluation

2.1.2.1 Change in Business Model

This project was planned in the 1980s and was implemented between 1993 and 2001. During this period, the horticultural industry developed outstandingly under private-sector initiatives. As a result, major private companies had their own cold storages and packing facilities, and this led to competitions with the operations of HCDA. Also, the government sector reform was implemented in the 2000s, under the policy of market liberalization with the idea that the public sector should not expand their operations that would lead to competitions with the private sector.

Prior to the implementation of the project, HCDA prioritized the extension of assistance to small-scale farmers who tended to be alienated from the market and aimed to purchase the produce from the farmers, pack and export them by keeping the quality in the pre-cooling and cold rooms. However, as the demand for horticultural crops

increased, the small-scale farmers started having alternative options to sell their produce elsewhere. With these environmental changes considered, leasing of the facilities to the private sector was judged to be conducive to the improvement of facility utilization, to the vitalization of horticultural produce distribution, and to the benefit of the small-scale farmers as a result. The consequence was the change in HCDA's business model in 2005 in that the direct collection and sales model was abolished and the leasing of the facilities was introduced.

Table 1 Status of Utilization of Each Facility (As of June and August 2009)

Facility	Nairobi Center	Limuru	Yatta*	Machakos	Sagana	Mwea	Kibwezi	Nkubu
Pre-cooling / Cold Storage Room	○ 【Cold Storage】 (Utilizing 8 of 9 rooms)	○ 【Pre-cooling】 (Utilizing all 4 rooms)	△ 【Utilized without pre-cooling function】 (Utilizing 1 room as a storage of hot peppers)	△ 【Utilized without pre-cooling function】 (Utilizing 1 room as a storage of bulbs)	△ 【Pre-cooling】 (Utilizing all 4 rooms)	× (Not utilized. 1 room was broken)	○ 【Pre-cooling】 (Utilizing all 2 rooms)	× (Not utilized)
Weighing / Packing Space	○	○	○	○(Weighing space only)	○	×	○	×
User**	Exporters 26	Exporter 1 Farmer Groups 15 Individual Farmers 20	Exporter 1 Farmer Groups 10 Individual Farmers 50	Exporter 1 NGO**** 1 Farmer Groups 16 Individual Farmers 35	Exporter 1 Farmer Groups 6 Individual Farmers 20	(Exporter 1)*** Farmer Groups 50 Individual Farmers 8	Exporter 1 NGOs**** 2 Farmer Groups 8 Individual Farmers 320	(Exporter 1)*** Farmer Groups 29 Individual Farmers 5
Office Space	—	○	○	○	○	×	○	×
Refrigerated Truck	○ (3t)	○ (3t)	×	×	○ (3t)	×	○ (8t)	×
Changes since the Ex-post Evaluation	After the completion of this project, HCDA made an effort to improve the environment for the use of the exporters, by adding hand-wash basins and restrooms.	In recent years, this facility has been fully utilized thanks to an advantage of its proximity to Nairobi.	An exporter has run its operation on a small scale. However, the exporter is planning to discontinue the operation because of smaller profits after low rainfall.	Its pre-cooling room is not utilized, and only a part of the room is used for storage.	An exporter fully utilizes this facility, and its level has significantly improved since the Ex-post Evaluation.	Little improvement has been observed as the unstable production volume has prevented the exporters from the continuous utilization.	An exporter started to fully utilize this facility, and its level has significantly improved since the Ex-post Evaluation.	Little improvement has been observed as the unstable production volume has prevented the exporters from the continuous utilization.

Note: ○—Fully utilized, △—Partially utilized ×—Not utilized

*The hot pepper exporter in Yatta depot was scheduled to leave in late 2009 to consolidate their operation in another district.

**The utilization of the facilities by farmers means ‘the number of farmer groups/ individual farmers who receive the services’, i.e. technical assistance from HCDA at the time of field surveys, not the utilization of facilities.

***While these facilities were not utilized at the time of the field survey in June, there were lease agreements between the exporters and HCDA from the end of June. (After that, it was confirmed that the preparations toward utilization had gradually been started.)

****The utilization by NGO is limited to the use of office spaces.

2.1.2.2 Results of Change in Business Model

[Facility Utilization]

Since 2005, a lot of exporters, large or small, have utilized the facilities, depending on the business environment and harvest volumes. Nairobi Horticultural Center, whose locational inconvenience had been pointed out in the Ex-post Evaluation, is currently utilized in full. Also, Limuru, Sagana, Yatta and Kibwezi, not being used at the time of Ex-post Evaluation, were utilized by the exporters. This is the positive result of the change in the business model. At the same time, however, some exporters also expressed their views that it would be more efficient to collect the produce directly from the farms to their facilities around Nairobi Airport for packing.

[Relationship between HCDA and Farmers]

Since 2005, the role of HCDA has changed substantially from the body to collect and sell on behalf of the farmers to the entity that leases the facilities to the private exporters and offers technical trainings on cultivation and market information to foster small-scale farmers. Their technical services are offered to the farmers free of charge. According to the interviews conducted during the field surveys with the representatives of the farmer groups and with 70 individual farmers, more than 80% of the farmers responded that they were satisfied with the services offered by HCDA (especially technical services and trainings). They also responded that the reasons why they had not used HCDA facilities by themselves are that the production volume was low, that they could not afford the rent of the facilities, and that they were not large enough to do the collection and sales instead of the exporters.

2.1.3 Implementation Statuses of Recommendations in JICA Surveys

2.1.3.1 Efforts by Kenya

After the completion of this project, JICA conducted SAPS twice, during 2002 and 2003, and provided advices for realizing the better collection and selling of crops, and leasing the facilities to exporters. In this monitoring survey, implementation statuses of the recommendations proposed in the Ex-post Evaluation as well as the statuses of the recommended points that had been proposed in other past surveys but had not been tackled at the time of Ex-post Evaluation, were all confirmed as shown below in Table 2.³

³ At the time of the Ex-post Evaluation, HCDA had separately developed concrete plans for the establishment of a subsidiary for the purpose of promotion of utilization of each facility and better operational management. The subsidiary was actually incorporated and registered once. However, HCDA Board of Directors eventually decided to abandon the operation of the subsidiary after the State Corporation Advisory Committee of the Government decided that public corporations should not undertake pure business activities.

Table 2 Recommendations from the Ex-post Evaluation, Advice from SAPI, SAPS, and the Implementation Statuses at the Time of Ex-post Monitoring

	Recommendations from Past Surveys	Current Status (Ex-post Monitoring)
Recommendations from Ex-post Evaluation	HCDA has made an effort to increase the opportunities for bringing crops into Nairobi Horticultural Center by going around the horticultural farms to collect crops at the depots by pick-up trucks. They are expected to continue such efforts.	With the change in the business model in 2005, HCDA no longer conducts direct collection and selling. Many exporters located in Nairobi collect crops by directly sending their own trucks from Nairobi.
	Rather than having HCDA operating the depots, leasing the depots to exporters for their operation as originally planned would be another option. Also, marketing activities targeting the exporters are important.	After the change in the business model of HCDA, leasing of the depots to exporters has been promoted. Operations of the depots have been conducted by HCDA itself so far, but it is being considered as one of the options that all the facilities are wholly leased to an exporter organization. Also, HCDA is making an effort to strengthen the marketing system, and have recently focused on the recruitment from the private sector.
	Make a marketing progress in the domestic market as well as export markets.	Since the domestic market is significantly larger than the export market, HCDA provides guidance for the cultivation of crops that have comparative advantages in each region for domestic sales.
	Make a progress in securing its own financial resources	HCDA is currently operated with the subsidies from the Government, making it having a role as a public entity. Therefore, it is not expected to secure its own financing by operating the facilities for profit.
	Make a progress in fostering human resources for marketing etc.	Recently, some personnel recruited from the private sector have worked as the managers of some depots or have been assigned in the marketing section. HCDA has made an effort to improve the utilization of facilities in this regard. Also, short- and long-term trainings are conducted every year, among which are the training programs by JICA.

	Recommendations from Past Surveys	Current Status (Ex-post Monitoring)
Advice that had not been implemented at the time of Ex-post Evaluation	Build the relationship of trust with farmers at the depot level (payments without delays, and marketing activities for exporters)	Very good relationships between HCDA and farmers have been established, not through collection and selling but through the trainings and technical assistance. According to the interview survey with farmer groups, however, it was also heard that some farmers hope to reintroduce the collection and selling activities as previously conducted by HCDA.
	Improve accounting by utilizing computers	With regard to the improvement of accounting operations, HCDA continues to ensure the account processing and reporting to the headquarters by the depot managers, to perform internal audit and to conduct trainings. Also, the introduction of the ERP (Enterprise Resource Planning) information system to link all the facilities was in progress. At the headquarters, computers were introduced and they perform the account processing by using software. However, due to the change in the business model, the separation of accounts between the entire Authority and this project has not been conducted recently. In the future, this project will be separately treated in terms of account processing.
	Strengthen marketing activities for exporters etc., who would be the potential customers	Since the change in HCDA's business model, they have strengthened the marketing department and recruited some depot managers from the private sector to promote the utilization of the facilities.
	Improve the action plan schedule and familiarize the employees with it	In addition to the preparation of the action plans at the headquarters and the depots, HCDA as a whole is drafting the "Strategic Plan (2009-2013)".
	Create a website of HCDA	While the website was initially set up in 2004, it had not been available since April 2009 due to a problem of the outsourced company. However, the renewed website became partially available from August 2009.
	Introduce an employees' performance evaluation system	Every year, Staff Performance Appraisal Report covering 9 sections is prepared to evaluate the achievement of the targets set up at the beginning of the year. It has been operated over the last 6 years and has become an important mechanism.
	Further technical assistance by the Ministry of Agriculture and Livestock	Ministry of Agriculture, along with HCDA, conducts seminars regarding Good Agriculture Practice in Europe (major export market) and Kenya and the standards for the concerned parties.

2.1.4 Efforts by JICA

Although JICA conducted SAPI (2000) and SAPS (2002 & 2003) to promote the utilization of the facilities, some recommendations were difficult to be implemented due to the complete change of the business model. On the other hand, as the importance of making efforts in improving the utilization level of the facilities remains the same, JICA Kenya Office has checked the utilization levels by visiting the Authority as well as the facilities, and undertakes follow-ups of the improvement measures.

2.1.5 Internal Rate of Return

The FIRR will be negative as the operating expenses have consistently been larger than the revenues from the facilities since the completion of the project.

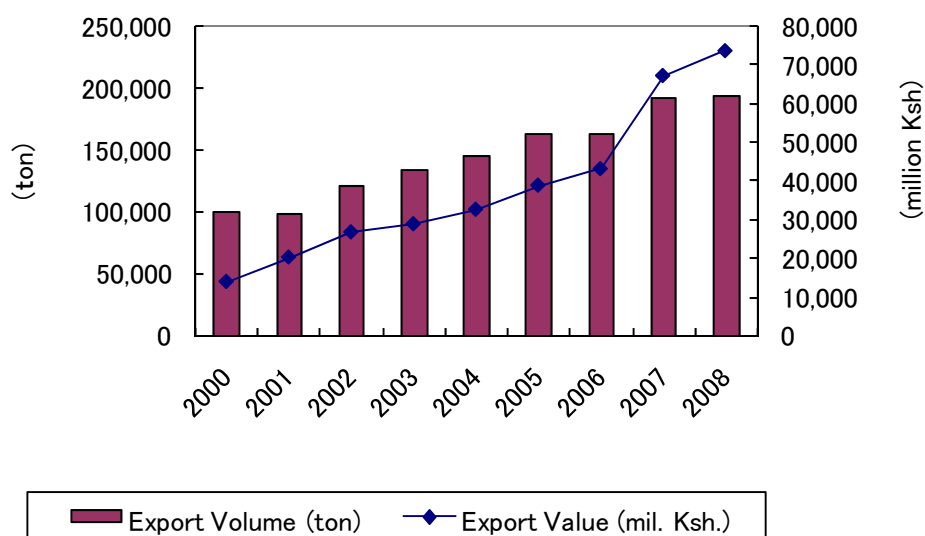
2.1.6 Impact

2.1.6.1 Export Promotion of Horticultural Crops

The horticultural industry is the fastest growing industry in the agricultural sector in Kenya. Export value, volume, and the number of exporters increased substantially, as shown in Figure 1 and 2. While the direct contribution of this project to the increase in export is limited as this project is only a part of the industry that grew under the initiatives of the private exporters, HCDA's major work is to provide technical assistance to farmers and small-scale exporters, and it can be said that HCDA is contributing to the increase in exports through the technical assistance for the increase in production by farmers, as is obvious in the results of the beneficiary survey. Also, the facilities are used for technical assistance workshops, thus it can be said that increase in the farmers' income would be resulting from the existence of these facilities. About 70% of the farmers answered that their income had increased. More than 80% of them answered that they were satisfied or, very satisfied with the technical assistance services provided by HCDA. Although the facilities are not currently utilized by them, nearly 80% of the farmers responded that the facility could be an important base as a hub for the distribution of their produce in the future.

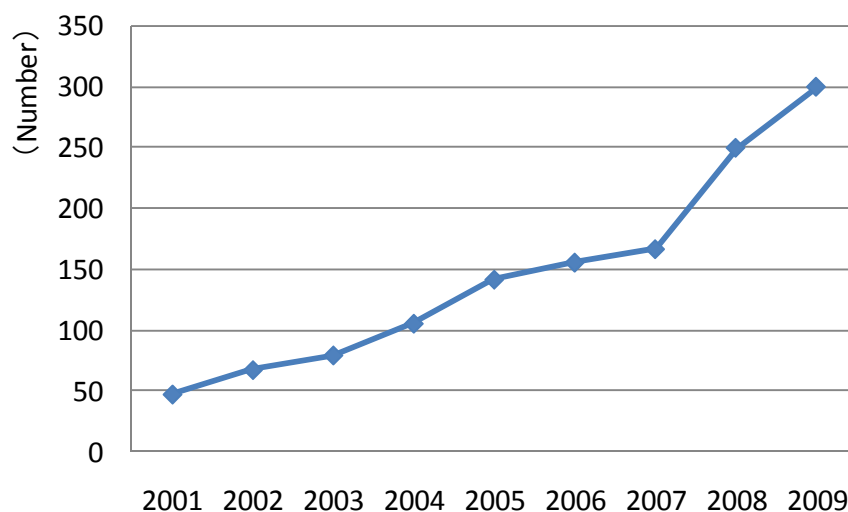
Nairobi Horticultural Center, almost fully operated, is utilized mainly by small-scale exporters, thus it can be said that it is contributing to the expansion of the horticultural industry base by providing the location for their operations. Around Nairobi Airport, there were some exporters that expanded their businesses and became independent after getting the support from HCDA.

Figure 1 Export Volume / Value of Horticultural Crops



Source : Data supplied by HCDA

Figure 2 Number of Exporters in Operation



Source : Data supplied by HCDA

2.1.6.2 Environmental / Social Impact

2.1.6.2.1 Impact on Environment

Since the completion of this project, no soil analysis has been performed. However, no abnormality has ever been reported. The hand-wash basins are the only places where some sort of detergent is always drained, and no particular problems have been observed. HCDA plans to conduct an environmental impact assessment of all the

facilities from next year as part of their annual inspection program.

2.1.6.2.2 Impact on Society

Almost all the workers employed by the exporters for sorting crops in accordance with the quality standards at Nairobi Horticultural Center are women. As all the exporters that utilize the Center are small-scale, provision of the operating base to those companies would lead to the securing of employment of women workers.

No particular problems have ever been reported as to the resettlement of residents required in this project.

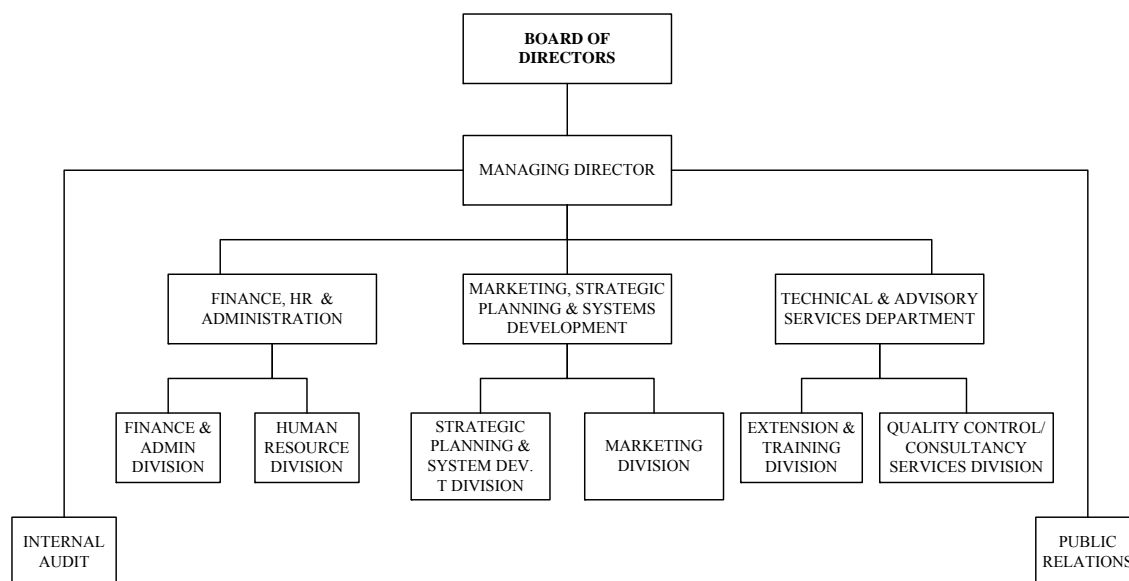
2.2 Sustainability

2.2.1 Organizational Structure

The organization of HCDA, consisting of 216 employees as of August 2009, is divided into 3 departments under the Managing Director (Figure 3), i.e. Finance, HR & Administration Department (138 staff)⁴, Marketing, Strategic Planning & Systems Development Department (20 staff) and Technical & Advisory Services Department (57 staff). HCDA is planning to consider restructuring the Authority for more efficient operations as specified in the “Strategic Plans for 2009-2013”.

Maintenance is assigned to 4 staff in the Technical & Advisory Services Department. They undertake the repairs based on the requests received from each depot.

Figure 3 Organization Chart of HCDA



Source : HCDA “Strategic Plan for 2009-2013”

⁴ Including the staff in the offices/depots located in various parts of the country

2.2.2 Technology

No particular problems were identified, as the facilities developed in this project are not technologically complex. According to HCDA, in case they had any troubles with the equipment, the maintenance staff mentioned above would deal with the troubles without any problems.

2.2.3 Finance

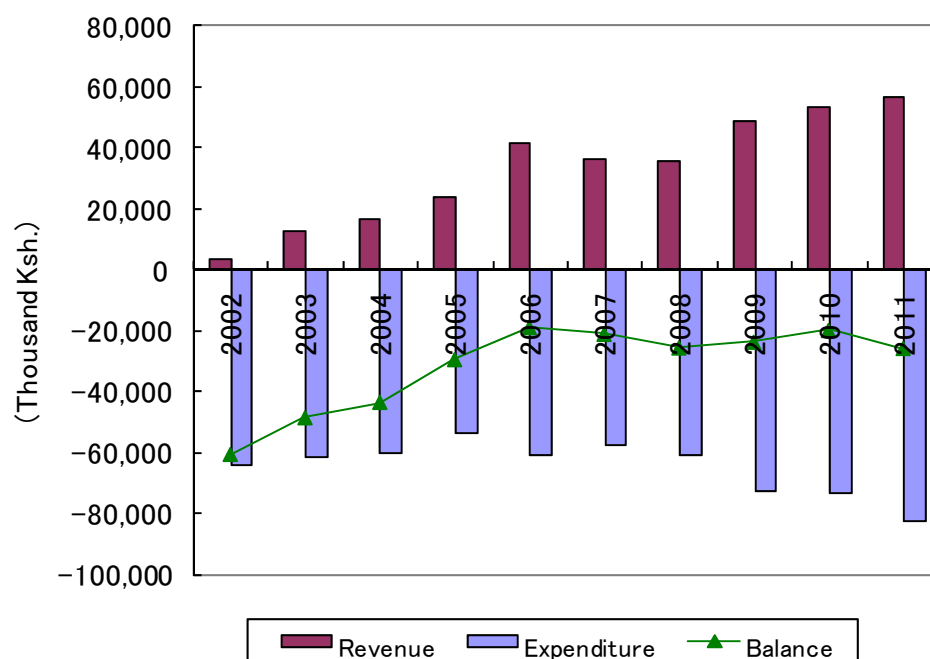
As shown in Figure 4, the expenses have always been larger than the revenues in this project since the construction was completed. However, as HCDA's current top priority is to promote the utilization of the facilities, fee levels have been set in accordance with the guideline of the Ministry of Public Works and have not been raised to make profits. The majority of HCDA's budget is provided in the form of subsidies from the Government at the moment and the Authority is expected to perform as a public entity.

Also, as described in Table 2, the account of this project is treated as part of the overall account of HCDA.

2.2.4 Maintenance Conditions

With regard to maintenance, no particular problems that would hamper the proper use of the facilities were identified.

Figure 4 Changes in Revenues and Expenditures of the Project



Note: Post-2009 data are the figures projected by HCDA.

Source: Income Statement specially prepared by HCDA for this survey

3. Conclusion, Lessons and Recommendations

3.1 Conclusion

During the period of planning and completion of this project, the surrounding business environment changed substantially: the horticultural industry, which rapidly grew with the private sector initiatives, led to the ownership of the facilities by the exporters etc. Under such circumstances, HCDA changed their business model from the direct collection and sales to the leasing of the facilities. It can be said that this was an appropriate decision, considering the social environment of that time, with a viewpoint that the subsidized public entities should not compete with the private sector.

There was room for improvement regarding the efforts to be made by HCDA for the improvement in the utilization statuses of the facilities and in supporting the expansion of marketing channels of the farmers when the collection of the produce from the farmers was halted in 2005. However, HCDA made various efforts such as the provision of technical assistance to the farmers on the sales of crops to private companies. Also, the farmers' income generally increased through the industry-wide growth led by the private sector.

As the yields of horticultural produce changes due to the risks of seasonal and annual fluctuations, not all facilities have yet secured the users in a continuous manner. But the utilization status of the facilities is on the improving trend in that the number of facilities

where the cooling / pre-cooling functions were utilized increased from 1 at the time of Ex-post Evaluation to 4 in this monitoring survey.

3.2 Lessons

3.2.1 Understanding of Problems in each Facility

It is expected that the formulation of a strategy toward further utilization of the facilities will become possible by understanding the problems of each facility from their utilization records and the financial conditions. In the project similar to this in the future, it is desirable that a mechanism to grasp the utilization records and the financial conditions of each facility be established at the time of project planning, and the appropriate, facility-specific strategy be formulated.

3.2.2 Prompt Understanding of Market Environment

The market environment changed substantially during the long period when the project was planned, implemented and completed. However, the surveys and researches to investigate the effects and lessons of this project, as well as the data maintenance etc., have been insufficient. As this is a project with a large financial deficit, it is necessary to analyze the current causes objectively and logically. In the future project that may deal with the market, it is desirable that the market environment be monitored regularly and its result be reflected into the organizational management as much as possible.

3.3 Recommendations

3.3.1 Recommendation to the Executing Agency

One of the viable plans to promote the utilization of the facilities by farmers is to encourage farmers groups, separately located in the areas around each facility, to coordinate with each other, thus organizing the larger farmer groups. Individual groups produce only a small volume of crops and they are always in a disadvantaged position against exporters when negotiating. However, it is possible to secure a stable volume of crop yields and strengthen their bargaining power against exporters, by organizing an association of farmer groups for the purpose of strengthening marketing capacities.⁵ In light of the objective of this project as well as the role of HCDA to support small-scale farmers, it is desirable that HCDA support the concrete actions by providing further marketing assistance to such farmer groups, coordinating the representatives of the farmer groups, providing meeting spaces, and assisting them with the process of formation of the associations. As the associations could use the facilities as the places for cooling and

⁵According to interview survey with the farmer groups, many of them expressed strong interests in this idea, and some of them actually completed the procedure for organization.

packing the produce and for negotiating with exporters and middlemen to hand over the produce, it is possible for HCDA to increase revenues.

The formation of associations of farmer groups may not progress as planned in some regions. In that case, it would be possible, in light of the project objective, to promote the comprehensive use of all facilities by exporter companies, which is under consideration at HCDA as one of the options. HCDA will need to continuously undertake various efforts toward the improvement of the farmers' living standards by taking into consideration that the roles of exporters and middlemen vary across the regions. As the first step, it will be important to conduct the analysis of the current situations regarding the market environment and the conditions the farmers are facing.

Also, in the technical cooperation project, "Smallholder Horticulture Empowerment Project (SHEP), which was separately implemented from 2006 with the assistance of JICA, organizing of horticultural farmer groups was supported. It is also possible that the findings and outcome of this technical cooperation will be utilized / applied.

Comparison of Original & Actual Scope

Item	Plan	Actual
1. Output Pre-cooling facilities (tons/day)	Sagana: 20 tons twice a day Limuru: 10 tons twice a day Kibwezi: 15 tons twice a day Nairobi: 10 tons twice a day Total: 110 tons (4 locations)	Sagana: 20 tons Limuru: 15 tons Kibwezi: 10 tons Kubu: 10 tons Mwea: 20 tons Yatta: 10 tons Machakos: 10 tons Total: 95 tons (7 locations)
Cold storage facilities (tons/day)	Nairobi: 110 tons Sagana: 20 tons Limru: 10 tons Kibwezi: 15 tons Total: 155 tons (4 locations)	Nairobi: 100 tons Total: 100 tons (1 location)
Related equipment	Forklift trucks Weighing scales Insulated trucks (4-ton × 3) Management-use vehicles (2), etc.	8.5-ton insulated trucks × 17 3-ton dry van truck × 27 Pickup vehicles × 7 Motorbikes × 7 Four-wheeled vehicle × 1 Total: 8 vehicles Crates / carts for crate movement
Consulting services	124M/M	82M/M
2. Project period	L/A conclusion: Oct. 1993 Consultant selection: Dec. 1993 Contractor selection: Feb. 1995 Equipment procurement: Mar. 1995 - Jun. 1996 Consulting services: Jan. 1994 - Dec. 1996	L/A conclusion: Oct. 1993 Consultant selection: Dec. 1994 Contractor selection: Jul. 1999 Equipment procurement: Aug. 1999 - Mar. 2001 Consulting services: Dec. 1994 - Jul. 2001
3. Project cost		
Foreign currency	1,491 mil. yen (877 mil. Ksh)	2,016 mil. yen (1,134 mil. Ksh)
Local currency	881 mil. yen (518 mil. Ksh)	2,404 mil. yen (1,353 mil. Ksh)
Total	2,372 mil. yen (1,395 mil. Ksh)	4,420 mil. yen (2,487 mil. Ksh)
ODA loan portion	2,016 mil. yen (1,185 mil. Ksh)	2,016 mil. yen (1,134 mil. Ksh)
Exchange rate	1Ksh (Kenyan shilling) = 1.7 yen	1 Ksh = approx. 1.78 yen* (*IFS ⁶ -based simple average during the project period)

⁶ International Financial Statistics by IMF