

Uzbekistan

Senior Secondary Education Project

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Field Survey: November 2008 and March 2009

1. Project Profile and Japanese ODA Loan



Map of Project Area



Kagan Professional College in Bukhara

1.1. Background

Before independence in 1992, the need for the development of industrial human resources in Uzbekistan was very low because the country was obligated to contribute to the national economy of the former Soviet Union, being “a land of material supplies” that could provide primary products such as cotton, oil and natural gas¹. For Uzbekistan, where there was no advanced industrial base and were very few human resources that could support this base before independence; educational reform that started in 1997 was one of the very important policies that would determine the direction of industrialization and economic growth after independence.

In the year 2000, almost half the population was under 20 years old². It was therefore of great importance for Uzbekistan to develop the human resources necessary for the transition toward a market-oriented economy, especially to foster the younger generation, which accounted for the greater part of the population, in order to proceed with the smooth transition to such an economy type. The development of a Senior Secondary Education system was therefore urgently needed. Particularly, development and

¹ The need to develop and foster the human resources related to agricultural product processing was very low, since the processing of cotton, for example, had been under the control of Leningrad (St. Petersburg as of now) and other cities. Moreover, with regard to the production of raw materials including cotton, daily manufacturing activities were backed up by engineers and researchers, the majority of whom were Russian. After independence, many of these Russians left Uzbekistan, thus a lack of human resources in the technical sector had become a serious issue at that time. (Source: JICA internal documents)

² It was also anticipated that the numbers of a younger generation (from 15 to 17 years old) would increase 19% in the period from 1999 to 2005. (Source: Ibid.)

enhancement of the Professional College (PC) system, through which, it was hoped, the majority of the younger generations would pass through, and which was one of the highest priority issues in the education sector of Uzbekistan.

1.2. Objective

To develop human resources necessary for the transition toward a market-oriented economy by providing overseas training for teachers and instructors and educational equipment at 50 model agricultural Professional Colleges (PCs), central to the ongoing educational reform in Uzbekistan, and thereby contributing to the development of a market economy.

1.3. Borrower / Executing Agencies

Government of the Republic of Uzbekistan / Ministry of Higher and Secondary Specialized Education (MHSSE), The Center for Secondary Specialized Professional (Vocational) Education (CSSVE)

1.4. Outline of Loan Agreement

Loan Amount / Disbursed Amount	6,347 million yen / 5,973 million yen
Exchange of Notes / Loan Agreement	December 2000 / January 2001
Terms and Conditions	
-Interest Rate	0.75%
-Repayment Period (Grace Period)	40 years (10 years)
-Procurement	Bilateral tied
Final Disbursement Date	September 2005
Main Contactors (over 1 billion yen)	Sumitomo Corporation (Japan)
Consulting Services (over 100 million yen)	UNICO International Corporation (Japan)
Feasibility Study (F/S), etc.	March 2000 Special Assistance for Project Formation (SAPROF) April 2007 Special Assistance for Project Sustainability (SAPS)

2. Evaluation Result (Rating: C)

2.1. Relevance (Rating: a)

This project has been highly relevant with Uzbekistan's national policies and development needs at the times of both appraisal and ex-post evaluation.

2.1.1. Relevance at the time of appraisal

At appraisal in 2000, the population under 20 years old consisted 50% of the total population and the capacity development for these younger generations in order to reform the economic system to a market-oriented economy and the reconstruction of the education system were regarded as urgent development issues in Uzbekistan. Under these circumstances, the Government of Uzbekistan launched the “National Program for Personnel Training (NPPT)” as the most important program in its national policy and promoted a fundamental reform of the education system.

In line with this goal, the reform of professional colleges (PCs) was set as a pillar of educational reform³, which had been treated as a low priority in the days of the former Soviet Union, and emphasized the fostering of “highly professionalized human resources required by industrial diversification and modernization under a market economy”. Moreover, the development of agricultural education was strongly promoted since the agricultural sector was very important, having an approximate 30% share of GDP⁴.

In addition, the problem of outdated educational equipment and materials, which were introduced in the era of the former Soviet Union, had to be urgently solved.

Thus, the project aimed at restructuring PCs through financing human resource development, including the training of directors, teachers and instructors and providing educational equipment, was highly consistent with the then development policies.

2.1.2. Relevance at the time of evaluation

At ex-post evaluation, the population under 20 was still high and its share of the total population was around 43%⁵. The growth rate of the young generations was noticeable and the acquisition of the necessary skills appropriate to a market economy for those young generations was still the most important issue for the establishment of an industrial foundation and economic growth. The NPPT still remained a key policy for education sector reform⁶.

The objectives of PCs aimed at developing human resources who meet the needs of a market economy have not changed and courses in agriculture, industry, economics, law, social and security service, education, and the service industry have all been offered. Especially, the agricultural sector, which made up 28% of the total GDP, remains important

³ In this reform, the government established a new education system. After 9 years compulsory education, 3 years of training in academic lyceums (ALs) or professional colleges (PCs) are offered to all students as a part of compulsory education.

⁴ In 2001, the working population engaged in the agricultural sector was around 40% of the total working population; the agricultural sector was one of the most important industries. The population of rural areas was around 60% and the development of the agricultural sector was crucial to development in Uzbekistan. However, the essence of a command economy remained strong in the agricultural sector. Thus, it was necessary to improve the technology for farmers through vocational training.

⁵ Source: Uzbekistan Bureau of Statistics

⁶ The budget allocation for education was 29% of the total budget. (source: JICA internal documents)

and the share of agricultural PCs was relatively high⁷.

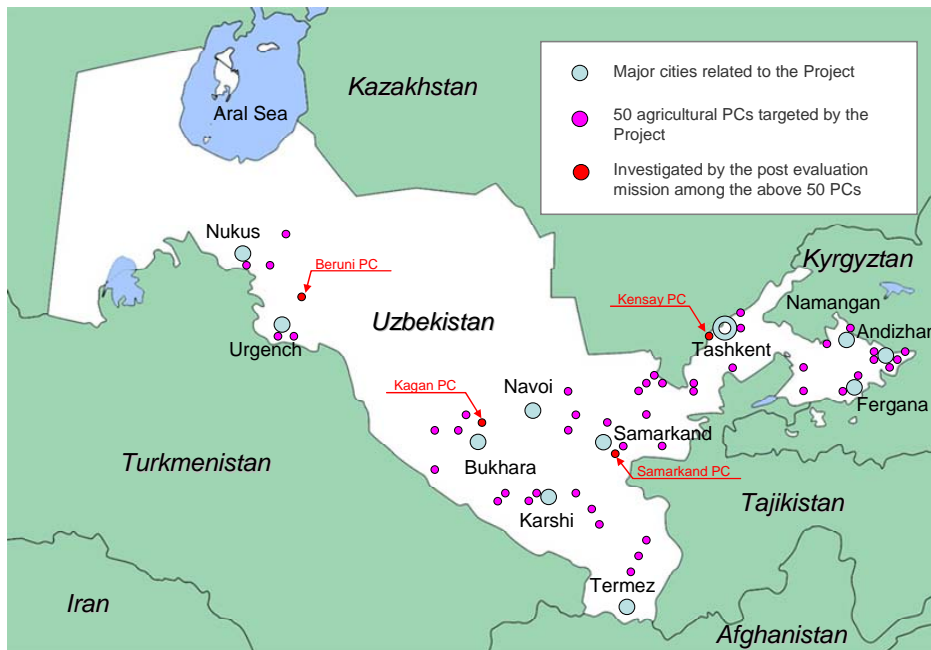
Regarding educational equipment, the government decided to implement a new strategy⁸ to develop textbooks for senior secondary and vocational education, while the budget allocation for the maintenance of educational materials showed an increase⁹.

Therefore, there is no change in the educational policy, including issues related to educational equipment, in Uzbekistan at ex-post evaluation. The need to enhance productivity by offering effective training to the growing younger generation is still unchanged. The development of industrial human resources, meeting the changes in a market economy in Uzbekistan, was still regarded as one of the most urgent issues to tackle. Thus, the Project is still given a high priority in efforts to develop and rehabilitate PCs and to improve an educational system of vocational training.

2.2. Efficiency (Rating: b)

The actual period was slightly longer than planned and the cost of the project was exceeded the plan; therefore the evaluation for efficiency is moderate.

Figure-1: Location of Project Sites



2.2.1. Output

The comparison of the project scope between original and actual is shown below.

⁷ In 2007, the number of agricultural PCs was 236, 22% of 1,076 PCs in total. (Source: JICA internal documents)

⁸ By August 2007, 663 kinds of textbooks were published. (Source: JICA internal documents)

⁹ The budget increased by 131% from 2002 to 2003. (Source: JICA internal documents)

Regarding the soft components (technical assistance components), there were huge changes in in-country training, whereas overseas (in Japan) training was provided as planned. The number of procured equipment items for the 50 PCs was increased by 50%. The background for those changes is described below:

Table-1: Comparison of Output between Original and Actual

Project Components	Original Plan	Actual Outputs
1. Technical Assistance Program		
1.1 Directors		
Overseas training	50 Directors, 0.5 months	As originally planned
In-country training	100 Directors 10 days	96 Directors ¹⁾ , 11 days 120 Directors ²⁾ , 1 day
1.2 Instructors		
Overseas training	50 Directors, 1.0 month	As originally planned
In-country training	180 Directors, 10 days	348 Directors, 13 days ¹⁰⁾
1.3 CSSPE/PIU and M&E experts		
Overseas training	6 staff, 2 weeks	As originally planned
In-country training	30 staff, 10 days	69 staff, 6 days
2. Procurement of the Equipment for 50 PCs	General Equipment ³⁾ Special (Agricultural) Equipment 233 items in total	General Equipment ⁴⁾ Special (Agricultural) Equipment ⁵⁾ 349 items in total
3. Civil Works (Renovation and Construction of PCs)	Renovation and Construction of 50 Agricultural PCs	Replacement of 7 PCs Additional financial input from Uzbekistan (will be described later)
4. Consulting Service (C/S)	257M/M	As originally planned 6 times amendments (but no change in total budget for consulting service)

Source: JICA internal documents and interviews with stakeholders in Uzbekistan

Note-1): Participants are all from 50 model PCs¹¹⁾.

Note-2): Participants are all from non model PCs.

Note-3): General equipment was defined as 5 subjects, such as physics, chemistry, astronomy, foreign language, and information technology and copy machines.

Note-4): In addition to above 5 subjects, 2 subjects, biology and geography were added. (It is consistent with the ADB education project, which cooperated with the project.)

Note-5): The project focused on 7 courses based on the market research needs. (Courses: plant growing, cattle breeding, agronomy, food processing, O&M of agriculture machines, veterinary, and O&M of irrigation machinery).

- ✓ In-country training for directors and instructors: In response to the demand growth for training from non model PCs, additional training for directors and instructors of non model PCs was provided¹²⁾.
- ✓ Capacity training for staff in executing agencies: Since the importance of training for monitoring and evaluation experts in executing agencies was recognized, the number

¹⁰⁾ Some of the courses (agriculture for 38 participants) were provided for 12 days. (Source: JICA internal documents)

¹¹⁾ As described, the project targeted 50 agricultural PCs.

¹²⁾ The participants from non model PCs were 114, around 30% of total participants (348). (Source: Results of interviews for CSSVE)

of trainees was increased. But all expenses were within a specified budget (the training period was shortened by 4 days).

- ✓ Procurement of equipment: The Sub-Expert Group (SEG) consisted of 9 Uzbekistan specialists in education and considered 223 items, which were previously listed up before the project was launched, and re-selected 349 items in 2002¹³.
- ✓ Renovation and construction of 50 professional colleges: There was the replacement of 7 PCs¹⁴. In addition, as a result of the inspection of 50 PCs for installing mini plants (mini production lines), it was found that some PCs faced difficulties in installing them (mainly due to space constraints). Thus, the government allocated an additional budget for those PCs to renovate and build new facilities for the mini plants.

2.2.2. Project period (Rating: b)

The project period was slightly longer than planned.

The project was scheduled from January 2000 to November 2003, a period of 47 months, but it extended to 53 months, from January 2001 to May 2005, which was equivalent to 113% of the original plan. The main reasons for the delay are listed below.

Table-2: Comparative Table of Project Periods

Item	Original Schedule (months)	Actual (months)	Differences (months)
Civil Works	Jan.2000 ¹⁾ - Sep.2001 (8.0)	Apr.2003 - Mar.2005 (23.0)	15.0
Procurement of Equipment	May.2001 - Oct.2003 (29.0)	Apr.2002 - May 2005 (37.0)	8.0
Technical Assistance	May.2001 - Nov.2003 (30.0)	Feb.2002 - Mar.2005 (37.0)	7.0
Selection of Consultant	Jan.2001 - May 2001 (4.0)	Jan.2001 - Jul.2001 (6.0)	2.0
Consulting Service	Jun.2001 - Nov.2003 (29.0)	Apr.2002 - Mar.2005 (35.0)	6.0

Source: JICA internal documents and interviews with stakeholders in Uzbekistan

Note-1): Civil works were launched before L/A since it was only financed by the Uzbekistan government.

- ✓ Delay for consulting service: The operation of consultants was delayed since it took time for domestic registration and to open the letter of credit (L/C)¹⁵.
- ✓ Delay in Civil Works: Some of the PCs faced difficulties in installing mini production and processing lines due to space constraints. It was agreed that the Uzbekistan government built new buildings for them from its own budget. It required 2 years and 10 months to finalize the drawings and have budget approval. Thus, the completion of

¹³ The selection criteria were (1) the compatibility with course contents offered by agricultural PCs, (2) usage frequency, (3) easy maintenance and (4) availability of maintenance service and spare parts. In addition, it was considered to be consistent with cooperative projects funded by ADB. (Source: JICA internal documents)

¹⁴ The 4 PCs, which faced financial difficulties, and the 3 PCs, which changed training components based on the research on demands, were eliminated from the target PCs. (Source: JICA internal documents)

¹⁵ Source: JICA internal documents

the buildings was delayed to April 2004¹⁶.

- ✓ Procurement and Installation of Equipment: The bid procedure to procure equipment took time since (1) it took extra time to finalize the bid documents due to changes in items to be purchased; (2) it also took extra time to create a bid evaluation standard; and (3) JICA delayed the issuing of its concurrence of the contract¹⁷. Moreover, the abovementioned delay in civil works brought on huge delays in the procurement and installation of equipment¹⁸.
- ✓ Delay in Technical Assistance Implementation: The delay in equipment procurement postponed training until after April 2004¹⁹.

2.2.3. Project cost (Rating: b)

Total project cost exceeded the plan.

The total cost of the project was originally 27,396 million yen (the Japanese ODA loan share was 6,347 million yen) but the actual project cost was 41,044 million yen (the Japanese ODA loan share was 5,973 million yen), which was equivalent to 150% of the original plan. The background to the drastic increase in local currency was, as explained earlier, extra civil works, which needed 13,750 million soum (equivalent to 10,600 million yen)²⁰. In addition, the cost to construct the PCs exceeded the cost originally expected.

2.3. Effectiveness (Rating: b)

Some of the procured equipment (especially food processing “mini line” equipment²¹) is not properly used and the teaching plans of many PCs have not yet been improved in a manner linked with the effective usage of procured equipment. Moreover, indicators such as an “increase in the number of PCs” and the “actual number of students per number of students at full capacity” have not achieved the target value. In contrast, positive effects like enhancement in the quality of course content and the increase in employment of instructors were recognized. Therefore, this project has produced certain effects, and its effectiveness is moderate.

2.3.1. Quantitative effects - Operation and Effect Indicators

Regarding the Operation and Effect Indicators (being defined by JICA as those to

¹⁶ Source: Answers to the questionnaire to CSSVE and the results of the interviews for them

¹⁷ Source: JICA internal documents

¹⁸ Source: Answers to the questionnaire to CSSVE and the results of the interviews for them

¹⁹ Source: Ibid.

²⁰ Source: Answers to the questionnaire to CSSVE

²¹ The number of “mini line” equipment (food processing mini-plant) procured under the Project was 23, which accounted for 7% of the 349 items in total.

monitor the operational status and project effects after the completion of the project), the type of indicators shown in Table-3 were tentatively agreed through the Minutes of Discussion (M/D) in August 2000 and, it had been decided at that time that the detailed targets were to be decided when concluding the Project Memorandum (P/M)²² at a later stage. However, no further actions to decide the target value, target year, etc., have been taken since then²³ and the P/M was not concluded after all.

In view of this, the indicators mentioned in the following table should be urgently relayed to the Monitoring Division of CSSVE, and it is of great importance for them to develop the administrative procedures to periodically collect the relevant data. (This will be elaborated in Section 3.3.)

Table-3: Comparison of Operation and Effect Indicators

Operation and Effect Indicators (Unit)	Baseline (2001)		Target Value (Year: Unknown)		Actual Data (as of Oct. 2008)	
	National	50 PCs	National	50 PCs	National	50 PCs
Actual Number of Students per Number of Students at Full Capacity (%) (No. of students at PCs are in parentheses - Unit: Thousand students)	80 (539.6)	80 (24.6)	120 (823.9)	120 (35.5)	150 (1,070.2)	170 (49.6)
Gross Student Enrollment Ratio (%) ¹⁾	13.2	- ⁴⁾	-	-	46.1	-
Gross Student Enrollment Ratio by Gender (%) ²⁾ (Upper: Male, Lower: Female)	28.6 25.8	- -	- -	- -	51.9 46.0	- -
Increase in the Number of Students (%)	N.A.	N.A.	53	44	198	202
Increase in the Number of PCs ³⁾ (No. of PCs in total are in parentheses)	N.A. (303)	N.A.	464 (1,406)	N.A.	355 ⁵⁾ (1,076)	N.A.
Drop Out Ratio (%)	0	0	0	0	0	0
Increase in the Number of Students proceeding to Higher Education (%)	2.2	2.1	2.6	5.7	2.8	2.9
Employment Ratio of Graduates (%)	72	65	83	77	92	92
Increase in the Revenue of 50 PCs through their Production Activity (%)	N.A.	33.0	N.A.	-	N.A.	18.0

Source: Answers to the questionnaire to CSSVE (except for the following Note-1 to 5)

Note-1): Calculated from the data relating to PCs only, among all the SSVE (Secondary, Specialized Vocational Education) courses (Source: JICA internal documents. The actual data is as of 2006)

Note-2): Calculated from the data encompassing all the SSVE courses (Source: JICA internal documents. The actual data is as of 2006)

Note-3): Calculated from the data relating to PCs only, among all the SSVE courses. Target value has been set according to the Government plan. (Source: JICA internal documents)

Note-4): “—” means no data available. “N.A.” means not applicable to the category in question.

Note-5): Source: JICA internal documents (The data is as of September 2007.)

Among the indicators of which targets have already been fixed as shown in the following table, i) the employment ratio of graduates, ii) the increase in the number of students proceeding to higher education (nationwide data), iii) the increase in the number of students and iv) the drop out ratio have achieved their target values. (Nonetheless, it is needed to be reconsidered whether it was right or wrong to select the data of “increase in

²² Source: JICA internal documents

²³ Source: Answers to the questionnaire to CSSVE and the results of the interviews for them

the number of students proceeding to higher education” as one of the indicators of the Project²⁴.)

On the other hand, the indicators of “increase in the number of PCs” and of “actual number of students per number of students at full capacity” are currently below target, because of the slow construction of new PCs, which does not meet the explosive increase in the number of enrolled students, stemming from a rapid growth in the younger population and their tremendous increase in the enrollment ratio (on the grounds that proceeding to SSVE has recently been made compulsory for all). Thus, it is recommended that the construction of new PCs should be greatly accelerated and the target value, 1,765 PCs by the year 2009, shall be upwardly revised²⁵.

2.3.2. Qualitative effects

(1) Frequency of equipment utilization

Figure-2 shows the results of a social impact survey²⁶ (answered by teachers and instructors) regarding the frequency of equipment utilization. Equipment usage from 7 to 10 hours per week is the majority answer by teachers and instructors, followed by that from 3 to 7 hours per week. At the same time, it was clearly pointed out in the final report regarding Special Assistance for Project Sustainability (SAPS), conducted in April 2007, that i) food processing equipment was not properly used, ii) all the other educational equipment, with the comparison of that for food processing, was generally used in good condition and iii) curriculums of many PCs have not been revised in a manner linking with the effective usage of procured equipment.

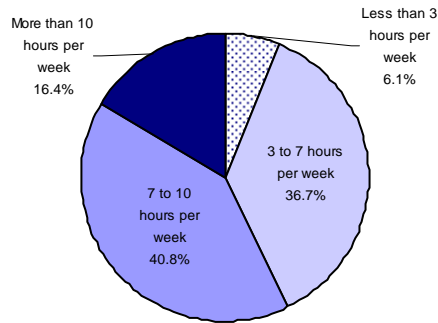
Having considered these facts, the frequency of equipment utilization except for food processing equipment seems to be relatively high.

²⁴ The primary goal of professional colleges is, as described in Section 2.1, to efficiently promote and foster industrial human resources in accordance with the market needs in Uzbekistan. Given this, the number of students proceeding to higher education (such as universities) may not be suitable as an “effect indicator” of the Project.

²⁵ The drop-out ratios answered by CSSVE were all “zero” in both baseline and actual data, which remains questionable because it seems impossible that there were no drop outs owing to illness and personal reasons.

²⁶ The social impact survey was conducted by face-to-face interviews in November 2008, extracting 6 PCs in Tashkent, Samarkand and Karakalpakstan (Amudarya PC, Nukus Agricultural PC, Kattakurgan PC, Istihan PC, Kibray Agricultural PC and Kensay PC) with the sample size of 233 (101 for students, 51 for instructors, 46 for graduates and 35 for employers of graduates).

Figure-2: Frequency of Equipment Utilization (Answered by Instructors, N=49)



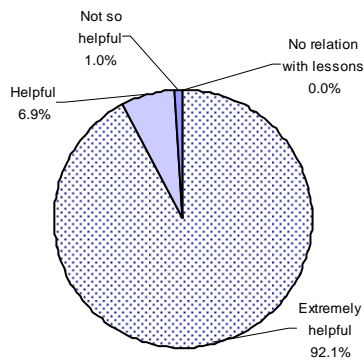
Source: Results of social impact survey (Unanswered: 2 instructors)

(2) Improvement and enhancement in the quality of course content at each PC

Contribution of procured equipment to improve lessons

Regarding the degree of usefulness to lesson understanding through the utilization of procured equipment, more than 90% of students answered in the social impact survey that the equipment was extremely helpful or helpful to understand the lessons. More precisely, it was obtained from the survey results that the tractors, welding machines, autoclaves (devices to apply high/low pressures for a variety of applications), PH meters, cotton cultivation equipment and personal computers were helpful.

Figure-3: Contribution of Procured Equipment to Understand Lessons (Answered by Students, N=101)



Source: Results of social impact survey

Note: Regarding to what degree the procured equipment was helpful to understand the lessons, asking students to assess in four levels: Extremely helpful, Helpful, Not so helpful and No relation with lessons.

Regarding the degree of contribution to the improvement of lesson content, it can be observed that some PCs have reorganized the curriculums by introducing in free slots new

courses that actively utilize the procured equipment in free time slots²⁷. Generally speaking, however, it was also pointed out²⁸ that the current curriculum of each PC has not sufficiently been improved so as to encourage the utilization of procured equipment and in a manner to practice new teaching methods (case study teaching, agriculture club activities, etc.).

Especially on food processing machines and equipment, a report said that the installation of this equipment is not linked with the improvement of course content (namely, curriculum reorganization based on the effective usage of this equipment) although it is contributing to increases in additional income through the production and sales of juices and other food products²⁹.

Positive changes in instructors' approaches to provide lessons

As shown in Table-4, 98% of 101 students responded in the social impact survey that lessons provided by trained instructors seems to be preferable than those by the instructors who were not trained by the Project.

In addition, it seems from the answers shown in Table-5 that the approaches to giving lessons by each instructor may be in the process of changing through the training programs provided by the Project. (On the other hand, this phenomenon hasn't led to any curriculum restructuring that will be based on the characteristics of procured educational equipment, as previously discussed.)

Table-4: Evaluation of Lesson Content
(Answered by Students, N=101)

Answers	Share
Lessons provided by trained instructors are better than those of non trained ones.	98%
No differences between trained and non trained	2%

Source: Results of Social impact survey

Table-5: Evaluation of Training Provided
(Answered by Instructors, N=51, Multiple answers)

Answers	Share
Started to introduce new teaching methods	96%
Have improved teaching materials after training	84%
Started to utilize procured equipment effectively	98%
Started to exchange knowledge and skills with other colleagues	89%

Source: Results of Social impact survey

(3) Improving the performance of the instructors

Regarding the instructors' performance, there were no graduates, out of 46 respondents, who answered "Bad" or "Very Bad" as demonstrated in the following table. The instructors seem to be highly regarded by ex-students according to the results of the social impact survey. Given that various factors have been contributed to improve the quality of

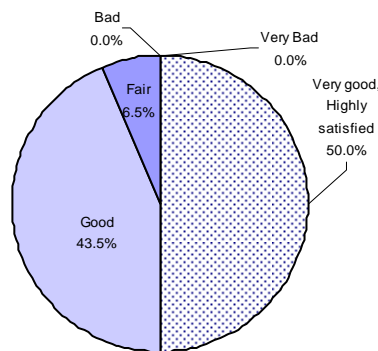
²⁷ Source: JICA internal documents

²⁸ Source: JICA internal documents

²⁹ Source: Ibid.

teachers and instructors, the graduates' evaluation of the above cannot be fully taken as the effects of the Project. Meanwhile, Table-4 implies that the lessons provided by trained instructors appear to have a comparative advantage over those provided by non trained instructors, thus it seems to contribute to the improvement of instructors' performance to some extent.

Figure-4: Evaluation of Instructors' Performance by Graduates (N=46)



Source: Results of social impact survey

Note: Regarding the performance of instructors, asking graduates assessment in five levels: Very good (or Highly satisfied), Good, Fair, Bad and Very bad.

(4) Improving the performance of the students

Employers' assessment on the performance of PC graduates is extremely high. None of the employers, out of 35 respondents, has answered either "Bad" or "Very Bad" regarding work behavior, machinery operation skills and theoretical knowledge attained by the graduates, as shown below.

Table-6: Evaluation of Graduates (Answered by Employers, N=35)

Evaluation Criteria	Very Good (%)	Good (%)	Fair (%)	Rating Score ¹⁾
Work Behavior	11.8	79.4	8.8	4.0
Operation Skills of Machines	14.7	79.4	5.9	4.1
Theoretical Knowledge	11.8	76.4	11.8	4.0

Source: Results of social impact survey

Note-1): Calculated by weighted scores given to each answer as follows: Very Good: 5 (Full mark), Good: 4, Fair: 3, Bad: 2, Very Bad: 1

Note-2): There were no "Bad" and "Very Bad" answers in each criterion.

With regard to the acquisition of official certification such as a welding or driver's license, almost half of the respondents acquired some certification while in college or after graduation. Then, 90% of 20 respondents answered that lessons provided by

instructors were quite supportive in obtaining such certification.

Table-7: Acquisition of Official Certification (Answered by Graduates, N=46)

Answers by Graduates	No. of Respondents	Share
Graduates who have acquired official certification	21	45.7%
Of which, lessons by instructors were quite helpful for acquisition of certification	19	-
Of which, lessons by instructors were not so helpful for acquisition of certification	1	-
Graduates who did not acquire official certification	25	54.3%

Source: Results of social impact survey

Note-): Among 21 respondents who have acquired official certification, one of them did not answer whether the lessons provided by instructors were helpful or not.

(5) Improving the management of PCs

All the instructors who have responded to the social impact survey pointed out that there was some improvement in the management conditions of PCs because of the procured equipment. It is noted that i) securing an additional income source (income from agricultural products, rental charge of procured equipment, tuition fees for courses for local citizens, for example) and ii) additional employment of teachers and instructors³⁰ are the areas of detailed improvement.

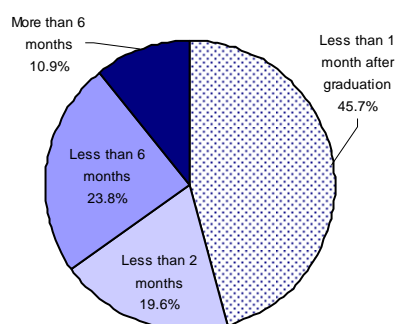
(6) Helping to find employment opportunities

According to Figure-5, the majority answer about the required time to find jobs was “less than one month”, which accounts for almost a half (46%). The share of graduates who required more than six months is only 10%. Since hiring someone through personal connections is still strongly rooted in Uzbekistan, the relevancy test between the quality of student and employment success needs careful consideration. However, 98% (45 respondents) answered that “technical skills and knowledge acquired from PCs were quite helpful in finding jobs”, thus the Project had some positive impact on the job-hunting process of PC graduates³¹.

³⁰ From the social impact survey, an answer saying that “On the basis of re-training existing teachers, the instructors who had already attained operational skills for specific equipment procured by the Project became necessary and additional employment of such human resources were accelerated.” was received. It appears that these additional employments made an important contribution to improve the management condition of PCs.

³¹ Among 46 graduates who responded to the social impact survey, 27 graduates found jobs at agriculture-related companies or proceeded to the agricultural universities/institutions (consisting of 12 for farms, 6 for veterinary, 5 for agricultural machinery workshop, 1 for cattle-breeding, 1 for agriculture-related administration, and 2 for the agricultural faculty of universities). Other than agriculture-related companies and institutions, 3 for manufacturing companies, 3 for retailers, 2 for garments and 11 for others.

Figure-5: Required Time to Find Jobs after Graduation
(Answered by Graduates, N=46)



Source: Results of social impact survey

2.3.3. Economic Internal rate of return (EIRR)

Recalculation of Economic Internal Rate of Return (EIRR) was not conducted since the necessary data for recalculation, such as the income growth of each PC by the increase in graduates, savings on education expenditure by extended working hours, etc., were not able to be obtained.

2.4. Impact

2.4.1. Impacts on private companies' business

Regarding the impact from the employment of graduates of 50 model PCs, the majority of answers of employers were concentrated on "Company sales have increased" and "Efficiency in business has been enhanced", as shown in Table-8. Taking into account the evaluation saying that "graduates of the Project have better knowledge and skills" (Table-9), it can be said that graduates of 50 model PCs who acquired various skills through the implementation of the Project have had a certain favorable impact on the business activities of hired companies.

Table-8: Impact on Business by Graduates
(Answered by Employers, N=34)

Answers	No. of Respondent	Share
Company sales have increased.	10	29%
Efficiency in business has been enhanced.	16	47%
Other answers	8	24%

Source: Results of social impact survey (Unanswered: 1 employer)

Table-9: Comparison of Business Proficiency of Graduates (Answered by Employers, N=34)

Answers	No. of Respondents	Share
Graduates of the Project have better knowledge and skills.	26	76%
No difference between PCs	7	21%
Graduates of other PCs have better knowledge and skills.	1	3%

Source: Results of social impact survey (Unanswered: 1 employer)

2.4.2. Job creation - Contribution to the increase in employment opportunities

The impact on the increase in the instructor's employment opportunities is considerable. The growth rate of teachers and instructors belonging to 50 model PCs of the Project was 75% in the period from 2000 to 2005, whereas those in SSVE as a whole was 57%³² in the same period of time (Table-10). As a supporting fact of the above, an additional 1,415 employment opportunities for instructors have been created among the 50 model PCs in the period from 2001 (at the time of Project commencement) to 2007 (Source: Ibid.).

As shown in Table-3, there were substantial increases in the number of enrolled students and the enrollment ratio of PCs, resulting from a rapid growth of the younger population and the fact that continuing on to SSVEs has recently been made compulsory. The government is now trying to construct new PCs and to employ additional teachers and instructors to respond to these needs.

On the other hand, in terms of the 50 model PCs of the Project, an answer saying that "the instructors who had attained operational skills related to the new equipment procured by the Project were additionally employed" was obtained from the social impact survey. Given that, it is highly possible that positive impacts on the increase in employment opportunities have emerged through the implementation of the Project.

Table-10: The Number of Instructors in SSVE and 50 Model PCs

Year	No. of Instructors in 50 Model PCs
2000	1,602
2001	1,847
2002	2,222
2003	2,397
2004	2,497
2005	2,808
2006	3,086
2007	3,262
Year 2007 / Year 2000	2.04 times
Agricultural PC in total	13 thousand (2007)
SSVE in total	70 thousand (2007)

Source: CSSVE and JICA internal documents

2.4.3. Impact on agricultural sector in Uzbekistan

As presented in Table-11, agricultural production and investment in the agricultural sector in the whole of Uzbekistan have been growing dramatically after 2004. Since a variety of factors will contribute to the expansion of the agricultural sector, the remarkable increase shown in Table-11 does not necessarily represent the impact of this Project exclusively. In general, however, development and supply of agricultural human

³² The number of teachers and instructors has increased from 7 thousand (in 2000) to 11 thousand (in 2005, Source: JICA internal documents).

resources through the implementation of the Project partly contributed to the stimulation of the agricultural sector in Uzbekistan.

Table-11: Macroeconomic Indicators of Agricultural Sector of Uzbekistan

Macroeconomic Indicators	2004	2005	2006	2007
Agricultural Production (billion soum)	4,615.8	5,978.3	7,539.8	9,304.9
Compared with the previous year	-	129.5	126.1	123.4
Investment in the Agriculture Sector (billion soum)	113.6	137.9	164.2	200.6
Compared with the previous year	-	121.4	119.1	122.2

Source: Statistical Office of Uzbekistan (2008) Agriculture in Uzbekistan, 2008 (written in Uzbek)

2.4.4. Impact on natural and social environment

No negative impact on the natural environment has been observed³³. The relocation of local people has not occurred during the construction of the PCs and there were no problems with land acquisition.

Regarding the impact on the social environment, it was observed from the field investigation that i) because of the modern educational equipment in use after the Project, requests for using the equipment to provide practical training flooded in from surrounding universities, and the PCs try to respond such needs by the conclusion of mutual agreements between the PCs and university (Kensay PC); ii) upon the procurement of new agricultural equipment and facilities, the PCs have started to provide technical training programs for general farmers as a course to provide off-budget income earnings and for community-related activities (Beruni PC); and iii) the PCs and farmers are using the agricultural laboratories on a collaboration basis (Beruni PC). Given these facts, it seems that a new type of communication between PCs, universities and local residents has emerged, thus contributing to the encouragement of social activities in the regions of the Project.

2.5. Sustainability (Rating: b)

In the short run, there are some issues of i) non-continuation of manipulation skills transfer among instructors, ii) difficulties of securing spare parts for some equipment, and iii) low level of operation and maintenance (O&M) status of food processing plants. On the other hand, it can be noted in the medium-and long term that i) there is an adequate O&M budget from central government, ii) the training system for teachers and instructors is well established (and actual performance seems to be good), and iii) the positive effects arising from the Special Assistance for Project Sustainability (SAPS), such as the progress of O&M system establishment are all anticipated. Taking all the above factors

³³ According to the results of an interview for the executing agencies and the results of field investigations at Kensay PC, Samarkand PC, Beruni PC and Kagan PC

into account, sustainability of this project is moderate.

2.5.1. Executing Agency

2.5.1.1. Operation and maintenance system

The operation and maintenance of educational equipment procured by the Project were performed by the CSSVE under the jurisdiction of MHSSE. The following table shows the organizational system of O&M activities. Each PC has a primary responsibility of O&M regarding the procured equipment, while the regional offices of CSSVE are in charge of monitoring the operational status of equipment. At the same time, a physical inspection has been conducted by the “Central Metrological Service Division” of CSSVE, implementing site investigations for each PC two to three times a year³⁴.

Table-12: Demarcation of Operation and Maintenance of Procured Equipment

Agency in Charge	Detailed Tasks Relating to O&M Activities
CSSVE Headquarters	<ul style="list-style-type: none"> ✓ Physical inspection of procured equipment: Conducted by Central Metrological Service Division of CSSVE (Site investigations have periodically been conducted for each PC two to three times a year.) ✓ Central Metrological Service Division is consolidating O&M-related information to be submitted from CSSVE regional offices. ✓ Monitoring of project impacts: In charge of Monitoring Division of CSSVE (newly established in Oct. 2008)
CSSVE Regional Office	<ul style="list-style-type: none"> ✓ To monitor operational conditions of PC equipment under the regional office ✓ To pay maintenance expenses of equipment, based upon the requests from PCs
PCs	<ul style="list-style-type: none"> ✓ Directly in charge of O&M of procured equipment ✓ Negotiation with equipment providers and servicing companies ✓ To bear purchase expenses of consumable goods and spare parts pertaining to O&M (To be elaborated upon in Section 2.5.1.3)

It is strongly desired to increase the number of staff in the Central Metrological Service Division since it is currently forced, mainly due to the shortage of personnel, to intermittently conduct a physical inspection over a wide area³⁵.

In addition, the Monitoring Division was newly established in October 2008 under the CSSVE and no specific activities have yet been started, with the status that there are only

³⁴ Together with the completion of the Asian Development Bank’s project (ADB Loan 1737-UZB: Senior Secondary Education Project), the Monitoring and Evaluation (M&E) division set up under MHSSE was dismantled at the end of December 2004. The duty assignment of that division was then transferred to the aforementioned “Central Metrological Service Division” under CSSVE, and it seems that there were no negative impacts incurred from this transfer (Source: Answers to the questionnaire to CSSVE). Regarding the relationship between ADB and this Project, the collaboration-related tasks of i) the preparation of O&M manuals, ii) the joint implementation of in-country training programs and iii) monitoring activities through the M&E division were realized. Also, this Project was supposed to share the Project Implementation Unit (PIU) with the ADB project of the above, but the PIU for each project was separately established and the M&E division common to both PIU was shared by them (Source: CSSVE).

³⁵ Source: Results of interview for CSSVE

two staff (including a director, as of November 2008). The duties to be assigned will be “monitoring the impacts of all the projects funded by foreign donors”, according to the director in charge. It should be preferable to clarify the assignment duties from now on, to increase the personnel in line with the areas and level of duties, and to urgently start the monitoring activities of this Project.

To sum up, demarcation of O&M activities is very clear among each division under the CSSVE as stated in Table-12, thus there seems to be no specific problems. On the other hand, the monitoring capacity of the CSSVE, especially the number of personnel of the Central Metrological Service Division and assigned activities of the Monitoring Division, should be monitored carefully.

2.5.1.2. Technical capacity

Personnel of SSVE and their academic background

The number of teachers and instructors under the SSVE was 70,756 in total (as of June 2007), with there being 37,412 teachers for general subjects, 25,593 teachers for special subjects and 7,751 instructors. In terms of academic background, 64,414 are graduates from universities (which accounted for 91% of all the staff, consisting of 121 PhD holders) and 6,342 are from secondary education and lower (9%).

It appears that teachers and instructors have attained a technical grounding to some extent, since more than 90% of them are graduates from higher education.

Training system for SSVE teachers and instructors

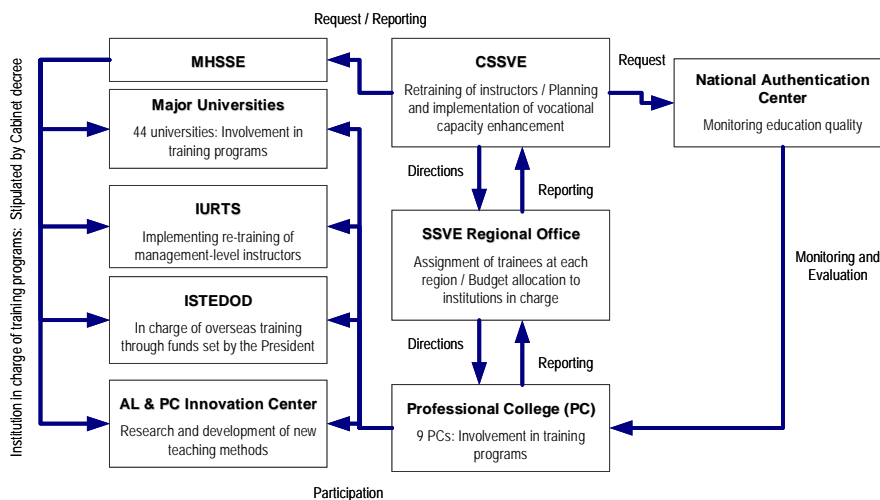
By Decree No.400³⁶ announced in 2001, the Institute of Upgrading & Retraining of SSVE Teaching Staff (IURTS)³⁷ and 44 major universities are assigned to provide training and re-training courses for teachers and instructors of the SSVE. Regarding overseas training, ISTEDOD is in charge. (For further details, refer to the following Figure-6 and Table-13.)

Participation in the upgrading training programs (to maintain and improve educational skills) once every three years is being made compulsory for teachers and instructors. Turnaround training programs to change the specialization of subjects are also provided. (The composition of upgrading training: 30% for classroom lectures on social sciences, 50% for those on special subjects and 20% for practical training.)

³⁶ Decree No.400 aims at i) improving the quality of teachers and instructors and ii) developing and fostering teachers and instructors belonging to AL and PC that meet the national education standard and NPPT.

³⁷ Established in 2004 through the reorganization of the IDSSVE under the jurisdiction of the CSSVE. In charge of training of secondary specialized education (such as PCs), publishing textbooks and research and development of new courses.

Figure-6: Institutional Mechanism of Training Programs in SSVE



Source: JICA internal documents (Original source: CSSVE)

Table-13: Training Programs of Instructors/Teachers in SSVE

Training Programs (Institution in Charge)	Target	Contents
Directors / Deputy Directors Training (IURTS)	Directors / Deputy Directors	Management and Organization
Upgrading and Turnaround Training (44 Universities)	Instructors / Teachers	Special Subjects
Upgrading, Turnaround and Equipment Training (9 PCs)	Instructors	Special Subjects
Overseas Upgrading Training (ISTEOD)	Directors / Deputy Directors / Teachers	Management and Special Subjects
Overseas Upgrading and Turnaround Training (International Agencies, Donors, etc.)	Directors / Deputy Directors / Teachers and instructors	Management and Special Subjects

Source: JICA internal documents (Original source: CSSVE)

As described in the above, the training systems for teachers and instructors are well established. (It is possible to take several training courses at IURTS and 44 other institutions and to participate in overseas training programs as presented in Table-13. The number of participants for upgrading training has increased 43% in six years up to the present.)

Specific training implemented by the providers of the Project

It is reported³⁸ that teachers' and instructors' knowledge and skills for specific equipment such as food processing mini lines are not sufficient because not enough O&M training with the utilization of real machines and equipment was conducted due to the severe delays in their procurement (For details of the training, refer to Table-14.). It has

³⁸ Source: JICA internal documents

also been confirmed³⁹ that there are several cases where the transferring of manipulation skills of the procured equipment for instructors has not been smoothly conducted, mainly due to the changes in personnel who have already attained core O&M skills. Moreover, it has also been pointed out⁴⁰ that no O&M manuals were provided for some equipment or that these manuals have not yet been translated into Russian or Uzbek.

Table-14: Records of Equipment O&M Training Provided by the Contractors

Equipment for Training	Date and Duration of Training	No. of Trainees
Mini Line for Wrapping	24 th and 27 th August, 2004	Not known
Mini Line fro Wine Production	23 rd September, 2004	Not known
Mini Line for Milk Processing	10 th to 12 th November, 2004	Not known
Mini Line for Tomato Juice	13 th to 16 th December, 2004	32
Tractors	20 th to 22 nd September, 2004 22 nd to 24 th October, 2004	50
Bulldozers	For 5 days at each of 8 PCs, from March to May 2005	16
Digging Equipment	For 5 days at each of 8 PCs, from February to March 2005	16
Mini Line for Wine Production, Milk Processing and Tomato Juice	For 3 days at each of 16 PCs, from January to March 2005	32

Source: JICA internal documents

2.5.1.3. Financial status

The operation and maintenance expenditure under the state budget of the education sector in Uzbekistan was increased five-fold in the period from 1999 to 2003 (Table-15). The share of O&M expenditure is around 3% of the state budget of the education sector as a whole. The income sources of each PC are i) the local government's budget (subsidies) allocated to each PC, and ii) off-budget income from business activities conducted by PCs. While the detailed data about subsidies from local governments were not able to be obtained in the course of the field survey, it can be presumed that the share of subsidies in the entire budget of each PC accounts for around 70 to 80%, whereas the independent incomes are around 20 to 30%, given the comprehensive results of interviews conducted for four PCs (Kensay PC, Samarkand PC, Beruni PC and Kagan PC).

The use of local governments' subsidies is limited to the i) salary and social security of teachers and staff, ii) O&M for facilities (capital repair) and procurement of equipment, iii) capital investment such as building construction and iv) utility's expenses and miscellaneous allowances (travel allowances for teachers, etc.) Basically, the use of local government's subsidies for O&M of vehicles and equipment, purchase of fertilizers, fuel, raw materials and stationery are not permitted. It is therefore necessary to allocate some

³⁹ Source: Results of interviews for CSSVE

⁴⁰ Source: Indications made by agricultural PC staff who participated in the preliminary evaluation results workshop held in March 2009

financial resources from off-budget incomes⁴¹. Given these measures, O&M expenditure for the building of newly constructed and/or rehabilitated structures by the Project must be allocated from the local governments' budget, while that for equipment procured by the Project should be obtained from the off-budget income of each PC.

Table-15: O&M Expenditure in Education Sector's Budget

Unit: million soum

Year	Capital Repairs	Current Repairs	O&M Expenditure in Total	Share of Education Sector's Budget (%)
1999	3,384	823	4,207	2.6
2000	3,557	1,313	4,870	2.2
2001	9,311	2,009	11,320	3.4
2002	13,339	3,098	16,437	3.3
2003	17,671	4,059	21,730	3.4
2003 / 1999	5.22 times	4.93 times	5.17 times	-

Source: JICA internal documents

Table-16: Composition of Expenditures under SSVE Budget

Expenditure Items	Share of SSVE Budget (%)
Salary and Social Security of Teachers and instructors / Staff	81.0
Capital Repair, Procurement of Equipment and Stationary	8.3
Capital (Investment) and Non-Capital Expenditures	5.6
Other Expenses	5.1
Total	100.0

Source: JICA internal documents

Total O&M expenditures in the SSVE budget account for around 8% of the total (Table-16); this figure is very high compared with other developing countries where teacher's salaries and social security usually make up more than 90% of the total national budget for education. Thus, the O&M budget for new and refurbished buildings (which have to be paid for from the local budget) could be relatively abundant. On the other hand, it seems that the situation regarding the off-budget income varies from PC to PC, depending on the number of excellent teachers/instructors and on the marketing knowledge and skills of the managerial staff⁴². (Table-17 shows the off-budget income of

⁴¹ This rule does not seem to be applied through the whole of Uzbekistan, on the ground that some of the PCs visited by an external evaluator gave the answer saying that the local budget could be utilized for daily operation and maintenance of equipment. Note that part of the off-budget income had to be paid to the CSSVE until 2004, with the imposition of a tax for the sales. Currently, the off-budget income can freely be used at each PC's discretion and no taxes are being imposed on them. (Source: JICA internal documents)

⁴² Income sources for the off-budget income are relatively well established at specific PCs, such as prestigious ones where lots of talented teachers are employed for all the subjects (Kensay PC), and special colleges where excellent teachers are assigned to specific subjects (welding techniques at Beruni PC). For these PCs, income sources are i) tuition fees of courses provided for local citizens and ii) rental charges of procured equipment to universities in the surrounding area. At the same time, for PCs that have never been categorized in any of the above, how to secure the off-budget income is one of the biggest issues in terms of school management. Adding to these issues, the development and expansion of off-budget business are largely dependent on directors' potential and capability as management executives of private institutions.

Samarkand Agricultural PC of the three years from 2005 to 2007. This PC is the core college in the region of Samarkand and one of the center PCs of the Project. The income level seems to be steady and stable⁴³.)

Table-17: Off-Budget Income of Samarkand Agricultural PC

Unit: Thousand soum

Year	Income from Agricultural Products	Income from Service Delivery ¹⁾	Other Income ²⁾	Off-Budget Income in Total
2005	1,950	500	17,712	20,612
2006	2,250	8,500	21,000	31,750
2007	550	5,820	22,000	28,370
Three-Year Total	4,750	14,820	60,712	80,282

Source: Answers for the questionnaire to Samarkand PC

Note-1): Rental charge of tractors and other vehicles owned by Samarkand PC

Note-2): Tuition fees of computer course for local citizens in Samarkand and miscellaneous income from other activities

2.5.2. Operation and maintenance status

A food processing plant and related equipment have not been operated correctly and have not received the correct maintenance at most of the 18 PCs where this equipment is provided. Other equipment, except for the above, is in good condition. The detailed observations of O&M status are as follows:

- ✓ Operational and management skills of food processing equipment are not sufficiently transferred to teachers and instructors⁴⁴.
- ✓ With regard to the equipment that had never been used before and that had been newly procured by the Project, many teachers and instructors tend to not be familiar with the handling, and the O&M of such equipment is inadequate in general⁴⁵.
- ✓ For the four PCs visited by an external evaluator during the field survey, there were no major O&M problems with almost all the equipment for agriculture-related subjects (other than food processing ones) and for general subjects. The same observations and results have been reported for 12 PCs which were examined by the Special Assistance for Project Sustainability (SAPS) in April 2007⁴⁶.
- ✓ Issues of how to secure an O&M budget are becoming more important, especially on how to earn off-budget income. Also, some PCs noted that there are difficulties in

⁴³ Necessary O&M budget per PC was estimated as about 16 million soum (Source: JICA internal documents). The amount of Samarkand PC's off-budget income is 20 to 30 million soum annually as shown in Table-17, where necessary financial resources are well secured.

⁴⁴ Among all types of food processing equipment, few teachers and instructors are familiar with the operation and maintenance of the juice processing mini line in particular. (Source: JICA internal documents and results of interviews for CSSVE)

⁴⁵ Source: JICA internal documents and results of interviews for CSSVE

⁴⁶ Agricultural and heavy machinery such as tractors and bulldozers are in high-frequency use. This is because these machines are additionally utilized for business activities related to off-budget income (acquisition of tractor's driving license, machinery rental services for farmers, etc.) as well as the usage for practical training. (Source: JICA internal documents, and results from field investigation at Kensay PC, Samarkand PC, Beruni PC and Kagan PC)

obtaining spare parts since some of them cannot be procured in the domestic market.

For the O&M of the food processing mini lines, the following requirements for proper management are not being fulfilled: i) daily cleaning, ii) periodical fueling and parts checking, iii) scheduled procurement of spare parts, iv) development of partnerships with servicing companies, v) periodical preparation of operation, repair and maintenance records, vi) information sharing of O&M activities with other PCs and vii) securing food safety. One of the possible reasons why the manipulation skills of food processing plants have not been transferred to the users⁴⁷ is that not enough O&M training with the utilization of real machines and equipment could be sufficiently implemented⁴⁸ due to the severe delays in procurement.

Regarding the issues of spare parts that cannot be procured in the domestic market, it is highly possible that the procured items' selection criteria of "being able to procure spare parts and receive maintenance in the Uzbekistan market" was not strictly applied to the process of selecting the items to be procured.

3. Conclusion, Lessons Learned and Recommendations

3.1. Conclusion

The components of the Project are highly relevant to the related national policies and a certain amount of positive impacts have been felt through the implementation of the Project. However, there does seem to be some problems with sustainability. In light of the above, this project is evaluated to be fairly satisfactory.

3.2. Lessons Learned

At the time of the effectuation of the consultant's contract, delays in opening the letter of credit (L/C) and in the registration of the contract were observed. In terms of results, these have induced more delays in the project implementation as a whole although it was very difficult to anticipate such risks at the time. Considering these issues, it is necessary to allow a wide margin for risks in advance, especially in the case where there are problems with law enforcement and with governmental administrative procedures (time

⁴⁷ With these situations in mind, Special Assistance for Project Sustainability (SAPS) was conducted in 2007, having recommended the i) establishment of an O&M system for equipment (accelerating collaboration between PCs and partnership with private servicing companies), ii) installation of complementary equipment to that currently issued, iii) enhancement of training system for equipment (establishment of training system for food processing, setting up a full-time organization under the CSSVE for providing training programs, etc.). In addition, experimental seminar workshops regarding milk and vegetable mini lines were held in the course of the Special Assistance for Project Sustainability (SAPS). It can be understood that a variety of efforts to improve these situations have just started.

⁴⁸ Source: JICA internal documents

consuming, etc.)

3.3. Recommendations

(For Executing Agency -1)

For securing independent financial resources through the business activities of each PC, the preparation of disciplinary rules is needed for the areas and degree of these activities, in order to officially guide non-educational activities. It cannot be denied that some of the PCs will be forced to concentrate much more on securing off-budget income than on providing education, given that the requests to acquire new financial sources for O&M costs will be rising in the future. It is not wholly preferable on the one hand that procured equipment will frequently be used in order primarily to acquire off-budget income. Stipulating the areas of business activities on their own is necessary to earn “disciplined” additional financial sources without “deteriorating” the quality of education.

(For Executing Agency -2)

Regarding the monitoring indicators tentatively agreed through M/D, it seems that the detailed targets have not yet been decided and some of the indicators were not fully collected. Having reviewed the capabilities and operational status of the newly established Monitoring Division⁴⁹ under the CSSVE, it is recommend to urgently and officially decide “monitoring indicators”. While the frequency of equipment utilization can be one of the most important indicators that can evaluate the appropriateness on usage of procured equipment, it should be necessary to elaborate somewhat (target equipment for monitoring, frequency of data collection, etc.) with the detailed design regarding how to collect the indicators, given that there are 350 types of equipment that have been procured with more than 14,000 items in total. (For example, targeting some of the food processing mini lines for monitoring with high frequency, then monitoring other equipment once every two years, etc.)

(For Executing Agency -3)

As to the lack of manipulation and O&M skills on the food processing mini lines in question, experimental seminar workshops were held in the course of the Special Assistance for Project Sustainability (SAPS), achieving some positive results with the participation of 143 teachers and instructors from 50 model PCs. To sustain these positive results, additional follow ups (providing additional training course, etc.) by the CSSVE

⁴⁹ The Monitoring Division was newly established in October 2008 and no specific activities have yet been started. There are only two personnel belonging to the division (as of November 2008). The assigned duties will be “monitoring the impacts of all the projects funded by foreign donors (including JICA)”, according to the director in charge.

will be necessary.

(For Executing Agency -4)

It was also pointed out that no O&M manuals were provided for some equipment and that some of those provided had not been translated into Russian or Uzbek. For the detailed analysis of the inadequacies in O&M manuals and measurements to counter these inadequacies, an additional follow up by CSSVE will also be necessary.

(For JICA)

Regarding the curriculums that were expected to be improved by teachers and instructors who received some training from the Project, the current curriculum of each PC has not sufficiently been revised in a manner linked with effective usage of procured equipment, as reported by the Special Assistance for Project Sustainability (SAPS). Although some of the PCs have succeeded in improving their curriculums so as to encourage the utilization of procured equipment at free time slots (Samarkand Agricultural PC, for example), it is highly recommended to start considering the possibility to provide additional supports through a variety of JICA's assistance schemes (such as project-type technical cooperation and dispatching professional experts, even the dispatching of food processing and/or equipment repair volunteers through the Japan Overseas Cooperation Volunteers (JOCV) in some cases).

Comparison of Original and Actual Scope

Item	Plan	Actual
(1) Outputs		
1. Technical assistance program		
1.1 Directors		
Overseas training	50 directors, 2 weeks	As planned
In-country training	100 directors, 10 days	96 directors, 11 days 120 directors, 1 day
1.2 Instructors (Teachers)		
Overseas training	50 instructors, 1 month	As planned
In-country training	180 instructors, 10 days	348 instructors, 13 days
1.3 CSSPE / PIU / M&E experts		
Overseas training	6 CSSPE / PIU / M&E experts, 2 weeks	As planned
In-country training	30 CSSPE / PIU / M&E experts, 10 days	69 CSSPE / PIU / M&E experts, 6 days
2. Procurement of the equipment for 50 PCs	Equipment for general & special (agricultural) subjects 233 items in total	Equipment for general & special (agricultural) subjects 349 items in total
3. Civil works (construction and rehabilitation of the buildings)	Construction and rehabilitation of 50 agricultural PCs	7 PCs: Replaced from the original plan Additional use of local currency budget
4. Consulting services (C/S)	257 M/M	As planned Contract amendments: 6 times in total, with no changes in C/S budget
(2) Project Period	January 2000 – November 2003 (47 months)	January 2001 – May 2005 (53 months)
(3) Project Cost		
Foreign currency	6,347 million yen	5,973 million yen
Local currency	21,049 million yen (27,311 million soum)	35,071 million yen (7,968 million soum)
Total	27,396 million yen	41,044 million yen
Japanese ODA loan portion	6,347 million yen	5,973 million yen
Exchange rate	1 soum = 0.77 yen (as of January 2000)	1 soum = 4.40 yen (Average for Jan. 2001 – May 2005)

Appendix - Name of Target PCs, Number of Teachers and Students

No.	Name of PCs	Upper: Teachers					Lower: Students				
		2000	2001	2002	2003	2004	2005	2006	2007	2007	
1	Amudaryya PC	68	72	73	75	82	85	87	87	87	
		290	291	536	815	808	952	1,055	1,254	1,254	
2	Beruni PC	86	88	93	115	115	120	130	130	130	
		276	275	622	821	821	901	948	1,098	1,098	
3	Karauzak PC	35	42	47	57	57	65	68	70	70	
		200	199	424	704	706	764	904	1,031	1,031	
4	Nukus Agricultural PC	0	0	97	97	98	98	100	100	100	
		0	0	588	954	957	1,062	1,027	922	922	
5	Hujaabad PC	16	21	28	29	30	48	41	59	59	
		200	325	558	531	563	626	804	977	977	
6	Marhamat PC	25	26	29	32	34	55	51	56	56	
		202	366	558	554	567	621	540	641	641	
7	Shahrihan PC	25	29	29	33	34	52	53	57	57	
		282	444	408	501	440	542	540	599	599	
8	Ulugnor PC	25	26	29	34	34	50	51	56	56	
		185	261	468	545	560	654	789	779	779	
9	Ulugnor PC v. Mingbulak	0	28	29	32	35	55	46	51	51	
		0	0	320	515	782	835	979	1,136	1,136	
10	Alat PC	0	0	17	22	71	54	63	57	57	
		0	48	346	635	853	827	804	959	959	
11	Bukhara PC	62	65	67	67	70	73	70	64	64	
		360	489	739	744	905	975	871	883	883	
12	Galaosie PC v. Yangi-Hayet	0	23	28	39	42	51	52	56	56	
		0	68	194	290	357	500	465	659	659	
13	Kagan PC	0	69	47	45	41	52	60	68	68	
		0	40	210	399	550	625	641	764	764	
14	Shafircan PC	0	26	26	29	60	60	64	66	66	
		0	75	338	595	825	899	848	1,025	1,025	
15	Bakhmal PC	11	20	35	35	31	32	38	48	48	
		62	168	318	306	357	370	393	590	590	
16	Dustlik PC	31	27	32	36	23	24	51	42	42	
		277	197	252	311	349	412	587	674	674	
17	Pahtakor PC	29	30	32	35	29	30	43	47	47	
		234	386	425	438	531	619	539	737	737	
18	Zarbdar Agriculture PC	0	0	13	27	35	36	41	79	79	
		0	0	65	261	448	596	780	916	916	
19	Zaamin PC	0	0	0	0	0	0	26	50	50	
		0	0	0	0	0	0	261	510	510	
20	Mirzachul Agriculture PC	12	20	21	22	22	23	37	39	39	
		95	144	209	240	299	379	429	700	700	
21	Kasbiy II Agriculture PC v. Denau	0	32	38	42	49	67	71	76	76	
		0	593	473	448	479	731	907	1,177	1,177	
22	Chirakchi PC	49	58	62	65	67	72	78	86	86	
		530	525	641	582	754	902	1,107	1,402	1,402	
23	Kamashi PC	407	47	80	82	84	84	81	133	133	
		618	723	776	792	792	782	677	936	936	
24	Karshi PC	0	120	153	146	134	126	115	107	107	
		0	190	569	1,149	1,620	1,578	1,349	1,149	1,149	
25	Kasbiy PC	34	34	36	38	40	42	48	46	46	
		150	350	530	637	761	887	1,027	963	963	
26	Shahrisabz PC	72	76	88	93	97	103	100	106	106	
		169	608	919	1,239	1,268	1,294	1,135	1,128	1,128	
27	Shahrisabz Agriculture PC v. Chorsanba	71	72	69	66	67	64	71	79	79	
		890	942	574	636	679	862	842	960	960	
28	Hatirchi Agro-service PC	0	0	53	55	60	65	67	71	71	
		0	0	299	526	694	725	823	838	838	
29	Narin PC	48	45	48	53	35	57	45	58	58	
		320	729	579	768	729	836	875	989	989	
30	Pup PC	47	47	55	64	53	72	51	53	53	
		628	579	591	587	683	751	833	949	949	
31	Bulungur PC	0	65	43	62	39	71	77	94	94	
		605	605	400	661	390	878	952	1,151	1,151	
32	Kattakurgan PC	0	0	0	0	264	0	1,926	600	600	
33	Koshrabat PC	0	32	28	32	25	46	57	51	51	
		303	303	228	377	283	527	654	802	802	
34	Samarkand PC	64	88	87	89	56	73	86	83	83	
		868	1,200	1,171	1,256	828	1,139	1,349	1,464	1,464	
35	Istihan PC	0	44	30	36	26	52	55	58	58	
		0	392	274	352	264	596	632	792	792	
36	Gulisatan PC	0	0	0	0	20	21	37	49	49	
		0	0	0	0	125	344	540	593	593	
37	Sh. Rashidov PC	0	0	38	35	45	51	53	53	53	
		0	0	450	401	548	623	701	850	850	
38	Bandykhan PC	0	0	0	22	36	45	58	62	62	
		0	0	0	75	350	750	1,002	837	837	
39	Sariosiyo PC	35	40	50	50	42	42	47	46	46	
		425	675	725	630	694	682	685	755	755	
40	Kizirik PC	22	50	63	63	63	61	59	60	60	
		100	400	595	657	843	912	987	1,100	1,100	
41	Akkurgan PC	30	28	33	34	25	28	37	34	34	
		407	276	327	341	394	368	355	516	516	
42	Kibray Agriculture PC	31	34	40	41	49	58	74	64	64	
		608	560	697	590	806	757	727	594	594	
43	Tashkent PC v. Kensay	32	44	51	51	84	53	81	61	61	
		768	844	1,130	1,381	1,352	1,296	1,024	1,237	1,237	
44	Piskent PC	32	25	33	28	27	31	59	45	45	
		349	254	331	278	372	560	645	932	932	
45	Bagdad PC	31	35	36	34	47	47	47	48	48	
		200	217	305	280	422	514	625	758	758	
46	Oltiaryk PC	0	26	55	57	57	61	55	59	59	
		0	0	327	502	642	680	797	866	866	
47	Kuva PC	79	79	62	56	69	70	87	69	69	
		0	125	602	518	674	760	855	939	939	
48	Yaziavan PC	27	23	19	31	37	51	53	51	51	
		120	230	516	536	656	694	805	526	526	
49	Khiva PC	66	66	66	66	66	66	66	66	66	
		275	370	602	562	856	856	962	1,014	1,014	
50	Yangliarik PC	0	25	34	45	55	66	65	67	67	
		0	196	238	448	571	770	680	780	780	
Total		1,602	1,847	2,222	2,397	2,497	2,808	3,085	3,262	3,262	
		10,996	15,662	22,447	27,368	31,471	36,213	40,682	44,451	44,451	